

# A LEGENDRIAN KNOT ATLAS FOR KNOTS OF ARC INDEX 10

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ABSTRACT. We expand the atlas of Legendrian knots in standard contact three-space to knots of arc index 10.

## 1. INTRODUCTION

One of the major problems in contact knot theory is that of classifying Legendrian and transverse knots of a fixed topological type  $K$  in a given contact three-manifold  $(Y, \xi)$ . Even the simplest case where  $Y = \mathbb{R}^3$  and  $\xi = \xi_{\text{std}}$  is the standard contact structure given by the kernel of the 1-form  $\alpha_{\text{std}} = dz - y dx$  is quite challenging, and few knots are fully classified.

In 2010, Chongchitmate and Ng undertook this task for all knots of arc index up to 9 [CN13]. The resulting “Legendrian knot atlas” contains conjectural classification data for these knots, and is updated and permanently available at <https://services.math.duke.edu/~ng/atlas/>.

In this paper, we begin the conjectural Legendrian and transverse classification for prime knots of arc index 10. As in [CN13], we take a probabilistic approach to enumerating Legendrian knots, by presenting them as grid diagrams. Two grid diagrams represent the same Legendrian knot if and only if they can be related by a sequence of elementary moves, which we call “Legendrian grid moves”. One of these moves, stabilization, increases the size of the grid diagram. Thus, an algorithm cannot affirm in finite time that two grid diagrams represent nonisotopic Legendrian knots. Still, it is reasonable to guess that if two diagrams are related by Legendrian grid moves, then the sequence of moves does not increase grid size by much. In [CN13], the conjectural classification is based on generating all grid diagrams of size 9 and all grid diagrams of size 10 (for knots of arc index 9). Here, we generate all (up to Legendrian isotopy) grid diagrams of size 10 for knots of (smooth) arc index 10.

Starting with a large list of grid diagrams, we used a variety of methods to reduce it, by discarding duplicates – at any given point, if two grids in the set represent Legendrian isotopic knots, we may remove one of them, and we still have a set that contains all Legendrian representatives that the original set contained. We guess that among the remaining diagrams that we present here, most pairs for a given topological knot are not Legendrian isotopic. Some pairs can indeed be distinguished by nonclassical invariants such as the ruling invariant or linearized contact homology. We do not include these computations at present. We present the resulting data in the form of tables, as the graphical representation of grid diagrams and mountain ranges becomes somewhat unwieldy as the number and complexity of knots increases.

The atlas for knots of arc index 10 is available at <https://github.com/ipetkova/LegendrianAtlas>. Future updates to the data will be posted there. For example, we have also generated a set of grid diagrams of size 11 for these knots, and are running reduction code to eliminate duplicates (up to Legendrian isotopy). It is a lengthy process, but we hope to update the atlas with this data soon. The code we used to generate and reduce grids is also available at the above link. In addition to that code, we used a combination of SnapPy and Sage methods to identify knots [CDGW, The23].

While this manuscript was in preparation, the authors learned that a research group at the Louisiana State University had started work on a similar project. It would be interesting to compare our results with theirs when they become available [BMVV<sup>+</sup>].

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## 2. PRELIMINARIES

In this section, we review some basics about Legendrian and transverse knots, as well as grid diagrams.

**2.1. Legendrian and transverse knots.** In this section, we review some basics of Legendrian and transverse knots. We restrict to the case of knots in  $\mathbb{R}^3$  with the standard contact structure

$$\xi_{\text{std}} = \ker(\alpha_{\text{std}}), \quad \alpha_{\text{std}} = dz - y dx.$$

A smooth link  $\Lambda \in (\mathbb{R}^3, \xi_{\text{std}})$  is called *Legendrian* if it is everywhere tangent to the contact structure. Two Legendrian links are Legendrian isotopic if they are isotopic through a family of Legendrian links.

A Legendrian link can be represented by its *front diagram*, that is, by its projection onto the  $xz$ -plane. Note that in a front diagram, strands with lower slope always pass over strands with higher slope. See Figure 1 for an example.

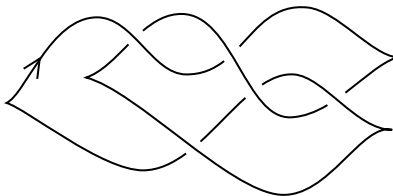


FIGURE 1. An example of a front projection.

Two Legendrian links are Legendrian isotopic if and only if their front diagrams are related by a sequence of Legendrian planar isotopies (isotopies that preserve left and right cusps) and Legendrian Reidemeister moves (see Figure 2).

The two classical Legendrian link invariants are the Thurston–Bennequin number  $tb(\Lambda)$  and the rotation number  $r(\Lambda)$ . These can be computed from an oriented front diagram  $D$  via the relations

$$tb(\Lambda) = \text{wr}(D) - \frac{1}{2}(c_+(D) + c_-(D)), \quad r(\Lambda) = \frac{1}{2}(c_-(D) - c_+(D)),$$

where  $\text{wr}(D)$  is the writhe of the diagram, and  $c_-(D)$  and  $c_+(D)$  are the number of downward and upward cusps, respectively.

A smooth link  $T \in (\mathbb{R}^3, \xi_{\text{std}})$  is called *transverse* if it is everywhere transverse to the contact structure. Two transverse links are transversely isotopic if they are isotopic through transverse links. A transverse link  $T$  naturally inherits an orientation from the (oriented) contact structure: a vector  $v$  tangent to  $T$  is positive if and only if  $\alpha_{\text{std}}(v) > 0$ .

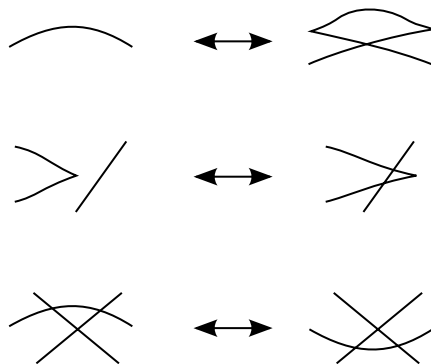


FIGURE 2. Legendrian Reidemeister moves. The vertical and horizontal reflections of the second move are also allowed.

Given an oriented Legendrian link  $\Lambda$ , we can obtain a transverse link  $T_+(\Lambda)$ , called the *positive transverse pushoff* of  $\Lambda$ , by smoothly pushing  $\Lambda$  off in a direction transverse to the contact planes so that the orientation of the smooth link is preserved. Further, every transverse link is the positive transverse pushoff of some Legendrian link.

The *self-linking number*  $\text{sl}(T)$  of a transverse link  $T \in (\mathbb{R}^3, \xi_{\text{std}})$  is a classical transverse invariant, which can be defined as follows. If  $\Lambda$  is a Legendrian link such that  $T$  is the positive transverse pushoff of  $\Lambda$ , then

$$\text{sl}(T) = \text{tb}(\Lambda) - r(\Lambda).$$

Transverse links can be studied via front projections similar to those for Legendrian links. Instead of discussing those projections too, we shift the exposition to grid diagrams, the method of choice in this paper of representing both Legendrian and transverse links.

**2.2. Grid diagrams.** In this section, we review some basics of grid diagrams, following the conventions in [OSSz15].

A *grid diagram*  $\mathbb{G}$  is an  $n \times n$  grid on the plane, along with two sets of markings

$$\mathbb{O} = \{O_1, \dots, O_n\}, \quad \mathbb{X} = \{X_1, \dots, X_n\},$$

such that there is exactly one  $O$  and exactly one  $X$  in each row, as well as in each column, and no square of the grid contains more than one marking. The number  $n$  is called the *grid number* of  $\mathbb{G}$ .

A grid diagram  $\mathbb{G}$  specifies a link  $L(\mathbb{G})$  in  $\mathbb{R}^3$  as follows. In each column, connect the  $X$ -marking to the  $O$ -marking with an oriented vertical segment. In each row, connect the  $O$ -marking to the  $X$ -marking with an oriented horizontal segment. Change resulting intersections to crossings, so that vertical segments always cross above horizontal ones. We say  $\mathbb{G}$  is a *grid diagram for*  $L$ . Conversely, every link  $L$  in  $\mathbb{R}^3$  can be represented by a grid diagram. By a theorem of Cromwell [Cro95], two grid diagrams represent the same link if and only if they are related by a sequence of the following moves:

- *cyclic permutations*, in which the topmost row (or bottommost row, rightmost column, leftmost column) is moved to become the bottommost row (or topmost row, leftmost column, rightmost column, resp.);
- *commutations*, in which two adjacent rows (or columns) are switched if the corresponding segments connecting the  $X$ 's and  $O$ 's are either nested or disjoint;
- *stabilizations*, in which a  $1 \times 1$  square with an  $O$ -marking (resp.  $X$ -marking) is replaced by a  $2 \times 2$  square with two diagonal  $O$ -markings and an  $X$ -marking (resp. two diagonal

$X$ -markings and an  $O$ -marking), creating a new row and a new column, and *destabilizations*, the inverse operations to stabilizations.

Following [OSSz15], we classify (de)stabilizations by the type of the marking and the location of the empty cell in the  $2 \times 2$  square; for example, a stabilization of type  $X:SE$  results in a  $2 \times 2$  square with an empty southeastern cell, an  $X$  in the northwestern cell, and  $O$ 's in the other two cells.

A grid diagram  $\mathbb{G}$  also specifies a Legendrian link  $\Lambda(\mathbb{G})$  in  $(\mathbb{R}^3, \xi_{\text{std}})$ , as follows. First, create the oriented link  $L(\mathbb{G})$ . The projection of  $L(\mathbb{G})$  onto the grid has corners that can be classified into four types: northeast, northwest, southwest, and southeast. Smooth all of the northwest and southeast corners of the projection, and turn the northeast and southwest corners into cusps. Next, rotate the diagram 45 degrees clockwise. Last, flip all the crossings. Note that the smooth type of the Legendrian link  $\Lambda(\mathbb{G})$  is the mirror of the smooth link  $L(\mathbb{G})$ . Similar to the smooth case, every Legendrian link in  $(\mathbb{R}^3, \xi_{\text{std}})$  can be represented by a grid diagram. Two grid diagrams represent the same Legendrian link if and only if they are related by a sequence of cyclic permutations, commutations, and (de)stabilizations of type  $X:SE$  and  $X:NW$ . (De)stabilizations of type  $O:SE$  and  $O:NW$  also result in Legendrian isotopies. The other grid stabilization moves do change the Legendrian isotopy class of the link:  $X:NE$  and  $O:SW$  result in *positive stabilizations* and change  $(tb, r)$  by  $(-1, 1)$ , whereas  $X:SW$  and  $O:NE$  result in *negative stabilizations* and  $(tb, r)$  by  $(-1, -1)$ .

If a Legendrian link is the positive/negative stabilization of another, it is called *destabilizable*; otherwise, it is called *non-destabilizable*. For a given topological type,  $tb$  is bounded above by a classical result of Bennequin, so there are non-destabilizable Legendrian links in every topological type.

A grid diagram  $\mathbb{G}$  also specifies a transverse link  $T(\mathbb{G})$  in  $(\mathbb{R}^3, \xi_{\text{std}})$ , by taking the positive pushoff of  $\Lambda(\mathbb{G})$ . Two grid diagrams represent the same transverse link if and only if they are related by a sequence of sequence of cyclic permutations, commutations, and (de)stabilizations of type  $X:SE$ ,  $X:NW$ , and  $X:SW$ . (De)stabilizations of type  $O:SE$ ,  $O:NW$ , and  $O:SW$  result in transverse isotopies as well. Thus, one can think of transverse links up to transverse isotopy as Legendrian links up to Legendrian isotopy and negative stabilization. Stabilizations of type  $X:NE$  and  $O:SW$  result in *transverse stabilization* of the transverse link  $T(\mathbb{G})$ , and decrease the self-linking number by two.

**Remark 2.1.** Our convention for converting from grid diagrams to Legendrian and transverse knots is different from [CN13], and agrees with [OSSz15], [OSzT08], and [NOT08].

**2.3. Mountain ranges.** In [CN13], Legendrian knots of a given topological type are depicted via a *Legendrian mountain range*, as follows. Isotopy classes of Legendrian knots are plotted as dots on the  $(r, tb)$ -plane. Positive and negative stabilizations are depicted by arrows. Black dots represent knots that are known to be distinct, while red dots represent conjecturally distinct knots. In this depiction, non-destabilizable knots can be seen as “peaks” (including non-maximal peaks) of the mountain ranges.

**2.4. Knot symmetries.** As in [CN13], we consider certain Legendrian symmetries.

The *reverse*  $-\Lambda$  of a Legendrian link  $\Lambda$  is the result of reversing the orientation of  $\Lambda$ . On a grid diagram, this can be achieved by exchanging the  $X$ 's and the  $O$ 's. This operation preserves  $tb$  and reflects  $r$ . This operation may also change the topological type of the knot; all knots in [CN13] are isotopic to their orientation reverses, so this does happen there.

The *Legendrian mirror*  $\mu(\Lambda)$  of  $\Lambda$  is the image of  $\Lambda$  under the contactomorphism  $(x, y, z) \mapsto (-x, y, -z)$ . If  $\mathbb{G}$  is a grid diagram for  $\Lambda$ , one can obtain a grid diagram for  $\mu(\Lambda)$  by rotating  $\mathbb{G}$  by  $180^\circ$ . This operation too preserves  $tb$  and reflects  $r$ , and preserves topological type.

The composition of the two operations above descends to an operation on transverse links, called the *transverse mirror*.

### 3. METHODOLOGY

Our methodology is similar to [CN13]. We briefly recall the main idea and outline major differences below.

The set of all grid diagrams can be thought of as an infinite graph  $\Gamma$ . Vertices correspond to grid diagrams; if two vertices are related by a grid move that corresponds to Legendrian isotopy, they are connected by an edge. The connected components of  $\Gamma$  are precisely the isotopy classes of Legendrian links.<sup>1</sup> Denote by  $\Gamma_n$  the finite subgraph corresponding to grid diagrams of size at most  $n$ . Determining the connected components of  $\Gamma_n$  is the same as determining which pairs of vertices are connected by a path, and approximates the problem of finding the connected components of the infinite graph  $\Gamma$ .

We generate a set of grid diagrams of size 10 that is guaranteed to contain a vertex in each connected component of  $\Gamma_{10}$ . While in [CN13] grid diagrams were represented by matrices of zeros and ones, we find it more efficient to represent grids by pairs of permutations, corresponding to the placement of the  $X$ 's and  $O$ 's. We discard grid diagrams representing multicomponent links, and subdivide the remaining grids into “buckets” by topological type,  $tb$ , and  $r$ . For knots that are not invertible (i.e. knots where reversing orientation changes the knot), we did not further subdivide by orientation, as identifying the knot with orientation can be a bit tricky. However, we were able to generate partial data, and used it to aid reduction. For each bucket, we run a search to check if a grid is destabilizable, and if so, we discard it. We then run a bidirectional search to determine which pairs of knots are connected in  $\Gamma_n$ , and discard duplicates (we started with  $n = 10$ , and, as the set decreased in size, we check up to  $n = 12$ ). The goal is to reduce to a set of grids that conjecturally represents pairwise nonisotopic Legendrian knots.

To manage time and space challenges, we sometimes relied on random sampling, imposed time limits on the code, and varied the depth of the bidirectional search and the maximum allowed size of the neighborhoods it generates.

**Remark 3.1.** We have also generated a set of (conjecturally nondestabilizable) grid diagrams of size 11 for knots of arc index 10. We are running bidirectional searches to eliminate duplicates and reduce the size of this set, and will update the atlas once the data size is sufficiently small.

**Remark 3.2.** One could use non-classical invariants to distinguish some of the remaining pairs of grids. Examples of such invariants include the GRID invariants, their recently introduced spectral generalizations [JPS+23], the ruling invariant or linearized contact homology. We do not include these computations at present, as for many grids, these have been slow to compute. In the cases where we were able to compute the GRID and spectral GRID invariants, these invariants were not able to distinguish pairs of knots.

**Remark 3.3.** The authors of [CN13] conjecture that a Legendrian knot of maximal Thurston–Bennequin number has a grid diagram of minimum grid number, that is, a grid diagram of size the arc index of the knot. More generally, they conjecture that, given a knot  $K$  of maximal Thurston–Bennequin number  $\overline{tb}(K)$  and arc index  $\alpha(K)$ , a Legendrian representative  $\Lambda$  for  $K$  with  $tb(\Lambda) = \overline{tb}(K) - m$  can be represented on a grid of size  $\alpha(K) + m$ . Our data supports this conjecture.

### 4. THE LEGENDRIAN KNOT ATLAS FOR KNOTS OF ARC INDEX 10

The tables in this section present our conjectural classification of Legendrian knots of arc index 10 (without yet considering nonmaximal nondestabilizable knots). As in [CN13], we present the first three horizontal layers of a conjectural mountain range for each prime knot  $K$ , that is, the

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<sup>1</sup>Note that if two vertices are in the same connected component, then they have the same topological type.

Legendrian knots with Thurston–Bennequin numbers  $\overline{tb}(K)$ ,  $\overline{tb}(K) - 1$ , and  $\overline{tb}(K) - 2$ . Each of these layers, along with symmetry data, is presented in a corresponding table, as follows.

[Table 1](#) contains a complete list of nondestabilizable knots of arc index 10 of maximal  $tb$ . The list consists of grid diagram representatives. To track data more easily, we label each grid diagram with a unique identifier (its ID), of form “G” followed by a number. For each knot, we also list known symmetry data, as follows. In the row for grid  $\mathbb{G}$ , we list a grid  $\mathbb{G}'$  in the column labeled “reverse”, “Legendrian mirror”, or “reverse of Legendrian mirror”, if we can verify that  $\Lambda(\mathbb{G}')$  Legendrian isotopic to  $-\Lambda(\mathbb{G})$ ,  $\mu(\Lambda(\mathbb{G}))$ , or  $-\mu(\Lambda(\mathbb{G}))$ , respectively. The goal of course is to determine whether a knot  $\Lambda$  is Legendrian isotopic to  $-\Lambda$ ,  $\mu(\Lambda)$ , and  $-(\mu\Lambda)$ , but we find it helpful to include data rather than a question mark, even when  $\Lambda(\mathbb{G}')$  may be distinct from  $\Lambda(\mathbb{G})$ . For a knot  $\Lambda$  with nonzero rotation number, we lists a hyphen in the columns for  $-\Lambda$  and  $\mu(\Lambda)$ , as  $-\Lambda$  and  $\mu(\Lambda)$  are trivially distinct from  $\Lambda$ . In all other cells of the table, if no  $\mathbb{G}'$  as above is found, we mark the cell with a question mark.

[Table 2](#) contains a list of the positive and negative stabilizations of the maximal knots. The grid IDs for these grids begin with an “S”. For each grid, a list of “parents” is also given; these are the grids from [Table 1](#) which stabilize to the given grid. Whether the respective stabilization is positive or negative can be determined from the rotation number, so we omit listing this information for brevity. Note that by symmetry, we know that two of the four positive stabilizations for  $m8a14$  in [Table 2](#) must be Legendrian isotopic, but we haven’t been able to determine which ones yet.

[Table 3](#) contains a list of the twice-stabilized maximal knots. Their grid IDs begin with a “T”, and symmetry and ancestry data is listed in the same was as in [Table 2](#). Note that for many of the knots, the fact that  $S_+(S_-(\Lambda)) = S_-(S_+(\Lambda))$ , along with the data from [Table 1](#) and [Table 2](#), completely determines the data in [Table 3](#). We include the complete table nevertheless.

With orientation and mirroring, there are 604 topological knots of arc index 10 (240 knots, of which 65 are chiral, 16 negative amphicheiral, 161 reversible, and 6 fully amphicheiral). Of these 604 knots, the program guesses that 157 are transversely nonsimple:

$m8a4, 8a6, m8a6, 8a7, m8a7, 8a8, m8a8, 8a9, 8a10, m8a10, 8a11, m8a11, 8a12, 8a13, m8a13,$   
 $8a14, m8a14, 8a15, m8a15, 8a16, m8a16, \pm 8a17, 10n4, m10n4, 10n6, 10n7, 10n8, m10n8,$   
 $10n10, m10n10, m10n11, 10n12, m10n12, 10n14, m10n14, 10n15, m10n15, 10n20, m10n20,$   
 $10n21, m10n23, \pm m10n24, \pm 10n25, \pm m10n25, \pm 10n27, \pm m10n27, \pm 10n28, 10n29,$   
 $10n31, m10n31, 10n32, 10n33, m10n33, m10n35, 10n36, m10n36, 10n39, m10n39, 10n40, m10n40,$   
 $m10n41, 10n42, m10n42, 11n12, m11n12, 11n20, m11n20, \pm m11n23, \pm 11n24, \pm m11n24,$   
 $\pm m11n37, m11n48, \pm m11n50, 11n57, 11n61, m11n61, m11n65, 11n70, m11n82,$   
 $11n84, m11n84, 11n86, m11n86, 11n92, m11n92, m11n96, m11n99, 11n106, m11n106,$   
 $\pm 11n110, m11n111, m11n117, \pm m11n122, \pm 11n132, \pm m11n132, \pm m11n134, 11n145, m11n164,$   
 $12n25, m12n25, 12n121, m12n243, m12n285, 12n293, 12n321, 12n323, 12n340, m12n340,$   
 $\pm 12n358, 12n370, m12n370, m12n375, 12n403, m12n403, m12n407, 12n438, m12n438,$   
 $12n443, 12n451, m12n452, 12n487, m12n487, m12n502, m12n603, 12n830, m12n838,$   
 $\pm 12n873, \pm 13n588, \pm 13n1692, 13n1907, \pm m13n1445, \pm m13n2787,$   
 $13n3582, 15n41131$

Among the rest are the twist and torus knots of arc index 10, namely  $K_6 = 8a1$ ,  $K_{-6} = m8a1$ ,  $T_{3,7} = 14n21881$ , and  $T_{3,-7} = m14n21881$ , all four of which are known to be transversely simple [\[EH01, ENV13\]](#).

| Knot | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 8a1  | G1011 | (0, 9, 2, 1, 4, 3, 7, 8, 5, 6) | (8, 1, 0, 3, 2, 5, 4, 6, 7, 9) | -7   | 0   | G1011          | G1011      | G1011           |
| m8a1 | G1848 | (0, 8, 1, 9, 4, 2, 5, 3, 7, 6) | (5, 2, 7, 3, 0, 6, 1, 8, 9, 4) | -3   | 0   | G1848          | G1848      | G1848           |
|      | G1849 | (0, 1, 8, 9, 6, 7, 5, 4, 2, 3) | (2, 9, 0, 7, 8, 4, 3, 6, 5, 1) | -3   | 0   | G1849          | G1849      | G1849           |
|      | G1850 | (0, 6, 4, 8, 7, 2, 1, 3, 5, 9) | (8, 9, 7, 6, 3, 5, 4, 0, 1, 2) | -3   | 0   | G1850          | G1850      | G1850           |
| 8a2  | G1014 | (0, 2, 3, 9, 8, 7, 6, 5, 4, 1) | (3, 4, 1, 2, 0, 9, 8, 7, 6, 5) | -11  | -4  | —              | —          | G1014           |
|      | G1015 | (0, 9, 8, 7, 4, 5, 3, 2, 6, 1) | (2, 1, 0, 9, 6, 8, 7, 4, 3, 5) | -11  | -4  | —              | —          | G1015           |
|      | G1012 | (0, 9, 7, 8, 6, 5, 3, 2, 4, 1) | (2, 1, 0, 5, 4, 9, 7, 6, 8, 3) | -11  | -2  | —              | —          | G1013           |
|      | G1013 | (0, 7, 6, 4, 5, 3, 2, 1, 9, 8) | (6, 5, 9, 8, 0, 7, 4, 3, 2, 1) | -11  | -2  | —              | —          | G1012           |
|      | G1016 | (0, 2, 9, 1, 8, 7, 5, 4, 6, 3) | (5, 4, 3, 7, 6, 0, 2, 9, 1, 8) | -11  | 0   | G1016          | G1016      | G1016           |
|      | G1017 | (0, 9, 1, 8, 6, 5, 7, 3, 2, 4) | (5, 4, 7, 3, 0, 9, 2, 1, 6, 8) | -11  | 0   | G1018          | G1017      | G1018           |
|      | G1018 | (0, 9, 1, 8, 6, 5, 7, 3, 2, 4) | (5, 3, 7, 4, 0, 9, 2, 1, 8, 6) | -11  | 0   | G1017          | G1018      | G1017           |
|      | G1019 | (0, 9, 7, 6, 5, 3, 4, 2, 1, 8) | (7, 6, 5, 4, 1, 8, 0, 9, 3, 2) | -11  | 2   | —              | —          | G1020           |
|      | G1020 | (0, 7, 9, 8, 6, 5, 3, 4, 2, 1) | (8, 3, 5, 4, 2, 7, 6, 1, 0, 9) | -11  | 2   | —              | —          | G1019           |
|      | G1021 | (0, 7, 6, 5, 4, 3, 2, 8, 9, 1) | (6, 5, 4, 3, 2, 1, 9, 0, 7, 8) | -11  | 4   | —              | —          | G1021           |
|      | G1022 | (0, 5, 9, 8, 6, 7, 4, 3, 2, 1) | (6, 8, 7, 4, 3, 5, 2, 1, 0, 9) | -11  | 4   | —              | —          | G1022           |
| m8a2 | G1851 | (0, 1, 2, 3, 5, 4, 7, 6, 8, 9) | (8, 9, 0, 1, 2, 6, 5, 3, 4, 7) | 1    | 0   | ?              | G1851      | ?               |
| 8a3  | G1023 | (0, 5, 4, 6, 7, 2, 3, 9, 8, 1) | (2, 1, 7, 3, 5, 4, 8, 6, 0, 9) | -5   | 0   | G1023          | G1023      | G1023           |
|      | G1024 | (0, 9, 2, 1, 4, 3, 7, 8, 5, 6) | (5, 1, 0, 3, 2, 8, 9, 6, 7, 4) | -5   | 0   | G1024          | G1024      | G1024           |
| 8a4  | G1025 | (0, 1, 7, 8, 2, 9, 5, 3, 6, 4) | (2, 5, 3, 6, 7, 4, 0, 9, 1, 8) | -3   | 0   | ?              | ?          | G1026           |
|      | G1026 | (0, 7, 9, 8, 4, 1, 2, 5, 3, 6) | (4, 2, 5, 3, 9, 6, 0, 1, 7, 8) | -3   | 0   | ?              | ?          | G1026           |
| m8a4 | G1852 | (0, 7, 4, 8, 9, 5, 3, 2, 6, 1) | (2, 1, 9, 0, 6, 8, 7, 4, 3, 5) | -7   | -2  | —              | —          | G1852           |
|      | G1853 | (0, 7, 8, 6, 3, 9, 4, 2, 1, 5) | (4, 9, 1, 0, 7, 5, 8, 6, 3, 2) | -7   | -2  | —              | —          | G1853           |
|      | G1854 | (0, 9, 8, 7, 4, 3, 5, 6, 1, 2) | (5, 1, 0, 9, 8, 6, 2, 4, 3, 7) | -7   | -2  | —              | —          | G1854           |
|      | G1855 | (0, 7, 8, 6, 5, 4, 3, 1, 2, 9) | (8, 9, 3, 2, 7, 6, 5, 4, 0, 1) | -7   | -2  | —              | —          | G1855           |
|      | G1856 | (0, 9, 6, 7, 4, 5, 3, 2, 8, 1) | (2, 1, 8, 5, 6, 0, 9, 4, 3, 7) | -7   | -2  | —              | —          | G1856           |
|      | G1857 | (0, 9, 3, 2, 7, 6, 1, 8, 4, 5) | (4, 2, 1, 8, 0, 9, 7, 5, 6, 3) | -7   | 0   | G1859          | G1857      | G1859           |
|      | G1858 | (0, 7, 5, 3, 1, 2, 4, 9, 8, 6) | (4, 2, 9, 6, 5, 0, 8, 7, 3, 1) | -7   | 0   | G1860          | G1858      | G1860           |
|      | G1859 | (0, 6, 7, 3, 2, 5, 9, 8, 4, 1) | (7, 8, 5, 6, 4, 1, 3, 2, 0, 9) | -7   | 0   | G1857          | G1859      | G1857           |
|      | G1860 | (0, 2, 6, 5, 9, 8, 4, 7, 1, 3) | (5, 8, 4, 1, 3, 0, 9, 2, 6, 7) | -7   | 0   | G1858          | G1860      | G1858           |
|      | G1861 | (0, 7, 8, 6, 5, 4, 3, 1, 2, 9) | (8, 9, 5, 4, 3, 2, 7, 6, 0, 1) | -7   | 2   | —              | —          | G1861           |
|      | G1862 | (0, 3, 9, 8, 6, 7, 4, 5, 2, 1) | (4, 8, 7, 2, 1, 5, 6, 3, 0, 9) | -7   | 2   | —              | —          | G1862           |
|      | G1863 | (0, 5, 9, 8, 6, 2, 3, 7, 4, 1) | (6, 8, 7, 4, 3, 5, 1, 2, 0, 9) | -7   | 2   | —              | —          | G1863           |
|      | G1864 | (0, 4, 3, 1, 6, 2, 9, 7, 8, 5) | (3, 2, 9, 7, 0, 8, 5, 4, 6, 1) | -7   | 2   | —              | —          | G1864           |
|      | G1865 | (0, 1, 6, 7, 9, 8, 5, 4, 3, 2) | (5, 9, 8, 0, 6, 4, 3, 2, 1, 7) | -7   | 2   | —              | —          | G1865           |
| 8a5  | G1030 | (0, 9, 8, 6, 5, 3, 2, 4, 7, 1) | (2, 1, 0, 9, 7, 6, 5, 8, 3, 4) | -11  | -4  | —              | —          | G1030           |
|      | G1027 | (0, 9, 8, 5, 3, 6, 4, 7, 2, 1) | (2, 4, 1, 0, 7, 9, 8, 5, 6, 3) | -11  | -2  | —              | —          | G1027           |
|      | G1028 | (0, 9, 5, 4, 6, 3, 8, 7, 2, 1) | (2, 1, 0, 8, 9, 7, 5, 4, 6, 3) | -11  | -2  | —              | —          | G1029           |
|      | G1029 | (0, 9, 8, 5, 3, 2, 4, 7, 6, 1) | (2, 1, 0, 9, 7, 6, 8, 5, 3, 4) | -11  | -2  | —              | —          | G1028           |
|      | G1031 | (0, 9, 1, 4, 8, 6, 3, 7, 5, 2) | (6, 4, 5, 0, 3, 2, 9, 1, 8, 7) | -11  | 0   | G1031          | G1031      | G1031           |
|      | G1032 | (0, 8, 7, 6, 5, 4, 3, 1, 2, 9) | (7, 6, 3, 2, 9, 8, 5, 4, 0, 1) | -11  | 0   | G1032          | G1032      | G1032           |
|      | G1033 | (0, 1, 9, 8, 6, 3, 7, 5, 4, 2) | (3, 7, 5, 4, 0, 9, 2, 1, 6, 8) | -11  | 0   | G1034          | G1033      | G1034           |
|      | G1034 | (0, 8, 4, 7, 6, 3, 5, 2, 1, 9) | (6, 5, 9, 2, 1, 7, 0, 8, 4, 3) | -11  | 0   | G1033          | G1034      | G1033           |
|      | G1035 | (0, 9, 4, 7, 5, 8, 6, 3, 2, 1) | (8, 5, 6, 3, 2, 4, 1, 0, 7, 9) | -11  | 2   | —              | —          | G1035           |
|      | G1036 | (0, 5, 4, 7, 9, 8, 6, 3, 2, 1) | (7, 8, 6, 3, 5, 4, 2, 1, 0, 9) | -11  | 2   | —              | —          | G1037           |
|      | G1037 | (0, 9, 4, 3, 8, 5, 7, 6, 2, 1) | (8, 5, 7, 6, 4, 2, 3, 1, 0, 9) | -11  | 2   | —              | —          | G1036           |
|      | G1038 | (0, 4, 7, 9, 8, 6, 5, 3, 2, 1) | (7, 8, 3, 6, 5, 4, 2, 1, 0, 9) | -11  | 4   | —              | —          | G1038           |
| m8a5 | G1866 | (0, 2, 3, 4, 5, 1, 8, 6, 7, 9) | (3, 4, 5, 6, 8, 7, 2, 9, 0, 1) | 1    | 0   | ?              | G1866      | ?               |
| 8a6  | G1039 | (0, 4, 3, 8, 7, 6, 5, 1, 2, 9) | (3, 2, 5, 4, 9, 8, 7, 6, 0, 1) | -9   | -2  | —              | —          | G1039           |
|      | G1040 | (0, 1, 7, 6, 5, 4, 9, 8, 2, 3) | (2, 4, 3, 8, 7, 6, 5, 0, 9, 1) | -9   | -2  | —              | —          | G1040           |
|      | G1041 | (0, 9, 8, 1, 3, 5, 4, 7, 6, 2) | (3, 2, 0, 4, 9, 1, 6, 5, 8, 7) | -9   | -2  | —              | —          | G1041           |
|      | G1042 | (0, 9, 4, 1, 3, 2, 6, 5, 8, 7) | (3, 2, 0, 8, 9, 5, 4, 7, 6, 1) | -9   | 0   | G1043          | G1042      | G1043           |
|      | G1043 | (0, 9, 7, 2, 1, 4, 3, 6, 5, 8) | (6, 5, 1, 0, 3, 2, 8, 9, 7, 4) | -9   | 0   | G1042          | G1043      | G1042           |
|      | G1044 | (0, 7, 8, 4, 3, 2, 1, 6, 5, 9) | (8, 9, 3, 2, 1, 0, 5, 4, 7, 6) | -9   | 2   | —              | —          | G1044           |
|      | G1045 | (0, 1, 5, 4, 9, 8, 7, 6, 2, 3) | (2, 4, 3, 8, 7, 6, 5, 0, 9, 1) | -9   | 2   | —              | —          | G1045           |



| Knot  | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|-------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|       | G1046 | (0, 6, 5, 8, 7, 9, 1, 4, 3, 2) | (5, 4, 7, 6, 1, 3, 8, 2, 0, 9) | -9   | 2   | —              | —          | G1046           |
| m8a6  | G1867 | (0, 5, 6, 7, 8, 3, 4, 2, 1, 9) | (8, 9, 4, 5, 6, 7, 1, 0, 3, 2) | -1   | 0   | ?              | G1867      | ?               |
|       | G1868 | (0, 4, 2, 6, 7, 8, 5, 9, 3, 1) | (2, 1, 7, 8, 9, 0, 3, 4, 6, 5) | -1   | 0   | ?              | G1868      | ?               |
|       | G1047 | (0, 1, 5, 6, 7, 8, 9, 4, 3, 2) | (3, 6, 7, 8, 9, 0, 2, 1, 5, 4) | -2   | -1  | —              | —          | ?               |
| 8a7   | G1048 | (0, 9, 1, 8, 2, 3, 4, 5, 7, 6) | (7, 5, 6, 0, 9, 1, 2, 3, 4, 8) | -2   | -1  | —              | —          | ?               |
|       | G1049 | (0, 9, 8, 3, 4, 5, 6, 7, 1, 2) | (8, 7, 1, 0, 2, 3, 4, 5, 6, 9) | -2   | 1   | —              | —          | ?               |
|       | G1050 | (0, 9, 1, 2, 3, 4, 8, 5, 7, 6) | (8, 2, 3, 4, 5, 7, 6, 0, 1, 9) | -2   | 1   | —              | —          | ?               |
| m8a7  | G1872 | (0, 5, 4, 3, 2, 1, 7, 6, 8, 9) | (8, 9, 6, 5, 4, 3, 2, 0, 1, 7) | -8   | -3  | —              | —          | ?               |
|       | G1873 | (0, 9, 5, 4, 6, 3, 2, 1, 7, 8) | (7, 1, 0, 8, 9, 5, 4, 3, 2, 6) | -8   | -3  | —              | —          | ?               |
|       | G1869 | (0, 4, 9, 5, 3, 6, 7, 8, 2, 1) | (3, 2, 1, 0, 8, 9, 5, 6, 7, 4) | -8   | -1  | —              | —          | ?               |
|       | G1870 | (0, 8, 7, 9, 2, 3, 6, 5, 1, 4) | (5, 2, 1, 3, 4, 0, 8, 7, 6, 9) | -8   | -1  | —              | —          | ?               |
|       | G1871 | (0, 3, 5, 4, 2, 1, 7, 9, 8, 6) | (7, 8, 1, 0, 6, 3, 2, 5, 4, 9) | -8   | -1  | —              | —          | ?               |
|       | G1874 | (0, 3, 9, 8, 1, 2, 5, 7, 6, 4) | (5, 8, 7, 6, 4, 0, 1, 3, 2, 9) | -8   | 1   | —              | —          | ?               |
|       | G1875 | (0, 8, 7, 9, 5, 4, 2, 1, 3, 6) | (7, 2, 1, 4, 3, 0, 6, 5, 8, 9) | -8   | 1   | —              | —          | ?               |
|       | G1876 | (0, 9, 3, 4, 5, 8, 6, 2, 7, 1) | (7, 4, 5, 6, 2, 3, 1, 0, 9, 8) | -8   | 1   | —              | —          | ?               |
|       | G1877 | (0, 1, 7, 6, 5, 2, 4, 3, 9, 8) | (2, 6, 5, 4, 3, 9, 0, 8, 7, 1) | -8   | 3   | —              | —          | ?               |
|       | G1878 | (0, 1, 3, 2, 8, 7, 6, 5, 4, 9) | (2, 8, 9, 7, 6, 5, 4, 3, 0, 1) | -8   | 3   | —              | —          | ?               |
| 8a8   | G1051 | (0, 9, 8, 6, 7, 3, 4, 5, 1, 2) | (7, 1, 0, 9, 4, 5, 6, 2, 3, 8) | -4   | -1  | —              | —          | ?               |
|       | G1052 | (0, 7, 6, 2, 5, 8, 1, 3, 4, 9) | (3, 1, 8, 7, 9, 4, 6, 5, 0, 2) | -4   | -1  | —              | —          | ?               |
|       | G1053 | (0, 1, 7, 8, 6, 5, 2, 4, 3, 9) | (2, 8, 9, 4, 3, 7, 6, 0, 5, 1) | -4   | -1  | —              | —          | ?               |
|       | G1054 | (0, 9, 6, 8, 1, 5, 2, 3, 4, 7) | (5, 1, 0, 4, 7, 9, 6, 8, 2, 3) | -4   | -1  | —              | —          | ?               |
|       | G1055 | (0, 8, 7, 6, 1, 9, 3, 4, 2, 5) | (3, 2, 9, 8, 7, 4, 5, 6, 0, 1) | -4   | -1  | —              | —          | ?               |
|       | G1056 | (0, 3, 1, 2, 6, 4, 9, 8, 7, 5) | (4, 5, 9, 0, 1, 8, 7, 6, 3, 2) | -4   | 1   | —              | —          | ?               |
|       | G1057 | (0, 6, 5, 7, 4, 3, 1, 2, 8, 9) | (8, 4, 9, 3, 2, 6, 5, 0, 1, 7) | -4   | 1   | —              | —          | ?               |
|       | G1058 | (0, 3, 4, 5, 2, 6, 9, 1, 8, 7) | (4, 5, 9, 1, 8, 0, 3, 7, 6, 2) | -4   | 1   | —              | —          | ?               |
|       | G1059 | (0, 1, 7, 8, 9, 5, 6, 4, 3, 2) | (4, 9, 0, 6, 7, 8, 3, 2, 1, 5) | -4   | 1   | —              | —          | ?               |
|       | G1060 | (0, 5, 6, 8, 1, 4, 7, 3, 2, 9) | (7, 9, 4, 3, 5, 0, 2, 1, 8, 6) | -4   | 1   | —              | —          | ?               |
| m8a8  | G1879 | (0, 4, 5, 2, 1, 8, 6, 9, 7, 3) | (5, 6, 9, 7, 3, 4, 0, 2, 1, 8) | -6   | -1  | —              | —          | ?               |
|       | G1880 | (0, 2, 9, 1, 4, 5, 8, 7, 3, 6) | (4, 7, 3, 5, 6, 2, 0, 9, 8, 1) | -6   | -1  | —              | —          | ?               |
|       | G1881 | (0, 3, 2, 9, 1, 5, 6, 8, 4, 7) | (5, 8, 4, 3, 6, 7, 2, 0, 9, 1) | -6   | -1  | —              | —          | ?               |
|       | G1882 | (0, 3, 9, 1, 2, 6, 8, 5, 4, 7) | (6, 8, 7, 5, 0, 1, 4, 3, 9, 2) | -6   | 1   | —              | —          | ?               |
|       | G1883 | (0, 3, 9, 8, 1, 2, 5, 7, 4, 6) | (5, 8, 7, 6, 4, 0, 1, 3, 9, 2) | -6   | 1   | —              | —          | ?               |
|       | G1884 | (0, 6, 4, 7, 5, 2, 1, 8, 9, 3) | (5, 2, 1, 3, 9, 0, 6, 4, 7, 8) | -6   | 1   | —              | —          | ?               |
| 8a9   | G1061 | (0, 9, 4, 3, 5, 6, 7, 8, 2, 1) | (2, 1, 0, 8, 9, 4, 5, 6, 7, 3) | -5   | -2  | —              | —          | ?               |
|       | G1062 | (0, 6, 7, 8, 9, 2, 5, 4, 3, 1) | (2, 1, 3, 6, 7, 8, 0, 9, 5, 4) | -5   | -2  | —              | —          | ?               |
|       | G1063 | (0, 9, 1, 7, 5, 6, 4, 2, 3, 8) | (5, 4, 6, 3, 8, 0, 7, 9, 1, 2) | -5   | 0   | ?              | ?          | G1064           |
|       | G1064 | (0, 8, 6, 7, 5, 1, 3, 2, 4, 9) | (5, 3, 2, 4, 8, 6, 9, 7, 0, 1) | -5   | 0   | ?              | ?          | G1063           |
|       | G1065 | (0, 8, 7, 6, 9, 2, 3, 4, 5, 1) | (7, 6, 2, 1, 3, 4, 5, 8, 0, 9) | -5   | 2   | —              | —          | ?               |
|       | G1066 | (0, 9, 3, 4, 5, 6, 8, 7, 2, 1) | (8, 4, 5, 6, 7, 2, 3, 1, 0, 9) | -5   | 2   | —              | —          | ?               |
| 8a10  | G891  | (0, 3, 4, 5, 6, 9, 8, 7, 1, 2) | (4, 5, 6, 7, 1, 2, 0, 9, 3, 8) | -2   | -1  | —              | —          | G892            |
|       | G892  | (0, 6, 5, 3, 1, 2, 4, 7, 8, 9) | (3, 2, 7, 6, 4, 5, 8, 9, 0, 1) | -2   | -1  | —              | —          | G891            |
|       | G893  | (0, 3, 5, 7, 9, 8, 4, 6, 1, 2) | (4, 7, 8, 1, 2, 0, 9, 3, 5, 6) | -2   | -1  | —              | —          | ?               |
|       | G894  | (0, 9, 5, 2, 3, 1, 4, 6, 7, 8) | (3, 1, 0, 4, 6, 5, 7, 8, 9, 2) | -2   | -1  | —              | —          | ?               |
|       | G895  | (0, 1, 2, 5, 7, 8, 6, 4, 3, 9) | (8, 9, 0, 1, 4, 5, 3, 2, 7, 6) | -2   | 1   | —              | —          | G896            |
|       | G896  | (0, 1, 5, 4, 3, 6, 7, 8, 9, 2) | (4, 9, 3, 2, 0, 1, 5, 6, 7, 8) | -2   | 1   | —              | —          | G895            |
|       | G897  | (0, 1, 6, 8, 4, 3, 5, 7, 9, 2) | (6, 7, 9, 3, 2, 0, 1, 4, 5, 8) | -2   | 1   | —              | —          | ?               |
|       | G898  | (0, 1, 2, 4, 7, 5, 6, 3, 9, 8) | (6, 9, 0, 1, 3, 2, 4, 8, 7, 5) | -2   | 1   | —              | —          | ?               |
| m8a10 | G1785 | (0, 9, 8, 4, 5, 6, 3, 2, 1, 7) | (5, 1, 0, 6, 7, 9, 8, 4, 3, 2) | -8   | -3  | —              | —          | ?               |
|       | G1786 | (0, 9, 8, 7, 3, 2, 4, 5, 1, 6) | (4, 1, 0, 9, 8, 5, 6, 7, 3, 2) | -8   | -3  | —              | —          | ?               |
|       | G1780 | (0, 9, 7, 3, 6, 2, 1, 4, 5, 8) | (5, 2, 1, 8, 0, 7, 6, 9, 3, 4) | -8   | -1  | —              | —          | ?               |
|       | G1781 | (0, 1, 5, 3, 4, 2, 8, 7, 9, 6) | (8, 9, 0, 7, 6, 5, 3, 1, 4, 2) | -8   | -1  | —              | —          | ?               |
|       | G1782 | (0, 9, 4, 8, 3, 2, 5, 6, 7, 1) | (3, 1, 2, 0, 9, 7, 8, 4, 5, 6) | -8   | -1  | —              | —          | ?               |
|       | G1783 | (0, 2, 1, 9, 4, 8, 3, 7, 5, 6) | (5, 7, 6, 3, 0, 2, 1, 9, 8, 4) | -8   | -1  | —              | —          | G1784           |
|       | G1784 | (0, 2, 1, 6, 4, 8, 9, 7, 5, 3) | (4, 6, 5, 3, 9, 0, 2, 1, 8, 7) | -8   | -1  | —              | —          | G1783           |
|       | G1787 | (0, 3, 4, 7, 6, 2, 5, 1, 9, 8) | (4, 5, 9, 2, 1, 8, 0, 7, 6, 3) | -8   | 1   | —              | —          | ?               |



| Knot  | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|-------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|       | G1788 | (0, 7, 9, 8, 4, 2, 3, 1, 5, 6) | (4, 2, 5, 3, 1, 0, 9, 6, 7, 8) | -8   | 1   | —              | —          | ?               |
|       | G1789 | (0, 4, 5, 6, 9, 8, 3, 7, 2, 1) | (5, 6, 7, 3, 4, 2, 1, 9, 0, 8) | -8   | 1   | —              | —          | ?               |
|       | G1790 | (0, 1, 9, 3, 8, 2, 7, 5, 4, 6) | (2, 8, 7, 5, 4, 6, 3, 0, 9, 1) | -8   | 1   | —              | —          | G1791           |
|       | G1791 | (0, 8, 6, 4, 5, 9, 7, 2, 1, 3) | (6, 5, 2, 1, 3, 4, 0, 8, 7, 9) | -8   | 1   | —              | —          | G1790           |
|       | G1792 | (0, 5, 1, 2, 4, 3, 9, 8, 7, 6) | (4, 3, 9, 0, 1, 8, 7, 6, 5, 2) | -8   | 3   | —              | —          | ?               |
|       | G1793 | (0, 6, 5, 4, 1, 2, 3, 9, 8, 7) | (5, 4, 3, 9, 8, 0, 1, 7, 6, 2) | -8   | 3   | —              | —          | ?               |
| 8a11  | G899  | (0, 9, 6, 5, 8, 7, 2, 1, 3, 4) | (3, 1, 0, 7, 6, 9, 8, 4, 5, 2) | -9   | -2  | —              | —          | ?               |
|       | G900  | (0, 7, 4, 8, 3, 6, 5, 2, 9, 1) | (2, 1, 9, 0, 5, 4, 7, 6, 3, 8) | -9   | -2  | —              | —          | G900            |
|       | G901  | (0, 8, 2, 1, 5, 7, 6, 4, 3, 9) | (7, 1, 0, 6, 9, 3, 2, 8, 5, 4) | -9   | 0   | ?              | ?          | G902            |
|       | G902  | (0, 2, 1, 7, 5, 6, 9, 8, 4, 3) | (4, 9, 6, 3, 0, 8, 7, 2, 1, 5) | -9   | 0   | ?              | ?          | G901            |
|       | G903  | (0, 2, 9, 6, 5, 8, 3, 7, 4, 1) | (3, 8, 5, 4, 7, 6, 1, 2, 0, 9) | -9   | 2   | —              | —          | G903            |
|       | G904  | (0, 1, 3, 2, 7, 6, 9, 8, 5, 4) | (2, 9, 0, 6, 5, 8, 7, 4, 3, 1) | -9   | 2   | —              | —          | ?               |
| m8a11 | G1794 | (0, 6, 5, 1, 2, 7, 8, 9, 3, 4) | (3, 2, 7, 6, 8, 9, 0, 4, 5, 1) | -1   | 0   | ?              | ?          | G1798           |
|       | G1795 | (0, 3, 5, 1, 9, 4, 6, 7, 8, 2) | (4, 9, 0, 8, 2, 1, 3, 5, 6, 7) | -1   | 0   | ?              | G1799      | G1801           |
|       | G1796 | (0, 1, 4, 8, 7, 5, 6, 9, 2, 3) | (2, 5, 7, 6, 9, 8, 0, 3, 4, 1) | -1   | 0   | ?              | G1796      | ?               |
|       | G1797 | (0, 5, 6, 3, 4, 7, 8, 2, 1, 9) | (6, 7, 4, 5, 8, 9, 1, 0, 3, 2) | -1   | 0   | ?              | ?          | G1800           |
|       | G1798 | (0, 1, 4, 3, 7, 8, 9, 2, 5, 6) | (2, 9, 0, 5, 4, 6, 7, 8, 1, 3) | -1   | 0   | ?              | ?          | G1794           |
|       | G1799 | (0, 9, 1, 3, 2, 4, 6, 8, 7, 5) | (8, 2, 4, 6, 5, 7, 0, 1, 9, 3) | -1   | 0   | G1801          | G1795      | ?               |
|       | G1800 | (0, 6, 7, 4, 5, 8, 9, 2, 3, 1) | (2, 1, 5, 6, 3, 4, 7, 8, 0, 9) | -1   | 0   | ?              | ?          | G1797           |
|       | G1801 | (0, 7, 8, 2, 9, 3, 5, 4, 6, 1) | (2, 1, 3, 5, 4, 6, 9, 7, 0, 8) | -1   | 0   | G1799          | ?          | G1795           |
| 8a12  | G905  | (0, 9, 2, 1, 4, 3, 7, 8, 5, 6) | (3, 1, 0, 8, 9, 5, 4, 6, 7, 2) | -5   | 0   | G907           | G907       | G905            |
|       | G906  | (0, 5, 4, 1, 7, 6, 2, 3, 9, 8) | (4, 3, 9, 6, 5, 8, 7, 0, 1, 2) | -5   | 0   | ?              | G909       | ?               |
|       | G907  | (0, 8, 9, 5, 4, 6, 7, 2, 3, 1) | (2, 1, 4, 3, 7, 8, 5, 6, 0, 9) | -5   | 0   | G905           | G905       | G907            |
|       | G908  | (0, 3, 2, 4, 8, 6, 5, 9, 7, 1) | (2, 1, 8, 9, 3, 0, 7, 6, 4, 5) | -5   | 0   | G910           | G910       | G908            |
|       | G909  | (0, 2, 1, 6, 5, 9, 8, 3, 4, 7) | (3, 8, 5, 4, 7, 6, 0, 9, 1, 2) | -5   | 0   | ?              | G906       | ?               |
|       | G910  | (0, 3, 2, 5, 8, 4, 7, 6, 9, 1) | (2, 1, 7, 9, 0, 6, 5, 3, 4, 8) | -5   | 0   | G908           | G908       | G910            |
|       | G911  | (0, 9, 2, 1, 4, 3, 5, 6, 8, 7) | (3, 1, 0, 8, 9, 6, 7, 4, 5, 2) | -5   | 0   | G911           | G911       | G911            |
| 8a13  | G912  | (0, 8, 7, 2, 1, 4, 6, 3, 5, 9) | (6, 3, 9, 8, 5, 0, 1, 7, 2, 4) | -4   | -1  | —              | —          | G919            |
|       | G913  | (0, 8, 5, 4, 6, 3, 1, 2, 7, 9) | (6, 3, 9, 7, 2, 5, 4, 8, 0, 1) | -4   | -1  | —              | —          | G916            |
|       | G914  | (0, 4, 3, 7, 6, 8, 5, 1, 2, 9) | (8, 9, 5, 4, 2, 3, 7, 6, 0, 1) | -4   | -1  | —              | —          | G917            |
|       | G915  | (0, 9, 3, 4, 1, 2, 5, 8, 7, 6) | (7, 5, 6, 2, 3, 0, 1, 4, 9, 8) | -4   | -1  | —              | —          | G920            |
|       | G916  | (0, 1, 7, 8, 6, 4, 3, 5, 9, 2) | (3, 9, 0, 5, 2, 7, 6, 1, 4, 8) | -4   | -1  | —              | —          | G913            |
|       | G917  | (0, 4, 5, 2, 3, 7, 6, 1, 9, 8) | (5, 6, 3, 4, 9, 0, 8, 7, 2, 1) | -4   | -1  | —              | —          | G914            |
|       | G918  | (0, 4, 5, 8, 9, 3, 2, 1, 6, 7) | (6, 9, 1, 0, 7, 8, 4, 3, 2, 5) | -4   | -1  | —              | —          | G923            |
|       | G919  | (0, 6, 5, 3, 4, 8, 7, 1, 9, 2) | (4, 1, 7, 6, 9, 0, 2, 5, 3, 8) | -4   | -1  | —              | —          | G912            |
|       | G920  | (0, 9, 3, 4, 1, 2, 5, 8, 7, 6) | (7, 4, 5, 2, 3, 6, 0, 1, 9, 8) | -4   | -1  | —              | —          | G915            |
|       | G921  | (0, 2, 5, 3, 4, 9, 8, 6, 7, 1) | (4, 6, 1, 7, 2, 3, 0, 9, 5, 8) | -4   | -1  | —              | —          | G922            |
|       | G922  | (0, 2, 3, 1, 6, 7, 5, 4, 9, 8) | (3, 4, 9, 7, 0, 2, 8, 6, 5, 1) | -4   | -1  | —              | —          | G921            |
|       | G923  | (0, 4, 5, 1, 8, 7, 6, 2, 3, 9) | (5, 6, 2, 4, 3, 9, 8, 7, 0, 1) | -4   | -1  | —              | —          | G918            |
|       | G924  | (0, 7, 8, 4, 1, 3, 2, 6, 5, 9) | (8, 9, 3, 2, 6, 7, 5, 4, 0, 1) | -4   | 1   | —              | —          | G928            |
|       | G925  | (0, 6, 7, 3, 2, 1, 8, 4, 5, 9) | (8, 9, 2, 1, 0, 6, 5, 7, 3, 4) | -4   | 1   | —              | —          | G929            |
|       | G926  | (0, 3, 1, 5, 4, 8, 9, 7, 6, 2) | (4, 9, 7, 0, 2, 3, 6, 5, 1, 8) | -4   | 1   | —              | —          | G933            |
|       | G927  | (0, 2, 7, 8, 6, 3, 5, 4, 1, 9) | (8, 9, 1, 5, 4, 7, 2, 0, 6, 3) | -4   | 1   | —              | —          | G932            |
|       | G928  | (0, 9, 7, 2, 1, 5, 6, 3, 4, 8) | (7, 6, 1, 0, 8, 9, 4, 5, 2, 3) | -4   | 1   | —              | —          | G924            |
|       | G929  | (0, 1, 6, 5, 4, 8, 9, 2, 3, 7) | (2, 5, 4, 3, 9, 0, 7, 6, 8, 1) | -4   | 1   | —              | —          | G925            |
|       | G930  | (0, 9, 8, 1, 4, 5, 2, 3, 7, 6) | (8, 7, 2, 5, 6, 3, 4, 0, 1, 9) | -4   | 1   | —              | —          | G934            |
|       | G931  | (0, 9, 4, 3, 1, 2, 7, 5, 6, 8) | (7, 3, 2, 0, 6, 8, 1, 9, 4, 5) | -4   | 1   | —              | —          | G935            |
|       | G932  | (0, 3, 7, 9, 8, 6, 4, 5, 1, 2) | (4, 8, 1, 6, 5, 0, 7, 2, 3, 9) | -4   | 1   | —              | —          | G927            |
|       | G933  | (0, 4, 6, 3, 5, 8, 7, 2, 1, 9) | (5, 7, 2, 8, 9, 4, 1, 0, 6, 3) | -4   | 1   | —              | —          | G926            |
|       | G934  | (0, 9, 8, 1, 4, 5, 2, 3, 7, 6) | (8, 7, 5, 6, 0, 3, 4, 1, 2, 9) | -4   | 1   | —              | —          | G930            |
|       | G935  | (0, 4, 5, 3, 2, 7, 8, 6, 9, 1) | (3, 6, 2, 1, 8, 9, 4, 0, 5, 7) | -4   | 1   | —              | —          | G931            |
| m8a13 | G1802 | (0, 9, 2, 1, 8, 6, 7, 3, 4, 5) | (7, 1, 0, 3, 2, 9, 4, 5, 6, 8) | -6   | -1  | —              | —          | ?               |
|       | G1803 | (0, 4, 1, 7, 8, 9, 3, 2, 6, 5) | (6, 8, 5, 9, 0, 2, 1, 4, 3, 7) | -6   | -1  | —              | —          | ?               |
|       | G1804 | (0, 9, 3, 2, 6, 7, 8, 4, 1, 5) | (8, 2, 1, 4, 3, 5, 6, 0, 7, 9) | -6   | 1   | —              | —          | ?               |

| Knot  | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|-------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 8a14  | G1805 | (0, 1, 2, 8, 9, 7, 4, 3, 6, 5) | (7, 9, 0, 1, 6, 3, 2, 5, 4, 8) | -6   | 1   | —              | —          | ?               |
|       | G936  | (0, 4, 3, 2, 9, 6, 5, 7, 8, 1) | (2, 1, 5, 4, 3, 0, 8, 9, 6, 7) | -9   | -2  | —              | —          | G937            |
|       | G937  | (0, 9, 8, 3, 2, 4, 5, 1, 7, 6) | (7, 1, 0, 9, 5, 6, 3, 4, 2, 8) | -9   | -2  | —              | —          | G936            |
|       | G938  | (0, 8, 7, 2, 3, 9, 1, 6, 5, 4) | (5, 1, 9, 8, 0, 2, 4, 3, 7, 6) | -9   | -2  | —              | —          | G939            |
|       | G939  | (0, 4, 9, 5, 2, 3, 8, 7, 6, 1) | (2, 1, 3, 0, 4, 6, 5, 9, 8, 7) | -9   | -2  | —              | —          | G938            |
|       | G940  | (0, 9, 1, 4, 5, 3, 2, 8, 7, 6) | (7, 3, 5, 0, 2, 1, 6, 4, 9, 8) | -9   | 0   | ?              | G942       | ?               |
|       | G941  | (0, 3, 1, 2, 8, 5, 4, 7, 6, 9) | (8, 9, 7, 4, 3, 2, 6, 5, 0, 1) | -9   | 0   | G947           | G948       | G946            |
|       | G942  | (0, 9, 4, 2, 7, 6, 5, 1, 3, 8) | (3, 1, 0, 6, 5, 4, 8, 7, 9, 2) | -9   | 0   | ?              | G940       | ?               |
|       | G943  | (0, 9, 1, 7, 6, 8, 3, 5, 2, 4) | (8, 3, 5, 2, 1, 4, 7, 0, 6, 9) | -9   | 0   | G949           | G945       | G944            |
|       | G944  | (0, 3, 1, 8, 7, 9, 5, 4, 6, 2) | (5, 9, 6, 2, 0, 4, 3, 1, 8, 7) | -9   | 0   | G945           | G949       | G943            |
|       | G945  | (0, 3, 9, 2, 1, 6, 8, 5, 4, 7) | (6, 8, 5, 7, 3, 2, 4, 0, 9, 1) | -9   | 0   | G944           | G943       | G949            |
|       | G946  | (0, 3, 2, 9, 4, 8, 5, 7, 6, 1) | (2, 1, 7, 5, 6, 0, 3, 4, 9, 8) | -9   | 0   | G948           | G947       | G941            |
|       | G947  | (0, 7, 4, 5, 2, 3, 9, 8, 6, 1) | (2, 1, 8, 3, 4, 7, 6, 5, 0, 9) | -9   | 0   | G941           | G946       | G948            |
|       | G948  | (0, 8, 9, 1, 2, 7, 4, 3, 6, 5) | (7, 6, 2, 3, 0, 1, 9, 5, 4, 8) | -9   | 0   | G946           | G941       | G947            |
|       | G949  | (0, 8, 5, 4, 2, 6, 3, 9, 7, 1) | (2, 1, 3, 9, 7, 0, 8, 5, 4, 6) | -9   | 0   | G943           | G944       | G945            |
|       | G950  | (0, 1, 3, 2, 9, 6, 5, 4, 8, 7) | (2, 9, 0, 8, 4, 3, 7, 6, 5, 1) | -9   | 0   | ?              | G951       | ?               |
|       | G951  | (0, 9, 8, 3, 2, 4, 5, 1, 7, 6) | (8, 7, 1, 0, 5, 6, 3, 4, 2, 9) | -9   | 0   | ?              | G950       | ?               |
|       | G952  | (0, 5, 4, 3, 8, 9, 6, 2, 7, 1) | (4, 3, 2, 6, 5, 7, 1, 8, 0, 9) | -9   | 2   | —              | —          | G953            |
|       | G953  | (0, 9, 8, 3, 5, 1, 2, 7, 6, 4) | (8, 7, 1, 0, 2, 4, 6, 5, 3, 9) | -9   | 2   | —              | —          | G952            |
|       | G954  | (0, 9, 5, 1, 2, 4, 3, 8, 7, 6) | (8, 4, 2, 3, 0, 1, 7, 6, 5, 9) | -9   | 2   | —              | —          | G955            |
|       | G955  | (0, 3, 4, 6, 5, 2, 9, 8, 7, 1) | (4, 5, 2, 3, 1, 8, 7, 6, 0, 9) | -9   | 2   | —              | —          | G954            |
| m8a14 | G1806 | (0, 1, 4, 5, 6, 9, 8, 2, 3, 7) | (5, 8, 6, 7, 3, 4, 0, 9, 1, 2) | -1   | 0   | ?              | ?          | G1811           |
|       | G1807 | (0, 8, 9, 3, 1, 4, 2, 7, 5, 6) | (4, 2, 7, 8, 5, 9, 6, 3, 0, 1) | -1   | 0   | G1809          | ?          | ?               |
|       | G1808 | (0, 2, 4, 7, 8, 5, 6, 3, 1, 9) | (8, 5, 9, 1, 6, 7, 2, 0, 4, 3) | -1   | 0   | ?              | ?          | G1810           |
|       | G1809 | (0, 6, 7, 9, 2, 3, 5, 1, 4, 8) | (3, 1, 5, 6, 4, 8, 0, 7, 9, 2) | -1   | 0   | G1807          | ?          | ?               |
|       | G1810 | (0, 3, 9, 4, 7, 8, 5, 6, 1, 2) | (5, 8, 1, 0, 3, 6, 7, 2, 4, 9) | -1   | 0   | ?              | ?          | G1808           |
|       | G1811 | (0, 1, 6, 3, 2, 7, 8, 4, 5, 9) | (7, 9, 0, 8, 4, 3, 5, 6, 1, 2) | -1   | 0   | ?              | ?          | G1806           |
| 8a15  | G956  | (0, 9, 8, 2, 4, 3, 1, 7, 6, 5) | (6, 3, 1, 0, 9, 5, 4, 2, 8, 7) | -13  | -2  | —              | —          | G959            |
|       | G957  | (0, 4, 9, 8, 3, 2, 1, 7, 6, 5) | (6, 8, 5, 1, 0, 4, 3, 2, 9, 7) | -13  | -2  | —              | —          | ?               |
|       | G958  | (0, 6, 9, 5, 4, 2, 3, 8, 7, 1) | (2, 1, 3, 0, 7, 6, 5, 4, 9, 8) | -13  | -2  | —              | —          | G958            |
|       | G959  | (0, 9, 7, 4, 3, 2, 8, 6, 5, 1) | (8, 2, 1, 0, 5, 4, 3, 9, 7, 6) | -13  | -2  | —              | —          | G956            |
|       | G960  | (0, 4, 3, 2, 9, 8, 6, 7, 5, 1) | (3, 2, 1, 7, 5, 4, 9, 0, 8, 6) | -13  | 0   | G965           | G962       | G961            |
|       | G961  | (0, 1, 6, 5, 3, 9, 8, 7, 4, 2) | (3, 4, 2, 1, 8, 7, 6, 0, 9, 5) | -13  | 0   | G962           | G965       | G960            |
|       | G962  | (0, 9, 3, 2, 8, 7, 5, 6, 4, 1) | (2, 1, 0, 5, 6, 4, 9, 3, 8, 7) | -13  | 0   | G961           | G960       | G965            |
|       | G963  | (0, 9, 7, 2, 6, 1, 8, 5, 4, 3) | (5, 1, 0, 9, 8, 7, 4, 3, 2, 6) | -13  | 0   | ?              | G964       | ?               |
|       | G964  | (0, 9, 3, 2, 8, 7, 5, 6, 4, 1) | (2, 1, 0, 7, 6, 4, 3, 9, 8, 5) | -13  | 0   | ?              | G963       | ?               |
|       | G965  | (0, 8, 9, 7, 6, 3, 2, 1, 5, 4) | (7, 5, 6, 1, 0, 8, 4, 3, 2, 9) | -13  | 0   | G960           | G961       | G962            |
|       | G966  | (0, 9, 7, 8, 6, 5, 2, 1, 4, 3) | (6, 4, 0, 5, 1, 9, 7, 3, 2, 8) | -13  | 0   | G966           | G967       | G967            |
|       | G967  | (0, 9, 7, 8, 6, 5, 2, 1, 4, 3) | (8, 5, 1, 4, 0, 7, 9, 3, 2, 6) | -13  | 0   | G967           | G966       | G966            |
|       | G968  | (0, 9, 8, 4, 3, 2, 7, 6, 1, 5) | (8, 6, 3, 2, 1, 5, 4, 0, 7, 9) | -13  | 2   | —              | —          | ?               |
|       | G969  | (0, 9, 8, 4, 2, 1, 3, 7, 6, 5) | (8, 7, 3, 1, 0, 6, 5, 4, 2, 9) | -13  | 2   | —              | —          | G970            |
|       | G970  | (0, 6, 5, 3, 9, 8, 7, 4, 2, 1) | (5, 4, 2, 8, 7, 6, 1, 0, 9, 3) | -13  | 2   | —              | —          | G969            |
|       | G971  | (0, 4, 3, 8, 9, 7, 6, 2, 5, 1) | (3, 2, 7, 6, 5, 4, 1, 8, 0, 9) | -13  | 2   | —              | —          | G971            |
| m8a15 | G1812 | (0, 1, 2, 3, 4, 8, 9, 5, 6, 7) | (3, 9, 4, 5, 0, 2, 6, 7, 8, 1) | 3    | 0   | G1815          | ?          | ?               |
|       | G1813 | (0, 3, 4, 5, 6, 1, 2, 8, 9, 7) | (5, 6, 8, 7, 2, 3, 9, 0, 4, 1) | 3    | 0   | ?              | G1813      | ?               |
|       | G1814 | (0, 6, 7, 9, 1, 2, 4, 3, 5, 8) | (3, 4, 5, 6, 8, 0, 1, 7, 9, 2) | 3    | 0   | G1814          | G1814      | G1814           |
|       | G1815 | (0, 3, 4, 5, 1, 2, 6, 7, 9, 8) | (7, 8, 2, 3, 4, 9, 0, 5, 6, 1) | 3    | 0   | G1812          | ?          | ?               |
|       | G1816 | (0, 4, 5, 6, 1, 7, 8, 2, 3, 9) | (8, 9, 2, 4, 5, 3, 6, 7, 0, 1) | 3    | 0   | ?              | G1816      | ?               |
|       | G1817 | (0, 3, 5, 4, 6, 8, 7, 9, 1, 2) | (4, 6, 7, 9, 0, 5, 1, 2, 3, 8) | 3    | 0   | G1817          | ?          | ?               |
| 8a16  | G972  | (0, 1, 3, 2, 4, 5, 9, 8, 6, 7) | (2, 5, 8, 6, 7, 3, 4, 0, 9, 1) | -2   | -1  | —              | —          | G974            |
|       | G973  | (0, 1, 2, 6, 5, 3, 4, 7, 9, 8) | (4, 9, 0, 1, 7, 6, 8, 2, 5, 3) | -2   | -1  | —              | —          | ?               |
|       | G974  | (0, 2, 3, 6, 7, 5, 4, 8, 9, 1) | (3, 4, 9, 1, 2, 0, 6, 5, 7, 8) | -2   | -1  | —              | —          | G972            |
|       | G975  | (0, 1, 9, 8, 2, 3, 5, 4, 6, 7) | (6, 8, 7, 3, 4, 0, 1, 9, 2, 5) | -2   | 1   | —              | —          | G977            |
|       | G976  | (0, 9, 1, 4, 5, 3, 2, 6, 7, 8) | (5, 3, 6, 0, 2, 1, 7, 8, 9, 4) | -2   | 1   | —              | —          | ?               |

| Knot  | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|-------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| m8a16 | G977  | (0, 2, 3, 7, 6, 4, 5, 8, 9, 1) | (3, 4, 6, 5, 1, 9, 0, 2, 7, 8) | -2   | 1   | —              | —          | G975            |
|       | G1830 | (0, 9, 5, 6, 4, 3, 7, 2, 1, 8) | (7, 1, 8, 0, 9, 5, 4, 6, 3, 2) | -8   | -3  | —              | —          | G1831           |
|       | G1831 | (0, 7, 9, 8, 4, 3, 5, 2, 6, 1) | (2, 1, 6, 0, 9, 7, 8, 4, 3, 5) | -8   | -3  | —              | —          | G1830           |
|       | G1832 | (0, 8, 7, 4, 3, 5, 6, 9, 2, 1) | (2, 1, 9, 8, 6, 7, 0, 4, 5, 3) | -8   | -3  | —              | —          | ?               |
|       | G1818 | (0, 9, 7, 8, 2, 5, 6, 4, 3, 1) | (2, 1, 0, 4, 6, 7, 3, 9, 8, 5) | -8   | -1  | —              | —          | G1823           |
|       | G1819 | (0, 2, 3, 9, 8, 6, 7, 5, 4, 1) | (3, 4, 8, 7, 1, 0, 2, 9, 6, 5) | -8   | -1  | —              | —          | G1822           |
|       | G1820 | (0, 9, 8, 1, 2, 4, 7, 3, 6, 5) | (6, 4, 2, 3, 5, 0, 1, 9, 8, 7) | -8   | -1  | —              | —          | G1826           |
|       | G1821 | (0, 7, 1, 4, 6, 5, 3, 9, 8, 2) | (3, 9, 8, 0, 2, 1, 7, 6, 4, 5) | -8   | -1  | —              | —          | G1821           |
|       | G1822 | (0, 2, 3, 9, 8, 6, 7, 5, 4, 1) | (5, 7, 1, 2, 0, 9, 4, 3, 8, 6) | -8   | -1  | —              | —          | G1819           |
|       | G1823 | (0, 9, 2, 3, 5, 8, 7, 1, 6, 4) | (5, 3, 4, 6, 1, 2, 0, 9, 8, 7) | -8   | -1  | —              | —          | G1818           |
|       | G1824 | (0, 2, 4, 6, 5, 9, 8, 7, 3, 1) | (4, 5, 7, 3, 1, 2, 0, 9, 8, 6) | -8   | -1  | —              | —          | G1827           |
|       | G1825 | (0, 7, 3, 6, 5, 4, 9, 8, 1, 2) | (4, 1, 9, 0, 8, 7, 5, 2, 3, 6) | -8   | -1  | —              | —          | G1828           |
|       | G1826 | (0, 3, 4, 7, 5, 9, 8, 6, 2, 1) | (5, 6, 2, 3, 1, 4, 0, 9, 8, 7) | -8   | -1  | —              | —          | G1820           |
|       | G1827 | (0, 4, 6, 5, 9, 8, 7, 2, 1, 3) | (5, 2, 3, 1, 4, 0, 9, 8, 6, 7) | -8   | -1  | —              | —          | G1824           |
|       | G1828 | (0, 4, 2, 3, 6, 9, 8, 7, 5, 1) | (6, 7, 5, 1, 2, 4, 0, 3, 9, 8) | -8   | -1  | —              | —          | G1825           |
|       | G1829 | (0, 2, 4, 5, 9, 7, 8, 6, 3, 1) | (5, 6, 1, 3, 4, 0, 2, 9, 8, 7) | -8   | -1  | —              | —          | ?               |
|       | G1833 | (0, 8, 4, 3, 2, 6, 5, 7, 9, 1) | (5, 3, 2, 1, 9, 0, 8, 4, 6, 7) | -8   | 1   | —              | —          | G1842           |
|       | G1834 | (0, 9, 5, 3, 2, 6, 4, 7, 8, 1) | (4, 3, 2, 1, 7, 0, 8, 9, 5, 6) | -8   | 1   | —              | —          | G1843           |
|       | G1835 | (0, 8, 3, 7, 6, 9, 1, 2, 5, 4) | (7, 6, 5, 4, 2, 3, 8, 0, 1, 9) | -8   | 1   | —              | —          | G1836           |
|       | G1836 | (0, 8, 7, 5, 6, 9, 3, 4, 2, 1) | (6, 3, 2, 8, 4, 5, 7, 1, 0, 9) | -8   | 1   | —              | —          | G1835           |
|       | G1837 | (0, 6, 4, 3, 2, 5, 8, 9, 7, 1) | (3, 2, 8, 1, 7, 9, 0, 6, 4, 5) | -8   | 1   | —              | —          | G1839           |
|       | G1838 | (0, 8, 5, 3, 4, 2, 6, 7, 9, 1) | (4, 3, 2, 9, 1, 7, 8, 0, 5, 6) | -8   | 1   | —              | —          | ?               |
|       | G1839 | (0, 1, 4, 3, 8, 7, 6, 9, 5, 2) | (6, 9, 0, 7, 5, 4, 2, 3, 1, 8) | -8   | 1   | —              | —          | G1837           |
|       | G1840 | (0, 7, 6, 4, 5, 3, 2, 8, 9, 1) | (6, 5, 2, 9, 1, 0, 4, 3, 7, 8) | -8   | 1   | —              | —          | G1841           |
|       | G1841 | (0, 7, 6, 4, 5, 3, 2, 8, 9, 1) | (5, 3, 8, 7, 2, 1, 9, 0, 4, 6) | -8   | 1   | —              | —          | G1840           |
|       | G1842 | (0, 2, 1, 6, 5, 4, 8, 7, 9, 3) | (6, 7, 5, 4, 3, 9, 2, 0, 1, 8) | -8   | 1   | —              | —          | G1833           |
|       | G1843 | (0, 9, 2, 8, 1, 3, 4, 7, 6, 5) | (8, 7, 6, 4, 5, 0, 2, 3, 1, 9) | -8   | 1   | —              | —          | G1834           |
|       | G1844 | (0, 4, 3, 9, 7, 6, 8, 1, 5, 2) | (7, 8, 6, 5, 1, 0, 2, 4, 3, 9) | -8   | 1   | —              | —          | G1844           |
|       | G1845 | (0, 7, 6, 1, 5, 4, 2, 3, 9, 8) | (6, 5, 2, 4, 3, 9, 8, 0, 7, 1) | -8   | 3   | —              | —          | G1846           |
|       | G1846 | (0, 5, 9, 6, 8, 7, 3, 2, 4, 1) | (6, 8, 7, 3, 4, 2, 1, 5, 0, 9) | -8   | 3   | —              | —          | G1845           |
|       | G1847 | (0, 9, 2, 5, 6, 8, 7, 4, 3, 1) | (8, 6, 7, 1, 4, 5, 3, 2, 0, 9) | -8   | 3   | —              | —          | ?               |
| 8a17  | G978  | (0, 9, 1, 2, 5, 6, 8, 7, 4, 3) | (4, 2, 3, 6, 7, 0, 1, 9, 8, 5) | -5   | -2  | —              | —          | G983            |
|       | G979  | (0, 8, 9, 2, 5, 6, 7, 4, 3, 1) | (2, 1, 3, 6, 7, 8, 0, 9, 5, 4) | -5   | -2  | —              | —          | G981            |
|       | G980  | (0, 2, 1, 3, 9, 6, 8, 7, 4, 5) | (4, 6, 5, 7, 2, 0, 1, 9, 8, 3) | -5   | -2  | —              | —          | G982            |
|       | G981  | (0, 5, 4, 1, 2, 3, 8, 9, 7, 6) | (7, 9, 6, 5, 0, 1, 2, 4, 3, 8) | -5   | -2  | —              | —          | G979            |
|       | G982  | (0, 8, 9, 1, 5, 7, 6, 2, 4, 3) | (4, 2, 3, 6, 8, 0, 9, 7, 1, 5) | -5   | -2  | —              | —          | G980            |
|       | G983  | (0, 5, 4, 6, 7, 3, 2, 8, 9, 1) | (2, 1, 9, 0, 5, 6, 4, 3, 7, 8) | -5   | -2  | —              | —          | G978            |
|       | G984  | (0, 5, 4, 3, 6, 7, 8, 1, 9, 2) | (3, 2, 1, 9, 0, 5, 6, 7, 4, 8) | -5   | 0   | G986           | G987       | G989            |
|       | G985  | (0, 9, 3, 2, 4, 1, 5, 7, 6, 8) | (7, 1, 0, 8, 9, 6, 3, 4, 2, 5) | -5   | 0   | G992           | G999       | G988            |
|       | G986  | (0, 1, 9, 8, 7, 5, 2, 3, 4, 6) | (5, 7, 4, 6, 0, 9, 8, 1, 2, 3) | -5   | 0   | G984           | G989       | G987            |
|       | G987  | (0, 1, 6, 7, 8, 5, 9, 4, 3, 2) | (4, 7, 8, 9, 2, 0, 3, 1, 6, 5) | -5   | 0   | G989           | G984       | G986            |
|       | G988  | (0, 8, 7, 9, 1, 3, 2, 4, 6, 5) | (6, 3, 1, 2, 4, 0, 5, 8, 9, 7) | -5   | 0   | G999           | G992       | G985            |
|       | G989  | (0, 9, 2, 3, 4, 6, 8, 5, 7, 1) | (6, 3, 4, 5, 7, 1, 2, 0, 9, 8) | -5   | 0   | G987           | G986       | G984            |
|       | G990  | (0, 8, 9, 2, 6, 7, 3, 1, 5, 4) | (5, 3, 4, 7, 8, 1, 0, 9, 2, 6) | -5   | 0   | G991           | G998       | G997            |
|       | G991  | (0, 1, 9, 8, 5, 4, 6, 2, 3, 7) | (5, 6, 4, 0, 3, 7, 9, 8, 1, 2) | -5   | 0   | G990           | G997       | G998            |
|       | G992  | (0, 1, 3, 2, 5, 4, 9, 7, 6, 8) | (2, 4, 9, 7, 8, 6, 5, 3, 0, 1) | -5   | 0   | G985           | G988       | G999            |
|       | G993  | (0, 9, 2, 1, 6, 4, 5, 3, 7, 8) | (7, 4, 5, 3, 2, 8, 0, 9, 1, 6) | -5   | 0   | G996           | G994       | G995            |
|       | G994  | (0, 9, 2, 1, 3, 4, 8, 6, 7, 5) | (8, 4, 6, 5, 7, 2, 3, 0, 1, 9) | -5   | 0   | G995           | G993       | G996            |
|       | G995  | (0, 9, 2, 1, 6, 4, 5, 3, 7, 8) | (6, 5, 7, 3, 2, 0, 1, 8, 9, 4) | -5   | 0   | G994           | G996       | G993            |
|       | G996  | (0, 9, 2, 1, 3, 4, 8, 6, 7, 5) | (8, 6, 7, 4, 5, 0, 2, 1, 3, 9) | -5   | 0   | G993           | G995       | G994            |
|       | G997  | (0, 7, 8, 4, 5, 3, 2, 6, 9, 1) | (3, 1, 6, 7, 2, 9, 8, 0, 4, 5) | -5   | 0   | G998           | G991       | G990            |
|       | G998  | (0, 1, 4, 5, 8, 7, 9, 3, 6, 2) | (5, 6, 9, 3, 4, 0, 2, 1, 8, 7) | -5   | 0   | G997           | G990       | G991            |
|       | G999  | (0, 9, 3, 2, 4, 1, 5, 6, 8, 7) | (6, 1, 0, 8, 9, 7, 3, 4, 5, 2) | -5   | 0   | G988           | G985       | G992            |
|       | G1000 | (0, 9, 7, 8, 3, 4, 5, 2, 1, 6) | (8, 3, 2, 4, 5, 6, 1, 0, 7, 9) | -5   | 2   | —              | —          | G1002           |
|       | G1001 | (0, 2, 3, 9, 8, 4, 5, 7, 6, 1) | (3, 4, 8, 7, 5, 6, 1, 2, 0, 9) | -5   | 2   | —              | —          | G1005           |

| Knot  | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|-------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 8a17  | G1002 | (0, 8, 7, 4, 5, 6, 9, 2, 3, 1) | (7, 6, 2, 1, 3, 4, 5, 8, 0, 9) | -5   | 2   | —              | —          | G1000           |
|       | G1003 | (0, 9, 1, 7, 6, 8, 2, 4, 5, 3) | (8, 2, 6, 4, 3, 5, 7, 0, 1, 9) | -5   | 2   | —              | —          | G1004           |
|       | G1004 | (0, 1, 8, 7, 9, 6, 2, 4, 3, 5) | (2, 7, 6, 4, 5, 3, 8, 0, 9, 1) | -5   | 2   | —              | —          | G1003           |
|       | G1005 | (0, 9, 6, 5, 7, 8, 1, 2, 4, 3) | (8, 5, 4, 2, 3, 6, 7, 0, 1, 9) | -5   | 2   | —              | —          | G1001           |
| 8a18  | G1006 | (0, 4, 6, 5, 1, 3, 2, 8, 7, 9) | (5, 8, 9, 7, 6, 0, 4, 3, 1, 2) | -5   | -2  | —              | —          | G1006           |
|       | G1007 | (0, 2, 1, 5, 4, 7, 6, 8, 9, 3) | (5, 6, 4, 3, 9, 2, 0, 1, 7, 8) | -5   | 0   | ?              | ?          | G1008           |
|       | G1008 | (0, 5, 4, 7, 6, 8, 9, 1, 3, 2) | (4, 3, 1, 2, 9, 0, 5, 7, 8, 6) | -5   | 0   | ?              | ?          | G1007           |
|       | G1009 | (0, 4, 5, 3, 2, 1, 6, 8, 7, 9) | (6, 8, 2, 9, 7, 4, 3, 5, 0, 1) | -5   | 0   | ?              | ?          | ?               |
| 10n2  | G1010 | (0, 2, 1, 7, 6, 8, 4, 3, 5, 9) | (7, 8, 6, 5, 9, 3, 2, 0, 1, 4) | -5   | 2   | —              | —          | G1010           |
|       | G180  | (0, 6, 7, 9, 5, 8, 1, 2, 4, 3) | (4, 8, 1, 2, 0, 3, 6, 7, 9, 5) | -4   | -1  | —              | —          | G180            |
| 10n2  | G181  | (0, 9, 1, 2, 5, 8, 4, 6, 7, 3) | (8, 4, 6, 7, 0, 3, 1, 2, 5, 9) | -4   | 1   | —              | —          | G181            |
| m10n2 | G1185 | (0, 7, 6, 8, 9, 4, 3, 5, 2, 1) | (2, 1, 9, 0, 5, 7, 6, 8, 4, 3) | -6   | -3  | —              | —          | G1185           |
|       | G1184 | (0, 7, 4, 8, 6, 5, 9, 2, 3, 1) | (5, 2, 9, 1, 0, 7, 3, 4, 8, 6) | -6   | -1  | —              | —          | G1184           |
|       | G1186 | (0, 8, 9, 2, 6, 5, 3, 7, 4, 1) | (5, 3, 7, 8, 4, 1, 0, 2, 9, 6) | -6   | 1   | —              | —          | G1186           |
|       | G1187 | (0, 9, 6, 8, 7, 2, 3, 5, 4, 1) | (8, 7, 3, 5, 4, 6, 1, 2, 0, 9) | -6   | 3   | —              | —          | G1187           |
| 10n3  | G249  | (0, 2, 1, 3, 6, 7, 8, 9, 5, 4) | (3, 5, 4, 7, 8, 9, 0, 2, 1, 6) | 0    | -1  | —              | —          | G249            |
|       | G250  | (0, 2, 8, 7, 3, 4, 5, 6, 9, 1) | (6, 9, 1, 0, 8, 2, 3, 4, 5, 7) | 0    | -1  | —              | —          | G249            |
|       | G251  | (0, 9, 5, 6, 7, 8, 1, 3, 2, 4) | (8, 3, 2, 4, 5, 6, 7, 0, 9, 1) | 0    | 1   | —              | —          | G251            |
|       | G252  | (0, 2, 5, 6, 7, 8, 4, 3, 9, 1) | (4, 6, 7, 8, 9, 3, 1, 0, 2, 5) | 0    | 1   | —              | —          | G251            |
| m10n3 | G1269 | (0, 4, 3, 2, 1, 8, 6, 7, 5, 9) | (6, 7, 5, 4, 3, 2, 9, 0, 8, 1) | -10  | -3  | —              | —          | G1269           |
|       | G1268 | (0, 6, 7, 9, 8, 5, 2, 3, 4, 1) | (4, 8, 2, 3, 1, 0, 6, 7, 9, 5) | -10  | -1  | —              | —          | G1268           |
|       | G1270 | (0, 7, 8, 9, 6, 3, 2, 4, 5, 1) | (6, 2, 4, 5, 1, 0, 8, 9, 3, 7) | -10  | 1   | —              | —          | G1270           |
|       | G1271 | (0, 4, 2, 3, 1, 8, 7, 6, 5, 9) | (8, 1, 9, 0, 7, 6, 5, 4, 2, 3) | -10  | 3   | —              | —          | G1271           |
| 10n4  | G285  | (0, 9, 8, 7, 4, 6, 5, 3, 1, 2) | (3, 1, 0, 9, 8, 2, 7, 6, 4, 5) | -13  | -4  | —              | —          | G286            |
|       | G286  | (0, 8, 9, 7, 4, 6, 5, 3, 2, 1) | (2, 1, 5, 0, 8, 9, 7, 6, 4, 3) | -13  | -4  | —              | —          | G285            |
|       | G279  | (0, 7, 9, 6, 1, 5, 4, 3, 2, 8) | (5, 1, 2, 0, 8, 9, 7, 6, 4, 3) | -13  | -2  | —              | —          | G284            |
|       | G280  | (0, 8, 9, 7, 6, 5, 4, 3, 1, 2) | (3, 1, 6, 2, 0, 8, 7, 5, 4, 9) | -13  | -2  | —              | —          | G281            |
|       | G281  | (0, 8, 9, 7, 6, 5, 4, 3, 1, 2) | (4, 1, 3, 0, 8, 7, 2, 6, 5, 9) | -13  | -2  | —              | —          | G280            |
|       | G282  | (0, 1, 3, 2, 9, 6, 5, 8, 7, 4) | (6, 7, 5, 4, 3, 2, 0, 1, 9, 8) | -13  | -2  | —              | —          | G282            |
|       | G283  | (0, 5, 4, 9, 8, 7, 6, 3, 1, 2) | (4, 3, 1, 2, 0, 9, 8, 7, 5, 6) | -13  | -2  | —              | —          | G283            |
|       | G284  | (0, 9, 8, 7, 5, 3, 1, 4, 2, 6) | (4, 1, 0, 2, 9, 8, 6, 7, 5, 3) | -13  | -2  | —              | —          | G279            |
|       | G287  | (0, 4, 3, 9, 6, 8, 5, 7, 2, 1) | (6, 8, 5, 4, 2, 3, 1, 0, 9, 7) | -13  | 0   | G288           | G290       | G292            |
|       | G288  | (0, 9, 7, 8, 6, 2, 1, 4, 5, 3) | (5, 4, 2, 3, 1, 0, 7, 8, 9, 6) | -13  | 0   | G287           | G292       | G290            |
|       | G289  | (0, 7, 9, 4, 6, 1, 5, 3, 2, 8) | (5, 1, 3, 2, 0, 8, 9, 7, 6, 4) | -13  | 0   | G293           | G294       | G291            |
|       | G290  | (0, 4, 2, 3, 9, 7, 8, 6, 5, 1) | (7, 8, 6, 5, 4, 1, 2, 3, 0, 9) | -13  | 0   | G292           | G287       | G288            |
|       | G291  | (0, 5, 8, 7, 3, 6, 4, 1, 9, 2) | (4, 1, 3, 2, 9, 0, 8, 7, 5, 6) | -13  | 0   | G294           | G293       | G289            |
|       | G292  | (0, 1, 8, 7, 6, 4, 5, 3, 2, 9) | (6, 7, 5, 2, 1, 9, 0, 8, 4, 3) | -13  | 0   | G290           | G288       | G287            |
|       | G293  | (0, 2, 1, 8, 9, 7, 6, 4, 5, 3) | (4, 7, 6, 2, 5, 3, 0, 8, 1, 9) | -13  | 0   | G289           | G291       | G294            |
|       | G294  | (0, 8, 7, 5, 6, 2, 4, 3, 1, 9) | (6, 4, 3, 9, 1, 8, 0, 5, 7, 2) | -13  | 0   | G291           | G289       | G293            |
|       | G295  | (0, 1, 9, 8, 7, 6, 5, 3, 4, 2) | (3, 7, 6, 0, 5, 4, 2, 9, 1, 8) | -13  | 2   | —              | —          | G297            |
|       | G296  | (0, 6, 5, 4, 3, 7, 2, 9, 1, 8) | (5, 4, 2, 1, 9, 0, 8, 6, 7, 3) | -13  | 2   | —              | —          | G298            |
|       | G297  | (0, 1, 9, 8, 7, 6, 5, 3, 4, 2) | (3, 8, 7, 5, 4, 2, 0, 6, 1, 9) | -13  | 2   | —              | —          | G295            |
|       | G298  | (0, 4, 2, 5, 3, 1, 9, 8, 7, 6) | (3, 1, 9, 0, 8, 7, 4, 6, 5, 2) | -13  | 2   | —              | —          | G296            |
|       | G299  | (0, 1, 9, 6, 5, 4, 3, 8, 7, 2) | (6, 7, 5, 4, 3, 2, 0, 1, 9, 8) | -13  | 2   | —              | —          | G299            |
|       | G300  | (0, 7, 6, 9, 8, 5, 2, 1, 3, 4) | (6, 5, 3, 4, 2, 1, 0, 9, 7, 8) | -13  | 2   | —              | —          | G300            |
|       | G301  | (0, 9, 8, 6, 5, 7, 4, 2, 3, 1) | (8, 7, 5, 4, 2, 3, 1, 6, 0, 9) | -13  | 4   | —              | —          | G302            |
|       | G302  | (0, 1, 9, 7, 6, 8, 5, 4, 3, 2) | (7, 8, 6, 5, 0, 4, 3, 2, 1, 9) | -13  | 4   | —              | —          | G301            |
| m10n4 | G1312 | (0, 1, 2, 4, 5, 7, 6, 8, 3, 9) | (8, 9, 0, 1, 3, 4, 2, 5, 7, 6) | 3    | 0   | G1315          | G1314      | G1313           |
|       | G1313 | (0, 1, 2, 3, 9, 4, 5, 7, 6, 8) | (2, 3, 4, 7, 5, 6, 8, 0, 9, 1) | 3    | 0   | G1314          | G1315      | G1312           |
|       | G1314 | (0, 3, 5, 4, 6, 7, 8, 9, 1, 2) | (4, 6, 1, 7, 8, 9, 0, 2, 3, 5) | 3    | 0   | G1313          | G1312      | G1315           |
|       | G1315 | (0, 1, 3, 5, 4, 6, 7, 8, 9, 2) | (4, 9, 0, 2, 1, 3, 5, 6, 7, 8) | 3    | 0   | G1312          | G1313      | G1314           |
| 10n6  | G303  | (0, 1, 6, 4, 8, 9, 3, 2, 7, 5) | (2, 9, 0, 7, 5, 6, 8, 4, 3, 1) | -6   | -1  | —              | —          | G305            |
|       | G304  | (0, 9, 4, 2, 6, 7, 3, 1, 5, 8) | (3, 1, 0, 7, 8, 5, 6, 4, 9, 2) | -6   | -1  | —              | —          | G309            |
|       | G305  | (0, 6, 5, 2, 8, 1, 7, 3, 4, 9) | (8, 9, 7, 6, 3, 4, 2, 5, 0, 1) | -6   | -1  | —              | —          | G303            |

| Knot  | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|-------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|       | G306  | (0, 6, 7, 9, 5, 1, 8, 2, 4, 3) | (4, 8, 1, 2, 0, 6, 3, 7, 9, 5) | -6   | -1  | —              | —          | G310            |
|       | G307  | (0, 1, 3, 2, 8, 9, 7, 5, 6, 4) | (5, 6, 0, 9, 1, 4, 3, 8, 2, 7) | -6   | -1  | —              | —          | G308            |
|       | G308  | (0, 9, 6, 4, 5, 3, 1, 2, 7, 8) | (5, 3, 2, 7, 8, 6, 4, 0, 9, 1) | -6   | -1  | —              | —          | G307            |
|       | G309  | (0, 6, 2, 8, 9, 3, 5, 4, 1, 7) | (4, 1, 9, 0, 7, 8, 2, 6, 5, 3) | -6   | -1  | —              | —          | G304            |
|       | G310  | (0, 6, 3, 4, 8, 5, 2, 7, 9, 1) | (2, 1, 7, 9, 3, 0, 6, 4, 5, 8) | -6   | -1  | —              | —          | G306            |
|       | G311  | (0, 2, 4, 9, 6, 3, 7, 8, 5, 1) | (3, 6, 7, 5, 1, 8, 2, 4, 0, 9) | -6   | 1   | —              | —          | G316            |
|       | G312  | (0, 1, 6, 7, 5, 3, 4, 2, 9, 8) | (7, 9, 8, 4, 2, 0, 1, 6, 5, 3) | -6   | 1   | —              | —          | G314            |
|       | G313  | (0, 6, 3, 2, 4, 8, 9, 5, 1, 7) | (4, 2, 1, 5, 9, 0, 7, 8, 6, 3) | -6   | 1   | —              | —          | G315            |
|       | G314  | (0, 8, 9, 7, 5, 6, 2, 1, 3, 4) | (7, 2, 6, 1, 0, 3, 5, 4, 8, 9) | -6   | 1   | —              | —          | G312            |
|       | G315  | (0, 3, 7, 5, 1, 2, 6, 4, 9, 8) | (6, 9, 4, 2, 3, 0, 1, 8, 7, 5) | -6   | 1   | —              | —          | G313            |
|       | G316  | (0, 9, 1, 5, 2, 8, 4, 6, 7, 3) | (8, 4, 6, 0, 7, 3, 1, 2, 5, 9) | -6   | 1   | —              | —          | G311            |
|       | G317  | (0, 8, 3, 2, 6, 7, 1, 9, 4, 5) | (4, 2, 1, 7, 9, 0, 8, 5, 6, 3) | -6   | 1   | —              | —          | G318            |
|       | G318  | (0, 5, 6, 2, 8, 1, 7, 4, 3, 9) | (8, 9, 4, 7, 5, 6, 3, 2, 0, 1) | -6   | 1   | —              | —          | G317            |
| m10n6 | G1316 | (0, 1, 7, 6, 9, 8, 2, 4, 3, 5) | (2, 4, 3, 8, 7, 0, 5, 9, 6, 1) | -4   | -1  | —              | —          | ?               |
|       | G1317 | (0, 2, 1, 3, 7, 6, 9, 8, 4, 5) | (4, 9, 6, 0, 5, 8, 7, 2, 1, 3) | -4   | 1   | —              | —          | ?               |
| 10n7  | G319  | (0, 6, 1, 9, 8, 2, 4, 5, 3, 7) | (4, 2, 5, 3, 0, 7, 6, 9, 8, 1) | -2   | -1  | —              | —          | G320            |
|       | G320  | (0, 3, 6, 4, 5, 9, 7, 2, 1, 8) | (7, 9, 1, 8, 0, 4, 3, 6, 5, 2) | -2   | -1  | —              | —          | G319            |
|       | G321  | (0, 7, 6, 1, 9, 3, 4, 2, 5, 8) | (6, 3, 2, 5, 4, 8, 0, 7, 9, 1) | -2   | 1   | —              | —          | G322            |
|       | G322  | (0, 4, 2, 3, 5, 9, 8, 6, 1, 7) | (6, 9, 8, 1, 0, 7, 4, 2, 5, 3) | -2   | 1   | —              | —          | G321            |
| m10n7 | G1318 | (0, 3, 2, 6, 8, 9, 7, 4, 5, 1) | (2, 1, 4, 3, 5, 6, 0, 8, 9, 7) | -8   | -1  | —              | —          | ?               |
|       | G1319 | (0, 6, 7, 4, 2, 3, 5, 9, 8, 1) | (4, 2, 3, 1, 5, 6, 8, 7, 0, 9) | -8   | 1   | —              | —          | ?               |
| 10n8  | G323  | (0, 8, 9, 5, 4, 7, 6, 1, 3, 2) | (3, 1, 2, 0, 6, 5, 8, 7, 9, 4) | -11  | -2  | —              | —          | G324            |
|       | G324  | (0, 7, 9, 8, 4, 3, 6, 5, 1, 2) | (3, 1, 2, 0, 9, 5, 4, 7, 6, 8) | -11  | -2  | —              | —          | G323            |
|       | G325  | (0, 9, 2, 1, 6, 4, 5, 3, 8, 7) | (5, 1, 0, 3, 2, 8, 9, 7, 6, 4) | -11  | 0   | G330           | G330       | G325            |
|       | G326  | (0, 8, 1, 9, 3, 5, 4, 7, 6, 2) | (7, 3, 4, 2, 0, 1, 6, 5, 9, 8) | -11  | 0   | G329           | G328       | G327            |
|       | G327  | (0, 1, 7, 6, 5, 9, 8, 3, 4, 2) | (3, 6, 4, 2, 8, 7, 0, 9, 1, 5) | -11  | 0   | G328           | G329       | G326            |
|       | G328  | (0, 8, 9, 7, 4, 3, 6, 5, 1, 2) | (6, 1, 3, 0, 2, 5, 4, 8, 7, 9) | -11  | 0   | G327           | G326       | G329            |
|       | G329  | (0, 1, 7, 6, 9, 8, 5, 3, 4, 2) | (3, 6, 4, 8, 7, 2, 0, 9, 1, 5) | -11  | 0   | G326           | G327       | G328            |
|       | G330  | (0, 9, 7, 8, 4, 3, 6, 5, 1, 2) | (6, 1, 0, 3, 2, 5, 4, 9, 7, 8) | -11  | 0   | G325           | G325       | G330            |
|       | G331  | (0, 1, 7, 6, 9, 8, 4, 3, 5, 2) | (4, 6, 5, 8, 7, 3, 2, 0, 1, 9) | -11  | 2   | —              | —          | G332            |
|       | G332  | (0, 9, 1, 6, 5, 8, 7, 3, 4, 2) | (8, 3, 5, 4, 7, 6, 2, 0, 1, 9) | -11  | 2   | —              | —          | G331            |
| m10n8 | G1320 | (0, 4, 6, 3, 5, 7, 9, 8, 1, 2) | (5, 9, 0, 8, 1, 4, 6, 2, 3, 7) | 1    | 0   | G1327          | G1325      | G1324           |
|       | G1321 | (0, 9, 4, 5, 1, 2, 6, 3, 7, 8) | (5, 3, 6, 2, 4, 7, 0, 8, 9, 1) | 1    | 0   | G1326          | G1323      | G1322           |
|       | G1322 | (0, 4, 6, 7, 5, 8, 2, 3, 9, 1) | (5, 7, 8, 1, 9, 3, 4, 0, 2, 6) | 1    | 0   | G1323          | G1326      | G1321           |
|       | G1323 | (0, 1, 3, 7, 6, 8, 4, 5, 9, 2) | (6, 9, 0, 2, 1, 5, 7, 3, 4, 8) | 1    | 0   | G1322          | G1321      | G1326           |
|       | G1324 | (0, 8, 1, 9, 2, 4, 3, 7, 5, 6) | (5, 2, 7, 3, 6, 0, 8, 9, 1, 4) | 1    | 0   | G1325          | G1327      | G1320           |
|       | G1325 | (0, 4, 3, 5, 8, 6, 9, 7, 1, 2) | (8, 9, 7, 1, 4, 0, 5, 2, 3, 6) | 1    | 0   | G1324          | G1320      | G1327           |
|       | G1326 | (0, 6, 7, 1, 3, 4, 2, 5, 9, 8) | (7, 8, 2, 4, 5, 9, 6, 0, 3, 1) | 1    | 0   | G1321          | G1322      | G1323           |
|       | G1327 | (0, 4, 2, 3, 6, 5, 7, 9, 1, 8) | (5, 9, 7, 1, 2, 8, 0, 3, 6, 4) | 1    | 0   | G1320          | G1324      | G1325           |
|       | G1328 | (0, 7, 8, 2, 1, 3, 4, 6, 5, 9) | (8, 9, 4, 6, 5, 7, 2, 3, 0, 1) | 1    | 0   | G1329          | G1328      | G1329           |
|       | G1329 | (0, 7, 8, 2, 1, 3, 4, 6, 5, 9) | (8, 9, 6, 7, 4, 5, 0, 2, 1, 3) | 1    | 0   | G1328          | G1329      | G1328           |
| 10n10 | G1    | (0, 9, 5, 8, 4, 1, 3, 2, 7, 6) | (7, 1, 0, 2, 9, 5, 6, 4, 3, 8) | -11  | -2  | —              | —          | G1              |
|       | G2    | (0, 9, 4, 3, 8, 2, 1, 7, 5, 6) | (7, 1, 0, 5, 4, 6, 3, 2, 8, 9) | -11  | -2  | —              | —          | G3              |
|       | G3    | (0, 7, 6, 2, 1, 9, 8, 4, 5, 3) | (4, 5, 8, 7, 3, 2, 0, 9, 1, 6) | -11  | -2  | —              | —          | G2              |
|       | G4    | (0, 8, 9, 5, 7, 6, 2, 4, 3, 1) | (6, 2, 4, 1, 3, 8, 7, 0, 5, 9) | -11  | 0   | G9             | G7         | G5              |
|       | G5    | (0, 9, 5, 7, 6, 3, 4, 2, 1, 8) | (6, 4, 0, 2, 8, 7, 1, 9, 5, 3) | -11  | 0   | G7             | G9         | G4              |
|       | G6    | (0, 3, 1, 7, 6, 9, 8, 4, 5, 2) | (6, 8, 4, 5, 2, 3, 0, 9, 1, 7) | -11  | 0   | G11            | G8         | G10             |
|       | G7    | (0, 8, 9, 6, 5, 7, 3, 2, 4, 1) | (3, 1, 5, 4, 0, 2, 8, 6, 9, 7) | -11  | 0   | G5             | G4         | G9              |
|       | G8    | (0, 9, 1, 7, 8, 5, 6, 3, 2, 4) | (5, 3, 6, 4, 0, 9, 2, 1, 7, 8) | -11  | 0   | G10            | G6         | G11             |
|       | G9    | (0, 8, 7, 5, 4, 6, 2, 1, 3, 9) | (6, 2, 9, 3, 8, 1, 0, 5, 7, 4) | -11  | 0   | G4             | G5         | G7              |
|       | G10   | (0, 9, 2, 1, 6, 8, 5, 7, 3, 4) | (6, 5, 7, 3, 2, 4, 0, 1, 8, 9) | -11  | 0   | G8             | G11        | G6              |
|       | G11   | (0, 9, 1, 7, 8, 5, 6, 3, 2, 4) | (8, 3, 5, 2, 4, 0, 1, 7, 6, 9) | -11  | 0   | G6             | G10        | G8              |
|       | G12   | (0, 9, 4, 3, 5, 2, 8, 1, 7, 6) | (8, 3, 2, 0, 1, 7, 4, 6, 5, 9) | -11  | 2   | —              | —          | G12             |
|       | G13   | (0, 8, 9, 5, 4, 2, 1, 7, 6, 3) | (7, 2, 4, 3, 1, 0, 6, 5, 8, 9) | -11  | 2   | —              | —          | G14             |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| m10n10 | G14   | (0, 1, 9, 5, 4, 8, 3, 2, 7, 6) | (7, 8, 4, 3, 0, 2, 1, 6, 5, 9) | -11  | 2   | –              | –          | G13             |
|        | G1067 | (0, 1, 5, 2, 3, 4, 9, 6, 8, 7) | (6, 9, 0, 7, 8, 1, 3, 2, 5, 4) | 1    | 0   | G1067          | G1067      | G1067           |
|        | G1068 | (0, 9, 4, 5, 7, 1, 2, 3, 6, 8) | (7, 5, 6, 8, 3, 4, 0, 1, 9, 2) | 1    | 0   | ?              | G1070      | ?               |
|        | G1069 | (0, 9, 2, 3, 1, 5, 6, 4, 8, 7) | (6, 3, 4, 8, 7, 0, 2, 9, 1, 5) | 1    | 0   | ?              | ?          | G1071           |
|        | G1070 | (0, 1, 3, 8, 9, 5, 6, 4, 7, 2) | (4, 9, 0, 2, 6, 7, 8, 1, 3, 5) | 1    | 0   | ?              | G1068      | ?               |
|        | G1071 | (0, 9, 3, 1, 2, 6, 4, 5, 8, 7) | (6, 4, 7, 5, 0, 1, 8, 9, 3, 2) | 1    | 0   | ?              | ?          | G1069           |
| 10n11  | G15   | (0, 6, 5, 4, 3, 2, 9, 8, 7, 1) | (4, 2, 1, 7, 6, 5, 3, 0, 9, 8) | -15  | -2  | –              | –          | G15             |
|        | G16   | (0, 7, 5, 6, 4, 3, 9, 8, 2, 1) | (3, 2, 8, 1, 7, 6, 5, 0, 9, 4) | -15  | -2  | –              | –          | G18             |
|        | G17   | (0, 6, 5, 4, 3, 2, 9, 8, 7, 1) | (3, 2, 7, 1, 6, 5, 4, 0, 9, 8) | -15  | -2  | –              | –          | G15             |
|        | G18   | (0, 9, 4, 3, 8, 7, 6, 2, 5, 1) | (3, 2, 1, 5, 4, 0, 9, 7, 8, 6) | -15  | -2  | –              | –          | G16             |
|        | G19   | (0, 6, 5, 4, 3, 2, 9, 8, 7, 1) | (5, 3, 2, 1, 7, 6, 4, 0, 9, 8) | -15  | 0   | G21            | G20        | G22             |
|        | G20   | (0, 9, 6, 4, 3, 2, 8, 7, 5, 1) | (8, 2, 1, 7, 6, 5, 4, 3, 0, 9) | -15  | 0   | G22            | G19        | G21             |
|        | G21   | (0, 4, 9, 8, 3, 2, 1, 7, 6, 5) | (7, 6, 5, 2, 1, 0, 4, 3, 9, 8) | -15  | 0   | G19            | G22        | G20             |
|        | G22   | (0, 9, 7, 4, 3, 2, 8, 6, 5, 1) | (7, 6, 2, 1, 5, 4, 3, 0, 9, 8) | -15  | 0   | G20            | G21        | G19             |
|        | G23   | (0, 4, 3, 2, 9, 8, 7, 6, 5, 1) | (3, 2, 1, 8, 6, 5, 4, 0, 9, 7) | -15  | 2   | –              | –          | G23             |
|        | G24   | (0, 4, 3, 2, 9, 8, 7, 6, 5, 1) | (3, 2, 1, 7, 6, 5, 0, 4, 9, 8) | -15  | 2   | –              | –          | G23             |
|        | G25   | (0, 9, 3, 2, 8, 7, 5, 6, 4, 1) | (7, 2, 1, 6, 5, 4, 0, 3, 9, 8) | -15  | 2   | –              | –          | G26             |
|        | G26   | (0, 6, 9, 5, 4, 3, 8, 7, 2, 1) | (5, 3, 4, 2, 1, 7, 6, 0, 9, 8) | -15  | 2   | –              | –          | G25             |
| m10n11 | G1072 | (0, 1, 2, 7, 3, 8, 9, 4, 5, 6) | (5, 8, 9, 0, 1, 2, 6, 7, 3, 4) | 5    | 0   | G1073          | G1073      | G1072           |
|        | G1073 | (0, 1, 2, 3, 4, 8, 9, 5, 6, 7) | (3, 4, 9, 5, 0, 1, 6, 7, 8, 2) | 5    | 0   | G1072          | G1072      | G1073           |
|        | G1074 | (0, 8, 1, 2, 3, 4, 6, 5, 7, 9) | (4, 2, 6, 7, 5, 9, 0, 8, 1, 3) | 5    | 0   | G1074          | G1075      | G1075           |
|        | G1075 | (0, 2, 5, 3, 4, 6, 7, 8, 9, 1) | (6, 7, 1, 9, 0, 2, 5, 3, 4, 8) | 5    | 0   | G1075          | G1074      | G1074           |
|        | G1076 | (0, 2, 1, 3, 4, 5, 6, 7, 9, 8) | (4, 9, 5, 7, 8, 2, 0, 1, 6, 3) | 5    | 0   | G1076          | ?          | ?               |
| 10n12  | G27   | (0, 1, 9, 6, 3, 5, 2, 4, 7, 8) | (5, 4, 2, 0, 7, 1, 6, 8, 9, 3) | -6   | -1  | –              | –          | ?               |
|        | G28   | (0, 8, 6, 7, 3, 4, 5, 2, 1, 9) | (7, 1, 9, 4, 5, 6, 0, 8, 3, 2) | -6   | -1  | –              | –          | G33             |
|        | G29   | (0, 2, 1, 4, 8, 9, 7, 5, 6, 3) | (4, 5, 3, 9, 0, 6, 2, 8, 1, 7) | -6   | -1  | –              | –          | ?               |
|        | G30   | (0, 2, 1, 9, 6, 7, 8, 4, 5, 3) | (4, 8, 3, 2, 0, 5, 6, 7, 1, 9) | -6   | -1  | –              | –          | ?               |
|        | G31   | (0, 9, 7, 1, 2, 3, 8, 6, 4, 5) | (6, 4, 2, 3, 5, 0, 1, 9, 7, 8) | -6   | -1  | –              | –          | ?               |
|        | G32   | (0, 4, 2, 3, 1, 7, 5, 8, 6, 9) | (8, 9, 5, 6, 4, 2, 0, 3, 1, 7) | -6   | -1  | –              | –          | ?               |
|        | G33   | (0, 8, 9, 7, 6, 3, 4, 5, 1, 2) | (6, 1, 5, 0, 8, 7, 2, 3, 4, 9) | -6   | -1  | –              | –          | G28             |
|        | G34   | (0, 3, 1, 4, 2, 8, 6, 7, 5, 9) | (2, 8, 6, 9, 7, 5, 3, 4, 0, 1) | -6   | 1   | –              | –          | ?               |
|        | G35   | (0, 1, 4, 6, 3, 5, 2, 9, 7, 8) | (5, 9, 0, 2, 7, 1, 8, 6, 4, 3) | -6   | 1   | –              | –          | ?               |
|        | G36   | (0, 1, 7, 8, 9, 6, 5, 3, 4, 2) | (3, 8, 9, 0, 5, 4, 2, 7, 1, 6) | -6   | 1   | –              | –          | G38             |
|        | G37   | (0, 7, 8, 6, 4, 5, 9, 2, 1, 3) | (6, 2, 5, 1, 7, 3, 4, 0, 8, 9) | -6   | 1   | –              | –          | ?               |
|        | G38   | (0, 8, 7, 4, 5, 6, 2, 3, 1, 9) | (7, 6, 1, 9, 3, 4, 5, 0, 8, 2) | -6   | 1   | –              | –          | G36             |
|        | G39   | (0, 8, 9, 5, 6, 7, 4, 2, 1, 3) | (4, 2, 6, 7, 8, 3, 1, 0, 5, 9) | -6   | 1   | –              | –          | ?               |
|        | G40   | (0, 1, 9, 7, 2, 3, 4, 8, 6, 5) | (7, 8, 6, 4, 5, 0, 2, 3, 1, 9) | -6   | 1   | –              | –          | ?               |
| m10n12 | G1077 | (0, 9, 8, 1, 3, 2, 4, 5, 7, 6) | (7, 2, 0, 5, 9, 6, 1, 3, 4, 8) | -4   | -1  | –              | –          | G1079           |
|        | G1078 | (0, 9, 1, 3, 2, 4, 5, 8, 7, 6) | (7, 2, 4, 0, 5, 6, 1, 3, 9, 8) | -4   | -1  | –              | –          | G1080           |
|        | G1079 | (0, 5, 4, 8, 9, 1, 6, 3, 7, 2) | (3, 2, 6, 5, 7, 8, 0, 9, 1, 4) | -4   | -1  | –              | –          | G1077           |
|        | G1080 | (0, 9, 1, 3, 2, 4, 5, 8, 7, 6) | (7, 2, 5, 0, 6, 1, 3, 4, 9, 8) | -4   | -1  | –              | –          | G1078           |
|        | G1081 | (0, 9, 8, 1, 2, 4, 3, 5, 7, 6) | (8, 7, 2, 3, 5, 0, 6, 1, 4, 9) | -4   | 1   | –              | –          | G1083           |
|        | G1082 | (0, 5, 9, 6, 1, 3, 4, 8, 7, 2) | (8, 1, 3, 2, 4, 5, 7, 6, 0, 9) | -4   | 1   | –              | –          | G1084           |
|        | G1083 | (0, 9, 8, 1, 2, 4, 3, 5, 7, 6) | (8, 7, 3, 5, 0, 1, 6, 2, 4, 9) | -4   | 1   | –              | –          | G1081           |
|        | G1084 | (0, 9, 1, 2, 4, 3, 5, 8, 7, 6) | (8, 2, 3, 5, 0, 7, 1, 6, 4, 9) | -4   | 1   | –              | –          | G1082           |
| 10n14  | G41   | (0, 2, 7, 5, 6, 3, 4, 9, 8, 1) | (5, 6, 4, 1, 8, 7, 2, 3, 0, 9) | -7   | 0   | G46            | G45        | G44             |
|        | G42   | (0, 6, 9, 1, 2, 5, 4, 8, 7, 3) | (5, 2, 3, 4, 0, 1, 7, 6, 9, 8) | -7   | 0   | G51            | G49        | G48             |
|        | G43   | (0, 1, 9, 4, 6, 5, 8, 7, 2, 3) | (5, 8, 2, 0, 3, 7, 6, 1, 4, 9) | -7   | 0   | ?              | ?          | G47             |
|        | G44   | (0, 8, 9, 5, 4, 1, 2, 7, 6, 3) | (7, 2, 4, 3, 6, 5, 0, 1, 8, 9) | -7   | 0   | G45            | G46        | G41             |
|        | G45   | (0, 6, 7, 5, 2, 9, 8, 3, 4, 1) | (2, 1, 3, 8, 6, 7, 4, 5, 0, 9) | -7   | 0   | G44            | G41        | G46             |
|        | G46   | (0, 8, 9, 3, 2, 7, 6, 1, 4, 5) | (4, 1, 2, 0, 6, 5, 8, 7, 9, 3) | -7   | 0   | G41            | G44        | G45             |
|        | G47   | (0, 1, 8, 9, 3, 5, 4, 7, 6, 2) | (3, 7, 2, 4, 8, 0, 6, 5, 1, 9) | -7   | 0   | ?              | ?          | G43             |
|        | G48   | (0, 9, 5, 2, 1, 6, 4, 7, 8, 3) | (7, 4, 1, 0, 3, 2, 8, 9, 5, 6) | -7   | 0   | G49            | G51        | G42             |
|        | G49   | (0, 6, 5, 8, 7, 4, 1, 2, 3, 9) | (4, 3, 7, 6, 2, 9, 5, 8, 0, 1) | -7   | 0   | G48            | G42        | G51             |
|        | G50   | (0, 8, 9, 4, 3, 5, 7, 6, 1, 2) | (5, 1, 3, 0, 6, 2, 4, 8, 7, 9) | -7   | 0   | ?              | ?          | G52             |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G51   | (0, 7, 4, 3, 6, 5, 1, 2, 8, 9) | (3, 2, 8, 5, 4, 9, 7, 0, 1, 6) | -7   | 0   | G42            | G48        | G49             |
|        | G52   | (0, 8, 9, 4, 3, 5, 7, 6, 1, 2) | (3, 1, 5, 2, 6, 0, 4, 8, 7, 9) | -7   | 0   | ?              | ?          | G50             |
| m10n14 | G1085 | (0, 3, 5, 6, 2, 4, 9, 1, 8, 7) | (6, 8, 7, 1, 9, 0, 3, 5, 4, 2) | -3   | 0   | ?              | ?          | G1087           |
|        | G1086 | (0, 2, 7, 8, 1, 5, 6, 9, 4, 3) | (4, 8, 9, 6, 7, 0, 3, 2, 1, 5) | -3   | 0   | ?              | ?          | G1088           |
|        | G1087 | (0, 4, 1, 8, 5, 9, 6, 7, 3, 2) | (8, 9, 7, 3, 0, 2, 1, 4, 6, 5) | -3   | 0   | ?              | ?          | G1085           |
|        | G1088 | (0, 1, 5, 8, 2, 9, 7, 6, 3, 4) | (2, 9, 0, 3, 6, 5, 4, 8, 7, 1) | -3   | 0   | ?              | ?          | G1086           |
|        |       |                                |                                |      |     |                |            |                 |
| 10n15  | G53   | (0, 7, 3, 4, 6, 5, 8, 9, 2, 1) | (4, 2, 5, 1, 3, 9, 0, 7, 8, 6) | -7   | 0   | G60            | G56        | G55             |
|        | G54   | (0, 1, 8, 9, 6, 7, 5, 4, 2, 3) | (2, 5, 4, 7, 8, 3, 0, 9, 6, 1) | -7   | 0   | G54            | G54        | G54             |
|        | G55   | (0, 8, 9, 6, 7, 4, 5, 1, 3, 2) | (5, 3, 7, 8, 1, 0, 2, 4, 9, 6) | -7   | 0   | G56            | G60        | G53             |
|        | G56   | (0, 8, 6, 4, 7, 3, 5, 1, 2, 9) | (4, 3, 2, 9, 5, 6, 8, 7, 0, 1) | -7   | 0   | G55            | G53        | G60             |
|        | G57   | (0, 9, 8, 2, 1, 3, 7, 4, 6, 5) | (7, 6, 3, 4, 5, 0, 2, 9, 1, 8) | -7   | 0   | G59            | G59        | G57             |
|        | G58   | (0, 2, 4, 3, 1, 8, 9, 6, 5, 7) | (3, 9, 0, 6, 5, 4, 7, 2, 8, 1) | -7   | 0   | ?              | ?          | G61             |
|        | G59   | (0, 7, 8, 9, 4, 6, 3, 5, 2, 1) | (3, 2, 6, 5, 7, 1, 8, 0, 9, 4) | -7   | 0   | G57            | G57        | G59             |
|        | G60   | (0, 1, 8, 7, 9, 6, 4, 5, 2, 3) | (6, 9, 5, 0, 2, 1, 8, 3, 4, 7) | -7   | 0   | G53            | G55        | G56             |
|        | G61   | (0, 9, 5, 4, 6, 2, 3, 7, 1, 8) | (7, 2, 1, 0, 3, 5, 8, 9, 6, 4) | -7   | 0   | ?              | ?          | G58             |
| m10n15 | G1089 | (0, 9, 5, 4, 7, 6, 8, 1, 2, 3) | (8, 1, 0, 6, 5, 2, 3, 4, 7, 9) | -3   | 0   | G1090          | G1090      | G1089           |
|        | G1090 | (0, 4, 5, 6, 3, 2, 7, 9, 8, 1) | (6, 7, 8, 2, 1, 4, 3, 5, 0, 9) | -3   | 0   | G1089          | G1089      | G1090           |
|        | G1091 | (0, 7, 8, 5, 4, 9, 2, 3, 6, 1) | (2, 1, 4, 3, 6, 5, 7, 8, 0, 9) | -3   | 0   | G1091          | G1091      | G1091           |
|        | G1092 | (0, 5, 4, 3, 6, 7, 8, 1, 9, 2) | (3, 1, 2, 8, 9, 0, 5, 6, 4, 7) | -3   | 0   | G1093          | G1092      | G1093           |
|        | G1093 | (0, 8, 6, 7, 9, 3, 4, 5, 1, 2) | (3, 2, 1, 4, 5, 6, 8, 0, 7, 9) | -3   | 0   | G1092          | G1093      | G1092           |
| 10n18  | G62   | (0, 1, 9, 3, 7, 6, 4, 5, 8, 2) | (4, 5, 2, 0, 1, 8, 7, 9, 3, 6) | -7   | -2  | —              | —          | ?               |
|        | G63   | (0, 1, 4, 3, 8, 6, 7, 5, 9, 2) | (6, 7, 9, 5, 4, 2, 3, 0, 1, 8) | -7   | 0   | ?              | ?          | G63             |
|        | G64   | (0, 1, 5, 4, 2, 3, 8, 6, 9, 7) | (3, 9, 0, 8, 6, 7, 5, 1, 4, 2) | -7   | 0   | ?              | ?          | G65             |
|        | G65   | (0, 7, 9, 1, 2, 5, 6, 4, 3, 8) | (6, 4, 2, 3, 8, 0, 1, 9, 7, 5) | -7   | 0   | ?              | ?          | G64             |
|        | G66   | (0, 4, 7, 8, 6, 5, 9, 3, 1, 2) | (6, 9, 3, 5, 4, 1, 2, 0, 7, 8) | -7   | 2   | —              | —          | ?               |
| m10n18 | G1094 | (0, 2, 3, 9, 8, 5, 4, 6, 1, 7) | (6, 7, 1, 2, 0, 9, 8, 3, 5, 4) | -3   | -2  | —              | —          | G1094           |
|        | G1095 | (0, 9, 1, 8, 4, 2, 3, 6, 5, 7) | (6, 5, 7, 3, 0, 9, 1, 2, 8, 4) | -3   | 0   | G1097          | G1096      | G1098           |
|        | G1096 | (0, 6, 8, 7, 9, 5, 2, 1, 3, 4) | (7, 9, 2, 1, 3, 0, 6, 4, 5, 8) | -3   | 0   | G1098          | G1095      | G1097           |
|        | G1097 | (0, 6, 8, 7, 9, 5, 2, 1, 3, 4) | (3, 1, 5, 4, 6, 0, 8, 7, 9, 2) | -3   | 0   | G1095          | G1098      | G1096           |
|        | G1098 | (0, 8, 7, 9, 2, 3, 1, 5, 4, 6) | (5, 2, 1, 3, 4, 0, 6, 8, 7, 9) | -3   | 0   | G1096          | G1097      | G1095           |
|        | G1099 | (0, 6, 1, 3, 2, 9, 8, 4, 5, 7) | (3, 2, 4, 9, 8, 7, 5, 6, 0, 1) | -3   | 2   | —              | —          | G1099           |
| 10n20  | G67   | (0, 2, 5, 6, 7, 4, 3, 8, 9, 1) | (3, 6, 7, 8, 1, 9, 5, 0, 2, 4) | 0    | -1  | —              | —          | ?               |
|        | G68   | (0, 9, 1, 3, 4, 6, 5, 7, 8, 2) | (3, 2, 4, 5, 8, 0, 9, 1, 6, 7) | 0    | -1  | —              | —          | ?               |
|        | G69   | (0, 2, 3, 8, 7, 4, 5, 6, 9, 1) | (7, 9, 1, 6, 2, 0, 3, 4, 5, 8) | 0    | 1   | —              | —          | ?               |
|        | G70   | (0, 4, 5, 7, 6, 8, 9, 1, 3, 2) | (5, 6, 1, 3, 2, 4, 7, 8, 0, 9) | 0    | 1   | —              | —          | ?               |
| m10n20 | G1105 | (0, 8, 2, 7, 6, 3, 5, 4, 1, 9) | (4, 1, 9, 0, 8, 7, 2, 6, 5, 3) | -10  | -3  | —              | —          | G1106           |
|        | G1106 | (0, 8, 6, 7, 5, 9, 2, 4, 3, 1) | (2, 1, 9, 0, 8, 3, 6, 7, 5, 4) | -10  | -3  | —              | —          | G1105           |
|        | G1100 | (0, 5, 9, 8, 6, 7, 4, 2, 3, 1) | (2, 8, 7, 1, 0, 3, 9, 5, 6, 4) | -10  | -1  | —              | —          | G1104           |
|        | G1101 | (0, 8, 2, 5, 4, 3, 1, 7, 6, 9) | (7, 1, 9, 0, 6, 8, 5, 4, 2, 3) | -10  | -1  | —              | —          | ?               |
|        | G1102 | (0, 1, 9, 4, 3, 8, 6, 5, 7, 2) | (3, 6, 2, 7, 5, 4, 0, 9, 1, 8) | -10  | -1  | —              | —          | ?               |
|        | G1103 | (0, 6, 4, 5, 3, 9, 7, 8, 2, 1) | (2, 1, 9, 0, 8, 6, 4, 5, 7, 3) | -10  | -1  | —              | —          | ?               |
|        | G1104 | (0, 8, 7, 5, 4, 2, 3, 1, 6, 9) | (7, 6, 1, 9, 8, 5, 0, 4, 2, 3) | -10  | -1  | —              | —          | G1100           |
|        | G1107 | (0, 3, 8, 6, 7, 5, 4, 2, 1, 9) | (6, 7, 5, 9, 4, 1, 0, 8, 3, 2) | -10  | 1   | —              | —          | G1111           |
|        | G1108 | (0, 3, 2, 8, 6, 5, 4, 7, 1, 9) | (6, 7, 5, 4, 1, 3, 9, 0, 8, 2) | -10  | 1   | —              | —          | ?               |
|        | G1109 | (0, 9, 3, 4, 2, 8, 6, 7, 5, 1) | (8, 4, 6, 7, 5, 3, 1, 2, 0, 9) | -10  | 1   | —              | —          | ?               |
|        | G1110 | (0, 5, 7, 6, 4, 9, 8, 3, 1, 2) | (4, 1, 3, 2, 8, 7, 5, 0, 6, 9) | -10  | 1   | —              | —          | ?               |
|        | G1111 | (0, 8, 9, 7, 4, 5, 3, 2, 6, 1) | (7, 5, 6, 2, 8, 1, 0, 4, 3, 9) | -10  | 1   | —              | —          | G1107           |
|        | G1112 | (0, 8, 7, 9, 2, 6, 4, 5, 3, 1) | (7, 6, 4, 5, 8, 3, 1, 2, 0, 9) | -10  | 3   | —              | —          | G1113           |
|        | G1113 | (0, 8, 5, 4, 6, 3, 2, 7, 1, 9) | (6, 4, 3, 7, 2, 1, 9, 0, 8, 5) | -10  | 3   | —              | —          | G1112           |
| 10n21  | G71   | (0, 8, 1, 6, 5, 3, 4, 2, 9, 7) | (4, 2, 9, 0, 7, 6, 8, 5, 3, 1) | -9   | -2  | —              | —          | G74             |
|        | G72   | (0, 8, 7, 5, 6, 3, 4, 2, 9, 1) | (2, 1, 9, 8, 4, 5, 0, 7, 3, 6) | -9   | -2  | —              | —          | G76             |
|        | G73   | (0, 2, 1, 9, 8, 6, 7, 5, 3, 4) | (3, 7, 5, 4, 0, 9, 1, 8, 6, 2) | -9   | -2  | —              | —          | G75             |
|        | G74   | (0, 9, 5, 7, 4, 6, 8, 3, 1, 2) | (3, 1, 0, 2, 8, 9, 5, 7, 4, 6) | -9   | -2  | —              | —          | G71             |
|        | G75   | (0, 9, 5, 2, 7, 4, 8, 3, 1, 6) | (3, 1, 0, 8, 9, 6, 5, 7, 4, 2) | -9   | -2  | —              | —          | G73             |



| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G76   | (0, 8, 7, 4, 6, 5, 3, 1, 2, 9) | (5, 3, 9, 8, 2, 7, 6, 4, 0, 1) | -9   | -2  | –              | –          | G72             |
|        | G77   | (0, 2, 9, 7, 8, 4, 6, 3, 5, 1) | (4, 5, 3, 1, 6, 7, 2, 0, 9, 8) | -9   | 0   | G83            | G86        | G90             |
|        | G78   | (0, 8, 2, 5, 9, 7, 3, 1, 6, 4) | (5, 4, 6, 1, 3, 2, 0, 8, 9, 7) | -9   | 0   | G78            | G87        | G87             |
|        | G79   | (0, 8, 1, 7, 9, 4, 6, 5, 3, 2) | (7, 3, 6, 2, 5, 8, 0, 1, 9, 4) | -9   | 0   | G85            | G92        | G80             |
|        | G80   | (0, 7, 6, 3, 5, 4, 1, 9, 2, 8) | (5, 1, 9, 7, 2, 0, 8, 3, 6, 4) | -9   | 0   | G92            | G85        | G79             |
|        | G81   | (0, 9, 2, 1, 8, 3, 5, 7, 6, 4) | (8, 5, 7, 4, 2, 6, 0, 3, 1, 9) | -9   | 0   | G88            | G88        | G81             |
|        | G82   | (0, 8, 7, 6, 4, 5, 2, 3, 1, 9) | (7, 5, 1, 9, 8, 3, 4, 0, 6, 2) | -9   | 0   | G93            | G82        | G93             |
|        | G83   | (0, 6, 9, 5, 3, 4, 7, 8, 2, 1) | (3, 2, 4, 0, 8, 1, 9, 6, 7, 5) | -9   | 0   | G77            | G90        | G86             |
|        | G84   | (0, 1, 8, 9, 7, 4, 3, 6, 5, 2) | (4, 9, 0, 5, 3, 2, 8, 1, 7, 6) | -9   | 0   | G84            | G84        | G84             |
|        | G85   | (0, 1, 7, 5, 3, 8, 6, 4, 9, 2) | (4, 6, 3, 2, 9, 1, 0, 7, 5, 8) | -9   | 0   | G79            | G80        | G92             |
|        | G86   | (0, 9, 1, 7, 8, 6, 3, 5, 2, 4) | (5, 3, 8, 0, 4, 2, 7, 1, 9, 6) | -9   | 0   | G90            | G77        | G83             |
|        | G87   | (0, 4, 7, 1, 6, 3, 9, 2, 8, 5) | (3, 2, 9, 8, 0, 7, 5, 6, 4, 1) | -9   | 0   | G87            | G78        | G78             |
|        | G88   | (0, 3, 2, 8, 6, 5, 7, 4, 9, 1) | (5, 7, 4, 3, 1, 9, 2, 0, 6, 8) | -9   | 0   | G81            | G81        | G88             |
|        | G89   | (0, 1, 9, 8, 6, 7, 5, 4, 2, 3) | (2, 7, 5, 0, 9, 4, 3, 8, 6, 1) | -9   | 0   | G89            | G91        | G91             |
|        | G90   | (0, 1, 9, 7, 6, 8, 4, 2, 5, 3) | (2, 6, 5, 4, 0, 3, 9, 7, 8, 1) | -9   | 0   | G86            | G83        | G77             |
|        | G91   | (0, 1, 9, 8, 6, 7, 5, 4, 2, 3) | (2, 8, 7, 4, 0, 3, 9, 6, 5, 1) | -9   | 0   | G91            | G89        | G89             |
|        | G92   | (0, 3, 9, 2, 5, 7, 8, 6, 1, 4) | (5, 8, 4, 6, 1, 3, 2, 0, 9, 7) | -9   | 0   | G80            | G79        | G85             |
|        | G93   | (0, 1, 8, 9, 6, 7, 5, 3, 4, 2) | (3, 9, 0, 5, 4, 2, 8, 7, 1, 6) | -9   | 0   | G82            | G93        | G82             |
|        | G94   | (0, 7, 8, 6, 4, 3, 5, 2, 1, 9) | (8, 9, 5, 3, 2, 7, 1, 0, 6, 4) | -9   | 2   | –              | –          | G97             |
|        | G95   | (0, 5, 3, 8, 2, 9, 4, 1, 7, 6) | (4, 2, 9, 1, 0, 7, 8, 6, 5, 3) | -9   | 2   | –              | –          | G96             |
|        | G96   | (0, 1, 9, 7, 8, 6, 5, 3, 2, 4) | (2, 8, 6, 3, 5, 4, 0, 9, 7, 1) | -9   | 2   | –              | –          | G95             |
|        | G97   | (0, 2, 9, 7, 8, 5, 6, 4, 3, 1) | (5, 8, 4, 1, 6, 7, 3, 2, 0, 9) | -9   | 2   | –              | –          | G94             |
|        | G98   | (0, 8, 5, 3, 4, 2, 1, 6, 9, 7) | (6, 4, 2, 9, 1, 0, 7, 8, 5, 3) | -9   | 2   | –              | –          | G99             |
|        | G99   | (0, 1, 9, 4, 6, 8, 5, 7, 3, 2) | (6, 8, 5, 7, 3, 4, 0, 2, 1, 9) | -9   | 2   | –              | –          | G98             |
| m10n21 | G1114 | (0, 4, 6, 7, 2, 8, 9, 3, 5, 1) | (2, 1, 3, 5, 6, 4, 7, 8, 0, 9) | -1   | 0   | ?              | ?          | ?               |
| 10n23  | G100  | (0, 5, 3, 9, 2, 6, 4, 7, 8, 1) | (2, 1, 6, 5, 7, 0, 8, 9, 3, 4) | -4   | -1  | –              | –          | G100            |
|        | G101  | (0, 3, 4, 7, 5, 9, 2, 8, 6, 1) | (7, 8, 2, 3, 1, 4, 6, 5, 0, 9) | -4   | 1   | –              | –          | G101            |
| m10n23 | G1115 | (0, 9, 4, 3, 1, 2, 6, 8, 5, 7) | (8, 6, 7, 5, 4, 0, 1, 3, 9, 2) | -6   | -1  | –              | –          | ?               |
|        | G1116 | (0, 9, 1, 2, 7, 8, 6, 3, 5, 4) | (5, 2, 3, 8, 0, 4, 1, 7, 9, 6) | -6   | -1  | –              | –          | G1116           |
|        | G1117 | (0, 2, 5, 1, 4, 3, 8, 6, 7, 9) | (3, 8, 9, 6, 7, 5, 4, 2, 0, 1) | -6   | -1  | –              | –          | G1119           |
|        | G1118 | (0, 7, 9, 4, 1, 3, 5, 6, 2, 8) | (5, 1, 2, 0, 8, 6, 7, 9, 4, 3) | -6   | -1  | –              | –          | G1123           |
|        | G1119 | (0, 8, 1, 2, 5, 3, 7, 6, 4, 9) | (6, 3, 4, 0, 1, 9, 2, 8, 7, 5) | -6   | -1  | –              | –          | G1117           |
|        | G1120 | (0, 4, 6, 2, 5, 3, 8, 7, 1, 9) | (8, 9, 1, 7, 0, 6, 4, 3, 5, 2) | -6   | -1  | –              | –          | ?               |
|        | G1121 | (0, 6, 1, 5, 3, 8, 2, 7, 9, 4) | (2, 8, 7, 9, 6, 4, 5, 0, 3, 1) | -6   | -1  | –              | –          | G1125           |
|        | G1122 | (0, 8, 6, 7, 1, 4, 5, 3, 2, 9) | (7, 1, 9, 2, 5, 6, 0, 8, 4, 3) | -6   | -1  | –              | –          | G1124           |
|        | G1123 | (0, 1, 5, 3, 6, 4, 8, 2, 9, 7) | (4, 9, 0, 8, 1, 7, 5, 6, 3, 2) | -6   | -1  | –              | –          | G1118           |
|        | G1124 | (0, 4, 8, 7, 5, 6, 2, 3, 1, 9) | (6, 1, 3, 9, 8, 4, 5, 0, 7, 2) | -6   | -1  | –              | –          | G1122           |
|        | G1125 | (0, 4, 2, 7, 1, 9, 5, 3, 6, 8) | (7, 8, 6, 3, 4, 2, 0, 9, 1, 5) | -6   | -1  | –              | –          | G1121           |
|        | G1126 | (0, 1, 9, 4, 5, 8, 7, 3, 6, 2) | (3, 7, 5, 6, 0, 2, 9, 8, 1, 4) | -6   | -1  | –              | –          | ?               |
|        | G1127 | (0, 8, 5, 9, 3, 1, 4, 2, 6, 7) | (5, 4, 1, 2, 0, 6, 9, 7, 8, 3) | -6   | 1   | –              | –          | G1131           |
|        | G1128 | (0, 5, 7, 2, 6, 1, 9, 3, 8, 4) | (3, 1, 4, 9, 0, 8, 5, 7, 6, 2) | -6   | 1   | –              | –          | G1137           |
|        | G1129 | (0, 8, 6, 7, 3, 4, 2, 1, 5, 9) | (7, 2, 9, 4, 5, 1, 0, 6, 8, 3) | -6   | 1   | –              | –          | G1132           |
|        | G1130 | (0, 9, 1, 8, 6, 7, 2, 3, 5, 4) | (8, 5, 7, 3, 0, 4, 6, 1, 2, 9) | -6   | 1   | –              | –          | G1130           |
|        | G1131 | (0, 6, 2, 3, 5, 7, 4, 9, 1, 8) | (5, 4, 9, 1, 2, 0, 8, 6, 7, 3) | -6   | 1   | –              | –          | G1127           |
|        | G1132 | (0, 7, 6, 4, 5, 8, 2, 3, 1, 9) | (6, 5, 1, 9, 3, 4, 7, 0, 8, 2) | -6   | 1   | –              | –          | G1129           |
|        | G1133 | (0, 5, 3, 2, 6, 4, 7, 8, 1, 9) | (4, 2, 1, 7, 0, 8, 9, 5, 6, 3) | -6   | 1   | –              | –          | G1138           |
|        | G1134 | (0, 6, 9, 5, 4, 7, 8, 3, 1, 2) | (8, 1, 4, 3, 0, 2, 6, 7, 5, 9) | -6   | 1   | –              | –          | ?               |
|        | G1135 | (0, 8, 2, 1, 6, 4, 7, 3, 5, 9) | (7, 4, 6, 5, 3, 9, 2, 8, 0, 1) | -6   | 1   | –              | –          | ?               |
|        | G1136 | (0, 2, 9, 1, 5, 6, 4, 3, 8, 7) | (5, 8, 4, 6, 7, 3, 2, 0, 1, 9) | -6   | 1   | –              | –          | ?               |
|        | G1137 | (0, 2, 5, 3, 9, 7, 1, 6, 4, 8) | (3, 7, 9, 8, 6, 4, 5, 2, 0, 1) | -6   | 1   | –              | –          | G1128           |
|        | G1138 | (0, 2, 3, 1, 6, 5, 8, 4, 7, 9) | (8, 9, 7, 5, 4, 2, 3, 0, 1, 6) | -6   | 1   | –              | –          | G1133           |
| 10n24  | G1885 | (0, 4, 6, 2, 9, 8, 7, 3, 1, 5) | (2, 1, 3, 5, 4, 0, 9, 8, 6, 7) | -7   | -2  | –              | –          | G2291           |
|        | G2291 | (0, 8, 1, 5, 4, 3, 9, 7, 2, 6) | (3, 2, 7, 8, 6, 5, 4, 0, 9, 1) | -7   | -2  | –              | –          | G1885           |
|        | G1886 | (0, 7, 1, 5, 9, 8, 6, 4, 2, 3) | (4, 2, 6, 8, 7, 3, 0, 9, 5, 1) | -7   | 0   | G1887          | G2293      | G2292           |
|        | G1887 | (0, 1, 9, 7, 5, 4, 8, 2, 6, 3) | (2, 8, 4, 3, 0, 6, 5, 7, 1, 9) | -7   | 0   | G1886          | G2292      | G2293           |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G2292 | (0, 6, 2, 1, 8, 4, 3, 5, 9, 7) | (8, 9, 7, 5, 3, 2, 6, 0, 4, 1) | -7   | 0   | G2293          | G1887      | G1886           |
|        | G2293 | (0, 4, 6, 5, 1, 8, 7, 3, 9, 2) | (5, 9, 3, 7, 6, 4, 2, 0, 1, 8) | -7   | 0   | G2292          | G1886      | G1887           |
|        | G1888 | (0, 4, 2, 8, 7, 6, 3, 9, 1, 5) | (8, 9, 7, 6, 5, 1, 0, 2, 4, 3) | -7   | 2   | —              | —          | G2294           |
|        | G2294 | (0, 4, 9, 7, 3, 2, 1, 5, 8, 6) | (5, 7, 6, 2, 1, 0, 8, 9, 4, 3) | -7   | 2   | —              | —          | G1888           |
| m10n24 | G2120 | (0, 6, 8, 2, 7, 1, 9, 3, 4, 5) | (4, 1, 5, 9, 0, 8, 6, 7, 2, 3) | -3   | 0   | ?              | ?          | G2528           |
|        | G2121 | (0, 1, 9, 6, 7, 8, 3, 2, 4, 5) | (4, 8, 2, 0, 5, 6, 1, 7, 9, 3) | -3   | 0   | ?              | ?          | G2529           |
|        | G2122 | (0, 7, 8, 3, 4, 5, 2, 6, 1, 9) | (3, 1, 4, 5, 6, 9, 7, 0, 8, 2) | -3   | 0   | G2124          | G2527      | G2530           |
|        | G2123 | (0, 5, 7, 8, 9, 4, 2, 3, 1, 6) | (4, 1, 3, 6, 7, 8, 5, 0, 9, 2) | -3   | 0   | ?              | ?          | G2526           |
|        | G2124 | (0, 2, 4, 1, 3, 7, 5, 6, 8, 9) | (3, 7, 8, 5, 6, 4, 2, 9, 0, 1) | -3   | 0   | G2122          | G2530      | G2527           |
|        | G2526 | (0, 3, 5, 2, 4, 7, 6, 1, 8, 9) | (8, 9, 1, 6, 0, 5, 3, 4, 2, 7) | -3   | 0   | ?              | ?          | G2123           |
|        | G2527 | (0, 3, 1, 5, 6, 4, 7, 8, 9, 2) | (5, 9, 4, 2, 3, 0, 1, 6, 7, 8) | -3   | 0   | G2530          | G2122      | G2124           |
|        | G2528 | (0, 8, 2, 6, 1, 9, 3, 4, 5, 7) | (3, 1, 9, 0, 7, 4, 5, 6, 8, 2) | -3   | 0   | ?              | ?          | G2120           |
|        | G2529 | (0, 9, 1, 2, 3, 7, 8, 6, 4, 5) | (8, 4, 6, 0, 1, 2, 5, 9, 7, 3) | -3   | 0   | ?              | ?          | G2121           |
|        | G2530 | (0, 2, 6, 7, 4, 5, 3, 1, 8, 9) | (8, 9, 1, 3, 0, 2, 6, 4, 5, 7) | -3   | 0   | G2527          | G2124      | G2122           |
| 10n25  | G102  | (0, 8, 9, 1, 6, 5, 2, 3, 4, 7) | (5, 4, 7, 8, 0, 9, 6, 1, 2, 3) | 0    | -1  | —              | —          | G103            |
|        | G103  | (0, 1, 2, 9, 8, 3, 5, 6, 4, 7) | (2, 3, 5, 4, 0, 6, 7, 9, 8, 1) | 0    | -1  | —              | —          | G102            |
|        | G104  | (0, 2, 3, 4, 9, 6, 5, 7, 8, 1) | (5, 7, 1, 2, 3, 0, 8, 9, 4, 6) | 0    | -1  | —              | —          | G105            |
|        | G105  | (0, 9, 1, 2, 8, 4, 3, 5, 6, 7) | (4, 3, 5, 0, 1, 9, 6, 7, 8, 2) | 0    | -1  | —              | —          | G104            |
|        | G106  | (0, 3, 4, 6, 5, 2, 7, 8, 9, 1) | (5, 7, 2, 3, 1, 8, 9, 0, 4, 6) | 0    | 1   | —              | —          | G108            |
|        | G107  | (0, 3, 1, 2, 4, 9, 8, 5, 6, 7) | (6, 9, 8, 0, 1, 7, 3, 2, 4, 5) | 0    | 1   | —              | —          | G109            |
|        | G108  | (0, 1, 2, 4, 3, 9, 5, 6, 8, 7) | (5, 9, 0, 1, 8, 6, 7, 2, 4, 3) | 0    | 1   | —              | —          | G106            |
|        | G109  | (0, 3, 4, 5, 2, 1, 6, 8, 9, 7) | (4, 5, 6, 1, 8, 7, 9, 0, 3, 2) | 0    | 1   | —              | —          | G107            |
| m10n25 | G1147 | (0, 4, 6, 9, 8, 7, 5, 2, 3, 1) | (2, 1, 3, 4, 0, 9, 8, 6, 7, 5) | -10  | -3  | —              | —          | G1148           |
|        | G1148 | (0, 8, 7, 6, 2, 3, 5, 4, 1, 9) | (4, 1, 9, 8, 7, 0, 2, 6, 5, 3) | -10  | -3  | —              | —          | G1147           |
|        | G1139 | (0, 8, 7, 4, 5, 3, 2, 1, 6, 9) | (7, 6, 1, 9, 0, 8, 4, 3, 2, 5) | -10  | -1  | —              | —          | G1145           |
|        | G1140 | (0, 9, 5, 4, 2, 3, 1, 7, 6, 8) | (7, 1, 0, 6, 8, 9, 5, 4, 2, 3) | -10  | -1  | —              | —          | G1144           |
|        | G1141 | (0, 8, 9, 7, 4, 2, 1, 3, 6, 5) | (6, 2, 3, 1, 0, 5, 4, 8, 9, 7) | -10  | -1  | —              | —          | G1142           |
|        | G1142 | (0, 6, 5, 7, 4, 9, 8, 3, 1, 2) | (4, 3, 1, 2, 6, 5, 0, 9, 7, 8) | -10  | -1  | —              | —          | G1141           |
|        | G1143 | (0, 5, 8, 7, 6, 4, 9, 2, 3, 1) | (4, 2, 3, 1, 8, 7, 5, 6, 0, 9) | -10  | -1  | —              | —          | G1146           |
|        | G1144 | (0, 1, 9, 8, 4, 3, 5, 7, 6, 2) | (4, 5, 3, 2, 9, 6, 0, 1, 8, 7) | -10  | -1  | —              | —          | G1140           |
|        | G1145 | (0, 7, 6, 5, 3, 4, 8, 2, 1, 9) | (4, 2, 8, 7, 6, 9, 1, 0, 5, 3) | -10  | -1  | —              | —          | G1139           |
|        | G1146 | (0, 4, 8, 7, 5, 6, 3, 9, 2, 1) | (2, 7, 6, 1, 9, 0, 8, 4, 5, 3) | -10  | -1  | —              | —          | G1143           |
|        | G1149 | (0, 8, 9, 2, 7, 5, 4, 3, 6, 1) | (2, 1, 5, 6, 4, 3, 0, 8, 9, 7) | -10  | 1   | —              | —          | G1152           |
|        | G1150 | (0, 1, 9, 4, 3, 8, 5, 7, 6, 2) | (4, 5, 3, 2, 7, 6, 0, 1, 9, 8) | -10  | 1   | —              | —          | G1153           |
|        | G1151 | (0, 3, 8, 7, 6, 4, 5, 2, 1, 9) | (4, 7, 6, 5, 1, 9, 0, 8, 3, 2) | -10  | 1   | —              | —          | G1154           |
|        | G1152 | (0, 9, 2, 8, 5, 6, 4, 3, 7, 1) | (8, 6, 7, 3, 1, 2, 0, 5, 4, 9) | -10  | 1   | —              | —          | G1149           |
|        | G1153 | (0, 9, 2, 4, 3, 1, 8, 6, 7, 5) | (8, 6, 7, 1, 0, 5, 4, 2, 3, 9) | -10  | 1   | —              | —          | G1150           |
|        | G1154 | (0, 8, 7, 1, 5, 6, 4, 3, 2, 9) | (6, 4, 9, 8, 0, 3, 2, 1, 7, 5) | -10  | 1   | —              | —          | G1151           |
|        | G1155 | (0, 6, 5, 7, 9, 8, 4, 3, 1, 2) | (5, 4, 1, 2, 6, 3, 0, 9, 7, 8) | -10  | 1   | —              | —          | G1156           |
|        | G1156 | (0, 2, 1, 7, 5, 6, 4, 3, 9, 8) | (5, 6, 4, 3, 9, 0, 2, 8, 7, 1) | -10  | 1   | —              | —          | G1155           |
|        | G1157 | (0, 8, 5, 4, 6, 7, 3, 2, 1, 9) | (6, 4, 3, 7, 9, 2, 1, 0, 8, 5) | -10  | 3   | —              | —          | G1158           |
|        | G1158 | (0, 8, 9, 6, 4, 3, 2, 5, 7, 1) | (6, 4, 5, 3, 2, 1, 7, 8, 0, 9) | -10  | 3   | —              | —          | G1157           |
| 10n26  | G1899 | (0, 9, 7, 6, 5, 3, 4, 2, 1, 8) | (4, 1, 0, 8, 7, 6, 9, 5, 3, 2) | -13  | -4  | —              | —          | G2305           |
|        | G2305 | (0, 9, 7, 6, 4, 5, 3, 2, 1, 8) | (5, 1, 0, 8, 7, 9, 6, 4, 3, 2) | -13  | -4  | —              | —          | G1899           |
|        | G1889 | (0, 8, 6, 4, 5, 2, 3, 1, 9, 7) | (5, 1, 0, 7, 9, 6, 8, 4, 3, 2) | -13  | -2  | —              | —          | G2295           |
|        | G1890 | (0, 6, 5, 7, 4, 9, 3, 2, 1, 8) | (4, 1, 9, 0, 8, 6, 7, 5, 3, 2) | -13  | -2  | —              | —          | G2301           |
|        | G1891 | (0, 8, 5, 2, 7, 6, 4, 3, 1, 9) | (6, 2, 1, 9, 0, 8, 7, 5, 4, 3) | -13  | -2  | —              | —          | G2299           |
|        | G1892 | (0, 1, 7, 6, 9, 8, 5, 3, 4, 2) | (3, 5, 4, 0, 2, 1, 9, 7, 8, 6) | -13  | -2  | —              | —          | G2297           |
|        | G1893 | (0, 8, 7, 6, 4, 5, 2, 3, 1, 9) | (5, 2, 9, 8, 7, 1, 0, 6, 4, 3) | -13  | -2  | —              | —          | G2298           |
|        | G1894 | (0, 2, 9, 6, 8, 7, 1, 5, 4, 3) | (4, 7, 3, 1, 2, 0, 9, 8, 6, 5) | -13  | -2  | —              | —          | G2300           |
|        | G1895 | (0, 8, 7, 3, 6, 2, 5, 4, 1, 9) | (4, 2, 1, 8, 9, 7, 0, 6, 5, 3) | -13  | -2  | —              | —          | G2296           |
|        | G1896 | (0, 9, 7, 8, 6, 5, 3, 4, 2, 1) | (3, 2, 0, 4, 9, 7, 6, 1, 8, 5) | -13  | -2  | —              | —          | G2302           |
|        | G1897 | (0, 1, 9, 7, 4, 8, 6, 5, 3, 2) | (3, 6, 5, 2, 0, 1, 9, 7, 8, 4) | -13  | -2  | —              | —          | G2303           |
|        | G1898 | (0, 7, 9, 8, 4, 6, 3, 5, 1, 2) | (5, 1, 3, 2, 0, 9, 7, 8, 4, 6) | -13  | -2  | —              | —          | G2304           |
|        | G2295 | (0, 2, 9, 1, 8, 6, 7, 4, 5, 3) | (4, 7, 5, 3, 2, 0, 9, 8, 1, 6) | -13  | -2  | —              | —          | G1889           |

| Knot | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|      | G2296 | (0, 9, 7, 5, 4, 2, 3, 1, 8, 6) | (3, 1, 0, 8, 6, 7, 9, 5, 4, 2) | -13  | -2  | –              | –          | G1895           |
|      | G2297 | (0, 8, 9, 7, 4, 3, 6, 5, 1, 2) | (5, 1, 3, 2, 0, 8, 9, 7, 4, 6) | -13  | -2  | –              | –          | G1892           |
|      | G2298 | (0, 8, 9, 7, 6, 5, 3, 4, 2, 1) | (3, 2, 4, 0, 8, 7, 6, 1, 9, 5) | -13  | -2  | –              | –          | G1893           |
|      | G2299 | (0, 9, 7, 5, 4, 2, 3, 1, 8, 6) | (3, 1, 0, 9, 6, 5, 8, 7, 4, 2) | -13  | -2  | –              | –          | G1891           |
|      | G2300 | (0, 8, 7, 6, 2, 4, 3, 1, 9, 5) | (3, 1, 9, 8, 7, 0, 6, 5, 4, 2) | -13  | -2  | –              | –          | G1894           |
|      | G2301 | (0, 6, 9, 8, 4, 3, 5, 2, 7, 1) | (3, 1, 2, 0, 9, 7, 8, 6, 4, 5) | -13  | -2  | –              | –          | G1890           |
|      | G2302 | (0, 9, 7, 8, 6, 5, 3, 4, 2, 1) | (8, 2, 1, 4, 0, 7, 6, 9, 5, 3) | -13  | -2  | –              | –          | G1896           |
|      | G2303 | (0, 3, 2, 9, 1, 8, 6, 7, 5, 4) | (5, 8, 7, 3, 4, 2, 0, 1, 9, 6) | -13  | -2  | –              | –          | G1897           |
|      | G2304 | (0, 9, 7, 5, 6, 3, 1, 4, 2, 8) | (4, 2, 1, 8, 0, 9, 5, 7, 6, 3) | -13  | -2  | –              | –          | G1898           |
|      | G1900 | (0, 8, 7, 5, 6, 4, 2, 3, 1, 9) | (6, 4, 3, 8, 1, 9, 7, 0, 5, 2) | -13  | 0   | G1912          | G2308      | G2313           |
|      | G1901 | (0, 8, 2, 9, 4, 7, 6, 5, 3, 1) | (6, 4, 5, 3, 1, 2, 8, 0, 7, 9) | -13  | 0   | G1908          | G2307      | G2317           |
|      | G1902 | (0, 4, 3, 2, 9, 7, 5, 8, 6, 1) | (7, 8, 5, 6, 4, 3, 1, 2, 0, 9) | -13  | 0   | G1906          | G2315      | G2306           |
|      | G1903 | (0, 8, 6, 3, 2, 7, 5, 4, 1, 9) | (5, 4, 2, 1, 9, 0, 8, 6, 7, 3) | -13  | 0   | G1904          | G2319      | G2309           |
|      | G1904 | (0, 9, 7, 2, 1, 8, 6, 4, 5, 3) | (8, 6, 4, 5, 3, 2, 0, 9, 1, 7) | -13  | 0   | G1903          | G2309      | G2319           |
|      | G1905 | (0, 7, 6, 5, 4, 2, 3, 1, 9, 8) | (4, 3, 9, 7, 1, 6, 0, 8, 5, 2) | -13  | 0   | G1910          | G2311      | G2316           |
|      | G1906 | (0, 4, 3, 8, 6, 9, 7, 5, 2, 1) | (6, 7, 5, 4, 2, 3, 1, 0, 8, 9) | -13  | 0   | G1902          | G2306      | G2315           |
|      | G1907 | (0, 9, 3, 2, 8, 6, 7, 5, 1, 4) | (8, 5, 7, 4, 3, 1, 2, 0, 9, 6) | -13  | 0   | G1911          | G2310      | G2314           |
|      | G1908 | (0, 8, 7, 5, 3, 2, 1, 4, 9, 6) | (4, 2, 9, 1, 8, 0, 6, 7, 5, 3) | -13  | 0   | G1901          | G2317      | G2307           |
|      | G1909 | (0, 5, 4, 2, 7, 6, 3, 1, 9, 8) | (4, 3, 1, 9, 0, 8, 7, 6, 5, 2) | -13  | 0   | G1913          | G2318      | G2312           |
|      | G1910 | (0, 9, 8, 7, 4, 6, 5, 3, 1, 2) | (3, 7, 5, 1, 0, 2, 9, 6, 4, 8) | -13  | 0   | G1905          | G2316      | G2311           |
|      | G1911 | (0, 4, 9, 3, 2, 8, 6, 7, 5, 1) | (6, 8, 7, 5, 4, 3, 1, 2, 0, 9) | -13  | 0   | G1907          | G2314      | G2310           |
|      | G1912 | (0, 2, 4, 1, 6, 9, 8, 5, 7, 3) | (8, 6, 7, 5, 3, 4, 2, 0, 1, 9) | -13  | 0   | G1900          | G2313      | G2308           |
|      | G1913 | (0, 9, 4, 6, 5, 3, 1, 8, 7, 2) | (3, 1, 0, 2, 9, 8, 7, 6, 4, 5) | -13  | 0   | G1909          | G2312      | G2318           |
|      | G2306 | (0, 6, 5, 9, 8, 7, 2, 4, 1, 3) | (5, 4, 2, 3, 1, 0, 8, 9, 6, 7) | -13  | 0   | G2315          | G1906      | G1902           |
|      | G2307 | (0, 9, 6, 8, 4, 3, 2, 5, 1, 7) | (5, 2, 0, 3, 1, 9, 7, 8, 6, 4) | -13  | 0   | G2317          | G1901      | G1908           |
|      | G2308 | (0, 5, 8, 6, 4, 7, 2, 9, 3, 1) | (4, 2, 3, 1, 9, 0, 8, 6, 7, 5) | -13  | 0   | G2313          | G1900      | G1912           |
|      | G2309 | (0, 6, 5, 9, 8, 4, 7, 3, 1, 2) | (5, 4, 1, 3, 2, 9, 0, 8, 6, 7) | -13  | 0   | G2319          | G1904      | G1903           |
|      | G2310 | (0, 5, 4, 2, 9, 7, 8, 6, 3, 1) | (7, 8, 6, 5, 4, 1, 3, 2, 0, 9) | -13  | 0   | G2314          | G1907      | G1911           |
|      | G2311 | (0, 8, 9, 7, 4, 6, 5, 3, 2, 1) | (4, 3, 5, 0, 8, 2, 7, 1, 9, 6) | -13  | 0   | G2316          | G1905      | G1910           |
|      | G2312 | (0, 9, 3, 2, 7, 6, 8, 5, 1, 4) | (8, 6, 5, 4, 3, 1, 2, 0, 7, 9) | -13  | 0   | G2318          | G1913      | G1909           |
|      | G2313 | (0, 8, 7, 5, 6, 4, 2, 3, 1, 9) | (6, 2, 9, 1, 3, 0, 5, 8, 7, 4) | -13  | 0   | G2308          | G1912      | G1900           |
|      | G2314 | (0, 9, 7, 6, 5, 3, 4, 2, 1, 8) | (6, 1, 5, 4, 0, 8, 9, 7, 3, 2) | -13  | 0   | G2310          | G1911      | G1907           |
|      | G2315 | (0, 4, 3, 9, 6, 8, 5, 7, 2, 1) | (6, 7, 5, 4, 2, 3, 0, 1, 9, 8) | -13  | 0   | G2306          | G1902      | G1906           |
|      | G2316 | (0, 9, 7, 6, 8, 5, 3, 4, 2, 1) | (3, 1, 5, 0, 4, 2, 7, 9, 8, 6) | -13  | 0   | G2311          | G1910      | G1905           |
|      | G2317 | (0, 6, 8, 5, 4, 7, 3, 9, 2, 1) | (3, 1, 4, 2, 9, 0, 8, 6, 7, 5) | -13  | 0   | G2307          | G1908      | G1901           |
|      | G2318 | (0, 9, 5, 8, 4, 1, 3, 2, 7, 6) | (3, 1, 0, 2, 9, 7, 8, 6, 5, 4) | -13  | 0   | G2312          | G1909      | G1913           |
|      | G2319 | (0, 9, 3, 2, 8, 6, 7, 5, 1, 4) | (6, 5, 7, 4, 3, 1, 2, 0, 8, 9) | -13  | 0   | G2309          | G1903      | G1904           |
|      | G1914 | (0, 8, 6, 5, 3, 2, 7, 4, 1, 9) | (6, 5, 4, 2, 1, 9, 0, 8, 7, 3) | -13  | 2   | –              | –          | G2320           |
|      | G1915 | (0, 9, 7, 8, 6, 5, 3, 4, 2, 1) | (6, 3, 0, 5, 4, 2, 7, 1, 9, 8) | -13  | 2   | –              | –          | G2323           |
|      | G1916 | (0, 1, 7, 9, 6, 8, 4, 3, 5, 2) | (6, 8, 4, 5, 3, 2, 0, 9, 1, 7) | -13  | 2   | –              | –          | G2328           |
|      | G1917 | (0, 7, 6, 5, 9, 4, 1, 3, 2, 8) | (6, 5, 3, 1, 2, 0, 8, 9, 7, 4) | -13  | 2   | –              | –          | G2325           |
|      | G1918 | (0, 9, 8, 2, 6, 5, 7, 4, 1, 3) | (8, 7, 5, 4, 3, 1, 2, 0, 6, 9) | -13  | 2   | –              | –          | G2321           |
|      | G1919 | (0, 8, 5, 4, 7, 3, 6, 2, 1, 9) | (6, 4, 3, 9, 2, 0, 1, 8, 7, 5) | -13  | 2   | –              | –          | G2324           |
|      | G1920 | (0, 8, 6, 4, 5, 2, 3, 1, 9, 7) | (5, 4, 3, 9, 1, 8, 0, 7, 6, 2) | -13  | 2   | –              | –          | G2326           |
|      | G1921 | (0, 8, 9, 7, 4, 3, 6, 5, 1, 2) | (6, 4, 5, 3, 1, 0, 2, 8, 7, 9) | -13  | 2   | –              | –          | G2329           |
|      | G1922 | (0, 9, 7, 6, 4, 8, 5, 3, 1, 2) | (8, 4, 5, 3, 1, 2, 0, 7, 6, 9) | -13  | 2   | –              | –          | G2327           |
|      | G1923 | (0, 8, 6, 7, 4, 5, 3, 2, 1, 9) | (6, 5, 3, 9, 8, 2, 1, 0, 7, 4) | -13  | 2   | –              | –          | G2322           |
|      | G2320 | (0, 8, 5, 3, 4, 2, 1, 9, 7, 6) | (4, 2, 9, 8, 1, 0, 7, 6, 5, 3) | -13  | 2   | –              | –          | G1914           |
|      | G2321 | (0, 6, 4, 2, 1, 3, 9, 8, 7, 5) | (3, 1, 0, 9, 5, 8, 7, 6, 4, 2) | -13  | 2   | –              | –          | G1918           |
|      | G2322 | (0, 9, 7, 8, 6, 5, 4, 2, 3, 1) | (6, 2, 0, 5, 4, 3, 1, 7, 9, 8) | -13  | 2   | –              | –          | G1923           |
|      | G2323 | (0, 9, 7, 8, 6, 5, 3, 4, 2, 1) | (8, 6, 2, 5, 4, 1, 7, 0, 9, 3) | -13  | 2   | –              | –          | G1915           |
|      | G2324 | (0, 8, 5, 3, 4, 2, 1, 9, 7, 6) | (4, 2, 1, 7, 9, 0, 8, 6, 5, 3) | -13  | 2   | –              | –          | G1919           |
|      | G2325 | (0, 4, 9, 6, 8, 7, 3, 2, 5, 1) | (6, 7, 5, 3, 4, 2, 1, 9, 0, 8) | -13  | 2   | –              | –          | G1917           |
|      | G2326 | (0, 8, 9, 6, 7, 5, 2, 4, 1, 3) | (7, 2, 5, 4, 3, 1, 0, 8, 6, 9) | -13  | 2   | –              | –          | G1920           |
|      | G2327 | (0, 9, 7, 8, 6, 3, 5, 2, 1, 4) | (8, 5, 3, 4, 2, 0, 1, 7, 6, 9) | -13  | 2   | –              | –          | G1922           |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G2328 | (0, 6, 4, 7, 5, 2, 3, 1, 9, 8) | (5, 2, 1, 3, 9, 8, 0, 7, 6, 4) | -13  | 2   | –              | –          | G1916           |
|        | G2329 | (0, 1, 7, 6, 9, 8, 5, 3, 4, 2) | (6, 8, 5, 3, 4, 2, 0, 9, 1, 7) | -13  | 2   | –              | –          | G1921           |
|        | G1924 | (0, 7, 6, 4, 5, 3, 2, 1, 9, 8) | (6, 5, 3, 9, 2, 1, 0, 8, 7, 4) | -13  | 4   | –              | –          | G2330           |
|        | G2330 | (0, 7, 6, 5, 3, 4, 2, 1, 9, 8) | (6, 5, 4, 2, 9, 1, 0, 8, 7, 3) | -13  | 4   | –              | –          | G1924           |
| m10n26 | G2125 | (0, 1, 3, 4, 5, 2, 6, 8, 9, 7) | (2, 4, 5, 6, 8, 7, 9, 0, 3, 1) | 3    | 0   | G2126          | G2531      | G2532           |
|        | G2126 | (0, 1, 2, 4, 5, 8, 6, 7, 9, 3) | (7, 9, 0, 1, 3, 4, 2, 5, 6, 8) | 3    | 0   | G2125          | G2532      | G2531           |
|        | G2531 | (0, 2, 3, 4, 1, 5, 6, 8, 9, 7) | (3, 4, 5, 8, 6, 7, 9, 0, 2, 1) | 3    | 0   | G2532          | G2125      | G2126           |
|        | G2532 | (0, 1, 3, 4, 8, 5, 6, 7, 9, 2) | (7, 9, 0, 2, 3, 1, 4, 5, 6, 8) | 3    | 0   | G2531          | G2126      | G2125           |
| 10n27  | G110  | (0, 9, 8, 6, 3, 2, 1, 5, 4, 7) | (5, 1, 0, 9, 7, 6, 4, 3, 8, 2) | -11  | -2  | –              | –          | G114            |
|        | G111  | (0, 2, 1, 8, 7, 9, 6, 5, 3, 4) | (5, 9, 3, 2, 0, 4, 1, 8, 7, 6) | -11  | -2  | –              | –          | G112            |
|        | G112  | (0, 9, 6, 7, 5, 4, 2, 1, 3, 8) | (4, 1, 0, 3, 8, 7, 6, 5, 9, 2) | -11  | -2  | –              | –          | G111            |
|        | G113  | (0, 9, 7, 6, 4, 5, 3, 2, 1, 8) | (6, 5, 1, 8, 7, 0, 9, 4, 3, 2) | -11  | -2  | –              | –          | G115            |
|        | G114  | (0, 6, 5, 4, 8, 7, 3, 9, 2, 1) | (2, 1, 9, 7, 6, 0, 5, 4, 8, 3) | -11  | -2  | –              | –          | G110            |
|        | G115  | (0, 9, 7, 6, 5, 3, 4, 2, 1, 8) | (5, 4, 1, 8, 7, 6, 0, 9, 3, 2) | -11  | -2  | –              | –          | G113            |
|        | G116  | (0, 9, 4, 6, 3, 2, 8, 1, 7, 5) | (8, 6, 7, 1, 0, 5, 4, 3, 2, 9) | -11  | 0   | G118           | G124       | G122            |
|        | G117  | (0, 9, 7, 8, 6, 5, 2, 1, 4, 3) | (8, 2, 1, 4, 3, 0, 7, 6, 9, 5) | -11  | 0   | G121           | G119       | G125            |
|        | G118  | (0, 5, 4, 9, 7, 3, 6, 2, 1, 8) | (7, 8, 6, 5, 2, 1, 0, 9, 4, 3) | -11  | 0   | G116           | G122       | G124            |
|        | G119  | (0, 7, 4, 3, 6, 2, 5, 9, 8, 1) | (3, 2, 9, 8, 1, 0, 7, 6, 4, 5) | -11  | 0   | G125           | G117       | G121            |
|        | G120  | (0, 1, 8, 6, 9, 7, 5, 3, 2, 4) | (5, 9, 4, 0, 3, 2, 1, 8, 6, 7) | -11  | 0   | ?              | ?          | G123            |
|        | G121  | (0, 9, 2, 1, 7, 5, 4, 8, 6, 3) | (5, 4, 7, 6, 3, 2, 0, 1, 9, 8) | -11  | 0   | G117           | G125       | G119            |
|        | G122  | (0, 8, 3, 2, 9, 7, 6, 4, 1, 5) | (4, 2, 1, 6, 5, 0, 9, 8, 7, 3) | -11  | 0   | G124           | G118       | G116            |
|        | G123  | (0, 2, 9, 1, 7, 8, 5, 4, 6, 3) | (5, 6, 4, 8, 0, 3, 2, 1, 9, 7) | -11  | 0   | ?              | ?          | G120            |
|        | G124  | (0, 9, 4, 2, 7, 1, 8, 6, 5, 3) | (6, 1, 0, 8, 9, 5, 4, 3, 2, 7) | -11  | 0   | G122           | G116       | G118            |
|        | G125  | (0, 9, 7, 8, 6, 5, 2, 1, 4, 3) | (4, 2, 1, 5, 3, 0, 7, 6, 9, 8) | -11  | 0   | G119           | G121       | G117            |
|        | G126  | (0, 1, 9, 8, 5, 7, 6, 3, 2, 4) | (8, 7, 6, 3, 0, 4, 2, 1, 5, 9) | -11  | 2   | –              | –          | G130            |
|        | G127  | (0, 9, 2, 8, 4, 3, 7, 6, 5, 1) | (8, 3, 7, 6, 1, 5, 4, 2, 0, 9) | -11  | 2   | –              | –          | G128            |
|        | G128  | (0, 3, 2, 6, 5, 4, 1, 9, 8, 7) | (5, 9, 4, 3, 1, 0, 8, 7, 6, 2) | -11  | 2   | –              | –          | G127            |
|        | G129  | (0, 7, 6, 4, 5, 3, 2, 1, 9, 8) | (6, 5, 9, 8, 2, 1, 0, 7, 4, 3) | -11  | 2   | –              | –          | G131            |
|        | G130  | (0, 5, 7, 6, 4, 3, 1, 2, 9, 8) | (6, 9, 3, 2, 1, 0, 5, 8, 7, 4) | -11  | 2   | –              | –          | G126            |
|        | G131  | (0, 7, 6, 5, 3, 4, 2, 1, 9, 8) | (6, 5, 4, 9, 8, 1, 0, 7, 3, 2) | -11  | 2   | –              | –          | G129            |
| m10n27 | G1159 | (0, 3, 4, 1, 2, 8, 9, 5, 6, 7) | (6, 8, 9, 7, 0, 1, 3, 2, 4, 5) | 1    | 0   | G1164          | G1162      | G1170           |
|        | G1160 | (0, 5, 6, 7, 1, 2, 4, 8, 3, 9) | (6, 7, 8, 2, 3, 9, 0, 1, 5, 4) | 1    | 0   | G1161          | G1168      | G1169           |
|        | G1161 | (0, 2, 3, 7, 8, 9, 4, 5, 1, 6) | (4, 5, 1, 2, 6, 7, 8, 0, 9, 3) | 1    | 0   | G1160          | G1169      | G1168           |
|        | G1162 | (0, 3, 7, 8, 4, 5, 6, 1, 2, 9) | (8, 9, 1, 2, 0, 3, 4, 5, 7, 6) | 1    | 0   | G1170          | G1159      | G1164           |
|        | G1163 | (0, 1, 7, 4, 2, 5, 6, 3, 8, 9) | (4, 5, 3, 8, 6, 7, 0, 9, 1, 2) | 1    | 0   | G1166          | G1165      | G1167           |
|        | G1164 | (0, 1, 4, 7, 8, 9, 5, 6, 2, 3) | (5, 6, 8, 9, 0, 2, 1, 3, 4, 7) | 1    | 0   | G1159          | G1170      | G1162           |
|        | G1165 | (0, 1, 2, 8, 4, 5, 7, 3, 6, 9) | (4, 3, 7, 5, 6, 9, 0, 8, 1, 2) | 1    | 0   | G1167          | G1163      | G1166           |
|        | G1166 | (0, 1, 4, 2, 3, 6, 7, 5, 9, 8) | (3, 6, 9, 5, 7, 8, 4, 0, 1, 2) | 1    | 0   | G1163          | G1167      | G1165           |
|        | G1167 | (0, 1, 3, 2, 5, 6, 4, 9, 7, 8) | (3, 4, 9, 6, 7, 0, 8, 5, 1, 2) | 1    | 0   | G1165          | G1166      | G1163           |
|        | G1168 | (0, 4, 5, 1, 2, 3, 7, 6, 8, 9) | (8, 9, 3, 4, 6, 0, 5, 1, 2, 7) | 1    | 0   | G1169          | G1160      | G1161           |
|        | G1169 | (0, 9, 3, 4, 5, 1, 2, 6, 7, 8) | (5, 1, 6, 0, 2, 3, 7, 8, 9, 4) | 1    | 0   | G1168          | G1161      | G1160           |
|        | G1170 | (0, 8, 9, 1, 2, 3, 5, 4, 6, 7) | (6, 3, 4, 7, 0, 1, 2, 8, 9, 5) | 1    | 0   | G1162          | G1164      | G1159           |
| 10n28  | G132  | (0, 8, 9, 2, 3, 5, 4, 6, 1, 7) | (6, 1, 3, 4, 7, 0, 8, 9, 5, 2) | -2   | -1  | –              | –          | G138            |
|        | G133  | (0, 7, 5, 6, 8, 2, 3, 9, 4, 1) | (2, 1, 9, 0, 3, 4, 5, 7, 8, 6) | -2   | -1  | –              | –          | G143            |
|        | G134  | (0, 5, 6, 7, 8, 3, 4, 2, 9, 1) | (2, 8, 1, 9, 4, 5, 0, 6, 3, 7) | -2   | -1  | –              | –          | G142            |
|        | G135  | (0, 5, 1, 8, 2, 3, 4, 7, 9, 6) | (7, 9, 6, 3, 4, 5, 0, 1, 2, 8) | -2   | -1  | –              | –          | G139            |
|        | G136  | (0, 9, 2, 1, 3, 4, 8, 6, 7, 5) | (6, 4, 7, 5, 0, 1, 2, 9, 3, 8) | -2   | -1  | –              | –          | G150            |
|        | G137  | (0, 1, 3, 4, 2, 9, 5, 7, 6, 8) | (2, 5, 7, 8, 6, 3, 0, 4, 9, 1) | -2   | -1  | –              | –          | G151            |
|        | G138  | (0, 8, 3, 4, 6, 5, 7, 9, 1, 2) | (5, 1, 9, 2, 3, 8, 0, 4, 6, 7) | -2   | -1  | –              | –          | G132            |
|        | G139  | (0, 1, 2, 9, 6, 8, 7, 3, 4, 5) | (2, 3, 7, 4, 0, 5, 9, 6, 8, 1) | -2   | -1  | –              | –          | G135            |
|        | G140  | (0, 6, 8, 1, 5, 4, 2, 3, 7, 9) | (4, 2, 3, 7, 8, 6, 5, 9, 0, 1) | -2   | -1  | –              | –          | G144            |
|        | G141  | (0, 1, 9, 2, 5, 8, 6, 7, 3, 4) | (2, 6, 3, 7, 0, 1, 9, 4, 5, 8) | -2   | -1  | –              | –          | ?               |
|        | G142  | (0, 2, 1, 9, 7, 8, 3, 4, 5, 6) | (5, 8, 4, 2, 0, 6, 7, 9, 1, 3) | -2   | -1  | –              | –          | G134            |
|        | G143  | (0, 6, 4, 5, 7, 8, 9, 2, 3, 1) | (2, 1, 8, 3, 9, 0, 4, 6, 7, 5) | -2   | -1  | –              | –          | G133            |
|        | G144  | (0, 1, 9, 2, 3, 5, 8, 7, 4, 6) | (4, 7, 3, 5, 6, 0, 1, 9, 8, 2) | -2   | -1  | –              | –          | G140            |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G145  | (0, 7, 8, 9, 2, 3, 5, 6, 4, 1) | (3, 1, 6, 7, 4, 8, 0, 2, 9, 5) | -2   | -1  | —              | —          | G149            |
|        | G146  | (0, 7, 5, 3, 4, 6, 8, 9, 1, 2) | (4, 1, 8, 7, 2, 9, 0, 3, 5, 6) | -2   | -1  | —              | —          | ?               |
|        | G147  | (0, 6, 7, 8, 3, 4, 5, 2, 1, 9) | (8, 9, 1, 4, 5, 6, 0, 7, 3, 2) | -2   | -1  | —              | —          | G148            |
|        | G148  | (0, 1, 2, 7, 8, 9, 5, 6, 4, 3) | (4, 9, 0, 1, 3, 6, 7, 2, 8, 5) | -2   | -1  | —              | —          | G147            |
|        | G149  | (0, 1, 3, 7, 4, 5, 9, 8, 6, 2) | (5, 6, 8, 0, 2, 3, 4, 1, 9, 7) | -2   | -1  | —              | —          | G145            |
|        | G150  | (0, 9, 2, 1, 3, 4, 8, 6, 7, 5) | (6, 3, 4, 5, 7, 0, 2, 9, 1, 8) | -2   | -1  | —              | —          | G136            |
|        | G151  | (0, 1, 4, 6, 5, 7, 3, 8, 9, 2) | (3, 5, 9, 2, 0, 1, 6, 4, 7, 8) | -2   | -1  | —              | —          | G137            |
|        | G152  | (0, 2, 9, 8, 1, 3, 4, 7, 5, 6) | (4, 8, 7, 5, 6, 0, 1, 3, 9, 2) | -2   | 1   | —              | —          | G164            |
|        | G153  | (0, 9, 7, 8, 4, 5, 6, 1, 2, 3) | (8, 5, 1, 6, 7, 0, 2, 3, 4, 9) | -2   | 1   | —              | —          | G161            |
|        | G154  | (0, 7, 5, 6, 8, 9, 2, 3, 4, 1) | (6, 2, 9, 1, 3, 7, 4, 5, 0, 8) | -2   | 1   | —              | —          | G170            |
|        | G155  | (0, 7, 9, 2, 3, 4, 8, 5, 1, 6) | (8, 4, 5, 6, 1, 2, 3, 0, 7, 9) | -2   | 1   | —              | —          | G167            |
|        | G156  | (0, 8, 9, 2, 3, 4, 6, 7, 5, 1) | (6, 4, 5, 7, 1, 2, 8, 3, 0, 9) | -2   | 1   | —              | —          | G160            |
|        | G157  | (0, 2, 9, 7, 8, 3, 4, 5, 6, 1) | (4, 8, 5, 1, 6, 7, 2, 0, 3, 9) | -2   | 1   | —              | —          | G166            |
|        | G158  | (0, 1, 3, 4, 6, 8, 9, 7, 5, 2) | (6, 7, 9, 2, 3, 0, 5, 4, 1, 8) | -2   | 1   | —              | —          | ?               |
|        | G159  | (0, 1, 7, 8, 6, 9, 2, 5, 3, 4) | (6, 9, 0, 5, 3, 4, 7, 1, 8, 2) | -2   | 1   | —              | —          | ?               |
|        | G160  | (0, 7, 2, 8, 9, 3, 5, 6, 4, 1) | (5, 3, 4, 6, 7, 8, 1, 2, 0, 9) | -2   | 1   | —              | —          | G156            |
|        | G161  | (0, 8, 7, 4, 5, 6, 1, 2, 3, 9) | (7, 6, 2, 9, 3, 4, 5, 8, 0, 1) | -2   | 1   | —              | —          | G153            |
|        | G162  | (0, 8, 9, 7, 1, 2, 4, 3, 6, 5) | (7, 4, 6, 3, 5, 8, 0, 1, 2, 9) | -2   | 1   | —              | —          | G171            |
|        | G163  | (0, 6, 1, 3, 2, 4, 5, 8, 9, 7) | (5, 2, 8, 9, 7, 0, 3, 4, 6, 1) | -2   | 1   | —              | —          | G169            |
|        | G164  | (0, 2, 6, 7, 5, 4, 8, 1, 3, 9) | (8, 9, 0, 4, 3, 1, 2, 6, 7, 5) | -2   | 1   | —              | —          | G152            |
|        | G165  | (0, 3, 4, 9, 5, 7, 6, 8, 1, 2) | (4, 5, 8, 6, 1, 2, 0, 3, 7, 9) | -2   | 1   | —              | —          | G168            |
|        | G166  | (0, 1, 2, 3, 8, 9, 7, 5, 4, 6) | (3, 5, 7, 9, 0, 6, 4, 2, 8, 1) | -2   | 1   | —              | —          | G157            |
|        | G167  | (0, 1, 2, 8, 7, 9, 6, 3, 4, 5) | (4, 7, 9, 6, 0, 5, 1, 8, 2, 3) | -2   | 1   | —              | —          | G155            |
|        | G168  | (0, 2, 1, 3, 9, 6, 4, 5, 7, 8) | (7, 9, 4, 8, 5, 2, 0, 1, 3, 6) | -2   | 1   | —              | —          | G165            |
|        | G169  | (0, 1, 3, 5, 7, 6, 8, 9, 4, 2) | (5, 6, 8, 2, 4, 9, 0, 3, 1, 7) | -2   | 1   | —              | —          | G163            |
|        | G170  | (0, 6, 4, 3, 7, 8, 5, 9, 1, 2) | (5, 3, 1, 8, 9, 0, 2, 4, 6, 7) | -2   | 1   | —              | —          | G154            |
|        | G171  | (0, 8, 9, 7, 1, 2, 4, 3, 6, 5) | (7, 2, 6, 3, 4, 5, 0, 8, 1, 9) | -2   | 1   | —              | —          | G162            |
| m10n28 | G1171 | (0, 4, 3, 2, 9, 6, 5, 7, 8, 1) | (2, 1, 8, 5, 4, 0, 9, 3, 6, 7) | -8   | -1  | —              | —          | G1176           |
|        | G1172 | (0, 7, 6, 1, 5, 8, 9, 4, 3, 2) | (5, 3, 8, 7, 9, 0, 2, 1, 6, 4) | -8   | -1  | —              | —          | G1173           |
|        | G1173 | (0, 5, 4, 6, 7, 9, 8, 3, 1, 2) | (3, 2, 7, 8, 1, 5, 0, 9, 6, 4) | -8   | -1  | —              | —          | G1172           |
|        | G1174 | (0, 2, 3, 6, 5, 4, 9, 8, 7, 1) | (4, 8, 1, 2, 7, 6, 5, 3, 0, 9) | -8   | -1  | —              | —          | G1175           |
|        | G1175 | (0, 9, 6, 4, 3, 2, 7, 8, 1, 5) | (8, 2, 1, 0, 5, 4, 3, 6, 7, 9) | -8   | -1  | —              | —          | G1174           |
|        | G1176 | (0, 3, 4, 6, 5, 9, 8, 7, 2, 1) | (2, 5, 8, 1, 7, 6, 3, 0, 9, 4) | -8   | -1  | —              | —          | G1171           |
|        | G1177 | (0, 4, 7, 8, 3, 2, 1, 9, 6, 5) | (6, 8, 9, 2, 1, 0, 5, 4, 3, 7) | -8   | 1   | —              | —          | G1179           |
|        | G1178 | (0, 3, 4, 6, 5, 2, 9, 8, 7, 1) | (4, 5, 8, 2, 1, 7, 6, 3, 0, 9) | -8   | 1   | —              | —          | G1180           |
|        | G1179 | (0, 4, 3, 2, 7, 6, 5, 8, 9, 1) | (2, 1, 8, 6, 5, 4, 9, 0, 3, 7) | -8   | 1   | —              | —          | G1177           |
|        | G1180 | (0, 9, 4, 3, 2, 6, 5, 7, 8, 1) | (7, 2, 1, 8, 5, 4, 0, 3, 6, 9) | -8   | 1   | —              | —          | G1178           |
|        | G1181 | (0, 9, 8, 3, 4, 7, 1, 6, 5, 2) | (8, 6, 1, 0, 2, 3, 5, 4, 9, 7) | -8   | 1   | —              | —          | G1182           |
|        | G1182 | (0, 1, 9, 4, 3, 5, 6, 8, 7, 2) | (8, 6, 3, 2, 7, 1, 4, 5, 0, 9) | -8   | 1   | —              | —          | G1181           |
| 10n29  | G172  | (0, 2, 9, 8, 6, 7, 4, 5, 3, 1) | (4, 5, 3, 1, 0, 2, 9, 8, 7, 6) | -17  | -2  | —              | —          | G172            |
|        | G173  | (0, 7, 9, 6, 8, 5, 4, 3, 2, 1) | (4, 1, 3, 0, 2, 9, 7, 8, 6, 5) | -17  | -2  | —              | —          | G173            |
|        | G174  | (0, 7, 6, 8, 4, 3, 2, 5, 1, 9) | (5, 3, 2, 1, 0, 9, 7, 8, 6, 4) | -17  | 0   | G175           | G174       | G175            |
|        | G175  | (0, 1, 9, 7, 6, 5, 8, 3, 2, 4) | (6, 5, 4, 3, 2, 0, 1, 9, 7, 8) | -17  | 0   | G174           | G175       | G174            |
|        | G176  | (0, 9, 7, 6, 3, 8, 5, 2, 4, 1) | (5, 4, 3, 2, 0, 1, 9, 7, 8, 6) | -17  | 0   | G177           | G176       | G177            |
|        | G177  | (0, 6, 5, 4, 2, 9, 3, 1, 8, 7) | (3, 1, 9, 0, 8, 7, 6, 5, 4, 2) | -17  | 0   | G176           | G177       | G176            |
|        | G178  | (0, 8, 6, 7, 4, 5, 3, 2, 9, 1) | (5, 4, 3, 2, 9, 1, 0, 8, 6, 7) | -17  | 2   | —              | —          | G178            |
|        | G179  | (0, 9, 8, 7, 6, 3, 5, 2, 4, 1) | (6, 5, 3, 4, 2, 9, 1, 8, 0, 7) | -17  | 2   | —              | —          | G179            |
| m10n29 | G1183 | (0, 2, 4, 5, 3, 6, 7, 9, 8, 1) | (7, 8, 9, 1, 0, 2, 4, 5, 3, 6) | 7    | 0   | G1183          | G1183      | G1183           |
| 10n30  | G182  | (0, 1, 4, 8, 5, 7, 3, 6, 9, 2) | (3, 6, 9, 2, 0, 1, 8, 4, 5, 7) | -4   | -1  | —              | —          | G183            |
|        | G183  | (0, 2, 3, 1, 8, 4, 6, 9, 7, 5) | (4, 6, 7, 5, 2, 9, 0, 3, 1, 8) | -4   | -1  | —              | —          | G182            |
|        | G184  | (0, 8, 6, 9, 1, 7, 4, 2, 3, 5) | (7, 4, 2, 5, 6, 3, 0, 8, 9, 1) | -4   | 1   | —              | —          | G185            |
|        | G185  | (0, 3, 6, 9, 5, 7, 4, 8, 1, 2) | (5, 7, 8, 4, 1, 2, 0, 3, 6, 9) | -4   | 1   | —              | —          | G184            |
| m10n30 | G1188 | (0, 7, 9, 8, 5, 1, 4, 2, 6, 3) | (4, 2, 6, 3, 0, 7, 9, 8, 1, 5) | -6   | -1  | —              | —          | G1189           |
|        | G1189 | (0, 9, 7, 2, 4, 6, 3, 1, 5, 8) | (4, 3, 1, 5, 8, 0, 7, 6, 9, 2) | -6   | -1  | —              | —          | G1188           |
|        | G1190 | (0, 7, 1, 9, 2, 8, 5, 4, 6, 3) | (8, 2, 5, 4, 6, 3, 0, 7, 1, 9) | -6   | 1   | —              | —          | G1191           |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 10n31  | G1191 | (0, 3, 7, 5, 2, 4, 6, 1, 9, 8) | (6, 9, 2, 1, 8, 0, 3, 7, 5, 4) | -6   | 1   | –              | –          | G1190           |
|        | G186  | (0, 2, 9, 8, 6, 7, 4, 5, 3, 1) | (4, 5, 3, 1, 0, 2, 8, 9, 6, 7) | -15  | -2  | –              | –          | G186            |
|        | G187  | (0, 2, 9, 1, 8, 6, 7, 4, 5, 3) | (4, 6, 3, 5, 2, 0, 1, 9, 8, 7) | -15  | -2  | –              | –          | G187            |
|        | G188  | (0, 2, 9, 8, 6, 7, 4, 5, 3, 1) | (4, 5, 3, 1, 9, 2, 8, 0, 7, 6) | -15  | -2  | –              | –          | G188            |
|        | G189  | (0, 4, 2, 9, 8, 1, 7, 5, 6, 3) | (8, 7, 5, 6, 3, 4, 2, 0, 1, 9) | -15  | 0   | G190           | G189       | G190            |
|        | G190  | (0, 7, 4, 6, 2, 3, 1, 9, 8, 5) | (3, 1, 9, 0, 7, 8, 6, 5, 4, 2) | -15  | 0   | G189           | G190       | G189            |
|        | G191  | (0, 8, 7, 9, 6, 2, 4, 5, 1, 3) | (4, 5, 2, 3, 1, 0, 8, 9, 7, 6) | -15  | 0   | G192           | G191       | G192            |
|        | G192  | (0, 4, 1, 2, 9, 7, 6, 8, 5, 3) | (7, 8, 5, 6, 4, 3, 1, 2, 0, 9) | -15  | 0   | G191           | G192       | G191            |
|        | G193  | (0, 7, 2, 9, 8, 6, 4, 5, 1, 3) | (6, 4, 5, 3, 1, 2, 0, 9, 7, 8) | -15  | 0   | G194           | G193       | G194            |
|        | G194  | (0, 1, 9, 5, 8, 7, 4, 2, 6, 3) | (5, 6, 4, 2, 3, 1, 0, 8, 9, 7) | -15  | 0   | G193           | G194       | G193            |
|        | G195  | (0, 8, 6, 7, 4, 5, 3, 2, 9, 1) | (5, 4, 1, 3, 9, 2, 0, 8, 6, 7) | -15  | 2   | –              | –          | G195            |
|        | G196  | (0, 8, 6, 7, 4, 5, 3, 2, 9, 1) | (4, 5, 2, 3, 9, 1, 0, 8, 6, 7) | -15  | 2   | –              | –          | G196            |
|        | G197  | (0, 8, 9, 6, 7, 5, 2, 4, 1, 3) | (6, 5, 4, 2, 3, 1, 8, 0, 7, 9) | -15  | 2   | –              | –          | G197            |
| m10n31 | G1192 | (0, 2, 3, 6, 4, 8, 5, 7, 9, 1) | (6, 7, 9, 1, 0, 3, 2, 4, 5, 8) | 5    | 0   | G1192          | G1192      | G1192           |
|        | G1193 | (0, 3, 2, 4, 7, 5, 6, 8, 9, 1) | (4, 7, 6, 8, 1, 9, 0, 3, 2, 5) | 5    | 0   | G1193          | G1193      | G1193           |
| 10n32  | G198  | (0, 9, 3, 6, 7, 5, 4, 8, 1, 2) | (4, 1, 7, 8, 0, 9, 6, 2, 3, 5) | -3   | -2  | –              | –          | G198            |
|        | G199  | (0, 9, 1, 2, 8, 7, 4, 3, 5, 6) | (4, 3, 5, 0, 1, 9, 8, 6, 7, 2) | -3   | -2  | –              | –          | G199            |
|        | G200  | (0, 1, 5, 4, 2, 3, 7, 9, 6, 8) | (7, 9, 0, 8, 6, 1, 2, 5, 4, 3) | -3   | 0   | G201           | G200       | G201            |
|        | G201  | (0, 8, 1, 2, 5, 6, 4, 3, 9, 7) | (4, 2, 3, 6, 7, 0, 9, 8, 5, 1) | -3   | 0   | G200           | G201       | G200            |
|        | G202  | (0, 1, 4, 8, 7, 5, 6, 9, 3, 2) | (7, 9, 0, 6, 3, 2, 4, 5, 1, 8) | -3   | 2   | –              | –          | G202            |
|        | G203  | (0, 1, 3, 2, 9, 8, 4, 5, 7, 6) | (4, 9, 0, 8, 7, 5, 6, 1, 3, 2) | -3   | 2   | –              | –          | G203            |
| m10n32 | G1194 | (0, 5, 6, 7, 9, 8, 4, 2, 3, 1) | (2, 1, 3, 5, 6, 0, 9, 7, 8, 4) | -7   | -2  | –              | –          | G1194           |
|        | G1195 | (0, 5, 4, 6, 7, 9, 8, 3, 1, 2) | (4, 3, 7, 8, 1, 2, 0, 9, 5, 6) | -7   | 0   | G1196          | G1195      | G1196           |
|        | G1196 | (0, 3, 4, 8, 7, 5, 6, 2, 1, 9) | (4, 5, 7, 6, 1, 9, 0, 8, 3, 2) | -7   | 0   | G1195          | G1196      | G1195           |
|        | G1197 | (0, 8, 9, 7, 3, 2, 4, 5, 6, 1) | (7, 3, 4, 2, 1, 5, 6, 8, 0, 9) | -7   | 2   | –              | –          | G1197           |
| 10n33  | G204  | (0, 3, 4, 7, 6, 5, 8, 9, 1, 2) | (4, 5, 1, 2, 9, 7, 0, 3, 6, 8) | -2   | -1  | –              | –          | G206            |
|        | G205  | (0, 8, 9, 6, 7, 1, 3, 2, 4, 5) | (4, 1, 2, 0, 5, 6, 8, 7, 9, 3) | -2   | -1  | –              | –          | G205            |
|        | G206  | (0, 2, 3, 6, 5, 7, 4, 8, 1, 9) | (4, 8, 1, 2, 9, 0, 6, 5, 7, 3) | -2   | -1  | –              | –          | G204            |
|        | G207  | (0, 2, 1, 8, 4, 5, 3, 6, 9, 7) | (5, 6, 3, 2, 7, 9, 8, 0, 4, 1) | -2   | -1  | –              | –          | G212            |
|        | G208  | (0, 3, 1, 7, 2, 6, 8, 9, 4, 5) | (4, 6, 5, 3, 9, 0, 1, 7, 8, 2) | -2   | -1  | –              | –          | G209            |
|        | G209  | (0, 6, 4, 3, 5, 7, 1, 2, 8, 9) | (7, 2, 8, 6, 9, 4, 5, 0, 1, 3) | -2   | -1  | –              | –          | G208            |
|        | G210  | (0, 1, 5, 4, 2, 3, 7, 8, 6, 9) | (7, 8, 9, 6, 5, 1, 2, 4, 0, 3) | -2   | -1  | –              | –          | G213            |
|        | G211  | (0, 1, 4, 3, 2, 7, 8, 9, 5, 6) | (2, 8, 9, 5, 4, 0, 3, 6, 7, 1) | -2   | -1  | –              | –          | G211            |
|        | G212  | (0, 5, 3, 4, 6, 8, 2, 7, 9, 1) | (2, 1, 7, 9, 0, 3, 5, 4, 6, 8) | -2   | -1  | –              | –          | G207            |
|        | G213  | (0, 6, 4, 5, 7, 8, 9, 2, 3, 1) | (2, 1, 8, 9, 0, 6, 3, 4, 7, 5) | -2   | -1  | –              | –          | G210            |
|        | G214  | (0, 8, 1, 5, 2, 4, 3, 6, 7, 9) | (6, 2, 4, 3, 9, 0, 7, 8, 1, 5) | -2   | 1   | –              | –          | G219            |
|        | G215  | (0, 1, 7, 8, 2, 4, 6, 5, 3, 9) | (6, 8, 9, 4, 5, 0, 3, 1, 7, 2) | -2   | 1   | –              | –          | G222            |
|        | G216  | (0, 3, 1, 2, 6, 7, 5, 4, 8, 9) | (6, 9, 5, 7, 8, 4, 3, 0, 1, 2) | -2   | 1   | –              | –          | G223            |
|        | G217  | (0, 1, 3, 2, 4, 8, 9, 6, 7, 5) | (2, 6, 8, 7, 9, 0, 5, 3, 4, 1) | -2   | 1   | –              | –          | G217            |
|        | G218  | (0, 8, 1, 4, 2, 3, 9, 6, 5, 7) | (6, 3, 7, 9, 8, 0, 5, 4, 1, 2) | -2   | 1   | –              | –          | G220            |
|        | G219  | (0, 1, 3, 4, 7, 6, 5, 8, 9, 2) | (4, 6, 9, 2, 5, 3, 0, 1, 7, 8) | -2   | 1   | –              | –          | G214            |
|        | G220  | (0, 2, 4, 9, 3, 5, 7, 8, 6, 1) | (3, 5, 7, 6, 8, 1, 2, 4, 0, 9) | -2   | 1   | –              | –          | G218            |
|        | G221  | (0, 1, 7, 8, 9, 4, 3, 2, 5, 6) | (5, 9, 0, 3, 6, 2, 1, 7, 8, 4) | -2   | 1   | –              | –          | G221            |
|        | G222  | (0, 1, 6, 7, 9, 3, 8, 4, 2, 5) | (3, 7, 8, 4, 5, 6, 2, 0, 9, 1) | -2   | 1   | –              | –          | G215            |
|        | G223  | (0, 8, 9, 2, 3, 4, 6, 7, 5, 1) | (6, 4, 7, 8, 5, 1, 2, 3, 0, 9) | -2   | 1   | –              | –          | G216            |
| m10n33 | G1198 | (0, 7, 5, 4, 8, 9, 3, 2, 6, 1) | (3, 2, 1, 6, 5, 7, 8, 4, 0, 9) | -8   | -1  | –              | –          | G1198           |
|        | G1199 | (0, 3, 2, 8, 7, 5, 6, 4, 9, 1) | (5, 6, 4, 3, 9, 8, 1, 0, 2, 7) | -8   | -1  | –              | –          | G1199           |
|        | G1200 | (0, 5, 9, 8, 2, 3, 7, 6, 4, 1) | (2, 1, 7, 3, 4, 6, 5, 0, 9, 8) | -8   | 1   | –              | –          | G1200           |
|        | G1201 | (0, 2, 7, 5, 6, 4, 3, 9, 8, 1) | (4, 9, 1, 0, 3, 2, 8, 7, 5, 6) | -8   | 1   | –              | –          | G1201           |
| 10n34  | G224  | (0, 8, 9, 1, 2, 5, 3, 4, 6, 7) | (6, 4, 7, 8, 0, 1, 9, 2, 3, 5) | 3    | 0   | G224           | G224       | G224            |
| m10n34 | G1206 | (0, 2, 1, 9, 8, 5, 7, 6, 4, 3) | (4, 6, 3, 2, 0, 9, 1, 8, 7, 5) | -13  | -4  | –              | –          | G1206           |
|        | G1202 | (0, 6, 3, 7, 5, 4, 2, 9, 1, 8) | (4, 1, 9, 0, 8, 6, 7, 5, 3, 2) | -13  | -2  | –              | –          | G1205           |
|        | G1203 | (0, 7, 6, 4, 5, 3, 2, 9, 1, 8) | (2, 1, 9, 7, 0, 8, 4, 3, 6, 5) | -13  | -2  | –              | –          | G1204           |
|        | G1204 | (0, 9, 7, 6, 4, 5, 3, 2, 1, 8) | (5, 1, 0, 8, 7, 2, 9, 6, 4, 3) | -13  | -2  | –              | –          | G1203           |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G1205 | (0, 6, 9, 8, 5, 7, 3, 1, 4, 2) | (3, 2, 4, 1, 9, 0, 8, 6, 7, 5) | -13  | -2  | –              | –          | G1202           |
|        | G1207 | (0, 8, 7, 5, 6, 4, 2, 3, 1, 9) | (7, 6, 2, 9, 1, 0, 5, 8, 4, 3) | -13  | 0   | G1213          | G1213      | G1207           |
|        | G1208 | (0, 2, 9, 8, 5, 7, 4, 3, 6, 1) | (5, 6, 4, 1, 9, 3, 2, 0, 8, 7) | -13  | 0   | G1211          | G1208      | G1211           |
|        | G1209 | (0, 3, 9, 2, 6, 5, 8, 4, 7, 1) | (6, 7, 5, 4, 3, 1, 2, 0, 9, 8) | -13  | 0   | G1212          | G1209      | G1212           |
|        | G1210 | (0, 7, 8, 5, 3, 6, 4, 2, 9, 1) | (3, 2, 4, 1, 9, 0, 7, 6, 5, 8) | -13  | 0   | G1214          | G1214      | G1210           |
|        | G1211 | (0, 2, 8, 7, 5, 9, 6, 4, 3, 1) | (4, 7, 6, 3, 1, 2, 0, 9, 5, 8) | -13  | 0   | G1208          | G1211      | G1208           |
|        | G1212 | (0, 6, 9, 8, 2, 5, 1, 4, 3, 7) | (4, 2, 3, 1, 0, 9, 7, 8, 6, 5) | -13  | 0   | G1209          | G1212      | G1209           |
|        | G1213 | (0, 8, 7, 5, 6, 4, 2, 3, 1, 9) | (6, 3, 9, 8, 2, 1, 7, 0, 5, 4) | -13  | 0   | G1207          | G1207      | G1213           |
|        | G1214 | (0, 8, 9, 6, 5, 4, 7, 2, 1, 3) | (4, 2, 5, 3, 1, 8, 0, 9, 6, 7) | -13  | 0   | G1210          | G1210      | G1214           |
|        | G1215 | (0, 7, 6, 5, 3, 4, 2, 1, 9, 8) | (5, 4, 2, 9, 6, 1, 0, 8, 7, 3) | -13  | 2   | –              | –          | G1218           |
|        | G1216 | (0, 8, 1, 9, 5, 7, 4, 3, 6, 2) | (7, 5, 6, 4, 2, 3, 1, 8, 0, 9) | -13  | 2   | –              | –          | G1217           |
|        | G1217 | (0, 7, 9, 6, 4, 3, 1, 5, 2, 8) | (6, 5, 3, 1, 2, 0, 8, 9, 7, 4) | -13  | 2   | –              | –          | G1216           |
|        | G1218 | (0, 7, 9, 6, 5, 3, 4, 2, 1, 8) | (3, 2, 5, 4, 0, 8, 1, 9, 7, 6) | -13  | 2   | –              | –          | G1215           |
|        | G1219 | (0, 9, 7, 6, 8, 5, 4, 2, 1, 3) | (8, 6, 5, 2, 4, 3, 1, 0, 7, 9) | -13  | 4   | –              | –          | G1219           |
| 10n35  | G225  | (0, 4, 5, 3, 2, 1, 6, 8, 7, 9) | (8, 9, 1, 7, 0, 4, 3, 5, 2, 6) | -5   | 0   | G226           | ?          | ?               |
|        | G226  | (0, 2, 7, 6, 5, 3, 4, 8, 9, 1) | (3, 6, 4, 1, 8, 7, 9, 0, 2, 5) | -5   | 0   | G225           | ?          | ?               |
| m10n35 | G1220 | (0, 6, 5, 3, 1, 8, 2, 4, 7, 9) | (8, 9, 7, 6, 4, 3, 5, 0, 1, 2) | -5   | -2  | –              | –          | G1223           |
|        | G1221 | (0, 3, 6, 7, 5, 4, 2, 9, 1, 8) | (7, 8, 9, 1, 0, 6, 5, 3, 4, 2) | -5   | -2  | –              | –          | G1224           |
|        | G1222 | (0, 2, 6, 1, 7, 5, 8, 9, 4, 3) | (4, 8, 0, 3, 2, 9, 1, 6, 7, 5) | -5   | -2  | –              | –          | G1225           |
|        | G1223 | (0, 5, 7, 8, 6, 3, 4, 2, 1, 9) | (8, 9, 1, 4, 0, 5, 7, 6, 3, 2) | -5   | -2  | –              | –          | G1220           |
|        | G1224 | (0, 1, 9, 8, 4, 3, 5, 6, 7, 2) | (3, 5, 2, 0, 9, 7, 8, 1, 4, 6) | -5   | -2  | –              | –          | G1221           |
|        | G1225 | (0, 1, 4, 7, 5, 3, 2, 9, 6, 8) | (5, 9, 6, 0, 8, 7, 4, 3, 1, 2) | -5   | -2  | –              | –          | G1222           |
|        | G1226 | (0, 8, 7, 3, 5, 4, 6, 9, 1, 2) | (4, 1, 9, 8, 2, 7, 0, 3, 5, 6) | -5   | -2  | –              | –          | G1227           |
|        | G1227 | (0, 6, 5, 1, 4, 2, 3, 7, 9, 8) | (3, 9, 7, 6, 0, 5, 8, 1, 4, 2) | -5   | -2  | –              | –          | G1226           |
|        | G1228 | (0, 8, 9, 1, 6, 7, 2, 5, 4, 3) | (5, 2, 3, 7, 8, 4, 0, 1, 9, 6) | -5   | 0   | G1237          | G1234      | G1235           |
|        | G1229 | (0, 1, 4, 3, 5, 2, 8, 7, 9, 6) | (2, 8, 9, 7, 0, 6, 4, 1, 5, 3) | -5   | 0   | G1233          | G1229      | G1233           |
|        | G1230 | (0, 2, 9, 1, 8, 5, 7, 3, 4, 6) | (3, 7, 5, 6, 4, 0, 9, 8, 1, 2) | -5   | 0   | G1232          | G1238      | G1236           |
|        | G1231 | (0, 1, 8, 9, 7, 5, 6, 2, 3, 4) | (2, 7, 6, 3, 0, 9, 4, 5, 8, 1) | -5   | 0   | G1239          | G1231      | G1239           |
|        | G1232 | (0, 2, 3, 9, 1, 8, 5, 7, 4, 6) | (4, 5, 8, 7, 6, 2, 0, 1, 9, 3) | -5   | 0   | G1230          | G1236      | G1238           |
|        | G1233 | (0, 4, 2, 1, 3, 8, 6, 5, 7, 9) | (6, 9, 8, 5, 7, 4, 2, 0, 1, 3) | -5   | 0   | G1229          | G1233      | G1229           |
|        | G1234 | (0, 6, 2, 3, 1, 8, 7, 4, 5, 9) | (8, 9, 4, 7, 6, 5, 2, 0, 1, 3) | -5   | 0   | G1235          | G1228      | G1237           |
|        | G1235 | (0, 8, 1, 4, 7, 6, 5, 2, 3, 9) | (6, 4, 5, 9, 0, 3, 8, 7, 1, 2) | -5   | 0   | G1234          | G1237      | G1228           |
|        | G1236 | (0, 4, 1, 9, 7, 5, 8, 6, 2, 3) | (7, 8, 6, 2, 1, 0, 3, 4, 5, 9) | -5   | 0   | G1238          | G1232      | G1230           |
|        | G1237 | (0, 1, 5, 3, 4, 8, 9, 2, 7, 6) | (2, 8, 9, 7, 0, 3, 6, 5, 4, 1) | -5   | 0   | G1228          | G1235      | G1234           |
|        | G1238 | (0, 6, 4, 7, 5, 3, 1, 8, 2, 9) | (7, 8, 9, 2, 1, 0, 6, 4, 5, 3) | -5   | 0   | G1236          | G1230      | G1232           |
|        | G1239 | (0, 1, 9, 7, 8, 5, 6, 2, 3, 4) | (2, 7, 6, 3, 0, 9, 4, 5, 8, 1) | -5   | 0   | G1231          | G1239      | G1231           |
|        | G1240 | (0, 9, 4, 5, 8, 6, 2, 7, 1, 3) | (8, 6, 7, 2, 4, 1, 0, 3, 5, 9) | -5   | 2   | –              | –          | G1246           |
|        | G1241 | (0, 2, 5, 7, 1, 8, 6, 4, 3, 9) | (7, 8, 9, 4, 6, 5, 3, 2, 0, 1) | -5   | 2   | –              | –          | G1244           |
|        | G1242 | (0, 5, 6, 7, 9, 8, 4, 3, 1, 2) | (6, 8, 1, 4, 5, 3, 2, 0, 7, 9) | -5   | 2   | –              | –          | G1247           |
|        | G1243 | (0, 1, 3, 6, 8, 7, 9, 5, 4, 2) | (6, 7, 9, 2, 5, 0, 4, 3, 1, 8) | -5   | 2   | –              | –          | G1245           |
|        | G1244 | (0, 8, 7, 5, 6, 3, 1, 2, 4, 9) | (7, 6, 3, 2, 4, 9, 5, 8, 0, 1) | -5   | 2   | –              | –          | G1241           |
|        | G1245 | (0, 9, 1, 5, 6, 4, 7, 3, 2, 8) | (6, 4, 7, 0, 3, 8, 2, 1, 9, 5) | -5   | 2   | –              | –          | G1243           |
|        | G1246 | (0, 2, 9, 6, 5, 3, 1, 4, 7, 8) | (6, 7, 5, 4, 1, 0, 8, 2, 9, 3) | -5   | 2   | –              | –          | G1240           |
|        | G1247 | (0, 7, 9, 6, 4, 3, 1, 2, 5, 8) | (6, 4, 5, 3, 2, 8, 7, 9, 0, 1) | -5   | 2   | –              | –          | G1242           |
| 10n36  | G236  | (0, 6, 7, 9, 8, 5, 4, 2, 3, 1) | (2, 1, 3, 6, 0, 9, 7, 5, 8, 4) | -10  | -3  | –              | –          | ?               |
|        | G227  | (0, 9, 7, 8, 2, 1, 6, 4, 5, 3) | (6, 1, 0, 4, 5, 3, 2, 7, 9, 8) | -10  | -1  | –              | –          | G234            |
|        | G228  | (0, 1, 9, 5, 3, 6, 8, 7, 4, 2) | (4, 7, 3, 2, 0, 1, 5, 9, 8, 6) | -10  | -1  | –              | –          | G231            |
|        | G229  | (0, 8, 9, 7, 2, 1, 6, 4, 5, 3) | (4, 3, 5, 1, 0, 8, 9, 7, 2, 6) | -10  | -1  | –              | –          | ?               |
|        | G230  | (0, 6, 5, 7, 9, 8, 4, 1, 3, 2) | (3, 4, 8, 1, 2, 0, 9, 6, 7, 5) | -10  | -1  | –              | –          | G235            |
|        | G231  | (0, 1, 9, 8, 4, 3, 5, 7, 6, 2) | (4, 5, 3, 0, 2, 6, 9, 1, 8, 7) | -10  | -1  | –              | –          | G228            |
|        | G232  | (0, 7, 6, 4, 5, 3, 8, 1, 9, 2) | (3, 2, 8, 7, 1, 9, 0, 6, 4, 5) | -10  | -1  | –              | –          | ?               |
|        | G233  | (0, 9, 1, 7, 5, 6, 8, 3, 4, 2) | (6, 3, 4, 2, 0, 1, 5, 7, 9, 8) | -10  | -1  | –              | –          | ?               |
|        | G234  | (0, 6, 7, 5, 4, 9, 8, 3, 1, 2) | (4, 1, 3, 2, 6, 5, 0, 9, 7, 8) | -10  | -1  | –              | –          | G227            |
|        | G235  | (0, 9, 5, 2, 4, 1, 3, 7, 6, 8) | (7, 1, 0, 8, 9, 6, 5, 4, 2, 3) | -10  | -1  | –              | –          | G230            |
|        | G237  | (0, 8, 9, 7, 2, 1, 5, 6, 4, 3) | (5, 4, 6, 1, 0, 8, 9, 3, 2, 7) | -10  | 1   | –              | –          | G239            |



| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G238  | (0, 8, 9, 7, 2, 1, 6, 4, 5, 3) | (7, 1, 6, 4, 5, 3, 2, 8, 0, 9) | -10  | 1   | –              | –          | ?               |
|        | G239  | (0, 1, 9, 4, 3, 8, 7, 5, 6, 2) | (4, 5, 3, 2, 7, 6, 0, 9, 1, 8) | -10  | 1   | –              | –          | G237            |
|        | G240  | (0, 8, 9, 4, 6, 7, 5, 1, 3, 2) | (4, 3, 5, 7, 1, 2, 0, 8, 9, 6) | -10  | 1   | –              | –          | ?               |
|        | G241  | (0, 3, 1, 4, 9, 7, 8, 6, 5, 2) | (7, 8, 6, 2, 3, 1, 5, 4, 0, 9) | -10  | 1   | –              | –          | ?               |
|        | G242  | (0, 2, 1, 5, 7, 4, 6, 3, 9, 8) | (5, 6, 4, 3, 2, 9, 0, 8, 7, 1) | -10  | 1   | –              | –          | G244            |
|        | G243  | (0, 6, 5, 7, 9, 8, 4, 3, 1, 2) | (5, 4, 1, 3, 6, 0, 2, 9, 7, 8) | -10  | 1   | –              | –          | G245            |
|        | G244  | (0, 9, 1, 8, 4, 3, 5, 7, 6, 2) | (7, 5, 6, 3, 2, 0, 1, 4, 8, 9) | -10  | 1   | –              | –          | G242            |
|        | G245  | (0, 8, 5, 4, 6, 9, 7, 3, 1, 2) | (6, 4, 3, 7, 1, 2, 0, 9, 5, 8) | -10  | 1   | –              | –          | G243            |
|        | G246  | (0, 8, 9, 7, 6, 3, 2, 4, 5, 1) | (7, 3, 6, 4, 2, 1, 5, 8, 0, 9) | -10  | 3   | –              | –          | ?               |
|        | G1248 | (0, 3, 5, 7, 8, 6, 4, 9, 1, 2) | (4, 6, 8, 9, 1, 0, 7, 2, 3, 5) | 0    | -1  | –              | –          | G1248           |
|        | G1249 | (0, 3, 5, 4, 6, 1, 2, 8, 7, 9) | (6, 8, 9, 7, 2, 3, 5, 4, 0, 1) | 0    | -1  | –              | –          | G1250           |
|        | G1250 | (0, 1, 6, 8, 7, 9, 3, 2, 4, 5) | (4, 9, 0, 2, 1, 5, 8, 6, 7, 3) | 0    | -1  | –              | –          | G1249           |
|        | G1251 | (0, 1, 3, 2, 6, 8, 7, 9, 4, 5) | (2, 8, 9, 7, 0, 4, 3, 5, 6, 1) | 0    | 1   | –              | –          | G1253           |
|        | G1252 | (0, 1, 3, 8, 6, 4, 5, 7, 9, 2) | (7, 9, 0, 5, 2, 1, 3, 4, 6, 8) | 0    | 1   | –              | –          | G1252           |
|        | G1253 | (0, 2, 1, 7, 8, 3, 5, 4, 6, 9) | (8, 9, 5, 4, 6, 7, 2, 0, 1, 3) | 0    | 1   | –              | –          | G1251           |
|        | G247  | (0, 9, 3, 6, 1, 7, 2, 8, 4, 5) | (8, 1, 0, 2, 4, 3, 5, 6, 7, 9) | -1   | 0   | G248           | G248       | G247            |
| 10n39  | G248  | (0, 9, 1, 2, 3, 5, 4, 7, 6, 8) | (7, 3, 8, 4, 0, 1, 6, 5, 9, 2) | -1   | 0   | G247           | G247       | G248            |
|        |       |                                |                                |      |     |                |            |                 |
| m10n39 | G1254 | (0, 6, 2, 8, 5, 9, 4, 3, 1, 7) | (3, 1, 9, 0, 7, 6, 8, 5, 4, 2) | -9   | -2  | –              | –          | G1256           |
|        | G1255 | (0, 5, 4, 2, 3, 1, 7, 9, 6, 8) | (7, 9, 6, 5, 8, 4, 2, 3, 0, 1) | -9   | -2  | –              | –          | G1257           |
|        | G1256 | (0, 8, 7, 5, 6, 2, 4, 3, 1, 9) | (3, 1, 9, 8, 4, 5, 0, 7, 6, 2) | -9   | -2  | –              | –          | G1254           |
|        | G1257 | (0, 8, 1, 6, 4, 5, 3, 2, 9, 7) | (5, 2, 9, 0, 7, 8, 6, 4, 3, 1) | -9   | -2  | –              | –          | G1255           |
|        | G1258 | (0, 8, 4, 3, 6, 2, 5, 7, 1, 9) | (5, 2, 1, 9, 0, 7, 8, 3, 6, 4) | -9   | 0   | G1263          | G1258      | G1263           |
|        | G1259 | (0, 1, 8, 9, 7, 6, 5, 3, 4, 2) | (3, 9, 0, 6, 4, 2, 8, 7, 1, 5) | -9   | 0   | G1260          | G1259      | G1260           |
|        | G1260 | (0, 8, 7, 6, 4, 5, 2, 3, 1, 9) | (6, 1, 5, 9, 8, 3, 4, 0, 7, 2) | -9   | 0   | G1259          | G1260      | G1259           |
|        | G1261 | (0, 4, 2, 1, 8, 9, 6, 7, 5, 3) | (6, 9, 7, 3, 0, 5, 2, 4, 1, 8) | -9   | 0   | G1262          | G1261      | G1262           |
|        | G1262 | (0, 5, 8, 7, 4, 6, 3, 1, 2, 9) | (6, 9, 3, 1, 8, 2, 0, 5, 7, 4) | -9   | 0   | G1261          | G1262      | G1261           |
|        | G1263 | (0, 1, 9, 8, 5, 6, 4, 7, 2, 3) | (4, 7, 6, 2, 0, 1, 9, 3, 5, 8) | -9   | 0   | G1258          | G1263      | G1258           |
|        | G1264 | (0, 6, 4, 3, 8, 2, 9, 5, 1, 7) | (5, 3, 2, 9, 1, 0, 7, 8, 6, 4) | -9   | 2   | –              | –          | G1267           |
|        | G1265 | (0, 2, 9, 1, 7, 5, 6, 4, 3, 8) | (7, 8, 5, 6, 4, 0, 3, 2, 9, 1) | -9   | 2   | –              | –          | G1266           |
|        | G1266 | (0, 8, 5, 4, 2, 3, 1, 6, 9, 7) | (6, 4, 3, 1, 9, 0, 7, 8, 5, 2) | -9   | 2   | –              | –          | G1265           |
|        | G1267 | (0, 8, 6, 5, 7, 3, 4, 2, 1, 9) | (7, 3, 2, 9, 4, 5, 1, 0, 8, 6) | -9   | 2   | –              | –          | G1264           |
| 10n40  | G253  | (0, 6, 5, 1, 4, 8, 9, 7, 3, 2) | (4, 3, 7, 6, 9, 0, 2, 1, 8, 5) | -8   | -1  | –              | –          | G255            |
|        | G254  | (0, 9, 7, 5, 3, 2, 8, 1, 4, 6) | (8, 2, 1, 0, 6, 4, 3, 5, 7, 9) | -8   | -1  | –              | –          | ?               |
|        | G255  | (0, 8, 9, 3, 6, 2, 1, 7, 5, 4) | (5, 1, 7, 8, 0, 9, 4, 3, 2, 6) | -8   | -1  | –              | –          | G253            |
|        | G256  | (0, 9, 5, 3, 4, 8, 1, 7, 6, 2) | (7, 4, 1, 0, 2, 3, 6, 5, 9, 8) | -8   | 1   | –              | –          | G257            |
|        | G257  | (0, 9, 7, 3, 2, 8, 1, 5, 6, 4) | (8, 2, 1, 0, 5, 4, 6, 7, 3, 9) | -8   | 1   | –              | –          | G256            |
|        | G258  | (0, 2, 5, 8, 4, 3, 1, 9, 7, 6) | (7, 9, 1, 3, 2, 0, 6, 5, 4, 8) | -8   | 1   | –              | –          | ?               |
| m10n40 | G1272 | (0, 9, 1, 2, 7, 3, 6, 4, 5, 8) | (6, 3, 5, 0, 1, 8, 9, 7, 2, 4) | -2   | -1  | –              | –          | G1281           |
|        | G1273 | (0, 9, 5, 2, 8, 1, 3, 4, 6, 7) | (3, 1, 0, 6, 4, 5, 7, 9, 8, 2) | -2   | -1  | –              | –          | G1276           |
|        | G1274 | (0, 7, 1, 2, 6, 8, 9, 3, 5, 4) | (5, 2, 3, 9, 0, 1, 4, 7, 8, 6) | -2   | -1  | –              | –          | G1278           |
|        | G1275 | (0, 6, 5, 7, 8, 2, 9, 1, 3, 4) | (3, 1, 9, 0, 6, 7, 4, 5, 8, 2) | -2   | -1  | –              | –          | G1279           |
|        | G1276 | (0, 8, 5, 3, 1, 2, 6, 4, 7, 9) | (4, 2, 9, 6, 5, 7, 0, 8, 1, 3) | -2   | -1  | –              | –          | G1273           |
|        | G1277 | (0, 1, 3, 7, 4, 8, 6, 5, 9, 2) | (4, 5, 9, 0, 2, 3, 1, 7, 6, 8) | -2   | -1  | –              | –          | G1280           |
|        | G1278 | (0, 7, 1, 2, 6, 8, 9, 3, 5, 4) | (5, 3, 4, 9, 0, 1, 7, 8, 2, 6) | -2   | -1  | –              | –          | G1274           |
|        | G1279 | (0, 3, 4, 7, 6, 8, 9, 1, 5, 2) | (4, 5, 1, 2, 9, 0, 3, 7, 8, 6) | -2   | -1  | –              | –          | G1275           |
|        | G1280 | (0, 8, 9, 2, 4, 5, 3, 6, 7, 1) | (2, 1, 3, 6, 8, 0, 7, 9, 4, 5) | -2   | -1  | –              | –          | G1277           |
|        | G1281 | (0, 8, 6, 1, 3, 2, 4, 5, 9, 7) | (4, 2, 9, 7, 8, 5, 6, 0, 1, 3) | -2   | -1  | –              | –          | G1272           |
|        | G1282 | (0, 7, 1, 3, 4, 6, 5, 8, 9, 2) | (6, 4, 5, 9, 2, 3, 0, 1, 7, 8) | -2   | 1   | –              | –          | G1289           |
|        | G1283 | (0, 3, 7, 6, 4, 8, 5, 9, 1, 2) | (4, 6, 5, 1, 9, 0, 2, 3, 7, 8) | -2   | 1   | –              | –          | G1284           |
|        | G1284 | (0, 4, 5, 8, 6, 7, 9, 2, 3, 1) | (6, 7, 2, 4, 1, 3, 5, 8, 0, 9) | -2   | 1   | –              | –          | G1283           |
|        | G1285 | (0, 3, 4, 2, 5, 1, 6, 7, 9, 8) | (4, 6, 1, 9, 0, 7, 8, 3, 5, 2) | -2   | 1   | –              | –          | G1290           |
|        | G1286 | (0, 1, 3, 4, 6, 9, 5, 2, 8, 7) | (5, 9, 8, 0, 2, 3, 1, 7, 6, 4) | -2   | 1   | –              | –          | G1288           |
|        | G1287 | (0, 9, 1, 5, 6, 8, 2, 3, 7, 4) | (8, 2, 6, 7, 3, 4, 5, 0, 1, 9) | -2   | 1   | –              | –          | G1291           |
|        | G1288 | (0, 2, 5, 3, 7, 8, 6, 4, 1, 9) | (6, 8, 1, 9, 2, 4, 3, 0, 7, 5) | -2   | 1   | –              | –          | G1286           |
|        | G1289 | (0, 1, 3, 5, 2, 6, 7, 9, 8, 4) | (2, 6, 9, 0, 7, 8, 4, 5, 3, 1) | -2   | 1   | –              | –          | G1282           |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 10n41  | G1290 | (0, 8, 2, 3, 5, 4, 6, 1, 9, 7) | (4, 6, 7, 1, 2, 9, 0, 8, 5, 3) | -2   | 1   | –              | –          | G1285           |
|        | G1291 | (0, 9, 1, 5, 6, 8, 2, 3, 7, 4) | (8, 6, 7, 0, 3, 4, 5, 1, 2, 9) | -2   | 1   | –              | –          | G1287           |
|        | G259  | (0, 5, 3, 6, 4, 2, 1, 7, 9, 8) | (7, 9, 8, 1, 0, 5, 3, 2, 6, 4) | -4   | -1  | –              | –          | G260            |
|        | G260  | (0, 4, 6, 5, 7, 3, 2, 9, 1, 8) | (5, 7, 9, 8, 1, 0, 4, 3, 6, 2) | -4   | -1  | –              | –          | G259            |
|        | G261  | (0, 4, 6, 9, 5, 7, 2, 1, 3, 8) | (5, 7, 1, 3, 8, 0, 9, 4, 6, 2) | -4   | -1  | –              | –          | G261            |
|        | G262  | (0, 9, 1, 7, 6, 4, 2, 5, 3, 8) | (4, 2, 6, 5, 3, 8, 7, 0, 9, 1) | -4   | 1   | –              | –          | G264            |
|        | G263  | (0, 5, 7, 6, 1, 3, 9, 2, 4, 8) | (6, 2, 4, 9, 8, 0, 5, 7, 1, 3) | -4   | 1   | –              | –          | G263            |
| 10n42  | G264  | (0, 7, 9, 6, 5, 1, 3, 2, 4, 8) | (6, 2, 5, 4, 8, 7, 0, 9, 1, 3) | -4   | 1   | –              | –          | G262            |
|        | G1292 | (0, 1, 9, 7, 8, 6, 2, 5, 3, 4) | (3, 8, 5, 0, 4, 9, 7, 1, 6, 2) | -6   | -1  | –              | –          | G1295           |
|        | G1293 | (0, 5, 7, 8, 6, 4, 2, 3, 1, 9) | (6, 8, 9, 1, 3, 0, 5, 7, 4, 2) | -6   | -1  | –              | –          | G1294           |
|        | G1294 | (0, 8, 6, 7, 5, 1, 3, 2, 4, 9) | (5, 4, 9, 2, 8, 6, 7, 0, 1, 3) | -6   | -1  | –              | –          | G1293           |
|        | G1295 | (0, 5, 7, 8, 6, 4, 2, 3, 1, 9) | (6, 8, 9, 3, 1, 7, 5, 0, 4, 2) | -6   | -1  | –              | –          | G1292           |
|        | G1296 | (0, 1, 8, 9, 7, 4, 6, 2, 3, 5) | (4, 6, 3, 5, 0, 8, 9, 7, 1, 2) | -6   | -1  | –              | –          | ?               |
|        | G1297 | (0, 1, 9, 6, 2, 4, 5, 3, 8, 7) | (2, 5, 3, 0, 8, 7, 9, 6, 4, 1) | -6   | -1  | –              | –          | G1298           |
| m10n41 | G1298 | (0, 2, 5, 3, 1, 9, 6, 8, 4, 7) | (5, 6, 8, 7, 4, 2, 0, 3, 9, 1) | -6   | -1  | –              | –          | G1297           |
|        | G1299 | (0, 8, 6, 7, 5, 3, 1, 2, 4, 9) | (7, 5, 2, 4, 9, 6, 8, 0, 1, 3) | -6   | 1   | –              | –          | G1303           |
|        | G1300 | (0, 9, 4, 2, 3, 5, 1, 8, 6, 7) | (6, 3, 1, 8, 0, 9, 7, 4, 2, 5) | -6   | 1   | –              | –          | G1305           |
|        | G1301 | (0, 1, 9, 2, 8, 6, 7, 5, 3, 4) | (2, 8, 3, 7, 5, 0, 4, 9, 6, 1) | -6   | 1   | –              | –          | G1304           |
|        | G1302 | (0, 2, 3, 9, 1, 8, 6, 7, 4, 5) | (3, 4, 8, 6, 7, 5, 0, 2, 9, 1) | -6   | 1   | –              | –          | ?               |
|        | G1303 | (0, 5, 7, 6, 8, 4, 2, 3, 1, 9) | (6, 8, 9, 2, 3, 1, 7, 0, 5, 4) | -6   | 1   | –              | –          | G1299           |
|        | G1304 | (0, 8, 6, 7, 5, 3, 1, 2, 4, 9) | (7, 5, 9, 4, 2, 8, 6, 0, 1, 3) | -6   | 1   | –              | –          | G1301           |
|        | G1305 | (0, 3, 9, 1, 8, 6, 4, 2, 5, 7) | (6, 8, 4, 7, 5, 3, 0, 9, 1, 2) | -6   | 1   | –              | –          | G1300           |
|        | G265  | (0, 1, 6, 8, 7, 9, 2, 4, 3, 5) | (4, 8, 9, 5, 0, 3, 6, 1, 7, 2) | 1    | 0   | G267           | G276       | G270            |
|        | G266  | (0, 4, 6, 3, 5, 7, 9, 8, 1, 2) | (5, 7, 1, 9, 8, 0, 4, 2, 3, 6) | 1    | 0   | G274           | G271       | G273            |
|        | G267  | (0, 1, 6, 8, 7, 9, 2, 4, 3, 5) | (3, 7, 9, 4, 0, 5, 8, 1, 6, 2) | 1    | 0   | G265           | G270       | G276            |
|        | G268  | (0, 3, 6, 8, 7, 9, 4, 5, 1, 2) | (4, 7, 9, 1, 0, 5, 6, 2, 3, 8) | 1    | 0   | G272           | G277       | G275            |
|        | G269  | (0, 3, 1, 4, 6, 5, 8, 7, 9, 2) | (4, 9, 5, 7, 2, 0, 1, 3, 6, 8) | 1    | 0   | G278           | ?          | ?               |
|        | G270  | (0, 1, 6, 8, 7, 9, 2, 4, 3, 5) | (4, 7, 9, 5, 0, 3, 6, 8, 1, 2) | 1    | 0   | G276           | G267       | G265            |
| m10n42 | G271  | (0, 8, 9, 2, 1, 3, 7, 5, 4, 6) | (5, 4, 7, 8, 6, 0, 2, 9, 1, 3) | 1    | 0   | G273           | G266       | G274            |
|        | G272  | (0, 1, 6, 8, 7, 9, 2, 5, 3, 4) | (3, 9, 0, 5, 4, 6, 8, 1, 7, 2) | 1    | 0   | G268           | G275       | G277            |
|        | G273  | (0, 8, 1, 9, 2, 4, 3, 7, 5, 6) | (5, 3, 7, 6, 8, 1, 0, 2, 9, 4) | 1    | 0   | G271           | G274       | G266            |
|        | G274  | (0, 3, 2, 4, 1, 6, 7, 5, 9, 8) | (4, 6, 5, 9, 7, 8, 2, 0, 3, 1) | 1    | 0   | G266           | G273       | G271            |
|        | G275  | (0, 5, 6, 2, 3, 8, 7, 9, 1, 4) | (6, 7, 3, 4, 9, 1, 0, 2, 5, 8) | 1    | 0   | G277           | G272       | G268            |
|        | G276  | (0, 2, 1, 3, 8, 9, 4, 5, 6, 7) | (6, 9, 4, 0, 2, 5, 7, 1, 8, 3) | 1    | 0   | G270           | G265       | G267            |
|        | G277  | (0, 2, 3, 1, 6, 8, 7, 9, 4, 5) | (3, 4, 8, 7, 9, 2, 0, 5, 6, 1) | 1    | 0   | G275           | G268       | G272            |
|        | G278  | (0, 3, 1, 4, 6, 5, 8, 7, 9, 2) | (4, 9, 5, 7, 0, 2, 3, 1, 6, 8) | 1    | 0   | G269           | ?          | ?               |
|        | G1306 | (0, 2, 1, 5, 4, 9, 7, 8, 6, 3) | (4, 8, 3, 2, 6, 5, 0, 1, 9, 7) | -11  | -2  | –              | –          | ?               |
|        | G1307 | (0, 8, 9, 7, 4, 3, 6, 5, 1, 2) | (6, 1, 3, 2, 8, 5, 4, 0, 7, 9) | -11  | 0   | G1308          | G1309      | G1310           |
|        | G1308 | (0, 9, 3, 2, 7, 5, 1, 6, 4, 8) | (6, 2, 1, 4, 3, 0, 8, 9, 7, 5) | -11  | 0   | G1307          | G1310      | G1309           |
|        | G1309 | (0, 8, 9, 7, 4, 3, 6, 5, 1, 2) | (3, 1, 6, 2, 0, 5, 4, 8, 7, 9) | -11  | 0   | G1310          | G1307      | G1308           |
|        | G1310 | (0, 1, 7, 6, 9, 8, 5, 3, 4, 2) | (3, 5, 4, 8, 7, 2, 0, 6, 1, 9) | -11  | 0   | G1309          | G1308      | G1307           |
|        | G1311 | (0, 7, 5, 6, 4, 9, 8, 2, 1, 3) | (6, 4, 2, 3, 8, 7, 1, 0, 5, 9) | -11  | 2   | –              | –          | ?               |
| 11n12  | G359  | (0, 3, 9, 7, 8, 2, 1, 6, 4, 5) | (6, 8, 1, 0, 4, 5, 3, 2, 7, 9) | -8   | -1  | –              | –          | G364            |
|        | G360  | (0, 4, 6, 8, 5, 7, 2, 9, 3, 1) | (2, 1, 3, 4, 9, 0, 8, 6, 7, 5) | -8   | -1  | –              | –          | G361            |
|        | G361  | (0, 9, 6, 4, 5, 3, 1, 2, 7, 8) | (7, 1, 0, 8, 2, 9, 4, 6, 3, 5) | -8   | -1  | –              | –          | G360            |
|        | G362  | (0, 9, 5, 3, 4, 8, 6, 1, 7, 2) | (4, 1, 0, 6, 7, 5, 2, 3, 9, 8) | -8   | -1  | –              | –          | G365            |
|        | G363  | (0, 9, 3, 4, 2, 6, 7, 5, 1, 8) | (7, 1, 0, 8, 5, 3, 4, 9, 6, 2) | -8   | -1  | –              | –          | G366            |
|        | G364  | (0, 5, 7, 8, 6, 3, 4, 2, 9, 1) | (2, 1, 4, 5, 9, 7, 0, 8, 3, 6) | -8   | -1  | –              | –          | G359            |
|        | G365  | (0, 4, 5, 3, 7, 9, 6, 2, 1, 8) | (7, 8, 1, 6, 4, 5, 0, 9, 3, 2) | -8   | -1  | –              | –          | G362            |
|        | G366  | (0, 5, 1, 8, 3, 4, 2, 9, 7, 6) | (7, 9, 6, 2, 0, 1, 5, 3, 4, 8) | -8   | -1  | –              | –          | G363            |
|        | G367  | (0, 9, 7, 4, 2, 3, 8, 5, 1, 6) | (8, 2, 3, 1, 5, 6, 4, 0, 7, 9) | -8   | 1   | –              | –          | G374            |
|        | G368  | (0, 8, 2, 9, 4, 6, 3, 5, 7, 1) | (6, 4, 5, 3, 1, 2, 7, 8, 0, 9) | -8   | 1   | –              | –          | G369            |
|        | G369  | (0, 1, 6, 7, 5, 3, 4, 2, 9, 8) | (3, 5, 2, 4, 9, 6, 0, 8, 7, 1) | -8   | 1   | –              | –          | G368            |
|        | G370  | (0, 5, 1, 6, 4, 8, 9, 7, 3, 2) | (4, 3, 9, 0, 7, 5, 6, 2, 1, 8) | -8   | 1   | –              | –          | G371            |
|        | G371  | (0, 7, 6, 2, 9, 1, 5, 3, 4, 8) | (6, 5, 9, 8, 3, 4, 2, 7, 0, 1) | -8   | 1   | –              | –          | G370            |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G372  | (0, 1, 9, 4, 3, 7, 8, 6, 2, 5) | (6, 8, 3, 2, 0, 1, 5, 4, 7, 9) | -8   | 1   | –              | –          | G373            |
|        | G373  | (0, 2, 9, 7, 8, 5, 3, 4, 6, 1) | (5, 8, 3, 1, 4, 2, 6, 7, 0, 9) | -8   | 1   | –              | –          | G372            |
|        | G374  | (0, 7, 3, 1, 2, 6, 4, 5, 9, 8) | (6, 2, 9, 4, 5, 3, 0, 8, 7, 1) | -8   | 1   | –              | –          | G367            |
| m11n12 | G1357 | (0, 8, 1, 2, 9, 5, 7, 4, 6, 3) | (4, 2, 3, 7, 6, 8, 0, 9, 1, 5) | -2   | -1  | –              | –          | ?               |
|        | G1358 | (0, 5, 2, 6, 4, 3, 9, 7, 1, 8) | (7, 9, 8, 1, 0, 5, 4, 2, 3, 6) | -2   | -1  | –              | –          | ?               |
|        | G1359 | (0, 7, 1, 9, 5, 4, 2, 6, 3, 8) | (2, 5, 6, 4, 3, 8, 7, 0, 9, 1) | -2   | 1   | –              | –          | ?               |
|        | G1360 | (0, 7, 9, 6, 8, 4, 1, 2, 5, 3) | (8, 2, 4, 3, 5, 7, 6, 0, 1, 9) | -2   | 1   | –              | –          | ?               |
| 11n20  | G416  | (0, 8, 9, 4, 5, 1, 6, 7, 2, 3) | (5, 1, 2, 0, 3, 7, 8, 4, 6, 9) | -3   | 0   | G430           | G418       | G429            |
|        | G417  | (0, 1, 9, 5, 6, 7, 3, 4, 2, 8) | (4, 7, 6, 8, 0, 2, 9, 1, 5, 3) | -3   | 0   | G421           | G432       | G424            |
|        | G418  | (0, 1, 2, 4, 8, 9, 3, 7, 5, 6) | (3, 9, 7, 0, 2, 5, 6, 4, 8, 1) | -3   | 0   | G429           | G416       | G430            |
|        | G419  | (0, 7, 8, 6, 3, 4, 1, 2, 5, 9) | (6, 4, 5, 9, 7, 2, 3, 8, 0, 1) | -3   | 0   | G422           | G433       | G423            |
|        | G420  | (0, 1, 5, 6, 9, 7, 8, 4, 2, 3) | (2, 7, 8, 4, 5, 0, 3, 9, 6, 1) | -3   | 0   | G426           | G428       | G427            |
|        | G421  | (0, 4, 3, 5, 8, 6, 9, 7, 1, 2) | (5, 6, 7, 1, 4, 2, 3, 0, 8, 9) | -3   | 0   | G417           | G424       | G432            |
|        | G422  | (0, 1, 8, 6, 7, 4, 5, 9, 2, 3) | (2, 7, 5, 9, 0, 8, 3, 4, 6, 1) | -3   | 0   | G419           | G423       | G433            |
|        | G423  | (0, 6, 7, 4, 5, 8, 3, 1, 2, 9) | (8, 9, 5, 6, 1, 2, 0, 4, 7, 3) | -3   | 0   | G433           | G422       | G419            |
|        | G424  | (0, 6, 7, 8, 2, 5, 3, 4, 1, 9) | (3, 1, 5, 4, 6, 9, 7, 0, 8, 2) | -3   | 0   | G432           | G421       | G417            |
|        | G425  | (0, 6, 7, 8, 5, 3, 4, 1, 2, 9) | (8, 9, 1, 4, 0, 6, 2, 3, 7, 5) | -3   | 0   | G431           | G425       | G431            |
|        | G426  | (0, 1, 9, 5, 6, 4, 7, 8, 2, 3) | (2, 7, 4, 0, 3, 8, 9, 5, 6, 1) | -3   | 0   | G420           | G427       | G428            |
|        | G427  | (0, 1, 8, 9, 7, 2, 3, 5, 6, 4) | (5, 9, 0, 6, 3, 4, 8, 1, 2, 7) | -3   | 0   | G428           | G426       | G420            |
|        | G428  | (0, 8, 9, 6, 7, 3, 1, 2, 4, 5) | (4, 1, 7, 8, 2, 0, 5, 6, 9, 3) | -3   | 0   | G427           | G420       | G426            |
|        | G429  | (0, 6, 7, 1, 4, 2, 3, 9, 5, 8) | (7, 8, 3, 9, 0, 5, 6, 4, 1, 2) | -3   | 0   | G418           | G430       | G416            |
|        | G430  | (0, 5, 6, 1, 7, 8, 3, 4, 2, 9) | (6, 8, 4, 5, 9, 2, 0, 1, 7, 3) | -3   | 0   | G416           | G429       | G418            |
|        | G431  | (0, 8, 5, 6, 7, 3, 4, 1, 2, 9) | (7, 3, 9, 2, 4, 5, 8, 6, 0, 1) | -3   | 0   | G425           | G431       | G425            |
|        | G432  | (0, 4, 2, 3, 6, 5, 7, 9, 1, 8) | (3, 1, 7, 9, 0, 8, 4, 5, 6, 2) | -3   | 0   | G424           | G417       | G421            |
|        | G433  | (0, 1, 9, 4, 7, 8, 5, 6, 2, 3) | (5, 8, 2, 0, 1, 6, 7, 3, 4, 9) | -3   | 0   | G423           | G419       | G422            |
| m11n20 | G1412 | (0, 9, 2, 4, 3, 6, 5, 8, 7, 1) | (6, 3, 7, 1, 5, 4, 0, 2, 9, 8) | -7   | 0   | G1413          | G1413      | G1412           |
|        | G1413 | (0, 2, 5, 4, 3, 7, 6, 9, 8, 1) | (3, 7, 1, 8, 6, 5, 2, 4, 0, 9) | -7   | 0   | G1412          | G1412      | G1413           |
| 11n23  | G1956 | (0, 8, 7, 4, 3, 5, 6, 9, 2, 1) | (3, 2, 1, 9, 8, 0, 4, 5, 7, 6) | -10  | -1  | –              | –          | G2362           |
|        | G2362 | (0, 6, 9, 8, 7, 3, 2, 4, 5, 1) | (3, 2, 4, 1, 0, 9, 5, 6, 8, 7) | -10  | -1  | –              | –          | G1956           |
|        | G1957 | (0, 9, 2, 5, 6, 8, 7, 4, 3, 1) | (5, 4, 6, 7, 1, 3, 2, 0, 9, 8) | -10  | 1   | –              | –          | G2363           |
|        | G2363 | (0, 6, 7, 9, 8, 4, 3, 2, 5, 1) | (4, 3, 5, 6, 2, 1, 0, 7, 9, 8) | -10  | 1   | –              | –          | G1957           |
| m11n23 | G2165 | (0, 6, 8, 9, 7, 3, 1, 2, 4, 5) | (3, 2, 4, 5, 0, 8, 6, 7, 9, 1) | 0    | -1  | –              | –          | G2574           |
|        | G2166 | (0, 6, 4, 5, 7, 8, 9, 2, 3, 1) | (2, 1, 8, 9, 0, 3, 4, 6, 7, 5) | 0    | -1  | –              | –          | G2573           |
|        | G2167 | (0, 6, 4, 5, 7, 8, 9, 2, 3, 1) | (2, 1, 9, 0, 3, 4, 6, 7, 8, 5) | 0    | -1  | –              | –          | G2572           |
|        | G2168 | (0, 1, 6, 2, 4, 5, 3, 8, 9, 7) | (5, 8, 9, 7, 0, 1, 6, 2, 4, 3) | 0    | -1  | –              | –          | G2571           |
|        | G2571 | (0, 7, 4, 2, 3, 5, 6, 8, 1, 9) | (5, 1, 8, 6, 7, 9, 0, 2, 4, 3) | 0    | -1  | –              | –          | G2168           |
|        | G2572 | (0, 1, 5, 4, 2, 3, 7, 8, 6, 9) | (3, 7, 8, 6, 5, 9, 0, 4, 1, 2) | 0    | -1  | –              | –          | G2167           |
|        | G2573 | (0, 1, 5, 4, 2, 3, 7, 8, 6, 9) | (7, 8, 9, 6, 5, 0, 1, 4, 2, 3) | 0    | -1  | –              | –          | G2166           |
|        | G2574 | (0, 2, 5, 3, 4, 1, 7, 8, 6, 9) | (4, 7, 8, 6, 9, 5, 0, 2, 1, 3) | 0    | -1  | –              | –          | G2165           |
|        | G2169 | (0, 1, 3, 4, 2, 8, 6, 7, 9, 5) | (4, 6, 8, 9, 7, 5, 0, 1, 3, 2) | 0    | 1   | –              | –          | G2578           |
|        | G2170 | (0, 8, 9, 2, 3, 4, 6, 7, 5, 1) | (6, 4, 5, 7, 8, 1, 2, 3, 0, 9) | 0    | 1   | –              | –          | G2576           |
|        | G2171 | (0, 8, 9, 4, 2, 3, 5, 1, 6, 7) | (4, 3, 5, 1, 6, 7, 0, 8, 9, 2) | 0    | 1   | –              | –          | G2577           |
|        | G2172 | (0, 8, 9, 2, 3, 4, 6, 7, 5, 1) | (6, 3, 4, 5, 7, 8, 1, 2, 0, 9) | 0    | 1   | –              | –          | G2575           |
|        | G2575 | (0, 3, 1, 2, 6, 7, 5, 4, 8, 9) | (7, 8, 5, 9, 0, 4, 3, 1, 2, 6) | 0    | 1   | –              | –          | G2172           |
|        | G2576 | (0, 3, 1, 2, 6, 7, 5, 4, 8, 9) | (6, 7, 5, 8, 9, 4, 3, 0, 1, 2) | 0    | 1   | –              | –          | G2170           |
|        | G2577 | (0, 8, 1, 3, 4, 6, 7, 5, 2, 9) | (6, 5, 7, 9, 0, 2, 3, 1, 8, 4) | 0    | 1   | –              | –          | G2171           |
|        | G2578 | (0, 3, 1, 2, 8, 5, 6, 4, 7, 9) | (6, 8, 7, 9, 4, 0, 3, 1, 2, 5) | 0    | 1   | –              | –          | G2169           |
| 11n24  | G1958 | (0, 3, 4, 6, 5, 9, 8, 7, 2, 1) | (5, 7, 2, 3, 1, 4, 0, 9, 8, 6) | -6   | -1  | –              | –          | G2366           |
|        | G1959 | (0, 9, 2, 1, 3, 4, 8, 7, 6, 5) | (7, 3, 6, 4, 5, 0, 2, 9, 1, 8) | -6   | -1  | –              | –          | G2365           |
|        | G1960 | (0, 2, 9, 8, 5, 3, 4, 7, 6, 1) | (4, 7, 6, 1, 0, 9, 2, 3, 8, 5) | -6   | -1  | –              | –          | G2364           |
|        | G2364 | (0, 2, 6, 7, 5, 9, 8, 4, 3, 1) | (4, 7, 8, 1, 0, 3, 2, 9, 6, 5) | -6   | -1  | –              | –          | G1960           |
|        | G2365 | (0, 9, 2, 1, 3, 4, 8, 7, 6, 5) | (7, 4, 6, 5, 0, 2, 3, 9, 1, 8) | -6   | -1  | –              | –          | G1959           |
|        | G2366 | (0, 3, 4, 6, 5, 9, 8, 7, 2, 1) | (4, 5, 7, 2, 1, 3, 0, 9, 8, 6) | -6   | -1  | –              | –          | G1958           |
|        | G1961 | (0, 9, 8, 7, 1, 2, 4, 3, 6, 5) | (7, 4, 6, 3, 5, 0, 1, 9, 2, 8) | -6   | 1   | –              | –          | G2368           |
|        | G1962 | (0, 5, 4, 7, 8, 6, 3, 2, 9, 1) | (6, 3, 8, 9, 2, 1, 0, 5, 4, 7) | -6   | 1   | –              | –          | G2367           |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G1963 | (0, 9, 4, 3, 2, 6, 5, 7, 8, 1) | (5, 3, 2, 1, 7, 0, 8, 9, 4, 6) | -6   | 1   | —              | —          | G2369           |
|        | G2367 | (0, 8, 7, 3, 2, 6, 4, 5, 9, 1) | (6, 5, 2, 9, 8, 1, 0, 3, 4, 7) | -6   | 1   | —              | —          | G1962           |
|        | G2368 | (0, 9, 8, 7, 1, 2, 4, 3, 6, 5) | (7, 4, 6, 2, 3, 5, 0, 9, 1, 8) | -6   | 1   | —              | —          | G1961           |
|        | G2369 | (0, 9, 4, 3, 2, 6, 5, 7, 8, 1) | (5, 3, 2, 1, 8, 0, 9, 4, 6, 7) | -6   | 1   | —              | —          | G1963           |
|        | G1414 | (0, 8, 9, 1, 3, 4, 7, 5, 6, 2) | (4, 2, 5, 6, 0, 1, 3, 8, 9, 7) | -4   | -1  | —              | —          | G1420           |
|        | G1415 | (0, 1, 9, 5, 6, 7, 3, 4, 2, 8) | (4, 6, 2, 7, 8, 0, 9, 1, 5, 3) | -4   | -1  | —              | —          | ?               |
|        | G1416 | (0, 2, 3, 4, 8, 5, 7, 6, 1, 9) | (5, 6, 1, 2, 3, 9, 0, 8, 7, 4) | -4   | -1  | —              | —          | G1419           |
|        | G1417 | (0, 1, 4, 5, 3, 2, 7, 8, 6, 9) | (2, 7, 8, 9, 6, 4, 3, 5, 0, 1) | -4   | -1  | —              | —          | G1418           |
|        | G1418 | (0, 1, 3, 4, 5, 9, 8, 6, 7, 2) | (5, 6, 7, 2, 3, 4, 0, 9, 1, 8) | -4   | -1  | —              | —          | G1417           |
|        | G1419 | (0, 1, 9, 2, 3, 4, 6, 8, 7, 5) | (6, 7, 3, 4, 5, 0, 1, 2, 9, 8) | -4   | -1  | —              | —          | G1416           |
|        | G1420 | (0, 4, 1, 8, 6, 7, 2, 3, 5, 9) | (6, 7, 5, 4, 9, 0, 8, 1, 2, 3) | -4   | -1  | —              | —          | G1414           |
|        | G1421 | (0, 2, 7, 3, 5, 6, 4, 8, 1, 9) | (4, 9, 1, 8, 0, 2, 7, 5, 6, 3) | -4   | -1  | —              | —          | ?               |
|        | G1422 | (0, 6, 4, 5, 1, 2, 3, 9, 7, 8) | (5, 3, 7, 9, 8, 0, 1, 6, 2, 4) | -4   | 1   | —              | —          | ?               |
|        | G1423 | (0, 8, 3, 2, 4, 1, 5, 6, 7, 9) | (5, 2, 1, 9, 0, 6, 7, 8, 3, 4) | -4   | 1   | —              | —          | G1428           |
|        | G1424 | (0, 3, 1, 2, 7, 6, 4, 5, 8, 9) | (8, 9, 4, 6, 5, 3, 0, 1, 2, 7) | -4   | 1   | —              | —          | G1429           |
|        | G1425 | (0, 4, 6, 7, 2, 3, 1, 8, 5, 9) | (6, 7, 8, 1, 9, 0, 5, 4, 2, 3) | -4   | 1   | —              | —          | G1426           |
|        | G1426 | (0, 6, 7, 5, 8, 9, 1, 3, 4, 2) | (5, 3, 4, 9, 1, 2, 6, 7, 0, 8) | -4   | 1   | —              | —          | G1425           |
|        | G1427 | (0, 8, 1, 5, 3, 4, 6, 2, 7, 9) | (6, 3, 4, 2, 7, 9, 1, 8, 0, 5) | -4   | 1   | —              | —          | ?               |
|        | G1428 | (0, 8, 7, 9, 1, 2, 3, 6, 4, 5) | (7, 6, 3, 4, 5, 0, 1, 2, 8, 9) | -4   | 1   | —              | —          | G1423           |
|        | G1429 | (0, 5, 6, 4, 3, 7, 8, 9, 1, 2) | (4, 1, 3, 2, 8, 9, 0, 5, 6, 7) | -4   | 1   | —              | —          | G1424           |
| 11n27  | G1964 | (0, 9, 8, 6, 5, 4, 2, 1, 3, 7) | (4, 3, 1, 0, 7, 9, 6, 5, 8, 2) | -13  | -2  | —              | —          | G2370           |
|        | G2370 | (0, 3, 2, 1, 8, 7, 9, 6, 5, 4) | (5, 9, 6, 4, 3, 0, 2, 1, 8, 7) | -13  | -2  | —              | —          | G1964           |
|        | G1965 | (0, 9, 7, 5, 4, 6, 3, 2, 1, 8) | (6, 3, 2, 8, 7, 1, 0, 9, 5, 4) | -13  | 0   | G1966          | G2371      | G2372           |
|        | G1966 | (0, 4, 3, 7, 6, 5, 2, 1, 9, 8) | (5, 2, 9, 1, 0, 8, 7, 6, 4, 3) | -13  | 0   | G1965          | G2372      | G2371           |
|        | G2371 | (0, 9, 1, 8, 5, 7, 6, 4, 3, 2) | (4, 3, 7, 6, 0, 2, 1, 9, 8, 5) | -13  | 0   | G2372          | G1965      | G1966           |
|        | G2372 | (0, 9, 1, 8, 5, 7, 6, 4, 3, 2) | (5, 4, 6, 0, 9, 3, 2, 1, 8, 7) | -13  | 0   | G2371          | G1966      | G1965           |
|        | G1967 | (0, 4, 6, 5, 3, 2, 1, 9, 8, 7) | (5, 9, 2, 1, 8, 0, 7, 6, 4, 3) | -13  | 2   | —              | —          | G2373           |
|        | G2373 | (0, 9, 8, 5, 7, 6, 3, 2, 1, 4) | (7, 6, 3, 2, 4, 1, 0, 8, 5, 9) | -13  | 2   | —              | —          | G1967           |
| m11n27 | G2173 | (0, 1, 4, 2, 3, 7, 8, 5, 6, 9) | (7, 8, 9, 6, 0, 1, 4, 2, 3, 5) | 3    | 0   | G2174          | ?          | ?               |
|        | G2174 | (0, 1, 3, 4, 2, 5, 9, 6, 7, 8) | (6, 7, 9, 0, 8, 3, 4, 1, 2, 5) | 3    | 0   | G2173          | ?          | ?               |
|        | G2579 | (0, 1, 7, 8, 2, 3, 6, 4, 5, 9) | (3, 6, 4, 5, 7, 9, 0, 8, 1, 2) | 3    | 0   | G2580          | ?          | ?               |
|        | G2580 | (0, 1, 2, 6, 7, 5, 8, 9, 3, 4) | (5, 8, 9, 0, 3, 1, 2, 4, 6, 7) | 3    | 0   | G2579          | ?          | ?               |
| 11n37  | G1968 | (0, 8, 5, 6, 7, 9, 3, 2, 4, 1) | (3, 2, 1, 4, 5, 6, 8, 7, 0, 9) | -3   | 0   | G1969          | G2374      | G2375           |
|        | G1969 | (0, 2, 3, 4, 1, 9, 8, 5, 7, 6) | (3, 4, 5, 8, 7, 6, 0, 9, 2, 1) | -3   | 0   | G1968          | G2375      | G2374           |
|        | G2374 | (0, 8, 7, 2, 6, 3, 4, 5, 9, 1) | (6, 5, 9, 8, 1, 0, 2, 3, 4, 7) | -3   | 0   | G2375          | G1968      | G1969           |
|        | G2375 | (0, 9, 8, 2, 1, 4, 3, 5, 6, 7) | (6, 3, 1, 0, 7, 9, 8, 2, 4, 5) | -3   | 0   | G2374          | G1969      | G1968           |
| m11n37 | G2175 | (0, 9, 7, 8, 5, 3, 4, 1, 2, 6) | (3, 2, 0, 4, 9, 6, 7, 5, 8, 1) | -7   | -2  | —              | —          | G2581           |
|        | G2176 | (0, 9, 7, 8, 2, 3, 6, 4, 5, 1) | (3, 1, 0, 4, 5, 9, 2, 7, 8, 6) | -7   | -2  | —              | —          | G2583           |
|        | G2177 | (0, 1, 3, 6, 5, 4, 2, 8, 9, 7) | (2, 8, 9, 0, 7, 6, 5, 3, 4, 1) | -7   | -2  | —              | —          | G2582           |
|        | G2178 | (0, 1, 7, 5, 6, 8, 9, 4, 3, 2) | (3, 6, 2, 9, 0, 1, 7, 8, 5, 4) | -7   | -2  | —              | —          | G2584           |
|        | G2581 | (0, 1, 9, 4, 7, 8, 6, 5, 2, 3) | (5, 8, 2, 0, 1, 3, 9, 7, 4, 6) | -7   | -2  | —              | —          | G2175           |
|        | G2582 | (0, 9, 5, 3, 4, 6, 7, 2, 8, 1) | (2, 1, 0, 7, 8, 9, 5, 6, 3, 4) | -7   | -2  | —              | —          | G2177           |
|        | G2583 | (0, 7, 8, 2, 3, 6, 5, 4, 1, 9) | (3, 1, 4, 7, 9, 0, 8, 6, 5, 2) | -7   | -2  | —              | —          | G2176           |
|        | G2584 | (0, 9, 8, 4, 5, 3, 6, 7, 1, 2) | (3, 1, 0, 9, 2, 7, 8, 4, 5, 6) | -7   | -2  | —              | —          | G2178           |
|        | G2179 | (0, 7, 5, 6, 3, 4, 2, 8, 9, 1) | (6, 2, 8, 1, 9, 0, 5, 3, 4, 7) | -7   | 0   | G2181          | G2585      | G2586           |
|        | G2180 | (0, 7, 6, 3, 8, 2, 4, 5, 1, 9) | (4, 2, 1, 7, 5, 6, 9, 0, 8, 3) | -7   | 0   | G2182          | G2588      | G2587           |
|        | G2181 | (0, 8, 4, 5, 3, 7, 6, 9, 1, 2) | (6, 3, 1, 2, 9, 0, 8, 4, 5, 7) | -7   | 0   | G2179          | G2586      | G2585           |
|        | G2182 | (0, 8, 7, 9, 5, 6, 4, 1, 2, 3) | (6, 1, 0, 4, 2, 3, 8, 5, 7, 9) | -7   | 0   | G2180          | G2587      | G2588           |
|        | G2585 | (0, 3, 1, 2, 7, 5, 6, 9, 8, 4) | (7, 8, 5, 6, 4, 0, 1, 3, 2, 9) | -7   | 0   | G2586          | G2179      | G2181           |
|        | G2586 | (0, 7, 5, 6, 3, 4, 2, 8, 9, 1) | (4, 2, 8, 9, 7, 1, 0, 3, 5, 6) | -7   | 0   | G2585          | G2181      | G2179           |
|        | G2587 | (0, 1, 9, 6, 4, 7, 8, 3, 2, 5) | (7, 8, 3, 2, 0, 1, 5, 6, 4, 9) | -7   | 0   | G2588          | G2182      | G2180           |
|        | G2588 | (0, 7, 5, 6, 3, 2, 4, 1, 8, 9) | (6, 4, 8, 1, 9, 7, 0, 3, 2, 5) | -7   | 0   | G2587          | G2180      | G2182           |
|        | G2183 | (0, 4, 5, 2, 3, 1, 8, 9, 7, 6) | (5, 8, 1, 9, 0, 7, 2, 6, 4, 3) | -7   | 2   | —              | —          | G2590           |
|        | G2184 | (0, 8, 9, 5, 3, 2, 1, 4, 6, 7) | (6, 3, 4, 2, 1, 0, 7, 8, 9, 5) | -7   | 2   | —              | —          | G2589           |
|        | G2185 | (0, 9, 8, 3, 4, 6, 7, 5, 1, 2) | (8, 7, 4, 5, 1, 2, 3, 0, 6, 9) | -7   | 2   | —              | —          | G2592           |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G2186 | (0, 6, 7, 5, 8, 9, 3, 4, 2, 1) | (5, 3, 4, 9, 2, 6, 7, 1, 0, 8) | -7   | 2   | —              | —          | G2591           |
|        | G2589 | (0, 3, 9, 4, 5, 7, 8, 6, 2, 1) | (7, 8, 5, 6, 2, 3, 4, 1, 0, 9) | -7   | 2   | —              | —          | G2184           |
|        | G2590 | (0, 1, 8, 7, 5, 6, 9, 4, 2, 3) | (7, 9, 6, 4, 0, 2, 3, 1, 5, 8) | -7   | 2   | —              | —          | G2183           |
|        | G2591 | (0, 8, 5, 4, 3, 6, 7, 1, 2, 9) | (7, 4, 3, 1, 9, 0, 2, 5, 8, 6) | -7   | 2   | —              | —          | G2186           |
|        | G2592 | (0, 1, 5, 6, 9, 7, 8, 4, 3, 2) | (6, 7, 8, 4, 5, 0, 3, 2, 1, 9) | -7   | 2   | —              | —          | G2185           |
| 11n48  | G434  | (0, 9, 1, 2, 5, 7, 6, 4, 3, 8) | (7, 6, 8, 0, 1, 3, 2, 9, 5, 4) | -3   | 0   | G435           | ?          | ?               |
|        | G435  | (0, 9, 1, 6, 5, 3, 2, 4, 7, 8) | (3, 2, 5, 4, 0, 7, 6, 8, 9, 1) | -3   | 0   | G434           | ?          | ?               |
| m11n48 | G1430 | (0, 8, 9, 2, 7, 5, 3, 4, 1, 6) | (3, 1, 4, 8, 0, 9, 6, 7, 5, 2) | -7   | -2  | —              | —          | G1435           |
|        | G1431 | (0, 8, 9, 1, 2, 7, 5, 6, 4, 3) | (4, 2, 3, 6, 0, 1, 8, 9, 7, 5) | -7   | -2  | —              | —          | G1433           |
|        | G1432 | (0, 1, 9, 6, 7, 8, 4, 5, 3, 2) | (3, 8, 2, 0, 1, 5, 6, 9, 7, 4) | -7   | -2  | —              | —          | G1434           |
|        | G1433 | (0, 9, 7, 8, 6, 2, 3, 1, 4, 5) | (3, 1, 0, 4, 9, 7, 8, 5, 6, 2) | -7   | -2  | —              | —          | G1431           |
|        | G1434 | (0, 1, 7, 8, 9, 6, 4, 5, 3, 2) | (3, 9, 0, 2, 5, 1, 7, 8, 6, 4) | -7   | -2  | —              | —          | G1432           |
|        | G1435 | (0, 7, 8, 6, 4, 9, 2, 3, 1, 5) | (3, 9, 1, 0, 7, 5, 6, 8, 4, 2) | -7   | -2  | —              | —          | G1430           |
|        | G1436 | (0, 1, 8, 6, 4, 7, 3, 5, 2, 9) | (5, 7, 3, 9, 8, 2, 0, 1, 6, 4) | -7   | 0   | G1438          | G1436      | G1438           |
|        | G1437 | (0, 6, 2, 4, 1, 5, 3, 8, 7, 9) | (5, 1, 8, 0, 7, 9, 6, 4, 2, 3) | -7   | 0   | G1439          | G1437      | G1439           |
|        | G1438 | (0, 1, 8, 6, 4, 7, 3, 5, 2, 9) | (6, 7, 5, 2, 9, 0, 8, 1, 4, 3) | -7   | 0   | G1436          | G1438      | G1436           |
|        | G1439 | (0, 8, 5, 6, 4, 7, 3, 1, 9, 2) | (7, 1, 9, 3, 0, 2, 8, 5, 4, 6) | -7   | 0   | G1437          | G1439      | G1437           |
|        | G1440 | (0, 9, 7, 8, 6, 1, 2, 4, 5, 3) | (8, 6, 4, 5, 2, 3, 7, 0, 1, 9) | -7   | 2   | —              | —          | G1443           |
|        | G1441 | (0, 5, 2, 3, 1, 9, 4, 7, 8, 6) | (4, 1, 9, 0, 7, 6, 8, 2, 5, 3) | -7   | 2   | —              | —          | G1442           |
|        | G1442 | (0, 4, 2, 3, 6, 1, 9, 7, 8, 5) | (3, 1, 7, 9, 0, 8, 5, 4, 6, 2) | -7   | 2   | —              | —          | G1441           |
|        | G1443 | (0, 1, 4, 2, 3, 9, 7, 8, 6, 5) | (3, 9, 0, 7, 8, 6, 1, 5, 4, 2) | -7   | 2   | —              | —          | G1440           |
|        | G1444 | (0, 9, 7, 8, 6, 3, 4, 5, 1, 2) | (8, 6, 4, 5, 1, 7, 0, 2, 3, 9) | -7   | 2   | —              | —          | G1445           |
|        | G1445 | (0, 9, 7, 8, 4, 5, 6, 3, 1, 2) | (8, 5, 3, 6, 7, 1, 2, 0, 4, 9) | -7   | 2   | —              | —          | G1444           |
| 11n49  | G436  | (0, 3, 4, 7, 5, 9, 8, 6, 2, 1) | (5, 6, 8, 2, 1, 4, 3, 0, 9, 7) | -5   | 0   | G437           | G437       | G436            |
|        | G437  | (0, 4, 3, 6, 5, 2, 1, 9, 7, 8) | (6, 9, 7, 1, 0, 8, 4, 3, 2, 5) | -5   | 0   | G436           | G436       | G437            |
| m11n49 | G1446 | (0, 3, 4, 1, 2, 7, 6, 8, 5, 9) | (7, 8, 9, 6, 5, 3, 0, 4, 1, 2) | -5   | 0   | G1447          | G1446      | G1447           |
|        | G1447 | (0, 8, 7, 9, 1, 2, 5, 6, 3, 4) | (6, 5, 2, 3, 4, 8, 0, 1, 7, 9) | -5   | 0   | G1446          | G1447      | G1446           |
| 11n50  | G438  | (0, 1, 8, 2, 9, 4, 7, 6, 3, 5) | (2, 4, 3, 6, 5, 8, 0, 9, 7, 1) | -2   | -1  | —              | —          | ?               |
|        | G439  | (0, 2, 7, 5, 8, 9, 6, 1, 4, 3) | (4, 8, 1, 9, 0, 3, 2, 5, 7, 6) | -2   | -1  | —              | —          | ?               |
|        | G440  | (0, 9, 2, 7, 4, 5, 8, 6, 1, 3) | (7, 6, 8, 1, 0, 3, 4, 2, 5, 9) | -2   | 1   | —              | —          | ?               |
|        | G441  | (0, 2, 9, 8, 1, 6, 3, 7, 4, 5) | (4, 8, 6, 5, 7, 0, 9, 2, 1, 3) | -2   | 1   | —              | —          | ?               |
| m11n50 | G2187 | (0, 1, 7, 9, 8, 6, 3, 4, 2, 5) | (4, 6, 2, 5, 0, 9, 7, 1, 8, 3) | -8   | -1  | —              | —          | G2593           |
|        | G2188 | (0, 7, 9, 5, 3, 4, 6, 1, 2, 8) | (6, 1, 2, 0, 8, 9, 3, 5, 7, 4) | -8   | -1  | —              | —          | G2594           |
|        | G2189 | (0, 7, 8, 5, 3, 4, 6, 2, 1, 9) | (5, 1, 4, 9, 6, 7, 0, 8, 3, 2) | -8   | -1  | —              | —          | G2595           |
|        | G2593 | (0, 5, 7, 4, 6, 2, 8, 9, 3, 1) | (2, 1, 3, 9, 0, 7, 5, 6, 8, 4) | -8   | -1  | —              | —          | G2187           |
|        | G2594 | (0, 8, 1, 6, 4, 7, 5, 2, 3, 9) | (4, 2, 5, 3, 9, 0, 8, 6, 7, 1) | -8   | -1  | —              | —          | G2188           |
|        | G2595 | (0, 8, 1, 2, 9, 4, 7, 3, 6, 5) | (6, 2, 4, 5, 3, 0, 1, 8, 9, 7) | -8   | -1  | —              | —          | G2189           |
|        | G2190 | (0, 8, 7, 3, 5, 6, 4, 1, 2, 9) | (7, 6, 1, 9, 2, 3, 0, 5, 8, 4) | -8   | 1   | —              | —          | G2596           |
|        | G2191 | (0, 3, 1, 2, 9, 7, 6, 8, 4, 5) | (2, 7, 4, 8, 6, 5, 0, 3, 9, 1) | -8   | 1   | —              | —          | G2598           |
|        | G2192 | (0, 6, 7, 2, 4, 5, 3, 9, 1, 8) | (4, 1, 3, 5, 9, 0, 8, 6, 7, 2) | -8   | 1   | —              | —          | G2597           |
|        | G2596 | (0, 9, 2, 8, 1, 6, 3, 4, 7, 5) | (8, 6, 7, 4, 5, 2, 0, 1, 3, 9) | -8   | 1   | —              | —          | G2190           |
|        | G2597 | (0, 6, 7, 4, 2, 5, 3, 8, 1, 9) | (8, 2, 3, 1, 9, 0, 6, 4, 7, 5) | -8   | 1   | —              | —          | G2192           |
|        | G2598 | (0, 8, 2, 3, 9, 5, 7, 4, 6, 1) | (7, 3, 5, 6, 4, 1, 2, 8, 0, 9) | -8   | 1   | —              | —          | G2191           |
| 11n57  | G442  | (0, 6, 5, 8, 9, 4, 3, 2, 1, 7) | (2, 1, 9, 0, 7, 8, 6, 5, 4, 3) | -13  | -2  | —              | —          | G443            |
|        | G443  | (0, 6, 4, 3, 2, 1, 8, 7, 5, 9) | (8, 9, 7, 6, 5, 4, 3, 2, 0, 1) | -13  | -2  | —              | —          | G442            |
|        | G444  | (0, 9, 8, 1, 7, 6, 4, 5, 3, 2) | (4, 3, 2, 6, 5, 0, 9, 1, 8, 7) | -13  | 0   | G445           | G444       | G445            |
|        | G445  | (0, 9, 8, 1, 7, 6, 4, 5, 3, 2) | (6, 4, 3, 5, 0, 9, 8, 2, 1, 7) | -13  | 0   | G444           | G445       | G444            |
|        | G446  | (0, 6, 5, 4, 3, 8, 9, 2, 1, 7) | (4, 3, 2, 1, 9, 0, 7, 8, 6, 5) | -13  | 2   | —              | —          | G447            |
|        | G447  | (0, 4, 2, 1, 8, 7, 6, 5, 3, 9) | (8, 9, 7, 6, 5, 4, 3, 2, 0, 1) | -13  | 2   | —              | —          | G446            |
| m11n57 | G1448 | (0, 1, 2, 3, 5, 4, 7, 6, 8, 9) | (3, 7, 4, 8, 9, 6, 5, 0, 1, 2) | 3    | 0   | G1449          | ?          | ?               |
|        | G1449 | (0, 1, 3, 7, 6, 2, 4, 5, 8, 9) | (3, 4, 6, 5, 8, 7, 9, 0, 1, 2) | 3    | 0   | G1448          | ?          | ?               |
| 11n61  | G448  | (0, 8, 7, 6, 9, 2, 3, 5, 4, 1) | (5, 2, 1, 0, 3, 4, 8, 9, 7, 6) | -10  | -1  | —              | —          | ?               |
|        | G449  | (0, 9, 8, 7, 6, 3, 4, 5, 1, 2) | (6, 5, 1, 0, 9, 8, 2, 3, 4, 7) | -10  | -1  | —              | —          | ?               |
|        | G450  | (0, 9, 8, 7, 3, 2, 4, 5, 1, 6) | (4, 2, 1, 0, 9, 5, 6, 8, 7, 3) | -10  | -1  | —              | —          | ?               |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G451  | (0, 7, 6, 8, 9, 2, 5, 4, 3, 1) | (5, 4, 2, 3, 7, 8, 1, 0, 9, 6) | -10  | 1   | —              | —          | ?               |
|        | G452  | (0, 5, 1, 2, 4, 3, 9, 8, 7, 6) | (3, 9, 8, 0, 1, 7, 6, 5, 4, 2) | -10  | 1   | —              | —          | ?               |
|        | G453  | (0, 1, 7, 8, 9, 6, 5, 4, 3, 2) | (5, 8, 9, 0, 4, 3, 2, 1, 7, 6) | -10  | 1   | —              | —          | ?               |
| m11n61 | G1450 | (0, 1, 2, 4, 3, 7, 6, 8, 9, 5) | (6, 8, 9, 0, 5, 4, 1, 2, 3, 7) | 0    | -1  | —              | —          | G1452           |
|        | G1451 | (0, 1, 2, 3, 4, 7, 6, 5, 9, 8) | (3, 4, 5, 9, 0, 1, 8, 7, 6, 2) | 0    | -1  | —              | —          | G1453           |
|        | G1452 | (0, 1, 3, 4, 5, 7, 6, 2, 9, 8) | (4, 5, 6, 9, 0, 1, 8, 7, 3, 2) | 0    | -1  | —              | —          | G1450           |
|        | G1453 | (0, 1, 2, 3, 4, 7, 6, 5, 9, 8) | (4, 5, 9, 0, 1, 2, 8, 7, 6, 3) | 0    | -1  | —              | —          | G1451           |
|        | G1454 | (0, 9, 3, 2, 1, 4, 5, 6, 7, 8) | (6, 2, 1, 0, 7, 8, 9, 3, 4, 5) | 0    | 1   | —              | —          | G1457           |
|        | G1455 | (0, 9, 6, 2, 1, 3, 4, 5, 7, 8) | (6, 5, 1, 0, 7, 8, 9, 2, 3, 4) | 0    | 1   | —              | —          | G1456           |
|        | G1456 | (0, 6, 7, 9, 8, 2, 1, 3, 4, 5) | (8, 2, 3, 4, 1, 0, 5, 6, 7, 9) | 0    | 1   | —              | —          | G1455           |
|        | G1457 | (0, 9, 3, 2, 1, 4, 5, 6, 7, 8) | (5, 2, 1, 0, 6, 7, 8, 9, 3, 4) | 0    | 1   | —              | —          | G1454           |
|        |       |                                |                                |      |     |                |            |                 |
| 11n65  | G454  | (0, 9, 2, 4, 3, 5, 7, 6, 8, 1) | (3, 1, 5, 0, 6, 8, 2, 9, 4, 7) | -2   | -1  | —              | —          | G455            |
|        | G455  | (0, 9, 2, 4, 3, 5, 7, 6, 8, 1) | (3, 1, 6, 0, 8, 2, 4, 9, 5, 7) | -2   | -1  | —              | —          | G454            |
|        | G456  | (0, 3, 5, 4, 6, 8, 7, 9, 2, 1) | (4, 7, 2, 9, 3, 5, 1, 6, 0, 8) | -2   | 1   | —              | —          | G457            |
|        | G457  | (0, 3, 5, 4, 6, 8, 7, 9, 2, 1) | (4, 6, 2, 7, 9, 3, 1, 5, 0, 8) | -2   | 1   | —              | —          | G456            |
| m11n65 | G1458 | (0, 8, 9, 7, 5, 6, 1, 4, 2, 3) | (6, 1, 4, 0, 8, 2, 3, 7, 5, 9) | -8   | -1  | —              | —          | ?               |
|        | G1459 | (0, 7, 5, 8, 9, 6, 1, 4, 2, 3) | (4, 2, 9, 1, 3, 0, 7, 8, 5, 6) | -8   | -1  | —              | —          | ?               |
|        | G1460 | (0, 8, 6, 3, 4, 2, 5, 9, 1, 7) | (5, 1, 9, 7, 0, 8, 3, 4, 6, 2) | -8   | -1  | —              | —          | ?               |
|        | G1461 | (0, 6, 8, 2, 5, 3, 4, 1, 9, 7) | (5, 1, 3, 4, 9, 7, 0, 8, 6, 2) | -8   | 1   | —              | —          | ?               |
|        | G1462 | (0, 1, 9, 2, 7, 8, 6, 4, 5, 3) | (4, 8, 6, 0, 1, 5, 3, 9, 2, 7) | -8   | 1   | —              | —          | ?               |
|        | G1463 | (0, 1, 9, 2, 7, 4, 5, 8, 6, 3) | (7, 8, 5, 6, 3, 0, 2, 4, 1, 9) | -8   | 1   | —              | —          | ?               |
|        |       |                                |                                |      |     |                |            |                 |
| 11n70  | G458  | (0, 4, 3, 7, 6, 5, 2, 1, 9, 8) | (5, 9, 8, 1, 0, 7, 6, 4, 3, 2) | -9   | -2  | —              | —          | G458            |
|        | G459  | (0, 9, 5, 4, 7, 6, 8, 3, 2, 1) | (3, 1, 0, 8, 2, 9, 5, 7, 6, 4) | -9   | -2  | —              | —          | G459            |
|        | G460  | (0, 9, 8, 5, 7, 6, 2, 4, 3, 1) | (2, 1, 0, 9, 4, 3, 5, 8, 7, 6) | -9   | -2  | —              | —          | G460            |
|        | G461  | (0, 9, 6, 8, 5, 4, 1, 3, 2, 7) | (5, 4, 0, 3, 2, 7, 6, 9, 8, 1) | -9   | 0   | G463           | G462       | G464            |
|        | G462  | (0, 2, 8, 7, 5, 9, 6, 4, 3, 1) | (4, 9, 6, 1, 0, 3, 2, 8, 7, 5) | -9   | 0   | G464           | G461       | G463            |
|        | G463  | (0, 2, 9, 8, 5, 7, 4, 3, 6, 1) | (4, 7, 6, 1, 0, 3, 9, 8, 2, 5) | -9   | 0   | G461           | G464       | G462            |
|        | G464  | (0, 9, 5, 7, 6, 4, 3, 1, 8, 2) | (6, 1, 8, 3, 2, 0, 9, 5, 4, 7) | -9   | 0   | G462           | G463       | G461            |
|        | G465  | (0, 9, 8, 3, 5, 4, 7, 6, 2, 1) | (7, 5, 4, 6, 2, 9, 3, 1, 0, 8) | -9   | 2   | —              | —          | G465            |
|        | G466  | (0, 9, 7, 6, 3, 2, 1, 5, 4, 8) | (6, 5, 4, 2, 1, 8, 7, 0, 9, 3) | -9   | 2   | —              | —          | G466            |
|        | G467  | (0, 8, 7, 9, 5, 4, 6, 3, 2, 1) | (5, 4, 3, 6, 8, 7, 2, 1, 0, 9) | -9   | 2   | —              | —          | G467            |
| m11n70 | G1464 | (0, 2, 3, 4, 5, 8, 6, 7, 1, 9) | (6, 7, 1, 2, 3, 4, 9, 0, 8, 5) | -1   | 0   | G1465          | G1464      | G1465           |
|        | G1465 | (0, 1, 2, 9, 7, 8, 3, 4, 5, 6) | (5, 7, 8, 6, 0, 1, 9, 2, 3, 4) | -1   | 0   | G1464          | G1465      | G1464           |
| 11n79  | G468  | (0, 9, 2, 4, 3, 6, 5, 8, 7, 1) | (4, 3, 5, 1, 0, 2, 7, 6, 9, 8) | -7   | 0   | G469           | G469       | G468            |
|        | G469  | (0, 3, 2, 8, 7, 9, 5, 4, 6, 1) | (2, 1, 5, 4, 3, 6, 8, 7, 0, 9) | -7   | 0   | G468           | G468       | G469            |
| m11n79 | G1466 | (0, 1, 9, 5, 6, 4, 7, 8, 2, 3) | (6, 7, 2, 0, 1, 8, 3, 5, 4, 9) | -3   | 0   | G1467          | G1466      | G1467           |
|        | G1467 | (0, 8, 9, 6, 7, 3, 1, 2, 4, 5) | (7, 1, 2, 0, 4, 6, 5, 8, 9, 3) | -3   | 0   | G1466          | G1467      | G1466           |
|        | G1468 | (0, 6, 7, 8, 5, 3, 4, 1, 2, 9) | (8, 9, 3, 4, 2, 6, 7, 5, 0, 1) | -3   | 0   | G1469          | G1468      | G1469           |
|        | G1469 | (0, 8, 5, 6, 7, 3, 4, 1, 2, 9) | (7, 1, 9, 0, 4, 5, 2, 3, 8, 6) | -3   | 0   | G1468          | G1469      | G1468           |
| 11n81  | G470  | (0, 2, 1, 9, 8, 6, 5, 7, 4, 3) | (5, 8, 7, 4, 3, 0, 9, 2, 1, 6) | -13  | 0   | G470           | G470       | G470            |
| m11n81 | G1470 | (0, 1, 4, 2, 3, 5, 6, 8, 9, 7) | (3, 8, 9, 6, 7, 0, 1, 4, 5, 2) | 3    | 0   | G1470          | G1470      | G1470           |
| 11n82  | G471  | (0, 5, 7, 4, 2, 1, 3, 6, 9, 8) | (4, 3, 9, 8, 6, 5, 7, 0, 2, 1) | -6   | -1  | —              | —          | ?               |
|        | G472  | (0, 9, 2, 1, 5, 7, 6, 4, 3, 8) | (7, 6, 8, 3, 0, 2, 1, 9, 5, 4) | -6   | -1  | —              | —          | ?               |
|        | G473  | (0, 9, 2, 5, 7, 6, 4, 1, 3, 8) | (7, 6, 8, 1, 3, 2, 0, 9, 5, 4) | -6   | 1   | —              | —          | ?               |
|        | G474  | (0, 5, 4, 2, 1, 3, 7, 6, 9, 8) | (4, 3, 9, 7, 6, 8, 5, 0, 2, 1) | -6   | 1   | —              | —          | ?               |
| m11n82 | G1471 | (0, 1, 9, 5, 3, 4, 6, 7, 8, 2) | (3, 4, 2, 0, 7, 8, 1, 9, 5, 6) | -4   | -1  | —              | —          | G1475           |
|        | G1472 | (0, 2, 1, 6, 4, 7, 5, 3, 8, 9) | (7, 8, 3, 2, 9, 1, 0, 6, 4, 5) | -4   | -1  | —              | —          | G1474           |
|        | G1473 | (0, 1, 2, 3, 9, 7, 8, 6, 4, 5) | (3, 4, 8, 6, 5, 0, 1, 9, 7, 2) | -4   | -1  | —              | —          | ?               |
|        | G1474 | (0, 2, 1, 7, 4, 6, 3, 5, 8, 9) | (6, 5, 3, 2, 8, 9, 7, 0, 1, 4) | -4   | -1  | —              | —          | G1472           |
|        | G1475 | (0, 1, 7, 5, 8, 9, 6, 4, 2, 3) | (4, 8, 9, 0, 2, 3, 1, 7, 5, 6) | -4   | -1  | —              | —          | G1471           |
|        | G1476 | (0, 1, 9, 6, 7, 8, 3, 2, 4, 5) | (4, 8, 2, 0, 1, 5, 9, 6, 7, 3) | -4   | -1  | —              | —          | ?               |
|        | G1477 | (0, 1, 9, 7, 4, 5, 8, 6, 2, 3) | (7, 8, 6, 2, 0, 1, 3, 4, 5, 9) | -4   | 1   | —              | —          | G1481           |
|        | G1478 | (0, 1, 9, 7, 8, 6, 2, 3, 4, 5) | (3, 8, 6, 4, 5, 0, 9, 7, 1, 2) | -4   | 1   | —              | —          | ?               |
|        | G1479 | (0, 1, 6, 4, 2, 5, 3, 8, 7, 9) | (4, 5, 3, 9, 8, 0, 7, 6, 1, 2) | -4   | 1   | —              | —          | G1482           |

| Knot   | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|--------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|        | G1480 | (0, 1, 3, 2, 7, 8, 9, 6, 4, 5) | (2, 8, 9, 6, 0, 4, 5, 3, 7, 1) | -4   | 1   | —              | —          | ?               |
|        | G1481 | (0, 4, 5, 6, 8, 9, 7, 3, 1, 2) | (6, 7, 3, 1, 4, 5, 2, 0, 8, 9) | -4   | 1   | —              | —          | G1477           |
|        | G1482 | (0, 1, 4, 6, 3, 5, 2, 8, 7, 9) | (5, 8, 9, 2, 0, 1, 7, 6, 4, 3) | -4   | 1   | —              | —          | G1479           |
| 11n84  | G475  | (0, 2, 9, 1, 4, 6, 3, 5, 8, 7) | (3, 6, 4, 5, 8, 0, 7, 9, 2, 1) | 1    | 0   | ?              | G475       | ?               |
|        | G476  | (0, 8, 9, 1, 3, 2, 4, 7, 5, 6) | (5, 2, 7, 8, 0, 6, 9, 3, 1, 4) | 1    | 0   | ?              | G476       | ?               |
| m11n84 | G1483 | (0, 9, 7, 5, 6, 2, 4, 1, 3, 8) | (4, 1, 3, 8, 0, 7, 9, 5, 6, 2) | -11  | -2  | —              | —          | G1483           |
|        | G1484 | (0, 2, 1, 9, 8, 6, 7, 5, 3, 4) | (5, 7, 3, 2, 0, 9, 4, 1, 6, 8) | -11  | -2  | —              | —          | G1487           |
|        | G1485 | (0, 1, 9, 8, 6, 7, 5, 4, 2, 3) | (4, 7, 2, 0, 9, 3, 1, 6, 5, 8) | -11  | -2  | —              | —          | G1485           |
|        | G1486 | (0, 2, 9, 6, 1, 8, 7, 4, 5, 3) | (4, 7, 5, 0, 3, 2, 9, 8, 1, 6) | -11  | -2  | —              | —          | G1489           |
|        | G1487 | (0, 9, 6, 8, 7, 4, 5, 3, 1, 2) | (5, 1, 0, 3, 9, 8, 2, 6, 4, 7) | -11  | -2  | —              | —          | G1484           |
|        | G1488 | (0, 6, 8, 7, 5, 3, 4, 2, 9, 1) | (2, 1, 4, 9, 8, 6, 0, 7, 3, 5) | -11  | -2  | —              | —          | G1488           |
|        | G1489 | (0, 7, 5, 3, 6, 4, 9, 2, 1, 8) | (4, 9, 1, 8, 0, 7, 5, 6, 3, 2) | -11  | -2  | —              | —          | G1486           |
|        | G1490 | (0, 8, 7, 5, 6, 2, 4, 3, 1, 9) | (7, 6, 3, 9, 1, 8, 0, 5, 4, 2) | -11  | 0   | G1499          | G1494      | G1504           |
|        | G1491 | (0, 8, 7, 1, 9, 5, 6, 3, 2, 4) | (7, 6, 3, 4, 2, 0, 1, 8, 5, 9) | -11  | 0   | G1500          | G1505      | G1493           |
|        | G1492 | (0, 8, 4, 6, 3, 2, 5, 9, 1, 7) | (5, 1, 9, 2, 0, 7, 8, 6, 4, 3) | -11  | 0   | G1502          | G1503      | G1496           |
|        | G1493 | (0, 9, 2, 7, 1, 8, 5, 3, 6, 4) | (7, 5, 6, 3, 4, 2, 0, 8, 1, 9) | -11  | 0   | G1505          | G1500      | G1491           |
|        | G1494 | (0, 1, 9, 8, 6, 7, 4, 3, 5, 2) | (4, 7, 5, 0, 9, 3, 2, 8, 1, 6) | -11  | 0   | G1504          | G1490      | G1499           |
|        | G1495 | (0, 8, 9, 7, 4, 3, 6, 5, 1, 2) | (4, 1, 5, 3, 2, 8, 0, 7, 6, 9) | -11  | 0   | G1498          | G1495      | G1498           |
|        | G1496 | (0, 2, 8, 1, 9, 6, 5, 3, 7, 4) | (6, 7, 3, 5, 2, 4, 0, 9, 1, 8) | -11  | 0   | G1503          | G1502      | G1492           |
|        | G1497 | (0, 7, 8, 6, 4, 5, 2, 3, 1, 9) | (6, 2, 5, 9, 7, 1, 0, 8, 4, 3) | -11  | 0   | G1501          | G1497      | G1501           |
|        | G1498 | (0, 1, 7, 6, 9, 8, 5, 3, 4, 2) | (3, 6, 5, 2, 4, 0, 9, 7, 1, 8) | -11  | 0   | G1495          | G1498      | G1495           |
|        | G1499 | (0, 8, 7, 9, 5, 6, 4, 3, 1, 2) | (7, 6, 1, 3, 0, 2, 8, 5, 4, 9) | -11  | 0   | G1490          | G1504      | G1494           |
|        | G1500 | (0, 7, 9, 4, 2, 6, 1, 5, 3, 8) | (5, 2, 3, 1, 8, 0, 9, 7, 6, 4) | -11  | 0   | G1491          | G1493      | G1505           |
|        | G1501 | (0, 1, 8, 9, 7, 6, 5, 3, 4, 2) | (3, 5, 2, 6, 4, 0, 8, 7, 1, 9) | -11  | 0   | G1497          | G1501      | G1497           |
|        | G1502 | (0, 2, 9, 7, 8, 4, 6, 3, 5, 1) | (4, 8, 5, 1, 3, 9, 2, 0, 7, 6) | -11  | 0   | G1492          | G1496      | G1503           |
|        | G1503 | (0, 1, 9, 7, 6, 8, 4, 2, 5, 3) | (5, 8, 2, 4, 0, 3, 1, 7, 9, 6) | -11  | 0   | G1496          | G1492      | G1502           |
|        | G1504 | (0, 2, 1, 8, 9, 7, 6, 4, 5, 3) | (4, 7, 3, 2, 6, 5, 0, 8, 1, 9) | -11  | 0   | G1494          | G1499      | G1490           |
|        | G1505 | (0, 8, 9, 6, 7, 5, 4, 2, 1, 3) | (7, 2, 4, 1, 3, 8, 6, 0, 5, 9) | -11  | 0   | G1493          | G1491      | G1500           |
|        | G1506 | (0, 1, 9, 7, 8, 6, 5, 3, 2, 4) | (6, 8, 3, 0, 5, 4, 2, 1, 7, 9) | -11  | 2   | —              | —          | G1508           |
|        | G1507 | (0, 5, 7, 4, 6, 2, 3, 1, 9, 8) | (6, 2, 3, 9, 1, 8, 0, 5, 7, 4) | -11  | 2   | —              | —          | G1507           |
|        | G1508 | (0, 1, 9, 7, 8, 5, 4, 6, 3, 2) | (5, 8, 6, 0, 4, 3, 9, 2, 1, 7) | -11  | 2   | —              | —          | G1506           |
|        | G1509 | (0, 1, 9, 8, 6, 7, 5, 4, 2, 3) | (5, 8, 7, 2, 0, 4, 3, 1, 6, 9) | -11  | 2   | —              | —          | G1509           |
|        | G1510 | (0, 2, 9, 7, 8, 6, 4, 3, 5, 1) | (6, 8, 4, 1, 5, 3, 2, 7, 0, 9) | -11  | 2   | —              | —          | G1510           |
|        | G1511 | (0, 7, 6, 9, 4, 2, 5, 3, 1, 8) | (6, 5, 2, 3, 1, 8, 0, 7, 9, 4) | -11  | 2   | —              | —          | G1512           |
|        | G1512 | (0, 8, 9, 6, 5, 2, 7, 4, 1, 3) | (7, 2, 5, 4, 1, 0, 3, 8, 6, 9) | -11  | 2   | —              | —          | G1511           |
| 11n86  | G477  | (0, 4, 3, 1, 2, 9, 5, 7, 6, 8) | (7, 8, 5, 4, 6, 3, 0, 1, 9, 2) | -7   | -2  | —              | —          | G482            |
|        | G478  | (0, 8, 9, 4, 7, 1, 6, 2, 5, 3) | (5, 1, 2, 0, 3, 4, 8, 7, 9, 6) | -7   | -2  | —              | —          | G480            |
|        | G479  | (0, 1, 6, 5, 2, 4, 3, 9, 7, 8) | (3, 9, 0, 7, 6, 8, 5, 4, 1, 2) | -7   | -2  | —              | —          | G481            |
|        | G480  | (0, 7, 6, 3, 4, 2, 8, 9, 1, 5) | (2, 1, 9, 7, 0, 5, 3, 4, 6, 8) | -7   | -2  | —              | —          | G478            |
|        | G481  | (0, 1, 9, 2, 3, 6, 8, 7, 5, 4) | (5, 7, 3, 4, 0, 1, 2, 9, 8, 6) | -7   | -2  | —              | —          | G479            |
|        | G482  | (0, 3, 4, 2, 1, 6, 8, 7, 9, 5) | (6, 7, 9, 5, 3, 2, 4, 0, 1, 8) | -7   | -2  | —              | —          | G477            |
|        | G483  | (0, 2, 5, 4, 8, 6, 7, 3, 9, 1) | (4, 7, 3, 1, 2, 9, 0, 8, 5, 6) | -7   | 0   | G498           | G486       | G493            |
|        | G484  | (0, 2, 9, 1, 5, 4, 6, 3, 7, 8) | (6, 7, 4, 3, 2, 0, 1, 8, 9, 5) | -7   | 0   | G490           | G484       | G490            |
|        | G485  | (0, 4, 6, 5, 7, 2, 9, 1, 3, 8) | (2, 1, 3, 9, 0, 8, 4, 6, 7, 5) | -7   | 0   | G492           | G485       | G492            |
|        | G486  | (0, 8, 4, 9, 2, 1, 3, 7, 5, 6) | (3, 1, 0, 7, 8, 5, 6, 4, 9, 2) | -7   | 0   | G493           | G483       | G498            |
|        | G487  | (0, 1, 6, 4, 7, 5, 2, 3, 9, 8) | (4, 5, 3, 9, 0, 8, 7, 1, 6, 2) | -7   | 0   | G500           | G494       | G497            |
|        | G488  | (0, 1, 7, 6, 8, 4, 5, 3, 2, 9) | (6, 8, 5, 9, 2, 0, 1, 7, 4, 3) | -7   | 0   | G489           | G499       | G491            |
|        | G489  | (0, 8, 3, 2, 5, 4, 6, 1, 7, 9) | (6, 2, 1, 9, 0, 7, 8, 5, 3, 4) | -7   | 0   | G488           | G491       | G499            |
|        | G490  | (0, 7, 9, 8, 4, 2, 1, 3, 5, 6) | (5, 2, 3, 1, 9, 0, 6, 7, 8, 4) | -7   | 0   | G484           | G490       | G484            |
|        | G491  | (0, 7, 6, 8, 3, 4, 5, 2, 1, 9) | (6, 4, 1, 5, 7, 9, 0, 8, 3, 2) | -7   | 0   | G499           | G489       | G488            |
|        | G492  | (0, 2, 6, 9, 7, 8, 5, 3, 4, 1) | (5, 8, 1, 3, 2, 4, 9, 6, 0, 7) | -7   | 0   | G485           | G492       | G485            |
|        | G493  | (0, 7, 5, 6, 2, 4, 8, 3, 1, 9) | (6, 3, 8, 9, 7, 1, 2, 0, 5, 4) | -7   | 0   | G486           | G498       | G483            |
|        | G494  | (0, 6, 7, 2, 3, 5, 4, 9, 1, 8) | (3, 1, 4, 6, 9, 0, 8, 7, 5, 2) | -7   | 0   | G497           | G487       | G500            |
|        | G495  | (0, 3, 4, 8, 7, 5, 6, 2, 1, 9) | (5, 6, 2, 3, 9, 8, 1, 0, 7, 4) | -7   | 0   | G496           | G495       | G496            |
|        | G496  | (0, 9, 3, 4, 7, 8, 6, 5, 1, 2) | (8, 4, 5, 1, 2, 3, 0, 7, 6, 9) | -7   | 0   | G495           | G496       | G495            |



| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G497  | (0, 1, 7, 5, 6, 8, 9, 4, 3, 2) | (4, 6, 3, 9, 0, 2, 7, 8, 1, 5) | -7   | 0   | G494           | G500       | G487            |
|         | G498  | (0, 1, 4, 9, 7, 8, 5, 3, 6, 2) | (3, 7, 8, 6, 0, 2, 1, 9, 4, 5) | -7   | 0   | G483           | G493       | G486            |
|         | G499  | (0, 7, 6, 9, 1, 8, 2, 5, 3, 4) | (6, 5, 2, 3, 4, 0, 9, 1, 7, 8) | -7   | 0   | G491           | G488       | G489            |
|         | G500  | (0, 9, 5, 6, 3, 1, 4, 2, 7, 8) | (6, 2, 7, 1, 0, 8, 9, 5, 3, 4) | -7   | 0   | G487           | G497       | G494            |
|         | G501  | (0, 9, 7, 6, 8, 1, 2, 5, 3, 4) | (8, 6, 5, 2, 3, 4, 0, 1, 7, 9) | -7   | 2   | —              | —          | G502            |
|         | G502  | (0, 1, 9, 5, 4, 6, 3, 2, 7, 8) | (6, 7, 4, 3, 0, 2, 1, 8, 9, 5) | -7   | 2   | —              | —          | G501            |
|         | G503  | (0, 2, 1, 3, 9, 6, 7, 5, 4, 8) | (6, 9, 7, 8, 5, 2, 4, 3, 0, 1) | -7   | 2   | —              | —          | G504            |
|         | G504  | (0, 6, 8, 7, 9, 4, 3, 1, 2, 5) | (7, 4, 5, 1, 3, 2, 0, 6, 8, 9) | -7   | 2   | —              | —          | G503            |
|         | G505  | (0, 4, 6, 7, 3, 1, 2, 9, 8, 5) | (7, 9, 1, 2, 0, 5, 8, 6, 4, 3) | -7   | 2   | —              | —          | G506            |
|         | G506  | (0, 8, 1, 7, 2, 6, 9, 4, 5, 3) | (7, 4, 6, 5, 9, 0, 3, 1, 2, 8) | -7   | 2   | —              | —          | G505            |
| m11n86  | G1513 | (0, 9, 3, 2, 5, 6, 4, 7, 8, 1) | (4, 2, 1, 6, 7, 0, 8, 9, 3, 5) | -3   | 0   | ?              | ?          | ?               |
|         | G1514 | (0, 9, 2, 4, 1, 5, 7, 6, 3, 8) | (7, 5, 6, 8, 3, 2, 4, 0, 9, 1) | -3   | 0   | ?              | ?          | ?               |
| 11n88   | G507  | (0, 9, 2, 4, 8, 7, 6, 3, 5, 1) | (4, 3, 5, 1, 2, 0, 9, 8, 7, 6) | -13  | -2  | —              | —          | G507            |
|         | G508  | (0, 6, 5, 4, 8, 7, 3, 9, 2, 1) | (4, 3, 2, 9, 1, 0, 8, 6, 7, 5) | -13  | 0   | G509           | G508       | G509            |
|         | G509  | (0, 9, 8, 6, 3, 2, 1, 5, 4, 7) | (5, 4, 2, 1, 0, 9, 7, 8, 6, 3) | -13  | 0   | G508           | G509       | G508            |
|         | G510  | (0, 6, 8, 5, 4, 3, 7, 9, 2, 1) | (5, 4, 3, 2, 1, 9, 0, 6, 8, 7) | -13  | 2   | —              | —          | G510            |
| m11n88  | G1515 | (0, 1, 3, 5, 4, 6, 7, 8, 9, 2) | (3, 4, 8, 2, 9, 0, 1, 5, 6, 7) | 3    | 0   | G1516          | G1516      | G1515           |
|         | G1516 | (0, 8, 1, 2, 3, 4, 6, 5, 7, 9) | (7, 3, 4, 5, 9, 0, 1, 8, 2, 6) | 3    | 0   | G1515          | G1515      | G1516           |
| 11n92   | G511  | (0, 9, 6, 3, 4, 5, 1, 2, 7, 8) | (7, 1, 0, 8, 9, 2, 3, 6, 4, 5) | -4   | -1  | —              | —          | G514            |
|         | G512  | (0, 1, 9, 8, 2, 3, 4, 6, 7, 5) | (6, 7, 4, 0, 9, 5, 1, 2, 3, 8) | -4   | -1  | —              | —          | G513            |
|         | G513  | (0, 1, 4, 2, 3, 8, 7, 5, 6, 9) | (3, 7, 0, 5, 6, 4, 9, 8, 1, 2) | -4   | -1  | —              | —          | G512            |
|         | G514  | (0, 6, 7, 3, 4, 5, 2, 8, 9, 1) | (2, 1, 5, 6, 8, 9, 7, 0, 3, 4) | -4   | -1  | —              | —          | G511            |
|         | G515  | (0, 1, 6, 7, 3, 4, 5, 2, 9, 8) | (3, 4, 2, 5, 6, 9, 0, 8, 7, 1) | -4   | 1   | —              | —          | G517            |
|         | G516  | (0, 8, 9, 1, 2, 3, 7, 6, 4, 5) | (7, 2, 3, 4, 0, 6, 5, 1, 8, 9) | -4   | 1   | —              | —          | G518            |
|         | G517  | (0, 2, 3, 9, 6, 7, 8, 4, 5, 1) | (7, 8, 1, 4, 2, 3, 5, 6, 0, 9) | -4   | 1   | —              | —          | G515            |
|         | G518  | (0, 3, 4, 2, 1, 6, 7, 5, 8, 9) | (7, 8, 1, 0, 5, 3, 4, 9, 2, 6) | -4   | 1   | —              | —          | G516            |
| m11n92  | G1517 | (0, 9, 6, 3, 2, 1, 4, 7, 8, 5) | (4, 1, 0, 7, 6, 5, 8, 9, 3, 2) | -6   | -1  | —              | —          | ?               |
|         | G1518 | (0, 9, 1, 6, 5, 7, 8, 4, 3, 2) | (4, 3, 8, 0, 9, 2, 6, 7, 1, 5) | -6   | -1  | —              | —          | ?               |
|         | G1519 | (0, 7, 8, 1, 4, 3, 2, 9, 6, 5) | (3, 2, 6, 7, 0, 9, 8, 5, 4, 1) | -6   | 1   | —              | —          | ?               |
|         | G1520 | (0, 9, 8, 4, 5, 7, 6, 1, 3, 2) | (7, 1, 5, 6, 0, 3, 2, 4, 9, 8) | -6   | 1   | —              | —          | ?               |
| 11n96   | G519  | (0, 2, 4, 9, 6, 5, 8, 7, 3, 1) | (5, 7, 1, 3, 0, 2, 4, 9, 8, 6) | -6   | -1  | —              | —          | ?               |
|         | G520  | (0, 8, 4, 3, 6, 5, 2, 7, 9, 1) | (5, 3, 2, 7, 9, 1, 8, 0, 4, 6) | -6   | 1   | —              | —          | ?               |
| m11n96  | G1521 | (0, 7, 8, 1, 6, 3, 5, 2, 4, 9) | (5, 2, 3, 4, 9, 7, 8, 6, 0, 1) | -4   | -1  | —              | —          | G1523           |
|         | G1522 | (0, 1, 3, 4, 9, 7, 5, 8, 6, 2) | (5, 6, 8, 2, 3, 0, 1, 4, 9, 7) | -4   | -1  | —              | —          | G1524           |
|         | G1523 | (0, 4, 2, 5, 3, 1, 8, 9, 6, 7) | (6, 8, 9, 0, 7, 4, 2, 3, 1, 5) | -4   | -1  | —              | —          | G1521           |
|         | G1524 | (0, 2, 9, 5, 6, 4, 7, 8, 1, 3) | (4, 7, 3, 0, 1, 8, 9, 2, 5, 6) | -4   | -1  | —              | —          | G1522           |
|         | G1525 | (0, 5, 7, 4, 6, 3, 8, 1, 2, 9) | (8, 9, 3, 1, 2, 0, 5, 6, 7, 4) | -4   | 1   | —              | —          | G1527           |
|         | G1526 | (0, 6, 4, 7, 5, 3, 8, 9, 1, 2) | (5, 3, 8, 1, 2, 9, 0, 4, 6, 7) | -4   | 1   | —              | —          | G1528           |
|         | G1527 | (0, 1, 8, 9, 6, 4, 2, 5, 3, 7) | (2, 6, 4, 5, 3, 0, 7, 8, 9, 1) | -4   | 1   | —              | —          | G1525           |
|         | G1528 | (0, 2, 5, 6, 9, 7, 8, 4, 1, 3) | (7, 8, 1, 4, 5, 2, 3, 0, 6, 9) | -4   | 1   | —              | —          | G1526           |
| 11n99   | G521  | (0, 7, 1, 3, 2, 4, 6, 8, 9, 5) | (4, 2, 6, 8, 5, 7, 9, 0, 3, 1) | 1    | 0   | G522           | G521       | G522            |
|         | G522  | (0, 6, 7, 9, 1, 3, 2, 4, 8, 5) | (4, 2, 5, 6, 8, 0, 7, 9, 3, 1) | 1    | 0   | G521           | G522       | G521            |
| m11n99  | G1529 | (0, 8, 7, 5, 6, 4, 2, 3, 1, 9) | (4, 1, 9, 8, 3, 7, 5, 0, 6, 2) | -11  | -2  | —              | —          | G1529           |
|         | G1530 | (0, 2, 9, 1, 8, 3, 7, 5, 6, 4) | (5, 6, 3, 4, 2, 0, 9, 8, 1, 7) | -11  | -2  | —              | —          | G1530           |
|         | G1531 | (0, 3, 1, 9, 8, 5, 7, 4, 6, 2) | (5, 6, 4, 2, 0, 9, 3, 8, 1, 7) | -11  | -2  | —              | —          | G1531           |
|         | G1532 | (0, 9, 2, 8, 1, 6, 4, 7, 3, 5) | (6, 4, 7, 3, 5, 2, 0, 1, 9, 8) | -11  | 0   | G1533          | G1535      | G1534           |
|         | G1533 | (0, 8, 6, 4, 7, 3, 5, 2, 1, 9) | (7, 5, 1, 9, 2, 8, 0, 6, 4, 3) | -11  | 0   | G1532          | G1534      | G1535           |
|         | G1534 | (0, 6, 4, 7, 3, 5, 1, 9, 8, 2) | (3, 1, 9, 2, 8, 0, 7, 6, 4, 5) | -11  | 0   | G1535          | G1533      | G1532           |
|         | G1535 | (0, 7, 5, 6, 4, 3, 1, 9, 2, 8) | (6, 1, 9, 2, 8, 0, 5, 4, 7, 3) | -11  | 0   | G1534          | G1532      | G1533           |
|         | G1536 | (0, 6, 8, 5, 7, 4, 3, 1, 9, 2) | (5, 1, 4, 9, 3, 2, 0, 8, 6, 7) | -11  | 2   | —              | —          | G1536           |
|         | G1537 | (0, 8, 6, 7, 5, 3, 4, 2, 1, 9) | (7, 3, 9, 4, 2, 6, 1, 0, 8, 5) | -11  | 2   | —              | —          | G1537           |
|         | G1538 | (0, 8, 9, 7, 1, 6, 3, 5, 2, 4) | (7, 3, 6, 5, 4, 2, 0, 1, 8, 9) | -11  | 2   | —              | —          | G1538           |
| 11n102  | G333  | (0, 7, 9, 4, 3, 1, 5, 2, 8, 6) | (3, 2, 5, 6, 8, 7, 0, 9, 4, 1) | -1   | 0   | G333           | G333       | G333            |
| m11n102 | G1330 | (0, 7, 8, 5, 3, 4, 6, 2, 1, 9) | (6, 2, 4, 9, 7, 0, 1, 8, 5, 3) | -9   | 0   | G1330          | G1330      | G1330           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 11n104  | G334  | (0, 9, 8, 6, 5, 7, 2, 4, 3, 1) | (7, 2, 4, 1, 0, 3, 6, 9, 8, 5) | -13  | 0   | G334           | G334       | G334            |
| m11n104 | G1331 | (0, 8, 9, 2, 3, 1, 4, 5, 6, 7) | (5, 1, 4, 7, 0, 6, 8, 9, 2, 3) | 3    | 0   | G1331          | G1331      | G1331           |
| 11n106  | G335  | (0, 1, 2, 7, 8, 9, 6, 4, 5, 3) | (4, 9, 0, 1, 3, 5, 2, 7, 8, 6) | -4   | -1  | —              | —          | G337            |
|         | G336  | (0, 7, 4, 5, 3, 6, 8, 9, 1, 2) | (3, 1, 8, 2, 7, 9, 0, 4, 5, 6) | -4   | -1  | —              | —          | G339            |
|         | G337  | (0, 1, 2, 7, 8, 9, 6, 4, 5, 3) | (4, 5, 8, 9, 0, 3, 1, 7, 2, 6) | -4   | -1  | —              | —          | G335            |
|         | G338  | (0, 8, 3, 4, 2, 5, 6, 7, 1, 9) | (5, 1, 9, 0, 6, 7, 8, 3, 4, 2) | -4   | -1  | —              | —          | G340            |
|         | G339  | (0, 8, 9, 4, 2, 3, 5, 1, 6, 7) | (6, 1, 3, 0, 7, 8, 9, 4, 2, 5) | -4   | -1  | —              | —          | G336            |
|         | G340  | (0, 1, 9, 5, 3, 4, 6, 7, 8, 2) | (3, 4, 2, 0, 8, 9, 1, 5, 6, 7) | -4   | -1  | —              | —          | G338            |
|         | G341  | (0, 8, 9, 7, 4, 5, 6, 1, 2, 3) | (7, 1, 6, 2, 0, 3, 4, 5, 8, 9) | -4   | 1   | —              | —          | G343            |
|         | G342  | (0, 4, 5, 6, 8, 9, 7, 3, 1, 2) | (5, 6, 7, 1, 3, 4, 2, 0, 8, 9) | -4   | 1   | —              | —          | G345            |
|         | G343  | (0, 8, 9, 7, 4, 5, 6, 1, 2, 3) | (7, 5, 6, 1, 8, 0, 2, 3, 4, 9) | -4   | 1   | —              | —          | G341            |
|         | G344  | (0, 1, 3, 4, 6, 9, 7, 8, 5, 2) | (6, 7, 8, 2, 3, 5, 0, 4, 1, 9) | -4   | 1   | —              | —          | G346            |
|         | G345  | (0, 8, 2, 3, 4, 7, 5, 6, 1, 9) | (7, 5, 6, 1, 2, 3, 9, 0, 8, 4) | -4   | 1   | —              | —          | G342            |
|         | G346  | (0, 1, 6, 2, 4, 5, 3, 8, 9, 7) | (2, 5, 3, 8, 9, 0, 7, 4, 6, 1) | -4   | 1   | —              | —          | G344            |
| m11n106 | G1332 | (0, 3, 1, 6, 5, 2, 4, 9, 8, 7) | (4, 9, 8, 0, 7, 6, 1, 5, 3, 2) | -6   | -1  | —              | —          | ?               |
|         | G1333 | (0, 6, 9, 5, 1, 8, 7, 3, 2, 4) | (3, 2, 4, 7, 6, 5, 0, 9, 8, 1) | -6   | -1  | —              | —          | ?               |
|         | G1334 | (0, 2, 1, 3, 7, 6, 5, 4, 9, 8) | (3, 6, 4, 9, 2, 0, 8, 7, 5, 1) | -6   | -1  | —              | —          | ?               |
|         | G1335 | (0, 9, 4, 3, 2, 1, 5, 7, 6, 8) | (7, 3, 1, 0, 8, 6, 9, 4, 2, 5) | -6   | 1   | —              | —          | ?               |
|         | G1336 | (0, 9, 8, 3, 5, 2, 1, 6, 4, 7) | (5, 4, 2, 6, 1, 0, 7, 9, 8, 3) | -6   | 1   | —              | —          | ?               |
|         | G1337 | (0, 2, 1, 7, 6, 3, 9, 5, 8, 4) | (3, 6, 5, 4, 9, 8, 7, 0, 2, 1) | -6   | 1   | —              | —          | ?               |
| 11n107  | G347  | (0, 9, 3, 4, 5, 8, 7, 6, 2, 1) | (5, 2, 6, 1, 3, 4, 0, 9, 8, 7) | -10  | -1  | —              | —          | ?               |
|         | G348  | (0, 9, 5, 4, 3, 6, 7, 8, 2, 1) | (4, 3, 2, 1, 7, 8, 0, 5, 9, 6) | -10  | 1   | —              | —          | ?               |
| m11n107 | G1338 | (0, 1, 2, 3, 6, 7, 5, 4, 9, 8) | (3, 4, 7, 9, 0, 1, 8, 6, 5, 2) | 0    | -1  | —              | —          | ?               |
|         | G1339 | (0, 9, 1, 2, 3, 5, 8, 6, 7, 4) | (5, 4, 6, 7, 0, 1, 2, 9, 3, 8) | 0    | -1  | —              | —          | ?               |
|         | G1340 | (0, 9, 4, 3, 1, 2, 5, 6, 7, 8) | (6, 3, 2, 0, 7, 8, 9, 1, 4, 5) | 0    | 1   | —              | —          | ?               |
|         | G1341 | (0, 7, 8, 6, 9, 1, 2, 3, 5, 4) | (6, 1, 5, 2, 3, 4, 7, 8, 0, 9) | 0    | 1   | —              | —          | ?               |
| 11n110  | G1925 | (0, 8, 9, 7, 6, 3, 4, 5, 1, 2) | (4, 1, 5, 0, 8, 7, 9, 2, 3, 6) | -7   | -2  | —              | —          | G2331           |
|         | G1926 | (0, 8, 9, 2, 6, 3, 5, 4, 1, 7) | (3, 1, 4, 8, 0, 7, 9, 6, 5, 2) | -7   | -2  | —              | —          | G2333           |
|         | G1927 | (0, 8, 9, 7, 5, 1, 3, 2, 4, 6) | (4, 1, 2, 0, 8, 6, 7, 5, 9, 3) | -7   | -2  | —              | —          | G2332           |
|         | G1928 | (0, 6, 7, 5, 8, 9, 4, 2, 3, 1) | (2, 1, 3, 9, 0, 6, 7, 5, 8, 4) | -7   | -2  | —              | —          | G2334           |
|         | G2331 | (0, 8, 6, 7, 3, 4, 5, 2, 1, 9) | (4, 1, 9, 5, 6, 8, 0, 7, 3, 2) | -7   | -2  | —              | —          | G1925           |
|         | G2332 | (0, 1, 9, 4, 7, 5, 3, 6, 8, 2) | (3, 6, 2, 0, 1, 8, 7, 9, 4, 5) | -7   | -2  | —              | —          | G1927           |
|         | G2333 | (0, 9, 7, 2, 4, 5, 3, 1, 6, 8) | (5, 1, 0, 8, 6, 9, 7, 4, 2, 3) | -7   | -2  | —              | —          | G1926           |
|         | G2334 | (0, 9, 7, 8, 6, 3, 1, 2, 4, 5) | (4, 1, 0, 2, 9, 7, 5, 6, 8, 3) | -7   | -2  | —              | —          | G1928           |
|         | G1929 | (0, 1, 2, 8, 9, 7, 5, 4, 6, 3) | (5, 6, 9, 0, 4, 1, 3, 8, 2, 7) | -7   | 0   | G1930          | G2349      | G2338           |
|         | G1930 | (0, 5, 6, 9, 1, 8, 7, 3, 4, 2) | (6, 7, 3, 4, 5, 2, 0, 8, 1, 9) | -7   | 0   | G1929          | G2338      | G2349           |
|         | G1931 | (0, 2, 3, 1, 9, 8, 6, 7, 4, 5) | (4, 6, 8, 5, 7, 2, 0, 1, 9, 3) | -7   | 0   | G1941          | G2345      | G2337           |
|         | G1932 | (0, 1, 9, 8, 6, 2, 3, 5, 7, 4) | (6, 7, 5, 0, 3, 4, 9, 1, 2, 8) | -7   | 0   | G1936          | G2336      | G2342           |
|         | G1933 | (0, 1, 8, 6, 7, 5, 3, 2, 4, 9) | (5, 7, 4, 9, 2, 8, 0, 6, 1, 3) | -7   | 0   | G1934          | G2344      | G2347           |
|         | G1934 | (0, 5, 8, 6, 3, 7, 1, 9, 2, 4) | (3, 2, 4, 1, 9, 0, 8, 5, 6, 7) | -7   | 0   | G1933          | G2347      | G2344           |
|         | G1935 | (0, 8, 9, 2, 1, 7, 5, 3, 6, 4) | (7, 3, 5, 6, 4, 2, 8, 0, 1, 9) | -7   | 0   | G1944          | G2340      | G2335           |
|         | G1936 | (0, 2, 7, 3, 9, 6, 4, 5, 1, 8) | (4, 6, 5, 1, 2, 0, 8, 9, 7, 3) | -7   | 0   | G1932          | G2342      | G2336           |
|         | G1937 | (0, 1, 9, 2, 6, 7, 5, 8, 4, 3) | (4, 8, 5, 7, 0, 3, 1, 2, 9, 6) | -7   | 0   | G1942          | G2341      | G2339           |
|         | G1938 | (0, 1, 7, 5, 8, 9, 6, 4, 2, 3) | (6, 9, 4, 0, 2, 3, 1, 8, 5, 7) | -7   | 0   | G1939          | G2343      | G2350           |
|         | G1939 | (0, 3, 1, 2, 8, 5, 7, 4, 9, 6) | (7, 9, 5, 6, 4, 0, 3, 1, 2, 8) | -7   | 0   | G1938          | G2350      | G2343           |
|         | G1940 | (0, 8, 1, 6, 4, 7, 5, 2, 3, 9) | (6, 4, 5, 3, 9, 0, 8, 7, 1, 2) | -7   | 0   | G1943          | G2346      | G2348           |
|         | G1941 | (0, 3, 1, 7, 5, 6, 4, 8, 9, 2) | (5, 6, 4, 3, 9, 2, 0, 1, 7, 8) | -7   | 0   | G1931          | G2337      | G2345           |
|         | G1942 | (0, 8, 9, 6, 4, 2, 5, 1, 3, 7) | (5, 2, 4, 3, 0, 7, 8, 6, 9, 1) | -7   | 0   | G1937          | G2339      | G2341           |
|         | G1943 | (0, 4, 2, 3, 1, 8, 7, 5, 6, 9) | (8, 9, 5, 7, 4, 6, 2, 0, 1, 3) | -7   | 0   | G1940          | G2348      | G2346           |
|         | G1944 | (0, 8, 4, 2, 3, 1, 6, 7, 5, 9) | (6, 1, 9, 7, 0, 5, 8, 4, 2, 3) | -7   | 0   | G1935          | G2335      | G2340           |
|         | G2335 | (0, 8, 6, 7, 9, 5, 3, 1, 2, 4) | (7, 3, 1, 4, 2, 0, 6, 5, 8, 9) | -7   | 0   | G2340          | G1944      | G1935           |
|         | G2336 | (0, 4, 1, 9, 2, 3, 7, 8, 6, 5) | (7, 8, 6, 3, 4, 0, 1, 5, 2, 9) | -7   | 0   | G2342          | G1932      | G1936           |
|         | G2337 | (0, 6, 9, 7, 8, 4, 5, 2, 3, 1) | (4, 2, 3, 1, 5, 6, 9, 7, 0, 8) | -7   | 0   | G2345          | G1941      | G1931           |
|         | G2338 | (0, 8, 1, 9, 6, 7, 3, 4, 5, 2) | (7, 3, 4, 2, 0, 5, 6, 9, 1, 8) | -7   | 0   | G2349          | G1930      | G1929           |
|         | G2339 | (0, 7, 9, 8, 6, 2, 3, 1, 4, 5) | (6, 3, 4, 1, 9, 7, 0, 5, 8, 2) | -7   | 0   | G2341          | G1942      | G1937           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G2340 | (0, 8, 9, 5, 2, 3, 1, 4, 7, 6) | (4, 1, 3, 0, 7, 8, 6, 9, 5, 2) | -7   | 0   | G2335          | G1935      | G1944           |
|         | G2341 | (0, 2, 8, 3, 6, 4, 5, 1, 9, 7) | (4, 5, 1, 9, 2, 8, 0, 7, 6, 3) | -7   | 0   | G2339          | G1937      | G1942           |
|         | G2342 | (0, 8, 9, 7, 3, 4, 6, 1, 2, 5) | (6, 4, 5, 1, 8, 0, 2, 3, 9, 7) | -7   | 0   | G2336          | G1936      | G1932           |
|         | G2343 | (0, 7, 4, 6, 5, 8, 3, 9, 1, 2) | (5, 3, 1, 2, 9, 0, 6, 4, 7, 8) | -7   | 0   | G2350          | G1938      | G1939           |
|         | G2344 | (0, 6, 8, 4, 9, 1, 3, 5, 2, 7) | (5, 3, 1, 0, 2, 7, 8, 9, 6, 4) | -7   | 0   | G2347          | G1933      | G1934           |
|         | G2345 | (0, 1, 3, 5, 2, 4, 9, 7, 8, 6) | (2, 7, 9, 0, 8, 6, 5, 3, 4, 1) | -7   | 0   | G2337          | G1931      | G1941           |
|         | G2346 | (0, 1, 9, 8, 2, 3, 7, 5, 6, 4) | (5, 8, 6, 3, 4, 0, 1, 9, 2, 7) | -7   | 0   | G2348          | G1940      | G1943           |
|         | G2347 | (0, 1, 9, 6, 7, 8, 4, 3, 5, 2) | (4, 8, 2, 0, 3, 5, 1, 6, 9, 7) | -7   | 0   | G2344          | G1934      | G1933           |
|         | G2348 | (0, 7, 9, 5, 3, 4, 6, 1, 2, 8) | (6, 4, 1, 0, 8, 9, 2, 3, 7, 5) | -7   | 0   | G2346          | G1943      | G1940           |
|         | G2349 | (0, 1, 5, 2, 4, 9, 3, 8, 6, 7) | (3, 9, 0, 8, 6, 5, 7, 4, 1, 2) | -7   | 0   | G2338          | G1929      | G1930           |
|         | G2350 | (0, 7, 5, 6, 8, 9, 4, 2, 1, 3) | (4, 2, 9, 0, 3, 7, 1, 8, 5, 6) | -7   | 0   | G2343          | G1939      | G1938           |
|         | G1945 | (0, 8, 9, 7, 2, 3, 6, 4, 5, 1) | (7, 3, 6, 4, 5, 1, 2, 8, 0, 9) | -7   | 2   | —              | —          | G2353           |
|         | G1946 | (0, 2, 4, 3, 5, 1, 9, 7, 8, 6) | (3, 7, 1, 9, 0, 8, 6, 4, 5, 2) | -7   | 2   | —              | —          | G2352           |
|         | G1947 | (0, 6, 3, 2, 4, 1, 5, 8, 9, 7) | (5, 2, 1, 8, 0, 7, 9, 3, 6, 4) | -7   | 2   | —              | —          | G2354           |
|         | G1948 | (0, 1, 7, 8, 9, 6, 5, 3, 4, 2) | (6, 9, 0, 3, 5, 4, 2, 7, 1, 8) | -7   | 2   | —              | —          | G2351           |
|         | G2351 | (0, 8, 7, 4, 5, 6, 2, 3, 1, 9) | (7, 6, 2, 9, 1, 3, 4, 0, 8, 5) | -7   | 2   | —              | —          | G1948           |
|         | G2352 | (0, 4, 6, 9, 7, 5, 8, 3, 1, 2) | (7, 8, 3, 5, 4, 1, 2, 0, 6, 9) | -7   | 2   | —              | —          | G1946           |
|         | G2353 | (0, 1, 3, 4, 2, 9, 7, 8, 6, 5) | (2, 7, 9, 0, 8, 6, 3, 5, 4, 1) | -7   | 2   | —              | —          | G1945           |
|         | G2354 | (0, 2, 7, 5, 3, 4, 6, 1, 9, 8) | (5, 6, 4, 1, 9, 2, 0, 8, 7, 3) | -7   | 2   | —              | —          | G1947           |
| m11n110 | G2127 | (0, 7, 6, 3, 5, 8, 4, 9, 1, 2) | (5, 4, 8, 7, 9, 1, 0, 2, 3, 6) | -3   | 0   | G2128          | G2533      | G2534           |
|         | G2128 | (0, 1, 3, 8, 4, 7, 9, 6, 5, 2) | (6, 9, 0, 2, 1, 3, 5, 4, 8, 7) | -3   | 0   | G2127          | G2534      | G2533           |
|         | G2533 | (0, 3, 7, 8, 6, 9, 1, 5, 4, 2) | (5, 8, 9, 1, 0, 2, 4, 3, 7, 6) | -3   | 0   | G2534          | G2127      | G2128           |
|         | G2534 | (0, 1, 3, 2, 4, 6, 5, 9, 8, 7) | (2, 4, 9, 5, 8, 0, 7, 6, 3, 1) | -3   | 0   | G2533          | G2128      | G2127           |
| 11n111  | G349  | (0, 3, 2, 8, 7, 6, 9, 5, 1, 4) | (5, 9, 4, 3, 1, 0, 2, 8, 6, 7) | -9   | -2  | —              | —          | G349            |
|         | G350  | (0, 4, 2, 3, 6, 9, 8, 7, 5, 1) | (6, 8, 5, 7, 1, 4, 3, 2, 0, 9) | -9   | 0   | G353           | G351       | G352            |
|         | G351  | (0, 6, 3, 1, 2, 5, 4, 9, 8, 7) | (4, 2, 9, 8, 7, 0, 6, 5, 3, 1) | -9   | 0   | G352           | G350       | G353            |
|         | G352  | (0, 7, 3, 6, 5, 4, 9, 8, 1, 2) | (4, 1, 9, 2, 0, 8, 7, 3, 6, 5) | -9   | 0   | G351           | G353       | G350            |
|         | G353  | (0, 6, 4, 3, 2, 5, 8, 9, 7, 1) | (2, 1, 9, 8, 7, 0, 4, 6, 3, 5) | -9   | 0   | G350           | G352       | G351            |
|         | G354  | (0, 3, 9, 5, 8, 7, 6, 2, 1, 4) | (7, 8, 6, 2, 4, 3, 1, 0, 5, 9) | -9   | 2   | —              | —          | G354            |
| m11n111 | G1342 | (0, 1, 2, 9, 6, 5, 7, 3, 4, 8) | (5, 6, 7, 4, 0, 8, 1, 9, 2, 3) | -1   | 0   | ?              | ?          | G1343           |
|         | G1343 | (0, 3, 7, 4, 5, 6, 1, 2, 9, 8) | (6, 9, 1, 8, 0, 2, 3, 7, 4, 5) | -1   | 0   | ?              | ?          | G1342           |
| 11n116  | G1949 | (0, 2, 5, 4, 6, 3, 8, 7, 1, 9) | (4, 8, 1, 9, 0, 7, 5, 2, 6, 3) | -3   | 0   | G1950          | G2356      | G2355           |
|         | G1950 | (0, 6, 4, 7, 5, 8, 9, 2, 1, 3) | (5, 2, 9, 3, 1, 0, 6, 7, 4, 8) | -3   | 0   | G1949          | G2355      | G2356           |
|         | G2355 | (0, 3, 2, 5, 6, 4, 7, 1, 9, 8) | (4, 1, 7, 9, 0, 8, 3, 5, 6, 2) | -3   | 0   | G2356          | G1950      | G1949           |
|         | G2356 | (0, 2, 9, 1, 3, 4, 8, 6, 5, 7) | (6, 8, 4, 5, 7, 0, 3, 2, 9, 1) | -3   | 0   | G2355          | G1949      | G1950           |
| m11n116 | G2129 | (0, 8, 7, 1, 9, 2, 6, 4, 3, 5) | (6, 2, 4, 5, 3, 0, 1, 8, 7, 9) | -7   | 0   | G2130          | G2535      | G2536           |
|         | G2130 | (0, 9, 7, 1, 4, 2, 6, 5, 3, 8) | (6, 5, 2, 3, 0, 8, 9, 1, 7, 4) | -7   | 0   | G2129          | G2536      | G2535           |
|         | G2535 | (0, 3, 2, 8, 5, 7, 6, 9, 1, 4) | (5, 7, 6, 4, 1, 2, 0, 3, 8, 9) | -7   | 0   | G2536          | G2129      | G2130           |
|         | G2536 | (0, 6, 5, 8, 4, 7, 9, 2, 1, 3) | (4, 2, 1, 3, 9, 0, 5, 8, 6, 7) | -7   | 0   | G2535          | G2130      | G2129           |
| 11n117  | G355  | (0, 9, 1, 3, 2, 6, 5, 4, 8, 7) | (5, 2, 8, 0, 4, 3, 9, 7, 6, 1) | -7   | 0   | G356           | G356       | G355            |
|         | G356  | (0, 4, 1, 7, 9, 3, 2, 8, 6, 5) | (6, 9, 8, 0, 2, 1, 5, 4, 3, 7) | -7   | 0   | G355           | G355       | G356            |
| m11n117 | G1344 | (0, 8, 1, 6, 7, 2, 4, 5, 3, 9) | (7, 2, 3, 9, 5, 6, 0, 1, 8, 4) | -3   | 0   | G1347          | G1353      | G1352           |
|         | G1345 | (0, 6, 4, 5, 7, 3, 1, 8, 2, 9) | (7, 8, 9, 1, 2, 0, 6, 4, 5, 3) | -3   | 0   | G1348          | G1346      | G1351           |
|         | G1346 | (0, 5, 3, 4, 7, 8, 6, 1, 9, 2) | (4, 1, 6, 9, 2, 3, 0, 7, 5, 8) | -3   | 0   | G1351          | G1345      | G1348           |
|         | G1347 | (0, 4, 6, 2, 7, 8, 3, 1, 5, 9) | (6, 8, 1, 9, 0, 5, 7, 4, 2, 3) | -3   | 0   | G1344          | G1352      | G1353           |
|         | G1348 | (0, 1, 9, 4, 2, 3, 6, 8, 5, 7) | (3, 8, 6, 0, 5, 7, 1, 4, 9, 2) | -3   | 0   | G1345          | G1351      | G1346           |
|         | G1349 | (0, 1, 8, 9, 7, 5, 6, 2, 3, 4) | (2, 7, 3, 6, 0, 8, 4, 5, 9, 1) | -3   | 0   | G1350          | G1349      | G1350           |
|         | G1350 | (0, 1, 9, 7, 8, 5, 6, 2, 3, 4) | (2, 8, 6, 0, 3, 9, 4, 5, 7, 1) | -3   | 0   | G1349          | G1350      | G1349           |
|         | G1351 | (0, 2, 9, 6, 7, 5, 8, 1, 3, 4) | (7, 8, 3, 1, 2, 0, 4, 5, 6, 9) | -3   | 0   | G1346          | G1348      | G1345           |
|         | G1352 | (0, 1, 5, 6, 9, 7, 8, 3, 4, 2) | (3, 7, 8, 2, 5, 0, 4, 6, 1, 9) | -3   | 0   | G1353          | G1347      | G1344           |
|         | G1353 | (0, 3, 6, 8, 9, 7, 4, 5, 1, 2) | (6, 7, 1, 2, 5, 0, 8, 3, 4, 9) | -3   | 0   | G1352          | G1344      | G1347           |
| 11n122  | G1951 | (0, 1, 3, 2, 4, 6, 5, 8, 7, 9) | (2, 6, 8, 5, 7, 3, 9, 4, 0, 1) | 1    | 0   | ?              | G2357      | ?               |
|         | G2357 | (0, 9, 1, 2, 3, 5, 4, 7, 6, 8) | (7, 2, 3, 4, 6, 0, 8, 1, 9, 5) | 1    | 0   | ?              | G1951      | ?               |
| m11n122 | G2131 | (0, 8, 4, 7, 6, 5, 2, 3, 1, 9) | (5, 3, 9, 1, 8, 7, 6, 0, 4, 2) | -11  | -2  | —              | —          | G2539           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G2132 | (0, 6, 8, 5, 7, 1, 4, 3, 9, 2) | (3, 1, 2, 9, 0, 8, 6, 5, 4, 7) | -11  | -2  | –              | –          | G2537           |
|         | G2133 | (0, 1, 8, 9, 7, 6, 5, 3, 4, 2) | (3, 5, 2, 4, 0, 8, 7, 6, 1, 9) | -11  | -2  | –              | –          | G2538           |
|         | G2537 | (0, 8, 4, 6, 1, 5, 3, 2, 9, 7) | (5, 1, 9, 0, 7, 8, 6, 4, 3, 2) | -11  | -2  | –              | –          | G2132           |
|         | G2538 | (0, 8, 7, 6, 4, 5, 2, 3, 1, 9) | (5, 3, 9, 8, 7, 1, 6, 0, 4, 2) | -11  | -2  | –              | –          | G2133           |
|         | G2539 | (0, 1, 6, 9, 8, 7, 5, 3, 4, 2) | (3, 5, 2, 4, 0, 9, 8, 6, 1, 7) | -11  | -2  | –              | –          | G2131           |
|         | G2134 | (0, 2, 7, 9, 6, 8, 3, 1, 5, 4) | (5, 6, 3, 4, 1, 2, 0, 7, 9, 8) | -11  | 0   | G2135          | G2540      | G2541           |
|         | G2135 | (0, 7, 9, 4, 6, 2, 1, 5, 3, 8) | (5, 2, 3, 0, 1, 8, 7, 9, 6, 4) | -11  | 0   | G2134          | G2541      | G2540           |
|         | G2540 | (0, 9, 2, 7, 1, 8, 5, 3, 6, 4) | (8, 5, 6, 3, 4, 2, 0, 9, 1, 7) | -11  | 0   | G2541          | G2134      | G2135           |
|         | G2541 | (0, 3, 2, 8, 6, 9, 7, 4, 1, 5) | (6, 7, 4, 5, 1, 3, 2, 0, 8, 9) | -11  | 0   | G2540          | G2135      | G2134           |
|         | G2136 | (0, 8, 9, 7, 6, 5, 3, 4, 1, 2) | (3, 1, 6, 5, 4, 2, 8, 0, 7, 9) | -11  | 2   | –              | –          | G2542           |
|         | G2137 | (0, 8, 6, 7, 4, 3, 2, 5, 1, 9) | (7, 5, 9, 3, 2, 1, 8, 0, 6, 4) | -11  | 2   | –              | –          | G2544           |
|         | G2138 | (0, 3, 9, 8, 1, 5, 7, 4, 6, 2) | (5, 8, 7, 6, 4, 2, 3, 0, 1, 9) | -11  | 2   | –              | –          | G2543           |
|         | G2542 | (0, 8, 6, 7, 4, 5, 3, 2, 1, 9) | (7, 5, 9, 3, 8, 2, 1, 0, 6, 4) | -11  | 2   | –              | –          | G2136           |
|         | G2543 | (0, 8, 5, 4, 2, 6, 1, 3, 9, 7) | (5, 4, 3, 1, 9, 0, 7, 8, 6, 2) | -11  | 2   | –              | –          | G2138           |
|         | G2544 | (0, 8, 9, 7, 5, 4, 3, 6, 1, 2) | (5, 1, 6, 4, 3, 2, 8, 0, 7, 9) | -11  | 2   | –              | –          | G2137           |
| 11n126  | G357  | (0, 8, 4, 7, 3, 2, 1, 9, 6, 5) | (6, 1, 0, 9, 8, 5, 4, 3, 2, 7) | -15  | -2  | –              | –          | G357            |
|         | G358  | (0, 9, 6, 4, 3, 2, 8, 1, 7, 5) | (8, 3, 2, 1, 0, 7, 6, 5, 4, 9) | -15  | 2   | –              | –          | G358            |
| m11n126 | G1354 | (0, 1, 2, 6, 3, 7, 9, 4, 5, 8) | (3, 4, 7, 8, 9, 0, 5, 6, 1, 2) | 5    | 0   | G1355          | G1354      | G1355           |
|         | G1355 | (0, 4, 5, 6, 8, 1, 2, 7, 9, 3) | (8, 9, 2, 3, 4, 5, 0, 1, 6, 7) | 5    | 0   | G1354          | G1355      | G1354           |
|         | G1356 | (0, 2, 4, 5, 6, 3, 7, 9, 8, 1) | (3, 6, 7, 9, 0, 8, 1, 2, 4, 5) | 5    | 0   | G1356          | G1356      | G1356           |
| 11n132  | G375  | (0, 4, 9, 2, 5, 7, 6, 8, 3, 1) | (2, 1, 3, 6, 8, 0, 9, 4, 5, 7) | -2   | -1  | –              | –          | G377            |
|         | G376  | (0, 2, 4, 6, 9, 8, 5, 7, 1, 3) | (5, 8, 7, 1, 3, 0, 9, 2, 4, 6) | -2   | -1  | –              | –          | G378            |
|         | G377  | (0, 4, 9, 2, 5, 7, 6, 8, 3, 1) | (2, 1, 3, 8, 9, 4, 0, 5, 7, 6) | -2   | -1  | –              | –          | G375            |
|         | G378  | (0, 3, 7, 4, 8, 6, 5, 1, 9, 2) | (5, 9, 1, 0, 3, 2, 7, 6, 4, 8) | -2   | -1  | –              | –          | G376            |
|         | G379  | (0, 2, 6, 8, 5, 4, 7, 9, 1, 3) | (7, 9, 1, 4, 3, 0, 2, 6, 5, 8) | -2   | 1   | –              | –          | G380            |
|         | G380  | (0, 3, 1, 7, 6, 4, 8, 5, 9, 2) | (4, 8, 6, 5, 0, 9, 2, 1, 3, 7) | -2   | 1   | –              | –          | G379            |
|         | G381  | (0, 8, 3, 5, 4, 6, 9, 2, 7, 1) | (5, 4, 6, 1, 7, 2, 3, 8, 0, 9) | -2   | 1   | –              | –          | G382            |
|         | G382  | (0, 8, 3, 5, 4, 6, 9, 2, 7, 1) | (4, 6, 7, 2, 1, 3, 5, 8, 0, 9) | -2   | 1   | –              | –          | G381            |
| m11n132 | G1361 | (0, 2, 9, 5, 8, 4, 6, 7, 1, 3) | (4, 7, 3, 1, 2, 9, 0, 5, 6, 8) | -8   | -1  | –              | –          | G1363           |
|         | G1362 | (0, 2, 8, 4, 5, 9, 7, 1, 6, 3) | (4, 5, 3, 6, 1, 2, 0, 8, 9, 7) | -8   | -1  | –              | –          | G1365           |
|         | G1363 | (0, 8, 4, 2, 5, 6, 3, 1, 9, 7) | (3, 1, 9, 6, 7, 0, 8, 4, 5, 2) | -8   | -1  | –              | –          | G1361           |
|         | G1364 | (0, 1, 6, 4, 5, 3, 8, 9, 7, 2) | (3, 9, 2, 7, 0, 6, 4, 5, 1, 8) | -8   | -1  | –              | –          | G1366           |
|         | G1365 | (0, 8, 9, 7, 5, 6, 1, 4, 2, 3) | (4, 1, 6, 0, 8, 2, 3, 9, 5, 7) | -8   | -1  | –              | –          | G1362           |
|         | G1366 | (0, 8, 4, 2, 3, 1, 7, 5, 6, 9) | (7, 1, 9, 5, 6, 4, 2, 8, 0, 3) | -8   | -1  | –              | –          | G1364           |
|         | G1367 | (0, 8, 6, 4, 1, 2, 5, 3, 9, 7) | (5, 2, 3, 9, 7, 0, 1, 8, 6, 4) | -8   | 1   | –              | –          | G1371           |
|         | G1368 | (0, 1, 9, 2, 7, 8, 6, 4, 5, 3) | (6, 8, 4, 0, 1, 5, 3, 7, 2, 9) | -8   | 1   | –              | –          | G1369           |
|         | G1369 | (0, 7, 2, 6, 4, 8, 9, 5, 1, 3) | (6, 4, 5, 3, 1, 2, 7, 0, 8, 9) | -8   | 1   | –              | –          | G1368           |
|         | G1370 | (0, 5, 3, 4, 9, 7, 8, 6, 1, 2) | (4, 1, 7, 8, 6, 2, 5, 0, 3, 9) | -8   | 1   | –              | –          | G1372           |
|         | G1371 | (0, 2, 6, 7, 9, 5, 8, 4, 1, 3) | (5, 7, 8, 3, 4, 1, 2, 0, 6, 9) | -8   | 1   | –              | –          | G1367           |
|         | G1372 | (0, 3, 4, 2, 8, 6, 7, 5, 1, 9) | (6, 9, 1, 7, 5, 3, 4, 0, 8, 2) | -8   | 1   | –              | –          | G1370           |
| 11n133  | G383  | (0, 9, 1, 3, 4, 8, 7, 6, 5, 2) | (6, 4, 5, 0, 2, 3, 1, 9, 8, 7) | -10  | -1  | –              | –          | ?               |
|         | G384  | (0, 7, 6, 5, 4, 8, 9, 1, 3, 2) | (5, 4, 3, 1, 9, 0, 2, 7, 8, 6) | -10  | 1   | –              | –          | ?               |
| m11n133 | G1373 | (0, 3, 1, 2, 6, 7, 8, 9, 5, 4) | (5, 7, 4, 8, 9, 0, 1, 3, 2, 6) | 0    | -1  | –              | –          | ?               |
|         | G1374 | (0, 9, 5, 6, 7, 8, 2, 3, 1, 4) | (8, 2, 1, 3, 4, 5, 6, 0, 7, 9) | 0    | 1   | –              | –          | ?               |
| 11n134  | G1952 | (0, 2, 4, 6, 5, 8, 7, 9, 3, 1) | (7, 9, 1, 3, 0, 4, 2, 6, 8, 5) | 1    | 0   | G1953          | G2359      | G2358           |
|         | G1953 | (0, 4, 6, 5, 8, 7, 9, 1, 3, 2) | (5, 7, 1, 9, 2, 0, 3, 4, 8, 6) | 1    | 0   | G1952          | G2358      | G2359           |
|         | G2358 | (0, 2, 4, 5, 6, 3, 7, 9, 8, 1) | (3, 6, 9, 7, 1, 8, 0, 5, 2, 4) | 1    | 0   | G2359          | G1953      | G1952           |
|         | G2359 | (0, 4, 6, 8, 5, 9, 7, 1, 3, 2) | (6, 7, 9, 1, 0, 3, 2, 4, 8, 5) | 1    | 0   | G2358          | G1952      | G1953           |
| m11n134 | G2139 | (0, 2, 9, 1, 8, 7, 3, 5, 6, 4) | (5, 6, 3, 4, 2, 0, 8, 9, 1, 7) | -11  | -2  | –              | –          | G2547           |
|         | G2140 | (0, 8, 7, 5, 6, 4, 2, 3, 1, 9) | (6, 3, 9, 8, 1, 7, 5, 0, 4, 2) | -11  | -2  | –              | –          | G2546           |
|         | G2141 | (0, 1, 7, 9, 8, 6, 3, 5, 4, 2) | (3, 4, 2, 5, 0, 9, 7, 1, 8, 6) | -11  | -2  | –              | –          | G2548           |
|         | G2142 | (0, 3, 1, 9, 7, 8, 5, 2, 6, 4) | (5, 6, 4, 2, 0, 3, 1, 7, 9, 8) | -11  | -2  | –              | –          | G2545           |
|         | G2545 | (0, 7, 9, 4, 8, 6, 3, 5, 1, 2) | (5, 1, 3, 0, 2, 9, 7, 8, 4, 6) | -11  | -2  | –              | –          | G2142           |
|         | G2546 | (0, 8, 7, 5, 6, 4, 2, 3, 1, 9) | (6, 1, 9, 8, 3, 0, 5, 7, 4, 2) | -11  | -2  | –              | –          | G2140           |
|         | G2547 | (0, 3, 1, 6, 9, 7, 8, 5, 2, 4) | (5, 8, 4, 2, 3, 0, 1, 9, 7, 6) | -11  | -2  | –              | –          | G2139           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G2548 | (0, 5, 8, 6, 7, 4, 2, 9, 3, 1) | (2, 1, 3, 9, 0, 8, 6, 5, 7, 4) | -11  | -2  | –              | –          | G2141           |
|         | G2143 | (0, 6, 4, 2, 7, 5, 3, 9, 1, 8) | (5, 2, 1, 9, 0, 8, 6, 4, 7, 3) | -11  | 0   | G2154          | G2560      | G2557           |
|         | G2144 | (0, 8, 4, 2, 6, 3, 9, 1, 7, 5) | (3, 1, 9, 8, 0, 7, 5, 6, 4, 2) | -11  | 0   | G2149          | G2559      | G2554           |
|         | G2145 | (0, 7, 2, 5, 1, 4, 9, 3, 8, 6) | (3, 1, 9, 0, 8, 6, 5, 7, 4, 2) | -11  | 0   | G2148          | G2550      | G2555           |
|         | G2146 | (0, 7, 8, 6, 9, 3, 1, 5, 4, 2) | (5, 3, 4, 1, 2, 0, 7, 9, 6, 8) | -11  | 0   | G2150          | G2553      | G2551           |
|         | G2147 | (0, 8, 5, 6, 4, 2, 3, 1, 9, 7) | (4, 3, 9, 1, 7, 5, 0, 8, 6, 2) | -11  | 0   | G2151          | G2556      | G2549           |
|         | G2148 | (0, 3, 8, 5, 9, 7, 2, 6, 1, 4) | (5, 6, 4, 2, 3, 1, 8, 0, 9, 7) | -11  | 0   | G2145          | G2555      | G2550           |
|         | G2149 | (0, 1, 9, 4, 7, 8, 6, 3, 5, 2) | (4, 6, 3, 2, 0, 5, 9, 7, 1, 8) | -11  | 0   | G2144          | G2554      | G2559           |
|         | G2150 | (0, 8, 7, 4, 6, 5, 3, 1, 2, 9) | (7, 6, 1, 9, 2, 0, 8, 4, 5, 3) | -11  | 0   | G2146          | G2551      | G2553           |
|         | G2151 | (0, 3, 1, 9, 7, 8, 6, 4, 5, 2) | (6, 8, 4, 2, 0, 5, 3, 9, 1, 7) | -11  | 0   | G2147          | G2549      | G2556           |
|         | G2152 | (0, 2, 9, 1, 8, 6, 7, 4, 5, 3) | (4, 6, 5, 7, 2, 0, 3, 9, 1, 8) | -11  | 0   | G2153          | G2558      | G2552           |
|         | G2153 | (0, 8, 1, 7, 9, 3, 5, 4, 6, 2) | (5, 3, 6, 4, 2, 0, 1, 8, 9, 7) | -11  | 0   | G2152          | G2552      | G2558           |
|         | G2154 | (0, 6, 4, 2, 7, 5, 3, 9, 1, 8) | (5, 3, 1, 9, 0, 8, 7, 4, 6, 2) | -11  | 0   | G2143          | G2557      | G2560           |
|         | G2549 | (0, 7, 5, 6, 4, 2, 3, 9, 1, 8) | (6, 3, 9, 1, 0, 5, 8, 4, 7, 2) | -11  | 0   | G2556          | G2151      | G2147           |
|         | G2550 | (0, 7, 5, 6, 4, 2, 3, 9, 1, 8) | (6, 1, 9, 3, 0, 5, 8, 7, 4, 2) | -11  | 0   | G2555          | G2145      | G2148           |
|         | G2551 | (0, 6, 9, 5, 8, 7, 3, 1, 2, 4) | (5, 3, 4, 1, 2, 0, 8, 6, 9, 7) | -11  | 0   | G2553          | G2150      | G2146           |
|         | G2552 | (0, 8, 6, 4, 5, 2, 3, 1, 9, 7) | (5, 1, 3, 7, 9, 8, 0, 6, 4, 2) | -11  | 0   | G2558          | G2153      | G2152           |
|         | G2553 | (0, 1, 9, 2, 8, 6, 7, 4, 5, 3) | (4, 8, 7, 5, 3, 0, 2, 9, 1, 6) | -11  | 0   | G2551          | G2146      | G2150           |
|         | G2554 | (0, 4, 1, 8, 9, 6, 5, 3, 7, 2) | (6, 7, 5, 3, 4, 2, 8, 0, 1, 9) | -11  | 0   | G2559          | G2149      | G2144           |
|         | G2555 | (0, 4, 2, 7, 5, 3, 9, 1, 8, 6) | (3, 1, 9, 0, 8, 6, 5, 7, 4, 2) | -11  | 0   | G2550          | G2148      | G2145           |
|         | G2556 | (0, 6, 7, 5, 3, 4, 2, 9, 1, 8) | (5, 1, 4, 9, 8, 0, 6, 3, 7, 2) | -11  | 0   | G2549          | G2147      | G2151           |
|         | G2557 | (0, 8, 7, 4, 6, 2, 5, 3, 1, 9) | (7, 5, 3, 9, 1, 8, 0, 6, 4, 2) | -11  | 0   | G2560          | G2154      | G2143           |
|         | G2558 | (0, 7, 3, 5, 4, 6, 1, 9, 2, 8) | (4, 2, 9, 1, 8, 0, 7, 5, 6, 3) | -11  | 0   | G2552          | G2152      | G2153           |
|         | G2559 | (0, 5, 3, 1, 2, 9, 7, 8, 6, 4) | (7, 2, 8, 4, 6, 3, 1, 5, 0, 9) | -11  | 0   | G2554          | G2144      | G2149           |
|         | G2560 | (0, 8, 1, 6, 9, 7, 5, 3, 4, 2) | (6, 3, 5, 2, 4, 0, 8, 7, 1, 9) | -11  | 0   | G2557          | G2143      | G2154           |
|         | G2155 | (0, 8, 2, 9, 6, 7, 5, 3, 1, 4) | (6, 5, 7, 3, 1, 4, 2, 0, 8, 9) | -11  | 2   | –              | –          | G2564           |
|         | G2156 | (0, 8, 7, 9, 6, 4, 3, 5, 1, 2) | (6, 4, 1, 5, 3, 2, 7, 0, 8, 9) | -11  | 2   | –              | –          | G2563           |
|         | G2157 | (0, 8, 6, 7, 5, 3, 4, 2, 1, 9) | (7, 5, 9, 4, 2, 8, 1, 0, 6, 3) | -11  | 2   | –              | –          | G2562           |
|         | G2158 | (0, 8, 9, 1, 7, 6, 3, 5, 2, 4) | (7, 3, 5, 6, 4, 2, 0, 1, 8, 9) | -11  | 2   | –              | –          | G2561           |
|         | G2561 | (0, 2, 9, 6, 7, 5, 8, 3, 1, 4) | (8, 7, 5, 3, 4, 1, 2, 0, 6, 9) | -11  | 2   | –              | –          | G2158           |
|         | G2562 | (0, 8, 6, 7, 5, 3, 4, 2, 1, 9) | (7, 5, 2, 4, 9, 6, 1, 0, 8, 3) | -11  | 2   | –              | –          | G2157           |
|         | G2563 | (0, 8, 2, 9, 7, 4, 5, 3, 6, 1) | (7, 4, 6, 5, 3, 1, 2, 8, 0, 9) | -11  | 2   | –              | –          | G2156           |
|         | G2564 | (0, 1, 7, 9, 6, 4, 8, 3, 5, 2) | (6, 8, 4, 5, 3, 0, 2, 9, 1, 7) | -11  | 2   | –              | –          | G2155           |
| 11n135  | G385  | (0, 8, 9, 7, 5, 4, 6, 1, 3, 2) | (4, 1, 6, 3, 0, 8, 2, 7, 9, 5) | -11  | 0   | G386           | G385       | G386            |
|         | G386  | (0, 8, 5, 7, 6, 3, 2, 4, 1, 9) | (6, 2, 9, 4, 1, 8, 7, 0, 5, 3) | -11  | 0   | G385           | G386       | G385            |
| m11n135 | G1375 | (0, 1, 5, 3, 8, 4, 6, 9, 2, 7) | (6, 8, 9, 7, 2, 0, 1, 3, 5, 4) | 1    | 0   | G1376          | G1376      | G1375           |
|         | G1376 | (0, 3, 1, 2, 5, 6, 4, 7, 9, 8) | (6, 9, 4, 7, 0, 1, 8, 3, 5, 2) | 1    | 0   | G1375          | G1375      | G1376           |
| 11n138  | G387  | (0, 8, 1, 9, 3, 7, 6, 5, 2, 4) | (3, 2, 5, 4, 8, 0, 9, 7, 6, 1) | -5   | -2  | –              | –          | G387            |
|         | G388  | (0, 2, 9, 5, 4, 3, 7, 6, 8, 1) | (3, 6, 4, 1, 0, 8, 2, 9, 5, 7) | -5   | 0   | G389           | G388       | G389            |
|         | G389  | (0, 9, 8, 2, 1, 3, 7, 5, 4, 6) | (5, 7, 3, 6, 4, 0, 2, 9, 8, 1) | -5   | 0   | G388           | G389       | G388            |
|         | G390  | (0, 2, 9, 8, 7, 1, 5, 3, 6, 4) | (3, 8, 7, 5, 4, 6, 0, 9, 2, 1) | -5   | 2   | –              | –          | G390            |
| m11n138 | G1377 | (0, 5, 7, 8, 9, 3, 1, 4, 2, 6) | (4, 1, 2, 6, 7, 0, 8, 9, 5, 3) | -5   | 0   | ?              | G1377      | ?               |
| 11n139  | G391  | (0, 8, 2, 5, 3, 1, 7, 4, 9, 6) | (4, 1, 9, 0, 7, 6, 2, 8, 5, 3) | -9   | 0   | G391           | G392       | G392            |
|         | G392  | (0, 7, 2, 9, 1, 6, 3, 5, 8, 4) | (6, 5, 8, 3, 4, 2, 7, 0, 1, 9) | -9   | 0   | G392           | G391       | G391            |
| m11n139 | G1378 | (0, 9, 1, 6, 3, 2, 4, 7, 8, 5) | (4, 2, 7, 0, 8, 5, 9, 3, 6, 1) | -1   | 0   | G1378          | G1379      | G1379           |
|         | G1379 | (0, 2, 5, 9, 3, 4, 7, 6, 8, 1) | (3, 6, 1, 4, 8, 0, 2, 9, 5, 7) | -1   | 0   | G1379          | G1378      | G1378           |
| 11n141  | G393  | (0, 9, 1, 3, 2, 5, 4, 6, 8, 7) | (8, 2, 4, 0, 6, 1, 7, 3, 5, 9) | -3   | 0   | G393           | G393       | G393            |
| m11n141 | G1380 | (0, 7, 6, 8, 9, 5, 3, 4, 1, 2) | (3, 1, 9, 4, 7, 2, 6, 0, 5, 8) | -7   | 0   | G1380          | G1380      | G1380           |
|         | G1381 | (0, 7, 8, 6, 4, 5, 2, 3, 1, 9) | (6, 1, 5, 9, 7, 3, 4, 0, 8, 2) | -7   | 0   | G1381          | G1381      | G1381           |
| 11n142  | G394  | (0, 9, 1, 3, 2, 5, 4, 7, 6, 8) | (7, 2, 6, 0, 4, 3, 8, 1, 9, 5) | -3   | 0   | G395           | G395       | G394            |
|         | G395  | (0, 6, 8, 3, 7, 1, 5, 4, 9, 2) | (7, 9, 1, 0, 2, 4, 3, 6, 5, 8) | -3   | 0   | G394           | G394       | G395            |
| m11n142 | G1382 | (0, 1, 8, 9, 6, 7, 5, 3, 4, 2) | (3, 5, 2, 7, 8, 4, 0, 6, 1, 9) | -7   | 0   | G1384          | G1382      | G1384           |
|         | G1383 | (0, 3, 1, 8, 9, 5, 7, 4, 6, 2) | (5, 6, 4, 2, 7, 8, 3, 0, 1, 9) | -7   | 0   | G1385          | G1388      | G1387           |
|         | G1384 | (0, 1, 8, 9, 6, 7, 5, 3, 4, 2) | (3, 9, 0, 5, 2, 4, 8, 6, 1, 7) | -7   | 0   | G1382          | G1384      | G1382           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G1385 | (0, 3, 9, 7, 8, 1, 2, 6, 4, 5) | (6, 8, 4, 2, 5, 3, 0, 1, 7, 9) | -7   | 0   | G1383          | G1387      | G1388           |
|         | G1386 | (0, 2, 9, 4, 7, 3, 6, 1, 5, 8) | (5, 6, 3, 1, 2, 8, 0, 7, 9, 4) | -7   | 0   | G1391          | G1390      | G1389           |
|         | G1387 | (0, 6, 8, 5, 7, 3, 1, 2, 9, 4) | (5, 3, 4, 9, 2, 8, 6, 0, 1, 7) | -7   | 0   | G1388          | G1385      | G1383           |
|         | G1388 | (0, 2, 8, 4, 9, 6, 7, 5, 1, 3) | (4, 5, 3, 1, 7, 8, 2, 0, 6, 9) | -7   | 0   | G1387          | G1383      | G1385           |
|         | G1389 | (0, 8, 3, 1, 9, 4, 7, 5, 2, 6) | (7, 4, 5, 6, 2, 0, 3, 1, 8, 9) | -7   | 0   | G1390          | G1391      | G1386           |
|         | G1390 | (0, 6, 8, 5, 7, 2, 3, 4, 1, 9) | (5, 1, 4, 9, 3, 6, 8, 0, 7, 2) | -7   | 0   | G1389          | G1386      | G1391           |
|         | G1391 | (0, 1, 9, 6, 7, 8, 4, 2, 5, 3) | (4, 8, 2, 0, 5, 3, 1, 6, 9, 7) | -7   | 0   | G1386          | G1389      | G1390           |
| 11n143  | G396  | (0, 7, 8, 6, 9, 3, 1, 5, 4, 2) | (3, 1, 2, 0, 4, 7, 8, 9, 6, 5) | -7   | -2  | –              | –          | G396            |
|         | G397  | (0, 7, 6, 3, 4, 2, 5, 9, 1, 8) | (6, 5, 1, 8, 9, 7, 0, 3, 4, 2) | -7   | 0   | G400           | G398       | G399            |
|         | G398  | (0, 4, 3, 9, 6, 7, 5, 8, 1, 2) | (6, 8, 5, 4, 1, 2, 0, 3, 7, 9) | -7   | 0   | G399           | G397       | G400            |
|         | G399  | (0, 8, 1, 9, 6, 4, 5, 7, 3, 2) | (4, 5, 7, 3, 0, 8, 9, 2, 1, 6) | -7   | 0   | G398           | G400       | G397            |
|         | G400  | (0, 6, 3, 1, 2, 5, 4, 9, 7, 8) | (4, 2, 9, 7, 8, 0, 6, 5, 3, 1) | -7   | 0   | G397           | G399       | G398            |
|         | G401  | (0, 8, 7, 1, 9, 3, 6, 4, 5, 2) | (7, 6, 3, 4, 5, 8, 2, 0, 1, 9) | -7   | 2   | –              | –          | G401            |
| m11n143 | G1392 | (0, 6, 4, 7, 5, 8, 9, 2, 1, 3) | (5, 2, 1, 3, 9, 0, 4, 7, 6, 8) | -3   | 0   | G1393          | ?          | ?               |
|         | G1393 | (0, 1, 8, 7, 9, 2, 6, 4, 3, 5) | (2, 6, 4, 3, 5, 8, 0, 7, 9, 1) | -3   | 0   | G1392          | ?          | ?               |
| 11n145  | G402  | (0, 3, 1, 2, 5, 8, 9, 7, 6, 4) | (5, 7, 4, 6, 9, 0, 3, 2, 1, 8) | -6   | -1  | –              | –          | G403            |
|         | G403  | (0, 5, 9, 8, 6, 7, 1, 3, 4, 2) | (3, 1, 4, 2, 0, 5, 6, 9, 8, 7) | -6   | -1  | –              | –          | G402            |
|         | G404  | (0, 8, 9, 7, 4, 1, 3, 2, 5, 6) | (5, 3, 2, 0, 8, 6, 9, 7, 1, 4) | -6   | -1  | –              | –          | G405            |
|         | G405  | (0, 5, 7, 6, 4, 8, 9, 3, 1, 2) | (3, 8, 2, 1, 9, 0, 5, 7, 4, 6) | -6   | -1  | –              | –          | G404            |
|         | G406  | (0, 8, 7, 5, 6, 9, 2, 3, 1, 4) | (6, 3, 2, 1, 4, 5, 8, 0, 7, 9) | -6   | 1   | –              | –          | G409            |
|         | G407  | (0, 1, 9, 3, 4, 8, 6, 5, 7, 2) | (6, 8, 5, 7, 2, 3, 1, 0, 4, 9) | -6   | 1   | –              | –          | G408            |
|         | G408  | (0, 1, 4, 3, 5, 2, 9, 7, 8, 6) | (2, 5, 9, 7, 0, 8, 6, 4, 3, 1) | -6   | 1   | –              | –          | G407            |
|         | G409  | (0, 8, 9, 1, 5, 6, 4, 3, 7, 2) | (5, 4, 3, 6, 7, 2, 0, 8, 1, 9) | -6   | 1   | –              | –          | G406            |
|         | G1394 | (0, 9, 5, 7, 8, 6, 1, 3, 2, 4) | (6, 1, 0, 2, 3, 9, 4, 7, 5, 8) | -4   | -1  | –              | –          | ?               |
| m11n145 | G1395 | (0, 2, 1, 3, 8, 6, 7, 9, 5, 4) | (6, 9, 7, 0, 5, 1, 2, 4, 3, 8) | -4   | 1   | –              | –          | ?               |
| 11n147  | G1954 | (0, 9, 1, 3, 8, 4, 7, 6, 5, 2) | (6, 4, 5, 0, 2, 1, 3, 9, 8, 7) | -10  | -1  | –              | –          | G2360           |
|         | G2360 | (0, 3, 2, 1, 9, 6, 5, 7, 4, 8) | (6, 7, 5, 4, 3, 2, 8, 0, 9, 1) | -10  | -1  | –              | –          | G1954           |
|         | G1955 | (0, 7, 6, 5, 8, 4, 9, 1, 3, 2) | (5, 4, 3, 9, 1, 0, 2, 7, 8, 6) | -10  | 1   | –              | –          | G2361           |
|         | G2361 | (0, 4, 1, 3, 2, 9, 7, 6, 5, 8) | (7, 9, 8, 0, 6, 5, 4, 3, 1, 2) | -10  | 1   | –              | –          | G1955           |
| m11n147 | G2159 | (0, 1, 5, 3, 4, 2, 7, 6, 8, 9) | (7, 8, 9, 6, 0, 5, 3, 1, 2, 4) | 0    | -1  | –              | –          | G2565           |
|         | G2160 | (0, 1, 9, 8, 2, 3, 4, 7, 5, 6) | (4, 7, 5, 0, 6, 9, 1, 2, 8, 3) | 0    | -1  | –              | –          | G2567           |
|         | G2161 | (0, 6, 1, 9, 2, 3, 4, 8, 5, 7) | (3, 8, 7, 4, 5, 6, 0, 1, 9, 2) | 0    | -1  | –              | –          | G2566           |
|         | G2565 | (0, 1, 5, 3, 4, 2, 7, 6, 8, 9) | (4, 7, 8, 6, 9, 5, 3, 0, 1, 2) | 0    | -1  | –              | –          | G2159           |
|         | G2566 | (0, 2, 1, 9, 5, 3, 4, 6, 7, 8) | (6, 7, 4, 2, 0, 8, 9, 1, 3, 5) | 0    | -1  | –              | –          | G2161           |
|         | G2567 | (0, 7, 5, 3, 4, 6, 8, 9, 1, 2) | (4, 1, 8, 7, 9, 0, 2, 3, 5, 6) | 0    | -1  | –              | –          | G2160           |
|         | G2162 | (0, 2, 9, 3, 4, 5, 8, 6, 1, 7) | (5, 8, 6, 7, 1, 2, 3, 0, 9, 4) | 0    | 1   | –              | –          | G2569           |
|         | G2163 | (0, 1, 3, 2, 7, 5, 6, 4, 8, 9) | (5, 7, 8, 6, 4, 9, 3, 0, 1, 2) | 0    | 1   | –              | –          | G2568           |
|         | G2164 | (0, 1, 9, 2, 3, 4, 8, 7, 5, 6) | (3, 8, 4, 5, 7, 0, 6, 1, 9, 2) | 0    | 1   | –              | –          | G2570           |
|         | G2568 | (0, 1, 3, 2, 7, 5, 6, 4, 8, 9) | (7, 8, 9, 6, 4, 0, 3, 1, 2, 5) | 0    | 1   | –              | –          | G2163           |
|         | G2569 | (0, 1, 2, 4, 5, 3, 9, 7, 6, 8) | (3, 5, 7, 9, 0, 8, 6, 4, 1, 2) | 0    | 1   | –              | –          | G2162           |
|         | G2570 | (0, 1, 3, 4, 6, 8, 9, 7, 5, 2) | (6, 7, 9, 0, 2, 3, 5, 4, 1, 8) | 0    | 1   | –              | –          | G2164           |
| 11n164  | G410  | (0, 6, 5, 3, 9, 8, 4, 2, 1, 7) | (5, 4, 8, 7, 6, 1, 0, 9, 3, 2) | -11  | 0   | G410           | G410       | G410            |
| m11n164 | G1396 | (0, 1, 8, 9, 5, 6, 7, 2, 3, 4) | (2, 6, 3, 7, 8, 0, 4, 5, 9, 1) | 1    | 0   | G1396          | G1396      | G1396           |
|         | G1397 | (0, 6, 4, 5, 7, 8, 1, 2, 3, 9) | (5, 2, 8, 9, 3, 6, 4, 7, 0, 1) | 1    | 0   | G1401          | G1402      | G1403           |
|         | G1398 | (0, 4, 7, 2, 5, 8, 1, 6, 9, 3) | (7, 8, 1, 9, 0, 3, 4, 2, 5, 6) | 1    | 0   | G1398          | G1400      | G1400           |
|         | G1399 | (0, 3, 1, 4, 6, 7, 5, 8, 9, 2) | (4, 5, 7, 9, 2, 3, 0, 1, 6, 8) | 1    | 0   | G1404          | G1404      | G1399           |
|         | G1400 | (0, 3, 1, 2, 5, 6, 4, 7, 9, 8) | (6, 9, 4, 7, 0, 3, 8, 1, 2, 5) | 1    | 0   | G1400          | G1398      | G1398           |
|         | G1401 | (0, 2, 3, 1, 7, 8, 4, 5, 9, 6) | (4, 8, 9, 5, 2, 6, 7, 0, 1, 3) | 1    | 0   | G1397          | G1403      | G1402           |
|         | G1402 | (0, 1, 7, 8, 2, 3, 6, 4, 5, 9) | (6, 8, 9, 4, 5, 0, 2, 7, 1, 3) | 1    | 0   | G1403          | G1397      | G1401           |
|         | G1403 | (0, 6, 3, 7, 8, 1, 2, 4, 5, 9) | (4, 2, 8, 9, 5, 6, 0, 7, 1, 3) | 1    | 0   | G1402          | G1401      | G1397           |
|         | G1404 | (0, 7, 9, 1, 2, 4, 5, 3, 6, 8) | (5, 2, 3, 6, 0, 7, 1, 8, 9, 4) | 1    | 0   | G1399          | G1399      | G1404           |
| 11n173  | G411  | (0, 4, 1, 3, 2, 8, 7, 9, 6, 5) | (7, 9, 6, 0, 5, 4, 1, 3, 2, 8) | -10  | -1  | –              | –          | G411            |
|         | G412  | (0, 9, 6, 8, 7, 3, 2, 4, 1, 5) | (7, 3, 2, 4, 1, 0, 5, 9, 6, 8) | -10  | 1   | –              | –          | G412            |
| m11n173 | G1405 | (0, 1, 9, 5, 3, 4, 6, 7, 8, 2) | (4, 7, 2, 0, 8, 9, 1, 3, 5, 6) | 0    | -1  | –              | –          | G1407           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G1406 | (0, 2, 4, 5, 3, 1, 8, 6, 7, 9) | (5, 6, 8, 9, 7, 4, 2, 0, 1, 3) | 0    | -1  | –              | –          | G1406           |
|         | G1407 | (0, 8, 9, 2, 3, 5, 6, 4, 1, 7) | (4, 1, 6, 7, 8, 0, 2, 9, 5, 3) | 0    | -1  | –              | –          | G1405           |
|         | G1408 | (0, 2, 3, 1, 8, 6, 4, 5, 7, 9) | (6, 8, 9, 7, 5, 2, 0, 1, 3, 4) | 0    | 1   | –              | –          | G1408           |
|         | G1409 | (0, 4, 5, 6, 8, 9, 7, 3, 1, 2) | (6, 7, 9, 1, 3, 4, 2, 0, 5, 8) | 0    | 1   | –              | –          | G1410           |
|         | G1410 | (0, 6, 3, 1, 2, 4, 5, 8, 9, 7) | (4, 2, 8, 5, 7, 9, 0, 1, 6, 3) | 0    | 1   | –              | –          | G1409           |
| 11n183  | G413  | (0, 8, 6, 5, 7, 4, 2, 3, 9, 1) | (2, 3, 1, 9, 0, 8, 6, 7, 4, 5) | -15  | -2  | –              | –          | G413            |
|         | G414  | (0, 8, 7, 5, 6, 3, 4, 1, 9, 2) | (3, 2, 4, 1, 9, 8, 0, 7, 5, 6) | -15  | 0   | G414           | G414       | G414            |
|         | G415  | (0, 2, 8, 9, 7, 4, 6, 5, 3, 1) | (6, 7, 4, 5, 3, 1, 2, 0, 8, 9) | -15  | 2   | –              | –          | G415            |
| m11n183 | G1411 | (0, 9, 1, 3, 2, 5, 4, 7, 6, 8) | (5, 3, 4, 7, 6, 8, 0, 1, 9, 2) | 5    | 0   | G1411          | G1411      | G1411           |
| 12n25   | G529  | (0, 5, 2, 8, 6, 7, 1, 9, 3, 4) | (3, 1, 7, 4, 9, 0, 8, 5, 6, 2) | -5   | 0   | G540           | G543       | G531            |
|         | G530  | (0, 6, 1, 2, 8, 9, 7, 4, 5, 3) | (4, 2, 3, 7, 5, 6, 0, 8, 1, 9) | -5   | 0   | G544           | G535       | G534            |
|         | G531  | (0, 6, 2, 3, 5, 8, 9, 7, 1, 4) | (5, 3, 4, 7, 1, 2, 6, 0, 8, 9) | -5   | 0   | G543           | G540       | G529            |
|         | G532  | (0, 1, 9, 4, 2, 3, 8, 6, 5, 7) | (6, 8, 3, 0, 5, 7, 4, 9, 1, 2) | -5   | 0   | G536           | G545       | G538            |
|         | G533  | (0, 8, 1, 9, 3, 5, 2, 4, 6, 7) | (6, 3, 4, 2, 0, 1, 7, 8, 9, 5) | -5   | 0   | G541           | G533       | G541            |
|         | G534  | (0, 1, 6, 8, 9, 5, 3, 4, 7, 2) | (3, 5, 2, 4, 7, 8, 6, 0, 1, 9) | -5   | 0   | G535           | G544       | G530            |
|         | G535  | (0, 8, 9, 3, 1, 4, 2, 7, 5, 6) | (5, 1, 2, 0, 7, 8, 6, 3, 9, 4) | -5   | 0   | G534           | G530       | G544            |
|         | G536  | (0, 2, 5, 3, 9, 7, 8, 4, 1, 6) | (4, 7, 8, 1, 6, 0, 2, 9, 5, 3) | -5   | 0   | G532           | G538       | G545            |
|         | G537  | (0, 4, 5, 3, 1, 2, 7, 8, 6, 9) | (7, 8, 2, 9, 4, 6, 3, 5, 0, 1) | -5   | 0   | G539           | G542       | G546            |
|         | G538  | (0, 6, 4, 5, 1, 7, 3, 8, 9, 2) | (5, 3, 7, 9, 6, 2, 0, 1, 4, 8) | -5   | 0   | G545           | G536       | G532            |
|         | G539  | (0, 8, 1, 9, 4, 5, 7, 2, 3, 6) | (7, 5, 6, 2, 0, 1, 3, 4, 8, 9) | -5   | 0   | G537           | G546       | G542            |
|         | G540  | (0, 8, 2, 3, 1, 7, 4, 9, 5, 6) | (4, 1, 9, 0, 5, 2, 8, 6, 7, 3) | -5   | 0   | G529           | G531       | G543            |
|         | G541  | (0, 1, 9, 7, 8, 5, 6, 2, 3, 4) | (6, 8, 2, 0, 3, 1, 4, 5, 7, 9) | -5   | 0   | G533           | G541       | G533            |
|         | G542  | (0, 6, 7, 1, 8, 3, 5, 2, 4, 9) | (8, 9, 3, 4, 2, 0, 1, 6, 7, 5) | -5   | 0   | G546           | G537       | G539            |
|         | G543  | (0, 8, 5, 6, 2, 3, 1, 7, 4, 9) | (7, 1, 9, 3, 4, 0, 5, 2, 8, 6) | -5   | 0   | G531           | G529       | G540            |
|         | G544  | (0, 4, 6, 3, 5, 8, 9, 7, 1, 2) | (3, 1, 2, 7, 9, 0, 6, 4, 5, 8) | -5   | 0   | G530           | G534       | G535            |
|         | G545  | (0, 1, 4, 5, 3, 9, 6, 8, 2, 7) | (3, 6, 8, 2, 7, 4, 0, 1, 9, 5) | -5   | 0   | G538           | G532       | G536            |
|         | G546  | (0, 1, 9, 7, 8, 4, 2, 3, 5, 6) | (5, 8, 2, 0, 3, 1, 6, 7, 9, 4) | -5   | 0   | G542           | G539       | G537            |
| m12n25  | G1547 | (0, 9, 3, 2, 1, 5, 4, 6, 8, 7) | (4, 1, 0, 8, 6, 9, 7, 3, 5, 2) | -5   | 0   | G1548          | G1548      | G1547           |
|         | G1548 | (0, 9, 1, 3, 2, 6, 5, 4, 8, 7) | (5, 2, 4, 0, 8, 1, 9, 7, 6, 3) | -5   | 0   | G1547          | G1547      | G1548           |
| 12n121  | G523  | (0, 9, 1, 6, 5, 7, 3, 2, 4, 8) | (7, 3, 8, 0, 9, 4, 6, 5, 1, 2) | 0    | -1  | –              | –          | G523            |
|         | G524  | (0, 3, 4, 8, 1, 7, 9, 5, 2, 6) | (4, 5, 9, 2, 3, 0, 6, 8, 7, 1) | 0    | -1  | –              | –          | G524            |
|         | G525  | (0, 4, 1, 7, 9, 5, 8, 2, 3, 6) | (5, 9, 8, 0, 6, 3, 4, 7, 1, 2) | 0    | 1   | –              | –          | G525            |
|         | G526  | (0, 4, 6, 5, 1, 3, 2, 7, 9, 8) | (6, 7, 3, 2, 4, 9, 8, 0, 5, 1) | 0    | 1   | –              | –          | G526            |
| m12n121 | G1539 | (0, 8, 9, 4, 2, 3, 1, 7, 5, 6) | (7, 3, 1, 0, 5, 6, 4, 2, 8, 9) | -10  | -1  | –              | –          | G1540           |
|         | G1540 | (0, 8, 4, 2, 3, 1, 6, 7, 5, 9) | (7, 1, 0, 5, 9, 4, 2, 3, 8, 6) | -10  | -1  | –              | –          | G1540           |
|         | G1541 | (0, 1, 9, 5, 3, 4, 2, 7, 8, 6) | (7, 8, 4, 2, 0, 1, 6, 5, 3, 9) | -10  | 1   | –              | –          | G1542           |
|         | G1542 | (0, 4, 2, 3, 8, 6, 7, 5, 1, 9) | (3, 1, 6, 7, 5, 0, 4, 9, 8, 2) | -10  | 1   | –              | –          | G1542           |
| 12n243  | G527  | (0, 6, 5, 4, 3, 2, 9, 8, 7, 1) | (2, 1, 8, 7, 6, 5, 4, 3, 0, 9) | -17  | -2  | –              | –          | G527            |
|         | G528  | (0, 4, 3, 2, 9, 8, 7, 6, 5, 1) | (2, 1, 8, 7, 6, 5, 4, 3, 0, 9) | -17  | 2   | –              | –          | G528            |
| m12n243 | G1543 | (0, 1, 2, 3, 4, 8, 9, 5, 6, 7) | (3, 4, 5, 6, 9, 0, 7, 8, 1, 2) | 7    | 0   | G1544          | G1543      | G1544           |
|         | G1544 | (0, 1, 2, 8, 9, 3, 4, 5, 6, 7) | (5, 6, 9, 0, 7, 8, 1, 2, 3, 4) | 7    | 0   | G1543          | G1544      | G1543           |
|         | G1545 | (0, 1, 3, 5, 4, 6, 7, 8, 9, 2) | (7, 8, 9, 2, 0, 1, 3, 5, 6, 4) | 7    | 0   | G1545          | G1546      | G1546           |
|         | G1546 | (0, 2, 5, 3, 4, 6, 7, 8, 9, 1) | (5, 8, 1, 9, 0, 2, 3, 4, 6, 7) | 7    | 0   | G1546          | G1545      | G1545           |
| 12n253  | G1970 | (0, 8, 7, 1, 3, 4, 2, 5, 9, 6) | (4, 2, 9, 5, 6, 8, 7, 0, 3, 1) | 0    | -1  | –              | –          | G2377           |
|         | G1971 | (0, 7, 9, 1, 2, 5, 4, 3, 6, 8) | (4, 2, 3, 6, 8, 0, 7, 5, 9, 1) | 0    | -1  | –              | –          | G2376           |
|         | G2376 | (0, 7, 9, 1, 4, 5, 3, 6, 8, 2) | (3, 2, 5, 6, 8, 0, 7, 9, 1, 4) | 0    | -1  | –              | –          | G1971           |
|         | G2377 | (0, 2, 9, 1, 3, 8, 4, 6, 5, 7) | (4, 6, 5, 7, 0, 2, 9, 1, 8, 3) | 0    | -1  | –              | –          | G1970           |
|         | G1972 | (0, 7, 1, 4, 2, 3, 5, 9, 8, 6) | (5, 3, 6, 9, 8, 0, 1, 7, 4, 2) | 0    | 1   | –              | –          | G2378           |
|         | G1973 | (0, 2, 5, 4, 3, 6, 7, 9, 1, 8) | (7, 9, 3, 1, 8, 0, 2, 5, 6, 4) | 0    | 1   | –              | –          | G2379           |
|         | G2378 | (0, 2, 1, 3, 9, 4, 6, 8, 5, 7) | (4, 9, 6, 8, 5, 7, 0, 2, 1, 3) | 0    | 1   | –              | –          | G1972           |
|         | G2379 | (0, 4, 6, 9, 7, 8, 1, 3, 5, 2) | (8, 1, 3, 5, 2, 4, 6, 7, 0, 9) | 0    | 1   | –              | –          | G1973           |
| m12n253 | G2193 | (0, 8, 6, 9, 7, 5, 1, 2, 4, 3) | (5, 4, 1, 2, 0, 8, 3, 6, 9, 7) | -10  | -1  | –              | –          | G2599           |
|         | G2599 | (0, 8, 1, 9, 6, 4, 5, 7, 3, 2) | (4, 3, 5, 2, 0, 7, 8, 1, 9, 6) | -10  | -1  | –              | –          | G2193           |
|         | G2194 | (0, 9, 1, 2, 8, 6, 4, 7, 5, 3) | (6, 4, 7, 0, 5, 3, 1, 2, 9, 8) | -10  | 1   | –              | –          | G2600           |



| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 12n254  | G2600 | (0, 9, 5, 7, 8, 6, 3, 1, 4, 2) | (6, 3, 1, 4, 5, 2, 0, 7, 9, 8) | -10  | 1   | –              | –          | G2194           |
|         | G1974 | (0, 6, 9, 8, 5, 4, 2, 3, 1, 7) | (4, 1, 3, 0, 9, 7, 6, 8, 5, 2) | -13  | -2  | –              | –          | G2380           |
|         | G2380 | (0, 8, 6, 7, 5, 4, 1, 9, 3, 2) | (3, 1, 9, 2, 0, 8, 6, 5, 7, 4) | -13  | -2  | –              | –          | G1974           |
|         | G1975 | (0, 8, 4, 2, 6, 5, 3, 1, 9, 7) | (5, 3, 1, 9, 0, 8, 7, 6, 4, 2) | -13  | 0   | G1978          | G2383      | G2384           |
|         | G1976 | (0, 1, 9, 8, 6, 7, 4, 3, 5, 2) | (4, 7, 5, 3, 0, 2, 9, 6, 1, 8) | -13  | 0   | G1977          | G2382      | G2381           |
|         | G1977 | (0, 7, 5, 2, 4, 9, 3, 1, 8, 6) | (3, 1, 9, 8, 0, 6, 7, 5, 4, 2) | -13  | 0   | G1976          | G2381      | G2382           |
|         | G1978 | (0, 7, 9, 6, 5, 4, 2, 3, 1, 8) | (4, 1, 5, 3, 0, 8, 7, 9, 6, 2) | -13  | 0   | G1975          | G2384      | G2383           |
|         | G2381 | (0, 8, 7, 9, 5, 6, 4, 3, 1, 2) | (6, 4, 1, 3, 8, 2, 0, 7, 5, 9) | -13  | 0   | G2382          | G1977      | G1976           |
|         | G2382 | (0, 3, 1, 9, 6, 8, 5, 2, 7, 4) | (6, 7, 5, 4, 2, 3, 0, 9, 1, 8) | -13  | 0   | G2381          | G1976      | G1977           |
|         | G2383 | (0, 3, 9, 2, 8, 5, 7, 4, 6, 1) | (5, 7, 4, 6, 3, 1, 2, 0, 9, 8) | -13  | 0   | G2384          | G1975      | G1978           |
|         | G2384 | (0, 8, 6, 4, 5, 2, 3, 1, 9, 7) | (4, 3, 1, 9, 7, 6, 0, 8, 5, 2) | -13  | 0   | G2383          | G1978      | G1975           |
|         | G1979 | (0, 6, 4, 5, 3, 2, 9, 8, 1, 7) | (5, 2, 9, 1, 0, 8, 7, 4, 6, 3) | -13  | 2   | –              | –          | G2385           |
|         | G2385 | (0, 9, 3, 1, 8, 7, 5, 6, 4, 2) | (8, 5, 7, 6, 4, 2, 0, 3, 1, 9) | -13  | 2   | –              | –          | G1979           |
| m12n254 | G2195 | (0, 1, 7, 9, 2, 3, 5, 4, 6, 8) | (2, 5, 3, 4, 6, 8, 0, 7, 9, 1) | 3    | 0   | G2196          | G2602      | G2601           |
|         | G2196 | (0, 2, 4, 3, 5, 6, 9, 1, 7, 8) | (7, 9, 1, 8, 0, 2, 4, 5, 3, 6) | 3    | 0   | G2195          | G2601      | G2602           |
|         | G2601 | (0, 7, 9, 1, 3, 4, 2, 5, 6, 8) | (3, 2, 4, 5, 8, 0, 6, 7, 9, 1) | 3    | 0   | G2602          | G2196      | G2195           |
|         | G2602 | (0, 8, 9, 1, 3, 5, 2, 4, 6, 7) | (6, 2, 4, 7, 8, 0, 9, 1, 3, 5) | 3    | 0   | G2601          | G2195      | G2196           |
| 12n280  | G547  | (0, 6, 8, 7, 5, 2, 3, 9, 1, 4) | (5, 3, 4, 1, 9, 8, 0, 2, 6, 7) | -9   | 0   | G550           | G551       | G552            |
|         | G548  | (0, 5, 2, 4, 3, 6, 7, 1, 9, 8) | (3, 1, 9, 0, 7, 8, 5, 6, 4, 2) | -9   | 0   | G549           | G548       | G549            |
|         | G549  | (0, 1, 8, 9, 6, 7, 5, 3, 4, 2) | (5, 9, 0, 3, 2, 4, 1, 6, 8, 7) | -9   | 0   | G548           | G549       | G548            |
|         | G550  | (0, 6, 8, 4, 2, 1, 3, 9, 5, 7) | (8, 9, 1, 0, 7, 5, 6, 4, 2, 3) | -9   | 0   | G547           | G552       | G551            |
|         | G551  | (0, 5, 8, 3, 2, 4, 1, 6, 9, 7) | (8, 9, 1, 0, 6, 7, 5, 3, 4, 2) | -9   | 0   | G552           | G547       | G550            |
|         | G552  | (0, 5, 2, 4, 3, 9, 1, 6, 8, 7) | (3, 1, 8, 0, 6, 5, 7, 9, 4, 2) | -9   | 0   | G551           | G550       | G547            |
| m12n280 | G1549 | (0, 9, 1, 3, 2, 5, 4, 7, 6, 8) | (4, 2, 7, 0, 8, 9, 6, 5, 1, 3) | -1   | 0   | G1551          | G1551      | G1549           |
|         | G1550 | (0, 2, 8, 7, 1, 3, 5, 4, 6, 9) | (5, 7, 6, 9, 4, 8, 2, 0, 1, 3) | -1   | 0   | G1554          | G1552      | G1553           |
|         | G1551 | (0, 1, 8, 7, 3, 5, 6, 4, 9, 2) | (4, 7, 6, 9, 8, 0, 2, 1, 3, 5) | -1   | 0   | G1549          | G1549      | G1551           |
|         | G1552 | (0, 2, 6, 3, 7, 8, 5, 4, 9, 1) | (3, 8, 1, 9, 0, 4, 2, 6, 5, 7) | -1   | 0   | G1553          | G1550      | G1554           |
|         | G1553 | (0, 9, 1, 3, 5, 6, 4, 8, 2, 7) | (8, 4, 6, 7, 0, 2, 1, 3, 5, 9) | -1   | 0   | G1552          | G1554      | G1550           |
|         | G1554 | (0, 3, 1, 5, 4, 7, 8, 6, 9, 2) | (6, 8, 4, 3, 9, 0, 2, 1, 5, 7) | -1   | 0   | G1550          | G1553      | G1552           |
| 12n285  | G553  | (0, 4, 3, 2, 7, 6, 8, 5, 1, 9) | (8, 9, 6, 5, 4, 1, 3, 0, 7, 2) | -9   | 0   | G560           | G555       | G557            |
|         | G554  | (0, 7, 5, 6, 9, 1, 4, 3, 2, 8) | (6, 3, 8, 1, 2, 7, 0, 9, 5, 4) | -9   | 0   | G559           | G558       | G556            |
|         | G555  | (0, 7, 2, 8, 9, 6, 5, 4, 1, 3) | (5, 1, 9, 0, 4, 3, 2, 7, 6, 8) | -9   | 0   | G557           | G553       | G560            |
|         | G556  | (0, 3, 2, 1, 7, 8, 6, 4, 9, 5) | (8, 9, 6, 4, 3, 5, 0, 7, 2, 1) | -9   | 0   | G558           | G559       | G554            |
|         | G557  | (0, 9, 5, 3, 2, 4, 7, 8, 6, 1) | (4, 2, 1, 0, 6, 8, 9, 5, 3, 7) | -9   | 0   | G555           | G560       | G553            |
|         | G558  | (0, 9, 5, 4, 6, 3, 8, 1, 2, 7) | (4, 3, 2, 8, 0, 7, 5, 6, 9, 1) | -9   | 0   | G556           | G554       | G559            |
|         | G559  | (0, 8, 7, 9, 4, 1, 6, 5, 2, 3) | (6, 5, 1, 2, 0, 8, 3, 9, 4, 7) | -9   | 0   | G554           | G556       | G558            |
|         | G560  | (0, 8, 7, 6, 2, 4, 5, 1, 9, 3) | (6, 5, 1, 9, 8, 0, 3, 4, 2, 7) | -9   | 0   | G553           | G557       | G555            |
| m12n285 | G1555 | (0, 1, 2, 6, 8, 9, 7, 4, 3, 5) | (4, 7, 9, 0, 1, 5, 3, 2, 6, 8) | -1   | 0   | ?              | G1556      | ?               |
|         | G1556 | (0, 1, 5, 3, 2, 6, 8, 4, 7, 9) | (6, 8, 9, 7, 4, 3, 5, 0, 1, 2) | -1   | 0   | ?              | G1555      | ?               |
| 12n293  | G561  | (0, 8, 6, 4, 5, 2, 3, 1, 9, 7) | (3, 1, 9, 7, 0, 6, 8, 4, 5, 2) | -13  | -2  | –              | –          | G561            |
|         | G562  | (0, 7, 8, 5, 6, 4, 3, 1, 9, 2) | (3, 1, 2, 9, 0, 7, 5, 8, 4, 6) | -13  | -2  | –              | –          | G562            |
|         | G563  | (0, 7, 4, 5, 3, 9, 2, 8, 1, 6) | (3, 1, 9, 0, 8, 6, 7, 4, 5, 2) | -13  | 0   | G564           | G563       | G564            |
|         | G564  | (0, 8, 6, 4, 2, 3, 9, 1, 7, 5) | (3, 1, 9, 0, 7, 8, 5, 6, 4, 2) | -13  | 0   | G563           | G564       | G563            |
|         | G565  | (0, 1, 8, 9, 6, 7, 5, 3, 4, 2) | (5, 7, 3, 4, 0, 2, 9, 6, 1, 8) | -13  | 0   | G565           | G565       | G565            |
|         | G566  | (0, 1, 8, 9, 6, 7, 5, 3, 4, 2) | (5, 7, 2, 3, 0, 4, 1, 8, 9, 6) | -13  | 0   | G567           | G566       | G567            |
|         | G567  | (0, 1, 8, 9, 6, 7, 5, 3, 4, 2) | (5, 7, 3, 4, 0, 2, 8, 9, 1, 6) | -13  | 0   | G566           | G567       | G566            |
|         | G568  | (0, 3, 1, 9, 8, 6, 7, 4, 5, 2) | (6, 8, 4, 7, 5, 2, 3, 0, 1, 9) | -13  | 2   | –              | –          | G568            |
|         | G569  | (0, 8, 6, 4, 5, 2, 3, 1, 9, 7) | (5, 2, 3, 9, 1, 7, 0, 8, 6, 4) | -13  | 2   | –              | –          | G569            |
| m12n293 | G1557 | (0, 7, 1, 9, 2, 4, 3, 6, 5, 8) | (4, 2, 5, 3, 6, 8, 7, 0, 9, 1) | 3    | 0   | ?              | ?          | G1557           |
| 12n309  | G570  | (0, 6, 8, 9, 7, 1, 3, 5, 2, 4) | (5, 1, 2, 3, 0, 4, 8, 9, 6, 7) | -6   | -1  | –              | –          | G570            |
|         | G571  | (0, 2, 9, 1, 3, 7, 5, 6, 8, 4) | (7, 8, 5, 6, 0, 4, 1, 2, 3, 9) | -6   | 1   | –              | –          | G571            |
| m12n309 | G1558 | (0, 3, 1, 9, 5, 7, 6, 4, 8, 2) | (4, 7, 6, 2, 8, 1, 0, 9, 3, 5) | -4   | -1  | –              | –          | G1558           |
|         | G1559 | (0, 4, 8, 6, 5, 7, 3, 1, 9, 2) | (7, 9, 3, 2, 1, 4, 0, 6, 5, 8) | -4   | 1   | –              | –          | G1559           |
| 12n318  | G572  | (0, 3, 9, 1, 8, 2, 5, 6, 4, 7) | (5, 6, 2, 4, 3, 7, 9, 0, 8, 1) | -2   | -1  | –              | –          | G573            |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G573  | (0, 3, 5, 1, 8, 6, 7, 9, 4, 2) | (7, 9, 2, 4, 3, 0, 1, 5, 8, 6) | -2   | -1  | —              | —          | G572            |
|         | G574  | (0, 8, 3, 5, 6, 4, 1, 7, 9, 2) | (6, 4, 7, 1, 2, 9, 8, 0, 3, 5) | -2   | 1   | —              | —          | G575            |
|         | G575  | (0, 3, 1, 2, 5, 9, 6, 8, 4, 7) | (6, 9, 7, 8, 0, 4, 3, 5, 1, 2) | -2   | 1   | —              | —          | G574            |
| m12n318 | G1560 | (0, 8, 7, 9, 2, 6, 3, 5, 1, 4) | (5, 2, 1, 3, 4, 0, 7, 8, 6, 9) | -8   | -1  | —              | —          | G1561           |
|         | G1561 | (0, 2, 5, 3, 1, 8, 7, 9, 6, 4) | (7, 9, 0, 6, 4, 2, 3, 5, 1, 8) | -8   | -1  | —              | —          | G1560           |
|         | G1562 | (0, 3, 9, 1, 8, 2, 5, 7, 6, 4) | (5, 8, 6, 7, 4, 0, 1, 3, 2, 9) | -8   | 1   | —              | —          | G1563           |
|         | G1563 | (0, 8, 5, 7, 6, 3, 1, 9, 2, 4) | (6, 3, 9, 1, 2, 0, 8, 4, 5, 7) | -8   | 1   | —              | —          | G1562           |
|         | G1564 | (0, 3, 5, 1, 8, 6, 7, 9, 4, 2) | (7, 9, 2, 4, 3, 0, 1, 5, 8, 6) | -2   | -1  | —              | —          | G1565           |
| 12n321  | G576  | (0, 9, 6, 7, 5, 3, 4, 1, 2, 8) | (4, 1, 0, 2, 8, 6, 9, 7, 5, 3) | -13  | -2  | —              | —          | G576            |
|         | G577  | (0, 6, 8, 5, 7, 3, 4, 1, 2, 9) | (4, 1, 2, 9, 0, 8, 6, 5, 7, 3) | -13  | -2  | —              | —          | G577            |
|         | G578  | (0, 6, 4, 8, 7, 5, 3, 1, 2, 9) | (5, 3, 1, 2, 9, 8, 0, 6, 7, 4) | -13  | 0   | G580           | G578       | G580            |
|         | G579  | (0, 6, 7, 3, 5, 2, 4, 9, 1, 8) | (4, 1, 2, 9, 0, 8, 6, 5, 7, 3) | -13  | 0   | G581           | G579       | G581            |
|         | G580  | (0, 4, 2, 8, 9, 6, 7, 5, 3, 1) | (6, 7, 5, 3, 4, 1, 2, 8, 0, 9) | -13  | 0   | G578           | G580       | G578            |
|         | G581  | (0, 8, 5, 6, 3, 1, 4, 2, 9, 7) | (4, 1, 0, 2, 9, 7, 8, 5, 6, 3) | -13  | 0   | G579           | G581       | G579            |
|         | G582  | (0, 6, 7, 4, 5, 3, 1, 2, 9, 8) | (5, 3, 1, 9, 2, 0, 6, 8, 7, 4) | -13  | 2   | —              | —          | G582            |
|         | G583  | (0, 7, 8, 5, 6, 2, 4, 1, 3, 9) | (6, 2, 4, 3, 1, 9, 0, 7, 8, 5) | -13  | 2   | —              | —          | G583            |
| m12n321 | G1564 | (0, 9, 3, 1, 2, 5, 4, 6, 8, 7) | (5, 4, 6, 8, 0, 1, 7, 9, 3, 2) | 3    | 0   | G1565          | G1564      | G1565           |
|         | G1565 | (0, 2, 6, 5, 8, 7, 9, 1, 3, 4) | (7, 9, 1, 0, 3, 2, 6, 4, 5, 8) | 3    | 0   | G1564          | G1565      | G1564           |
| 12n323  | G1980 | (0, 6, 2, 9, 1, 3, 8, 4, 5, 7) | (5, 8, 7, 4, 6, 0, 2, 1, 9, 3) | -4   | -1  | —              | —          | G2393           |
|         | G1981 | (0, 1, 6, 8, 7, 9, 4, 5, 3, 2) | (3, 7, 9, 2, 0, 5, 6, 1, 8, 4) | -4   | -1  | —              | —          | G2394           |
|         | G1982 | (0, 7, 5, 8, 6, 9, 2, 4, 1, 3) | (4, 2, 9, 1, 0, 3, 5, 7, 6, 8) | -4   | -1  | —              | —          | G2386           |
|         | G1983 | (0, 6, 5, 8, 2, 9, 3, 1, 4, 7) | (3, 1, 9, 0, 6, 4, 7, 5, 8, 2) | -4   | -1  | —              | —          | G2387           |
|         | G1984 | (0, 4, 6, 5, 3, 7, 2, 9, 1, 8) | (6, 7, 1, 9, 8, 0, 4, 3, 5, 2) | -4   | -1  | —              | —          | G2390           |
|         | G1985 | (0, 5, 7, 6, 4, 8, 1, 3, 9, 2) | (3, 8, 1, 9, 0, 2, 5, 7, 4, 6) | -4   | -1  | —              | —          | G2391           |
|         | G1986 | (0, 2, 5, 4, 1, 3, 7, 9, 8, 6) | (3, 7, 9, 6, 5, 8, 0, 4, 1, 2) | -4   | -1  | —              | —          | G2392           |
|         | G1987 | (0, 3, 7, 6, 8, 5, 4, 1, 9, 2) | (4, 8, 1, 9, 2, 0, 6, 5, 3, 7) | -4   | -1  | —              | —          | G2389           |
|         | G1988 | (0, 5, 3, 6, 2, 8, 1, 7, 4, 9) | (6, 8, 7, 9, 4, 3, 5, 2, 0, 1) | -4   | -1  | —              | —          | G2388           |
|         | G2386 | (0, 2, 4, 9, 7, 5, 8, 6, 1, 3) | (6, 8, 1, 3, 2, 0, 4, 9, 5, 7) | -4   | -1  | —              | —          | G1982           |
|         | G2387 | (0, 2, 9, 6, 7, 5, 3, 4, 8, 1) | (3, 7, 4, 8, 1, 9, 6, 0, 2, 5) | -4   | -1  | —              | —          | G1983           |
|         | G2388 | (0, 6, 9, 1, 5, 3, 7, 8, 4, 2) | (3, 2, 4, 8, 0, 9, 1, 6, 7, 5) | -4   | -1  | —              | —          | G1988           |
|         | G2389 | (0, 3, 7, 4, 8, 6, 5, 1, 9, 2) | (4, 8, 1, 9, 2, 0, 7, 6, 3, 5) | -4   | -1  | —              | —          | G1987           |
|         | G2390 | (0, 7, 9, 8, 2, 4, 3, 1, 5, 6) | (4, 1, 3, 0, 5, 9, 7, 6, 8, 2) | -4   | -1  | —              | —          | G1984           |
|         | G2391 | (0, 1, 9, 7, 2, 4, 6, 3, 5, 8) | (6, 4, 3, 0, 5, 8, 1, 7, 9, 2) | -4   | -1  | —              | —          | G1985           |
|         | G2392 | (0, 7, 1, 9, 8, 5, 2, 4, 3, 6) | (4, 5, 6, 3, 0, 9, 7, 1, 8, 2) | -4   | -1  | —              | —          | G1986           |
|         | G2393 | (0, 3, 2, 6, 4, 1, 8, 5, 9, 7) | (4, 5, 8, 9, 7, 6, 3, 0, 2, 1) | -4   | -1  | —              | —          | G1980           |
|         | G2394 | (0, 1, 6, 8, 7, 9, 4, 5, 3, 2) | (3, 9, 0, 5, 2, 6, 8, 1, 7, 4) | -4   | -1  | —              | —          | G1981           |
|         | G1989 | (0, 5, 2, 8, 1, 7, 3, 6, 4, 9) | (8, 9, 7, 4, 6, 5, 0, 2, 1, 3) | -4   | 1   | —              | —          | G2400           |
|         | G1990 | (0, 2, 3, 9, 4, 6, 8, 5, 1, 7) | (4, 8, 6, 5, 7, 1, 3, 0, 9, 2) | -4   | 1   | —              | —          | G2396           |
|         | G1991 | (0, 9, 7, 8, 3, 5, 4, 6, 1, 2) | (8, 4, 1, 6, 7, 2, 0, 3, 5, 9) | -4   | 1   | —              | —          | G2395           |
|         | G1992 | (0, 3, 9, 1, 4, 8, 6, 5, 7, 2) | (6, 8, 5, 7, 0, 2, 3, 1, 4, 9) | -4   | 1   | —              | —          | G2398           |
|         | G1993 | (0, 2, 9, 1, 4, 7, 5, 8, 6, 3) | (5, 7, 6, 8, 0, 3, 2, 4, 1, 9) | -4   | 1   | —              | —          | G2397           |
|         | G1994 | (0, 3, 1, 8, 7, 4, 6, 5, 9, 2) | (5, 9, 7, 6, 2, 0, 3, 1, 4, 8) | -4   | 1   | —              | —          | G2401           |
|         | G1995 | (0, 3, 6, 4, 8, 5, 9, 2, 1, 7) | (5, 9, 2, 0, 3, 1, 7, 8, 6, 4) | -4   | 1   | —              | —          | G2403           |
|         | G1996 | (0, 8, 7, 9, 3, 5, 2, 1, 4, 6) | (4, 5, 2, 6, 8, 1, 0, 7, 9, 3) | -4   | 1   | —              | —          | G2399           |
|         | G1997 | (0, 7, 9, 6, 1, 5, 3, 2, 4, 8) | (6, 3, 5, 4, 8, 0, 9, 7, 1, 2) | -4   | 1   | —              | —          | G2402           |
|         | G2395 | (0, 9, 7, 8, 3, 5, 4, 6, 1, 2) | (8, 5, 1, 4, 6, 0, 7, 2, 3, 9) | -4   | 1   | —              | —          | G1991           |
|         | G2396 | (0, 8, 2, 9, 6, 3, 1, 5, 4, 7) | (6, 5, 7, 4, 1, 0, 8, 9, 2, 3) | -4   | 1   | —              | —          | G1990           |
|         | G2397 | (0, 2, 7, 5, 8, 6, 4, 9, 1, 3) | (6, 8, 4, 9, 3, 1, 0, 2, 5, 7) | -4   | 1   | —              | —          | G1993           |
|         | G2398 | (0, 3, 5, 2, 4, 6, 1, 9, 7, 8) | (6, 9, 1, 7, 0, 3, 8, 5, 4, 2) | -4   | 1   | —              | —          | G1992           |
|         | G2399 | (0, 3, 2, 4, 1, 8, 7, 5, 9, 6) | (4, 8, 5, 9, 7, 6, 3, 0, 1, 2) | -4   | 1   | —              | —          | G1996           |
|         | G2400 | (0, 8, 4, 5, 9, 7, 1, 3, 6, 2) | (7, 5, 6, 1, 3, 2, 4, 8, 0, 9) | -4   | 1   | —              | —          | G1989           |
|         | G2401 | (0, 3, 1, 7, 6, 4, 8, 5, 9, 2) | (7, 9, 6, 5, 2, 0, 3, 1, 4, 8) | -4   | 1   | —              | —          | G1994           |
|         | G2402 | (0, 1, 5, 3, 2, 4, 8, 7, 9, 6) | (4, 8, 0, 9, 7, 1, 6, 3, 5, 2) | -4   | 1   | —              | —          | G1997           |
|         | G2403 | (0, 3, 7, 8, 6, 4, 5, 2, 9, 1) | (6, 9, 1, 5, 2, 0, 3, 7, 4, 8) | -4   | 1   | —              | —          | G1995           |
| m12n323 | G1566 | (0, 3, 7, 8, 4, 2, 9, 1, 6, 5) | (6, 8, 9, 1, 0, 5, 3, 4, 2, 7) | -6   | -1  | —              | —          | G1567           |
|         | G1567 | (0, 5, 4, 6, 7, 9, 8, 3, 1, 2) | (3, 1, 7, 8, 2, 5, 0, 9, 4, 6) | -6   | -1  | —              | —          | G1566           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G1568 | (0, 9, 4, 6, 3, 1, 7, 8, 2, 5) | (8, 3, 1, 2, 0, 5, 4, 6, 7, 9) | -6   | 1   | —              | —          | G1569           |
|         | G1569 | (0, 1, 9, 4, 3, 5, 6, 8, 7, 2) | (6, 8, 3, 2, 7, 0, 4, 5, 1, 9) | -6   | 1   | —              | —          | G1568           |
| 12n328  | G584  | (0, 9, 1, 8, 6, 7, 5, 3, 4, 2) | (5, 3, 4, 2, 0, 1, 9, 8, 6, 7) | -17  | -2  | —              | —          | G584            |
|         | G585  | (0, 7, 6, 5, 4, 2, 3, 1, 9, 8) | (3, 1, 9, 0, 7, 6, 8, 5, 4, 2) | -17  | -2  | —              | —          | G585            |
|         | G586  | (0, 9, 1, 8, 5, 7, 6, 4, 3, 2) | (6, 3, 4, 2, 0, 1, 9, 8, 7, 5) | -17  | -2  | —              | —          | G586            |
|         | G587  | (0, 6, 5, 4, 2, 9, 3, 1, 8, 7) | (3, 1, 0, 9, 8, 6, 7, 5, 4, 2) | -17  | 0   | G588           | G587       | G588            |
|         | G588  | (0, 9, 7, 6, 3, 8, 5, 2, 4, 1) | (5, 3, 4, 2, 1, 0, 9, 7, 8, 6) | -17  | 0   | G587           | G588       | G587            |
|         | G589  | (0, 9, 8, 6, 5, 7, 4, 1, 3, 2) | (7, 5, 4, 3, 1, 2, 0, 8, 9, 6) | -17  | 2   | —              | —          | G589            |
|         | G590  | (0, 8, 9, 7, 5, 6, 4, 1, 3, 2) | (5, 6, 4, 3, 1, 2, 0, 8, 9, 7) | -17  | 2   | —              | —          | G590            |
|         | G591  | (0, 9, 7, 5, 6, 4, 3, 2, 1, 8) | (6, 4, 3, 0, 2, 1, 8, 9, 7, 5) | -17  | 2   | —              | —          | G591            |
| m12n328 | G1570 | (0, 3, 5, 4, 6, 7, 8, 9, 1, 2) | (7, 9, 1, 0, 2, 5, 3, 4, 6, 8) | 7    | 0   | G1570          | G1570      | G1570           |
| 12n340  | G592  | (0, 1, 8, 6, 7, 3, 5, 4, 2, 9) | (4, 7, 2, 9, 0, 8, 1, 6, 5, 3) | -9   | -2  | —              | —          | G594            |
|         | G593  | (0, 7, 5, 6, 3, 4, 2, 8, 9, 1) | (2, 1, 8, 9, 7, 0, 5, 3, 4, 6) | -9   | -2  | —              | —          | G593            |
|         | G594  | (0, 7, 8, 6, 3, 4, 5, 2, 9, 1) | (2, 1, 5, 9, 7, 8, 0, 6, 3, 4) | -9   | -2  | —              | —          | G592            |
|         | G595  | (0, 6, 2, 4, 3, 5, 9, 1, 7, 8) | (5, 1, 9, 0, 7, 8, 6, 4, 2, 3) | -9   | 0   | G600           | G601       | G598            |
|         | G596  | (0, 8, 1, 5, 3, 4, 7, 6, 2, 9) | (6, 3, 4, 2, 9, 0, 1, 8, 7, 5) | -9   | 0   | G602           | G599       | G597            |
|         | G597  | (0, 9, 4, 2, 3, 5, 1, 7, 8, 6) | (3, 1, 0, 7, 8, 9, 6, 4, 5, 2) | -9   | 0   | G599           | G602       | G596            |
|         | G598  | (0, 6, 3, 4, 1, 5, 2, 7, 9, 8) | (5, 1, 9, 0, 7, 8, 6, 3, 4, 2) | -9   | 0   | G601           | G600       | G595            |
|         | G599  | (0, 7, 6, 4, 5, 2, 3, 1, 8, 9) | (6, 5, 1, 8, 9, 7, 0, 4, 2, 3) | -9   | 0   | G597           | G596       | G602            |
|         | G600  | (0, 7, 2, 4, 5, 3, 8, 1, 9, 6) | (3, 1, 8, 9, 0, 7, 4, 6, 5, 2) | -9   | 0   | G595           | G598       | G601            |
|         | G601  | (0, 8, 9, 6, 7, 5, 3, 1, 2, 4) | (5, 1, 3, 2, 4, 8, 0, 6, 7, 9) | -9   | 0   | G598           | G595       | G600            |
|         | G602  | (0, 9, 6, 7, 8, 5, 3, 4, 1, 2) | (8, 3, 1, 2, 4, 0, 6, 7, 5, 9) | -9   | 0   | G596           | G597       | G599            |
|         | G603  | (0, 2, 3, 9, 7, 8, 5, 6, 4, 1) | (5, 7, 8, 6, 1, 4, 2, 3, 0, 9) | -9   | 2   | —              | —          | G603            |
|         | G604  | (0, 7, 5, 4, 6, 2, 3, 1, 8, 9) | (6, 4, 3, 8, 1, 9, 0, 7, 2, 5) | -9   | 2   | —              | —          | G605            |
|         | G605  | (0, 2, 9, 6, 7, 8, 5, 3, 4, 1) | (7, 8, 5, 1, 3, 4, 2, 6, 0, 9) | -9   | 2   | —              | —          | G604            |
| m12n340 | G1571 | (0, 3, 2, 1, 4, 5, 7, 6, 9, 8) | (7, 9, 8, 5, 6, 0, 3, 2, 4, 1) | -1   | 0   | ?              | ?          | G1572           |
|         | G1572 | (0, 3, 2, 1, 4, 5, 7, 6, 9, 8) | (5, 9, 7, 6, 8, 3, 4, 0, 2, 1) | -1   | 0   | ?              | ?          | G1571           |
| 12n356  | G1998 | (0, 6, 9, 7, 2, 8, 5, 3, 4, 1) | (2, 1, 3, 5, 6, 4, 0, 7, 9, 8) | -5   | 0   | G1999          | G2405      | G2406           |
|         | G1999 | (0, 5, 4, 6, 9, 7, 8, 1, 3, 2) | (4, 3, 8, 1, 2, 0, 5, 7, 9, 6) | -5   | 0   | G1998          | G2406      | G2405           |
|         | G2000 | (0, 9, 5, 1, 2, 4, 6, 8, 7, 3) | (6, 4, 2, 3, 7, 0, 1, 5, 9, 8) | -5   | 0   | G2002          | G2407      | G2409           |
|         | G2001 | (0, 6, 4, 7, 9, 3, 8, 2, 5, 1) | (3, 2, 9, 1, 5, 6, 4, 7, 0, 8) | -5   | 0   | G2003          | G2408      | G2404           |
|         | G2002 | (0, 7, 3, 2, 4, 6, 8, 9, 5, 1) | (4, 2, 1, 5, 9, 0, 3, 7, 8, 6) | -5   | 0   | G2000          | G2409      | G2407           |
|         | G2003 | (0, 3, 1, 8, 6, 2, 5, 9, 4, 7) | (6, 7, 5, 4, 9, 8, 0, 3, 1, 2) | -5   | 0   | G2001          | G2404      | G2408           |
|         | G2404 | (0, 8, 6, 3, 9, 2, 4, 7, 1, 5) | (4, 2, 1, 7, 5, 6, 8, 0, 9, 3) | -5   | 0   | G2408          | G2003      | G2001           |
|         | G2405 | (0, 6, 3, 5, 4, 8, 7, 9, 1, 2) | (4, 1, 9, 0, 7, 6, 2, 5, 3, 8) | -5   | 0   | G2406          | G1998      | G1999           |
|         | G2406 | (0, 7, 3, 1, 2, 4, 6, 5, 9, 8) | (4, 2, 9, 5, 0, 8, 1, 7, 6, 3) | -5   | 0   | G2405          | G1999      | G1998           |
|         | G2407 | (0, 7, 3, 8, 9, 2, 1, 5, 4, 6) | (5, 1, 9, 0, 6, 7, 4, 3, 8, 2) | -5   | 0   | G2409          | G2000      | G2002           |
|         | G2408 | (0, 9, 7, 8, 2, 3, 1, 4, 6, 5) | (6, 3, 1, 4, 7, 0, 5, 9, 2, 8) | -5   | 0   | G2404          | G2001      | G2003           |
|         | G2409 | (0, 1, 6, 2, 9, 3, 5, 4, 8, 7) | (3, 9, 0, 8, 4, 7, 1, 6, 5, 2) | -5   | 0   | G2407          | G2002      | G2000           |
| 12n358  | G2004 | (0, 7, 3, 8, 5, 1, 6, 9, 2, 4) | (6, 1, 9, 0, 2, 4, 3, 5, 7, 8) | -1   | 0   | G2007          | G2414      | ?               |
|         | G2005 | (0, 3, 9, 1, 2, 8, 4, 6, 5, 7) | (6, 8, 5, 7, 0, 1, 9, 3, 2, 4) | -1   | 0   | G2009          | G2412      | G2411           |
|         | G2006 | (0, 1, 8, 6, 7, 9, 2, 4, 3, 5) | (4, 7, 3, 0, 5, 6, 8, 1, 9, 2) | -1   | 0   | G2008          | G2415      | G2413           |
|         | G2007 | (0, 3, 1, 2, 5, 6, 4, 7, 9, 8) | (7, 9, 4, 6, 0, 3, 8, 1, 5, 2) | -1   | 0   | G2004          | ?          | G2414           |
|         | G2008 | (0, 9, 1, 3, 6, 7, 5, 2, 4, 8) | (3, 2, 5, 7, 8, 4, 0, 6, 9, 1) | -1   | 0   | G2006          | G2413      | G2415           |
|         | G2009 | (0, 9, 1, 4, 2, 5, 3, 8, 6, 7) | (6, 3, 8, 0, 9, 1, 7, 4, 2, 5) | -1   | 0   | G2005          | G2411      | G2412           |
|         | G2410 | (0, 4, 6, 2, 3, 5, 7, 9, 1, 8) | (7, 9, 1, 8, 0, 2, 4, 6, 5, 3) | -1   | 0   | ?              | ?          | ?               |
|         | G2411 | (0, 2, 9, 1, 3, 5, 4, 8, 6, 7) | (6, 8, 4, 7, 0, 2, 1, 3, 9, 5) | -1   | 0   | G2412          | G2009      | G2005           |
|         | G2412 | (0, 7, 8, 1, 9, 6, 2, 4, 3, 5) | (4, 3, 6, 7, 5, 0, 8, 1, 9, 2) | -1   | 0   | G2411          | G2005      | G2009           |
|         | G2413 | (0, 8, 6, 1, 7, 2, 4, 3, 5, 9) | (7, 2, 9, 4, 3, 5, 8, 6, 0, 1) | -1   | 0   | G2415          | G2008      | G2006           |
|         | G2414 | (0, 5, 3, 4, 6, 8, 7, 9, 1, 2) | (4, 1, 7, 2, 9, 5, 0, 3, 6, 8) | -1   | 0   | ?              | G2004      | G2007           |
|         | G2415 | (0, 9, 1, 3, 6, 2, 8, 4, 5, 7) | (3, 2, 4, 8, 0, 7, 5, 6, 9, 1) | -1   | 0   | G2413          | G2006      | G2008           |
| m12n358 | G1573 | (0, 5, 7, 6, 3, 4, 2, 9, 1, 8) | (6, 9, 1, 8, 7, 0, 5, 3, 4, 2) | -9   | -2  | —              | —          | G1574           |
|         | G1574 | (0, 7, 5, 8, 6, 4, 2, 3, 9, 1) | (2, 1, 9, 3, 0, 7, 5, 6, 4, 8) | -9   | -2  | —              | —          | G1573           |
|         | G2197 | (0, 8, 3, 7, 2, 9, 1, 5, 4, 6) | (5, 1, 9, 0, 8, 6, 4, 3, 7, 2) | -9   | 0   | G2198          | G2604      | G2603           |
|         | G2198 | (0, 8, 9, 7, 2, 1, 6, 5, 3, 4) | (6, 1, 3, 0, 8, 5, 4, 9, 7, 2) | -9   | 0   | G2197          | G2603      | G2604           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G2603 | (0, 4, 9, 5, 3, 1, 7, 6, 8, 2) | (3, 1, 2, 0, 8, 6, 5, 9, 4, 7) | -9   | 0   | G2604          | G2198      | G2197           |
|         | G2604 | (0, 8, 3, 2, 9, 7, 4, 6, 1, 5) | (4, 2, 1, 6, 5, 0, 8, 9, 7, 3) | -9   | 0   | G2603          | G2197      | G2198           |
|         | G1575 | (0, 2, 8, 9, 7, 5, 3, 6, 4, 1) | (3, 7, 5, 6, 4, 1, 8, 2, 0, 9) | -9   | 2   | —              | —          | G1576           |
|         | G1576 | (0, 7, 9, 6, 4, 5, 2, 1, 3, 8) | (6, 4, 5, 3, 8, 1, 0, 7, 9, 2) | -9   | 2   | —              | —          | G1575           |
| 12n370  | G606  | (0, 3, 1, 2, 9, 6, 7, 8, 5, 4) | (5, 8, 4, 7, 3, 0, 1, 2, 9, 6) | -9   | -2  | —              | —          | G607            |
|         | G607  | (0, 7, 8, 9, 6, 2, 4, 5, 3, 1) | (2, 1, 5, 3, 0, 7, 8, 9, 6, 4) | -9   | -2  | —              | —          | G606            |
|         | G608  | (0, 8, 1, 6, 3, 4, 7, 5, 2, 9) | (6, 3, 5, 2, 9, 0, 1, 8, 7, 4) | -9   | 0   | G611           | G613       | G610            |
|         | G609  | (0, 8, 9, 2, 1, 7, 4, 5, 6, 3) | (7, 4, 5, 6, 3, 2, 0, 8, 1, 9) | -9   | 0   | G612           | G612       | G609            |
|         | G610  | (0, 3, 8, 6, 7, 9, 5, 1, 2, 4) | (7, 5, 4, 1, 2, 3, 0, 8, 6, 9) | -9   | 0   | G613           | G611       | G608            |
|         | G611  | (0, 3, 1, 9, 8, 5, 6, 7, 4, 2) | (6, 8, 4, 7, 2, 0, 1, 3, 9, 5) | -9   | 0   | G608           | G610       | G613            |
|         | G612  | (0, 6, 3, 4, 5, 2, 8, 7, 1, 9) | (4, 1, 8, 9, 0, 7, 6, 3, 5, 2) | -9   | 0   | G609           | G609       | G612            |
|         | G613  | (0, 1, 2, 9, 8, 5, 7, 4, 6, 3) | (4, 5, 8, 6, 3, 0, 1, 9, 2, 7) | -9   | 0   | G610           | G608       | G611            |
|         | G614  | (0, 8, 6, 7, 9, 5, 2, 3, 4, 1) | (7, 5, 2, 3, 4, 1, 8, 6, 0, 9) | -9   | 2   | —              | —          | G615            |
|         | G615  | (0, 9, 6, 7, 8, 5, 2, 3, 1, 4) | (8, 5, 2, 3, 4, 1, 7, 0, 6, 9) | -9   | 2   | —              | —          | G614            |
|         | G1577 | (0, 3, 1, 4, 2, 5, 9, 8, 6, 7) | (6, 9, 8, 0, 7, 1, 4, 3, 2, 5) | -1   | 0   | G1579          | G1578      | G1580           |
| m12n370 | G1578 | (0, 1, 4, 3, 5, 2, 6, 9, 8, 7) | (2, 5, 8, 6, 9, 7, 0, 4, 3, 1) | -1   | 0   | G1580          | G1577      | G1579           |
|         | G1579 | (0, 1, 5, 3, 2, 4, 6, 9, 8, 7) | (6, 9, 0, 8, 7, 1, 3, 5, 2, 4) | -1   | 0   | G1577          | G1580      | G1578           |
|         | G1580 | (0, 4, 6, 8, 5, 7, 9, 2, 3, 1) | (5, 7, 9, 2, 1, 0, 3, 4, 8, 6) | -1   | 0   | G1578          | G1579      | G1577           |
|         | G1581 | (0, 3, 1, 4, 2, 5, 9, 8, 6, 7) | (6, 9, 8, 0, 7, 1, 4, 3, 2, 5) | -1   | 0   | G1579          | G1578      | G1580           |
| 12n371  | G616  | (0, 6, 5, 7, 9, 8, 4, 2, 1, 3) | (4, 1, 8, 2, 3, 0, 9, 6, 5, 7) | -8   | -1  | —              | —          | ?               |
|         | G617  | (0, 2, 1, 9, 5, 4, 6, 8, 7, 3) | (6, 8, 7, 4, 3, 0, 1, 5, 2, 9) | -8   | 1   | —              | —          | ?               |
| m12n371 | G1581 | (0, 1, 4, 5, 3, 6, 9, 2, 8, 7) | (2, 6, 8, 9, 7, 0, 4, 5, 3, 1) | -2   | -1  | —              | —          | G1582           |
|         | G1582 | (0, 8, 2, 3, 9, 6, 4, 5, 7, 1) | (4, 5, 7, 1, 2, 0, 8, 9, 3, 6) | -2   | -1  | —              | —          | G1581           |
|         | G1583 | (0, 9, 5, 8, 1, 4, 2, 3, 6, 7) | (6, 4, 2, 3, 7, 0, 8, 9, 1, 5) | -2   | 1   | —              | —          | G1584           |
|         | G1584 | (0, 4, 6, 7, 5, 2, 8, 9, 3, 1) | (5, 8, 2, 3, 1, 9, 0, 4, 6, 7) | -2   | 1   | —              | —          | G1583           |
| 12n375  | G618  | (0, 6, 5, 3, 9, 8, 4, 2, 1, 7) | (4, 1, 8, 7, 6, 0, 9, 5, 3, 2) | -13  | -2  | —              | —          | G618            |
|         | G619  | (0, 7, 5, 6, 4, 3, 9, 8, 2, 1) | (4, 2, 8, 3, 1, 7, 5, 0, 9, 6) | -13  | 0   | G620           | G621       | G622            |
|         | G620  | (0, 9, 7, 2, 1, 8, 6, 4, 5, 3) | (6, 4, 1, 0, 5, 3, 9, 8, 2, 7) | -13  | 0   | G619           | G622       | G621            |
|         | G621  | (0, 9, 3, 2, 8, 6, 7, 5, 1, 4) | (5, 2, 1, 7, 4, 0, 3, 9, 8, 6) | -13  | 0   | G622           | G619       | G620            |
|         | G622  | (0, 4, 3, 2, 9, 8, 6, 7, 5, 1) | (2, 1, 8, 5, 7, 4, 0, 3, 9, 6) | -13  | 0   | G621           | G620       | G619            |
|         | G623  | (0, 6, 5, 3, 9, 8, 4, 2, 1, 7) | (5, 4, 2, 8, 7, 1, 0, 9, 6, 3) | -13  | 2   | —              | —          | G623            |
| m12n375 | G1585 | (0, 2, 3, 7, 4, 8, 9, 1, 5, 6) | (5, 9, 1, 2, 0, 3, 6, 7, 8, 4) | 3    | 0   | G1589          | G1585      | G1589           |
|         | G1586 | (0, 8, 9, 1, 3, 2, 6, 4, 5, 7) | (6, 2, 5, 7, 8, 0, 1, 9, 3, 4) | 3    | 0   | G1587          | G1588      | G1590           |
|         | G1587 | (0, 5, 2, 3, 6, 4, 7, 9, 1, 8) | (7, 8, 9, 1, 2, 0, 3, 5, 6, 4) | 3    | 0   | G1586          | G1590      | G1588           |
|         | G1588 | (0, 8, 9, 1, 4, 2, 3, 5, 6, 7) | (6, 3, 5, 7, 0, 8, 1, 2, 9, 4) | 3    | 0   | G1590          | G1586      | G1587           |
|         | G1589 | (0, 6, 7, 8, 1, 4, 2, 3, 5, 9) | (8, 9, 3, 5, 6, 0, 7, 1, 2, 4) | 3    | 0   | G1585          | G1589      | G1585           |
|         | G1590 | (0, 2, 9, 3, 1, 4, 6, 7, 5, 8) | (3, 4, 6, 7, 5, 8, 0, 2, 9, 1) | 3    | 0   | G1588          | G1587      | G1586           |
| 12n403  | G624  | (0, 6, 7, 3, 4, 5, 1, 2, 8, 9) | (7, 8, 1, 9, 0, 2, 3, 6, 4, 5) | -1   | 0   | G626           | G624       | G626            |
|         | G625  | (0, 1, 9, 3, 4, 2, 5, 7, 6, 8) | (5, 6, 2, 0, 1, 7, 8, 3, 9, 4) | -1   | 0   | G628           | G625       | G628            |
|         | G626  | (0, 1, 9, 2, 3, 5, 6, 4, 7, 8) | (6, 7, 3, 4, 0, 1, 2, 8, 9, 5) | -1   | 0   | G624           | G626       | G624            |
|         | G627  | (0, 5, 6, 4, 7, 8, 1, 2, 3, 9) | (4, 2, 3, 8, 9, 5, 6, 7, 0, 1) | -1   | 0   | G629           | G629       | G627            |
|         | G628  | (0, 8, 3, 5, 6, 7, 1, 2, 4, 9) | (7, 1, 9, 0, 2, 4, 3, 5, 8, 6) | -1   | 0   | G625           | G628       | G625            |
|         | G629  | (0, 5, 6, 2, 3, 4, 7, 8, 1, 9) | (3, 1, 4, 5, 8, 9, 0, 6, 7, 2) | -1   | 0   | G627           | G627       | G629            |
| m12n403 | G1591 | (0, 9, 8, 2, 1, 5, 4, 3, 7, 6) | (4, 3, 1, 0, 7, 9, 8, 6, 5, 2) | -9   | 0   | G1592          | G1592      | G1591           |
|         | G1592 | (0, 2, 1, 9, 8, 5, 7, 6, 4, 3) | (4, 8, 7, 6, 0, 9, 3, 2, 1, 5) | -9   | 0   | G1591          | G1591      | G1592           |
| 12n407  | G2010 | (0, 8, 6, 4, 5, 3, 9, 7, 2, 1) | (3, 2, 1, 7, 8, 6, 4, 0, 9, 5) | -13  | -2  | —              | —          | G2416           |
|         | G2416 | (0, 9, 6, 4, 5, 3, 8, 2, 7, 1) | (3, 2, 1, 7, 0, 6, 4, 5, 9, 8) | -13  | -2  | —              | —          | G2010           |
|         | G2011 | (0, 5, 4, 9, 8, 7, 6, 3, 1, 2) | (3, 1, 7, 6, 5, 0, 2, 9, 4, 8) | -13  | 0   | G2012          | G2418      | G2417           |
|         | G2012 | (0, 8, 4, 9, 3, 1, 7, 6, 5, 2) | (6, 3, 1, 2, 0, 5, 4, 9, 8, 7) | -13  | 0   | G2011          | G2417      | G2418           |
|         | G2417 | (0, 5, 4, 9, 8, 7, 6, 3, 1, 2) | (3, 1, 7, 6, 5, 2, 0, 8, 4, 9) | -13  | 0   | G2418          | G2012      | G2011           |
|         | G2418 | (0, 5, 9, 4, 2, 8, 7, 6, 1, 3) | (4, 2, 3, 1, 6, 5, 0, 9, 8, 7) | -13  | 0   | G2417          | G2011      | G2012           |
|         | G2013 | (0, 9, 4, 2, 8, 6, 7, 5, 3, 1) | (6, 2, 1, 7, 5, 3, 4, 0, 9, 8) | -13  | 2   | —              | —          | G2419           |
|         | G2419 | (0, 4, 9, 3, 8, 6, 7, 5, 2, 1) | (3, 2, 6, 7, 5, 1, 4, 0, 9, 8) | -13  | 2   | —              | —          | G2013           |
| m12n407 | G2199 | (0, 3, 1, 4, 2, 5, 6, 7, 9, 8) | (6, 9, 8, 0, 7, 1, 3, 4, 5, 2) | 3    | 0   | G2203          | G2609      | G2610           |
|         | G2200 | (0, 2, 3, 1, 5, 4, 6, 8, 9, 7) | (5, 4, 8, 6, 9, 7, 0, 2, 3, 1) | 3    | 0   | G2202          | G2605      | G2607           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G2201 | (0, 3, 4, 5, 8, 1, 2, 6, 9, 7) | (5, 6, 8, 9, 2, 3, 7, 0, 4, 1) | 3    | 0   | ?              | ?          | G2606           |
|         | G2202 | (0, 2, 5, 3, 4, 7, 6, 9, 1, 8) | (4, 6, 9, 7, 8, 1, 0, 2, 5, 3) | 3    | 0   | G2200          | G2607      | G2605           |
|         | G2203 | (0, 2, 1, 3, 4, 5, 8, 6, 9, 7) | (4, 8, 5, 6, 7, 9, 3, 0, 2, 1) | 3    | 0   | G2199          | G2610      | G2609           |
|         | G2204 | (0, 2, 1, 3, 8, 9, 4, 5, 6, 7) | (4, 9, 5, 0, 2, 6, 7, 8, 3, 1) | 3    | 0   | ?              | ?          | G2608           |
|         | G2605 | (0, 4, 2, 5, 3, 6, 8, 9, 7, 1) | (8, 9, 7, 1, 0, 2, 4, 5, 3, 6) | 3    | 0   | G2607          | G2200      | G2202           |
|         | G2606 | (0, 5, 9, 1, 6, 7, 2, 3, 4, 8) | (7, 3, 4, 8, 0, 5, 6, 9, 1, 2) | 3    | 0   | ?              | ?          | G2201           |
|         | G2607 | (0, 3, 1, 2, 4, 7, 5, 6, 9, 8) | (7, 9, 6, 8, 0, 3, 1, 2, 5, 4) | 3    | 0   | G2605          | G2202      | G2200           |
|         | G2608 | (0, 1, 6, 7, 2, 4, 3, 5, 8, 9) | (7, 8, 9, 3, 5, 1, 6, 0, 2, 4) | 3    | 0   | ?              | ?          | G2204           |
|         | G2609 | (0, 9, 1, 8, 2, 4, 5, 6, 3, 7) | (4, 2, 5, 3, 6, 7, 8, 0, 9, 1) | 3    | 0   | G2610          | G2199      | G2203           |
|         | G2610 | (0, 7, 8, 9, 1, 5, 2, 4, 3, 6) | (4, 3, 5, 6, 7, 0, 8, 1, 9, 2) | 3    | 0   | G2609          | G2203      | G2199           |
| 12n426  | G630  | (0, 8, 9, 7, 5, 4, 6, 2, 1, 3) | (4, 2, 3, 1, 0, 8, 9, 7, 6, 5) | -17  | -2  | —              | —          | G630            |
|         | G631  | (0, 9, 2, 8, 6, 7, 5, 1, 4, 3) | (7, 5, 4, 3, 1, 2, 0, 9, 8, 6) | -17  | 0   | G631           | G631       | G631            |
|         | G632  | (0, 2, 1, 7, 9, 8, 6, 4, 5, 3) | (8, 7, 6, 4, 5, 3, 2, 0, 1, 9) | -17  | 2   | —              | —          | G632            |
| m12n426 | G1593 | (0, 2, 1, 3, 4, 5, 6, 8, 7, 9) | (6, 8, 7, 9, 2, 0, 1, 5, 3, 4) | 7    | 0   | G1593          | G1593      | G1593           |
| 12n438  | G633  | (0, 9, 1, 6, 8, 7, 5, 2, 4, 3) | (5, 2, 7, 0, 4, 3, 9, 8, 1, 6) | -9   | 0   | G634           | G634       | G633            |
|         | G634  | (0, 9, 1, 6, 8, 7, 4, 3, 5, 2) | (4, 3, 7, 0, 5, 2, 1, 6, 9, 8) | -9   | 0   | G633           | G633       | G634            |
| m12n438 | G1594 | (0, 6, 7, 1, 2, 9, 4, 5, 8, 3) | (4, 2, 3, 5, 8, 6, 7, 0, 1, 9) | -1   | 0   | G1599          | G1594      | G1599           |
|         | G1595 | (0, 3, 1, 5, 6, 4, 7, 8, 9, 2) | (6, 8, 4, 2, 3, 9, 0, 1, 5, 7) | -1   | 0   | G1596          | G1595      | G1596           |
|         | G1596 | (0, 3, 1, 4, 5, 7, 9, 6, 8, 2) | (5, 6, 7, 8, 2, 3, 4, 0, 1, 9) | -1   | 0   | G1595          | G1596      | G1595           |
|         | G1597 | (0, 1, 2, 4, 8, 9, 3, 7, 5, 6) | (3, 7, 9, 0, 1, 5, 6, 4, 8, 2) | -1   | 0   | G1598          | G1598      | G1597           |
|         | G1598 | (0, 7, 1, 2, 3, 8, 9, 6, 4, 5) | (6, 3, 4, 9, 0, 1, 5, 2, 7, 8) | -1   | 0   | G1597          | G1597      | G1598           |
|         | G1599 | (0, 8, 3, 1, 2, 5, 6, 4, 7, 9) | (6, 2, 9, 4, 7, 8, 3, 0, 1, 5) | -1   | 0   | G1594          | G1599      | G1594           |
| 12n439  | G635  | (0, 7, 9, 1, 5, 2, 4, 6, 8, 3) | (4, 2, 3, 6, 0, 8, 7, 9, 1, 5) | -2   | -1  | —              | —          | G635            |
|         | G636  | (0, 5, 7, 9, 1, 8, 2, 4, 6, 3) | (8, 2, 4, 6, 5, 3, 7, 0, 1, 9) | -2   | 1   | —              | —          | G636            |
| m12n439 | G1600 | (0, 6, 8, 5, 3, 9, 2, 4, 1, 7) | (3, 1, 4, 0, 7, 6, 8, 9, 5, 2) | -8   | -1  | —              | —          | G1600           |
|         | G1601 | (0, 6, 3, 5, 8, 4, 2, 9, 1, 7) | (5, 2, 8, 9, 1, 0, 7, 3, 6, 4) | -8   | 1   | —              | —          | G1601           |
| 12n443  | G637  | (0, 2, 8, 4, 7, 3, 9, 5, 6, 1) | (3, 5, 1, 9, 0, 8, 6, 7, 2, 4) | -4   | -1  | —              | —          | G638            |
|         | G638  | (0, 8, 2, 6, 5, 7, 1, 9, 3, 4) | (3, 1, 9, 0, 8, 4, 6, 5, 7, 2) | -4   | -1  | —              | —          | G637            |
|         | G639  | (0, 5, 6, 2, 8, 4, 7, 3, 9, 1) | (7, 9, 4, 5, 3, 1, 2, 0, 6, 8) | -4   | 1   | —              | —          | G640            |
|         | G640  | (0, 1, 5, 3, 7, 9, 8, 2, 6, 4) | (2, 7, 9, 8, 0, 6, 4, 5, 3, 1) | -4   | 1   | —              | —          | G639            |
| m12n443 | G1602 | (0, 8, 9, 7, 1, 3, 2, 4, 6, 5) | (6, 1, 2, 0, 4, 8, 5, 9, 3, 7) | -6   | -1  | —              | —          | ?               |
|         | G1603 | (0, 9, 1, 3, 2, 4, 8, 6, 7, 5) | (8, 2, 6, 0, 7, 1, 5, 3, 4, 9) | -6   | 1   | —              | —          | ?               |
| 12n451  | G641  | (0, 8, 4, 3, 6, 5, 7, 9, 1, 2) | (5, 1, 9, 7, 0, 8, 2, 3, 4, 6) | 0    | -1  | —              | —          | G644            |
|         | G642  | (0, 7, 1, 2, 6, 8, 9, 4, 3, 5) | (4, 3, 5, 9, 0, 1, 7, 8, 6, 2) | 0    | -1  | —              | —          | G643            |
|         | G643  | (0, 7, 1, 2, 6, 8, 9, 4, 3, 5) | (4, 2, 3, 9, 0, 1, 5, 7, 6, 8) | 0    | -1  | —              | —          | G642            |
|         | G644  | (0, 1, 5, 4, 7, 6, 8, 3, 9, 2) | (3, 8, 9, 0, 2, 1, 5, 7, 4, 6) | 0    | -1  | —              | —          | G641            |
|         | G645  | (0, 1, 3, 5, 7, 6, 9, 8, 4, 2) | (6, 8, 9, 0, 4, 2, 5, 3, 1, 7) | 0    | 1   | —              | —          | G647            |
|         | G646  | (0, 2, 1, 6, 7, 9, 3, 4, 8, 5) | (3, 9, 7, 8, 4, 5, 6, 0, 2, 1) | 0    | 1   | —              | —          | G648            |
|         | G647  | (0, 3, 9, 4, 6, 5, 8, 7, 1, 2) | (6, 8, 5, 7, 1, 0, 2, 3, 4, 9) | 0    | 1   | —              | —          | G645            |
|         | G648  | (0, 2, 1, 6, 7, 9, 3, 4, 8, 5) | (7, 9, 8, 0, 4, 5, 6, 2, 3, 1) | 0    | 1   | —              | —          | G646            |
| m12n451 | G1604 | (0, 2, 4, 3, 1, 9, 7, 8, 5, 6) | (3, 7, 8, 6, 5, 4, 0, 2, 9, 1) | -10  | -1  | —              | —          | ?               |
|         | G1605 | (0, 1, 8, 9, 7, 5, 3, 2, 4, 6) | (5, 7, 4, 6, 2, 1, 0, 8, 9, 3) | -10  | 1   | —              | —          | ?               |
| 12n452  | G649  | (0, 6, 5, 7, 9, 8, 4, 1, 3, 2) | (3, 1, 8, 2, 6, 0, 9, 5, 7, 4) | -9   | -2  | —              | —          | G649            |
|         | G650  | (0, 1, 9, 8, 4, 3, 5, 7, 6, 2) | (5, 7, 3, 0, 2, 6, 9, 4, 1, 8) | -9   | 0   | G651           | G653       | G652            |
|         | G651  | (0, 7, 2, 8, 6, 1, 4, 9, 5, 3) | (6, 4, 5, 3, 9, 8, 0, 2, 1, 7) | -9   | 0   | G650           | G652       | G653            |
|         | G652  | (0, 9, 5, 4, 2, 3, 1, 7, 6, 8) | (7, 3, 1, 8, 5, 0, 6, 4, 9, 2) | -9   | 0   | G653           | G651       | G650            |
|         | G653  | (0, 7, 4, 1, 3, 9, 8, 6, 2, 5) | (3, 2, 8, 6, 7, 5, 0, 4, 9, 1) | -9   | 0   | G652           | G650       | G651            |
|         | G654  | (0, 9, 1, 8, 4, 3, 5, 7, 6, 2) | (8, 5, 7, 3, 2, 6, 0, 4, 1, 9) | -9   | 2   | —              | —          | G654            |
| m12n452 | G1606 | (0, 6, 4, 7, 5, 8, 9, 2, 1, 3) | (5, 1, 8, 2, 9, 0, 3, 6, 4, 7) | -1   | 0   | G1611          | G1608      | G1610           |
|         | G1607 | (0, 6, 2, 5, 7, 8, 1, 9, 3, 4) | (3, 1, 9, 0, 4, 6, 7, 5, 8, 2) | -1   | 0   | G1609          | G1607      | G1609           |
|         | G1608 | (0, 3, 1, 7, 4, 8, 5, 6, 9, 2) | (7, 9, 6, 2, 0, 3, 1, 4, 5, 8) | -1   | 0   | G1610          | G1606      | G1611           |
|         | G1609 | (0, 1, 5, 3, 6, 7, 9, 2, 8, 4) | (2, 6, 9, 7, 8, 0, 4, 5, 3, 1) | -1   | 0   | G1607          | G1609      | G1607           |
|         | G1610 | (0, 3, 4, 1, 5, 2, 8, 6, 9, 7) | (4, 5, 8, 6, 9, 7, 3, 0, 2, 1) | -1   | 0   | G1608          | G1611      | G1606           |
|         | G1611 | (0, 3, 1, 4, 2, 8, 5, 7, 6, 9) | (8, 9, 7, 0, 6, 3, 1, 2, 4, 5) | -1   | 0   | G1606          | G1610      | G1608           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 12n462  | G2014 | (0, 2, 9, 7, 8, 4, 6, 5, 1, 3) | (5, 8, 6, 0, 1, 9, 3, 2, 4, 7) | -5   | 0   | G2015          | G2421      | G2420           |
|         | G2015 | (0, 4, 2, 3, 6, 5, 7, 9, 1, 8) | (3, 1, 9, 7, 0, 8, 4, 6, 5, 2) | -5   | 0   | G2014          | G2420      | G2421           |
|         | G2420 | (0, 3, 1, 7, 9, 8, 5, 6, 4, 2) | (6, 9, 8, 0, 2, 4, 1, 3, 7, 5) | -5   | 0   | G2421          | G2015      | G2014           |
|         | G2421 | (0, 4, 3, 5, 8, 6, 9, 7, 1, 2) | (5, 7, 6, 2, 4, 1, 3, 0, 8, 9) | -5   | 0   | G2420          | G2014      | G2015           |
| 12n475  | G655  | (0, 7, 2, 3, 5, 6, 4, 8, 1, 9) | (3, 1, 4, 8, 9, 0, 7, 5, 6, 2) | -6   | -1  | —              | —          | G655            |
|         | G656  | (0, 8, 1, 5, 3, 4, 6, 7, 2, 9) | (7, 3, 4, 2, 9, 0, 1, 5, 8, 6) | -6   | 1   | —              | —          | G656            |
| m12n475 | G1612 | (0, 2, 1, 5, 9, 7, 6, 8, 4, 3) | (4, 9, 8, 0, 3, 2, 1, 5, 7, 6) | -4   | -1  | —              | —          | G1612           |
|         | G1613 | (0, 9, 5, 7, 6, 4, 8, 2, 1, 3) | (7, 6, 8, 2, 1, 0, 3, 5, 4, 9) | -4   | 1   | —              | —          | G1613           |
| 12n487  | G657  | (0, 7, 9, 6, 3, 2, 5, 4, 1, 8) | (3, 1, 4, 0, 8, 7, 9, 6, 5, 2) | -11  | -2  | —              | —          | G658            |
|         | G658  | (0, 3, 2, 9, 7, 5, 8, 6, 4, 1) | (6, 8, 4, 3, 1, 0, 2, 9, 7, 5) | -11  | -2  | —              | —          | G657            |
|         | G659  | (0, 4, 9, 1, 8, 6, 3, 5, 7, 2) | (6, 7, 3, 5, 4, 2, 0, 9, 1, 8) | -11  | 0   | G660           | G664       | G663            |
|         | G660  | (0, 8, 7, 9, 6, 3, 5, 4, 1, 2) | (5, 3, 1, 4, 0, 7, 2, 8, 6, 9) | -11  | 0   | G659           | G663       | G664            |
|         | G661  | (0, 2, 9, 1, 8, 7, 5, 4, 6, 3) | (4, 5, 3, 7, 6, 2, 0, 9, 1, 8) | -11  | 0   | G662           | G662       | G661            |
|         | G662  | (0, 7, 4, 6, 5, 3, 2, 9, 1, 8) | (6, 2, 9, 1, 0, 8, 4, 3, 7, 5) | -11  | 0   | G661           | G661       | G662            |
|         | G663  | (0, 3, 9, 7, 5, 8, 4, 1, 6, 2) | (5, 6, 4, 2, 1, 3, 0, 7, 9, 8) | -11  | 0   | G664           | G660       | G659            |
|         | G664  | (0, 8, 6, 5, 7, 4, 2, 3, 9, 1) | (4, 2, 9, 1, 3, 8, 6, 0, 5, 7) | -11  | 0   | G663           | G659       | G660            |
|         | G665  | (0, 7, 4, 3, 6, 5, 2, 9, 1, 8) | (6, 3, 2, 9, 1, 0, 8, 4, 7, 5) | -11  | 2   | —              | —          | G666            |
| m12n487 | G666  | (0, 7, 5, 3, 6, 4, 2, 9, 8, 1) | (6, 4, 2, 9, 1, 0, 8, 7, 3, 5) | -11  | 2   | —              | —          | G665            |
|         | G1614 | (0, 3, 5, 7, 4, 6, 8, 1, 2, 9) | (4, 6, 8, 1, 9, 0, 2, 3, 7, 5) | 1    | 0   | ?              | ?          | G1615           |
| 12n488  | G1615 | (0, 1, 8, 9, 2, 5, 3, 6, 4, 7) | (5, 6, 4, 7, 8, 1, 0, 2, 9, 3) | 1    | 0   | ?              | ?          | G1614           |
|         | G667  | (0, 6, 5, 7, 9, 8, 4, 1, 2, 3) | (4, 1, 8, 2, 3, 0, 9, 5, 6, 7) | -6   | -1  | —              | —          | ?               |
| m12n488 | G668  | (0, 1, 2, 9, 5, 4, 6, 8, 7, 3) | (6, 7, 8, 4, 3, 0, 1, 5, 2, 9) | -6   | 1   | —              | —          | ?               |
|         | G1616 | (0, 3, 7, 8, 6, 4, 5, 9, 2, 1) | (4, 8, 9, 2, 1, 7, 0, 3, 6, 5) | -4   | -1  | —              | —          | G1617           |
|         | G1617 | (0, 3, 7, 8, 6, 4, 5, 9, 2, 1) | (5, 9, 2, 1, 0, 7, 3, 4, 8, 6) | -4   | -1  | —              | —          | G1616           |
|         | G1618 | (0, 9, 2, 6, 7, 5, 3, 4, 8, 1) | (5, 3, 7, 8, 4, 1, 0, 9, 2, 6) | -4   | 1   | —              | —          | G1619           |
| 12n502  | G1619 | (0, 9, 2, 6, 7, 5, 3, 4, 8, 1) | (6, 5, 8, 1, 4, 0, 9, 2, 3, 7) | -4   | 1   | —              | —          | G1618           |
|         | G669  | (0, 9, 6, 5, 4, 3, 2, 8, 7, 1) | (3, 2, 1, 0, 7, 6, 5, 4, 9, 8) | -17  | -2  | —              | —          | G669            |
| m12n502 | G670  | (0, 4, 3, 9, 8, 7, 6, 5, 2, 1) | (3, 2, 7, 6, 5, 4, 1, 0, 9, 8) | -17  | 2   | —              | —          | G670            |
|         | G1620 | (0, 5, 6, 7, 8, 1, 2, 3, 4, 9) | (8, 9, 3, 4, 5, 6, 7, 0, 1, 2) | 7    | 0   | G1622          | G1620      | G1622           |
|         | G1621 | (0, 1, 4, 2, 3, 5, 6, 8, 9, 7) | (3, 5, 7, 6, 8, 9, 0, 1, 4, 2) | 7    | 0   | G1621          | G1623      | G1623           |
|         | G1622 | (0, 1, 2, 3, 4, 8, 9, 5, 6, 7) | (5, 6, 9, 0, 1, 2, 7, 8, 3, 4) | 7    | 0   | G1620          | G1622      | G1620           |
| 12n603  | G1623 | (0, 1, 4, 2, 3, 5, 6, 8, 9, 7) | (6, 8, 7, 9, 0, 1, 2, 4, 5, 3) | 7    | 0   | G1623          | G1621      | G1621           |
|         | G671  | (0, 9, 5, 4, 3, 2, 1, 7, 6, 8) | (7, 1, 0, 8, 6, 5, 4, 3, 9, 2) | -13  | -2  | —              | —          | G671            |
| m12n603 | G672  | (0, 2, 1, 7, 6, 5, 4, 3, 9, 8) | (6, 9, 5, 4, 3, 2, 0, 8, 7, 1) | -13  | 2   | —              | —          | G672            |
|         | G1624 | (0, 1, 2, 6, 3, 8, 4, 5, 7, 9) | (3, 4, 8, 9, 7, 5, 6, 0, 1, 2) | 3    | 0   | G1626          | G1624      | G1626           |
|         | G1625 | (0, 2, 3, 5, 6, 4, 1, 7, 8, 9) | (7, 8, 1, 9, 2, 0, 5, 3, 4, 6) | 3    | 0   | G1629          | G1627      | G1628           |
|         | G1626 | (0, 1, 2, 4, 6, 7, 3, 8, 5, 9) | (7, 8, 9, 0, 1, 5, 6, 4, 2, 3) | 3    | 0   | G1624          | G1626      | G1624           |
|         | G1627 | (0, 3, 4, 9, 5, 6, 7, 8, 1, 2) | (7, 8, 1, 3, 0, 2, 4, 5, 6, 9) | 3    | 0   | G1628          | G1625      | G1629           |
|         | G1628 | (0, 1, 9, 4, 2, 5, 3, 6, 7, 8) | (6, 7, 3, 0, 8, 9, 1, 2, 4, 5) | 3    | 0   | G1627          | G1629      | G1625           |
| 12n706  | G1629 | (0, 8, 9, 2, 3, 1, 4, 5, 6, 7) | (5, 1, 6, 8, 0, 7, 9, 2, 3, 4) | 3    | 0   | G1625          | G1628      | G1627           |
|         | G673  | (0, 7, 8, 9, 4, 5, 3, 6, 2, 1) | (3, 2, 5, 6, 7, 1, 8, 0, 9, 4) | -5   | 0   | G674           | ?          | ?               |
| 12n725  | G674  | (0, 3, 1, 2, 7, 8, 9, 6, 5, 4) | (6, 8, 5, 9, 0, 1, 4, 3, 2, 7) | -5   | 0   | G673           | ?          | ?               |
|         | G675  | (0, 7, 6, 5, 4, 2, 3, 1, 9, 8) | (3, 1, 9, 0, 8, 7, 6, 5, 4, 2) | -19  | -2  | —              | —          | G675            |
|         | G676  | (0, 6, 9, 8, 5, 4, 7, 3, 2, 1) | (5, 4, 3, 2, 1, 0, 9, 8, 6, 7) | -19  | 0   | G676           | G676       | G676            |
| m12n725 | G677  | (0, 9, 7, 5, 6, 4, 3, 2, 1, 8) | (6, 4, 3, 2, 1, 0, 8, 9, 7, 5) | -19  | 2   | —              | —          | G677            |
| 12n729  | G1630 | (0, 2, 3, 4, 5, 8, 6, 7, 1, 9) | (5, 6, 7, 8, 9, 1, 0, 2, 3, 4) | 9    | 0   | G1630          | G1630      | G1630           |
|         | G2016 | (0, 3, 1, 9, 6, 8, 5, 7, 4, 2) | (5, 7, 4, 2, 0, 3, 1, 9, 8, 6) | -13  | -2  | —              | —          | G2422           |
|         | G2422 | (0, 3, 1, 9, 6, 8, 7, 5, 2, 4) | (5, 7, 4, 2, 0, 3, 1, 9, 8, 6) | -13  | -2  | —              | —          | G2016           |
|         | G2017 | (0, 8, 9, 7, 6, 4, 2, 5, 3, 1) | (4, 2, 5, 3, 1, 8, 7, 0, 6, 9) | -13  | 0   | G2019          | G2425      | G2424           |
|         | G2018 | (0, 9, 7, 5, 6, 4, 2, 3, 1, 8) | (6, 2, 1, 8, 3, 0, 7, 9, 5, 4) | -13  | 0   | G2020          | G2423      | G2426           |
|         | G2019 | (0, 3, 1, 9, 8, 6, 7, 5, 2, 4) | (5, 8, 7, 4, 2, 0, 3, 1, 9, 6) | -13  | 0   | G2017          | G2424      | G2425           |
|         | G2020 | (0, 9, 1, 8, 6, 7, 5, 3, 4, 2) | (7, 3, 5, 4, 0, 2, 9, 6, 1, 8) | -13  | 0   | G2018          | G2426      | G2423           |
|         | G2423 | (0, 9, 1, 8, 6, 7, 5, 3, 4, 2) | (5, 3, 7, 4, 0, 2, 1, 6, 9, 8) | -13  | 0   | G2426          | G2018      | G2020           |
|         | G2424 | (0, 7, 6, 4, 5, 3, 2, 9, 1, 8) | (5, 1, 9, 8, 2, 0, 7, 4, 6, 3) | -13  | 0   | G2425          | G2019      | G2017           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|         | G2425 | (0, 8, 7, 4, 6, 2, 5, 3, 1, 9) | (6, 5, 2, 9, 1, 8, 0, 7, 4, 3) | -13  | 0   | G2424          | G2017      | G2019           |
|         | G2426 | (0, 9, 7, 5, 6, 4, 2, 3, 1, 8) | (6, 4, 1, 0, 3, 8, 7, 9, 5, 2) | -13  | 0   | G2423          | G2020      | G2018           |
|         | G2021 | (0, 8, 5, 7, 4, 6, 3, 1, 9, 2) | (6, 4, 3, 1, 9, 2, 0, 8, 5, 7) | -13  | 2   | —              | —          | G2427           |
|         | G2427 | (0, 2, 9, 7, 6, 8, 5, 3, 1, 4) | (8, 6, 5, 3, 1, 4, 2, 0, 7, 9) | -13  | 2   | —              | —          | G2021           |
| m12n729 | G2205 | (0, 2, 4, 3, 5, 7, 6, 8, 1, 9) | (7, 8, 1, 6, 9, 2, 0, 4, 5, 3) | 3    | 0   | G2206          | G2611      | G2612           |
|         | G2206 | (0, 3, 5, 4, 6, 8, 7, 9, 1, 2) | (6, 7, 1, 9, 2, 5, 0, 3, 4, 8) | 3    | 0   | G2205          | G2612      | G2611           |
|         | G2611 | (0, 2, 4, 3, 5, 7, 6, 8, 1, 9) | (5, 8, 9, 6, 1, 2, 0, 4, 7, 3) | 3    | 0   | G2612          | G2205      | G2206           |
|         | G2612 | (0, 3, 5, 4, 6, 8, 7, 9, 1, 2) | (4, 7, 1, 9, 0, 5, 2, 3, 6, 8) | 3    | 0   | G2611          | G2206      | G2205           |
| 12n730  | G678  | (0, 6, 4, 5, 3, 9, 7, 8, 2, 1) | (3, 2, 8, 1, 6, 4, 0, 5, 9, 7) | -10  | -1  | —              | —          | G679            |
|         | G679  | (0, 9, 5, 3, 4, 2, 7, 8, 6, 1) | (4, 2, 1, 6, 8, 5, 0, 3, 9, 7) | -10  | -1  | —              | —          | G678            |
|         | G680  | (0, 5, 3, 4, 9, 7, 8, 6, 2, 1) | (4, 2, 8, 1, 6, 3, 5, 0, 9, 7) | -10  | 1   | —              | —          | G681            |
|         | G681  | (0, 9, 3, 4, 2, 8, 6, 7, 5, 1) | (4, 2, 6, 1, 7, 5, 0, 3, 9, 8) | -10  | 1   | —              | —          | G680            |
| m12n730 | G2207 | (0, 1, 5, 4, 2, 3, 8, 6, 9, 7) | (6, 8, 9, 7, 5, 0, 2, 1, 4, 3) | 0    | -1  | —              | —          | G2614           |
|         | G2208 | (0, 7, 1, 2, 6, 8, 4, 9, 3, 5) | (4, 3, 5, 9, 0, 1, 7, 6, 8, 2) | 0    | -1  | —              | —          | G2613           |
|         | G2613 | (0, 4, 6, 9, 1, 2, 7, 5, 8, 3) | (5, 7, 2, 3, 4, 8, 0, 9, 1, 6) | 0    | -1  | —              | —          | G2208           |
|         | G2614 | (0, 4, 3, 1, 2, 5, 7, 6, 9, 8) | (7, 9, 6, 4, 8, 0, 3, 1, 2, 5) | 0    | -1  | —              | —          | G2207           |
|         | G2209 | (0, 2, 6, 1, 7, 9, 3, 4, 8, 5) | (3, 7, 9, 8, 4, 5, 6, 0, 2, 1) | 0    | 1   | —              | —          | G2615           |
|         | G2210 | (0, 8, 1, 9, 4, 5, 3, 2, 6, 7) | (4, 3, 6, 5, 7, 2, 0, 8, 9, 1) | 0    | 1   | —              | —          | G2616           |
|         | G2615 | (0, 5, 8, 6, 1, 2, 4, 7, 9, 3) | (7, 2, 4, 3, 5, 9, 0, 1, 6, 8) | 0    | 1   | —              | —          | G2209           |
|         | G2616 | (0, 9, 2, 1, 3, 6, 7, 5, 4, 8) | (3, 6, 7, 5, 8, 0, 4, 2, 9, 1) | 0    | 1   | —              | —          | G2210           |
| 12n749  | G682  | (0, 8, 9, 7, 2, 1, 6, 4, 5, 3) | (6, 1, 4, 0, 5, 3, 2, 8, 9, 7) | -12  | -1  | —              | —          | G682            |
|         | G683  | (0, 8, 9, 7, 2, 1, 6, 4, 5, 3) | (6, 4, 5, 1, 0, 8, 3, 9, 2, 7) | -12  | 1   | —              | —          | G683            |
| m12n749 | G1631 | (0, 1, 6, 8, 7, 9, 2, 4, 3, 5) | (2, 4, 9, 3, 0, 5, 6, 8, 7, 1) | 2    | -1  | —              | —          | G1631           |
|         | G1632 | (0, 2, 1, 3, 6, 8, 7, 9, 4, 5) | (4, 8, 7, 9, 0, 5, 2, 6, 1, 3) | 2    | 1   | —              | —          | G1632           |
| 12n750  | G684  | (0, 8, 7, 6, 4, 5, 3, 1, 9, 2) | (3, 1, 9, 2, 8, 0, 7, 6, 4, 5) | -15  | -2  | —              | —          | G684            |
|         | G685  | (0, 8, 9, 6, 7, 3, 2, 5, 1, 4) | (5, 3, 4, 2, 1, 0, 8, 9, 6, 7) | -15  | 0   | G686           | G685       | G686            |
|         | G686  | (0, 4, 2, 8, 9, 6, 7, 5, 3, 1) | (6, 7, 5, 3, 4, 1, 2, 0, 9, 8) | -15  | 0   | G685           | G686       | G685            |
|         | G687  | (0, 7, 5, 4, 2, 9, 3, 1, 8, 6) | (3, 1, 9, 0, 8, 6, 7, 5, 4, 2) | -15  | 0   | G687           | G687       | G687            |
|         | G688  | (0, 3, 1, 9, 7, 8, 6, 5, 4, 2) | (7, 8, 6, 5, 2, 4, 0, 3, 1, 9) | -15  | 2   | —              | —          | G688            |
| m12n750 | G1633 | (0, 1, 3, 2, 4, 6, 5, 8, 7, 9) | (6, 8, 9, 5, 7, 1, 0, 3, 2, 4) | 5    | 0   | ?              | ?          | G1633           |
| 12n768  | G2022 | (0, 2, 9, 3, 5, 4, 7, 6, 8, 1) | (3, 6, 4, 8, 1, 0, 2, 9, 5, 7) | -1   | 0   | G2023          | G2428      | G2429           |
|         | G2023 | (0, 2, 1, 4, 6, 5, 8, 7, 9, 3) | (6, 9, 5, 7, 3, 0, 2, 1, 4, 8) | -1   | 0   | G2022          | G2429      | G2428           |
|         | G2428 | (0, 4, 6, 5, 8, 7, 9, 1, 3, 2) | (5, 9, 3, 1, 4, 0, 2, 6, 8, 7) | -1   | 0   | G2429          | G2022      | G2023           |
|         | G2429 | (0, 2, 4, 6, 5, 8, 7, 9, 3, 1) | (5, 7, 1, 3, 9, 2, 0, 4, 8, 6) | -1   | 0   | G2428          | G2023      | G2022           |
| m12n768 | G2211 | (0, 8, 4, 6, 7, 5, 3, 1, 2, 9) | (7, 1, 9, 0, 2, 8, 6, 4, 5, 3) | -9   | -2  | —              | —          | G2617           |
|         | G2617 | (0, 6, 9, 7, 8, 5, 3, 4, 1, 2) | (3, 1, 2, 0, 4, 9, 6, 7, 5, 8) | -9   | -2  | —              | —          | G2211           |
|         | G2212 | (0, 1, 2, 9, 7, 8, 6, 4, 5, 3) | (4, 7, 8, 5, 0, 3, 1, 9, 2, 6) | -9   | 0   | G2215          | G2621      | G2618           |
|         | G2213 | (0, 1, 9, 2, 8, 6, 7, 4, 5, 3) | (4, 8, 5, 7, 3, 0, 1, 9, 2, 6) | -9   | 0   | G2214          | G2619      | G2620           |
|         | G2214 | (0, 4, 2, 8, 6, 7, 9, 5, 1, 3) | (6, 7, 5, 3, 1, 2, 4, 0, 8, 9) | -9   | 0   | G2213          | G2620      | G2619           |
|         | G2215 | (0, 8, 6, 9, 4, 1, 3, 5, 2, 7) | (5, 1, 3, 2, 0, 7, 8, 9, 6, 4) | -9   | 0   | G2212          | G2618      | G2621           |
|         | G2618 | (0, 1, 2, 9, 7, 8, 6, 4, 5, 3) | (4, 6, 8, 5, 0, 3, 9, 1, 2, 7) | -9   | 0   | G2621          | G2215      | G2212           |
|         | G2619 | (0, 2, 8, 5, 6, 4, 7, 1, 9, 3) | (4, 7, 3, 1, 2, 9, 0, 8, 5, 6) | -9   | 0   | G2620          | G2213      | G2214           |
|         | G2620 | (0, 8, 9, 6, 7, 5, 3, 1, 2, 4) | (5, 1, 3, 0, 4, 2, 8, 6, 7, 9) | -9   | 0   | G2619          | G2214      | G2213           |
|         | G2621 | (0, 7, 8, 9, 5, 6, 4, 1, 2, 3) | (6, 4, 1, 2, 0, 3, 8, 5, 7, 9) | -9   | 0   | G2618          | G2212      | G2215           |
|         | G2216 | (0, 7, 8, 6, 4, 2, 3, 5, 1, 9) | (6, 4, 5, 3, 1, 7, 9, 0, 8, 2) | -9   | 2   | —              | —          | G2622           |
|         | G2622 | (0, 1, 8, 9, 7, 4, 5, 3, 6, 2) | (4, 7, 5, 6, 3, 8, 2, 0, 1, 9) | -9   | 2   | —              | —          | G2216           |
| 12n801  | G689  | (0, 8, 5, 6, 4, 2, 3, 1, 9, 7) | (3, 1, 9, 0, 7, 5, 8, 4, 6, 2) | -13  | -2  | —              | —          | G689            |
|         | G690  | (0, 1, 8, 9, 6, 7, 5, 4, 2, 3) | (5, 7, 4, 2, 0, 3, 8, 1, 6, 9) | -13  | 0   | G693           | G690       | G693            |
|         | G691  | (0, 6, 4, 5, 2, 3, 9, 7, 1, 8) | (3, 1, 9, 0, 7, 8, 6, 4, 5, 2) | -13  | 0   | G692           | G691       | G692            |
|         | G692  | (0, 8, 4, 5, 2, 3, 1, 7, 9, 6) | (3, 1, 9, 0, 7, 8, 6, 4, 5, 2) | -13  | 0   | G691           | G692       | G691            |
|         | G693  | (0, 3, 8, 1, 6, 9, 5, 7, 4, 2) | (6, 7, 4, 5, 2, 3, 0, 1, 9, 8) | -13  | 0   | G690           | G693       | G690            |
|         | G694  | (0, 8, 6, 4, 5, 3, 1, 2, 9, 7) | (5, 1, 3, 9, 2, 0, 7, 8, 6, 4) | -13  | 2   | —              | —          | G694            |
| m12n801 | G1634 | (0, 9, 1, 3, 2, 5, 4, 6, 8, 7) | (6, 2, 4, 8, 7, 0, 9, 1, 5, 3) | 3    | 0   | G1635          | G1635      | G1634           |
|         | G1635 | (0, 9, 1, 3, 2, 5, 4, 6, 8, 7) | (4, 2, 6, 8, 7, 0, 9, 3, 5, 1) | 3    | 0   | G1634          | G1634      | G1635           |

| Knot    | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|---------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 12n807  | G695  | (0, 4, 2, 9, 1, 8, 7, 5, 6, 3) | (5, 7, 6, 3, 4, 2, 0, 9, 1, 8) | -13  | -2  | –              | –          | G695            |
|         | G696  | (0, 8, 7, 6, 4, 5, 3, 1, 9, 2) | (5, 1, 3, 9, 8, 2, 0, 7, 4, 6) | -13  | 0   | G698           | G697       | G699            |
|         | G697  | (0, 7, 9, 6, 5, 4, 2, 3, 1, 8) | (6, 1, 4, 3, 0, 8, 7, 9, 5, 2) | -13  | 0   | G699           | G696       | G698            |
|         | G698  | (0, 3, 8, 2, 9, 5, 7, 6, 4, 1) | (5, 7, 4, 6, 3, 1, 2, 0, 9, 8) | -13  | 0   | G696           | G699       | G697            |
|         | G699  | (0, 8, 7, 9, 5, 3, 1, 6, 4, 2) | (5, 3, 1, 4, 2, 0, 8, 9, 7, 6) | -13  | 0   | G697           | G698       | G696            |
|         | G700  | (0, 7, 8, 6, 5, 2, 4, 1, 9, 3) | (5, 2, 4, 3, 1, 9, 0, 7, 6, 8) | -13  | 2   | –              | –          | G700            |
| m12n807 | G1636 | (0, 3, 1, 4, 2, 5, 6, 7, 9, 8) | (5, 9, 6, 0, 7, 1, 8, 3, 4, 2) | 3    | 0   | G1637          | ?          | ?               |
|         | G1637 | (0, 8, 9, 1, 3, 5, 7, 2, 4, 6) | (5, 2, 4, 6, 7, 8, 0, 9, 1, 3) | 3    | 0   | G1636          | ?          | ?               |
| 12n809  | G701  | (0, 6, 4, 7, 3, 5, 9, 8, 2, 1) | (3, 2, 9, 1, 8, 0, 6, 4, 7, 5) | -9   | 0   | G701           | G701       | G701            |
| m12n809 | G1638 | (0, 1, 5, 4, 7, 6, 8, 9, 2, 3) | (4, 6, 2, 9, 3, 0, 1, 5, 7, 8) | -1   | 0   | G1638          | G1638      | G1638           |
| 12n811  | G702  | (0, 7, 9, 6, 2, 3, 5, 4, 1, 8) | (5, 1, 3, 0, 4, 8, 9, 7, 6, 2) | -10  | -1  | –              | –          | ?               |
|         | G703  | (0, 7, 4, 3, 5, 6, 2, 9, 1, 8) | (6, 2, 1, 9, 0, 4, 8, 5, 7, 3) | -10  | 1   | –              | –          | ?               |
| m12n811 | G1639 | (0, 1, 3, 7, 5, 2, 4, 6, 9, 8) | (4, 6, 9, 0, 8, 7, 1, 3, 5, 2) | 0    | -1  | –              | –          | G1641           |
|         | G1640 | (0, 2, 4, 6, 9, 7, 5, 8, 1, 3) | (5, 7, 8, 1, 3, 0, 9, 2, 4, 6) | 0    | -1  | –              | –          | G1640           |
|         | G1641 | (0, 8, 1, 7, 3, 2, 4, 5, 9, 6) | (4, 2, 5, 9, 8, 6, 7, 0, 3, 1) | 0    | -1  | –              | –          | G1639           |
|         | G1642 | (0, 9, 2, 4, 6, 3, 1, 5, 7, 8) | (6, 3, 5, 7, 1, 0, 8, 9, 2, 4) | 0    | 1   | –              | –          | G1644           |
|         | G1643 | (0, 2, 5, 8, 6, 4, 7, 9, 1, 3) | (7, 9, 1, 4, 3, 0, 2, 5, 6, 8) | 0    | 1   | –              | –          | G1643           |
|         | G1644 | (0, 7, 1, 2, 4, 3, 9, 5, 8, 6) | (5, 3, 6, 9, 0, 8, 7, 1, 4, 2) | 0    | 1   | –              | –          | G1642           |
| 12n830  | G704  | (0, 8, 9, 7, 6, 4, 2, 5, 3, 1) | (5, 2, 3, 1, 8, 0, 7, 9, 6, 4) | -15  | -2  | –              | –          | G704            |
|         | G705  | (0, 2, 9, 1, 8, 7, 5, 6, 3, 4) | (5, 6, 3, 4, 2, 0, 9, 1, 8, 7) | -15  | -2  | –              | –          | G705            |
|         | G706  | (0, 8, 7, 5, 6, 4, 2, 3, 1, 9) | (6, 2, 1, 9, 3, 0, 7, 8, 5, 4) | -15  | 0   | G707           | G706       | G707            |
|         | G707  | (0, 8, 7, 5, 6, 4, 2, 3, 1, 9) | (6, 2, 3, 9, 1, 8, 7, 0, 5, 4) | -15  | 0   | G706           | G707       | G706            |
|         | G708  | (0, 3, 9, 2, 8, 1, 7, 5, 6, 4) | (8, 7, 5, 6, 3, 4, 2, 0, 1, 9) | -15  | 0   | G709           | G708       | G709            |
|         | G709  | (0, 8, 6, 4, 5, 3, 1, 9, 7, 2) | (3, 1, 2, 9, 0, 8, 7, 6, 4, 5) | -15  | 0   | G708           | G709       | G708            |
|         | G710  | (0, 8, 6, 9, 7, 5, 4, 2, 3, 1) | (7, 5, 2, 4, 1, 3, 0, 8, 9, 6) | -15  | 2   | –              | –          | G710            |
|         | G711  | (0, 1, 8, 9, 7, 6, 3, 5, 2, 4) | (7, 6, 3, 5, 4, 2, 0, 1, 8, 9) | -15  | 2   | –              | –          | G711            |
| m12n830 | G1645 | (0, 3, 4, 6, 5, 8, 7, 1, 9, 2) | (7, 9, 1, 2, 0, 3, 4, 6, 5, 8) | 5    | 0   | G1646          | G1646      | G1645           |
|         | G1646 | (0, 3, 2, 4, 7, 5, 6, 8, 9, 1) | (6, 9, 8, 1, 3, 0, 2, 4, 5, 7) | 5    | 0   | G1645          | G1645      | G1646           |
| 12n835  | G712  | (0, 5, 8, 7, 6, 9, 3, 1, 4, 2) | (3, 9, 1, 2, 0, 4, 8, 5, 7, 6) | -4   | -1  | –              | –          | G712            |
|         | G713  | (0, 8, 1, 9, 3, 6, 5, 4, 7, 2) | (6, 5, 7, 4, 8, 2, 0, 1, 3, 9) | -4   | 1   | –              | –          | G713            |
| m12n835 | G1647 | (0, 7, 4, 5, 6, 3, 8, 1, 9, 2) | (3, 1, 9, 0, 2, 7, 4, 6, 5, 8) | -6   | -1  | –              | –          | G1647           |
|         | G1648 | (0, 3, 1, 4, 9, 6, 7, 8, 5, 2) | (4, 7, 6, 8, 5, 0, 2, 3, 1, 9) | -6   | 1   | –              | –          | G1648           |
| 12n838  | G714  | (0, 6, 2, 7, 5, 3, 4, 9, 1, 8) | (3, 1, 9, 4, 0, 6, 8, 5, 7, 2) | -9   | 0   | G715           | G715       | G714            |
|         | G715  | (0, 2, 9, 1, 6, 7, 5, 8, 3, 4) | (7, 8, 3, 5, 2, 4, 0, 1, 6, 9) | -9   | 0   | G714           | G714       | G715            |
|         | G716  | (0, 7, 9, 3, 1, 5, 2, 4, 8, 6) | (4, 1, 2, 0, 8, 9, 6, 7, 5, 3) | -9   | 0   | G717           | G716       | G717            |
|         | G717  | (0, 7, 8, 6, 4, 5, 2, 3, 1, 9) | (4, 1, 5, 3, 7, 9, 6, 0, 8, 2) | -9   | 0   | G716           | G717       | G716            |
| m12n838 | G1649 | (0, 9, 1, 3, 2, 5, 4, 6, 8, 7) | (4, 2, 8, 0, 6, 9, 7, 3, 5, 1) | -1   | 0   | G1650          | G1650      | G1649           |
|         | G1650 | (0, 9, 1, 3, 2, 5, 4, 6, 8, 7) | (6, 2, 4, 0, 8, 1, 7, 9, 5, 3) | -1   | 0   | G1649          | G1649      | G1650           |
| 12n873  | G718  | (0, 1, 3, 6, 8, 9, 7, 5, 4, 2) | (5, 7, 9, 0, 2, 4, 3, 1, 8, 6) | -5   | 0   | G718           | G719       | G719            |
|         | G719  | (0, 5, 6, 4, 7, 3, 2, 8, 1, 9) | (7, 8, 2, 9, 1, 0, 5, 4, 6, 3) | -5   | 0   | G719           | G718       | G718            |
| 13n192  | G740  | (0, 1, 3, 4, 2, 6, 7, 5, 8, 9) | (6, 7, 8, 9, 5, 3, 4, 0, 1, 2) | 1    | 0   | G741           | G740       | G741            |
|         | G741  | (0, 2, 3, 4, 5, 8, 6, 7, 1, 9) | (5, 6, 7, 1, 2, 3, 9, 0, 8, 4) | 1    | 0   | G740           | G741       | G740            |
| m13n192 | G1667 | (0, 4, 3, 5, 9, 8, 7, 6, 2, 1) | (5, 7, 6, 2, 4, 3, 1, 0, 9, 8) | -11  | 0   | G1668          | G1668      | G1667           |
|         | G1668 | (0, 9, 8, 5, 7, 6, 2, 4, 3, 1) | (6, 2, 1, 0, 4, 3, 5, 9, 8, 7) | -11  | 0   | G1667          | G1667      | G1668           |
| 13n469  | G791  | (0, 4, 3, 2, 5, 8, 7, 6, 9, 1) | (5, 7, 9, 6, 1, 4, 3, 0, 2, 8) | -3   | 0   | G792           | G792       | G791            |
|         | G792  | (0, 2, 4, 1, 6, 9, 8, 5, 7, 3) | (5, 9, 8, 7, 0, 3, 2, 1, 4, 6) | -3   | 0   | G791           | G791       | G792            |
| m13n469 | G1702 | (0, 1, 7, 8, 9, 6, 3, 4, 5, 2) | (3, 6, 2, 4, 5, 0, 7, 9, 1, 8) | -7   | 0   | G1703          | G1702      | G1703           |
|         | G1703 | (0, 7, 2, 3, 5, 1, 4, 9, 6, 8) | (4, 1, 8, 9, 0, 6, 7, 5, 2, 3) | -7   | 0   | G1702          | G1703      | G1702           |
| 13n584  | G793  | (0, 1, 2, 5, 4, 6, 3, 9, 7, 8) | (3, 6, 7, 9, 8, 0, 5, 4, 1, 2) | 2    | -1  | –              | –          | G794            |
|         | G794  | (0, 1, 5, 3, 2, 4, 7, 8, 6, 9) | (7, 8, 9, 6, 5, 0, 1, 3, 2, 4) | 2    | -1  | –              | –          | G793            |
|         | G795  | (0, 1, 9, 5, 2, 4, 3, 6, 7, 8) | (6, 7, 4, 3, 8, 0, 9, 1, 2, 5) | 2    | 1   | –              | –          | G796            |
|         | G796  | (0, 3, 1, 2, 5, 7, 6, 4, 8, 9) | (5, 7, 6, 8, 9, 4, 3, 0, 1, 2) | 2    | 1   | –              | –          | G795            |
| m13n584 | G1704 | (0, 9, 8, 5, 3, 4, 2, 1, 6, 7) | (6, 2, 1, 0, 7, 9, 8, 5, 3, 4) | -12  | -1  | –              | –          | G1705           |
|         | G1705 | (0, 8, 9, 7, 2, 3, 6, 5, 4, 1) | (5, 2, 3, 1, 4, 8, 0, 9, 7, 6) | -12  | -1  | –              | –          | G1704           |



| Knot     | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|          | G1706 | (0, 7, 6, 5, 8, 9, 4, 2, 3, 1) | (5, 4, 2, 1, 3, 7, 0, 8, 9, 6) | -12  | 1   | –              | –          | G1707           |
|          | G1707 | (0, 1, 6, 5, 3, 4, 2, 9, 8, 7) | (3, 4, 2, 9, 8, 0, 7, 6, 5, 1) | -12  | 1   | –              | –          | G1706           |
| 13n586   | G797  | (0, 7, 6, 2, 1, 4, 3, 5, 9, 8) | (4, 3, 9, 8, 5, 7, 6, 0, 2, 1) | -4   | -1  | –              | –          | G797            |
|          | G798  | (0, 9, 3, 5, 4, 7, 6, 2, 1, 8) | (7, 6, 8, 2, 1, 3, 0, 9, 5, 4) | -4   | 1   | –              | –          | G798            |
| m13n586  | G1708 | (0, 1, 8, 9, 7, 2, 3, 5, 6, 4) | (5, 6, 3, 4, 0, 8, 9, 1, 2, 7) | -6   | -1  | –              | –          | G1708           |
|          | G1709 | (0, 8, 9, 1, 2, 7, 5, 6, 3, 4) | (7, 2, 3, 5, 6, 4, 0, 1, 8, 9) | -6   | 1   | –              | –          | G1709           |
| 13n588   | G2088 | (0, 8, 4, 7, 6, 5, 3, 2, 1, 9) | (5, 1, 9, 2, 0, 8, 7, 6, 4, 3) | -15  | -2  | –              | –          | G2494           |
|          | G2089 | (0, 8, 5, 4, 7, 6, 3, 2, 1, 9) | (6, 2, 1, 9, 0, 8, 7, 5, 4, 3) | -15  | -2  | –              | –          | G2495           |
|          | G2494 | (0, 7, 8, 6, 2, 5, 4, 3, 1, 9) | (4, 3, 1, 9, 8, 0, 7, 6, 5, 2) | -15  | -2  | –              | –          | G2088           |
|          | G2495 | (0, 7, 5, 6, 4, 3, 2, 9, 8, 1) | (2, 1, 9, 0, 8, 7, 5, 4, 3, 6) | -15  | -2  | –              | –          | G2089           |
|          | G2090 | (0, 9, 7, 8, 6, 5, 3, 2, 4, 1) | (3, 2, 1, 5, 4, 0, 9, 7, 8, 6) | -15  | 0   | G2093          | G2498      | G2496           |
|          | G2091 | (0, 9, 8, 1, 7, 4, 6, 3, 2, 5) | (6, 4, 3, 5, 2, 0, 1, 9, 8, 7) | -15  | 0   | G2092          | G2499      | G2497           |
|          | G2092 | (0, 7, 6, 5, 4, 2, 3, 1, 9, 8) | (6, 3, 1, 9, 8, 7, 0, 5, 4, 2) | -15  | 0   | G2091          | G2497      | G2499           |
|          | G2093 | (0, 9, 7, 6, 4, 5, 3, 2, 1, 8) | (5, 3, 2, 8, 7, 1, 0, 9, 6, 4) | -15  | 0   | G2090          | G2496      | G2498           |
|          | G2496 | (0, 7, 6, 4, 5, 3, 2, 1, 9, 8) | (6, 5, 1, 9, 0, 8, 7, 4, 3, 2) | -15  | 0   | G2498          | G2093      | G2090           |
|          | G2497 | (0, 8, 9, 7, 4, 6, 5, 3, 2, 1) | (4, 3, 5, 0, 8, 2, 1, 9, 7, 6) | -15  | 0   | G2499          | G2092      | G2091           |
|          | G2498 | (0, 9, 7, 6, 5, 3, 4, 2, 1, 8) | (6, 5, 4, 1, 0, 8, 9, 7, 3, 2) | -15  | 0   | G2496          | G2090      | G2093           |
|          | G2499 | (0, 9, 1, 8, 6, 7, 5, 3, 4, 2) | (5, 4, 7, 3, 0, 2, 9, 1, 8, 6) | -15  | 0   | G2497          | G2091      | G2092           |
|          | G2094 | (0, 8, 7, 6, 3, 2, 5, 4, 1, 9) | (6, 5, 4, 2, 1, 9, 0, 8, 7, 3) | -15  | 2   | –              | –          | G2500           |
|          | G2095 | (0, 8, 7, 6, 4, 3, 2, 5, 1, 9) | (6, 5, 3, 2, 1, 9, 7, 0, 8, 4) | -15  | 2   | –              | –          | G2501           |
|          | G2500 | (0, 3, 2, 9, 8, 7, 5, 6, 4, 1) | (5, 8, 7, 6, 4, 3, 1, 2, 0, 9) | -15  | 2   | –              | –          | G2094           |
|          | G2501 | (0, 8, 6, 5, 4, 7, 3, 1, 2, 9) | (7, 4, 3, 2, 9, 1, 0, 8, 6, 5) | -15  | 2   | –              | –          | G2095           |
| m13n588  | G2273 | (0, 8, 9, 1, 2, 3, 5, 4, 6, 7) | (6, 2, 3, 4, 7, 8, 0, 9, 1, 5) | 5    | 0   | G2274          | G2679      | G2680           |
|          | G2274 | (0, 1, 3, 4, 2, 5, 6, 8, 7, 9) | (5, 8, 9, 0, 6, 7, 1, 3, 2, 4) | 5    | 0   | G2273          | G2680      | G2679           |
|          | G2679 | (0, 1, 3, 4, 6, 5, 7, 8, 9, 2) | (5, 7, 8, 2, 3, 9, 0, 1, 4, 6) | 5    | 0   | G2680          | G2273      | G2274           |
|          | G2680 | (0, 1, 3, 2, 4, 5, 7, 8, 6, 9) | (7, 8, 9, 5, 6, 0, 1, 3, 2, 4) | 5    | 0   | G2679          | G2274      | G2273           |
| 13n592   | G799  | (0, 1, 7, 4, 5, 3, 6, 8, 9, 2) | (3, 6, 2, 8, 9, 7, 0, 1, 4, 5) | -2   | -1  | –              | –          | G800            |
|          | G800  | (0, 1, 3, 4, 2, 8, 6, 7, 9, 5) | (6, 7, 9, 0, 5, 3, 1, 2, 4, 8) | -2   | -1  | –              | –          | G799            |
|          | G801  | (0, 6, 8, 9, 7, 3, 1, 2, 4, 5) | (7, 1, 3, 4, 2, 0, 5, 6, 8, 9) | -2   | 1   | –              | –          | G802            |
|          | G802  | (0, 3, 4, 6, 9, 7, 8, 5, 1, 2) | (7, 8, 1, 2, 5, 3, 4, 0, 6, 9) | -2   | 1   | –              | –          | G801            |
| m13n592  | G1710 | (0, 9, 1, 5, 7, 6, 4, 8, 3, 2) | (4, 3, 8, 0, 2, 1, 9, 5, 7, 6) | -8   | -1  | –              | –          | G1711           |
|          | G1711 | (0, 7, 9, 8, 1, 5, 4, 6, 3, 2) | (4, 1, 3, 2, 6, 0, 7, 9, 8, 5) | -8   | -1  | –              | –          | G1710           |
|          | G1712 | (0, 9, 6, 8, 7, 1, 4, 3, 5, 2) | (7, 4, 3, 5, 2, 6, 0, 9, 1, 8) | -8   | 1   | –              | –          | G1713           |
|          | G1713 | (0, 9, 4, 8, 6, 5, 7, 1, 3, 2) | (6, 5, 7, 3, 1, 0, 2, 4, 9, 8) | -8   | 1   | –              | –          | G1712           |
| 13n604   | G803  | (0, 9, 6, 8, 7, 5, 4, 3, 2, 1) | (4, 3, 1, 2, 0, 9, 6, 8, 7, 5) | -19  | -2  | –              | –          | G803            |
|          | G804  | (0, 6, 5, 4, 2, 1, 3, 9, 8, 7) | (3, 1, 0, 9, 8, 7, 6, 5, 4, 2) | -19  | 0   | G805           | G804       | G805            |
|          | G805  | (0, 5, 4, 6, 3, 2, 1, 9, 8, 7) | (2, 1, 9, 0, 8, 7, 6, 5, 4, 3) | -19  | 0   | G804           | G805       | G804            |
|          | G806  | (0, 9, 8, 7, 6, 4, 3, 5, 2, 1) | (6, 4, 3, 5, 2, 1, 9, 0, 8, 7) | -19  | 2   | –              | –          | G806            |
| m13n604  | G1714 | (0, 2, 3, 1, 4, 5, 6, 7, 8, 9) | (4, 5, 7, 6, 8, 9, 0, 2, 3, 1) | 9    | 0   | G1714          | G1714      | G1714           |
| 13n1180  | G720  | (0, 9, 7, 8, 6, 5, 2, 1, 4, 3) | (4, 2, 1, 3, 0, 9, 7, 6, 8, 5) | -15  | -2  | –              | –          | G720            |
|          | G721  | (0, 9, 7, 6, 5, 3, 4, 2, 1, 8) | (6, 4, 2, 1, 8, 7, 0, 9, 5, 3) | -15  | 0   | G723           | G724       | G722            |
|          | G722  | (0, 8, 6, 9, 7, 3, 2, 5, 4, 1) | (5, 3, 2, 4, 1, 0, 8, 9, 7, 6) | -15  | 0   | G724           | G723       | G721            |
|          | G723  | (0, 2, 9, 8, 6, 7, 4, 5, 3, 1) | (5, 7, 4, 1, 0, 3, 2, 9, 8, 6) | -15  | 0   | G721           | G722       | G724            |
|          | G724  | (0, 8, 9, 6, 7, 5, 4, 2, 1, 3) | (7, 4, 2, 1, 3, 0, 9, 6, 5, 8) | -15  | 0   | G722           | G721       | G723            |
|          | G725  | (0, 9, 2, 1, 8, 7, 5, 6, 4, 3) | (8, 5, 7, 6, 4, 3, 0, 2, 1, 9) | -15  | 2   | –              | –          | G725            |
| m13n1180 | G1651 | (0, 8, 9, 1, 2, 5, 3, 4, 6, 7) | (6, 3, 4, 7, 8, 0, 9, 1, 2, 5) | 5    | 0   | G1652          | G1651      | G1652           |
|          | G1652 | (0, 1, 9, 2, 3, 5, 6, 4, 7, 8) | (3, 5, 4, 6, 7, 0, 1, 8, 9, 2) | 5    | 0   | G1651          | G1652      | G1651           |
| 13n1192  | G726  | (0, 8, 9, 2, 5, 3, 4, 6, 7, 1) | (4, 1, 6, 7, 0, 8, 9, 2, 3, 5) | 2    | -1  | –              | –          | G726            |
|          | G727  | (0, 4, 5, 7, 8, 6, 9, 2, 3, 1) | (6, 8, 9, 2, 3, 1, 4, 5, 0, 7) | 2    | 1   | –              | –          | G727            |
| m13n1192 | G1653 | (0, 9, 6, 8, 7, 5, 1, 2, 4, 3) | (5, 4, 1, 2, 0, 9, 3, 6, 8, 7) | -12  | -1  | –              | –          | G1653           |
|          | G1654 | (0, 9, 1, 2, 8, 6, 5, 7, 4, 3) | (6, 5, 7, 0, 4, 3, 1, 2, 9, 8) | -12  | 1   | –              | –          | G1654           |
| 13n1271  | G2024 | (0, 9, 6, 8, 7, 5, 2, 4, 1, 3) | (7, 2, 1, 4, 3, 0, 6, 9, 5, 8) | -11  | 0   | G2025          | G2431      | G2430           |
|          | G2025 | (0, 7, 9, 6, 4, 3, 5, 2, 1, 8) | (6, 2, 5, 1, 8, 7, 0, 9, 4, 3) | -11  | 0   | G2024          | G2430      | G2431           |
|          | G2430 | (0, 8, 6, 9, 7, 5, 2, 4, 3, 1) | (5, 2, 1, 4, 3, 8, 6, 0, 9, 7) | -11  | 0   | G2431          | G2025      | G2024           |

| Knot     | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| m13n1271 | G2431 | (0, 8, 6, 5, 3, 2, 4, 1, 9, 7) | (5, 4, 1, 9, 7, 6, 0, 8, 3, 2) | -11  | 0   | G2430          | G2024      | G2025           |
|          | G2217 | (0, 2, 3, 5, 7, 4, 6, 8, 1, 9) | (4, 6, 8, 1, 2, 9, 0, 5, 7, 3) | 1    | 0   | G2218          | G2623      | G2624           |
|          | G2218 | (0, 7, 9, 1, 2, 4, 5, 3, 6, 8) | (5, 2, 3, 6, 8, 0, 1, 7, 9, 4) | 1    | 0   | G2217          | G2624      | G2623           |
|          | G2623 | (0, 3, 1, 2, 4, 7, 5, 8, 6, 9) | (7, 8, 5, 6, 9, 3, 0, 4, 1, 2) | 1    | 0   | G2624          | G2217      | G2218           |
|          | G2624 | (0, 3, 1, 4, 6, 7, 5, 8, 9, 2) | (4, 8, 5, 9, 2, 3, 0, 1, 6, 7) | 1    | 0   | G2623          | G2218      | G2217           |
| 13n1692  | G2026 | (0, 1, 2, 5, 9, 7, 4, 6, 8, 3) | (4, 6, 8, 0, 3, 1, 9, 2, 5, 7) | -2   | -1  | —              | —          | G2433           |
|          | G2027 | (0, 8, 1, 9, 2, 7, 3, 5, 6, 4) | (5, 3, 6, 4, 8, 0, 9, 1, 2, 7) | -2   | -1  | —              | —          | G2432           |
|          | G2028 | (0, 4, 2, 1, 7, 5, 6, 8, 9, 3) | (5, 8, 6, 3, 2, 9, 0, 1, 4, 7) | -2   | -1  | —              | —          | G2434           |
|          | G2029 | (0, 7, 1, 3, 6, 5, 2, 4, 8, 9) | (5, 2, 4, 8, 9, 7, 6, 0, 1, 3) | -2   | -1  | —              | —          | G2435           |
|          | G2432 | (0, 3, 4, 7, 5, 6, 9, 2, 1, 8) | (5, 6, 9, 1, 8, 0, 3, 7, 4, 2) | -2   | -1  | —              | —          | G2027           |
|          | G2433 | (0, 7, 1, 9, 2, 4, 8, 5, 6, 3) | (4, 2, 5, 3, 6, 7, 0, 9, 1, 8) | -2   | -1  | —              | —          | G2026           |
|          | G2434 | (0, 1, 9, 2, 3, 5, 8, 7, 4, 6) | (5, 7, 4, 6, 0, 1, 2, 9, 8, 3) | -2   | -1  | —              | —          | G2028           |
|          | G2435 | (0, 7, 1, 9, 8, 5, 2, 3, 4, 6) | (5, 3, 6, 4, 0, 9, 7, 8, 1, 2) | -2   | -1  | —              | —          | G2029           |
|          | G2030 | (0, 8, 9, 1, 7, 2, 5, 3, 6, 4) | (7, 2, 3, 5, 4, 6, 0, 8, 1, 9) | -2   | 1   | —              | —          | G2438           |
|          | G2031 | (0, 5, 7, 9, 6, 4, 8, 1, 2, 3) | (6, 8, 1, 4, 2, 0, 3, 5, 7, 9) | -2   | 1   | —              | —          | G2436           |
|          | G2032 | (0, 1, 5, 7, 4, 3, 6, 8, 2, 9) | (6, 8, 9, 3, 2, 0, 1, 5, 7, 4) | -2   | 1   | —              | —          | G2437           |
|          | G2033 | (0, 4, 5, 7, 8, 6, 2, 1, 9, 3) | (6, 9, 2, 3, 4, 1, 0, 7, 5, 8) | -2   | 1   | —              | —          | G2439           |
|          | G2436 | (0, 7, 8, 5, 9, 1, 4, 2, 6, 3) | (5, 2, 4, 3, 6, 7, 0, 8, 1, 9) | -2   | 1   | —              | —          | G2031           |
|          | G2437 | (0, 2, 3, 4, 1, 8, 7, 5, 9, 6) | (4, 5, 8, 9, 7, 6, 2, 0, 3, 1) | -2   | 1   | —              | —          | G2032           |
|          | G2438 | (0, 7, 6, 9, 2, 3, 1, 4, 5, 8) | (6, 4, 1, 5, 8, 0, 7, 9, 2, 3) | -2   | 1   | —              | —          | G2030           |
|          | G2439 | (0, 2, 9, 8, 1, 3, 4, 7, 5, 6) | (3, 8, 7, 4, 5, 6, 0, 2, 9, 1) | -2   | 1   | —              | —          | G2033           |
| m13n1692 | G1655 | (0, 1, 8, 6, 2, 5, 4, 3, 9, 7) | (2, 4, 3, 9, 7, 0, 8, 6, 5, 1) | -8   | -1  | —              | —          | G1656           |
|          | G1656 | (0, 6, 8, 9, 2, 5, 4, 3, 1, 7) | (4, 1, 3, 7, 8, 0, 9, 6, 5, 2) | -8   | -1  | —              | —          | G1655           |
|          | G1657 | (0, 6, 4, 3, 2, 5, 8, 9, 1, 7) | (5, 2, 1, 8, 7, 9, 0, 4, 6, 3) | -8   | 1   | —              | —          | G1658           |
|          | G1658 | (0, 8, 4, 3, 2, 5, 1, 9, 6, 7) | (6, 2, 1, 9, 7, 0, 8, 4, 3, 5) | -8   | 1   | —              | —          | G1657           |
| 13n1718  | G2034 | (0, 7, 5, 4, 6, 3, 2, 8, 9, 1) | (3, 2, 1, 9, 0, 7, 5, 4, 6, 8) | -12  | -1  | —              | —          | G2440           |
|          | G2440 | (0, 9, 1, 8, 4, 5, 7, 6, 3, 2) | (4, 3, 5, 2, 6, 0, 1, 9, 8, 7) | -12  | -1  | —              | —          | G2034           |
|          | G2035 | (0, 2, 3, 9, 8, 5, 7, 6, 4, 1) | (3, 5, 7, 6, 4, 1, 2, 0, 9, 8) | -12  | 1   | —              | —          | G2441           |
|          | G2441 | (0, 9, 6, 5, 7, 8, 4, 1, 3, 2) | (5, 4, 3, 1, 2, 6, 0, 7, 9, 8) | -12  | 1   | —              | —          | G2035           |
| m13n1718 | G2219 | (0, 3, 6, 7, 5, 8, 9, 1, 4, 2) | (4, 8, 9, 1, 0, 2, 3, 6, 7, 5) | 2    | -1  | —              | —          | G2625           |
|          | G2220 | (0, 9, 3, 6, 4, 5, 7, 8, 1, 2) | (5, 1, 7, 0, 8, 9, 2, 3, 4, 6) | 2    | -1  | —              | —          | G2626           |
|          | G2625 | (0, 6, 4, 5, 7, 8, 2, 9, 1, 3) | (2, 1, 9, 0, 3, 4, 6, 5, 7, 8) | 2    | -1  | —              | —          | G2219           |
|          | G2626 | (0, 8, 9, 2, 4, 5, 3, 6, 7, 1) | (3, 1, 6, 7, 8, 0, 9, 2, 4, 5) | 2    | -1  | —              | —          | G2220           |
|          | G2221 | (0, 8, 1, 3, 4, 7, 5, 6, 9, 2) | (7, 5, 6, 9, 0, 2, 1, 3, 4, 8) | 2    | 1   | —              | —          | G2628           |
|          | G2222 | (0, 1, 4, 5, 7, 8, 6, 9, 3, 2) | (6, 8, 9, 0, 3, 4, 2, 5, 1, 7) | 2    | 1   | —              | —          | G2627           |
|          | G2627 | (0, 4, 5, 8, 6, 7, 9, 2, 3, 1) | (6, 7, 9, 2, 1, 3, 4, 5, 0, 8) | 2    | 1   | —              | —          | G2222           |
|          | G2628 | (0, 2, 4, 1, 5, 6, 8, 9, 7, 3) | (5, 6, 8, 7, 9, 0, 3, 4, 2, 1) | 2    | 1   | —              | —          | G2221           |
| 13n1735  | G2036 | (0, 8, 1, 2, 3, 6, 5, 7, 9, 4) | (5, 3, 4, 7, 9, 0, 8, 1, 2, 6) | 2    | -1  | —              | —          | G2443           |
|          | G2037 | (0, 3, 2, 4, 5, 6, 1, 8, 9, 7) | (6, 8, 7, 9, 0, 3, 4, 2, 5, 1) | 2    | -1  | —              | —          | G2442           |
|          | G2442 | (0, 8, 9, 2, 3, 5, 4, 6, 1, 7) | (4, 1, 6, 7, 8, 0, 9, 2, 5, 3) | 2    | -1  | —              | —          | G2037           |
|          | G2443 | (0, 1, 6, 3, 2, 4, 8, 5, 7, 9) | (5, 8, 9, 7, 6, 0, 3, 1, 2, 4) | 2    | -1  | —              | —          | G2036           |
|          | G2038 | (0, 5, 7, 9, 8, 1, 2, 3, 6, 4) | (8, 2, 3, 6, 4, 5, 7, 0, 1, 9) | 2    | 1   | —              | —          | G2444           |
|          | G2039 | (0, 8, 9, 6, 1, 2, 3, 5, 4, 7) | (6, 2, 5, 3, 4, 7, 8, 0, 9, 1) | 2    | 1   | —              | —          | G2445           |
|          | G2444 | (0, 2, 4, 1, 5, 7, 6, 3, 8, 9) | (5, 7, 8, 6, 9, 3, 2, 0, 1, 4) | 2    | 1   | —              | —          | G2038           |
|          | G2445 | (0, 6, 1, 3, 2, 4, 5, 8, 9, 7) | (4, 2, 5, 8, 7, 9, 0, 1, 6, 3) | 2    | 1   | —              | —          | G2039           |
| m13n1735 | G2223 | (0, 1, 9, 4, 6, 8, 7, 5, 3, 2) | (4, 5, 3, 7, 0, 2, 1, 9, 8, 6) | -12  | -1  | —              | —          | ?               |
|          | G2629 | (0, 9, 1, 2, 8, 5, 7, 6, 4, 3) | (5, 4, 6, 0, 3, 1, 2, 9, 8, 7) | -12  | -1  | —              | —          | ?               |
|          | G2224 | (0, 9, 7, 5, 4, 6, 8, 3, 1, 2) | (6, 4, 3, 1, 0, 2, 5, 9, 7, 8) | -12  | 1   | —              | —          | ?               |
|          | G2630 | (0, 9, 7, 6, 8, 5, 1, 2, 4, 3) | (6, 5, 4, 1, 2, 0, 3, 7, 9, 8) | -12  | 1   | —              | —          | ?               |
| 13n1762  | G2040 | (0, 9, 8, 5, 3, 6, 4, 2, 1, 7) | (6, 4, 1, 0, 7, 9, 8, 5, 3, 2) | -11  | -2  | —              | —          | G2446           |
|          | G2446 | (0, 9, 7, 6, 3, 5, 2, 4, 8, 1) | (4, 2, 1, 8, 7, 0, 6, 9, 3, 5) | -11  | -2  | —              | —          | G2040           |
|          | G2041 | (0, 9, 3, 1, 8, 4, 7, 6, 5, 2) | (8, 4, 6, 5, 2, 0, 3, 1, 9, 7) | -11  | 0   | G2042          | G2447      | G2448           |
|          | G2042 | (0, 5, 7, 6, 3, 4, 2, 9, 1, 8) | (6, 9, 2, 1, 0, 8, 5, 4, 7, 3) | -11  | 0   | G2041          | G2448      | G2447           |
|          | G2043 | (0, 8, 1, 9, 5, 4, 3, 7, 6, 2) | (5, 4, 6, 3, 2, 0, 8, 1, 9, 7) | -11  | 0   | G2044          | G2450      | G2449           |
|          | G2044 | (0, 8, 7, 9, 3, 6, 5, 2, 4, 1) | (3, 2, 1, 5, 8, 4, 0, 7, 9, 6) | -11  | 0   | G2043          | G2449      | G2450           |

| Knot     | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|          | G2447 | (0, 8, 1, 9, 7, 6, 5, 2, 4, 3) | (5, 2, 6, 4, 3, 0, 8, 7, 1, 9) | -11  | 0   | G2448          | G2041      | G2042           |
|          | G2448 | (0, 8, 5, 4, 7, 3, 6, 9, 2, 1) | (3, 4, 2, 9, 1, 8, 0, 5, 7, 6) | -11  | 0   | G2447          | G2042      | G2041           |
|          | G2449 | (0, 8, 6, 4, 7, 5, 3, 2, 9, 1) | (5, 3, 9, 8, 2, 1, 0, 6, 4, 7) | -11  | 0   | G2450          | G2044      | G2043           |
|          | G2450 | (0, 8, 6, 3, 5, 2, 9, 4, 7, 1) | (4, 2, 1, 9, 0, 7, 6, 8, 3, 5) | -11  | 0   | G2449          | G2043      | G2044           |
|          | G2045 | (0, 6, 5, 3, 1, 4, 2, 9, 8, 7) | (5, 4, 2, 9, 8, 0, 7, 6, 3, 1) | -11  | 2   | —              | —          | G2451           |
|          | G2451 | (0, 3, 7, 9, 6, 8, 5, 4, 2, 1) | (6, 8, 2, 5, 1, 4, 3, 0, 9, 7) | -11  | 2   | —              | —          | G2045           |
| m13n1762 | G2225 | (0, 3, 5, 6, 2, 4, 7, 8, 1, 9) | (4, 6, 7, 1, 8, 9, 0, 3, 5, 2) | 1    | 0   | G2226          | G2632      | G2631           |
|          | G2226 | (0, 1, 9, 2, 3, 6, 8, 4, 5, 7) | (6, 8, 5, 7, 0, 1, 2, 9, 3, 4) | 1    | 0   | G2225          | G2631      | G2632           |
|          | G2631 | (0, 2, 5, 6, 7, 4, 8, 9, 1, 3) | (4, 7, 8, 1, 3, 9, 0, 2, 5, 6) | 1    | 0   | G2632          | G2226      | G2225           |
|          | G2632 | (0, 1, 4, 6, 3, 5, 7, 8, 2, 9) | (5, 8, 9, 2, 0, 1, 4, 6, 7, 3) | 1    | 0   | G2631          | G2225      | G2226           |
| 13n1779  | G728  | (0, 7, 6, 5, 4, 2, 3, 1, 9, 8) | (5, 1, 3, 9, 8, 7, 0, 6, 4, 2) | -15  | 0   | G729           | G728       | G729            |
|          | G729  | (0, 9, 7, 6, 8, 5, 3, 4, 2, 1) | (5, 3, 2, 1, 4, 9, 7, 0, 6, 8) | -15  | 0   | G728           | G729       | G728            |
| m13n1779 | G1659 | (0, 8, 1, 2, 3, 4, 6, 5, 7, 9) | (6, 3, 5, 7, 9, 0, 2, 8, 1, 4) | 5    | 0   | G1660          | G1660      | G1659           |
|          | G1660 | (0, 1, 3, 5, 4, 6, 7, 8, 9, 2) | (4, 6, 8, 2, 9, 0, 1, 5, 3, 7) | 5    | 0   | G1659          | G1659      | G1660           |
| 13n1836  | G730  | (0, 1, 9, 3, 5, 4, 7, 6, 8, 2) | (3, 4, 2, 6, 0, 8, 1, 9, 5, 7) | -4   | -1  | —              | —          | G730            |
|          | G731  | (0, 4, 6, 5, 8, 7, 9, 3, 1, 2) | (5, 7, 3, 1, 4, 2, 6, 0, 8, 9) | -4   | 1   | —              | —          | G731            |
| m13n1836 | G1661 | (0, 4, 2, 6, 5, 7, 3, 9, 1, 8) | (3, 1, 7, 9, 8, 0, 6, 4, 5, 2) | -6   | -1  | —              | —          | G1661           |
|          | G1662 | (0, 7, 9, 5, 1, 3, 2, 6, 4, 8) | (6, 3, 4, 2, 8, 0, 9, 1, 7, 5) | -6   | 1   | —              | —          | G1662           |
| 13n1864  | G732  | (0, 1, 9, 4, 2, 3, 8, 6, 5, 7) | (3, 8, 6, 0, 5, 7, 4, 1, 9, 2) | -5   | 0   | G733           | G732       | G733            |
|          | G733  | (0, 6, 4, 5, 8, 9, 7, 2, 1, 3) | (5, 2, 7, 1, 3, 4, 0, 8, 6, 9) | -5   | 0   | G732           | G733       | G732            |
| m13n1864 | G1663 | (0, 9, 3, 5, 7, 4, 8, 1, 6, 2) | (5, 4, 6, 1, 2, 0, 3, 7, 9, 8) | -5   | 0   | G1664          | G1664      | G1663           |
|          | G1664 | (0, 1, 3, 8, 7, 9, 4, 6, 5, 2) | (4, 6, 9, 2, 0, 5, 1, 3, 8, 7) | -5   | 0   | G1663          | G1663      | G1664           |
| 13n1901  | G2046 | (0, 8, 6, 9, 7, 2, 4, 5, 3, 1) | (4, 2, 1, 5, 3, 6, 8, 0, 9, 7) | -7   | 0   | G2047          | G2452      | G2453           |
|          | G2047 | (0, 3, 1, 9, 8, 6, 4, 5, 7, 2) | (4, 8, 7, 5, 2, 0, 9, 1, 3, 6) | -7   | 0   | G2046          | G2453      | G2452           |
|          | G2452 | (0, 7, 9, 4, 5, 3, 6, 2, 1, 8) | (5, 2, 6, 8, 1, 7, 0, 9, 4, 3) | -7   | 0   | G2453          | G2046      | G2047           |
|          | G2453 | (0, 9, 5, 8, 6, 7, 2, 4, 1, 3) | (7, 2, 1, 4, 0, 3, 5, 9, 6, 8) | -7   | 0   | G2452          | G2047      | G2046           |
| m13n1901 | G2227 | (0, 8, 3, 5, 2, 4, 6, 7, 9, 1) | (4, 2, 9, 1, 7, 8, 0, 3, 5, 6) | -3   | 0   | G2228          | G2634      | G2633           |
|          | G2228 | (0, 1, 6, 7, 4, 8, 5, 3, 9, 2) | (5, 8, 9, 3, 0, 2, 1, 6, 4, 7) | -3   | 0   | G2227          | G2633      | G2634           |
|          | G2633 | (0, 9, 4, 2, 5, 3, 6, 7, 1, 8) | (6, 3, 1, 7, 0, 8, 9, 4, 5, 2) | -3   | 0   | G2634          | G2228      | G2227           |
|          | G2634 | (0, 8, 6, 3, 5, 1, 2, 4, 7, 9) | (5, 4, 2, 7, 9, 6, 8, 0, 1, 3) | -3   | 0   | G2633          | G2227      | G2228           |
| 13n1907  | G734  | (0, 7, 9, 6, 5, 4, 2, 3, 1, 8) | (4, 3, 1, 0, 8, 7, 6, 9, 5, 2) | -15  | -2  | —              | —          | G735            |
|          | G735  | (0, 6, 9, 8, 7, 5, 2, 4, 1, 3) | (4, 2, 3, 1, 0, 9, 8, 6, 5, 7) | -15  | -2  | —              | —          | G734            |
|          | G736  | (0, 9, 7, 8, 6, 5, 3, 4, 2, 1) | (3, 2, 1, 5, 4, 0, 7, 9, 8, 6) | -15  | 0   | G737           | G737       | G736            |
|          | G737  | (0, 9, 7, 8, 6, 5, 3, 4, 2, 1) | (5, 3, 2, 4, 1, 7, 6, 0, 9, 8) | -15  | 0   | G736           | G736       | G737            |
|          | G738  | (0, 7, 5, 6, 4, 3, 2, 9, 1, 8) | (6, 3, 9, 2, 1, 0, 8, 7, 5, 4) | -15  | 2   | —              | —          | G739            |
|          | G739  | (0, 2, 9, 1, 8, 6, 5, 4, 7, 3) | (6, 8, 7, 5, 4, 3, 2, 0, 1, 9) | -15  | 2   | —              | —          | G738            |
| m13n1907 | G1665 | (0, 2, 1, 3, 4, 5, 6, 8, 7, 9) | (8, 9, 5, 6, 7, 0, 2, 3, 1, 4) | 5    | 0   | G1666          | G1665      | G1666           |
|          | G1666 | (0, 2, 1, 3, 4, 5, 6, 8, 7, 9) | (5, 8, 6, 7, 9, 2, 3, 4, 0, 1) | 5    | 0   | G1665          | G1666      | G1665           |
| 13n1916  | G2048 | (0, 9, 6, 5, 8, 2, 7, 4, 1, 3) | (4, 2, 1, 0, 3, 6, 9, 8, 5, 7) | -11  | -2  | —              | —          | G2454           |
|          | G2454 | (0, 2, 9, 8, 1, 4, 7, 6, 5, 3) | (4, 6, 3, 0, 5, 9, 2, 1, 8, 7) | -11  | -2  | —              | —          | G2048           |
|          | G2049 | (0, 9, 7, 5, 6, 2, 4, 1, 3, 8) | (5, 4, 3, 1, 8, 7, 0, 6, 9, 2) | -11  | 0   | G2050          | G2455      | G2456           |
|          | G2050 | (0, 6, 7, 5, 3, 2, 4, 9, 1, 8) | (5, 4, 1, 9, 8, 7, 0, 3, 6, 2) | -11  | 0   | G2049          | G2456      | G2455           |
|          | G2455 | (0, 8, 5, 4, 7, 3, 6, 9, 2, 1) | (4, 2, 3, 9, 1, 8, 0, 5, 7, 6) | -11  | 0   | G2456          | G2049      | G2050           |
|          | G2456 | (0, 9, 6, 4, 7, 5, 2, 3, 1, 8) | (7, 5, 2, 8, 1, 0, 9, 6, 4, 3) | -11  | 0   | G2455          | G2050      | G2049           |
|          | G2051 | (0, 2, 9, 6, 1, 5, 8, 7, 4, 3) | (6, 8, 5, 4, 7, 0, 3, 2, 1, 9) | -11  | 2   | —              | —          | G2457           |
|          | G2457 | (0, 8, 7, 6, 9, 2, 5, 4, 1, 3) | (6, 5, 2, 1, 4, 8, 3, 0, 7, 9) | -11  | 2   | —              | —          | G2051           |
| m13n1916 | G2229 | (0, 3, 1, 4, 5, 8, 9, 6, 2, 7) | (6, 9, 7, 0, 2, 3, 4, 1, 8, 5) | 1    | 0   | G2230          | G2636      | G2635           |
|          | G2230 | (0, 7, 9, 1, 5, 2, 3, 4, 6, 8) | (6, 3, 4, 8, 0, 7, 9, 1, 2, 5) | 1    | 0   | G2229          | G2635      | G2636           |
|          | G2635 | (0, 2, 4, 5, 8, 9, 6, 7, 1, 3) | (5, 6, 7, 9, 1, 3, 0, 2, 4, 8) | 1    | 0   | G2636          | G2230      | G2229           |
|          | G2636 | (0, 1, 2, 9, 5, 3, 4, 7, 6, 8) | (3, 5, 7, 4, 0, 6, 8, 1, 9, 2) | 1    | 0   | G2635          | G2229      | G2230           |
| 13n1945  | G2052 | (0, 5, 4, 7, 8, 6, 9, 3, 1, 2) | (3, 1, 8, 9, 2, 0, 5, 7, 4, 6) | -4   | -1  | —              | —          | G2458           |
|          | G2458 | (0, 8, 9, 7, 2, 1, 5, 3, 4, 6) | (5, 1, 4, 0, 8, 6, 9, 7, 2, 3) | -4   | -1  | —              | —          | G2052           |
|          | G2053 | (0, 1, 9, 3, 6, 4, 5, 8, 7, 2) | (6, 8, 5, 7, 2, 0, 3, 4, 1, 9) | -4   | 1   | —              | —          | G2459           |
|          | G2459 | (0, 2, 3, 1, 5, 4, 9, 7, 8, 6) | (3, 4, 9, 7, 0, 8, 6, 2, 5, 1) | -4   | 1   | —              | —          | G2053           |

| Knot     | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| m13n1945 | G2231 | (0, 2, 1, 3, 9, 6, 8, 7, 4, 5) | (3, 6, 4, 7, 5, 0, 2, 9, 8, 1) | -6   | -1  | —              | —          | G2639           |
|          | G2232 | (0, 5, 7, 4, 3, 6, 8, 1, 9, 2) | (3, 1, 2, 9, 5, 0, 4, 7, 6, 8) | -6   | -1  | —              | —          | G2640           |
|          | G2233 | (0, 4, 6, 8, 5, 7, 2, 9, 3, 1) | (2, 7, 1, 3, 9, 0, 8, 4, 6, 5) | -6   | -1  | —              | —          | G2638           |
|          | G2234 | (0, 7, 8, 6, 5, 1, 3, 2, 4, 9) | (5, 2, 4, 9, 7, 6, 0, 8, 1, 3) | -6   | -1  | —              | —          | G2637           |
|          | G2637 | (0, 5, 7, 6, 8, 4, 3, 1, 2, 9) | (6, 8, 1, 9, 2, 0, 5, 4, 7, 3) | -6   | -1  | —              | —          | G2234           |
|          | G2638 | (0, 4, 2, 9, 1, 3, 7, 5, 8, 6) | (7, 8, 5, 4, 6, 0, 2, 1, 3, 9) | -6   | -1  | —              | —          | G2233           |
|          | G2639 | (0, 5, 6, 2, 4, 3, 1, 7, 9, 8) | (7, 9, 1, 8, 0, 5, 4, 2, 6, 3) | -6   | -1  | —              | —          | G2231           |
|          | G2640 | (0, 2, 1, 4, 8, 3, 9, 6, 7, 5) | (6, 9, 7, 0, 2, 5, 4, 1, 3, 8) | -6   | -1  | —              | —          | G2232           |
|          | G2235 | (0, 5, 7, 6, 8, 4, 3, 1, 2, 9) | (6, 8, 1, 9, 3, 2, 0, 5, 7, 4) | -6   | 1   | —              | —          | G2642           |
|          | G2236 | (0, 3, 1, 4, 6, 9, 8, 5, 7, 2) | (4, 6, 5, 8, 2, 7, 3, 0, 1, 9) | -6   | 1   | —              | —          | G2641           |
|          | G2237 | (0, 1, 8, 7, 9, 6, 2, 4, 3, 5) | (4, 7, 6, 3, 5, 0, 8, 1, 9, 2) | -6   | 1   | —              | —          | G2643           |
|          | G2238 | (0, 8, 2, 9, 4, 6, 3, 5, 7, 1) | (6, 5, 7, 3, 1, 2, 8, 0, 4, 9) | -6   | 1   | —              | —          | G2644           |
|          | G2641 | (0, 8, 9, 6, 2, 7, 1, 4, 3, 5) | (7, 2, 4, 1, 0, 3, 5, 8, 6, 9) | -6   | 1   | —              | —          | G2236           |
|          | G2642 | (0, 7, 8, 6, 5, 1, 3, 2, 4, 9) | (6, 2, 5, 4, 9, 7, 0, 8, 1, 3) | -6   | 1   | —              | —          | G2235           |
|          | G2643 | (0, 9, 1, 7, 5, 4, 6, 2, 3, 8) | (5, 2, 6, 4, 3, 8, 0, 7, 9, 1) | -6   | 1   | —              | —          | G2237           |
|          | G2644 | (0, 8, 1, 9, 3, 5, 7, 4, 2, 6) | (7, 3, 5, 4, 6, 0, 2, 1, 8, 9) | -6   | 1   | —              | —          | G2238           |
| 13n2102  | G2054 | (0, 1, 9, 8, 6, 3, 7, 5, 4, 2) | (3, 5, 4, 2, 0, 9, 1, 8, 7, 6) | -15  | -2  | —              | —          | G2460           |
|          | G2460 | (0, 7, 9, 8, 6, 5, 4, 1, 3, 2) | (4, 1, 3, 2, 0, 7, 9, 6, 8, 5) | -15  | -2  | —              | —          | G2054           |
|          | G2055 | (0, 9, 7, 8, 6, 5, 3, 2, 4, 1) | (8, 3, 2, 4, 1, 0, 7, 6, 9, 5) | -15  | 0   | G2056          | G2461      | G2462           |
|          | G2056 | (0, 9, 7, 6, 4, 5, 3, 2, 1, 8) | (6, 5, 2, 1, 8, 0, 9, 4, 7, 3) | -15  | 0   | G2055          | G2462      | G2461           |
|          | G2461 | (0, 9, 7, 6, 5, 3, 4, 2, 1, 8) | (5, 4, 2, 1, 8, 6, 0, 9, 7, 3) | -15  | 0   | G2462          | G2055      | G2056           |
|          | G2462 | (0, 7, 6, 4, 5, 3, 2, 1, 9, 8) | (5, 1, 9, 8, 2, 0, 7, 6, 4, 3) | -15  | 0   | G2461          | G2056      | G2055           |
|          | G2057 | (0, 8, 7, 5, 9, 6, 4, 3, 1, 2) | (6, 5, 4, 1, 3, 2, 0, 8, 7, 9) | -15  | 2   | —              | —          | G2463           |
|          | G2463 | (0, 9, 1, 8, 7, 6, 4, 3, 5, 2) | (7, 4, 6, 3, 5, 2, 0, 9, 1, 8) | -15  | 2   | —              | —          | G2057           |
| m13n2102 | G2239 | (0, 1, 3, 2, 4, 6, 7, 9, 5, 8) | (4, 6, 7, 5, 8, 9, 0, 3, 1, 2) | 5    | 0   | G2240          | G2645      | G2646           |
|          | G2240 | (0, 1, 2, 4, 5, 3, 6, 9, 7, 8) | (5, 3, 6, 7, 9, 8, 0, 4, 1, 2) | 5    | 0   | G2239          | G2646      | G2645           |
|          | G2645 | (0, 1, 9, 2, 4, 5, 3, 6, 7, 8) | (4, 5, 3, 6, 7, 0, 8, 1, 9, 2) | 5    | 0   | G2646          | G2239      | G2240           |
|          | G2646 | (0, 2, 3, 5, 7, 4, 6, 8, 1, 9) | (4, 6, 7, 8, 1, 9, 0, 2, 5, 3) | 5    | 0   | G2645          | G2240      | G2239           |
| 13n2180  | G742  | (0, 5, 2, 3, 9, 6, 1, 4, 7, 8) | (4, 1, 6, 7, 5, 0, 8, 9, 2, 3) | -3   | 0   | G743           | G742       | G743            |
|          | G743  | (0, 5, 1, 7, 3, 4, 8, 2, 6, 9) | (7, 8, 6, 2, 9, 0, 1, 5, 3, 4) | -3   | 0   | G742           | G743       | G742            |
| m13n2180 | G1669 | (0, 9, 6, 5, 4, 7, 2, 1, 3, 8) | (7, 4, 1, 0, 8, 3, 6, 5, 9, 2) | -7   | 0   | G1670          | G1670      | G1669           |
|          | G1670 | (0, 6, 2, 8, 7, 1, 5, 9, 4, 3) | (7, 9, 5, 4, 3, 6, 0, 2, 1, 8) | -7   | 0   | G1669          | G1669      | G1670           |
| 13n2303  | G2058 | (0, 2, 4, 5, 9, 7, 8, 6, 1, 3) | (5, 6, 8, 1, 3, 0, 2, 9, 4, 7) | -2   | -1  | —              | —          | G2464           |
|          | G2059 | (0, 3, 4, 9, 6, 8, 5, 7, 1, 2) | (5, 7, 1, 2, 0, 3, 9, 4, 6, 8) | -2   | -1  | —              | —          | G2465           |
|          | G2464 | (0, 4, 2, 3, 1, 7, 5, 8, 6, 9) | (7, 8, 6, 9, 4, 2, 0, 3, 1, 5) | -2   | -1  | —              | —          | G2058           |
|          | G2465 | (0, 2, 3, 7, 5, 8, 6, 4, 1, 9) | (4, 6, 8, 1, 9, 2, 0, 7, 5, 3) | -2   | -1  | —              | —          | G2059           |
|          | G2060 | (0, 2, 7, 5, 6, 4, 8, 9, 1, 3) | (6, 9, 4, 1, 3, 0, 2, 5, 7, 8) | -2   | 1   | —              | —          | G2466           |
|          | G2061 | (0, 1, 5, 7, 4, 6, 3, 8, 9, 2) | (4, 6, 8, 3, 9, 2, 0, 1, 5, 7) | -2   | 1   | —              | —          | G2467           |
|          | G2466 | (0, 3, 1, 4, 2, 8, 6, 7, 5, 9) | (4, 8, 6, 9, 7, 5, 0, 3, 1, 2) | -2   | 1   | —              | —          | G2060           |
|          | G2467 | (0, 8, 5, 3, 1, 4, 2, 6, 7, 9) | (6, 4, 2, 9, 7, 0, 8, 1, 3, 5) | -2   | 1   | —              | —          | G2061           |
| m13n2303 | G2241 | (0, 8, 1, 9, 7, 2, 6, 3, 5, 4) | (6, 3, 5, 4, 0, 8, 1, 9, 2, 7) | -8   | -1  | —              | —          | G2647           |
|          | G2647 | (0, 2, 9, 1, 4, 6, 8, 7, 5, 3) | (4, 6, 3, 5, 7, 0, 2, 1, 9, 8) | -8   | -1  | —              | —          | G2241           |
|          | G2242 | (0, 9, 1, 8, 2, 7, 5, 3, 6, 4) | (7, 2, 5, 3, 6, 4, 0, 9, 1, 8) | -8   | 1   | —              | —          | G2648           |
|          | G2648 | (0, 8, 6, 5, 7, 9, 2, 4, 1, 3) | (5, 4, 2, 1, 3, 6, 8, 0, 7, 9) | -8   | 1   | —              | —          | G2242           |
| 13n2428  | G2062 | (0, 9, 6, 8, 7, 5, 2, 4, 1, 3) | (4, 2, 1, 3, 0, 9, 8, 6, 5, 7) | -15  | -2  | —              | —          | G2468           |
|          | G2468 | (0, 7, 9, 8, 6, 5, 4, 1, 3, 2) | (4, 1, 3, 0, 2, 9, 7, 6, 8, 5) | -15  | -2  | —              | —          | G2062           |
|          | G2063 | (0, 7, 6, 4, 5, 3, 2, 1, 9, 8) | (5, 2, 9, 7, 1, 0, 8, 6, 4, 3) | -15  | 0   | G2064          | G2469      | G2470           |
|          | G2064 | (0, 7, 5, 4, 6, 3, 9, 2, 8, 1) | (3, 2, 1, 9, 0, 8, 7, 5, 4, 6) | -15  | 0   | G2063          | G2470      | G2469           |
|          | G2469 | (0, 9, 7, 6, 4, 5, 3, 2, 1, 8) | (6, 2, 5, 1, 8, 0, 9, 7, 4, 3) | -15  | 0   | G2470          | G2063      | G2064           |
|          | G2470 | (0, 9, 7, 8, 6, 5, 3, 2, 4, 1) | (5, 3, 2, 4, 1, 7, 0, 6, 9, 8) | -15  | 0   | G2469          | G2064      | G2063           |
|          | G2065 | (0, 2, 9, 1, 8, 6, 5, 7, 4, 3) | (6, 8, 7, 5, 4, 3, 0, 2, 1, 9) | -15  | 2   | —              | —          | G2471           |
|          | G2471 | (0, 9, 1, 8, 7, 6, 4, 3, 5, 2) | (7, 4, 6, 5, 3, 0, 2, 9, 1, 8) | -15  | 2   | —              | —          | G2065           |
| m13n2428 | G2243 | (0, 7, 9, 1, 2, 4, 5, 3, 6, 8) | (4, 2, 3, 5, 6, 7, 0, 8, 9, 1) | 5    | 0   | G2244          | G2650      | G2649           |
|          | G2244 | (0, 2, 3, 5, 7, 4, 6, 8, 1, 9) | (7, 8, 9, 1, 2, 0, 3, 5, 6, 4) | 5    | 0   | G2243          | G2649      | G2650           |

| Knot     | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|          | G2649 | (0, 3, 1, 2, 4, 7, 5, 8, 6, 9) | (7, 8, 6, 9, 0, 1, 3, 4, 2, 5) | 5    | 0   | G2650          | G2244      | G2243           |
|          | G2650 | (0, 8, 9, 1, 4, 2, 3, 5, 6, 7) | (5, 3, 6, 8, 0, 7, 9, 1, 2, 4) | 5    | 0   | G2649          | G2243      | G2244           |
| 13n2436  | G744  | (0, 5, 8, 6, 9, 2, 3, 4, 1, 7) | (3, 9, 1, 0, 4, 5, 7, 8, 6, 2) | -2   | -1  | —              | —          | G745            |
|          | G745  | (0, 1, 2, 6, 8, 4, 7, 9, 5, 3) | (4, 5, 9, 0, 3, 1, 2, 6, 8, 7) | -2   | -1  | —              | —          | G744            |
|          | G746  | (0, 6, 3, 4, 5, 8, 1, 9, 2, 7) | (5, 1, 9, 0, 2, 3, 7, 6, 8, 4) | -2   | 1   | —              | —          | G747            |
|          | G747  | (0, 8, 4, 6, 9, 5, 7, 1, 2, 3) | (6, 5, 7, 1, 2, 0, 3, 4, 8, 9) | -2   | 1   | —              | —          | G746            |
| m13n2436 | G1671 | (0, 3, 2, 1, 7, 5, 9, 6, 4, 8) | (6, 9, 8, 4, 3, 0, 2, 1, 7, 5) | -8   | -1  | —              | —          | G1672           |
|          | G1672 | (0, 5, 2, 6, 9, 8, 7, 4, 1, 3) | (4, 8, 7, 1, 3, 2, 0, 9, 5, 6) | -8   | -1  | —              | —          | G1671           |
|          | G1673 | (0, 4, 2, 9, 3, 1, 7, 6, 5, 8) | (3, 1, 7, 6, 8, 5, 4, 0, 9, 2) | -8   | 1   | —              | —          | G1674           |
|          | G1674 | (0, 2, 9, 6, 5, 4, 7, 1, 8, 3) | (7, 8, 4, 3, 1, 0, 2, 6, 5, 9) | -8   | 1   | —              | —          | G1673           |
| 13n2491  | G2066 | (0, 8, 7, 6, 5, 2, 3, 1, 4, 9) | (5, 4, 1, 9, 8, 7, 0, 6, 2, 3) | -12  | -1  | —              | —          | ?               |
|          | G2472 | (0, 8, 6, 9, 4, 5, 3, 2, 7, 1) | (3, 2, 1, 7, 8, 0, 9, 6, 4, 5) | -12  | -1  | —              | —          | ?               |
|          | G2067 | (0, 5, 8, 6, 7, 4, 3, 2, 1, 9) | (6, 7, 3, 9, 2, 1, 0, 8, 5, 4) | -12  | 1   | —              | —          | ?               |
|          | G2473 | (0, 4, 9, 8, 6, 7, 2, 5, 3, 1) | (6, 7, 5, 2, 1, 3, 4, 0, 9, 8) | -12  | 1   | —              | —          | ?               |
| m13n2491 | G2245 | (0, 1, 9, 2, 8, 6, 3, 4, 5, 7) | (4, 6, 5, 7, 0, 9, 8, 1, 2, 3) | 2    | -1  | —              | —          | G2651           |
|          | G2246 | (0, 9, 1, 5, 4, 2, 3, 6, 7, 8) | (4, 3, 6, 0, 7, 5, 8, 9, 1, 2) | 2    | -1  | —              | —          | G2652           |
|          | G2651 | (0, 1, 2, 3, 7, 5, 4, 6, 9, 8) | (4, 6, 9, 0, 1, 8, 7, 2, 5, 3) | 2    | -1  | —              | —          | G2245           |
|          | G2652 | (0, 2, 5, 6, 4, 3, 7, 8, 9, 1) | (3, 8, 9, 1, 0, 5, 2, 4, 6, 7) | 2    | -1  | —              | —          | G2246           |
|          | G2247 | (0, 2, 3, 4, 1, 9, 5, 8, 6, 7) | (4, 5, 6, 9, 8, 7, 0, 2, 1, 3) | 2    | 1   | —              | —          | G2653           |
|          | G2248 | (0, 1, 2, 5, 6, 4, 3, 7, 9, 8) | (6, 7, 9, 0, 3, 1, 8, 2, 5, 4) | 2    | 1   | —              | —          | G2654           |
|          | G2653 | (0, 9, 2, 4, 3, 1, 5, 6, 7, 8) | (5, 3, 6, 1, 0, 7, 8, 9, 2, 4) | 2    | 1   | —              | —          | G2247           |
|          | G2654 | (0, 2, 3, 4, 8, 7, 5, 6, 9, 1) | (4, 5, 7, 9, 6, 1, 0, 2, 3, 8) | 2    | 1   | —              | —          | G2248           |
| 13n2492  | G2068 | (0, 8, 9, 7, 6, 5, 4, 3, 1, 2) | (4, 1, 3, 2, 8, 0, 7, 6, 5, 9) | -15  | -2  | —              | —          | G2474           |
|          | G2474 | (0, 8, 9, 7, 6, 5, 4, 3, 1, 2) | (5, 1, 3, 2, 0, 8, 7, 6, 4, 9) | -15  | -2  | —              | —          | G2068           |
|          | G2069 | (0, 3, 9, 5, 8, 7, 6, 2, 1, 4) | (5, 6, 4, 2, 3, 1, 0, 9, 8, 7) | -15  | 0   | G2070          | G2476      | G2475           |
|          | G2070 | (0, 7, 6, 5, 4, 2, 3, 1, 9, 8) | (4, 1, 9, 3, 8, 7, 0, 6, 5, 2) | -15  | 0   | G2069          | G2475      | G2476           |
|          | G2475 | (0, 3, 2, 1, 9, 7, 5, 4, 8, 6) | (7, 8, 6, 5, 4, 3, 2, 0, 1, 9) | -15  | 0   | G2476          | G2070      | G2069           |
|          | G2476 | (0, 9, 7, 6, 8, 5, 3, 4, 2, 1) | (5, 3, 2, 0, 4, 9, 7, 1, 8, 6) | -15  | 0   | G2475          | G2069      | G2070           |
|          | G2071 | (0, 1, 9, 8, 7, 6, 5, 3, 4, 2) | (3, 7, 6, 5, 2, 4, 0, 9, 1, 8) | -15  | 2   | —              | —          | G2477           |
|          | G2477 | (0, 1, 9, 8, 7, 6, 5, 3, 4, 2) | (3, 8, 6, 5, 4, 2, 0, 9, 1, 7) | -15  | 2   | —              | —          | G2071           |
| m13n2492 | G2249 | (0, 2, 1, 3, 7, 4, 5, 6, 8, 9) | (7, 9, 6, 8, 2, 0, 1, 3, 4, 5) | 5    | 0   | G2250          | G2656      | G2655           |
|          | G2250 | (0, 3, 1, 5, 6, 4, 7, 8, 9, 2) | (4, 8, 9, 0, 2, 1, 3, 5, 6, 7) | 5    | 0   | G2249          | G2655      | G2656           |
|          | G2655 | (0, 1, 3, 2, 4, 6, 7, 8, 5, 9) | (2, 6, 7, 5, 8, 9, 0, 3, 1, 4) | 5    | 0   | G2656          | G2250      | G2249           |
|          | G2656 | (0, 8, 1, 6, 2, 3, 4, 7, 5, 9) | (6, 5, 7, 9, 8, 0, 1, 2, 3, 4) | 5    | 0   | G2655          | G2249      | G2250           |
| 13n2527  | G2072 | (0, 4, 6, 5, 9, 8, 7, 2, 1, 3) | (5, 7, 2, 1, 3, 4, 0, 9, 6, 8) | -5   | 0   | G2073          | G2479      | G2478           |
|          | G2073 | (0, 8, 7, 9, 2, 4, 1, 5, 3, 6) | (5, 4, 1, 3, 8, 0, 6, 9, 7, 2) | -5   | 0   | G2072          | G2478      | G2479           |
|          | G2478 | (0, 2, 4, 6, 5, 9, 8, 7, 3, 1) | (5, 7, 8, 3, 1, 4, 2, 0, 9, 6) | -5   | 0   | G2479          | G2073      | G2072           |
|          | G2479 | (0, 2, 4, 7, 6, 8, 5, 1, 9, 3) | (6, 5, 1, 3, 9, 2, 0, 7, 4, 8) | -5   | 0   | G2478          | G2072      | G2073           |
| m13n2527 | G2251 | (0, 7, 9, 1, 2, 5, 6, 4, 3, 8) | (6, 2, 3, 4, 8, 0, 1, 9, 7, 5) | -5   | 0   | G2252          | G2658      | G2657           |
|          | G2252 | (0, 2, 3, 7, 5, 9, 6, 8, 1, 4) | (5, 8, 6, 4, 1, 2, 0, 3, 7, 9) | -5   | 0   | G2251          | G2657      | G2658           |
|          | G2657 | (0, 1, 5, 4, 2, 3, 8, 6, 9, 7) | (3, 8, 9, 0, 6, 7, 5, 1, 4, 2) | -5   | 0   | G2658          | G2252      | G2251           |
|          | G2658 | (0, 2, 9, 3, 1, 6, 4, 7, 8, 5) | (6, 8, 4, 7, 5, 2, 0, 1, 3, 9) | -5   | 0   | G2657          | G2251      | G2252           |
| 13n2533  | G2074 | (0, 6, 5, 8, 7, 9, 4, 3, 1, 2) | (3, 1, 9, 2, 0, 6, 8, 5, 4, 7) | -7   | -2  | —              | —          | G2480           |
|          | G2480 | (0, 6, 5, 8, 7, 9, 4, 3, 1, 2) | (2, 1, 9, 3, 0, 6, 8, 5, 7, 4) | -7   | -2  | —              | —          | G2074           |
|          | G2075 | (0, 8, 2, 4, 3, 7, 5, 6, 1, 9) | (6, 3, 5, 1, 9, 2, 0, 8, 7, 4) | -7   | 0   | G2076          | G2482      | G2483           |
|          | G2076 | (0, 1, 3, 9, 8, 5, 7, 4, 6, 2) | (4, 8, 7, 6, 2, 0, 1, 9, 3, 5) | -7   | 0   | G2075          | G2483      | G2482           |
|          | G2077 | (0, 7, 5, 3, 6, 4, 9, 2, 1, 8) | (6, 1, 9, 8, 2, 0, 3, 7, 5, 4) | -7   | 0   | G2078          | G2484      | G2481           |
|          | G2078 | (0, 7, 9, 5, 6, 8, 3, 1, 4, 2) | (5, 1, 3, 2, 0, 4, 7, 6, 9, 8) | -7   | 0   | G2077          | G2481      | G2484           |
|          | G2481 | (0, 2, 9, 1, 8, 6, 3, 7, 4, 5) | (3, 6, 5, 7, 4, 0, 9, 2, 1, 8) | -7   | 0   | G2484          | G2078      | G2077           |
|          | G2482 | (0, 3, 1, 9, 8, 5, 7, 4, 6, 2) | (4, 8, 6, 7, 2, 0, 1, 9, 3, 5) | -7   | 0   | G2483          | G2075      | G2076           |
|          | G2483 | (0, 1, 9, 3, 5, 4, 7, 8, 6, 2) | (5, 7, 4, 6, 2, 0, 3, 1, 9, 8) | -7   | 0   | G2482          | G2076      | G2075           |
|          | G2484 | (0, 7, 6, 9, 8, 1, 3, 5, 2, 4) | (5, 3, 1, 4, 2, 7, 0, 9, 6, 8) | -7   | 0   | G2481          | G2077      | G2078           |
|          | G2079 | (0, 1, 9, 8, 3, 5, 4, 7, 6, 2) | (5, 8, 7, 4, 6, 2, 0, 3, 1, 9) | -7   | 2   | —              | —          | G2485           |
|          | G2485 | (0, 8, 9, 7, 2, 4, 3, 6, 5, 1) | (7, 4, 6, 3, 5, 1, 8, 2, 0, 9) | -7   | 2   | —              | —          | G2079           |

| Knot     | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| m13n2533 | G2253 | (0, 6, 9, 3, 1, 4, 2, 5, 7, 8) | (4, 1, 2, 0, 5, 7, 6, 8, 9, 3) | -3   | 0   | G2254          | G2659      | G2660           |
|          | G2254 | (0, 3, 1, 5, 8, 4, 6, 7, 9, 2) | (7, 9, 4, 2, 3, 0, 1, 5, 6, 8) | -3   | 0   | G2253          | G2660      | G2659           |
|          | G2659 | (0, 7, 9, 3, 1, 4, 5, 2, 6, 8) | (4, 1, 2, 0, 5, 6, 8, 7, 9, 3) | -3   | 0   | G2660          | G2253      | G2254           |
|          | G2660 | (0, 7, 8, 1, 9, 3, 5, 2, 4, 6) | (5, 4, 6, 7, 2, 0, 1, 8, 9, 3) | -3   | 0   | G2659          | G2254      | G2253           |
| 13n2769  | G2080 | (0, 5, 7, 6, 4, 3, 2, 8, 1, 9) | (6, 8, 2, 1, 9, 0, 5, 4, 7, 3) | -9   | 0   | G2081          | G2487      | G2486           |
|          | G2081 | (0, 7, 5, 4, 8, 6, 9, 2, 3, 1) | (4, 3, 2, 9, 1, 0, 5, 7, 8, 6) | -9   | 0   | G2080          | G2486      | G2487           |
|          | G2486 | (0, 2, 1, 6, 8, 9, 7, 5, 4, 3) | (5, 9, 7, 0, 3, 4, 2, 1, 8, 6) | -9   | 0   | G2487          | G2081      | G2080           |
|          | G2487 | (0, 1, 6, 5, 8, 4, 7, 9, 3, 2) | (5, 4, 3, 9, 2, 0, 1, 6, 8, 7) | -9   | 0   | G2486          | G2080      | G2081           |
| m13n2769 | G2255 | (0, 1, 9, 4, 2, 3, 5, 8, 6, 7) | (3, 8, 5, 0, 6, 7, 1, 4, 9, 2) | -1   | 0   | G2256          | G2662      | G2661           |
|          | G2256 | (0, 1, 9, 2, 3, 4, 6, 8, 7, 5) | (6, 8, 4, 5, 7, 0, 1, 3, 2, 9) | -1   | 0   | G2255          | G2661      | G2662           |
|          | G2661 | (0, 8, 3, 1, 2, 5, 6, 4, 7, 9) | (6, 2, 9, 4, 7, 0, 1, 8, 3, 5) | -1   | 0   | G2662          | G2256      | G2255           |
|          | G2662 | (0, 2, 3, 4, 8, 5, 7, 6, 1, 9) | (5, 7, 6, 1, 2, 9, 3, 0, 8, 4) | -1   | 0   | G2661          | G2255      | G2256           |
| 13n2787  | G748  | (0, 2, 4, 3, 5, 9, 7, 8, 6, 1) | (5, 8, 1, 6, 2, 4, 0, 3, 9, 7) | -4   | -1  | —              | —          | G749            |
|          | G749  | (0, 2, 4, 3, 5, 9, 7, 8, 6, 1) | (3, 5, 8, 6, 1, 4, 0, 2, 9, 7) | -4   | -1  | —              | —          | G748            |
|          | G750  | (0, 5, 3, 4, 2, 6, 8, 7, 9, 1) | (4, 2, 9, 1, 7, 0, 5, 3, 6, 8) | -4   | 1   | —              | —          | G751            |
|          | G751  | (0, 5, 3, 4, 2, 6, 8, 7, 9, 1) | (4, 2, 8, 1, 7, 9, 5, 0, 3, 6) | -4   | 1   | —              | —          | G750            |
| m13n2787 | G2257 | (0, 9, 1, 7, 5, 6, 4, 2, 3, 8) | (4, 2, 6, 3, 8, 0, 7, 5, 9, 1) | -6   | -1  | —              | —          | G2663           |
|          | G2258 | (0, 2, 4, 1, 3, 8, 9, 6, 7, 5) | (6, 9, 7, 5, 0, 2, 4, 1, 3, 8) | -6   | -1  | —              | —          | G2664           |
|          | G2259 | (0, 7, 9, 4, 2, 5, 3, 1, 6, 8) | (5, 1, 3, 0, 6, 8, 7, 4, 9, 2) | -6   | -1  | —              | —          | G2665           |
|          | G2663 | (0, 8, 6, 7, 5, 1, 3, 2, 4, 9) | (5, 2, 9, 4, 8, 6, 0, 7, 1, 3) | -6   | -1  | —              | —          | G2257           |
|          | G2664 | (0, 8, 1, 9, 6, 4, 5, 2, 3, 7) | (4, 2, 5, 3, 0, 7, 9, 6, 8, 1) | -6   | -1  | —              | —          | G2258           |
|          | G2665 | (0, 7, 4, 6, 3, 5, 8, 1, 9, 2) | (3, 1, 9, 2, 7, 0, 4, 6, 5, 8) | -6   | -1  | —              | —          | G2259           |
|          | G2260 | (0, 2, 7, 5, 3, 6, 4, 9, 1, 8) | (6, 9, 4, 1, 0, 2, 8, 5, 7, 3) | -6   | 1   | —              | —          | G2668           |
|          | G2261 | (0, 8, 9, 6, 7, 2, 4, 1, 3, 5) | (7, 2, 4, 1, 3, 5, 0, 8, 6, 9) | -6   | 1   | —              | —          | G2666           |
|          | G2262 | (0, 5, 6, 4, 2, 3, 1, 7, 9, 8) | (7, 9, 3, 1, 8, 0, 5, 2, 6, 4) | -6   | 1   | —              | —          | G2667           |
|          | G2666 | (0, 4, 5, 2, 3, 1, 8, 6, 9, 7) | (6, 9, 1, 8, 0, 7, 4, 2, 5, 3) | -6   | 1   | —              | —          | G2261           |
|          | G2667 | (0, 5, 7, 6, 8, 4, 2, 3, 1, 9) | (6, 8, 2, 9, 3, 1, 5, 0, 7, 4) | -6   | 1   | —              | —          | G2262           |
|          | G2668 | (0, 3, 1, 4, 7, 9, 6, 8, 5, 2) | (4, 7, 6, 8, 2, 5, 0, 3, 1, 9) | -6   | 1   | —              | —          | G2260           |
| 13n2872  | G752  | (0, 7, 1, 9, 3, 5, 6, 4, 2, 8) | (6, 3, 4, 2, 8, 0, 1, 9, 7, 5) | -9   | 0   | G753           | G752       | G753            |
|          | G753  | (0, 6, 9, 7, 8, 3, 1, 5, 2, 4) | (5, 3, 4, 1, 2, 0, 6, 9, 7, 8) | -9   | 0   | G752           | G753       | G752            |
| m13n2872 | G1675 | (0, 8, 1, 7, 9, 4, 3, 5, 2, 6) | (4, 3, 5, 2, 6, 8, 7, 0, 9, 1) | -1   | 0   | G1676          | G1676      | G1675           |
|          | G1676 | (0, 2, 9, 3, 5, 4, 7, 6, 8, 1) | (5, 8, 4, 6, 1, 0, 2, 9, 3, 7) | -1   | 0   | G1675          | G1675      | G1676           |
| 13n3158  | G2082 | (0, 2, 4, 1, 5, 3, 7, 6, 9, 8) | (3, 7, 9, 6, 0, 8, 4, 2, 5, 1) | -1   | 0   | G2083          | G2489      | G2488           |
|          | G2083 | (0, 8, 1, 7, 9, 4, 2, 6, 3, 5) | (4, 2, 6, 3, 5, 8, 7, 0, 9, 1) | -1   | 0   | G2082          | G2488      | G2489           |
|          | G2488 | (0, 9, 1, 4, 2, 6, 3, 5, 8, 7) | (6, 3, 5, 0, 8, 1, 7, 9, 4, 2) | -1   | 0   | G2489          | G2083      | G2082           |
|          | G2489 | (0, 6, 8, 2, 4, 1, 5, 3, 9, 7) | (4, 3, 5, 7, 9, 6, 0, 8, 2, 1) | -1   | 0   | G2488          | G2082      | G2083           |
| m13n3158 | G2263 | (0, 8, 2, 5, 3, 1, 4, 9, 7, 6) | (4, 1, 9, 0, 7, 6, 8, 5, 2, 3) | -9   | 0   | G2264          | G2669      | G2670           |
|          | G2264 | (0, 8, 3, 6, 4, 2, 5, 9, 7, 1) | (5, 2, 9, 1, 0, 7, 8, 6, 3, 4) | -9   | 0   | G2263          | G2670      | G2669           |
|          | G2669 | (0, 3, 9, 2, 1, 7, 4, 6, 8, 5) | (7, 8, 4, 6, 5, 3, 0, 1, 2, 9) | -9   | 0   | G2670          | G2263      | G2264           |
|          | G2670 | (0, 6, 9, 4, 1, 3, 5, 2, 8, 7) | (5, 1, 2, 0, 7, 8, 9, 6, 4, 3) | -9   | 0   | G2669          | G2264      | G2263           |
| 13n3414  | G2084 | (0, 9, 1, 8, 4, 2, 3, 6, 5, 7) | (6, 2, 5, 3, 0, 7, 9, 1, 8, 4) | -3   | 0   | G2085          | G2490      | G2491           |
|          | G2085 | (0, 9, 2, 3, 1, 7, 4, 6, 5, 8) | (7, 4, 6, 8, 5, 2, 0, 3, 9, 1) | -3   | 0   | G2084          | G2491      | G2490           |
|          | G2490 | (0, 2, 1, 9, 3, 5, 4, 8, 6, 7) | (5, 8, 6, 4, 7, 2, 0, 3, 9, 1) | -3   | 0   | G2491          | G2084      | G2085           |
|          | G2491 | (0, 8, 7, 9, 2, 3, 1, 5, 4, 6) | (5, 3, 1, 4, 8, 0, 6, 9, 7, 2) | -3   | 0   | G2490          | G2085      | G2084           |
| m13n3414 | G2265 | (0, 2, 6, 9, 7, 8, 5, 3, 4, 1) | (5, 8, 1, 3, 0, 4, 2, 6, 9, 7) | -7   | 0   | G2266          | G2671      | G2672           |
|          | G2266 | (0, 2, 1, 8, 9, 7, 4, 5, 3, 6) | (4, 7, 5, 3, 6, 0, 8, 2, 9, 1) | -7   | 0   | G2265          | G2672      | G2671           |
|          | G2671 | (0, 6, 4, 5, 1, 3, 2, 9, 7, 8) | (5, 2, 7, 9, 6, 0, 8, 4, 1, 3) | -7   | 0   | G2672          | G2265      | G2266           |
|          | G2672 | (0, 2, 8, 9, 7, 3, 5, 6, 4, 1) | (3, 7, 4, 6, 1, 8, 0, 2, 9, 5) | -7   | 0   | G2671          | G2266      | G2265           |
| 13n3582  | G754  | (0, 2, 1, 9, 3, 5, 8, 7, 6, 4) | (3, 7, 5, 4, 6, 0, 2, 1, 9, 8) | -8   | -1  | —              | —          | G756            |
|          | G755  | (0, 9, 8, 7, 3, 5, 4, 6, 1, 2) | (5, 4, 1, 0, 6, 9, 8, 2, 3, 7) | -8   | -1  | —              | —          | G757            |
|          | G756  | (0, 2, 1, 4, 9, 5, 8, 7, 6, 3) | (5, 7, 6, 0, 3, 2, 4, 1, 9, 8) | -8   | -1  | —              | —          | G754            |
|          | G757  | (0, 9, 8, 6, 7, 2, 4, 3, 1, 5) | (4, 3, 1, 0, 5, 6, 9, 8, 7, 2) | -8   | -1  | —              | —          | G755            |
|          | G758  | (0, 8, 7, 6, 9, 1, 5, 3, 2, 4) | (6, 5, 3, 2, 4, 8, 0, 9, 7, 1) | -8   | 1   | —              | —          | G760            |
|          | G759  | (0, 4, 2, 1, 3, 8, 9, 7, 6, 5) | (3, 8, 7, 6, 9, 0, 5, 4, 2, 1) | -8   | 1   | —              | —          | G761            |

| Knot     | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
|          | G760  | (0, 7, 6, 5, 8, 4, 9, 2, 1, 3) | (5, 4, 2, 9, 1, 0, 3, 7, 6, 8) | -8   | 1   | –              | –          | G758            |
|          | G761  | (0, 1, 6, 8, 7, 9, 5, 4, 3, 2) | (5, 9, 0, 4, 3, 6, 2, 1, 8, 7) | -8   | 1   | –              | –          | G759            |
| m13n3582 | G1677 | (0, 2, 1, 6, 4, 5, 7, 3, 8, 9) | (7, 8, 3, 2, 9, 0, 1, 6, 4, 5) | -2   | -1  | –              | –          | ?               |
|          | G1678 | (0, 1, 6, 2, 4, 5, 3, 8, 7, 9) | (4, 5, 3, 8, 9, 0, 7, 6, 1, 2) | -2   | 1   | –              | –          | ?               |
| 13n3589  | G762  | (0, 1, 9, 8, 6, 7, 4, 3, 5, 2) | (4, 7, 3, 5, 0, 2, 9, 8, 1, 6) | -13  | 0   | G763           | G762       | G763            |
|          | G763  | (0, 6, 9, 7, 2, 5, 4, 1, 3, 8) | (4, 2, 3, 1, 8, 0, 9, 6, 7, 5) | -13  | 0   | G762           | G763       | G762            |
| m13n3589 | G1679 | (0, 8, 9, 1, 3, 2, 4, 5, 7, 6) | (5, 2, 4, 7, 0, 6, 8, 9, 3, 1) | 3    | 0   | G1680          | G1680      | G1679           |
|          | G1680 | (0, 9, 1, 2, 4, 3, 5, 8, 6, 7) | (5, 3, 8, 6, 0, 7, 9, 4, 1, 2) | 3    | 0   | G1679          | G1679      | G1680           |
| 13n3596  | G764  | (0, 7, 8, 5, 6, 3, 4, 1, 2, 9) | (6, 1, 4, 9, 2, 0, 7, 5, 8, 3) | -11  | 0   | G764           | G764       | G764            |
| m13n3596 | G1681 | (0, 9, 2, 1, 4, 3, 5, 6, 8, 7) | (6, 3, 8, 5, 0, 7, 2, 9, 4, 1) | 1    | 0   | G1681          | G1681      | G1681           |
| 13n3602  | G765  | (0, 2, 8, 9, 6, 7, 4, 5, 3, 1) | (4, 7, 3, 5, 0, 1, 8, 2, 9, 6) | -11  | 0   | G766           | G765       | G766            |
|          | G766  | (0, 1, 8, 7, 9, 6, 4, 5, 2, 3) | (4, 6, 2, 3, 5, 0, 8, 1, 7, 9) | -11  | 0   | G765           | G766       | G765            |
| m13n3602 | G1682 | (0, 3, 4, 2, 5, 7, 6, 9, 8, 1) | (5, 9, 8, 6, 1, 3, 0, 4, 2, 7) | 1    | 0   | G1683          | G1683      | G1682           |
|          | G1683 | (0, 9, 1, 3, 4, 2, 6, 5, 8, 7) | (6, 2, 5, 8, 0, 7, 1, 9, 4, 3) | 1    | 0   | G1682          | G1682      | G1683           |
| 13n3956  | G767  | (0, 8, 5, 9, 3, 6, 4, 2, 7, 1) | (4, 2, 1, 7, 8, 0, 9, 5, 3, 6) | -8   | -1  | –              | –          | G768            |
|          | G768  | (0, 8, 1, 9, 5, 4, 6, 3, 7, 2) | (4, 3, 7, 2, 0, 8, 1, 9, 5, 6) | -8   | -1  | –              | –          | G767            |
|          | G769  | (0, 4, 9, 7, 5, 8, 2, 6, 3, 1) | (5, 8, 6, 2, 1, 3, 4, 0, 9, 7) | -8   | 1   | –              | –          | G770            |
|          | G770  | (0, 5, 9, 6, 8, 7, 3, 1, 4, 2) | (6, 7, 3, 1, 4, 2, 0, 5, 9, 8) | -8   | 1   | –              | –          | G769            |
| m13n3956 | G2267 | (0, 7, 1, 6, 3, 5, 2, 4, 8, 9) | (5, 2, 4, 8, 7, 9, 6, 0, 1, 3) | -2   | -1  | –              | –          | G2674           |
|          | G2268 | (0, 6, 2, 9, 1, 3, 8, 4, 5, 7) | (4, 8, 7, 5, 6, 0, 2, 9, 1, 3) | -2   | -1  | –              | –          | G2673           |
|          | G2673 | (0, 3, 1, 4, 6, 7, 9, 8, 5, 2) | (4, 7, 5, 8, 0, 2, 3, 1, 9, 6) | -2   | -1  | –              | –          | G2268           |
|          | G2674 | (0, 7, 8, 9, 2, 5, 3, 6, 4, 1) | (3, 1, 4, 6, 7, 0, 8, 2, 9, 5) | -2   | -1  | –              | –          | G2267           |
|          | G2269 | (0, 1, 5, 7, 4, 6, 3, 8, 2, 9) | (6, 8, 9, 3, 0, 2, 1, 5, 7, 4) | -2   | 1   | –              | –          | G2676           |
|          | G2270 | (0, 2, 3, 9, 4, 6, 8, 5, 1, 7) | (4, 6, 8, 5, 7, 1, 2, 0, 9, 3) | -2   | 1   | –              | –          | G2675           |
|          | G2675 | (0, 7, 4, 3, 5, 6, 8, 1, 9, 2) | (6, 3, 1, 9, 0, 2, 4, 7, 5, 8) | -2   | 1   | –              | –          | G2270           |
|          | G2676 | (0, 7, 5, 8, 6, 9, 2, 3, 4, 1) | (6, 2, 9, 3, 1, 4, 5, 7, 0, 8) | -2   | 1   | –              | –          | G2269           |
| 13n3960  | G771  | (0, 3, 5, 4, 6, 8, 7, 9, 1, 2) | (7, 9, 1, 0, 2, 5, 3, 6, 4, 8) | 5    | 0   | G772           | G772       | G771            |
|          | G772  | (0, 2, 1, 3, 6, 4, 7, 5, 9, 8) | (4, 6, 5, 7, 9, 8, 0, 2, 3, 1) | 5    | 0   | G771           | G771       | G772            |
| m13n3960 | G1684 | (0, 7, 5, 6, 4, 2, 3, 9, 1, 8) | (3, 1, 9, 0, 8, 7, 5, 4, 6, 2) | -15  | -2  | –              | –          | G1684           |
|          | G1685 | (0, 8, 5, 6, 4, 2, 3, 1, 9, 7) | (3, 1, 9, 0, 8, 5, 7, 6, 4, 2) | -15  | -2  | –              | –          | G1685           |
|          | G1686 | (0, 3, 1, 9, 8, 6, 4, 7, 5, 2) | (6, 7, 4, 3, 5, 2, 0, 1, 9, 8) | -15  | 0   | G1687          | G1686      | G1687           |
|          | G1687 | (0, 3, 1, 9, 8, 6, 4, 7, 5, 2) | (6, 7, 5, 2, 4, 3, 0, 1, 9, 8) | -15  | 0   | G1686          | G1687      | G1686           |
|          | G1688 | (0, 8, 6, 4, 5, 3, 1, 2, 9, 7) | (5, 3, 1, 0, 2, 9, 7, 8, 6, 4) | -15  | 2   | –              | –          | G1688           |
|          | G1689 | (0, 7, 9, 5, 6, 4, 2, 3, 1, 8) | (6, 2, 4, 3, 1, 0, 8, 9, 7, 5) | -15  | 2   | –              | –          | G1689           |
| 13n3979  | G773  | (0, 5, 7, 9, 6, 8, 1, 4, 3, 2) | (4, 1, 2, 3, 0, 5, 7, 9, 8, 6) | -6   | -1  | –              | –          | G773            |
|          | G774  | (0, 9, 8, 1, 4, 6, 3, 5, 7, 2) | (6, 4, 3, 5, 7, 2, 9, 0, 1, 8) | -6   | 1   | –              | –          | G774            |
| m13n3979 | G1690 | (0, 7, 3, 4, 5, 2, 6, 9, 1, 8) | (5, 1, 6, 9, 8, 7, 0, 3, 4, 2) | -4   | -1  | –              | –          | G1690           |
|          | G1691 | (0, 7, 9, 2, 6, 3, 4, 5, 1, 8) | (6, 4, 5, 8, 1, 0, 9, 2, 7, 3) | -4   | 1   | –              | –          | G1691           |
| 13n4024  | G775  | (0, 7, 6, 4, 3, 2, 5, 9, 8, 1) | (2, 1, 9, 8, 7, 6, 0, 4, 3, 5) | -11  | -2  | –              | –          | G775            |
|          | G776  | (0, 9, 2, 8, 5, 4, 3, 7, 6, 1) | (5, 4, 6, 3, 1, 0, 9, 2, 8, 7) | -11  | 0   | G778           | G777       | G779            |
|          | G777  | (0, 3, 9, 2, 4, 8, 7, 6, 5, 1) | (4, 7, 6, 5, 1, 3, 2, 0, 9, 8) | -11  | 0   | G779           | G776       | G778            |
|          | G778  | (0, 9, 8, 7, 4, 2, 1, 5, 3, 6) | (5, 4, 3, 1, 0, 9, 6, 8, 7, 2) | -11  | 0   | G776           | G779       | G777            |
|          | G779  | (0, 4, 3, 9, 7, 6, 5, 8, 2, 1) | (6, 8, 5, 4, 2, 1, 0, 3, 9, 7) | -11  | 0   | G777           | G778       | G776            |
|          | G780  | (0, 3, 2, 6, 9, 8, 7, 5, 4, 1) | (6, 8, 7, 1, 5, 4, 3, 2, 0, 9) | -11  | 2   | –              | –          | G780            |
| m13n4024 | G1692 | (0, 2, 3, 8, 4, 5, 1, 6, 7, 9) | (6, 7, 1, 2, 9, 0, 8, 3, 4, 5) | 1    | 0   | G1693          | G1692      | G1693           |
|          | G1693 | (0, 1, 2, 8, 5, 6, 3, 4, 7, 9) | (6, 7, 9, 4, 0, 1, 8, 2, 3, 5) | 1    | 0   | G1692          | G1693      | G1692           |
| 13n4084  | G781  | (0, 2, 7, 8, 6, 9, 5, 3, 1, 4) | (6, 5, 3, 4, 1, 2, 0, 8, 7, 9) | -13  | 0   | G782           | G781       | G782            |
|          | G782  | (0, 8, 1, 7, 9, 6, 4, 2, 3, 5) | (6, 4, 5, 2, 3, 1, 0, 8, 7, 9) | -13  | 0   | G781           | G782       | G781            |
| m13n4084 | G1694 | (0, 7, 9, 1, 4, 3, 6, 2, 5, 8) | (4, 2, 5, 6, 8, 7, 0, 9, 1, 3) | 3    | 0   | G1695          | G1695      | G1694           |
|          | G1695 | (0, 2, 4, 5, 3, 6, 7, 9, 8, 1) | (3, 7, 9, 1, 8, 2, 0, 5, 4, 6) | 3    | 0   | G1694          | G1694      | G1695           |
| 13n4104  | G783  | (0, 2, 3, 6, 7, 4, 9, 5, 1, 8) | (4, 5, 9, 1, 2, 8, 6, 0, 7, 3) | -3   | 0   | G783           | G784       | G784            |
|          | G784  | (0, 1, 8, 9, 4, 2, 5, 3, 6, 7) | (5, 6, 2, 3, 0, 7, 1, 8, 9, 4) | -3   | 0   | G784           | G783       | G783            |
| m13n4104 | G1696 | (0, 9, 3, 8, 1, 4, 2, 7, 6, 5) | (7, 4, 6, 2, 5, 0, 9, 3, 1, 8) | -7   | 0   | G1696          | G1697      | G1697           |
|          | G1697 | (0, 7, 9, 6, 8, 3, 2, 5, 4, 1) | (3, 2, 5, 1, 4, 7, 6, 0, 9, 8) | -7   | 0   | G1697          | G1696      | G1696           |

| Knot     | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| 13n4508  | G2086 | (0, 8, 5, 7, 6, 3, 2, 4, 1, 9) | (6, 2, 9, 4, 1, 0, 5, 8, 7, 3) | -11  | 0   | G2087          | G2492      | G2493           |
|          | G2087 | (0, 8, 5, 7, 6, 3, 2, 4, 1, 9) | (6, 2, 1, 4, 9, 8, 5, 0, 7, 3) | -11  | 0   | G2086          | G2493      | G2492           |
|          | G2492 | (0, 8, 9, 7, 5, 4, 6, 1, 3, 2) | (4, 3, 6, 1, 0, 8, 2, 5, 9, 7) | -11  | 0   | G2493          | G2086      | G2087           |
|          | G2493 | (0, 8, 9, 7, 5, 4, 6, 1, 3, 2) | (6, 1, 4, 3, 0, 8, 2, 5, 9, 7) | -11  | 0   | G2492          | G2087      | G2086           |
| m13n4508 | G2271 | (0, 3, 1, 2, 5, 6, 4, 7, 9, 8) | (6, 9, 4, 7, 8, 3, 0, 1, 5, 2) | 1    | 0   | G2272          | G2678      | G2677           |
|          | G2272 | (0, 3, 1, 2, 5, 6, 4, 7, 9, 8) | (6, 7, 4, 9, 0, 3, 8, 1, 5, 2) | 1    | 0   | G2271          | G2677      | G2678           |
|          | G2677 | (0, 5, 3, 4, 6, 8, 7, 9, 1, 2) | (4, 1, 7, 9, 2, 3, 0, 5, 6, 8) | 1    | 0   | G2678          | G2272      | G2271           |
|          | G2678 | (0, 5, 3, 4, 6, 8, 7, 9, 1, 2) | (4, 1, 7, 9, 0, 5, 2, 3, 6, 8) | 1    | 0   | G2677          | G2271      | G2272           |
| 13n4587  | G785  | (0, 9, 7, 8, 6, 5, 3, 4, 2, 1) | (3, 4, 1, 2, 0, 9, 7, 8, 6, 5) | -19  | -2  | —              | —          | G785            |
|          | G786  | (0, 9, 7, 8, 6, 5, 3, 4, 2, 1) | (6, 5, 3, 4, 2, 1, 9, 0, 7, 8) | -19  | 2   | —              | —          | G786            |
| m13n4587 | G1698 | (0, 9, 1, 2, 4, 3, 5, 6, 8, 7) | (4, 3, 5, 6, 8, 7, 9, 0, 1, 2) | 9    | 0   | G1698          | G1698      | G1698           |
| 13n4634  | G787  | (0, 9, 1, 8, 6, 2, 5, 4, 7, 3) | (5, 2, 4, 3, 0, 7, 9, 8, 1, 6) | -8   | -1  | —              | —          | G787            |
|          | G788  | (0, 6, 9, 8, 1, 7, 5, 2, 4, 3) | (7, 2, 5, 4, 6, 3, 0, 9, 1, 8) | -8   | 1   | —              | —          | G788            |
| m13n4634 | G1699 | (0, 1, 8, 2, 4, 7, 5, 6, 9, 3) | (4, 5, 3, 6, 9, 0, 8, 1, 2, 7) | -2   | -1  | —              | —          | G1699           |
|          | G1700 | (0, 4, 7, 8, 6, 9, 1, 5, 2, 3) | (6, 1, 2, 5, 3, 4, 7, 0, 8, 9) | -2   | 1   | —              | —          | G1700           |
| 13n4639  | G789  | (0, 1, 8, 9, 6, 7, 5, 4, 2, 3) | (5, 4, 2, 3, 0, 1, 9, 8, 6, 7) | -17  | -2  | —              | —          | G789            |
|          | G790  | (0, 1, 9, 8, 6, 7, 4, 5, 2, 3) | (6, 7, 5, 4, 2, 3, 0, 1, 9, 8) | -17  | 2   | —              | —          | G790            |
| m13n4639 | G1701 | (0, 9, 1, 2, 4, 3, 5, 6, 8, 7) | (4, 3, 5, 6, 8, 7, 0, 9, 2, 1) | 7    | 0   | G1701          | G1701      | G1701           |
| 14n3155  | G2100 | (0, 1, 3, 2, 9, 7, 8, 4, 6, 5) | (4, 7, 8, 6, 5, 0, 1, 9, 3, 2) | -5   | 0   | G2101          | G2506      | G2507           |
|          | G2101 | (0, 1, 6, 4, 5, 8, 7, 9, 3, 2) | (4, 5, 3, 9, 0, 2, 1, 6, 8, 7) | -5   | 0   | G2100          | G2507      | G2506           |
|          | G2506 | (0, 3, 4, 2, 1, 6, 7, 5, 9, 8) | (6, 7, 9, 8, 5, 3, 4, 0, 2, 1) | -5   | 0   | G2507          | G2100      | G2101           |
|          | G2507 | (0, 6, 7, 9, 8, 3, 5, 4, 1, 2) | (3, 1, 2, 5, 4, 6, 0, 9, 7, 8) | -5   | 0   | G2506          | G2101      | G2100           |
| 14n5294  | G824  | (0, 3, 1, 9, 6, 8, 7, 5, 2, 4) | (5, 8, 7, 2, 0, 4, 3, 1, 6, 9) | -9   | 0   | G825           | G825       | G824            |
|          | G825  | (0, 8, 7, 9, 6, 4, 2, 5, 1, 3) | (4, 2, 1, 5, 3, 8, 7, 0, 6, 9) | -9   | 0   | G824           | G824       | G825            |
| m14n5294 | G1728 | (0, 2, 9, 3, 1, 4, 6, 7, 5, 8) | (6, 7, 4, 8, 5, 0, 2, 3, 9, 1) | -1   | 0   | G1729          | G1728      | G1729           |
|          | G1729 | (0, 2, 4, 7, 5, 6, 8, 1, 9, 3) | (5, 6, 1, 3, 9, 0, 2, 7, 4, 8) | -1   | 0   | G1728          | G1729      | G1728           |
| 14n8212  | G2102 | (0, 7, 5, 6, 2, 4, 3, 8, 1, 9) | (6, 3, 8, 9, 7, 1, 0, 2, 5, 4) | -5   | 0   | G2103          | G2509      | G2508           |
|          | G2103 | (0, 8, 9, 2, 1, 3, 7, 5, 4, 6) | (7, 3, 5, 6, 4, 0, 2, 1, 8, 9) | -5   | 0   | G2102          | G2508      | G2509           |
|          | G2508 | (0, 8, 4, 6, 5, 2, 3, 1, 7, 9) | (6, 5, 7, 1, 9, 8, 0, 4, 2, 3) | -5   | 0   | G2509          | G2103      | G2102           |
|          | G2509 | (0, 3, 2, 4, 1, 6, 7, 5, 9, 8) | (6, 9, 7, 8, 5, 3, 4, 0, 2, 1) | -5   | 0   | G2508          | G2102      | G2103           |
| 14n8584  | G2104 | (0, 8, 4, 6, 5, 7, 1, 3, 2, 9) | (7, 1, 9, 3, 0, 2, 4, 8, 6, 5) | -5   | 0   | G2105          | G2510      | G2511           |
|          | G2105 | (0, 4, 6, 5, 7, 3, 1, 2, 9, 8) | (7, 9, 1, 8, 2, 0, 4, 6, 5, 3) | -5   | 0   | G2104          | G2511      | G2510           |
|          | G2510 | (0, 6, 7, 5, 1, 3, 2, 4, 9, 8) | (5, 2, 4, 9, 6, 8, 7, 0, 3, 1) | -5   | 0   | G2511          | G2104      | G2105           |
|          | G2511 | (0, 2, 1, 6, 8, 7, 9, 5, 3, 4) | (5, 9, 7, 0, 3, 2, 4, 1, 6, 8) | -5   | 0   | G2510          | G2105      | G2104           |
| m14n8584 | G2277 | (0, 4, 2, 3, 1, 6, 7, 5, 9, 8) | (6, 9, 7, 8, 5, 2, 4, 0, 3, 1) | -5   | 0   | G2278          | G2684      | G2683           |
|          | G2278 | (0, 6, 8, 9, 7, 3, 5, 1, 4, 2) | (3, 1, 2, 5, 4, 6, 0, 8, 9, 7) | -5   | 0   | G2277          | G2683      | G2684           |
|          | G2683 | (0, 6, 4, 5, 8, 7, 9, 3, 1, 2) | (5, 3, 9, 1, 2, 0, 6, 8, 4, 7) | -5   | 0   | G2684          | G2278      | G2277           |
|          | G2684 | (0, 3, 1, 6, 9, 7, 8, 5, 2, 4) | (5, 9, 8, 0, 4, 2, 3, 1, 6, 7) | -5   | 0   | G2683          | G2277      | G2278           |
| 14n8700  | G2106 | (0, 8, 3, 5, 2, 6, 4, 7, 9, 1) | (4, 2, 9, 1, 7, 0, 8, 3, 5, 6) | -5   | 0   | G2107          | G2513      | G2512           |
|          | G2107 | (0, 5, 7, 3, 6, 4, 2, 8, 1, 9) | (6, 8, 2, 9, 1, 0, 5, 3, 7, 4) | -5   | 0   | G2106          | G2512      | G2513           |
|          | G2512 | (0, 7, 9, 8, 3, 1, 5, 2, 4, 6) | (5, 1, 4, 2, 0, 6, 9, 7, 8, 3) | -5   | 0   | G2513          | G2107      | G2106           |
|          | G2513 | (0, 8, 3, 5, 6, 4, 2, 9, 1, 7) | (6, 4, 7, 9, 1, 0, 8, 3, 5, 2) | -5   | 0   | G2512          | G2106      | G2107           |
| 14n9408  | G2108 | (0, 9, 6, 4, 7, 5, 2, 3, 1, 8) | (7, 5, 3, 8, 1, 0, 6, 9, 4, 2) | -9   | 0   | G2109          | G2515      | G2514           |
|          | G2109 | (0, 2, 9, 7, 8, 5, 3, 6, 4, 1) | (3, 8, 6, 1, 4, 0, 9, 2, 7, 5) | -9   | 0   | G2108          | G2514      | G2515           |
|          | G2514 | (0, 9, 7, 5, 6, 2, 4, 1, 3, 8) | (6, 4, 3, 8, 1, 7, 0, 5, 9, 2) | -9   | 0   | G2515          | G2109      | G2108           |
|          | G2515 | (0, 6, 7, 5, 3, 2, 4, 9, 1, 8) | (5, 1, 4, 9, 8, 6, 0, 3, 7, 2) | -9   | 0   | G2514          | G2108      | G2109           |
| m14n9408 | G2279 | (0, 2, 3, 1, 6, 4, 7, 5, 9, 8) | (6, 7, 9, 5, 2, 8, 3, 0, 4, 1) | -1   | 0   | G2280          | G2686      | G2685           |
|          | G2280 | (0, 2, 4, 3, 7, 5, 8, 6, 1, 9) | (5, 6, 1, 8, 2, 9, 4, 0, 7, 3) | -1   | 0   | G2279          | G2685      | G2686           |
|          | G2685 | (0, 3, 1, 2, 5, 7, 4, 6, 9, 8) | (7, 9, 4, 6, 8, 3, 0, 1, 5, 2) | -1   | 0   | G2686          | G2280      | G2279           |
|          | G2686 | (0, 2, 9, 1, 4, 5, 3, 6, 8, 7) | (5, 6, 3, 8, 0, 2, 7, 9, 4, 1) | -1   | 0   | G2685          | G2279      | G2280           |
| 14n9994  | G2110 | (0, 9, 1, 7, 8, 6, 4, 2, 5, 3) | (4, 2, 6, 3, 5, 0, 9, 7, 1, 8) | -9   | 0   | G2111          | G2517      | G2516           |
|          | G2111 | (0, 7, 5, 8, 6, 4, 2, 3, 9, 1) | (6, 2, 9, 3, 1, 0, 5, 7, 4, 8) | -9   | 0   | G2110          | G2516      | G2517           |
|          | G2516 | (0, 5, 7, 4, 6, 3, 1, 2, 9, 8) | (6, 9, 1, 8, 2, 0, 5, 7, 4, 3) | -9   | 0   | G2517          | G2111      | G2110           |
|          | G2517 | (0, 5, 7, 6, 3, 4, 2, 9, 1, 8) | (6, 9, 2, 1, 8, 0, 5, 3, 7, 4) | -9   | 0   | G2516          | G2110      | G2111           |



| Knot      | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|-----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| m14n9994  | G2281 | (0, 2, 9, 1, 3, 5, 4, 8, 6, 7) | (5, 8, 4, 6, 7, 2, 0, 3, 9, 1) | -1   | 0   | G2282          | G2687      | G2688           |
|           | G2282 | (0, 4, 3, 5, 7, 9, 6, 8, 1, 2) | (5, 8, 6, 1, 2, 4, 0, 3, 7, 9) | -1   | 0   | G2281          | G2688      | G2687           |
|           | G2687 | (0, 3, 9, 1, 2, 7, 5, 8, 4, 6) | (5, 7, 4, 6, 8, 0, 9, 3, 1, 2) | -1   | 0   | G2688          | G2281      | G2282           |
|           | G2688 | (0, 8, 1, 9, 2, 4, 3, 6, 7, 5) | (6, 4, 7, 3, 5, 0, 8, 1, 2, 9) | -1   | 0   | G2687          | G2282      | G2281           |
| 14n14356  | G807  | (0, 8, 7, 6, 5, 4, 3, 2, 1, 9) | (5, 2, 1, 9, 8, 0, 7, 6, 4, 3) | -19  | -2  | —              | —          | G807            |
|           | G808  | (0, 8, 7, 6, 5, 4, 3, 2, 1, 9) | (6, 5, 3, 2, 9, 1, 0, 8, 7, 4) | -19  | 2   | —              | —          | G808            |
| m14n14356 | G1715 | (0, 8, 9, 1, 2, 5, 3, 4, 6, 7) | (5, 4, 6, 7, 8, 9, 0, 1, 2, 3) | 9    | 0   | G1715          | G1715      | G1715           |
| 14n14798  | G2096 | (0, 7, 9, 5, 6, 8, 3, 1, 4, 2) | (6, 1, 3, 0, 2, 4, 7, 5, 9, 8) | -5   | 0   | G2097          | G2503      | G2502           |
|           | G2097 | (0, 8, 1, 3, 6, 2, 5, 4, 9, 7) | (5, 2, 4, 9, 0, 7, 1, 8, 6, 3) | -5   | 0   | G2096          | G2502      | G2503           |
|           | G2502 | (0, 7, 1, 8, 6, 3, 5, 2, 4, 9) | (6, 2, 5, 4, 9, 7, 0, 8, 1, 3) | -5   | 0   | G2503          | G2097      | G2096           |
|           | G2503 | (0, 9, 7, 2, 4, 1, 3, 5, 8, 6) | (5, 3, 1, 8, 0, 6, 7, 9, 4, 2) | -5   | 0   | G2502          | G2096      | G2097           |
| 14n16364  | G809  | (0, 9, 7, 6, 4, 5, 3, 2, 1, 8) | (3, 2, 1, 0, 8, 9, 7, 6, 4, 5) | -19  | -2  | —              | —          | G809            |
|           | G810  | (0, 7, 6, 5, 3, 4, 2, 1, 9, 8) | (3, 4, 2, 1, 9, 0, 8, 7, 6, 5) | -19  | 2   | —              | —          | G810            |
| m14n16364 | G1716 | (0, 1, 3, 4, 6, 5, 7, 8, 9, 2) | (7, 8, 9, 0, 2, 1, 3, 4, 6, 5) | 9    | 0   | G1716          | G1716      | G1716           |
| 14n17954  | G811  | (0, 2, 9, 3, 1, 6, 4, 8, 5, 7) | (6, 8, 4, 7, 5, 2, 0, 3, 9, 1) | -5   | 0   | G811           | G811       | G811            |
| 14n21069  | G812  | (0, 2, 9, 5, 7, 8, 6, 3, 4, 1) | (5, 6, 3, 1, 2, 4, 0, 7, 9, 8) | -11  | 0   | G813           | G813       | G812            |
|           | G813  | (0, 1, 7, 9, 8, 6, 3, 4, 2, 5) | (3, 6, 4, 5, 2, 0, 9, 1, 7, 8) | -11  | 0   | G812           | G812       | G813            |
| m14n21069 | G1717 | (0, 1, 5, 3, 6, 8, 7, 4, 9, 2) | (4, 8, 9, 7, 0, 5, 2, 1, 3, 6) | 1    | 0   | G1718          | G1718      | G1717           |
|           | G1718 | (0, 2, 5, 4, 6, 3, 8, 7, 1, 9) | (6, 8, 9, 7, 1, 0, 5, 2, 4, 3) | 1    | 0   | G1717          | G1717      | G1718           |
|           | G1719 | (0, 3, 5, 4, 6, 8, 7, 9, 1, 2) | (4, 7, 2, 9, 1, 3, 0, 5, 8, 6) | 1    | 0   | G1720          | G1719      | G1720           |
|           | G1720 | (0, 2, 4, 3, 5, 7, 6, 8, 1, 9) | (3, 6, 1, 8, 0, 2, 9, 4, 7, 5) | 1    | 0   | G1719          | G1720      | G1719           |
| 14n21152  | G814  | (0, 3, 1, 7, 6, 9, 5, 2, 8, 4) | (6, 8, 5, 4, 2, 3, 0, 7, 1, 9) | -11  | 0   | G814           | G815       | G815            |
|           | G815  | (0, 9, 7, 4, 2, 6, 1, 3, 8, 5) | (6, 3, 1, 0, 8, 9, 5, 7, 4, 2) | -11  | 0   | G815           | G814       | G814            |
| m14n21152 | G1721 | (0, 8, 3, 9, 1, 4, 6, 2, 7, 5) | (4, 2, 6, 5, 7, 8, 0, 9, 3, 1) | 1    | 0   | G1721          | G1722      | G1722           |
|           | G1722 | (0, 2, 3, 5, 8, 4, 6, 9, 7, 1) | (4, 6, 9, 1, 2, 7, 0, 5, 3, 8) | 1    | 0   | G1722          | G1721      | G1721           |
| 14n21419  | G2098 | (0, 2, 9, 1, 8, 6, 7, 4, 5, 3) | (4, 8, 5, 7, 3, 0, 2, 9, 1, 6) | -11  | 0   | G2099          | G2505      | G2504           |
|           | G2099 | (0, 2, 9, 1, 8, 6, 7, 4, 5, 3) | (4, 6, 3, 7, 5, 0, 2, 9, 1, 8) | -11  | 0   | G2098          | G2504      | G2505           |
|           | G2504 | (0, 8, 6, 4, 5, 2, 3, 1, 9, 7) | (5, 3, 1, 7, 9, 6, 0, 8, 4, 2) | -11  | 0   | G2505          | G2099      | G2098           |
|           | G2505 | (0, 8, 6, 4, 5, 2, 3, 1, 9, 7) | (5, 3, 9, 7, 1, 8, 0, 6, 4, 2) | -11  | 0   | G2504          | G2098      | G2099           |
| m14n21419 | G2275 | (0, 3, 1, 4, 6, 5, 8, 7, 9, 2) | (4, 7, 5, 9, 2, 0, 3, 1, 6, 8) | 1    | 0   | G2276          | G2681      | G2682           |
|           | G2276 | (0, 3, 1, 4, 6, 5, 8, 7, 9, 2) | (6, 9, 5, 7, 2, 0, 3, 1, 4, 8) | 1    | 0   | G2275          | G2682      | G2681           |
|           | G2681 | (0, 9, 1, 3, 5, 2, 4, 6, 8, 7) | (6, 2, 4, 8, 0, 7, 9, 1, 5, 3) | 1    | 0   | G2682          | G2275      | G2276           |
|           | G2682 | (0, 9, 1, 3, 5, 2, 4, 6, 8, 7) | (4, 2, 6, 8, 0, 7, 9, 3, 5, 1) | 1    | 0   | G2681          | G2276      | G2275           |
| 14n21472  | G816  | (0, 4, 6, 3, 5, 7, 2, 9, 1, 8) | (7, 9, 1, 8, 0, 4, 6, 3, 5, 2) | -4   | -1  | —              | —          | G816            |
|           | G817  | (0, 7, 9, 6, 1, 3, 5, 2, 4, 8) | (6, 3, 5, 2, 4, 8, 0, 7, 9, 1) | -4   | 1   | —              | —          | G817            |
| m14n21472 | G1723 | (0, 2, 9, 1, 4, 6, 8, 5, 7, 3) | (4, 6, 3, 5, 7, 0, 2, 9, 1, 8) | -6   | -1  | —              | —          | G1723           |
|           | G1724 | (0, 6, 8, 5, 7, 9, 2, 4, 1, 3) | (5, 2, 4, 1, 3, 6, 8, 0, 7, 9) | -6   | 1   | —              | —          | G1724           |
| 14n21881  | G819  | (0, 9, 8, 7, 6, 5, 4, 3, 2, 1) | (3, 2, 1, 0, 9, 8, 7, 6, 5, 4) | -21  | -4  | —              | —          | G819            |
|           | G818  | (0, 9, 6, 8, 7, 5, 4, 3, 2, 1) | (4, 3, 1, 2, 0, 9, 8, 7, 6, 5) | -21  | -2  | —              | —          | G818            |
|           | G820  | (0, 9, 8, 7, 6, 4, 3, 5, 2, 1) | (6, 5, 4, 3, 2, 1, 9, 0, 8, 7) | -21  | 2   | —              | —          | G820            |
|           | G821  | (0, 9, 8, 7, 6, 5, 4, 3, 2, 1) | (7, 6, 5, 4, 3, 2, 1, 0, 9, 8) | -21  | 4   | —              | —          | G821            |
| m14n21881 | G1725 | (0, 1, 2, 3, 4, 5, 6, 7, 8, 9) | (3, 4, 5, 6, 7, 8, 9, 0, 1, 2) | 11   | 0   | ?              | ?          | G1725           |
| 14n22172  | G822  | (0, 3, 1, 9, 5, 7, 6, 4, 8, 2) | (6, 8, 4, 2, 0, 3, 1, 9, 5, 7) | -8   | -1  | —              | —          | G822            |
|           | G823  | (0, 4, 8, 6, 5, 7, 3, 1, 9, 2) | (5, 7, 3, 1, 9, 2, 0, 8, 4, 6) | -8   | 1   | —              | —          | G823            |
| m14n22172 | G1726 | (0, 8, 1, 5, 3, 4, 6, 2, 9, 7) | (4, 2, 6, 9, 7, 8, 0, 5, 3, 1) | -2   | -1  | —              | —          | G1726           |
|           | G1727 | (0, 8, 5, 1, 3, 4, 2, 6, 9, 7) | (6, 4, 2, 7, 9, 0, 8, 1, 5, 3) | -2   | 1   | —              | —          | G1727           |
| 15n40180  | G834  | (0, 7, 1, 5, 4, 3, 6, 2, 9, 8) | (3, 2, 6, 9, 8, 7, 0, 5, 4, 1) | -6   | -1  | —              | —          | G834            |
|           | G835  | (0, 9, 6, 2, 5, 4, 3, 7, 1, 8) | (7, 4, 3, 8, 1, 0, 9, 2, 6, 5) | -6   | 1   | —              | —          | G835            |
| m15n40180 | G1737 | (0, 1, 2, 3, 9, 5, 8, 6, 7, 4) | (3, 5, 6, 7, 4, 0, 1, 9, 2, 8) | -4   | -1  | —              | —          | G1737           |
|           | G1738 | (0, 7, 8, 6, 9, 5, 1, 2, 3, 4) | (6, 2, 5, 3, 4, 0, 7, 8, 9, 1) | -4   | 1   | —              | —          | G1738           |
| 15n40184  | G836  | (0, 1, 7, 5, 4, 6, 3, 2, 9, 8) | (3, 6, 2, 9, 8, 0, 7, 5, 4, 1) | -10  | -1  | —              | —          | G837            |
|           | G837  | (0, 2, 9, 6, 5, 7, 8, 4, 3, 1) | (4, 8, 3, 1, 0, 2, 6, 9, 7, 5) | -10  | -1  | —              | —          | G836            |
|           | G838  | (0, 9, 6, 5, 2, 4, 3, 1, 7, 8) | (7, 4, 3, 1, 8, 0, 9, 6, 2, 5) | -10  | 1   | —              | —          | G839            |
|           | G839  | (0, 8, 7, 3, 4, 6, 5, 2, 9, 1) | (6, 4, 2, 5, 9, 1, 0, 8, 3, 7) | -10  | 1   | —              | —          | G838            |

| Knot      | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|-----------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| m15n40184 | G1739 | (0, 1, 2, 9, 8, 3, 5, 6, 4, 7) | (3, 5, 6, 4, 0, 7, 9, 1, 8, 2) | 0    | -1  | –              | –          | G1740           |
|           | G1740 | (0, 8, 5, 9, 2, 3, 1, 4, 6, 7) | (3, 1, 0, 4, 6, 7, 5, 8, 9, 2) | 0    | -1  | –              | –          | G1739           |
|           | G1741 | (0, 3, 1, 2, 4, 9, 8, 5, 6, 7) | (5, 9, 6, 8, 0, 7, 3, 1, 2, 4) | 0    | 1   | –              | –          | G1742           |
|           | G1742 | (0, 1, 3, 6, 4, 5, 8, 2, 9, 7) | (5, 8, 9, 2, 0, 1, 3, 7, 6, 4) | 0    | 1   | –              | –          | G1741           |
| 15n40211  | G840  | (0, 8, 7, 6, 5, 4, 3, 2, 1, 9) | (4, 2, 1, 9, 0, 8, 7, 6, 5, 3) | -21  | -2  | –              | –          | G840            |
|           | G841  | (0, 8, 7, 6, 5, 4, 3, 2, 1, 9) | (6, 4, 3, 2, 1, 9, 0, 8, 7, 5) | -21  | 2   | –              | –          | G841            |
| m15n40211 | G1743 | (0, 2, 1, 3, 4, 5, 6, 8, 7, 9) | (6, 8, 7, 9, 0, 1, 2, 3, 4, 5) | 11   | 0   | G1743          | G1743      | G1743           |
| 15n40214  | G842  | (0, 2, 9, 1, 8, 6, 7, 5, 4, 3) | (5, 7, 4, 3, 2, 0, 1, 9, 8, 6) | -17  | -2  | –              | –          | G842            |
|           | G843  | (0, 9, 7, 8, 6, 5, 3, 4, 2, 1) | (5, 3, 2, 4, 0, 9, 7, 1, 8, 6) | -17  | 0   | G844           | G843       | G844            |
|           | G844  | (0, 2, 9, 8, 5, 7, 4, 3, 6, 1) | (5, 6, 4, 3, 1, 2, 0, 9, 8, 7) | -17  | 0   | G843           | G844       | G843            |
|           | G845  | (0, 9, 8, 6, 7, 5, 2, 4, 1, 3) | (7, 5, 4, 2, 3, 1, 0, 9, 6, 8) | -17  | 2   | –              | –          | G845            |
| m15n40214 | G1744 | (0, 8, 9, 1, 2, 3, 5, 4, 6, 7) | (5, 4, 6, 7, 8, 0, 2, 9, 1, 3) | 7    | 0   | G1745          | G1745      | G1744           |
|           | G1745 | (0, 2, 4, 1, 3, 5, 7, 6, 8, 9) | (4, 5, 7, 6, 8, 9, 2, 0, 1, 3) | 7    | 0   | G1744          | G1744      | G1745           |
| 15n41127  | G846  | (0, 1, 5, 8, 7, 6, 9, 4, 3, 2) | (4, 9, 0, 3, 2, 1, 5, 8, 7, 6) | -6   | -1  | –              | –          | G846            |
|           | G847  | (0, 9, 8, 3, 6, 5, 4, 7, 1, 2) | (6, 5, 4, 7, 1, 0, 9, 2, 3, 8) | -6   | 1   | –              | –          | G847            |
| m15n41127 | G1746 | (0, 1, 2, 9, 4, 5, 6, 8, 7, 3) | (5, 6, 7, 3, 0, 1, 2, 4, 9, 8) | -4   | -1  | –              | –          | G1746           |
|           | G1747 | (0, 6, 5, 7, 8, 9, 4, 1, 2, 3) | (5, 4, 9, 1, 2, 3, 0, 6, 7, 8) | -4   | 1   | –              | –          | G1747           |
| 15n41131  | G848  | (0, 9, 1, 8, 5, 4, 7, 6, 3, 2) | (4, 3, 6, 2, 0, 9, 1, 8, 7, 5) | -13  | -2  | –              | –          | G849            |
|           | G849  | (0, 9, 1, 8, 7, 4, 3, 6, 5, 2) | (4, 3, 5, 2, 0, 9, 8, 1, 7, 6) | -13  | -2  | –              | –          | G848            |
|           | G850  | (0, 6, 5, 9, 8, 7, 4, 1, 3, 2) | (5, 4, 1, 3, 2, 0, 9, 6, 8, 7) | -13  | 0   | G851           | G851       | G850            |
|           | G851  | (0, 2, 1, 9, 8, 5, 7, 6, 4, 3) | (4, 8, 7, 6, 3, 0, 2, 1, 9, 5) | -13  | 0   | G850           | G850       | G851            |
|           | G852  | (0, 7, 9, 8, 6, 5, 4, 1, 3, 2) | (4, 1, 5, 3, 2, 0, 7, 6, 9, 8) | -13  | 0   | G854           | G853       | G855            |
|           | G853  | (0, 9, 5, 2, 6, 4, 3, 1, 8, 7) | (4, 3, 1, 8, 0, 9, 7, 6, 5, 2) | -13  | 0   | G855           | G852       | G854            |
|           | G854  | (0, 3, 2, 9, 5, 8, 7, 6, 4, 1) | (5, 7, 6, 4, 1, 3, 2, 9, 0, 8) | -13  | 0   | G852           | G855       | G853            |
|           | G855  | (0, 7, 9, 8, 6, 5, 4, 1, 3, 2) | (5, 1, 4, 3, 0, 2, 7, 6, 9, 8) | -13  | 0   | G853           | G854       | G852            |
|           | G856  | (0, 9, 6, 5, 8, 7, 4, 1, 3, 2) | (7, 5, 4, 1, 3, 2, 0, 6, 9, 8) | -13  | 2   | –              | –          | G857            |
|           | G857  | (0, 7, 6, 9, 8, 5, 4, 1, 3, 2) | (6, 5, 1, 4, 3, 2, 0, 7, 9, 8) | -13  | 2   | –              | –          | G856            |
| m15n41131 | G1748 | (0, 8, 9, 1, 2, 5, 3, 4, 6, 7) | (6, 2, 3, 4, 7, 0, 8, 9, 1, 5) | 3    | 0   | G1749          | G1748      | G1749           |
|           | G1749 | (0, 1, 9, 2, 3, 5, 6, 4, 7, 8) | (5, 6, 4, 7, 0, 1, 2, 8, 9, 3) | 3    | 0   | G1748          | G1749      | G1748           |
| 15n41189  | G858  | (0, 6, 7, 9, 8, 5, 4, 2, 3, 1) | (4, 2, 3, 6, 1, 0, 9, 7, 8, 5) | -14  | -1  | –              | –          | G858            |
|           | G859  | (0, 8, 9, 7, 6, 3, 2, 4, 5, 1) | (6, 3, 4, 2, 1, 0, 5, 8, 9, 7) | -14  | 1   | –              | –          | G859            |
| m15n41189 | G1750 | (0, 2, 3, 4, 9, 6, 5, 7, 8, 1) | (5, 7, 8, 1, 2, 0, 9, 3, 4, 6) | 4    | -1  | –              | –          | G1750           |
|           | G1751 | (0, 3, 4, 6, 5, 2, 7, 8, 9, 1) | (5, 7, 8, 2, 1, 9, 0, 3, 4, 6) | 4    | 1   | –              | –          | G1751           |
| 15n45482  | G860  | (0, 3, 1, 9, 6, 8, 5, 7, 4, 2) | (5, 8, 7, 4, 0, 2, 9, 3, 1, 6) | -9   | 0   | G861           | G860       | G861            |
|           | G861  | (0, 3, 1, 9, 6, 8, 5, 7, 4, 2) | (5, 8, 7, 2, 0, 4, 1, 3, 9, 6) | -9   | 0   | G860           | G861       | G860            |
| m15n45482 | G1752 | (0, 1, 6, 8, 4, 7, 5, 9, 2, 3) | (5, 7, 9, 2, 0, 3, 1, 4, 6, 8) | -1   | 0   | G1753          | G1753      | G1752           |
|           | G1753 | (0, 3, 1, 4, 2, 5, 7, 9, 6, 8) | (7, 9, 5, 8, 6, 0, 3, 4, 1, 2) | -1   | 0   | G1752          | G1752      | G1753           |
| 15n47800  | G862  | (0, 8, 4, 7, 6, 5, 2, 9, 1, 3) | (5, 2, 9, 1, 0, 8, 7, 3, 4, 6) | -10  | -1  | –              | –          | G863            |
|           | G863  | (0, 9, 8, 6, 2, 5, 3, 1, 4, 7) | (5, 4, 1, 0, 7, 9, 8, 6, 2, 3) | -10  | -1  | –              | –          | G862            |
|           | G864  | (0, 3, 6, 4, 2, 5, 1, 9, 8, 7) | (4, 5, 1, 9, 8, 0, 7, 6, 3, 2) | -10  | 1   | –              | –          | G865            |
|           | G865  | (0, 2, 4, 1, 8, 7, 6, 9, 5, 3) | (7, 9, 0, 6, 5, 3, 2, 4, 1, 8) | -10  | 1   | –              | –          | G864            |
| m15n47800 | G1754 | (0, 1, 3, 7, 4, 6, 8, 5, 2, 9) | (5, 8, 9, 2, 0, 1, 3, 7, 6, 4) | 0    | -1  | –              | –          | G1755           |
|           | G1755 | (0, 1, 2, 9, 3, 5, 8, 6, 4, 7) | (3, 5, 6, 4, 7, 0, 1, 9, 8, 2) | 0    | -1  | –              | –          | G1754           |
|           | G1756 | (0, 7, 4, 1, 3, 5, 2, 6, 8, 9) | (5, 3, 2, 6, 8, 9, 7, 0, 1, 4) | 0    | 1   | –              | –          | G1757           |
|           | G1757 | (0, 3, 1, 9, 2, 4, 8, 5, 6, 7) | (5, 9, 8, 6, 7, 0, 3, 1, 2, 4) | 0    | 1   | –              | –          | G1756           |
| 15n49058  | G866  | (0, 9, 1, 8, 6, 7, 5, 3, 4, 2) | (5, 3, 7, 4, 0, 2, 9, 8, 1, 6) | -13  | 0   | G867           | G867       | G866            |
|           | G867  | (0, 9, 7, 5, 6, 4, 2, 3, 1, 8) | (6, 4, 3, 8, 1, 0, 7, 9, 5, 2) | -13  | 0   | G866           | G866       | G867            |
| m15n49058 | G1758 | (0, 3, 5, 4, 6, 8, 7, 9, 1, 2) | (4, 7, 1, 9, 2, 3, 0, 5, 6, 8) | 3    | 0   | G1759          | G1758      | G1759           |
|           | G1759 | (0, 2, 4, 3, 5, 7, 6, 8, 1, 9) | (5, 6, 1, 8, 9, 2, 0, 4, 7, 3) | 3    | 0   | G1758          | G1759      | G1758           |
| 15n51709  | G868  | (0, 7, 9, 6, 8, 2, 1, 4, 3, 5) | (4, 1, 3, 0, 5, 7, 6, 9, 8, 2) | -2   | -1  | –              | –          | G868            |
|           | G869  | (0, 2, 1, 4, 3, 7, 9, 6, 8, 5) | (3, 7, 6, 9, 8, 0, 5, 2, 4, 1) | -2   | 1   | –              | –          | G869            |
| m15n51709 | G1760 | (0, 1, 8, 9, 7, 2, 5, 3, 6, 4) | (5, 6, 3, 4, 0, 8, 1, 9, 2, 7) | -8   | -1  | –              | –          | G1760           |
|           | G1761 | (0, 8, 1, 9, 2, 7, 5, 6, 3, 4) | (7, 2, 5, 3, 6, 4, 0, 1, 8, 9) | -8   | 1   | –              | –          | G1761           |
| 15n52931  | G870  | (0, 8, 7, 9, 6, 4, 2, 5, 1, 3) | (5, 4, 2, 3, 1, 0, 8, 9, 7, 6) | -17  | 0   | G870           | G870       | G870            |

| Knot       | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|------------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| m15n52931  | G1762 | (0, 2, 4, 5, 7, 9, 6, 8, 1, 3) | (6, 8, 9, 0, 1, 3, 2, 4, 5, 7) | 7    | 0   | G1762          | G1762      | G1762           |
| 15n52940   | G871  | (0, 9, 7, 6, 4, 5, 3, 2, 1, 8) | (5, 3, 1, 0, 8, 9, 7, 6, 4, 2) | -17  | -2  | –              | –          | G871            |
|            | G872  | (0, 7, 6, 9, 5, 8, 4, 2, 3, 1) | (5, 4, 2, 3, 1, 0, 9, 7, 8, 6) | -17  | 0   | G873           | G872       | G873            |
|            | G873  | (0, 9, 7, 8, 6, 4, 2, 1, 5, 3) | (5, 4, 2, 3, 1, 0, 9, 7, 8, 6) | -17  | 0   | G872           | G873       | G872            |
|            | G874  | (0, 7, 6, 5, 3, 4, 2, 1, 9, 8) | (6, 4, 2, 1, 9, 0, 8, 7, 5, 3) | -17  | 2   | –              | –          | G874            |
| m15n52940  | G1763 | (0, 1, 2, 4, 3, 5, 6, 7, 9, 8) | (5, 9, 6, 0, 7, 8, 1, 2, 4, 3) | 7    | 0   | G1764          | G1764      | G1763           |
|            | G1764 | (0, 3, 4, 6, 5, 7, 1, 8, 2, 9) | (7, 8, 9, 1, 0, 2, 3, 4, 6, 5) | 7    | 0   | G1763          | G1763      | G1764           |
| 15n52944   | G875  | (0, 9, 7, 5, 2, 4, 3, 1, 6, 8) | (4, 3, 1, 0, 6, 8, 7, 5, 9, 2) | -10  | -1  | –              | –          | G875            |
|            | G876  | (0, 2, 7, 5, 4, 6, 3, 1, 9, 8) | (6, 9, 3, 1, 0, 2, 8, 7, 5, 4) | -10  | 1   | –              | –          | G876            |
| m15n52944  | G1765 | (0, 2, 7, 3, 6, 4, 5, 8, 1, 9) | (5, 8, 1, 9, 0, 7, 2, 3, 6, 4) | 0    | -1  | –              | –          | G1765           |
|            | G1766 | (0, 8, 1, 4, 5, 3, 6, 2, 7, 9) | (5, 3, 6, 7, 2, 9, 0, 8, 1, 4) | 0    | 1   | –              | –          | G1766           |
| 15n53218   | G2112 | (0, 8, 7, 5, 6, 3, 4, 2, 9, 1) | (6, 4, 2, 9, 1, 8, 0, 5, 3, 7) | -13  | 0   | G2113          | G2518      | G2519           |
|            | G2113 | (0, 8, 9, 6, 7, 5, 4, 2, 1, 3) | (7, 2, 4, 1, 3, 0, 8, 6, 5, 9) | -13  | 0   | G2112          | G2519      | G2518           |
|            | G2518 | (0, 2, 9, 8, 6, 7, 4, 5, 3, 1) | (4, 7, 5, 1, 0, 3, 9, 2, 8, 6) | -13  | 0   | G2519          | G2112      | G2113           |
|            | G2519 | (0, 8, 7, 4, 6, 5, 3, 1, 2, 9) | (6, 5, 1, 9, 2, 0, 8, 4, 7, 3) | -13  | 0   | G2518          | G2113      | G2112           |
| m15n53218  | G2283 | (0, 2, 4, 3, 6, 5, 7, 8, 1, 9) | (5, 7, 1, 8, 2, 9, 0, 4, 6, 3) | 3    | 0   | G2284          | G2689      | G2690           |
|            | G2284 | (0, 2, 4, 5, 3, 6, 7, 9, 8, 1) | (3, 7, 9, 1, 8, 0, 4, 5, 2, 6) | 3    | 0   | G2283          | G2690      | G2689           |
|            | G2689 | (0, 3, 2, 4, 7, 5, 6, 8, 9, 1) | (5, 8, 6, 1, 3, 9, 0, 2, 4, 7) | 3    | 0   | G2690          | G2283      | G2284           |
|            | G2690 | (0, 3, 2, 4, 5, 7, 8, 6, 9, 1) | (5, 8, 6, 9, 1, 3, 4, 0, 2, 7) | 3    | 0   | G2689          | G2284      | G2283           |
| 15n56026   | G877  | (0, 2, 4, 9, 8, 6, 5, 7, 1, 3) | (5, 7, 1, 3, 2, 0, 9, 4, 6, 8) | -6   | -1  | –              | –          | G877            |
|            | G878  | (0, 2, 6, 8, 7, 5, 4, 9, 1, 3) | (5, 7, 9, 4, 3, 1, 0, 2, 6, 8) | -6   | 1   | –              | –          | G878            |
| m15n56026  | G1767 | (0, 8, 6, 1, 2, 4, 5, 3, 9, 7) | (5, 3, 9, 7, 8, 0, 1, 6, 4, 2) | -4   | -1  | –              | –          | G1767           |
|            | G1768 | (0, 8, 4, 2, 3, 5, 6, 1, 9, 7) | (5, 3, 1, 6, 7, 9, 0, 8, 4, 2) | -4   | 1   | –              | –          | G1768           |
| 15n56079   | G879  | (0, 7, 8, 6, 2, 5, 4, 3, 1, 9) | (4, 1, 3, 9, 7, 0, 8, 6, 5, 2) | -13  | -2  | –              | –          | G879            |
|            | G880  | (0, 8, 6, 5, 4, 7, 3, 1, 2, 9) | (7, 4, 3, 1, 9, 2, 0, 6, 8, 5) | -13  | 2   | –              | –          | G880            |
| m15n56079  | G1769 | (0, 8, 1, 9, 3, 5, 2, 4, 6, 7) | (3, 2, 5, 4, 6, 0, 7, 8, 9, 1) | 3    | 0   | G1770          | G1769      | G1770           |
|            | G1770 | (0, 2, 4, 5, 6, 3, 7, 9, 8, 1) | (3, 6, 7, 9, 1, 8, 0, 4, 2, 5) | 3    | 0   | G1769          | G1770      | G1769           |
| 15n59005   | G881  | (0, 8, 1, 9, 6, 3, 5, 4, 7, 2) | (5, 4, 7, 2, 0, 8, 1, 9, 3, 6) | -6   | -1  | –              | –          | G881            |
|            | G882  | (0, 5, 8, 7, 9, 6, 3, 1, 4, 2) | (6, 9, 3, 1, 4, 2, 0, 5, 8, 7) | -6   | 1   | –              | –          | G882            |
| m15n59005  | G1771 | (0, 5, 7, 9, 6, 8, 1, 4, 2, 3) | (4, 1, 2, 3, 0, 5, 7, 9, 6, 8) | -4   | -1  | –              | –          | G1771           |
|            | G1772 | (0, 1, 9, 2, 5, 7, 4, 6, 8, 3) | (5, 7, 4, 6, 8, 3, 0, 1, 2, 9) | -4   | 1   | –              | –          | G1772           |
| 15n124802  | G826  | (0, 7, 8, 5, 6, 3, 4, 1, 2, 9) | (3, 1, 2, 9, 0, 7, 8, 5, 6, 4) | -15  | -2  | –              | –          | G826            |
|            | G827  | (0, 7, 8, 5, 6, 3, 4, 1, 2, 9) | (5, 3, 4, 1, 2, 9, 0, 7, 8, 6) | -15  | 2   | –              | –          | G827            |
| m15n124802 | G1730 | (0, 3, 2, 5, 4, 7, 6, 9, 8, 1) | (6, 9, 8, 1, 0, 3, 2, 4, 5, 7) | 5    | 0   | G1730          | G1730      | G1730           |
| 15n124988  | G828  | (0, 1, 9, 8, 6, 7, 5, 4, 2, 3) | (5, 7, 4, 2, 0, 3, 9, 1, 6, 8) | -15  | 0   | G829           | G828       | G829            |
|            | G829  | (0, 6, 9, 7, 5, 2, 4, 1, 3, 8) | (4, 2, 3, 1, 0, 8, 9, 6, 7, 5) | -15  | 0   | G828           | G829       | G828            |
| m15n124988 | G1731 | (0, 9, 1, 2, 4, 3, 5, 6, 8, 7) | (5, 3, 6, 8, 0, 7, 1, 9, 4, 2) | 5    | 0   | G1732          | G1732      | G1731           |
|            | G1732 | (0, 9, 1, 2, 4, 3, 5, 6, 8, 7) | (5, 3, 6, 8, 0, 7, 9, 2, 4, 1) | 5    | 0   | G1731          | G1731      | G1732           |
| 15n127271  | G830  | (0, 9, 6, 7, 8, 5, 3, 4, 1, 2) | (5, 3, 1, 2, 4, 9, 6, 0, 7, 8) | -11  | 0   | G831           | G830       | G831            |
|            | G831  | (0, 7, 6, 4, 5, 2, 3, 1, 8, 9) | (5, 1, 3, 8, 9, 7, 0, 6, 2, 4) | -11  | 0   | G830           | G831       | G830            |
| m15n127271 | G1733 | (0, 9, 2, 4, 3, 6, 5, 8, 7, 1) | (5, 3, 7, 1, 8, 0, 9, 2, 4, 6) | 1    | 0   | G1734          | G1734      | G1733           |
|            | G1734 | (0, 2, 5, 4, 3, 7, 6, 9, 8, 1) | (3, 7, 1, 9, 8, 0, 2, 5, 4, 6) | 1    | 0   | G1733          | G1733      | G1734           |
| 15n130933  | G832  | (0, 8, 3, 1, 4, 2, 5, 6, 9, 7) | (5, 2, 9, 6, 0, 7, 8, 3, 4, 1) | -1   | 0   | G832           | G833       | G833            |
|            | G833  | (0, 2, 4, 5, 7, 9, 6, 8, 1, 3) | (5, 6, 8, 1, 3, 4, 0, 2, 7, 9) | -1   | 0   | G833           | G832       | G832            |
| m15n130933 | G1735 | (0, 3, 1, 9, 8, 6, 4, 7, 5, 2) | (4, 8, 7, 5, 2, 0, 9, 3, 1, 6) | -9   | 0   | G1735          | G1736      | G1736           |
|            | G1736 | (0, 9, 6, 8, 5, 7, 2, 4, 1, 3) | (7, 2, 1, 4, 0, 3, 6, 9, 5, 8) | -9   | 0   | G1736          | G1735      | G1735           |
| 16n207543  | G883  | (0, 5, 6, 7, 4, 8, 9, 1, 2, 3) | (4, 1, 2, 3, 9, 0, 5, 6, 7, 8) | -1   | 0   | G884           | G883       | G884            |
|            | G884  | (0, 1, 2, 7, 4, 5, 6, 8, 9, 3) | (4, 5, 6, 3, 9, 0, 1, 2, 7, 8) | -1   | 0   | G883           | G884       | G883            |
| m16n207543 | G1773 | (0, 4, 7, 6, 5, 9, 8, 3, 2, 1) | (5, 8, 3, 2, 1, 4, 0, 9, 7, 6) | -9   | 0   | G1774          | G1774      | G1773           |
|            | G1774 | (0, 9, 4, 3, 7, 6, 5, 8, 2, 1) | (5, 3, 2, 8, 1, 0, 9, 4, 7, 6) | -9   | 0   | G1773          | G1773      | G1774           |
| 16n226759  | G2114 | (0, 1, 7, 9, 8, 6, 3, 5, 4, 2) | (3, 6, 2, 5, 4, 0, 7, 1, 9, 8) | -11  | 0   | G2520          | G2521      | G2115           |
|            | G2115 | (0, 2, 1, 8, 9, 7, 4, 6, 5, 3) | (4, 7, 6, 3, 5, 0, 8, 2, 1, 9) | -11  | 0   | G2521          | G2520      | G2114           |
|            | G2520 | (0, 2, 8, 9, 7, 5, 4, 6, 3, 1) | (4, 7, 3, 6, 1, 0, 8, 2, 9, 5) | -11  | 0   | G2114          | G2115      | G2521           |
|            | G2521 | (0, 8, 9, 6, 5, 7, 4, 2, 1, 3) | (7, 2, 4, 1, 0, 3, 8, 6, 5, 9) | -11  | 0   | G2115          | G2114      | G2520           |

| Knot       | ID    | $\mathbb{X}$ -permutation      | $\mathbb{O}$ -permutation      | $tb$ | $r$ | $\mu(\Lambda)$ | $-\Lambda$ | $-\mu(\Lambda)$ |
|------------|-------|--------------------------------|--------------------------------|------|-----|----------------|------------|-----------------|
| m16n226759 | G2285 | (0, 3, 1, 2, 4, 7, 5, 6, 9, 8) | (7, 9, 5, 6, 8, 3, 0, 1, 4, 2) | 1    | 0   | G2286          | G2692      | G2691           |
|            | G2286 | (0, 8, 1, 3, 2, 5, 6, 4, 7, 9) | (6, 2, 4, 9, 7, 0, 1, 8, 3, 5) | 1    | 0   | G2285          | G2691      | G2692           |
|            | G2691 | (0, 2, 3, 1, 5, 4, 6, 8, 9, 7) | (4, 8, 9, 6, 0, 7, 2, 3, 5, 1) | 1    | 0   | G2692          | G2286      | G2285           |
|            | G2692 | (0, 8, 9, 1, 3, 2, 6, 4, 5, 7) | (6, 2, 4, 5, 0, 7, 1, 8, 9, 3) | 1    | 0   | G2691          | G2285      | G2286           |
| 16n245346  | G885  | (0, 9, 2, 4, 3, 6, 5, 8, 7, 1) | (5, 3, 8, 1, 7, 0, 9, 4, 2, 6) | -1   | 0   | G886           | G886       | G885            |
|            | G886  | (0, 2, 5, 4, 3, 7, 6, 9, 8, 1) | (3, 6, 1, 9, 8, 2, 0, 5, 4, 7) | -1   | 0   | G885           | G885       | G886            |
| m16n245346 | G1775 | (0, 8, 5, 6, 7, 3, 4, 1, 2, 9) | (7, 4, 9, 1, 2, 8, 0, 5, 6, 3) | -9   | 0   | G1776          | G1775      | G1776           |
|            | G1776 | (0, 6, 7, 8, 5, 3, 4, 1, 2, 9) | (5, 1, 2, 4, 9, 6, 0, 7, 8, 3) | -9   | 0   | G1775          | G1776      | G1775           |
| 16n245347  | G2116 | (0, 3, 2, 7, 5, 9, 6, 8, 1, 4) | (5, 8, 6, 4, 1, 3, 0, 2, 7, 9) | -7   | 0   | G2117          | G2522      | G2523           |
|            | G2117 | (0, 8, 6, 3, 5, 1, 4, 2, 9, 7) | (5, 4, 2, 7, 9, 6, 0, 8, 3, 1) | -7   | 0   | G2116          | G2523      | G2522           |
|            | G2522 | (0, 6, 9, 7, 5, 2, 4, 1, 3, 8) | (5, 1, 4, 3, 8, 6, 0, 7, 9, 2) | -7   | 0   | G2523          | G2116      | G2117           |
|            | G2523 | (0, 4, 2, 7, 5, 9, 8, 6, 1, 3) | (5, 8, 6, 3, 1, 4, 2, 0, 7, 9) | -7   | 0   | G2522          | G2117      | G2116           |
| m16n245347 | G2287 | (0, 7, 9, 2, 4, 1, 3, 5, 8, 6) | (5, 1, 3, 8, 0, 6, 7, 9, 4, 2) | -3   | 0   | G2288          | G2693      | G2694           |
|            | G2288 | (0, 4, 2, 5, 7, 9, 6, 8, 1, 3) | (5, 8, 6, 1, 3, 4, 0, 2, 7, 9) | -3   | 0   | G2287          | G2694      | G2693           |
|            | G2693 | (0, 8, 2, 9, 1, 3, 6, 4, 7, 5) | (6, 3, 7, 4, 5, 0, 2, 8, 1, 9) | -3   | 0   | G2694          | G2287      | G2288           |
|            | G2694 | (0, 5, 3, 6, 4, 7, 9, 1, 8, 2) | (4, 1, 9, 2, 8, 0, 5, 6, 3, 7) | -3   | 0   | G2693          | G2288      | G2287           |
| 16n246031  | G2118 | (0, 8, 9, 2, 1, 3, 7, 4, 6, 5) | (7, 3, 4, 6, 5, 0, 2, 8, 1, 9) | -3   | 0   | G2119          | G2525      | G2524           |
|            | G2119 | (0, 4, 6, 5, 8, 9, 7, 2, 1, 3) | (5, 7, 2, 1, 3, 4, 0, 8, 6, 9) | -3   | 0   | G2118          | G2524      | G2525           |
|            | G2524 | (0, 5, 6, 4, 8, 7, 9, 1, 3, 2) | (4, 1, 3, 9, 2, 0, 5, 6, 8, 7) | -3   | 0   | G2525          | G2119      | G2118           |
|            | G2525 | (0, 9, 3, 1, 2, 7, 5, 4, 6, 8) | (7, 5, 8, 4, 6, 3, 0, 9, 1, 2) | -3   | 0   | G2524          | G2118      | G2119           |
| m16n246031 | G2289 | (0, 8, 6, 4, 5, 7, 2, 1, 3, 9) | (7, 2, 1, 9, 0, 3, 6, 4, 8, 5) | -7   | 0   | G2290          | G2695      | G2696           |
|            | G2290 | (0, 6, 8, 7, 2, 4, 5, 3, 1, 9) | (4, 1, 5, 3, 6, 9, 0, 8, 7, 2) | -7   | 0   | G2289          | G2696      | G2695           |
|            | G2695 | (0, 1, 9, 5, 8, 6, 7, 2, 4, 3) | (6, 7, 2, 0, 4, 1, 3, 5, 9, 8) | -7   | 0   | G2696          | G2289      | G2290           |
|            | G2696 | (0, 2, 7, 8, 6, 9, 5, 3, 4, 1) | (5, 9, 1, 3, 0, 4, 2, 7, 8, 6) | -7   | 0   | G2695          | G2290      | G2289           |
| 16n246032  | G887  | (0, 9, 8, 2, 1, 4, 3, 7, 6, 5) | (7, 4, 3, 6, 5, 0, 9, 2, 1, 8) | -5   | 0   | G887           | G887       | G887            |
| m16n246032 | G1777 | (0, 3, 4, 7, 8, 5, 6, 1, 2, 9) | (5, 6, 1, 2, 3, 9, 0, 7, 8, 4) | -5   | 0   | G1777          | G1777      | G1777           |
| 16n765768  | G888  | (0, 1, 8, 9, 6, 7, 5, 4, 2, 3) | (5, 7, 2, 4, 0, 3, 1, 8, 6, 9) | -13  | 0   | G888           | G888       | G888            |
| m16n765768 | G1778 | (0, 9, 2, 1, 4, 3, 5, 6, 8, 7) | (5, 3, 8, 6, 0, 7, 9, 2, 4, 1) | 3    | 0   | G1778          | G1778      | G1778           |
| 17?        | G889  | (0, 9, 8, 7, 6, 5, 4, 3, 2, 1) | (3, 4, 2, 1, 0, 9, 8, 7, 6, 5) | -23  | -2  | –              | –          | G889            |
|            | G890  | (0, 9, 8, 7, 6, 5, 4, 3, 2, 1) | (6, 5, 4, 3, 2, 1, 0, 9, 7, 8) | -23  | 2   | –              | –          | G890            |
| m17?       | G1779 | (0, 1, 2, 3, 4, 5, 6, 7, 8, 9) | (6, 7, 8, 9, 1, 0, 2, 3, 4, 5) | 13   | 0   | G1779          | G1779      | G1779           |

TABLE 1. The nondestabilizable Legendrian knots of arc index 10 which can be represented on a grid of size 10. Symmetry data is included when known.

| Knot | ID    | $tb$ | $r$ | Parents                           |
|------|-------|------|-----|-----------------------------------|
| 8a1  | S1131 | -8   | -1  | G1011                             |
|      | S1132 | -8   | 1   | G1011                             |
| m8a1 | S2261 | -4   | -1  | G1850, G1849, G1848               |
|      | S2262 | -4   | 1   | G1850, G1849, G1848               |
| 8a2  | S1232 | -12  | -5  | G1015, G1014                      |
|      | S1231 | -12  | -3  | G1012, G1013, G1014, G1015        |
|      | S1230 | -12  | -1  | G1018, G1017, G1012, G1013, G1016 |
|      | S1233 | -12  | 1   | G1018, G1019, G1017, G1020, G1016 |
|      | S1234 | -12  | 3   | G1020, G1019, G1021, G1022        |
|      | S1235 | -12  | 5   | G1021, G1022                      |
| m8a2 | S2323 | 0    | -1  | G1851                             |
|      | S2324 | 0    | 1   | G1851                             |
| 8a3  | S1236 | -6   | -1  | G1023, G1024                      |
|      | S1237 | -6   | 1   | G1023, G1024                      |
| 8a4  | S1238 | -4   | -1  | G1025, G1026                      |
|      | S1239 | -4   | 1   | G1025, G1026                      |

| Knot | ID    | tb  | r  | Parents   |
|------|-------|-----|----|---|
| m8a4 | S2326 | -8  | -3 | G1852, G1853, G1855   |
|      | S2327 | -8  | -3 | G1856, G1854  |
|      | S2325 | -8  | -1 | G1853, G1857, G1855, G1852, G1856, G1860, G1858, G1854, G1859 |
|      | S2328 | -8  | 1  | G1865, G1862, G1857, G1863, G1860, G1858, G1864, G1861, G1859 |
|      | S2329 | -8  | 3  | G1865, G1862  |
|      | S2330 | -8  | 3  | G1864, G1863, G1861   |
| 8a5  | S1242 | -12 | -5 | G1030   |
|      | S1241 | -12 | -3 | G1030, G1029, G1027, G1028                                    |
|      | S1240 | -12 | -1 | G1034, G1027, G1033, G1029, G1031, G1028, G1032               |
|      | S1243 | -12 | 1  | G1034, G1036, G1033, G1035, G1037, G1031, G1032               |
|      | S1244 | -12 | 3  | G1038, G1035, G1037, G1036                                    |
|      | S1245 | -12 | 5  | G1038   |
| m8a5 | S2331 | 0   | -1 | G1866   |
|      | S2332 | 0   | 1  | G1866   |
| 8a6  | S1247 | -10 | -3 | G1041, G1039  |
|      | S1248 | -10 | -3 | G1040   |
|      | S1246 | -10 | -1 | G1042, G1039, G1040, G1041, G1043                             |
|      | S1249 | -10 | 1  | G1046, G1042, G1044, G1045, G1043                             |
|      | S1250 | -10 | 3  | G1045   |
|      | S1251 | -10 | 3  | G1046, G1044  |
| m8a6 | S2333 | -2  | -1 | G1868   |
|      | S2334 | -2  | -1 | G1867   |
|      | S2335 | -2  | 1  | G1868   |
|      | S2336 | -2  | 1  | G1867   |
| 8a7  | S1252 | -3  | -2 | G1048   |
|      | S1253 | -3  | -2 | G1047   |
|      | S1254 | -3  | 0  | G1048, G1049, G1047, G1050                                    |
|      | S1255 | -3  | 2  | G1049   |
|      | S1256 | -3  | 2  | G1050   |
| m8a7 | S2339 | -9  | -4 | G1872   |
|      | S2340 | -9  | -4 | G1873   |
|      | S2337 | -9  | -2 | G1872, G1871, G1869, G1873                                    |
|      | S2338 | -9  | -2 | G1870   |
|      | S2341 | -9  | 0  | G1874, G1870  |
|      | S2342 | -9  | 0  | G1871, G1876, G1875, G1869                                    |
|      | S2346 | -9  | 2  | G1877, G1878, G1876, G1875                                    |
|      | S2347 | -9  | 2  | G1874   |
|      | S2348 | -9  | 4  | G1878   |
|      | S2349 | -9  | 4  | G1877   |
| 8a8  | S1257 | -5  | -2 | G1052   |
|      | S1258 | -5  | -2 | G1051   |
|      | S1259 | -5  | -2 | G1054   |
|      | S1260 | -5  | -2 | G1053   |
|      | S1261 | -5  | -2 | G1055   |
|      | S1264 | -5  | 0  | G1052, G1060  |
|      | S1265 | -5  | 0  | G1054, G1055, G1058, G1056                                    |
|      | S1267 | -5  | 0  | G1059, G1053, G1051, G1057                                    |
|      | S1268 | -5  | 2  | G1056   |
|      | S1269 | -5  | 2  | G1057   |
|      | S1270 | -5  | 2  | G1059   |
|      | S1271 | -5  | 2  | G1058   |
|      | S1272 | -5  | 2  | G1060   |
|      | S2350 | -7  | -2 | G1881   |
|      | S2351 | -7  | -2 | G1880   |

m8a8

| Knot  | ID    | $tb$ | $r$ | Parents                                  |
|-------|-------|------|-----|--|
|       | S2352 | -7   | -2  | G1879                                    |
|       | S2354 | -7   | 0   | G1881, G1882, G1879, G1883, G1884, G1880 |
|       | S2356 | -7   | 2   | G1882                                    |
|       | S2357 | -7   | 2   | G1883                                    |
|       | S2358 | -7   | 2   | G1884                                    |
| 8a9   | S1276 | -6   | -3  | G1061, G1062                             |
|       | S1274 | -6   | -1  | G1064, G1063                             |
|       | S1275 | -6   | -1  | G1061, G1062                             |
|       | S1278 | -6   | 1   | G1064, G1063                             |
|       | S1279 | -6   | 1   | G1065, G1066                             |
|       | S1280 | -6   | 3   | G1065, G1066                             |
| 8a10  | S1133 | -3   | -2  | G892, G894                               |
|       | S1134 | -3   | -2  | G893                                     |
|       | S1135 | -3   | -2  | G891                                     |
|       | S1136 | -3   | 0   | G896, G892, G891, G895, G894, G898       |
|       | S1137 | -3   | 0   | G897, G893                               |
|       | S1138 | -3   | 2   | G898, G895                               |
|       | S1139 | -3   | 2   | G896                                     |
|       | S1140 | -3   | 2   | G897                                     |
| m8a10 | S2268 | -9   | -4  | G1786, G1785                             |
|       | S2264 | -9   | -2  | G1784                                    |
|       | S2265 | -9   | -2  | G1781, G1782, G1780                      |
|       | S2266 | -9   | -2  | G1786, G1785                             |
|       | S2267 | -9   | -2  | G1783                                    |
|       | S2269 | -9   | 0   | G1782, G1781, G1787, G1780, G1789, G1788 |
|       | S2270 | -9   | 0   | G1783, G1790                             |
|       | S2271 | -9   | 0   | G1791, G1784                             |
|       | S2272 | -9   | 2   | G1791                                    |
|       | S2273 | -9   | 2   | G1793, G1792                             |
|       | S2274 | -9   | 2   | G1790                                    |
|       | S2275 | -9   | 2   | G1787, G1789, G1788                      |
|       | S2276 | -9   | 4   | G1793, G1792                             |
| 8a11  | S1145 | -10  | -3  | G899                                     |
|       | S1146 | -10  | -3  | G900                                     |
|       | S1141 | -10  | -1  | G900                                     |
|       | S1142 | -10  | -1  | G902                                     |
|       | S1143 | -10  | -1  | G901                                     |
|       | S1144 | -10  | -1  | G899                                     |
|       | S1147 | -10  | 1   | G902                                     |
|       | S1148 | -10  | 1   | G901                                     |
|       | S1149 | -10  | 1   | G903                                     |
|       | S1150 | -10  | 1   | G904                                     |
|       | S1151 | -10  | 3   | G903                                     |
|       | S1152 | -10  | 3   | G904                                     |
| m8a11 | S2277 | -2   | -1  | G1800, G1801, G1794, G1799, G1796        |
|       | S2278 | -2   | -1  | G1795, G1798, G1797                      |
|       | S2279 | -2   | 1   | G1801, G1798, G1797, G1799               |
|       | S2280 | -2   | 1   | G1795, G1794, G1796, G1800               |
| 8a12  | S1153 | -6   | -1  | G909, G906                               |
|       | S1154 | -6   | -1  | G907, G905, G910, G911, G908             |
|       | S1158 | -6   | 1   | G909, G906                               |
|       | S1159 | -6   | 1   | G907, G911, G910, G905, G908             |
| 8a13  | S1163 | -5   | -2  | G917, G923                               |
|       | S1164 | -5   | -2  | G919, G916                               |
|       | S1165 | -5   | -2  | G914, G918                               |

| Knot  | ID    | $tb$ | $r$ | Parents  |
|-------|-------|------|-----|--|
|       | S1166 | -5   | -2  | G912, G913   |
|       | S1167 | -5   | -2  | G920, G922   |
|       | S1168 | -5   | -2  | G915, G921   |
|       | S1170 | -5   | 0   | G931, G922, G935, G914, G915, G918, G917, G924, G928, G930, G934, G921, G925, G929, G920, G923 |
|       | S1171 | -5   | 0   | G932, G927, G913, G926, G912, G933, G919, G916   |
|       | S1172 | -5   | 2   | G928, G925   |
|       | S1173 | -5   | 2   | G932, G926   |
|       | S1174 | -5   | 2   | G931, G934   |
|       | S1175 | -5   | 2   | G933, G927   |
|       | S1176 | -5   | 2   | G930, G935   |
|       | S1177 | -5   | 2   | G929, G924   |
| m8a13 | S2281 | -7   | -2  | G1802  |
|       | S2282 | -7   | -2  | G1803  |
|       | S2283 | -7   | 0   | G1804, G1803   |
|       | S2284 | -7   | 0   | G1802, G1805   |
|       | S2285 | -7   | 2   | G1805  |
|       | S2286 | -7   | 2   | G1804  |
| 8a14  | S1182 | -10  | -3  | G936, G938   |
|       | S1183 | -10  | -3  | G937, G939   |
|       | S1178 | -10  | -1  | G941, G947, G938, G950, G942, G936   |
|       | S1179 | -10  | -1  | G943, G944, G949, G945   |
|       | S1180 | -10  | -1  | G937, G939, G948, G940, G951, G946   |
|       | S1185 | -10  | 1   | G952, G948, G940, G951, G954, G946   |
|       | S1186 | -10  | 1   | G943, G944, G949, G945   |
|       | S1187 | -10  | 1   | G941, G953, G947, G955, G950, G942   |
|       | S1188 | -10  | 3   | G953, G955   |
|       | S1189 | -10  | 3   | G954, G952   |
| m8a14 | S2288 | -2   | -1  | G1807, G1810, G1809  |
|       | S2289 | -2   | -1  | G1808  |
|       | S2291 | -2   | -1  | G1811, G1806   |
|       | S2292 | -2   | 1   | G1808  |
|       | S2293 | -2   | 1   | G1807, G1809   |
|       | S2294 | -2   | 1   | G1811, G1806   |
|       | S2296 | -2   | 1   | G1810  |
| 8a15  | S1195 | -14  | -3  | G956, G959, G957   |
|       | S1196 | -14  | -3  | G958   |
|       | S1191 | -14  | -1  | G958, G967, G966   |
|       | S1192 | -14  | -1  | G962, G957, G959, G960, G964, G963, G956, G961, G965   |
|       | S1197 | -14  | 1   | G967, G966, G971   |
|       | S1200 | -14  | 1   | G962, G969, G960, G970, G964, G963, G961, G968, G965   |
|       | S1201 | -14  | 3   | G971   |
|       | S1202 | -14  | 3   | G970, G968, G969   |
| m8a15 | S2297 | 2    | -1  | G1812  |
|       | S2298 | 2    | -1  | G1813  |
|       | S2299 | 2    | -1  | G1817, G1816   |
|       | S2300 | 2    | -1  | G1815, G1814   |
|       | S2301 | 2    | 1   | G1817  |
|       | S2302 | 2    | 1   | G1812, G1814   |
|       | S2303 | 2    | 1   | G1815, G1816   |
|       | S2304 | 2    | 1   | G1813  |
| 8a16  | S1204 | -3   | -2  | G974, G973   |
|       | S1205 | -3   | -2  | G972   |
|       | S1206 | -3   | 0   | G975, G972   |
|       | S1207 | -3   | 0   | G974, G977, G973, G976   |

| Knot  | ID    | $tb$ | $r$ | Parents  |
|-------|-------|------|-----|--|
|       | S1208 | -3   | 2   | G975   |
|       | S1209 | -3   | 2   | G977, G976   |
| m8a16 | S2310 | -9   | -4  | G1830, G1832, G1831  |
|       | S2305 | -9   | -2  | G1831, G1832, G1822, G1829, G1824, G1820   |
|       | S2306 | -9   | -2  | G1823, G1828, G1818, G1825, G1821  |
|       | S2308 | -9   | -2  | G1819, G1827, G1826, G1830   |
|       | S2312 | -9   | 0   | G1823, G1835, G1828, G1837, G1821, G1844, G1836, G1825, G1839, G1818               |
|       | S2314 | -9   | 0   | G1838, G1824, G1841, G1822, G1829, G1833, G1843, G1820                             |
|       | S2315 | -9   | 0   | G1827, G1840, G1842, G1819, G1826, G1834   |
|       | S2316 | -9   | 2   | G1845, G1840, G1842, G1834   |
|       | S2317 | -9   | 2   | G1838, G1847, G1846, G1841, G1833, G1843   |
|       | S2319 | -9   | 2   | G1835, G1837, G1844, G1836, G1839  |
|       | S2322 | -9   | 4   | G1847, G1845, G1846  |
| 8a17  | S1214 | -6   | -3  | G982   |
|       | S1215 | -6   | -3  | G979, G978   |
|       | S1216 | -6   | -3  | G980   |
|       | S1217 | -6   | -3  | G981, G983   |
|       | S1210 | -6   | -1  | G987, G985, G981, G992, G989, G983   |
|       | S1211 | -6   | -1  | G999, G988, G979, G984, G986, G978   |
|       | S1212 | -6   | -1  | G996, G997, G980, G998, G993   |
|       | S1213 | -6   | -1  | G994, G991, G995, G990, G982   |
|       | S1218 | -6   | 1   | G987, G985, G1001, G989, G992, G1000   |
|       | S1219 | -6   | 1   | G1004, G996, G997, G998, G993  |
|       | S1220 | -6   | 1   | G999, G1005, G988, G984, G986, G1002   |
|       | S1221 | -6   | 1   | G994, G991, G995, G990, G1003  |
|       | S1222 | -6   | 3   | G1000, G1001   |
|       | S1223 | -6   | 3   | G1003  |
|       | S1224 | -6   | 3   | G1005, G1002   |
|       | S1225 | -6   | 3   | G1004  |
| 8a18  | S1227 | -6   | -3  | G1006  |
|       | S1226 | -6   | -1  | G1006, G1008, G1007, G1009   |
|       | S1228 | -6   | 1   | G1008, G1009, G1007, G1010   |
|       | S1229 | -6   | 3   | G1010  |
| 10n2  | S64   | -5   | -2  | G180   |
|       | S65   | -5   | 0   | G180, G181   |
|       | S66   | -5   | 2   | G181   |
| m10n2 | S1330 | -7   | -4  | G1185  |
|       | S1329 | -7   | -2  | G1184, G1185   |
|       | S1331 | -7   | 0   | G1184, G1186   |
|       | S1332 | -7   | 2   | G1186, G1187   |
|       | S1333 | -7   | 4   | G1187  |
| 10n3  | S179  | -1   | -2  | G249, G250   |
|       | S180  | -1   | 0   | G251, G249, G252, G250   |
|       | S181  | -1   | 2   | G251, G252   |
| m10n3 | S1420 | -11  | -4  | G1269  |
|       | S1419 | -11  | -2  | G1268, G1269   |
|       | S1421 | -11  | 0   | G1268, G1270   |
|       | S1422 | -11  | 2   | G1271, G1270   |
|       | S1423 | -11  | 4   | G1271  |
| 10n4  | S235  | -14  | -5  | G285   |
|       | S236  | -14  | -5  | G286   |
|       | S234  | -14  | -3  | G283, G285, G284, G282, G279, G286, G281, G280                                     |
|       | S233  | -14  | -1  | G291, G283, G289, G288, G280, G290, G294, G279, G282, G284, G292, G281, G293, G287 |



| Knot   | ID    | tb  | r  | Parents  |
|--------|-------|-----|----|--|
|        | S237  | -14 | 1  | G295, G299, G291, G288, G289, G290, G294, G296, G300, G297, G292, G298, G293, G287             |
|        | S238  | -14 | 3  | G295, G299, G302, G296, G301, G300, G297, G298   |
|        | S239  | -14 | 5  | G301   |
|        | S240  | -14 | 5  | G302   |
| m10n4  | S1471 | 2   | -1 | G1312, G1315   |
|        | S1472 | 2   | -1 | G1314, G1313   |
|        | S1473 | 2   | 1  | G1312, G1315   |
|        | S1474 | 2   | 1  | G1314, G1313   |
| 10n6   | S263  | -7  | -2 | G304, G306, G307, G305   |
|        | S264  | -7  | -2 | G308, G309, G310, G303   |
|        | S268  | -7  | 0  | G312, G318, G308, G317, G310, G316, G314, G305, G311, G307, G313, G304, G306, G303, G304, G313 |
|        | S272  | -7  | 2  | G312, G317, G313, G311   |
|        | S273  | -7  | 2  | G316, G315, G318, G314   |
| m10n6  | S1504 | -5  | -2 | G1316  |
|        | S1505 | -5  | 0  | G1316, G1317   |
|        | S1506 | -5  | 2  | G1317  |
| 10n7   | S274  | -3  | -2 | G319   |
|        | S275  | -3  | -2 | G320   |
|        | S277  | -3  | 0  | G319, G320, G322, G321   |
|        | S278  | -3  | 2  | G322   |
|        | S279  | -3  | 2  | G321   |
| m10n7  | S1507 | -9  | -2 | G1318  |
|        | S1508 | -9  | 0  | G1318, G1319   |
|        | S1509 | -9  | 2  | G1319  |
| 10n8   | S281  | -12 | -3 | G323   |
|        | S282  | -12 | -3 | G324   |
|        | S280  | -12 | -1 | G329, G326, G324, G325, G328, G327, G330, G323   |
|        | S283  | -12 | 1  | G329, G326, G332, G325, G327, G328, G330, G331   |
|        | S284  | -12 | 3  | G331   |
|        | S285  | -12 | 3  | G332   |
| m10n8  | S1510 | 0   | -1 | G1326  |
|        | S1511 | 0   | -1 | G1321  |
|        | S1512 | 0   | -1 | G1324, G1329, G1325  |
|        | S1513 | 0   | -1 | G1328, G1327, G1320  |
|        | S1514 | 0   | -1 | G1323  |
|        | S1515 | 0   | -1 | G1322  |
|        | S1516 | 0   | 1  | G1321  |
|        | S1517 | 0   | 1  | G1329, G1322, G1327, G1320   |
|        | S1518 | 0   | 1  | G1326  |
|        | S1519 | 0   | 1  | G1324, G1328, G1325  |
|        | S1520 | 0   | 1  | G1323  |
| 10n10  | S10   | -12 | -3 | G1   |
|        | S8    | -12 | -3 | G2   |
|        | S9    | -12 | -3 | G3   |
|        | S2    | -12 | -1 | G9, G5, G7, G11, G4, G8, G6, G10   |
|        | S5    | -12 | -1 | G1, G2, G3   |
|        | S14   | -12 | 1  | G4, G5, G6, G7, G8, G9, G10, G11   |
|        | S16   | -12 | 1  | G12, G13, G14  |
|        | S18   | -12 | 3  | G12  |
|        | S19   | -12 | 3  | G13  |
|        | S20   | -12 | 3  | G14  |
| m10n10 | S1281 | 0   | -1 | G1068  |

| Knot   | ID    | $tb$ | $r$ | Parents                                |
|--------|-------|------|-----|--|
|        | S1282 | 0    | -1  | G1067                                  |
|        | S1283 | 0    | -1  | G1071                                  |
|        | S1284 | 0    | -1  | G1070                                  |
|        | S1285 | 0    | -1  | G1069                                  |
|        | S1286 | 0    | 1   | G1071                                  |
|        | S1287 | 0    | 1   | G1068                                  |
|        | S1288 | 0    | 1   | G1069                                  |
|        | S1289 | 0    | 1   | G1067                                  |
|        | S1290 | 0    | 1   | G1070                                  |
| 10n11  | S22   | -16  | -3  | G16, G15, G17, G18                     |
|        | S21   | -16  | -1  | G21, G19, G20, G17, G18, G22, G15, G16 |
|        | S23   | -16  | 1   | G26, G21, G19, G20, G22, G24, G25, G23 |
|        | S24   | -16  | 3   | G25, G23, G24, G26                     |
| m10n11 | S1291 | 4    | -1  | G1076                                  |
|        | S1292 | 4    | -1  | G1075                                  |
|        | S1293 | 4    | -1  | G1074                                  |
|        | S1294 | 4    | -1  | G1073                                  |
|        | S1295 | 4    | -1  | G1072                                  |
|        | S1296 | 4    | 1   | G1074                                  |
|        | S1297 | 4    | 1   | G1075                                  |
|        | S1298 | 4    | 1   | G1072                                  |
|        | S1299 | 4    | 1   | G1073                                  |
|        | S1300 | 4    | 1   | G1076                                  |
| 10n12  | S25   | -7   | -2  | G27, G31, G30                          |
|        | S26   | -7   | -2  | G32, G28                               |
|        | S28   | -7   | -2  | G29                                    |
|        | S29   | -7   | -2  | G33                                    |
|        | S30   | -7   | 0   | G27, G33, G36, G35                     |
|        | S32   | -7   | 0   | G37, G29                               |
|        | S33   | -7   | 0   | G28, G30, G31, G32, G34, G38, G39, G40 |
|        | S36   | -7   | 2   | G34, G38                               |
|        | S37   | -7   | 2   | G39, G40, G35                          |
|        | S39   | -7   | 2   | G36                                    |
|        | S40   | -7   | 2   | G37                                    |
| m10n12 | S1301 | -5   | -2  | G1078                                  |
|        | S1302 | -5   | -2  | G1079                                  |
|        | S1303 | -5   | -2  | G1077                                  |
|        | S1304 | -5   | -2  | G1080                                  |
|        | S1306 | -5   | 0   | G1077, G1080, G1084, G1081             |
|        | S1308 | -5   | 0   | G1083, G1079, G1078, G1082             |
|        | S1309 | -5   | 2   | G1082                                  |
|        | S1310 | -5   | 2   | G1083                                  |
|        | S1311 | -5   | 2   | G1084                                  |
|        | S1312 | -5   | 2   | G1081                                  |
| 10n14  | S43   | -8   | -1  | G42, G46, G50, G41, G51, G47           |
|        | S46   | -8   | -1  | G45, G44, G52, G48, G49, G43           |
|        | S48   | -8   | 1   | G42, G46, G50, G41, G51, G47           |
|        | S49   | -8   | 1   | G45, G44, G52, G48, G49, G43           |
| m10n14 | S1313 | -4   | -1  | G1085                                  |
|        | S1314 | -4   | -1  | G1087                                  |
|        | S1315 | -4   | -1  | G1088                                  |
|        | S1316 | -4   | -1  | G1086                                  |
|        | S1317 | -4   | 1   | G1087                                  |
|        | S1318 | -4   | 1   | G1086                                  |
|        | S1319 | -4   | 1   | G1085                                  |

| Knot   | ID    | tb  | r  | Parents   |
|--------|-------|-----|----|---|
|        | S1320 | -4  | 1  | G1088   |
| 10n15  | S54   | -8  | -1 | G57, G59  |
|        | S55   | -8  | -1 | G54   |
|        | S56   | -8  | -1 | G55, G53, G58, G56, G61, G60  |
|        | S57   | -8  | 1  | G54   |
|        | S58   | -8  | 1  | G57, G59  |
|        | S59   | -8  | 1  | G55, G53, G58, G56, G61, G60  |
| m10n15 | S1321 | -4  | -1 | G1092, G1093  |
|        | S1322 | -4  | -1 | G1091, G1090, G1089   |
|        | S1323 | -4  | 1  | G1092, G1093  |
|        | S1324 | -4  | 1  | G1091, G1090, G1089   |
| 10n18  | S61   | -8  | -3 | G62   |
|        | S60   | -8  | -1 | G65, G64, G63, G62  |
|        | S62   | -8  | 1  | G64, G65, G66, G63  |
|        | S63   | -8  | 3  | G66   |
| m10n18 | S1326 | -4  | -3 | G1094   |
|        | S1325 | -4  | -1 | G1098, G1096, G1095, G1094, G1097   |
|        | S1327 | -4  | 1  | G1098, G1096, G1095, G1099, G1097   |
|        | S1328 | -4  | 3  | G1099   |
| 10n20  | S67   | -1  | -2 | G68   |
|        | S68   | -1  | -2 | G67   |
|        | S69   | -1  | 0  | G68, G70  |
|        | S70   | -1  | 0  | G69, G67  |
|        | S71   | -1  | 2  | G70   |
|        | S72   | -1  | 2  | G69   |
| m10n20 | S1339 | -11 | -4 | G1105   |
|        | S1340 | -11 | -4 | G1106   |
|        | S1334 | -11 | -2 | G1104, G1105, G1101   |
|        | S1338 | -11 | -2 | G1103, G1100, G1102, G1106  |
|        | S1341 | -11 | 0  | G1104, G1108, G1107, G1101  |
|        | S1342 | -11 | 0  | G1102, G1100, G1111, G1110, G1103, G1109  |
|        | S1346 | -11 | 2  | G1111, G1110, G1112, G1109  |
|        | S1347 | -11 | 2  | G1108, G1107, G1113   |
|        | S1348 | -11 | 4  | G1113   |
|        | S1349 | -11 | 4  | G1112   |
| 10n21  | S74   | -10 | -3 | G76, G71, G75   |
|        | S75   | -10 | -3 | G72, G74, G73   |
|        | S73   | -10 | -1 | G89, G74, G78, G73, G88, G84, G82, G71, G90, G75, G92, G76, G79, G83, G72, G93, G85, G91, G81, G80, G86, G87, G77 |
|        | S76   | -10 | 1  | G97, G89, G94, G78, G88, G84, G82, G90, G92, G96, G79, G83, G98, G85, G91, G93, G81, G80, G99, G86, G87, G77, G95 |
|        | S77   | -10 | 3  | G98, G95, G94   |
|        | S78   | -10 | 3  | G97, G96, G99   |
| m10n21 | S1350 | -2  | -1 | G1114   |
|        | S1351 | -2  | 1  | G1114   |
| 10n23  | S79   | -5  | -2 | G100  |
|        | S80   | -5  | 0  | G100, G101  |
|        | S81   | -5  | 2  | G101  |
| m10n23 | S1352 | -7  | -2 | G1119, G1118  |
|        | S1353 | -7  | -2 | G1124   |
|        | S1354 | -7  | -2 | G1117, G1123  |
|        | S1355 | -7  | -2 | G1121, G1115  |
|        | S1356 | -7  | -2 | G1122   |
|        | S1357 | -7  | -2 | G1116, G1126  |

| Knot   | ID    | $tb$ | $r$ | Parents  |
|--------|-------|------|-----|--|
|        | S1358 | -7   | -2  | G1120, G1125   |
|        | S1359 | -7   | 0   | G1127, G1131, G1128, G1137, G1115, G1129, G1134, G1138, G1119, G1123, G1130, G1136, G1118, G1126, G1124, G1125, G1132, G1122, G1117, G1120, G1116, G1121, G1133, G1135 |
|        | S1360 | -7   | 2   | G1132  |
|        | S1361 | -7   | 2   | G1131, G1133   |
|        | S1362 | -7   | 2   | G1134, G1130   |
|        | S1363 | -7   | 2   | G1135, G1137   |
|        | S1364 | -7   | 2   | G1136, G1128   |
|        | S1365 | -7   | 2   | G1129  |
|        | S1366 | -7   | 2   | G1127, G1138   |
| 10n24  | S84   | -8   | -3  | G1885  |
|        | S85   | -8   | -3  | G2291  |
|        | S82   | -8   | -1  | G2293, G2292, G2291  |
|        | S83   | -8   | -1  | G1885, G1886, G1887  |
|        | S86   | -8   | 1   | G2294, G2293, G2292  |
|        | S87   | -8   | 1   | G1886, G1888, G1887  |
|        | S88   | -8   | 3   | G1888  |
|        | S89   | -8   | 3   | G2294  |
| m10n24 | S1368 | -4   | -1  | G2121, G2123   |
|        | S1369 | -4   | -1  | G2120, G2122, G2124  |
|        | S1371 | -4   | -1  | G2526, G2529   |
|        | S1372 | -4   | -1  | G2528, G2527, G2530  |
|        | S1373 | -4   | 1   | G2120, G2123   |
|        | S1374 | -4   | 1   | G2526, G2528   |
|        | S1375 | -4   | 1   | G2122, G2121, G2124  |
|        | S1376 | -4   | 1   | G2530, G2527, G2529  |
| 10n25  | S90   | -1   | -2  | G102   |
|        | S91   | -1   | -2  | G105   |
|        | S92   | -1   | -2  | G103   |
|        | S93   | -1   | -2  | G104   |
|        | S94   | -1   | 0   | G105, G108   |
|        | S95   | -1   | 0   | G102, G109   |
|        | S96   | -1   | 0   | G106, G104   |
|        | S97   | -1   | 0   | G107, G103   |
|        | S100  | -1   | 2   | G107   |
|        | S101  | -1   | 2   | G106   |
|        | S98   | -1   | 2   | G108   |
|        | S99   | -1   | 2   | G109   |
| m10n25 | S1381 | -11  | -4  | G1147  |
|        | S1382 | -11  | -4  | G1148  |
|        | S1377 | -11  | -2  | G1146  |
|        | S1378 | -11  | -2  | G1145, G1144, G1147, G1141   |
|        | S1379 | -11  | -2  | G1143  |
|        | S1380 | -11  | -2  | G1140, G1148, G1139, G1142   |
|        | S1383 | -11  | 0   | G1149, G1143   |
|        | S1385 | -11  | 0   | G1151, G1139, G1156, G1142, G1140, G1150   |
|        | S1387 | -11  | 0   | G1145, G1155, G1153, G1154, G1144, G1141   |
|        | S1388 | -11  | 0   | G1146, G1152   |
|        | S1389 | -11  | 2   | G1153, G1155, G1154, G1158   |
|        | S1390 | -11  | 2   | G1156, G1157, G1151, G1150   |
|        | S1391 | -11  | 2   | G1152  |
|        | S1392 | -11  | 2   | G1149  |
|        | S1393 | -11  | 4   | G1157  |

| Knot   | ID    | tb  | r  | Parents  |
|--------|-------|-----|----|--|
| 10n26  | S1394 | -11 | 4  | G1158  |
|        | S106  | -14 | -5 | G2305  |
|        | S107  | -14 | -5 | G1899  |
|        | S104  | -14 | -3 | G2304, G2305, G2297, G2300, G2303, G2296, G2301, G2299, G2302, G2295, G2298  |
|        | S105  | -14 | -3 | G1890, G1889, G1895, G1893, G1891, G1896, G1897, G1894, G1899, G1898, G1892  |
|        | S102  | -14 | -1 | G1890, G1895, G1904, G1892, G1909, G1913, G1903, G1906, G1897, G1908, G1898, G1889, G1912, G1893, G1911, G1896, G1894, G1900, G1902, G1910, G1907, G1901, G1891, G1905 |
|        | S103  | -14 | -1 | G2304, G2307, G2308, G2313, G2302, G2296, G2315, G2310, G2309, G2303, G2311, G2299, G2295, G2298, G2314, G2317, G2300, G2297, G2316, G2318, G2319, G2312, G2306, G2301 |
|        | S108  | -14 | 1  | G1916, G1920, G1904, G1917, G1915, G1921, G1923, G1914, G1909, G1913, G1903, G1918, G1906, G1919, G1908, G1912, G1911, G1900, G1902, G1910, G1922, G1907, G1901, G1905 |
|        | S109  | -14 | 1  | G2307, G2324, G2308, G2313, G2322, G2315, G2310, G2323, G2309, G2311, G2314, G2329, G2320, G2317, G2316, G2325, G2328, G2318, G2319, G2327, G2312, G2306, G2321, G2326 |
|        | S110  | -14 | 3  | G2325, G2328, G2324, G2320, G2323, G2330, G2327, G2322, G2321, G2326, G2329  |
|        | S111  | -14 | 3  | G1916, G1920, G1918, G1917, G1915, G1921, G1919, G1923, G1924, G1914, G1922  |
|        | S112  | -14 | 5  | G1924  |
|        | S113  | -14 | 5  | G2330  |
| m10n26 | S1395 | 2   | -1 | G2532, G2531   |
|        | S1396 | 2   | -1 | G2125, G2126   |
|        | S1397 | 2   | 1  | G2125, G2126   |
|        | S1398 | 2   | 1  | G2532, G2531   |
| 10n27  | S122  | -12 | -3 | G110, G111, G115   |
|        | S123  | -12 | -3 | G112, G113, G114   |
|        | S114  | -12 | -1 | G122, G114, G124   |
|        | S115  | -12 | -1 | G123, G112   |
|        | S117  | -12 | -1 | G116, G110, G118   |
|        | S119  | -12 | -1 | G120, G111   |
|        | S120  | -12 | -1 | G125, G113, G119   |
|        | S121  | -12 | -1 | G121, G117, G115   |
|        | S128  | -12 | 1  | G123, G130   |
|        | S130  | -12 | 1  | G127, G122, G124   |
|        | S131  | -12 | 1  | G120, G126   |
|        | S132  | -12 | 1  | G128, G116, G118   |
|        | S134  | -12 | 1  | G129, G121, G117   |
|        | S135  | -12 | 1  | G131, G125, G119   |
|        | S136  | -12 | 3  | G126, G128, G129   |
|        | S138  | -12 | 3  | G127, G130, G131   |
| m10n27 | S1399 | 0   | -1 | G1168  |
|        | S1400 | 0   | -1 | G1161  |
|        | S1401 | 0   | -1 | G1169, G1159, G1164  |
|        | S1402 | 0   | -1 | G1160, G1170, G1162  |
|        | S1403 | 0   | -1 | G1163, G1166   |
|        | S1404 | 0   | -1 | G1165, G1167   |
|        | S1405 | 0   | 1  | G1165, G1167   |
|        | S1406 | 0   | 1  | G1168, G1159, G1164  |
|        | S1407 | 0   | 1  | G1160  |
|        | S1408 | 0   | 1  | G1169  |

| Knot   | ID    | $tb$ | $r$ | Parents  |
|--------|-------|------|-----|--|
|        | S1409 | 0    | 1   | G1163, G1166   |
|        | S1410 | 0    | 1   | G1161, G1170, G1162  |
| 10n28  | S142  | -3   | -2  | G133, G138   |
|        | S143  | -3   | -2  | G146, G147, G149   |
|        | S144  | -3   | -2  | G145, G148   |
|        | S145  | -3   | -2  | G142   |
|        | S146  | -3   | -2  | G137, G140, G139   |
|        | S147  | -3   | -2  | G134   |
|        | S148  | -3   | -2  | G132, G143   |
|        | S149  | -3   | -2  | G141   |
|        | S150  | -3   | -2  | G150   |
|        | S151  | -3   | -2  | G151, G135, G144   |
|        | S152  | -3   | -2  | G136   |
|        | S155  | -3   | 0   | G171, G136, G157, G134   |
|        | S157  | -3   | 0   | G166, G142, G162, G150   |
|        | S158  | -3   | 0   | G159, G141   |
|        | S159  | -3   | 0   | G132, G140, G156, G148, G154, G168, G167, G139, G153, G164, G145, G137, G163, G143             |
|        | S161  | -3   | 0   | G135, G151, G155, G146, G160, G165, G144, G170, G133, G138, G149, G169, G147, G158, G161, G152 |
|        | S162  | -3   | 2   | G153, G154   |
|        | S163  | -3   | 2   | G166   |
|        | S164  | -3   | 2   | G171   |
|        | S165  | -3   | 2   | G164, G168, G167   |
|        | S166  | -3   | 2   | G160, G169   |
|        | S167  | -3   | 2   | G155, G165, G152   |
|        | S168  | -3   | 2   | G157   |
|        | S169  | -3   | 2   | G158, G161, G170   |
|        | S170  | -3   | 2   | G163, G156   |
|        | S171  | -3   | 2   | G162   |
|        | S172  | -3   | 2   | G159   |
| m10n28 | S1411 | -9   | -2  | G1171, G1175, G1172  |
|        | S1412 | -9   | -2  | G1174, G1176, G1173  |
|        | S1413 | -9   | 0   | G1173, G1176, G1180, G1182, G1179, G1174   |
|        | S1414 | -9   | 0   | G1181, G1178, G1177, G1175, G1171, G1172   |
|        | S1415 | -9   | 2   | G1179, G1180, G1182  |
|        | S1416 | -9   | 2   | G1181, G1178, G1177  |
| 10n29  | S174  | -18  | -3  | G173   |
|        | S175  | -18  | -3  | G172   |
|        | S173  | -18  | -1  | G173, G177, G176, G174, G175, G172   |
|        | S176  | -18  | 1   | G177, G178, G176, G179, G174, G175   |
|        | S177  | -18  | 3   | G178   |
|        | S178  | -18  | 3   | G179   |
| m10n29 | S1417 | 6    | -1  | G1183  |
|        | S1418 | 6    | 1   | G1183  |
| 10n30  | S182  | -5   | -2  | G183   |
|        | S183  | -5   | -2  | G182   |
|        | S184  | -5   | 0   | G185, G182   |
|        | S185  | -5   | 0   | G183, G184   |
|        | S186  | -5   | 2   | G185   |
|        | S187  | -5   | 2   | G184   |
| m10n30 | S1424 | -7   | -2  | G1189  |
|        | S1425 | -7   | -2  | G1188  |
|        | S1426 | -7   | 0   | G1188, G1190   |
|        | S1427 | -7   | 0   | G1189, G1191   |

| Knot   | ID    | tb  | r  | Parents  |
|--------|-------|-----|----|--|
|        | S1428 | -7  | 2  | G1190  |
|        | S1429 | -7  | 2  | G1191  |
| 10n31  | S189  | -16 | -3 | G188   |
|        | S190  | -16 | -3 | G186   |
|        | S191  | -16 | -3 | G187   |
|        | S188  | -16 | -1 | G190, G188, G189, G186, G194, G191, G192, G187, G193   |
|        | S192  | -16 | 1  | G190, G189, G195, G196, G194, G191, G197, G192, G193   |
|        | S193  | -16 | 3  | G196   |
|        | S194  | -16 | 3  | G197   |
|        | S195  | -16 | 3  | G195   |
| m10n31 | S1430 | 4   | -1 | G1192  |
|        | S1431 | 4   | -1 | G1193  |
|        | S1432 | 4   | 1  | G1193  |
|        | S1433 | 4   | 1  | G1192  |
| 10n32  | S198  | -4  | -3 | G198, G199   |
|        | S196  | -4  | -1 | G199   |
|        | S197  | -4  | -1 | G200, G198, G201   |
|        | S200  | -4  | 1  | G203   |
|        | S201  | -4  | 1  | G202, G200, G201   |
|        | S203  | -4  | 3  | G203, G202   |
| m10n32 | S1435 | -8  | -3 | G1194  |
|        | S1434 | -8  | -1 | G1196, G1195, G1194  |
|        | S1436 | -8  | 1  | G1196, G1197, G1195  |
|        | S1437 | -8  | 3  | G1197  |
| 10n33  | S204  | -3  | -2 | G209, G212, G210   |
|        | S205  | -3  | -2 | G207, G208, G213   |
|        | S207  | -3  | -2 | G206, G204, G211, G205   |
|        | S209  | -3  | 0  | G206, G214, G208, G219, G215, G209, G207, G211, G221, G212, G205, G217, G218, G204, G222, G220 |
|        | S210  | -3  | 0  | G213, G210, G216, G223   |
|        | S212  | -3  | 2  | G218, G222, G223   |
|        | S213  | -3  | 2  | G215, G216, G220   |
|        | S215  | -3  | 2  | G214, G219, G221, G217   |
| m10n33 | S1438 | -9  | -2 | G1199  |
|        | S1439 | -9  | -2 | G1198  |
|        | S1440 | -9  | 0  | G1201, G1199   |
|        | S1441 | -9  | 0  | G1200, G1198   |
|        | S1442 | -9  | 2  | G1201  |
|        | S1443 | -9  | 2  | G1200  |
| 10n34  | S216  | 2   | -1 | G224   |
|        | S217  | 2   | 1  | G224   |
| m10n34 | S1446 | -14 | -5 | G1206  |
|        | S1445 | -14 | -3 | G1202, G1205, G1203, G1206, G1204  |
|        | S1444 | -14 | -1 | G1212, G1207, G1210, G1202, G1205, G1214, G1203, G1209, G1213, G1204, G1208, G1211             |
|        | S1447 | -14 | 1  | G1212, G1207, G1210, G1216, G1214, G1217, G1218, G1209, G1208, G1213, G1215, G1211             |
|        | S1448 | -14 | 3  | G1216, G1219, G1217, G1218, G1215  |
|        | S1449 | -14 | 5  | G1219  |
| 10n35  | S218  | -6  | -1 | G226, G225   |
|        | S219  | -6  | 1  | G226, G225   |
| m10n35 | S1451 | -6  | -3 | G1225, G1220, G1226, G1221   |
|        | S1452 | -6  | -3 | G1227, G1222, G1224, G1223   |

| Knot   | ID    | $tb$ | $r$ | Parents  |
|--------|-------|------|-----|--|
|        | S1450 | -6   | -1  | G1236, G1223, G1239, G1228, G1238, G1232, G1227, G1234, G1235, G1231, G1224, G1221, G1233, G1229, G1222, G1225, G1230, G1220, G1226, G1237 |
|        | S1453 | -6   | 1   | G1236, G1244, G1246, G1245, G1239, G1228, G1241, G1238, G1232, G1234, G1235, G1243, G1231, G1247, G1233, G1240, G1229, G1242, G1230, G1237 |
|        | S1454 | -6   | 3   | G1242, G1244, G1240, G1245   |
|        | S1455 | -6   | 3   | G1247, G1241, G1246, G1243   |
| 10n36  | S223  | -11  | -4  | G236   |
|        | S220  | -11  | -2  | G235, G231, G234   |
|        | S221  | -11  | -2  | G230, G236, G228, G227, G233, G232   |
|        | S222  | -11  | -2  | G229   |
|        | S224  | -11  | 0   | G230, G240, G237, G245, G244, G228, G227, G241, G233, G232   |
|        | S225  | -11  | 0   | G242, G243, G231, G235, G239, G234   |
|        | S226  | -11  | 0   | G229, G238   |
|        | S227  | -11  | 2   | G238   |
|        | S228  | -11  | 2   | G240, G237, G245, G244, G241, G246   |
|        | S229  | -11  | 2   | G239, G243, G242   |
|        | S230  | -11  | 4   | G246   |
| m10n36 | S1456 | -1   | -2  | G1250  |
|        | S1457 | -1   | -2  | G1249  |
|        | S1458 | -1   | -2  | G1248  |
|        | S1459 | -1   | 0   | G1253, G1249   |
|        | S1460 | -1   | 0   | G1250, G1251   |
|        | S1461 | -1   | 0   | G1252, G1248   |
|        | S1462 | -1   | 2   | G1252  |
|        | S1463 | -1   | 2   | G1251  |
|        | S1464 | -1   | 2   | G1253  |
| 10n39  | S231  | -2   | -1  | G248, G247   |
|        | S232  | -2   | 1   | G248, G247   |
| m10n39 | S1466 | -10  | -3  | G1257, G1254   |
|        | S1467 | -10  | -3  | G1256, G1255   |
|        | S1465 | -10  | -1  | G1257, G1260, G1254, G1258, G1255, G1262, G1263, G1256, G1261, G1259   |
|        | S1468 | -10  | 1   | G1260, G1266, G1264, G1267, G1265, G1258, G1262, G1263, G1261, G1259   |
|        | S1469 | -10  | 3   | G1267, G1265   |
|        | S1470 | -10  | 3   | G1264, G1266   |
| 10n40  | S241  | -9   | -2  | G255, G254   |
|        | S242  | -9   | -2  | G253   |
|        | S243  | -9   | 0   | G256, G253   |
|        | S244  | -9   | 0   | G258, G255, G254, G257   |
|        | S245  | -9   | 2   | G258, G257   |
|        | S246  | -9   | 2   | G256   |
| m10n40 | S1475 | -3   | -2  | G1277, G1275, G1272  |
|        | S1476 | -3   | -2  | G1281, G1279, G1280  |
|        | S1477 | -3   | -2  | G1274, G1273   |
|        | S1478 | -3   | -2  | G1278, G1276   |
|        | S1479 | -3   | 0   | G1289, G1273, G1286, G1275, G1283, G1274, G1277, G1272, G1285, G1291   |
|        | S1480 | -3   | 0   | G1278, G1280, G1290, G1284, G1281, G1282, G1287, G1279, G1276, G1288   |
|        | S1481 | -3   | 2   | G1287, G1288   |
|        | S1482 | -3   | 2   | G1286, G1291   |
|        | S1483 | -3   | 2   | G1290, G1284, G1282  |
|        | S1484 | -3   | 2   | G1289, G1283, G1285  |
| 10n41  | S247  | -5   | -2  | G260, G261, G259   |
|        | S248  | -5   | 0   | G263, G261, G259, G262, G264, G260   |
|        | S249  | -5   | 2   | G262, G264, G263   |
| m10n41 | S1485 | -7   | -2  | G1293  |
|        | S1486 | -7   | -2  | G1292, G1297   |



| Knot   | ID    | tb  | r  | Parents  |
|--------|-------|-----|----|--|
|        | S1487 | -7  | -2 | G1296  |
|        | S1488 | -7  | -2 | G1298, G1294, G1295  |
|        | S1490 | -7  | 0  | G1294, G1303   |
|        | S1491 | -7  | 0  | G1292, G1298, G1305, G1300, G1297, G1304, G1301, G1295   |
|        | S1492 | -7  | 0  | G1299, G1302, G1296, G1293   |
|        | S1493 | -7  | 2  | G1300, G1301   |
|        | S1494 | -7  | 2  | G1304, G1305   |
|        | S1495 | -7  | 2  | G1299  |
|        | S1496 | -7  | 2  | G1302  |
|        | S1497 | -7  | 2  | G1303  |
| 10n42  | S250  | 0   | -1 | G271, G273, G277, G268   |
|        | S251  | 0   | -1 | G270   |
|        | S252  | 0   | -1 | G275, G266, G274, G272   |
|        | S253  | 0   | -1 | G276   |
|        | S254  | 0   | -1 | G265   |
|        | S255  | 0   | -1 | G269, G278, G267   |
|        | S256  | 0   | 1  | G269, G278, G265   |
|        | S257  | 0   | 1  | G275, G271, G273, G272   |
|        | S258  | 0   | 1  | G267   |
|        | S259  | 0   | 1  | G270   |
|        | S260  | 0   | 1  | G276   |
|        | S261  | 0   | 1  | G277, G268, G266, G274   |
| m10n42 | S1500 | -12 | -3 | G1306  |
|        | S1498 | -12 | -1 | G1307, G1308   |
|        | S1499 | -12 | -1 | G1309, G1310, G1306  |
|        | S1501 | -12 | 1  | G1307, G1308   |
|        | S1502 | -12 | 1  | G1309, G1310, G1311  |
|        | S1503 | -12 | 3  | G1311  |
| 11n12  | S322  | -9  | -2 | G365, G366   |
|        | S323  | -9  | -2 | G364, G360   |
|        | S324  | -9  | -2 | G363, G362   |
|        | S325  | -9  | -2 | G361, G359   |
|        | S326  | -9  | 0  | G371, G363, G364, G372, G366, G362, G361, G360, G370, G365, G368, G374, G367, G373, G359, G369 |
|        | S327  | -9  | 2  | G371, G367   |
|        | S328  | -9  | 2  | G372, G369   |
|        | S329  | -9  | 2  | G374, G370   |
|        | S330  | -9  | 2  | G373, G368   |
| m11n12 | S1554 | -3  | -2 | G1358  |
|        | S1555 | -3  | -2 | G1357  |
|        | S1556 | -3  | 0  | G1360, G1357   |
|        | S1557 | -3  | 0  | G1358, G1359   |
|        | S1558 | -3  | 2  | G1359  |
|        | S1559 | -3  | 2  | G1360  |
| 11n20  | S400  | -4  | -1 | G422, G428, G424, G432, G429, G430, G425, G423, G420   |
|        | S401  | -4  | -1 | G426, G421, G427, G433, G418, G416, G417, G419, G431   |
|        | S402  | -4  | 1  | G422, G428, G421, G429, G430, G425, G417, G423, G420   |
|        | S403  | -4  | 1  | G426, G424, G427, G432, G433, G418, G416, G419, G431   |
| m11n20 | S1643 | -8  | -1 | G1412, G1413   |
|        | S1644 | -8  | 1  | G1412, G1413   |
| 11n23  | S404  | -11 | -2 | G2362  |
|        | S405  | -11 | -2 | G1956  |
|        | S406  | -11 | 0  | G1957, G1956   |
|        | S407  | -11 | 0  | G2362, G2363   |
|        | S408  | -11 | 2  | G2363  |

| Knot   | ID    | $tb$ | $r$ | Parents  |
|--------|-------|------|-----|--|
| m11n23 | S409  | -11  | 2   | G1957  |
|        | S1645 | -1   | -2  | G2168, G2167   |
|        | S1646 | -1   | -2  | G2571, G2572   |
|        | S1647 | -1   | -2  | G2166, G2165   |
|        | S1648 | -1   | -2  | G2574, G2573   |
|        | S1649 | -1   | 0   | G2165, G2171, G2172, G2170, G2169, G2167, G2168, G2166 |
|        | S1650 | -1   | 0   | G2577, G2574, G2571, G2576, G2578, G2573, G2572, G2575 |
|        | S1651 | -1   | 2   | G2576, G2578   |
|        | S1652 | -1   | 2   | G2170, G2169   |
|        | S1653 | -1   | 2   | G2171, G2172   |
|        | S1654 | -1   | 2   | G2577, G2575   |
| 11n24  | S410  | -7   | -2  | G1960, G1958   |
|        | S411  | -7   | -2  | G2365  |
|        | S412  | -7   | -2  | G1959  |
|        | S413  | -7   | -2  | G2364, G2366   |
|        | S414  | -7   | 0   | G1959, G1962, G1960, G1963, G1958, G1961               |
|        | S415  | -7   | 0   | G2368, G2364, G2367, G2365, G2366, G2369               |
|        | S416  | -7   | 2   | G2369, G2367   |
|        | S417  | -7   | 2   | G1961  |
|        | S418  | -7   | 2   | G1962, G1963   |
|        | S419  | -7   | 2   | G2368  |
| m11n24 | S1655 | -5   | -2  | G1415, G1417   |
|        | S1656 | -5   | -2  | G1418  |
|        | S1657 | -5   | -2  | G1419, G1414   |
|        | S1658 | -5   | -2  | G1416, G1420   |
|        | S1659 | -5   | -2  | G1421  |
|        | S1660 | -5   | 0   | G1416, G1425, G1417, G1420, G1423, G1422, G1415, G1424 |
|        | S1661 | -5   | 0   | G1426, G1414, G1418, G1428, G1429, G1419               |
|        | S1662 | -5   | 0   | G1427, G1421   |
|        | S1663 | -5   | 2   | G1426, G1428   |
|        | S1664 | -5   | 2   | G1422, G1424   |
|        | S1665 | -5   | 2   | G1423, G1425   |
|        | S1666 | -5   | 2   | G1429  |
|        | S1667 | -5   | 2   | G1427  |
| 11n27  | S422  | -14  | -3  | G2370  |
|        | S423  | -14  | -3  | G1964  |
|        | S420  | -14  | -1  | G1966, G1965, G1964                                    |
|        | S421  | -14  | -1  | G2371, G2370, G2372                                    |
|        | S424  | -14  | 1   | G1966, G1967, G1965                                    |
|        | S425  | -14  | 1   | G2371, G2373, G2372                                    |
|        | S426  | -14  | 3   | G2373  |
|        | S427  | -14  | 3   | G1967  |
| m11n27 | S1668 | 2    | -1  | G2579, G2580   |
|        | S1669 | 2    | -1  | G2174, G2173   |
|        | S1670 | 2    | 1   | G2174, G2173   |
|        | S1671 | 2    | 1   | G2579, G2580   |
| 11n37  | S428  | -4   | -1  | G1968, G1969   |
|        | S429  | -4   | -1  | G2374, G2375   |
|        | S430  | -4   | 1   | G2374, G2375   |
|        | S431  | -4   | 1   | G1968, G1969   |
| m11n37 | S1674 | -8   | -3  | G2178, G2175   |
|        | S1675 | -8   | -3  | G2584, G2581   |
|        | S1676 | -8   | -3  | G2582, G2583   |
|        | S1677 | -8   | -3  | G2176, G2177   |
|        | S1672 | -8   | -1  | G2586, G2584, G2583, G2588, G2585, G2581, G2587, G2582 |

| Knot   | ID    | $tb$ | $r$ | Parents  |
|--------|-------|------|-----|--|
|        | S1673 | -8   | -1  | G2176, G2177, G2179, G2178, G2182, G2180, G2181, G2175               |
|        | S1678 | -8   | 1   | G2586, G2589, G2590, G2588, G2585, G2587, G2591, G2592               |
|        | S1679 | -8   | 1   | G2179, G2185, G2184, G2182, G2180, G2183, G2181, G2186               |
|        | S1680 | -8   | 3   | G2589, G2591   |
|        | S1681 | -8   | 3   | G2183, G2185   |
|        | S1682 | -8   | 3   | G2186, G2184   |
|        | S1683 | -8   | 3   | G2590, G2592   |
| 11n48  | S432  | -4   | -1  | G435, G434   |
|        | S433  | -4   | 1   | G435, G434   |
| m11n48 | S1685 | -8   | -3  | G1432, G1430   |
|        | S1686 | -8   | -3  | G1434, G1435   |
|        | S1687 | -8   | -3  | G1431, G1433   |
|        | S1684 | -8   | -1  | G1436, G1439, G1434, G1437, G1432, G1430, G1435, G1431, G1438, G1433 |
|        | S1688 | -8   | 1   | G1436, G1439, G1440, G1437, G1441, G1444, G1445, G1438, G1443, G1442 |
|        | S1689 | -8   | 3   | G1444, G1442   |
|        | S1690 | -8   | 3   | G1440, G1443   |
|        | S1691 | -8   | 3   | G1445, G1441   |
| 11n49  | S434  | -6   | -1  | G436, G437   |
|        | S435  | -6   | 1   | G436, G437   |
| m11n49 | S1693 | -6   | -1  | G1447, G1446   |
|        | S1694 | -6   | 1   | G1447, G1446   |
| 11n50  | S436  | -3   | -2  | G439   |
|        | S437  | -3   | -2  | G438   |
|        | S438  | -3   | 0   | G438, G441   |
|        | S439  | -3   | 0   | G439, G440   |
|        | S440  | -3   | 2   | G441   |
|        | S441  | -3   | 2   | G440   |
| m11n50 | S1696 | -9   | -2  | G2593  |
|        | S1697 | -9   | -2  | G2189  |
|        | S1698 | -9   | -2  | G2595  |
|        | S1699 | -9   | -2  | G2187  |
|        | S1700 | -9   | -2  | G2188  |
|        | S1701 | -9   | -2  | G2594  |
|        | S1703 | -9   | 0   | G2187, G2192, G2189, G2188, G2190, G2191                             |
|        | S1705 | -9   | 0   | G2596, G2594, G2598, G2597, G2595, G2593                             |
|        | S1706 | -9   | 2   | G2192  |
|        | S1707 | -9   | 2   | G2190  |
|        | S1708 | -9   | 2   | G2596  |
|        | S1709 | -9   | 2   | G2597  |
|        | S1710 | -9   | 2   | G2598  |
|        | S1711 | -9   | 2   | G2191  |
| 11n57  | S443  | -14  | -3  | G443   |
|        | S444  | -14  | -3  | G442   |
|        | S442  | -14  | -1  | G445, G442, G444, G443   |
|        | S445  | -14  | 1   | G445, G446, G444, G447   |
|        | S447  | -14  | 3   | G447   |
|        | S448  | -14  | 3   | G446   |
| m11n57 | S1712 | 2    | -1  | G1449, G1448   |
|        | S1713 | 2    | 1   | G1449, G1448   |
| 11n61  | S449  | -11  | -2  | G449   |
|        | S450  | -11  | -2  | G450   |
|        | S451  | -11  | -2  | G448   |
|        | S452  | -11  | 0   | G448, G450, G452, G451   |
|        | S453  | -11  | 0   | G453, G449   |

| Knot   | ID    | tb  | r  | Parents  |
|--------|-------|-----|----|--|
|        | S454  | -11 | 2  | G452   |
|        | S455  | -11 | 2  | G453   |
|        | S456  | -11 | 2  | G451   |
| m11n61 | S1714 | -1  | -2 | G1452, G1453   |
|        | S1715 | -1  | -2 | G1451, G1450   |
|        | S1716 | -1  | 0  | G1456, G1453, G1452, G1450, G1451, G1457, G1455, G1454               |
|        | S1717 | -1  | 2  | G1456, G1454   |
|        | S1718 | -1  | 2  | G1455, G1457   |
| 11n65  | S457  | -3  | -2 | G455, G454   |
|        | S458  | -3  | 0  | G455, G456, G454, G457   |
|        | S459  | -3  | 2  | G456, G457   |
| m11n65 | S1719 | -9  | -2 | G1459  |
|        | S1720 | -9  | -2 | G1460, G1458   |
|        | S1721 | -9  | 0  | G1462, G1459, G1461, G1460, G1458, G1463                             |
|        | S1722 | -9  | 2  | G1463  |
|        | S1723 | -9  | 2  | G1462, G1461   |
| 11n70  | S461  | -10 | -3 | G459   |
|        | S462  | -10 | -3 | G460, G458   |
|        | S460  | -10 | -1 | G462, G459, G460, G458, G461, G464, G463                             |
|        | S463  | -10 | 1  | G467, G465, G462, G461, G464, G466, G463                             |
|        | S464  | -10 | 3  | G465   |
|        | S465  | -10 | 3  | G467, G466   |
| m11n70 | S1724 | -2  | -1 | G1465, G1464   |
|        | S1725 | -2  | 1  | G1465, G1464   |
| 11n79  | S466  | -8  | -1 | G468, G469   |
|        | S467  | -8  | 1  | G468, G469   |
| m11n79 | S1726 | -4  | -1 | G1466, G1467, G1468, G1469   |
|        | S1727 | -4  | 1  | G1466, G1467, G1468, G1469   |
| 11n81  | S468  | -14 | -1 | G470   |
|        | S469  | -14 | 1  | G470   |
| m11n81 | S1728 | 2   | -1 | G1470  |
|        | S1729 | 2   | 1  | G1470  |
| 11n82  | S470  | -7  | -2 | G471, G472   |
|        | S471  | -7  | 0  | G473, G474, G471, G472   |
|        | S472  | -7  | 2  | G473, G474   |
| m11n82 | S1730 | -5  | -2 | G1473, G1474   |
|        | S1731 | -5  | -2 | G1476  |
|        | S1732 | -5  | -2 | G1472  |
|        | S1733 | -5  | -2 | G1471, G1475   |
|        | S1735 | -5  | 0  | G1476, G1480   |
|        | S1736 | -5  | 0  | G1473, G1477, G1479, G1474, G1478, G1482, G1471, G1475, G1472, G1481 |
|        | S1737 | -5  | 2  | G1479  |
|        | S1738 | -5  | 2  | G1477, G1481   |
|        | S1739 | -5  | 2  | G1478, G1482   |
|        | S1740 | -5  | 2  | G1480  |
| 11n84  | S473  | 0   | -1 | G476   |
|        | S474  | 0   | -1 | G475   |
|        | S475  | 0   | 1  | G476   |
|        | S476  | 0   | 1  | G475   |
| m11n84 | S1742 | -12 | -3 | G1483, G1485   |
|        | S1743 | -12 | -3 | G1487, G1486   |
|        | S1744 | -12 | -3 | G1488  |
|        | S1745 | -12 | -3 | G1484, G1489   |

| Knot   | ID    | tb  | r  | Parents   |
|--------|-------|-----|----|---|
|        | S1741 | -12 | -1 | G1492, G1488, G1489, G1499, G1484, G1486, G1503, G1483, G1485, G1491, G1498, G1493, G1501, G1496, G1494, G1497, G1490, G1500, G1495, G1502, G1504, G1487, G1505 |
|        | S1746 | -12 | 1  | G1506, G1492, G1508, G1512, G1499, G1503, G1491, G1498, G1493, G1501, G1496, G1494, G1497, G1490, G1511, G1500, G1495, G1502, G1509, G1504, G1510, G1505, G1507 |
|        | S1747 | -12 | 3  | G1508, G1512  |
|        | S1748 | -12 | 3  | G1507, G1509  |
|        | S1749 | -12 | 3  | G1510   |
|        | S1750 | -12 | 3  | G1506, G1511  |
| 11n86  | S478  | -8  | -3 | G477, G482  |
|        | S479  | -8  | -3 | G480, G481  |
|        | S480  | -8  | -3 | G479, G478  |
|        | S477  | -8  | -1 | G494, G489, G488, G479, G478, G499, G484, G496, G490, G492, G477, G487, G480, G485, G495, G491, G493, G481, G498, G483, G486, G500, G497, G482                  |
|        | S481  | -8  | 1  | G494, G501, G489, G488, G499, G484, G506, G505, G496, G492, G490, G503, G487, G504, G485, G495, G491, G493, G502, G498, G483, G486, G500, G497                  |
|        | S482  | -8  | 3  | G502, G506  |
|        | S483  | -8  | 3  | G503, G504  |
|        | S484  | -8  | 3  | G505, G501  |
| m11n86 | S1751 | -4  | -1 | G1514   |
|        | S1752 | -4  | -1 | G1513   |
|        | S1753 | -4  | 1  | G1514   |
|        | S1754 | -4  | 1  | G1513   |
| 11n88  | S486  | -14 | -3 | G507  |
|        | S485  | -14 | -1 | G507, G509, G508  |
|        | S487  | -14 | 1  | G509, G508, G510  |
|        | S488  | -14 | 3  | G510  |
| m11n88 | S1755 | 2   | -1 | G1515, G1516  |
|        | S1756 | 2   | 1  | G1515, G1516  |
| 11n92  | S489  | -5  | -2 | G513, G514  |
|        | S490  | -5  | -2 | G512, G511  |
|        | S491  | -5  | 0  | G515, G512, G518, G516, G517, G513, G511, G514  |
|        | S492  | -5  | 2  | G517, G518  |
|        | S493  | -5  | 2  | G515, G516  |
| m11n92 | S1757 | -7  | -2 | G1518, G1517  |
|        | S1759 | -7  | 0  | G1518, G1520  |
|        | S1760 | -7  | 0  | G1519, G1517  |
|        | S1762 | -7  | 2  | G1519, G1520  |
| 11n96  | S494  | -7  | -2 | G519  |
|        | S495  | -7  | 0  | G519, G520  |
|        | S496  | -7  | 2  | G520  |
| m11n96 | S1764 | -5  | -2 | G1521, G1524  |
|        | S1765 | -5  | -2 | G1523, G1522  |
|        | S1766 | -5  | 0  | G1523, G1527, G1526, G1524, G1528, G1525, G1521, G1522  |
|        | S1767 | -5  | 2  | G1528, G1525  |
|        | S1768 | -5  | 2  | G1527, G1526  |
| 11n99  | S497  | 0   | -1 | G521, G522  |
|        | S498  | 0   | 1  | G521, G522  |
| m11n99 | S1770 | -12 | -3 | G1530   |
|        | S1771 | -12 | -3 | G1531, G1529  |
|        | S1769 | -12 | -1 | G1533, G1529, G1535, G1531, G1534, G1530, G1532   |
|        | S1772 | -12 | 1  | G1533, G1536, G1535, G1538, G1534, G1537, G1532   |
|        | S1773 | -12 | 3  | G1537, G1536  |

| Knot    | ID    | tb  | r  | Parents  |
|---------|-------|-----|----|--|
|         | S1774 | -12 | 3  | G1538  |
| 11n102  | S286  | -2  | -1 | G333   |
|         | S287  | -2  | 1  | G333   |
| m11n102 | S1522 | -10 | -1 | G1330  |
|         | S1523 | -10 | 1  | G1330  |
| 11n104  | S288  | -14 | -1 | G334   |
|         | S289  | -14 | 1  | G334   |
| m11n104 | S1524 | 2   | -1 | G1331  |
|         | S1525 | 2   | 1  | G1331  |
| 11n106  | S290  | -5  | -2 | G340, G338   |
|         | S291  | -5  | -2 | G337, G336   |
|         | S292  | -5  | -2 | G339, G335   |
|         | S293  | -5  | 0  | G341, G344, G346, G343, G342, G336, G337, G335, G338, G340, G339, G345   |
|         | S294  | -5  | 2  | G341, G344   |
|         | S295  | -5  | 2  | G342, G345   |
|         | S296  | -5  | 2  | G343, G346   |
| m11n106 | S1526 | -7  | -2 | G1332  |
|         | S1527 | -7  | -2 | G1334  |
|         | S1528 | -7  | -2 | G1333  |
|         | S1529 | -7  | 0  | G1336, G1332   |
|         | S1530 | -7  | 0  | G1334, G1333, G1335, G1337   |
|         | S1532 | -7  | 2  | G1336  |
|         | S1533 | -7  | 2  | G1335  |
| 11n107  | S1534 | -7  | 2  | G1337  |
|         | S297  | -11 | -2 | G347   |
|         | S298  | -11 | 0  | G348, G347   |
| m11n107 | S299  | -11 | 2  | G348   |
|         | S1535 | -1  | -2 | G1339, G1338   |
|         | S1536 | -1  | 0  | G1340, G1339, G1338, G1341   |
| 11n110  | S1537 | -1  | 2  | G1340, G1341   |
|         | S302  | -8  | -3 | G2332, G2334   |
|         | S303  | -8  | -3 | G1928, G1927   |
|         | S304  | -8  | -3 | G2333, G2331   |
|         | S305  | -8  | -3 | G1925, G1926   |
|         | S300  | -8  | -1 | G1930, G1939, G1943, G1944, G1932, G1935, G1928, G1941, G1940, G1927, G1942, G1925, G1938, G1931, G1937, G1929, G1926, G1933, G1934, G1936 |
|         | S301  | -8  | -1 | G2348, G2347, G2346, G2338, G2337, G2335, G2336, G2331, G2344, G2342, G2350, G2339, G2333, G2343, G2349, G2345, G2334, G2332, G2341, G2340 |
|         | S306  | -8  | 1  | G2348, G2347, G2352, G2346, G2338, G2337, G2335, G2336, G2351, G2354, G2344, G2342, G2350, G2339, G2353, G2343, G2349, G2345, G2341, G2340 |
|         | S307  | -8  | 1  | G1930, G1945, G1939, G1943, G1944, G1932, G1935, G1948, G1941, G1947, G1940, G1942, G1938, G1931, G1946, G1937, G1929, G1933, G1934, G1936 |
|         | S308  | -8  | 3  | G1946, G1945   |
|         | S309  | -8  | 3  | G1948, G1947   |
|         | S310  | -8  | 3  | G2351, G2354   |
| m11n110 | S311  | -8  | 3  | G2352, G2353   |
|         | S1538 | -4  | -1 | G2128, G2127   |
|         | S1539 | -4  | -1 | G2533, G2534   |
|         | S1540 | -4  | 1  | G2533, G2534   |
| 11n111  | S1541 | -4  | 1  | G2128, G2127   |
|         | S313  | -10 | -3 | G349   |
|         | S312  | -10 | -1 | G353, G350, G351, G352, G349   |
|         | S314  | -10 | 1  | G353, G350, G351, G352, G354   |
|         | S315  | -10 | 3  | G354   |

| Knot    | ID    | $tb$ | $r$ | Parents                           |
|---------|-------|------|-----|-----------------------------------|
| m11n111 | S1542 | -2   | -1  | G1343                             |
|         | S1543 | -2   | -1  | G1342                             |
|         | S1544 | -2   | 1   | G1343                             |
|         | S1545 | -2   | 1   | G1342                             |
| 11n116  | S316  | -4   | -1  | G1950, G1949                      |
|         | S317  | -4   | -1  | G2355, G2356                      |
|         | S318  | -4   | 1   | G1950, G1949                      |
|         | S319  | -4   | 1   | G2355, G2356                      |
| m11n116 | S1546 | -8   | -1  | G2130, G2129                      |
|         | S1547 | -8   | -1  | G2535, G2536                      |
|         | S1548 | -8   | 1   | G2535, G2536                      |
|         | S1549 | -8   | 1   | G2130, G2129                      |
| 11n117  | S320  | -8   | -1  | G355, G356                        |
|         | S321  | -8   | 1   | G355, G356                        |
| m11n117 | S1550 | -4   | -1  | G1350, G1351, G1347, G1352, G1346 |
|         | S1551 | -4   | -1  | G1348, G1349, G1345, G1353, G1344 |
|         | S1552 | -4   | 1   | G1348, G1350, G1345, G1347, G1352 |
|         | S1553 | -4   | 1   | G1349, G1353, G1344, G1351, G1346 |
| 11n122  | S331  | 0    | -1  | G1951                             |
|         | S332  | 0    | -1  | G2357                             |
|         | S333  | 0    | 1   | G1951                             |
|         | S334  | 0    | 1   | G2357                             |
| m11n122 | S1562 | -12  | -3  | G2133, G2132                      |
|         | S1563 | -12  | -3  | G2131                             |
|         | S1564 | -12  | -3  | G2539                             |
|         | S1565 | -12  | -3  | G2537, G2538                      |
|         | S1560 | -12  | -1  | G2132, G2131, G2134, G2133, G2135 |
|         | S1561 | -12  | -1  | G2537, G2541, G2538, G2539, G2540 |
|         | S1566 | -12  | 1   | G2544, G2542, G2540, G2541, G2543 |
|         | S1567 | -12  | 1   | G2138, G2137, G2134, G2136, G2135 |
|         | S1568 | -12  | 3   | G2542, G2543                      |
|         | S1569 | -12  | 3   | G2137                             |
|         | S1570 | -12  | 3   | G2136, G2138                      |
|         | S1571 | -12  | 3   | G2544                             |
| 11n126  | S336  | -16  | -3  | G357                              |
|         | S335  | -16  | -1  | G357                              |
|         | S337  | -16  | 1   | G358                              |
|         | S338  | -16  | 3   | G358                              |
| m11n126 | S1572 | 4    | -1  | G1354, G1356, G1355               |
|         | S1573 | 4    | 1   | G1354, G1356, G1355               |
| 11n132  | S339  | -3   | -2  | G375                              |
|         | S340  | -3   | -2  | G376                              |
|         | S341  | -3   | -2  | G377                              |
|         | S342  | -3   | -2  | G378                              |
|         | S343  | -3   | 0   | G378, G380                        |
|         | S344  | -3   | 0   | G381, G377                        |
|         | S345  | -3   | 0   | G376, G379                        |
|         | S347  | -3   | 0   | G375, G382                        |
|         | S349  | -3   | 2   | G380                              |
|         | S350  | -3   | 2   | G382                              |
|         | S351  | -3   | 2   | G381                              |
|         | S352  | -3   | 2   | G379                              |
| m11n132 | S1574 | -9   | -2  | G1361                             |
|         | S1575 | -9   | -2  | G1364                             |

| Knot    | ID    | $tb$ | $r$ | Parents  |
|---------|-------|------|-----|--|
|         | S1576 | -9   | -2  | G1365  |
|         | S1577 | -9   | -2  | G1363  |
|         | S1578 | -9   | -2  | G1366  |
|         | S1579 | -9   | -2  | G1362  |
|         | S1580 | -9   | 0   | G1363, G1367   |
|         | S1581 | -9   | 0   | G1371, G1361   |
|         | S1582 | -9   | 0   | G1372, G1365, G1366, G1368   |
|         | S1583 | -9   | 0   | G1369, G1370, G1362, G1364   |
|         | S1584 | -9   | 2   | G1372  |
|         | S1585 | -9   | 2   | G1369  |
|         | S1586 | -9   | 2   | G1371  |
|         | S1587 | -9   | 2   | G1368  |
|         | S1588 | -9   | 2   | G1367  |
|         | S1589 | -9   | 2   | G1370  |
| 11n133  | S353  | -11  | -2  | G383   |
|         | S354  | -11  | 0   | G383, G384   |
|         | S355  | -11  | 2   | G384   |
| m11n133 | S1590 | -1   | -2  | G1373  |
|         | S1591 | -1   | 0   | G1374, G1373   |
|         | S1592 | -1   | 2   | G1374  |
| 11n134  | S356  | 0    | -1  | G2359, G2358   |
|         | S357  | 0    | -1  | G1953, G1952   |
|         | S358  | 0    | 1   | G1953, G1952   |
|         | S359  | 0    | 1   | G2359, G2358   |
| m11n134 | S1595 | -12  | -3  | G2142, G2140   |
|         | S1596 | -12  | -3  | G2546, G2545   |
|         | S1597 | -12  | -3  | G2547  |
|         | S1598 | -12  | -3  | G2141  |
|         | S1599 | -12  | -3  | G2548  |
|         | S1600 | -12  | -3  | G2139  |
|         | S1593 | -12  | -1  | G2154, G2153, G2146, G2140, G2145, G2148, G2152, G2147, G2139, G2141, G2143, G2142, G2144, G2150, G2151, G2149 |
|         | S1594 | -12  | -1  | G2546, G2557, G2549, G2550, G2556, G2559, G2560, G2545, G2548, G2558, G2547, G2552, G2551, G2555, G2553, G2554 |
|         | S1601 | -12  | 1   | G2154, G2153, G2156, G2155, G2145, G2146, G2157, G2148, G2152, G2158, G2147, G2143, G2144, G2150, G2151, G2149 |
|         | S1602 | -12  | 1   | G2562, G2557, G2549, G2550, G2556, G2559, G2560, G2561, G2558, G2563, G2564, G2552, G2551, G2555, G2553, G2554 |
|         | S1603 | -12  | 3   | G2156  |
|         | S1604 | -12  | 3   | G2157, G2155   |
|         | S1605 | -12  | 3   | G2562, G2564   |
|         | S1606 | -12  | 3   | G2563  |
|         | S1607 | -12  | 3   | G2158  |
|         | S1608 | -12  | 3   | G2561  |
| 11n135  | S360  | -12  | -1  | G386, G385   |
|         | S363  | -12  | 1   | G386, G385   |
| m11n135 | S1609 | 0    | -1  | G1376, G1375   |
|         | S1610 | 0    | 1   | G1376, G1375   |
| 11n138  | S365  | -6   | -3  | G387   |
|         | S364  | -6   | -1  | G388, G387, G389   |
|         | S366  | -6   | 1   | G388, G390, G389   |
|         | S367  | -6   | 3   | G390   |
| m11n138 | S1611 | -6   | -1  | G1377  |
|         | S1612 | -6   | 1   | G1377  |



| Knot    | ID    | tb  | r  | Parents  |
|---------|-------|-----|----|--|
| 11n139  | S368  | -10 | -1 | G392   |
|         | S369  | -10 | -1 | G391   |
|         | S370  | -10 | 1  | G392   |
|         | S371  | -10 | 1  | G391   |
| m11n139 | S1613 | -2  | -1 | G1378  |
|         | S1614 | -2  | -1 | G1379  |
|         | S1615 | -2  | 1  | G1379  |
|         | S1616 | -2  | 1  | G1378  |
| 11n141  | S372  | -4  | -1 | G393   |
|         | S373  | -4  | 1  | G393   |
| m11n141 | S1617 | -8  | -1 | G1380, G1381   |
|         | S1618 | -8  | 1  | G1380, G1381   |
| 11n142  | S374  | -4  | -1 | G395, G394   |
|         | S375  | -4  | 1  | G395, G394   |
| m11n142 | S1619 | -8  | -1 | G1384, G1388, G1385, G1387, G1390, G1391, G1383, G1382, G1389, G1386 |
|         | S1620 | -8  | 1  | G1384, G1388, G1385, G1387, G1390, G1391, G1383, G1382, G1389, G1386 |
| 11n143  | S377  | -8  | -3 | G396   |
|         | S376  | -8  | -1 | G399, G397, G398, G400, G396   |
|         | S378  | -8  | 1  | G399, G401, G397, G398, G400   |
|         | S379  | -8  | 3  | G401   |
| m11n143 | S1621 | -4  | -1 | G1392, G1393   |
|         | S1622 | -4  | 1  | G1392, G1393   |
| 11n145  | S380  | -7  | -2 | G404, G403   |
|         | S381  | -7  | -2 | G402, G405   |
|         | S382  | -7  | 0  | G404, G405, G402, G406, G403, G407, G409, G408                       |
|         | S383  | -7  | 2  | G407, G406   |
|         | S384  | -7  | 2  | G409, G408   |
| m11n145 | S1623 | -5  | -2 | G1394  |
|         | S1624 | -5  | 0  | G1395, G1394   |
|         | S1625 | -5  | 2  | G1395  |
| 11n147  | S385  | -11 | -2 | G2360  |
|         | S386  | -11 | -2 | G1954  |
|         | S387  | -11 | 0  | G1955, G1954   |
|         | S388  | -11 | 0  | G2360, G2361   |
|         | S389  | -11 | 2  | G1955  |
|         | S390  | -11 | 2  | G2361  |
| m11n147 | S1626 | -1  | -2 | G2566, G2565, G2567  |
|         | S1627 | -1  | -2 | G2161, G2159, G2160  |
|         | S1628 | -1  | 0  | G2159, G2164, G2163, G2162, G2161, G2160                             |
|         | S1629 | -1  | 0  | G2570, G2566, G2568, G2569, G2565, G2567                             |
|         | S1630 | -1  | 2  | G2163, G2162, G2164  |
|         | S1631 | -1  | 2  | G2568, G2569, G2570  |
| 11n164  | S391  | -12 | -1 | G410   |
|         | S392  | -12 | 1  | G410   |
| m11n164 | S1632 | 0   | -1 | G1400, G1403   |
|         | S1633 | 0   | -1 | G1404, G1401, G1399, G1402, G1396                                    |
|         | S1634 | 0   | -1 | G1397, G1398   |
|         | S1635 | 0   | 1  | G1398, G1401   |
|         | S1636 | 0   | 1  | G1404, G1397, G1399, G1396, G1403                                    |
|         | S1637 | 0   | 1  | G1400, G1402   |
| 11n173  | S393  | -11 | -2 | G411   |
|         | S394  | -11 | 0  | G412, G411   |
|         | S395  | -11 | 2  | G412   |
| m11n173 | S1638 | -1  | -2 | G1406, G1407, G1405  |

| Knot    | ID    | $tb$ | $r$ | Parents                                  |
|---------|-------|------|-----|--|
|         | S1639 | -1   | 0   | G1409, G1407, G1405, G1406, G1408, G1410 |
|         | S1640 | -1   | 2   | G1408, G1409, G1410                      |
| 11n183  | S397  | -16  | -3  | G413                                     |
|         | S396  | -16  | -1  | G413, G414                               |
|         | S398  | -16  | 1   | G414, G415                               |
|         | S399  | -16  | 3   | G415                                     |
| m11n183 | S1641 | 4    | -1  | G1411                                    |
|         | S1642 | 4    | 1   | G1411                                    |
| 12n25   | S509  | -6   | -1  | G539, G533, G542, G541                   |
|         | S510  | -6   | -1  | G531, G545, G538                         |
|         | S511  | -6   | -1  | G535, G537, G540, G534                   |
|         | S512  | -6   | -1  | G544, G546, G530, G543                   |
|         | S513  | -6   | -1  | G529, G532, G536                         |
|         | S514  | -6   | 1   | G532, G536, G540                         |
|         | S515  | -6   | 1   | G529, G539, G535, G534                   |
|         | S516  | -6   | 1   | G541, G533, G537, G546                   |
|         | S517  | -6   | 1   | G544, G531, G530, G542                   |
|         | S518  | -6   | 1   | G545, G538, G543                         |
| m12n25  | S1782 | -6   | -1  | G1547                                    |
|         | S1783 | -6   | -1  | G1548                                    |
|         | S1784 | -6   | 1   | G1547                                    |
|         | S1785 | -6   | 1   | G1548                                    |
| 12n121  | S499  | -1   | -2  | G523, G524                               |
|         | S500  | -1   | 0   | G525, G524                               |
|         | S501  | -1   | 0   | G523                                     |
|         | S503  | -1   | 0   | G526                                     |
|         | S504  | -1   | 2   | G526, G525                               |
| m12n121 | S1775 | -11  | -2  | G1540, G1539                             |
|         | S1776 | -11  | 0   | G1541, G1540, G1542, G1539               |
|         | S1777 | -11  | 2   | G1541, G1542                             |
| 12n243  | S506  | -18  | -3  | G527                                     |
|         | S505  | -18  | -1  | G527                                     |
|         | S507  | -18  | 1   | G528                                     |
|         | S508  | -18  | 3   | G528                                     |
| m12n243 | S1778 | 6    | -1  | G1546, G1544                             |
|         | S1779 | 6    | -1  | G1545, G1543                             |
|         | S1780 | 6    | 1   | G1546, G1543                             |
|         | S1781 | 6    | 1   | G1545, G1544                             |
| 12n253  | S519  | -1   | -2  | G1971, G1970                             |
|         | S520  | -1   | -2  | G2376, G2377                             |
|         | S521  | -1   | 0   | G2376, G2379, G2377, G2378               |
|         | S522  | -1   | 0   | G1971, G1970, G1972, G1973               |
|         | S523  | -1   | 2   | G1972, G1973                             |
|         | S524  | -1   | 2   | G2379, G2378                             |
| m12n253 | S1786 | -11  | -2  | G2599                                    |
|         | S1787 | -11  | -2  | G2193                                    |
|         | S1788 | -11  | 0   | G2600, G2599                             |
|         | S1789 | -11  | 0   | G2194, G2193                             |
|         | S1790 | -11  | 2   | G2194                                    |
|         | S1791 | -11  | 2   | G2600                                    |
| 12n254  | S527  | -14  | -3  | G1974                                    |
|         | S528  | -14  | -3  | G2380                                    |
|         | S525  | -14  | -1  | G1976, G1978, G1977, G1975, G1974        |
|         | S526  | -14  | -1  | G2384, G2382, G2383, G2381, G2380        |

| Knot    | ID    | tb  | r  | Parents  |
|---------|-------|-----|----|--|
|         | S529  | -14 | 1  | G1976, G1978, G1977, G1979, G1975              |
|         | S530  | -14 | 1  | G2384, G2382, G2383, G2381, G2385              |
|         | S531  | -14 | 3  | G2385  |
|         | S532  | -14 | 3  | G1979  |
| m12n254 | S1792 | 2   | -1 | G2601, G2602                                   |
|         | S1793 | 2   | -1 | G2196, G2195                                   |
|         | S1794 | 2   | 1  | G2196, G2195                                   |
|         | S1795 | 2   | 1  | G2601, G2602                                   |
| 12n280  | S533  | -10 | -1 | G547, G552, G551, G549, G548, G550             |
|         | S534  | -10 | 1  | G547, G552, G551, G549, G548, G550             |
|         | S1796 | -2  | -1 | G1549, G1551, G1554, G1550, G1553, G1552       |
|         | S1797 | -2  | 1  | G1549, G1551, G1554, G1550, G1553, G1552       |
| 12n285  | S535  | -10 | -1 | G555, G553, G556, G560, G557, G558, G559, G554 |
|         | S536  | -10 | 1  | G555, G553, G556, G560, G557, G558, G559, G554 |
| m12n285 | S1798 | -2  | -1 | G1555  |
|         | S1799 | -2  | -1 | G1556  |
|         | S1800 | -2  | 1  | G1555  |
|         | S1801 | -2  | 1  | G1556  |
| 12n293  | S538  | -14 | -3 | G561   |
|         | S539  | -14 | -3 | G562   |
|         | S537  | -14 | -1 | G567, G562, G561, G563, G566, G564, G565       |
|         | S540  | -14 | 1  | G568, G569, G567, G563, G564, G566, G565       |
|         | S541  | -14 | 3  | G569   |
|         | S542  | -14 | 3  | G568   |
| m12n293 | S1802 | 2   | -1 | G1557  |
|         | S1803 | 2   | 1  | G1557  |
| 12n309  | S543  | -7  | -2 | G570   |
|         | S544  | -7  | 0  | G571, G570                                     |
|         | S545  | -7  | 2  | G571   |
| m12n309 | S1804 | -5  | -2 | G1558  |
|         | S1805 | -5  | 0  | G1558, G1559                                   |
|         | S1806 | -5  | 2  | G1559  |
| 12n318  | S546  | -3  | -2 | G573   |
|         | S547  | -3  | -2 | G572   |
|         | S548  | -3  | 0  | G575, G572                                     |
|         | S549  | -3  | 0  | G574, G573                                     |
|         | S550  | -3  | 2  | G574   |
|         | S551  | -3  | 2  | G575   |
| m12n318 | S1807 | -9  | -2 | G1561  |
|         | S1808 | -9  | -2 | G1560  |
|         | S1809 | -9  | 0  | G1563, G1561                                   |
|         | S1810 | -9  | 0  | G1562, G1560                                   |
|         | S1811 | -9  | 2  | G1562  |
|         | S1812 | -9  | 2  | G1563  |
| 12n321  | S553  | -14 | -3 | G576   |
|         | S554  | -14 | -3 | G577   |
|         | S552  | -14 | -1 | G577, G578, G580, G579, G581, G576             |
|         | S555  | -14 | 1  | G583, G578, G580, G579, G581, G582             |
|         | S556  | -14 | 3  | G583   |
|         | S557  | -14 | 3  | G582   |
| m12n321 | S1813 | 2   | -1 | G1564, G1565                                   |
|         | S1814 | 2   | 1  | G1564, G1565                                   |
| 12n323  | S558  | -5  | -2 | G1983, G1985, G1987                            |
|         | S559  | -5  | -2 | G1981, G1980, G1984                            |

| Knot    | ID    | $tb$ | $r$ | Parents  |
|---------|-------|------|-----|--|
|         | S560  | -5   | -2  | G1986, G1982, G1988  |
|         | S561  | -5   | -2  | G2393, G2394, G2390  |
|         | S562  | -5   | -2  | G2387, G2391, G2389  |
|         | S563  | -5   | -2  | G2386, G2392, G2388  |
|         | S564  | -5   | 0   | G2393, G2399, G2398, G2400, G2402, G2388, G2389, G2391, G2387, G2403, G2386, G2395, G2392, G2394, G2396, G2397, G2401, G2390 |
|         | S565  | -5   | 0   | G1981, G1986, G1991, G1985, G1993, G1989, G1987, G1983, G1982, G1984, G1994, G1996, G1997, G1980, G1995, G1990, G1992, G1988 |
|         | S566  | -5   | 2   | G2397, G2399, G2400  |
|         | S567  | -5   | 2   | G1994, G1992, G1995  |
|         | S568  | -5   | 2   | G2403, G2401, G2398  |
|         | S569  | -5   | 2   | G1993, G1996, G1989  |
|         | S570  | -5   | 2   | G1990, G1997, G1991  |
|         | S571  | -5   | 2   | G2396, G2402, G2395  |
| m12n323 | S1815 | -7   | -2  | G1567  |
|         | S1816 | -7   | -2  | G1566  |
|         | S1817 | -7   | 0   | G1569, G1567   |
|         | S1818 | -7   | 0   | G1566, G1568   |
|         | S1819 | -7   | 2   | G1569  |
|         | S1820 | -7   | 2   | G1568  |
| 12n328  | S573  | -18  | -3  | G586, G585, G584   |
|         | S572  | -18  | -1  | G585, G588, G586, G584, G587   |
|         | S574  | -18  | 1   | G591, G590, G588, G589, G587   |
|         | S575  | -18  | 3   | G591, G590, G589   |
| m12n328 | S1821 | 6    | -1  | G1570  |
|         | S1822 | 6    | 1   | G1570  |
| 12n340  | S577  | -10  | -3  | G594   |
|         | S578  | -10  | -3  | G593   |
|         | S579  | -10  | -3  | G592   |
|         | S576  | -10  | -1  | G602, G598, G596, G597, G599, G592, G593, G594, G600, G601, G595   |
|         | S580  | -10  | 1   | G604, G603, G602, G605, G596, G597, G598, G599, G600, G601, G595   |
|         | S581  | -10  | 3   | G605   |
|         | S582  | -10  | 3   | G603   |
|         | S583  | -10  | 3   | G604   |
| m12n340 | S1823 | -2   | -1  | G1571  |
|         | S1824 | -2   | -1  | G1572  |
|         | S1825 | -2   | 1   | G1571  |
|         | S1826 | -2   | 1   | G1572  |
| 12n356  | S584  | -6   | -1  | G2404, G2405, G2408, G2406, G2407, G2409   |
|         | S585  | -6   | -1  | G2002, G2003, G1998, G2000, G1999, G2001   |
|         | S586  | -6   | 1   | G2002, G2003, G1998, G2000, G1999, G2001   |
|         | S587  | -6   | 1   | G2404, G2405, G2408, G2406, G2407, G2409   |
| 12n358  | S589  | -2   | -1  | G2008, G2004, G2007  |
|         | S590  | -2   | -1  | G2005, G2009, G2006  |
|         | S591  | -2   | -1  | G2415, G2410, G2414  |
|         | S592  | -2   | -1  | G2411, G2413, G2412  |
|         | S594  | -2   | 1   | G2413, G2410, G2414  |
|         | S595  | -2   | 1   | G2004, G2007, G2006  |
|         | S597  | -2   | 1   | G2415, G2411, G2412  |
|         | S598  | -2   | 1   | G2008, G2005, G2009  |
| m12n358 | S1831 | -10  | -3  | G1574  |
|         | S1832 | -10  | -3  | G1573  |
|         | S1827 | -10  | -1  | G2604, G2603, G1573  |
|         | S1828 | -10  | -1  | G1574, G2198, G2197  |
|         | S1833 | -10  | 1   | G2198, G2197, G1575  |

| Knot    | ID    | tb  | r  | Parents  |
|---------|-------|-----|----|--|
|         | S1834 | -10 | 1  | G2604, G1576, G2603                            |
|         | S1837 | -10 | 3  | G1576  |
|         | S1838 | -10 | 3  | G1575  |
| 12n370  | S601  | -10 | -3 | G606   |
|         | S602  | -10 | -3 | G607   |
|         | S600  | -10 | -1 | G607, G611, G608, G613, G610, G609, G612, G606 |
|         | S603  | -10 | 1  | G611, G608, G613, G610, G609, G614, G612, G615 |
|         | S604  | -10 | 3  | G614   |
|         | S605  | -10 | 3  | G615   |
|         |       |     |    |  |
| m12n370 | S1839 | -2  | -1 | G1579, G1577                                   |
|         | S1840 | -2  | -1 | G1580, G1578                                   |
|         | S1841 | -2  | 1  | G1580, G1578                                   |
|         | S1842 | -2  | 1  | G1579, G1577                                   |
| 12n371  | S606  | -9  | -2 | G616   |
|         | S607  | -9  | 0  | G617, G616                                     |
|         | S608  | -9  | 2  | G617   |
| m12n371 | S1844 | -3  | -2 | G1581, G1582                                   |
|         | S1845 | -3  | 0  | G1581, G1583, G1582, G1584                     |
|         | S1848 | -3  | 2  | G1583, G1584                                   |
| 12n375  | S610  | -14 | -3 | G618   |
|         | S609  | -14 | -1 | G621, G620, G619, G618, G622                   |
|         | S611  | -14 | 1  | G621, G620, G619, G622, G623                   |
|         | S612  | -14 | 3  | G623   |
| m12n375 | S1849 | 2   | -1 | G1588, G1590, G1589                            |
|         | S1850 | 2   | -1 | G1586, G1587, G1585                            |
|         | S1851 | 2   | 1  | G1589, G1587, G1586                            |
|         | S1852 | 2   | 1  | G1588, G1590, G1585                            |
| 12n403  | S613  | -2  | -1 | G624, G626, G629                               |
|         | S614  | -2  | -1 | G625, G627, G628                               |
|         | S615  | -2  | 1  | G624, G627, G626                               |
|         | S616  | -2  | 1  | G625, G628, G629                               |
| m12n403 | S1853 | -10 | -1 | G1592  |
|         | S1854 | -10 | -1 | G1591  |
|         | S1855 | -10 | 1  | G1591  |
|         | S1856 | -10 | 1  | G1592  |
| 12n407  | S619  | -14 | -3 | G2010  |
|         | S620  | -14 | -3 | G2416  |
|         | S617  | -14 | -1 | G2012, G2011, G2010                            |
|         | S618  | -14 | -1 | G2416, G2417, G2418                            |
|         | S621  | -14 | 1  | G2012, G2011, G2013                            |
|         | S622  | -14 | 1  | G2419, G2417, G2418                            |
|         | S623  | -14 | 3  | G2013  |
|         | S624  | -14 | 3  | G2419  |
| m12n407 | S1857 | 2   | -1 | G2203, G2199, G2204                            |
|         | S1858 | 2   | -1 | G2609, G2610                                   |
|         | S1859 | 2   | -1 | G2608  |
|         | S1860 | 2   | -1 | G2605, G2607, G2606                            |
|         | S1861 | 2   | -1 | G2200, G2202, G2201                            |
|         | S1864 | 2   | 1  | G2605, G2608, G2607                            |
|         | S1865 | 2   | 1  | G2200, G2202                                   |
|         | S1866 | 2   | 1  | G2203, G2199, G2201                            |
|         | S1867 | 2   | 1  | G2204  |
|         | S1868 | 2   | 1  | G2609, G2606, G2610                            |
| 12n426  | S626  | -18 | -3 | G630   |

| Knot    | ID    | $tb$ | $r$ | Parents  |
|---------|-------|------|-----|--|
|         | S625  | -18  | -1  | G631, G630                                     |
|         | S627  | -18  | 1   | G631, G632                                     |
|         | S628  | -18  | 3   | G632   |
| m12n426 | S1869 | 6    | -1  | G1593  |
|         | S1870 | 6    | 1   | G1593  |
| 12n438  | S629  | -10  | -1  | G634   |
|         | S630  | -10  | -1  | G633   |
|         | S631  | -10  | 1   | G634   |
|         | S632  | -10  | 1   | G633   |
| m12n438 | S1871 | -2   | -1  | G1597, G1596, G1595                            |
|         | S1872 | -2   | -1  | G1598, G1594, G1599                            |
|         | S1873 | -2   | 1   | G1599, G1594, G1597                            |
|         | S1874 | -2   | 1   | G1598, G1596, G1595                            |
| 12n439  | S633  | -3   | -2  | G635   |
|         | S634  | -3   | 0   | G635, G636                                     |
|         | S635  | -3   | 2   | G636   |
| m12n439 | S1875 | -9   | -2  | G1600  |
|         | S1876 | -9   | 0   | G1600, G1601                                   |
|         | S1877 | -9   | 2   | G1601  |
| 12n443  | S636  | -5   | -2  | G637   |
|         | S637  | -5   | -2  | G638   |
|         | S638  | -5   | 0   | G639, G640, G637, G638                         |
|         | S639  | -5   | 2   | G640   |
|         | S640  | -5   | 2   | G639   |
| m12n443 | S1878 | -7   | -2  | G1602  |
|         | S1879 | -7   | 0   | G1602, G1603                                   |
|         | S1880 | -7   | 2   | G1603  |
| 12n451  | S641  | -1   | -2  | G642, G644                                     |
|         | S642  | -1   | -2  | G641, G643                                     |
|         | S643  | -1   | 0   | G645, G644, G646, G641, G647, G642, G643, G648 |
|         | S644  | -1   | 2   | G645, G648                                     |
|         | S645  | -1   | 2   | G646, G647                                     |
| m12n451 | S1881 | -11  | -2  | G1604  |
|         | S1882 | -11  | 0   | G1605, G1604                                   |
|         | S1883 | -11  | 2   | G1605  |
| 12n452  | S647  | -10  | -3  | G649   |
|         | S646  | -10  | -1  | G650, G653, G649, G652, G651                   |
|         | S648  | -10  | 1   | G650, G653, G654, G652, G651                   |
|         | S649  | -10  | 3   | G654   |
| m12n452 | S1884 | -2   | -1  | G1610, G1607, G1608                            |
|         | S1885 | -2   | -1  | G1611, G1606, G1609                            |
|         | S1886 | -2   | 1   | G1610, G1609, G1608                            |
|         | S1887 | -2   | 1   | G1611, G1606, G1607                            |
| 12n462  | S650  | -6   | -1  | G2421, G2420                                   |
|         | S651  | -6   | -1  | G2015, G2014                                   |
|         | S652  | -6   | 1   | G2421, G2420                                   |
|         | S653  | -6   | 1   | G2015, G2014                                   |
| 12n475  | S654  | -7   | -2  | G655   |
|         | S655  | -7   | 0   | G655, G656                                     |
|         | S656  | -7   | 2   | G656   |
| m12n475 | S1888 | -5   | -2  | G1612  |
|         | S1889 | -5   | 0   | G1613, G1612                                   |
|         | S1890 | -5   | 2   | G1613  |
| 12n487  | S658  | -12  | -3  | G657   |

| Knot    | ID    | $tb$ | $r$ | Parents  |
|---------|-------|------|-----|--|
|         | S659  | -12  | -3  | G658   |
|         | S657  | -12  | -1  | G658, G659, G664, G657, G662, G663, G661, G660 |
|         | S660  | -12  | 1   | G659, G665, G664, G662, G663, G666, G661, G660 |
|         | S661  | -12  | 3   | G666   |
|         | S662  | -12  | 3   | G665   |
| m12n487 | S1891 | 0    | -1  | G1614  |
|         | S1892 | 0    | -1  | G1615  |
|         | S1893 | 0    | 1   | G1615  |
|         | S1894 | 0    | 1   | G1614  |
| 12n488  | S663  | -7   | -2  | G667   |
|         | S664  | -7   | 0   | G667, G668                                     |
|         | S665  | -7   | 2   | G668   |
| m12n488 | S1895 | -5   | -2  | G1617, G1616                                   |
|         | S1896 | -5   | 0   | G1619, G1618, G1617, G1616                     |
|         | S1897 | -5   | 2   | G1619, G1618                                   |
| 12n502  | S667  | -18  | -3  | G669   |
|         | S666  | -18  | -1  | G669   |
|         | S668  | -18  | 1   | G670   |
|         | S669  | -18  | 3   | G670   |
| m12n502 | S1898 | 6    | -1  | G1623, G1620                                   |
|         | S1899 | 6    | -1  | G1622, G1621                                   |
|         | S1900 | 6    | 1   | G1622, G1623                                   |
|         | S1901 | 6    | 1   | G1621, G1620                                   |
| 12n603  | S671  | -14  | -3  | G671   |
|         | S670  | -14  | -1  | G671   |
|         | S672  | -14  | 1   | G672   |
|         | S673  | -14  | 3   | G672   |
| m12n603 | S1902 | 2    | -1  | G1627, G1624, G1628                            |
|         | S1903 | 2    | -1  | G1625, G1629, G1626                            |
|         | S1904 | 2    | 1   | G1625, G1624, G1629                            |
|         | S1905 | 2    | 1   | G1627, G1628, G1626                            |
| 12n706  | S674  | -6   | -1  | G673, G674                                     |
|         | S675  | -6   | 1   | G673, G674                                     |
| 12n725  | S677  | -20  | -3  | G675   |
|         | S676  | -20  | -1  | G676, G675                                     |
|         | S678  | -20  | 1   | G676, G677                                     |
|         | S679  | -20  | 3   | G677   |
| m12n725 | S1906 | 8    | -1  | G1630  |
|         | S1907 | 8    | 1   | G1630  |
| 12n729  | S682  | -14  | -3  | G2016  |
|         | S683  | -14  | -3  | G2422  |
|         | S680  | -14  | -1  | G2422, G2423, G2426, G2425, G2424              |
|         | S681  | -14  | -1  | G2019, G2018, G2016, G2020, G2017              |
|         | S684  | -14  | 1   | G2019, G2018, G2020, G2021, G2017              |
|         | S685  | -14  | 1   | G2423, G2426, G2425, G2424, G2427              |
|         | S686  | -14  | 3   | G2427  |
|         | S687  | -14  | 3   | G2021  |
| m12n729 | S1908 | 2    | -1  | G2612, G2611                                   |
|         | S1909 | 2    | -1  | G2206, G2205                                   |
|         | S1910 | 2    | 1   | G2206, G2205                                   |
|         | S1911 | 2    | 1   | G2612, G2611                                   |
| 12n730  | S688  | -11  | -2  | G679   |
|         | S689  | -11  | -2  | G678   |
|         | S690  | -11  | 0   | G678, G681                                     |

| Knot    | ID    | $tb$ | $r$ | Parents                                  |
|---------|-------|------|-----|--|
|         | S691  | -11  | 0   | G679, G680                               |
|         | S692  | -11  | 2   | G680                                     |
|         | S693  | -11  | 2   | G681                                     |
| m12n730 | S1912 | -1   | -2  | G2614, G2613                             |
|         | S1913 | -1   | -2  | G2208, G2207                             |
|         | S1914 | -1   | 0   | G2614, G2615, G2616, G2613               |
|         | S1915 | -1   | 0   | G2208, G2210, G2207, G2209               |
|         | S1916 | -1   | 2   | G2615, G2616                             |
|         | S1917 | -1   | 2   | G2210, G2209                             |
|         |       |      |     |  |
| 12n749  | S694  | -13  | -2  | G682                                     |
|         | S695  | -13  | 0   | G682, G683                               |
|         | S696  | -13  | 2   | G683                                     |
| m12n749 | S1918 | 1    | -2  | G1631                                    |
|         | S1919 | 1    | 0   | G1631, G1632                             |
|         | S1920 | 1    | 2   | G1632                                    |
| 12n750  | S698  | -16  | -3  | G684                                     |
|         | S697  | -16  | -1  | G684, G686, G687, G685                   |
|         | S699  | -16  | 1   | G686, G687, G688, G685                   |
|         | S700  | -16  | 3   | G688                                     |
| m12n750 | S1921 | 4    | -1  | G1633                                    |
|         | S1922 | 4    | 1   | G1633                                    |
| 12n768  | S701  | -2   | -1  | G2023, G2022                             |
|         | S702  | -2   | -1  | G2429, G2428                             |
|         | S703  | -2   | 1   | G2023, G2022                             |
|         | S704  | -2   | 1   | G2429, G2428                             |
| m12n768 | S1925 | -10  | -3  | G2617                                    |
|         | S1926 | -10  | -3  | G2211                                    |
|         | S1923 | -10  | -1  | G2213, G2212, G2211, G2215, G2214        |
|         | S1924 | -10  | -1  | G2619, G2621, G2620, G2618, G2617        |
|         | S1927 | -10  | 1   | G2619, G2621, G2620, G2618, G2622        |
|         | S1928 | -10  | 1   | G2213, G2212, G2215, G2216, G2214        |
|         | S1929 | -10  | 3   | G2622                                    |
|         | S1930 | -10  | 3   | G2216                                    |
| 12n801  | S706  | -14  | -3  | G689                                     |
|         | S705  | -14  | -1  | G692, G689, G693, G690, G691             |
|         | S707  | -14  | 1   | G694, G692, G693, G690, G691             |
|         | S708  | -14  | 3   | G694                                     |
| m12n801 | S1931 | 2    | -1  | G1635, G1634                             |
|         | S1932 | 2    | 1   | G1635, G1634                             |
| 12n807  | S710  | -14  | -3  | G695                                     |
|         | S709  | -14  | -1  | G695, G696, G699, G698, G697             |
|         | S711  | -14  | 1   | G696, G700, G699, G698, G697             |
|         | S712  | -14  | 3   | G700                                     |
| m12n807 | S1933 | 2    | -1  | G1636, G1637                             |
|         | S1934 | 2    | 1   | G1636, G1637                             |
| 12n809  | S713  | -10  | -1  | G701                                     |
|         | S714  | -10  | 1   | G701                                     |
| m12n809 | S1935 | -2   | -1  | G1638                                    |
|         | S1936 | -2   | 1   | G1638                                    |
| 12n811  | S715  | -11  | -2  | G702                                     |
|         | S716  | -11  | 0   | G703, G702                               |
|         | S717  | -11  | 2   | G703                                     |
| m12n811 | S1937 | -1   | -2  | G1639, G1641, G1640                      |
|         | S1938 | -1   | 0   | G1642, G1640, G1644, G1639, G1641, G1643 |



| Knot    | ID    | $tb$ | $r$ | Parents                            |
|---------|-------|------|-----|------------------------------------|
|         | S1939 | -1   | 2   | G1644, G1642, G1643                |
| 12n830  | S719  | -16  | -3  | G705                               |
|         | S720  | -16  | -3  | G704                               |
|         | S718  | -16  | -1  | G709, G706, G705, G708, G707, G704 |
|         | S721  | -16  | 1   | G709, G706, G711, G710, G708, G707 |
|         | S722  | -16  | 3   | G711                               |
|         | S723  | -16  | 3   | G710                               |
| m12n830 | S1940 | 4    | -1  | G1645, G1646                       |
|         | S1941 | 4    | 1   | G1645, G1646                       |
| 12n835  | S724  | -5   | -2  | G712                               |
|         | S725  | -5   | 0   | G713, G712                         |
|         | S726  | -5   | 2   | G713                               |
| m12n835 | S1942 | -7   | -2  | G1647                              |
|         | S1943 | -7   | 0   | G1648, G1647                       |
|         | S1944 | -7   | 2   | G1648                              |
| 12n838  | S727  | -10  | -1  | G715, G714, G717, G716             |
|         | S728  | -10  | 1   | G715, G714, G717, G716             |
| m12n838 | S1945 | -2   | -1  | G1649                              |
|         | S1946 | -2   | -1  | G1650                              |
|         | S1947 | -2   | 1   | G1650                              |
|         | S1948 | -2   | 1   | G1649                              |
| 12n873  | S729  | -6   | -1  | G718                               |
|         | S730  | -6   | -1  | G719                               |
|         | S731  | -6   | 1   | G719                               |
|         | S732  | -6   | 1   | G718                               |
| 13n192  | S801  | 0    | -1  | G741, G740                         |
|         | S802  | 0    | 1   | G741, G740                         |
| m13n192 | S1997 | -12  | -1  | G1668, G1667                       |
|         | S1998 | -12  | 1   | G1668, G1667                       |
| 13n469  | S934  | -4   | -1  | G791, G792                         |
|         | S935  | -4   | 1   | G791, G792                         |
| m13n469 | S2114 | -8   | -1  | G1703, G1702                       |
|         | S2117 | -8   | 1   | G1703, G1702                       |
| 13n584  | S936  | 1    | -2  | G794                               |
|         | S937  | 1    | -2  | G793                               |
|         | S938  | 1    | 0   | G793, G795                         |
|         | S939  | 1    | 0   | G794, G796                         |
|         | S940  | 1    | 2   | G796                               |
|         | S941  | 1    | 2   | G795                               |
| m13n584 | S2118 | -13  | -2  | G1704                              |
|         | S2119 | -13  | -2  | G1705                              |
|         | S2120 | -13  | 0   | G1704, G1707                       |
|         | S2121 | -13  | 0   | G1706, G1705                       |
|         | S2122 | -13  | 2   | G1706                              |
|         | S2123 | -13  | 2   | G1707                              |
| 13n586  | S942  | -5   | -2  | G797                               |
|         | S943  | -5   | 0   | G797, G798                         |
|         | S944  | -5   | 2   | G798                               |
| m13n586 | S2124 | -7   | -2  | G1708                              |
|         | S2125 | -7   | 0   | G1708, G1709                       |
|         | S2126 | -7   | 2   | G1709                              |
| 13n588  | S947  | -16  | -3  | G2495                              |
|         | S948  | -16  | -3  | G2089                              |
|         | S949  | -16  | -3  | G2088                              |

| Knot     | ID    | $tb$ | $r$ | Parents                                  |
|----------|-------|------|-----|--|
|          | S950  | -16  | -3  | G2494                                    |
|          | S945  | -16  | -1  | G2088, G2092, G2093, G2089, G2091, G2090 |
|          | S946  | -16  | -1  | G2498, G2499, G2497, G2494, G2495, G2496 |
|          | S951  | -16  | 1   | G2092, G2093, G2091, G2094, G2090, G2095 |
|          | S952  | -16  | 1   | G2498, G2499, G2497, G2496, G2501, G2500 |
|          | S953  | -16  | 3   | G2094                                    |
|          | S954  | -16  | 3   | G2501                                    |
|          | S955  | -16  | 3   | G2095                                    |
|          | S956  | -16  | 3   | G2500                                    |
| m13n588  | S2127 | 4    | -1  | G2679, G2680                             |
|          | S2128 | 4    | -1  | G2273, G2274                             |
|          | S2129 | 4    | 1   | G2679, G2680                             |
|          | S2130 | 4    | 1   | G2273, G2274                             |
| 13n592   | S957  | -3   | -2  | G799                                     |
|          | S958  | -3   | -2  | G800                                     |
|          | S959  | -3   | 0   | G800, G801                               |
|          | S960  | -3   | 0   | G799, G802                               |
|          | S961  | -3   | 2   | G802                                     |
|          | S962  | -3   | 2   | G801                                     |
| m13n592  | S2131 | -9   | -2  | G1711                                    |
|          | S2132 | -9   | -2  | G1710                                    |
|          | S2133 | -9   | 0   | G1713, G1710                             |
|          | S2134 | -9   | 0   | G1711, G1712                             |
|          | S2135 | -9   | 2   | G1712                                    |
|          | S2136 | -9   | 2   | G1713                                    |
| 13n604   | S964  | -20  | -3  | G803                                     |
|          | S963  | -20  | -1  | G804, G803, G805                         |
|          | S965  | -20  | 1   | G804, G806, G805                         |
|          | S966  | -20  | 3   | G806                                     |
| m13n604  | S2137 | 8    | -1  | G1714                                    |
|          | S2138 | 8    | 1   | G1714                                    |
| 13n1180  | S734  | -16  | -3  | G720                                     |
|          | S733  | -16  | -1  | G724, G722, G720, G721, G723             |
|          | S735  | -16  | 1   | G725, G724, G722, G721, G723             |
|          | S736  | -16  | 3   | G725                                     |
| m13n1180 | S1949 | 4    | -1  | G1651, G1652                             |
|          | S1950 | 4    | 1   | G1651, G1652                             |
| 13n1192  | S737  | 1    | -2  | G726                                     |
|          | S738  | 1    | 0   | G726, G727                               |
|          | S739  | 1    | 2   | G727                                     |
| m13n1192 | S1951 | -13  | -2  | G1653                                    |
|          | S1952 | -13  | 0   | G1653, G1654                             |
|          | S1953 | -13  | 2   | G1654                                    |
| 13n1271  | S740  | -12  | -1  | G2431, G2430                             |
|          | S741  | -12  | -1  | G2024, G2025                             |
|          | S742  | -12  | 1   | G2431, G2430                             |
|          | S743  | -12  | 1   | G2024, G2025                             |
| m13n1271 | S1954 | 0    | -1  | G2218, G2217                             |
|          | S1955 | 0    | -1  | G2623, G2624                             |
|          | S1956 | 0    | 1   | G2623, G2624                             |
|          | S1957 | 0    | 1   | G2218, G2217                             |
| 13n1692  | S744  | -3   | -2  | G2026, G2029                             |
|          | S745  | -3   | -2  | G2435, G2433                             |
|          | S746  | -3   | -2  | G2432, G2434                             |

| Knot     | ID    | $tb$ | $r$ | Parents  |
|----------|-------|------|-----|--|
|          | S747  | -3   | -2  | G2027, G2028   |
|          | S748  | -3   | 0   | G2026, G2029, G2031, G2032, G2033, G2027, G2028, G2030 |
|          | S749  | -3   | 0   | G2437, G2436, G2433, G2432, G2438, G2439, G2435, G2434 |
|          | S750  | -3   | 2   | G2031, G2032   |
|          | S751  | -3   | 2   | G2438, G2439   |
|          | S752  | -3   | 2   | G2436, G2437   |
|          | S753  | -3   | 2   | G2030, G2033   |
| m13n1692 | S1958 | -9   | -2  | G1656  |
|          | S1959 | -9   | -2  | G1655  |
|          | S1960 | -9   | 0   | G1656, G1657   |
|          | S1961 | -9   | 0   | G1655, G1658   |
|          | S1962 | -9   | 2   | G1657  |
|          | S1963 | -9   | 2   | G1658  |
| 13n1718  | S754  | -13  | -2  | G2034  |
|          | S755  | -13  | -2  | G2440  |
|          | S756  | -13  | 0   | G2034, G2035   |
|          | S757  | -13  | 0   | G2440, G2441   |
|          | S758  | -13  | 2   | G2441  |
|          | S759  | -13  | 2   | G2035  |
| m13n1718 | S1964 | 1    | -2  | G2626, G2625   |
|          | S1965 | 1    | -2  | G2220, G2219   |
|          | S1966 | 1    | 0   | G2626, G2627, G2628, G2625                             |
|          | S1967 | 1    | 0   | G2220, G2221, G2219, G2222                             |
|          | S1968 | 1    | 2   | G2221, G2222   |
|          | S1969 | 1    | 2   | G2627, G2628   |
| 13n1735  | S760  | 1    | -2  | G2442, G2443   |
|          | S761  | 1    | -2  | G2036, G2037   |
|          | S762  | 1    | 0   | G2445, G2444, G2442, G2443                             |
|          | S763  | 1    | 0   | G2039, G2036, G2038, G2037                             |
|          | S764  | 1    | 2   | G2039, G2038   |
|          | S765  | 1    | 2   | G2445, G2444   |
| m13n1735 | S1970 | -13  | -2  | G2629  |
|          | S1971 | -13  | -2  | G2223  |
|          | S1972 | -13  | 0   | G2224, G2223   |
|          | S1973 | -13  | 0   | G2629, G2630   |
|          | S1974 | -13  | 2   | G2224  |
|          | S1975 | -13  | 2   | G2630  |
| 13n1762  | S768  | -12  | -3  | G2040  |
|          | S769  | -12  | -3  | G2446  |
|          | S766  | -12  | -1  | G2446, G2450, G2449, G2447, G2448                      |
|          | S767  | -12  | -1  | G2040, G2043, G2042, G2044, G2041                      |
|          | S770  | -12  | 1   | G2043, G2042, G2045, G2044, G2041                      |
|          | S771  | -12  | 1   | G2451, G2450, G2449, G2447, G2448                      |
|          | S772  | -12  | 3   | G2451  |
| m13n1762 | S773  | -12  | 3   | G2045  |
|          | S1976 | 0    | -1  | G2632, G2631   |
|          | S1977 | 0    | -1  | G2226, G2225   |
|          | S1978 | 0    | 1   | G2226, G2225   |
| 13n1779  | S1979 | 0    | 1   | G2632, G2631   |
|          | S774  | -16  | -1  | G728, G729   |
| m13n1779 | S775  | -16  | 1   | G728, G729   |
|          | S1980 | 4    | -1  | G1659, G1660   |
| 13n1836  | S1981 | 4    | 1   | G1659, G1660   |
|          | S776  | -5   | -2  | G730   |

| Knot     | ID    | tb  | r  | Parents  |
|----------|-------|-----|----|--|
|          | S777  | -5  | 0  | G730, G731   |
|          | S778  | -5  | 2  | G731   |
| m13n1836 | S1982 | -7  | -2 | G1661  |
|          | S1983 | -7  | 0  | G1662, G1661   |
|          | S1984 | -7  | 2  | G1662  |
|          |       |     |    |  |
| 13n1864  | S780  | -6  | -1 | G732, G733   |
|          | S782  | -6  | 1  | G732, G733   |
| m13n1864 | S1985 | -6  | -1 | G1664, G1663   |
|          | S1986 | -6  | 1  | G1664, G1663   |
| 13n1901  | S783  | -8  | -1 | G2047, G2046   |
|          | S784  | -8  | -1 | G2452, G2453   |
|          | S785  | -8  | 1  | G2047, G2046   |
|          | S786  | -8  | 1  | G2452, G2453   |
| m13n1901 | S1987 | -4  | -1 | G2634, G2633   |
|          | S1988 | -4  | -1 | G2227, G2228   |
|          | S1989 | -4  | 1  | G2634, G2633   |
|          | S1990 | -4  | 1  | G2227, G2228   |
| 13n1907  | S788  | -16 | -3 | G734   |
|          | S789  | -16 | -3 | G735   |
|          | S787  | -16 | -1 | G735, G736, G737, G734                                 |
|          | S790  | -16 | 1  | G739, G738, G737, G736                                 |
|          | S791  | -16 | 3  | G738   |
|          | S792  | -16 | 3  | G739   |
| m13n1907 | S1991 | 4   | -1 | G1665, G1666   |
|          | S1992 | 4   | 1  | G1665, G1666   |
| 13n1916  | S795  | -12 | -3 | G2048  |
|          | S796  | -12 | -3 | G2454  |
|          | S793  | -12 | -1 | G2456, G2454, G2455                                    |
|          | S794  | -12 | -1 | G2048, G2049, G2050                                    |
|          | S797  | -12 | 1  | G2049, G2051, G2050                                    |
|          | S798  | -12 | 1  | G2456, G2457, G2455                                    |
|          | S799  | -12 | 3  | G2457  |
|          | S800  | -12 | 3  | G2051  |
| m13n1916 | S1993 | 0   | -1 | G2636, G2635   |
|          | S1994 | 0   | -1 | G2229, G2230   |
|          | S1995 | 0   | 1  | G2229, G2230   |
|          | S1996 | 0   | 1  | G2636, G2635   |
| 13n1945  | S803  | -5  | -2 | G2052  |
|          | S804  | -5  | -2 | G2458  |
|          | S805  | -5  | 0  | G2459, G2458   |
|          | S806  | -5  | 0  | G2053, G2052   |
|          | S807  | -5  | 2  | G2053  |
|          | S808  | -5  | 2  | G2459  |
| m13n1945 | S1999 | -7  | -2 | G2637, G2640   |
|          | S2000 | -7  | -2 | G2233, G2231   |
|          | S2001 | -7  | -2 | G2639, G2638   |
|          | S2002 | -7  | -2 | G2234, G2232   |
|          | S2003 | -7  | 0  | G2641, G2644, G2639, G2638, G2643, G2637, G2642, G2640 |
|          | S2004 | -7  | 0  | G2238, G2232, G2234, G2237, G2231, G2236, G2235, G2233 |
|          | S2005 | -7  | 2  | G2237, G2238   |
|          | S2006 | -7  | 2  | G2641, G2642   |
|          | S2007 | -7  | 2  | G2236, G2235   |
|          | S2008 | -7  | 2  | G2644, G2643   |
| 13n2102  | S811  | -16 | -3 | G2460  |

| Knot     | ID    | $tb$ | $r$ | Parents                    |
|----------|-------|------|-----|----------------------------|
|          | S812  | -16  | -3  | G2054                      |
|          | S809  | -16  | -1  | G2054, G2056, G2055        |
|          | S810  | -16  | -1  | G2462, G2460, G2461        |
|          | S813  | -16  | 1   | G2463, G2461, G2462        |
|          | S814  | -16  | 1   | G2057, G2055, G2056        |
|          | S815  | -16  | 3   | G2463                      |
|          | S816  | -16  | 3   | G2057                      |
| m13n2102 | S2009 | 4    | -1  | G2646, G2645               |
|          | S2010 | 4    | -1  | G2240, G2239               |
|          | S2011 | 4    | 1   | G2240, G2239               |
|          | S2012 | 4    | 1   | G2646, G2645               |
| 13n2180  | S818  | -4   | -1  | G743, G742                 |
|          | S820  | -4   | 1   | G743, G742                 |
| m13n2180 | S2013 | -8   | -1  | G1670, G1669               |
|          | S2014 | -8   | 1   | G1670, G1669               |
| 13n2303  | S821  | -3   | -2  | G2465, G2464               |
|          | S822  | -3   | -2  | G2058, G2059               |
|          | S823  | -3   | 0   | G2061, G2060, G2058, G2059 |
|          | S824  | -3   | 0   | G2465, G2467, G2466, G2464 |
|          | S825  | -3   | 2   | G2467, G2466               |
|          | S826  | -3   | 2   | G2061, G2060               |
| m13n2303 | S2015 | -9   | -2  | G2647                      |
|          | S2016 | -9   | -2  | G2241                      |
|          | S2017 | -9   | 0   | G2241, G2242               |
|          | S2018 | -9   | 0   | G2647, G2648               |
|          | S2019 | -9   | 2   | G2648                      |
|          | S2020 | -9   | 2   | G2242                      |
| 13n2428  | S829  | -16  | -3  | G2468                      |
|          | S830  | -16  | -3  | G2062                      |
|          | S827  | -16  | -1  | G2470, G2469, G2468        |
|          | S828  | -16  | -1  | G2063, G2062, G2064        |
|          | S831  | -16  | 1   | G2063, G2064, G2065        |
|          | S832  | -16  | 1   | G2470, G2469, G2471        |
|          | S833  | -16  | 3   | G2065                      |
| m13n2428 | S834  | -16  | 3   | G2471                      |
|          | S2021 | 4    | -1  | G2650, G2649               |
|          | S2022 | 4    | -1  | G2243, G2244               |
|          | S2023 | 4    | 1   | G2650, G2649               |
| 13n2436  | S2024 | 4    | 1   | G2243, G2244               |
|          | S835  | -3   | -2  | G745                       |
|          | S836  | -3   | -2  | G744                       |
|          | S837  | -3   | 0   | G745, G747                 |
|          | S838  | -3   | 0   | G744, G746                 |
|          | S839  | -3   | 2   | G746                       |
| m13n2436 | S840  | -3   | 2   | G747                       |
|          | S2025 | -9   | -2  | G1671                      |
|          | S2026 | -9   | -2  | G1672                      |
|          | S2027 | -9   | 0   | G1674, G1672               |
|          | S2028 | -9   | 0   | G1671, G1673               |
|          | S2029 | -9   | 2   | G1673                      |
| 13n2491  | S2030 | -9   | 2   | G1674                      |
|          | S841  | -13  | -2  | G2472                      |
|          | S842  | -13  | -2  | G2066                      |
|          | S843  | -13  | 0   | G2473, G2472               |

| Knot     | ID    | $tb$ | $r$ | Parents                           |
|----------|-------|------|-----|-----------------------------------|
|          | S844  | -13  | 0   | G2067, G2066                      |
|          | S845  | -13  | 2   | G2473                             |
|          | S846  | -13  | 2   | G2067                             |
| m13n2491 | S2031 | 1    | -2  | G2651, G2652                      |
|          | S2032 | 1    | -2  | G2245, G2246                      |
|          | S2033 | 1    | 0   | G2247, G2248, G2245, G2246        |
|          | S2034 | 1    | 0   | G2651, G2654, G2653, G2652        |
|          | S2035 | 1    | 2   | G2654, G2653                      |
|          | S2036 | 1    | 2   | G2247, G2248                      |
| 13n2492  | S849  | -16  | -3  | G2068                             |
|          | S850  | -16  | -3  | G2474                             |
|          | S847  | -16  | -1  | G2069, G2068, G2070               |
|          | S848  | -16  | -1  | G2474, G2475, G2476               |
|          | S851  | -16  | 1   | G2069, G2071, G2070               |
|          | S852  | -16  | 1   | G2477, G2475, G2476               |
|          | S853  | -16  | 3   | G2477                             |
|          | S854  | -16  | 3   | G2071                             |
| m13n2492 | S2037 | 4    | -1  | G2655, G2656                      |
|          | S2038 | 4    | -1  | G2249, G2250                      |
|          | S2039 | 4    | 1   | G2249, G2250                      |
|          | S2040 | 4    | 1   | G2655, G2656                      |
| 13n2527  | S855  | -6   | -1  | G2479, G2478                      |
|          | S856  | -6   | -1  | G2073, G2072                      |
|          | S857  | -6   | 1   | G2479, G2478                      |
|          | S858  | -6   | 1   | G2073, G2072                      |
| m13n2527 | S2041 | -6   | -1  | G2251, G2252                      |
|          | S2042 | -6   | -1  | G2658, G2657                      |
|          | S2043 | -6   | 1   | G2251, G2252                      |
|          | S2044 | -6   | 1   | G2658, G2657                      |
| 13n2533  | S861  | -8   | -3  | G2074                             |
|          | S862  | -8   | -3  | G2480                             |
|          | S859  | -8   | -1  | G2074, G2077, G2076, G2078, G2075 |
|          | S860  | -8   | -1  | G2481, G2484, G2480, G2483, G2482 |
|          | S863  | -8   | 1   | G2078, G2076, G2077, G2079, G2075 |
|          | S864  | -8   | 1   | G2481, G2484, G2483, G2482, G2485 |
|          | S865  | -8   | 3   | G2485                             |
|          | S866  | -8   | 3   | G2079                             |
| m13n2533 | S2045 | -4   | -1  | G2253, G2254                      |
|          | S2046 | -4   | -1  | G2659, G2660                      |
|          | S2047 | -4   | 1   | G2253, G2254                      |
|          | S2048 | -4   | 1   | G2659, G2660                      |
| 13n2769  | S867  | -10  | -1  | G2487, G2486                      |
|          | S868  | -10  | -1  | G2081, G2080                      |
|          | S869  | -10  | 1   | G2487, G2486                      |
|          | S870  | -10  | 1   | G2081, G2080                      |
| m13n2769 | S2049 | -2   | -1  | G2255, G2256                      |
|          | S2050 | -2   | -1  | G2661, G2662                      |
|          | S2051 | -2   | 1   | G2661, G2662                      |
|          | S2052 | -2   | 1   | G2255, G2256                      |
| 13n2787  | S871  | -5   | -2  | G749                              |
|          | S872  | -5   | -2  | G748                              |
|          | S873  | -5   | 0   | G750, G749                        |
|          | S874  | -5   | 0   | G751, G748                        |
|          | S875  | -5   | 2   | G751                              |

| Knot     | ID    | $tb$ | $r$ | Parents  |
|----------|-------|------|-----|--|
| m13n2787 | S876  | -5   | 2   | G750   |
|          | S2053 | -7   | -2  | G2259, G2257                                   |
|          | S2054 | -7   | -2  | G2664  |
|          | S2055 | -7   | -2  | G2258  |
|          | S2056 | -7   | -2  | G2665, G2663                                   |
|          | S2057 | -7   | 0   | G2261, G2259, G2257, G2262, G2260, G2258       |
|          | S2058 | -7   | 0   | G2665, G2667, G2663, G2664, G2666, G2668       |
|          | S2059 | -7   | 2   | G2260, G2262                                   |
|          | S2060 | -7   | 2   | G2666  |
|          | S2061 | -7   | 2   | G2261  |
|          | S2062 | -7   | 2   | G2667, G2668                                   |
| 13n2872  | S877  | -10  | -1  | G752, G753                                     |
|          | S878  | -10  | 1   | G752, G753                                     |
| m13n2872 | S2063 | -2   | -1  | G1676, G1675                                   |
|          | S2064 | -2   | 1   | G1676, G1675                                   |
| 13n3158  | S879  | -2   | -1  | G2083, G2082                                   |
|          | S880  | -2   | -1  | G2489, G2488                                   |
|          | S881  | -2   | 1   | G2083, G2082                                   |
|          | S882  | -2   | 1   | G2489, G2488                                   |
| m13n3158 | S2065 | -10  | -1  | G2669, G2670                                   |
|          | S2066 | -10  | -1  | G2264, G2263                                   |
|          | S2067 | -10  | 1   | G2264, G2263                                   |
|          | S2068 | -10  | 1   | G2669, G2670                                   |
| 13n3414  | S883  | -4   | -1  | G2490, G2491                                   |
|          | S884  | -4   | -1  | G2084, G2085                                   |
|          | S885  | -4   | 1   | G2490, G2491                                   |
|          | S886  | -4   | 1   | G2084, G2085                                   |
| m13n3414 | S2069 | -8   | -1  | G2265, G2266                                   |
|          | S2070 | -8   | -1  | G2672, G2671                                   |
|          | S2071 | -8   | 1   | G2265, G2266                                   |
|          | S2072 | -8   | 1   | G2672, G2671                                   |
| 13n3582  | S887  | -9   | -2  | G757, G756                                     |
|          | S888  | -9   | -2  | G754, G755                                     |
|          | S889  | -9   | 0   | G760, G758, G756, G759, G761, G754, G755, G757 |
|          | S890  | -9   | 2   | G761, G758                                     |
|          | S891  | -9   | 2   | G760, G759                                     |
| m13n3582 | S2073 | -3   | -2  | G1677  |
|          | S2074 | -3   | 0   | G1677, G1678                                   |
|          | S2075 | -3   | 2   | G1678  |
| 13n3589  | S892  | -14  | -1  | G762, G763                                     |
|          | S893  | -14  | 1   | G762, G763                                     |
| m13n3589 | S2076 | 2    | -1  | G1679, G1680                                   |
|          | S2077 | 2    | 1   | G1679, G1680                                   |
| 13n3596  | S894  | -12  | -1  | G764   |
|          | S895  | -12  | 1   | G764   |
| m13n3596 | S2078 | 0    | -1  | G1681  |
|          | S2079 | 0    | 1   | G1681  |
| 13n3602  | S896  | -12  | -1  | G766, G765                                     |
|          | S897  | -12  | 1   | G766, G765                                     |
| m13n3602 | S2080 | 0    | -1  | G1682, G1683                                   |
|          | S2081 | 0    | 1   | G1682, G1683                                   |
| 13n3956  | S898  | -9   | -2  | G767   |
|          | S899  | -9   | -2  | G768   |
|          | S900  | -9   | 0   | G767, G769                                     |

| Knot     | ID    | $tb$ | $r$ | Parents                      |
|----------|-------|------|-----|------------------------------|
|          | S901  | -9   | 0   | G768, G770                   |
|          | S902  | -9   | 2   | G770                         |
|          | S903  | -9   | 2   | G769                         |
| m13n3956 | S2082 | -3   | -2  | G2673, G2674                 |
|          | S2083 | -3   | -2  | G2267, G2268                 |
|          | S2084 | -3   | 0   | G2675, G2673, G2674, G2676   |
|          | S2085 | -3   | 0   | G2267, G2270, G2268, G2269   |
|          | S2086 | -3   | 2   | G2270, G2269                 |
|          | S2087 | -3   | 2   | G2675, G2676                 |
| 13n3960  | S904  | 4    | -1  | G771, G772                   |
|          | S905  | 4    | 1   | G771, G772                   |
| m13n3960 | S2089 | -16  | -3  | G1685, G1684                 |
|          | S2088 | -16  | -1  | G1685, G1684, G1686, G1687   |
|          | S2090 | -16  | 1   | G1689, G1688, G1686, G1687   |
|          | S2091 | -16  | 3   | G1689, G1688                 |
| 13n3979  | S906  | -7   | -2  | G773                         |
|          | S907  | -7   | 0   | G773, G774                   |
|          | S908  | -7   | 2   | G774                         |
| m13n3979 | S2092 | -5   | -2  | G1690                        |
|          | S2093 | -5   | 0   | G1691, G1690                 |
|          | S2094 | -5   | 2   | G1691                        |
| 13n4024  | S910  | -12  | -3  | G775                         |
|          | S909  | -12  | -1  | G778, G779, G777, G775, G776 |
|          | S911  | -12  | 1   | G780, G778, G779, G777, G776 |
|          | S912  | -12  | 3   | G780                         |
| m13n4024 | S2095 | 0    | -1  | G1692, G1693                 |
|          | S2096 | 0    | 1   | G1692, G1693                 |
| 13n4084  | S913  | -14  | -1  | G781, G782                   |
|          | S914  | -14  | 1   | G781, G782                   |
| m13n4084 | S2097 | 2    | -1  | G1694, G1695                 |
|          | S2098 | 2    | 1   | G1694, G1695                 |
| 13n4104  | S915  | -4   | -1  | G783                         |
|          | S916  | -4   | -1  | G784                         |
|          | S917  | -4   | 1   | G783                         |
|          | S918  | -4   | 1   | G784                         |
| m13n4104 | S2099 | -8   | -1  | G1697                        |
|          | S2100 | -8   | -1  | G1696                        |
|          | S2101 | -8   | 1   | G1697                        |
|          | S2102 | -8   | 1   | G1696                        |
| 13n4508  | S919  | -12  | -1  | G2086, G2087                 |
|          | S920  | -12  | -1  | G2493, G2492                 |
|          | S921  | -12  | 1   | G2086, G2087                 |
|          | S922  | -12  | 1   | G2493, G2492                 |
| m13n4508 | S2103 | 0    | -1  | G2677, G2678                 |
|          | S2104 | 0    | -1  | G2271, G2272                 |
|          | S2105 | 0    | 1   | G2271, G2272                 |
|          | S2106 | 0    | 1   | G2677, G2678                 |
| 13n4587  | S924  | -20  | -3  | G785                         |
|          | S923  | -20  | -1  | G785                         |
|          | S925  | -20  | 1   | G786                         |
|          | S926  | -20  | 3   | G786                         |
| m13n4587 | S2107 | 8    | -1  | G1698                        |
|          | S2108 | 8    | 1   | G1698                        |
| 13n4634  | S927  | -9   | -2  | G787                         |



| Knot     | ID    | $tb$ | $r$ | Parents      |
|----------|-------|------|-----|--------------|
|          | S928  | -9   | 0   | G787, G788   |
|          | S929  | -9   | 2   | G788         |
| m13n4634 | S2109 | -3   | -2  | G1699        |
|          | S2110 | -3   | 0   | G1700, G1699 |
|          | S2111 | -3   | 2   | G1700        |
|          |       |      |     |              |
| 13n4639  | S931  | -18  | -3  | G789         |
|          | S930  | -18  | -1  | G789         |
|          | S932  | -18  | 1   | G790         |
|          | S933  | -18  | 3   | G790         |
| m13n4639 | S2112 | 6    | -1  | G1701        |
|          | S2113 | 6    | 1   | G1701        |
| 14n3155  | S1003 | -6   | -1  | G2100, G2101 |
|          | S1004 | -6   | -1  | G2507, G2506 |
|          | S1005 | -6   | 1   | G2100, G2101 |
|          | S1006 | -6   | 1   | G2507, G2506 |
| 14n5294  | S1007 | -10  | -1  | G824, G825   |
|          | S1008 | -10  | 1   | G824, G825   |
| m14n5294 | S2161 | -2   | -1  | G1728, G1729 |
|          | S2162 | -2   | 1   | G1728, G1729 |
| 14n8212  | S1009 | -6   | -1  | G2509, G2508 |
|          | S1010 | -6   | -1  | G2103, G2102 |
|          | S1011 | -6   | 1   | G2509, G2508 |
|          | S1012 | -6   | 1   | G2103, G2102 |
| 14n8584  | S1013 | -6   | -1  | G2105, G2104 |
|          | S1014 | -6   | -1  | G2511, G2510 |
|          | S1015 | -6   | 1   | G2105, G2104 |
|          | S1016 | -6   | 1   | G2511, G2510 |
| m14n8584 | S2163 | -6   | -1  | G2683, G2684 |
|          | S2164 | -6   | -1  | G2277, G2278 |
|          | S2165 | -6   | 1   | G2683, G2684 |
|          | S2166 | -6   | 1   | G2277, G2278 |
| 14n8700  | S1017 | -6   | -1  | G2512, G2513 |
|          | S1018 | -6   | -1  | G2107, G2106 |
|          | S1019 | -6   | 1   | G2512, G2513 |
|          | S1020 | -6   | 1   | G2107, G2106 |
| 14n9408  | S1021 | -10  | -1  | G2108, G2109 |
|          | S1022 | -10  | -1  | G2514, G2515 |
|          | S1023 | -10  | 1   | G2108, G2109 |
|          | S1024 | -10  | 1   | G2514, G2515 |
| m14n9408 | S2167 | -2   | -1  | G2280, G2279 |
|          | S2168 | -2   | -1  | G2686, G2685 |
|          | S2169 | -2   | 1   | G2280, G2279 |
|          | S2170 | -2   | 1   | G2686, G2685 |
| 14n9994  | S1025 | -10  | -1  | G2110, G2111 |
|          | S1026 | -10  | -1  | G2516, G2517 |
|          | S1027 | -10  | 1   | G2516, G2517 |
|          | S1028 | -10  | 1   | G2110, G2111 |
| m14n9994 | S2171 | -2   | -1  | G2688, G2687 |
|          | S2172 | -2   | -1  | G2282, G2281 |
|          | S2173 | -2   | 1   | G2688, G2687 |
|          | S2174 | -2   | 1   | G2282, G2281 |
| 14n14356 | S968  | -20  | -3  | G807         |
|          | S967  | -20  | -1  | G807         |
|          | S969  | -20  | 1   | G808         |

| Knot      | ID    | $tb$ | $r$ | Parents                    |
|-----------|-------|------|-----|----------------------------|
|           | S970  | -20  | 3   | G808                       |
| m14n14356 | S2139 | 8    | -1  | G1715                      |
|           | S2140 | 8    | 1   | G1715                      |
| 14n14798  | S971  | -6   | -1  | G2097, G2096               |
|           | S972  | -6   | -1  | G2503, G2502               |
|           | S973  | -6   | 1   | G2503, G2502               |
|           | S974  | -6   | 1   | G2097, G2096               |
| 14n16364  | S976  | -20  | -3  | G809                       |
|           | S975  | -20  | -1  | G809                       |
|           | S977  | -20  | 1   | G810                       |
|           | S978  | -20  | 3   | G810                       |
| m14n16364 | S2141 | 8    | -1  | G1716                      |
|           | S2142 | 8    | 1   | G1716                      |
| 14n17954  | S979  | -6   | -1  | G811                       |
|           | S980  | -6   | 1   | G811                       |
| 14n21069  | S981  | -12  | -1  | G813, G812                 |
|           | S982  | -12  | 1   | G813, G812                 |
| m14n21069 | S2143 | 0    | -1  | G1717, G1720, G1718, G1719 |
|           | S2144 | 0    | 1   | G1717, G1720, G1718, G1719 |
| 14n21152  | S983  | -12  | -1  | G814                       |
|           | S984  | -12  | -1  | G815                       |
|           | S985  | -12  | 1   | G814                       |
|           | S986  | -12  | 1   | G815                       |
| m14n21152 | S2145 | 0    | -1  | G1721                      |
|           | S2146 | 0    | -1  | G1722                      |
|           | S2147 | 0    | 1   | G1721                      |
|           | S2148 | 0    | 1   | G1722                      |
| 14n21419  | S987  | -12  | -1  | G2505, G2504               |
|           | S988  | -12  | -1  | G2098, G2099               |
|           | S989  | -12  | 1   | G2505, G2504               |
|           | S990  | -12  | 1   | G2098, G2099               |
| m14n21419 | S2149 | 0    | -1  | G2276, G2275               |
|           | S2150 | 0    | -1  | G2682, G2681               |
|           | S2151 | 0    | 1   | G2276, G2275               |
|           | S2152 | 0    | 1   | G2682, G2681               |
| 14n21472  | S991  | -5   | -2  | G816                       |
|           | S992  | -5   | 0   | G817, G816                 |
|           | S993  | -5   | 2   | G817                       |
| m14n21472 | S2153 | -7   | -2  | G1723                      |
|           | S2154 | -7   | 0   | G1723, G1724               |
|           | S2155 | -7   | 2   | G1724                      |
| 14n21881  | S996  | -22  | -5  | G819                       |
|           | S995  | -22  | -3  | G819, G818                 |
|           | S994  | -22  | -1  | G818                       |
|           | S997  | -22  | 1   | G820                       |
|           | S998  | -22  | 3   | G821, G820                 |
|           | S999  | -22  | 5   | G821                       |
| m14n21881 | S2156 | 10   | -1  | G1725                      |
|           | S2157 | 10   | 1   | G1725                      |
| 14n22172  | S1000 | -9   | -2  | G822                       |
|           | S1001 | -9   | 0   | G822, G823                 |
|           | S1002 | -9   | 2   | G823                       |
| m14n22172 | S2158 | -3   | -2  | G1726                      |
|           | S2159 | -3   | 0   | G1726, G1727               |

| Knot      | ID    | $tb$ | $r$ | Parents  |
|-----------|-------|------|-----|--|
|           | S2160 | -3   | 2   | G1727  |
| 15n40180  | S1041 | -7   | -2  | G834   |
|           | S1042 | -7   | 0   | G834, G835                                     |
|           | S1043 | -7   | 2   | G835   |
|           |       |      |     |  |
| m15n40180 | S2185 | -5   | -2  | G1737  |
|           | S2186 | -5   | 0   | G1737, G1738                                   |
|           | S2187 | -5   | 2   | G1738  |
| 15n40184  | S1044 | -11  | -2  | G836   |
|           | S1045 | -11  | -2  | G837   |
|           | S1046 | -11  | 0   | G836, G838                                     |
|           | S1047 | -11  | 0   | G839, G837                                     |
|           | S1048 | -11  | 2   | G839   |
|           | S1049 | -11  | 2   | G838   |
| m15n40184 | S2188 | -1   | -2  | G1739  |
|           | S2189 | -1   | -2  | G1740  |
|           | S2190 | -1   | 0   | G1740, G1742                                   |
|           | S2191 | -1   | 0   | G1739, G1741                                   |
|           | S2192 | -1   | 2   | G1742  |
|           | S2193 | -1   | 2   | G1741  |
| 15n40211  | S1051 | -22  | -3  | G840   |
|           | S1050 | -22  | -1  | G840   |
|           | S1052 | -22  | 1   | G841   |
|           | S1053 | -22  | 3   | G841   |
| m15n40211 | S2194 | 10   | -1  | G1743  |
|           | S2195 | 10   | 1   | G1743  |
| 15n40214  | S1055 | -18  | -3  | G842   |
|           | S1054 | -18  | -1  | G844, G842, G843                               |
|           | S1056 | -18  | 1   | G843, G844, G845                               |
|           | S1057 | -18  | 3   | G845   |
| m15n40214 | S2196 | 6    | -1  | G1744, G1745                                   |
|           | S2197 | 6    | 1   | G1744, G1745                                   |
| 15n41127  | S1058 | -7   | -2  | G846   |
|           | S1059 | -7   | 0   | G847, G846                                     |
|           | S1060 | -7   | 2   | G847   |
| m15n41127 | S2198 | -5   | -2  | G1746  |
|           | S2199 | -5   | 0   | G1747, G1746                                   |
|           | S2200 | -5   | 2   | G1747  |
| 15n41131  | S1062 | -14  | -3  | G849   |
|           | S1063 | -14  | -3  | G848   |
|           | S1061 | -14  | -1  | G852, G854, G848, G855, G850, G853, G851, G849 |
|           | S1064 | -14  | 1   | G852, G854, G856, G855, G850, G853, G851, G857 |
|           | S1065 | -14  | 3   | G857   |
|           | S1066 | -14  | 3   | G856   |
| m15n41131 | S2201 | 2    | -1  | G1748, G1749                                   |
|           | S2202 | 2    | 1   | G1748, G1749                                   |
| 15n41189  | S1067 | -15  | -2  | G858   |
|           | S1068 | -15  | 0   | G859, G858                                     |
|           | S1069 | -15  | 2   | G859   |
| m15n41189 | S2203 | 3    | -2  | G1750  |
|           | S2204 | 3    | 0   | G1751, G1750                                   |
|           | S2205 | 3    | 2   | G1751  |
| 15n45482  | S1070 | -10  | -1  | G860, G861                                     |
|           | S1071 | -10  | 1   | G860, G861                                     |
| m15n45482 | S2206 | -2   | -1  | G1753, G1752                                   |

| Knot      | ID    | $tb$ | $r$ | Parents          |
|-----------|-------|------|-----|------------------|
| 15n47800  | S2207 | -2   | 1   | G1753, G1752     |
|           | S1072 | -11  | -2  | G863             |
|           | S1073 | -11  | -2  | G862             |
|           | S1074 | -11  | 0   | G863, G864       |
|           | S1075 | -11  | 0   | G862, G865       |
|           | S1076 | -11  | 2   | G864             |
|           | S1077 | -11  | 2   | G865             |
| m15n47800 | S2208 | -1   | -2  | G1755            |
|           | S2209 | -1   | -2  | G1754            |
|           | S2210 | -1   | 0   | G1757, G1755     |
|           | S2211 | -1   | 0   | G1754, G1756     |
|           | S2212 | -1   | 2   | G1757            |
|           | S2213 | -1   | 2   | G1756            |
| 15n49058  | S1078 | -14  | -1  | G866, G867       |
|           | S1079 | -14  | 1   | G866, G867       |
| m15n49058 | S2214 | 2    | -1  | G1758, G1759     |
|           | S2215 | 2    | 1   | G1758, G1759     |
| 15n51709  | S1080 | -3   | -2  | G868             |
|           | S1081 | -3   | 0   | G869, G868       |
|           | S1082 | -3   | 2   | G869             |
| m15n51709 | S2216 | -9   | -2  | G1760            |
|           | S2217 | -9   | 0   | G1760, G1761     |
|           | S2218 | -9   | 2   | G1761            |
| 15n52931  | S1083 | -18  | -1  | G870             |
|           | S1084 | -18  | 1   | G870             |
| m15n52931 | S2219 | 6    | -1  | G1762            |
|           | S2220 | 6    | 1   | G1762            |
| 15n52940  | S1086 | -18  | -3  | G871             |
|           | S1085 | -18  | -1  | G873, G872, G871 |
|           | S1087 | -18  | 1   | G873, G874, G872 |
|           | S1088 | -18  | 3   | G874             |
| m15n52940 | S2221 | 6    | -1  | G1763, G1764     |
|           | S2222 | 6    | 1   | G1763, G1764     |
| 15n52944  | S1089 | -11  | -2  | G875             |
|           | S1090 | -11  | 0   | G876, G875       |
|           | S1091 | -11  | 2   | G876             |
| m15n52944 | S2223 | -1   | -2  | G1765            |
|           | S2224 | -1   | 0   | G1766, G1765     |
|           | S2225 | -1   | 2   | G1766            |
| 15n53218  | S1092 | -14  | -1  | G2519, G2518     |
|           | S1093 | -14  | -1  | G2112, G2113     |
|           | S1094 | -14  | 1   | G2112, G2113     |
|           | S1095 | -14  | 1   | G2519, G2518     |
| m15n53218 | S2226 | 2    | -1  | G2690, G2689     |
|           | S2227 | 2    | -1  | G2284, G2283     |
|           | S2228 | 2    | 1   | G2284, G2283     |
|           | S2229 | 2    | 1   | G2690, G2689     |
| 15n56026  | S1096 | -7   | -2  | G877             |
|           | S1097 | -7   | 0   | G877             |
|           | S1098 | -7   | 0   | G878             |
|           | S1099 | -7   | 2   | G878             |
| m15n56026 | S2230 | -5   | -2  | G1767            |
|           | S2231 | -5   | 0   | G1768, G1767     |
|           | S2232 | -5   | 2   | G1768            |

| Knot       | ID    | $tb$ | $r$ | Parents      |
|------------|-------|------|-----|--------------|
| 15n56079   | S1101 | -14  | -3  | G879         |
|            | S1100 | -14  | -1  | G879         |
|            | S1102 | -14  | 1   | G880         |
|            | S1103 | -14  | 3   | G880         |
| m15n56079  | S2233 | 2    | -1  | G1770, G1769 |
|            | S2234 | 2    | 1   | G1770, G1769 |
| 15n59005   | S1104 | -7   | -2  | G881         |
|            | S1105 | -7   | 0   | G882, G881   |
|            | S1106 | -7   | 2   | G882         |
| m15n59005  | S2235 | -5   | -2  | G1771        |
|            | S2236 | -5   | 0   | G1771, G1772 |
|            | S2237 | -5   | 2   | G1772        |
| 15n124802  | S1030 | -16  | -3  | G826         |
|            | S1029 | -16  | -1  | G826         |
|            | S1031 | -16  | 1   | G827         |
|            | S1032 | -16  | 3   | G827         |
| m15n124802 | S2175 | 4    | -1  | G1730        |
|            | S2176 | 4    | 1   | G1730        |
| 15n124988  | S1033 | -16  | -1  | G829, G828   |
|            | S1034 | -16  | 1   | G829, G828   |
| m15n124988 | S2177 | 4    | -1  | G1731, G1732 |
|            | S2178 | 4    | 1   | G1731, G1732 |
| 15n127271  | S1035 | -12  | -1  | G831, G830   |
|            | S1036 | -12  | 1   | G831, G830   |
| m15n127271 | S2179 | 0    | -1  | G1734, G1733 |
|            | S2180 | 0    | 1   | G1734, G1733 |
| 15n130933  | S1037 | -2   | -1  | G832         |
|            | S1038 | -2   | -1  | G833         |
|            | S1039 | -2   | 1   | G832         |
|            | S1040 | -2   | 1   | G833         |
| m15n130933 | S2181 | -10  | -1  | G1736        |
|            | S2182 | -10  | -1  | G1735        |
|            | S2183 | -10  | 1   | G1736        |
|            | S2184 | -10  | 1   | G1735        |
| 16n207543  | S1107 | -2   | -1  | G883, G884   |
|            | S1108 | -2   | 1   | G883, G884   |
| m16n207543 | S2238 | -10  | -1  | G1773, G1774 |
|            | S2239 | -10  | 1   | G1773, G1774 |
| 16n226759  | S1109 | -12  | -1  | G2115, G2521 |
|            | S1110 | -12  | -1  | G2520, G2114 |
|            | S1111 | -12  | 1   | G2115, G2521 |
|            | S1112 | -12  | 1   | G2520, G2114 |
| m16n226759 | S2240 | 0    | -1  | G2285, G2286 |
|            | S2241 | 0    | -1  | G2692, G2691 |
|            | S2242 | 0    | 1   | G2285, G2286 |
|            | S2243 | 0    | 1   | G2692, G2691 |
| 16n245346  | S1113 | -2   | -1  | G885, G886   |
|            | S1114 | -2   | 1   | G885, G886   |
| m16n245346 | S2244 | -10  | -1  | G1776, G1775 |
|            | S2245 | -10  | 1   | G1776, G1775 |
| 16n245347  | S1115 | -8   | -1  | G2116, G2117 |
|            | S1116 | -8   | -1  | G2523, G2522 |
|            | S1117 | -8   | 1   | G2116, G2117 |
|            | S1118 | -8   | 1   | G2523, G2522 |

| Knot       | ID    | $tb$ | $r$ | Parents      |
|------------|-------|------|-----|--------------|
| m16n245347 | S2246 | -4   | -1  | G2287, G2288 |
|            | S2247 | -4   | -1  | G2694, G2693 |
|            | S2248 | -4   | 1   | G2694, G2693 |
|            | S2249 | -4   | 1   | G2287, G2288 |
| 16n246031  | S1119 | -4   | -1  | G2524, G2525 |
|            | S1120 | -4   | -1  | G2119, G2118 |
|            | S1121 | -4   | 1   | G2119, G2118 |
|            | S1122 | -4   | 1   | G2524, G2525 |
| m16n246031 | S2250 | -8   | -1  | G2289, G2290 |
|            | S2251 | -8   | -1  | G2695, G2696 |
|            | S2252 | -8   | 1   | G2289, G2290 |
|            | S2253 | -8   | 1   | G2695, G2696 |
| 16n246032  | S1123 | -6   | -1  | G887         |
|            | S1124 | -6   | 1   | G887         |
| m16n246032 | S2254 | -6   | -1  | G1777        |
|            | S2255 | -6   | 1   | G1777        |
| 16n765768  | S1125 | -14  | -1  | G888         |
|            | S1126 | -14  | 1   | G888         |
| m16n765768 | S2256 | 2    | -1  | G1778        |
|            | S2257 | 2    | 1   | G1778        |
| 17?        | S1128 | -24  | -3  | G889         |
|            | S1127 | -24  | -1  | G889         |
|            | S1129 | -24  | 1   | G890         |
|            | S1130 | -24  | 3   | G890         |
| m17?       | S2258 | 12   | -1  | G1779        |
|            | S2259 | 12   | 1   | G1779        |

TABLE 2. The positive and negative stabilizations of the knots from Table 1. The fourth column lists the grids that stabilize to the given one. Whether the stabilization for each “parent” was positive or negative can be deduced from the rotation number, so we omit this bit of data.

| Knot | ID    | $tb$ | $r$ | Parents      |
|------|-------|------|-----|--------------|
| 8a1  | T1408 | -9   | -2  | S1131        |
|      | T1409 | -9   | 0   | S1131, S1132 |
|      | T1410 | -9   | 2   | S1132        |
| m8a1 | T2846 | -5   | -2  | S2261        |
|      | T2847 | -5   | 0   | S2262, S2261 |
|      | T2848 | -5   | 2   | S2262        |
| 8a2  | T1521 | -13  | -6  | S1232        |
|      | T1520 | -13  | -4  | S1232, S1231 |
|      | T1519 | -13  | -2  | S1230, S1231 |
|      | T1522 | -13  | 0   | S1233, S1230 |
|      | T1523 | -13  | 2   | S1234, S1233 |
|      | T1524 | -13  | 4   | S1234, S1235 |
|      | T1525 | -13  | 6   | S1235        |
| m8a2 | T2914 | -1   | -2  | S2323        |
|      | T2915 | -1   | 0   | S2323, S2324 |
|      | T2916 | -1   | 2   | S2324        |
| 8a3  | T1526 | -7   | -2  | S1236        |
|      | T1527 | -7   | 0   | S1236, S1237 |
|      | T1528 | -7   | 2   | S1237        |

| Knot | ID    | $tb$ | $r$ | Parents             |
|------|-------|------|-----|---------------------|
| 8a4  | T1529 | -5   | -2  | S1238               |
|      | T1530 | -5   | 0   | S1239, S1238        |
|      | T1531 | -5   | 2   | S1239               |
| m8a4 | T2918 | -9   | -4  | S2327               |
|      | T2919 | -9   | -4  | S2326               |
|      | T2917 | -9   | -2  | S2327, S2326, S2325 |
|      | T2920 | -9   | 0   | S2328, S2325        |
|      | T2921 | -9   | 2   | S2329, S2328, S2330 |
|      | T2922 | -9   | 4   | S2330               |
|      | T2923 | -9   | 4   | S2329               |
| 8a5  | T1534 | -13  | -6  | S1242               |
|      | T1533 | -13  | -4  | S1241, S1242        |
|      | T1532 | -13  | -2  | S1241, S1240        |
|      | T1535 | -13  | 0   | S1243, S1240        |
|      | T1536 | -13  | 2   | S1244, S1243        |
|      | T1537 | -13  | 4   | S1244, S1245        |
|      | T1538 | -13  | 6   | S1245               |
| m8a5 | T2924 | -1   | -2  | S2331               |
|      | T2925 | -1   | 0   | S2332, S2331        |
|      | T2926 | -1   | 2   | S2332               |
| 8a6  | T1540 | -11  | -4  | S1247               |
|      | T1541 | -11  | -4  | S1248               |
|      | T1539 | -11  | -2  | S1246, S1248, S1247 |
|      | T1542 | -11  | 0   | S1249, S1246        |
|      | T1543 | -11  | 2   | S1249, S1251, S1250 |
|      | T1544 | -11  | 4   | S1251               |
|      | T1545 | -11  | 4   | S1250               |
| m8a6 | T2927 | -3   | -2  | S2333               |
|      | T2928 | -3   | -2  | S2334               |
|      | T2929 | -3   | 0   | S2335, S2333        |
|      | T2930 | -3   | 0   | S2336, S2334        |
|      | T2931 | -3   | 2   | S2335               |
|      | T2932 | -3   | 2   | S2336               |
| 8a7  | T1547 | -4   | -3  | S1253               |
|      | T1548 | -4   | -3  | S1252               |
|      | T1546 | -4   | -1  | S1253, S1252, S1254 |
|      | T1549 | -4   | 1   | S1255, S1254, S1256 |
|      | T1550 | -4   | 3   | S1255               |
|      | T1551 | -4   | 3   | S1256               |
| m8a7 | T2937 | -10  | -5  | S2339               |
|      | T2938 | -10  | -5  | S2340               |
|      | T2935 | -10  | -3  | S2340, S2337, S2339 |
|      | T2936 | -10  | -3  | S2338               |
|      | T2933 | -10  | -1  | S2341, S2338        |
|      | T2934 | -10  | -1  | S2337, S2342        |
|      | T2939 | -10  | 1   | S2341, S2347        |
|      | T2940 | -10  | 1   | S2346, S2342        |
|      | T2941 | -10  | 3   | S2349, S2348, S2346 |
|      | T2942 | -10  | 3   | S2347               |
|      | T2943 | -10  | 5   | S2348               |
|      | T2944 | -10  | 5   | S2349               |
| 8a8  | T1555 | -6   | -3  | S1259               |
|      | T1556 | -6   | -3  | S1261               |
|      | T1557 | -6   | -3  | S1258               |

| Knot  | ID    | $tb$ | $r$ | Parents                    |
|-------|-------|------|-----|----------------------------|
|       | T1558 | -6   | -3  | S1257                      |
|       | T1559 | -6   | -3  | S1260                      |
|       | T1552 | -6   | -1  | S1259, S1261, S1265        |
|       | T1553 | -6   | -1  | S1264, S1257               |
|       | T1554 | -6   | -1  | S1258, S1260, S1267        |
|       | T1560 | -6   | 1   | S1264, S1272               |
|       | T1561 | -6   | 1   | S1271, S1265, S1268        |
|       | T1562 | -6   | 1   | S1269, S1267, S1270        |
|       | T1563 | -6   | 3   | S1268                      |
|       | T1564 | -6   | 3   | S1271                      |
|       | T1565 | -6   | 3   | S1270                      |
|       | T1566 | -6   | 3   | S1272                      |
|       | T1567 | -6   | 3   | S1269                      |
| m8a8  | T2946 | -8   | -3  | S2352                      |
|       | T2947 | -8   | -3  | S2351                      |
|       | T2948 | -8   | -3  | S2350                      |
|       | T2945 | -8   | -1  | S2352, S2354, S2351, S2350 |
|       | T2949 | -8   | 1   | S2356, S2357, S2354, S2358 |
|       | T2950 | -8   | 3   | S2358                      |
|       | T2951 | -8   | 3   | S2356                      |
|       | T2952 | -8   | 3   | S2357                      |
| 8a9   | T1570 | -7   | -4  | S1276                      |
|       | T1568 | -7   | -2  | S1274                      |
|       | T1569 | -7   | -2  | S1275, S1276               |
|       | T1571 | -7   | 0   | S1275, S1279               |
|       | T1572 | -7   | 0   | S1274, S1278               |
|       | T1573 | -7   | 2   | S1280, S1279               |
|       | T1574 | -7   | 2   | S1278                      |
|       | T1575 | -7   | 4   | S1280                      |
| 8a10  | T1413 | -4   | -3  | S1135                      |
|       | T1414 | -4   | -3  | S1134                      |
|       | T1415 | -4   | -3  | S1133                      |
|       | T1411 | -4   | -1  | S1137, S1134               |
|       | T1412 | -4   | -1  | S1133, S1136, S1135        |
|       | T1416 | -4   | 1   | S1136, S1139, S1138        |
|       | T1417 | -4   | 1   | S1137, S1140               |
|       | T1418 | -4   | 3   | S1139                      |
|       | T1419 | -4   | 3   | S1140                      |
|       | T1420 | -4   | 3   | S1138                      |
| m8a10 | T2857 | -10  | -5  | S2268                      |
|       | T2853 | -10  | -3  | S2268, S2266               |
|       | T2854 | -10  | -3  | S2264                      |
|       | T2855 | -10  | -3  | S2265                      |
|       | T2856 | -10  | -3  | S2267                      |
|       | T2849 | -10  | -1  | S2271, S2264               |
|       | T2850 | -10  | -1  | S2266                      |
|       | T2851 | -10  | -1  | S2265, S2269               |
|       | T2852 | -10  | -1  | S2267, S2270               |
|       | T2858 | -10  | 1   | S2275, S2269               |
|       | T2859 | -10  | 1   | S2273                      |
|       | T2860 | -10  | 1   | S2274, S2270               |
|       | T2861 | -10  | 1   | S2272, S2271               |
|       | T2862 | -10  | 3   | S2275                      |
|       | T2863 | -10  | 3   | S2272                      |
|       | T2864 | -10  | 3   | S2273, S2276               |



| Knot  | ID    | $tb$ | $r$ | Parents                           |
|-------|-------|------|-----|-----------------------------------|
|       | T2865 | -10  | 3   | S2274                             |
|       | T2866 | -10  | 5   | S2276                             |
| 8a11  | T1425 | -11  | -4  | S1146                             |
|       | T1426 | -11  | -4  | S1145                             |
|       | T1421 | -11  | -2  | S1143                             |
|       | T1422 | -11  | -2  | S1144, S1145                      |
|       | T1423 | -11  | -2  | S1142                             |
|       | T1424 | -11  | -2  | S1141, S1146                      |
|       | T1427 | -11  | 0   | S1144                             |
|       | T1428 | -11  | 0   | S1141                             |
|       | T1429 | -11  | 0   | S1142, S1147                      |
|       | T1430 | -11  | 0   | S1143, S1148                      |
|       | T1431 | -11  | 0   | S1149                             |
|       | T1432 | -11  | 0   | S1150                             |
|       | T1433 | -11  | 2   | S1147                             |
|       | T1434 | -11  | 2   | S1149, S1151                      |
|       | T1435 | -11  | 2   | S1148                             |
|       | T1436 | -11  | 2   | S1150, S1152                      |
|       | T1437 | -11  | 4   | S1152                             |
|       | T1438 | -11  | 4   | S1151                             |
| m8a11 | T2867 | -3   | -2  | S2277                             |
|       | T2868 | -3   | -2  | S2278                             |
|       | T2869 | -3   | 0   | S2278, S2279, S2280, S2277        |
|       | T2870 | -3   | 2   | S2280                             |
|       | T2871 | -3   | 2   | S2279                             |
| 8a12  | T1439 | -7   | -2  | S1154                             |
|       | T1440 | -7   | -2  | S1153                             |
|       | T1441 | -7   | 0   | S1159, S1154                      |
|       | T1442 | -7   | 0   | S1153, S1158                      |
|       | T1443 | -7   | 2   | S1159                             |
|       | T1444 | -7   | 2   | S1158                             |
| 8a13  | T1447 | -6   | -3  | S1163                             |
|       | T1448 | -6   | -3  | S1167                             |
|       | T1449 | -6   | -3  | S1164                             |
|       | T1450 | -6   | -3  | S1166                             |
|       | T1451 | -6   | -3  | S1165                             |
|       | T1452 | -6   | -3  | S1168                             |
|       | T1445 | -6   | -1  | S1170, S1168, S1165, S1167, S1163 |
|       | T1446 | -6   | -1  | S1166, S1164, S1171               |
|       | T1453 | -6   | 1   | S1176, S1170, S1177, S1172, S1174 |
|       | T1454 | -6   | 1   | S1173, S1175, S1171               |
|       | T1455 | -6   | 3   | S1172                             |
|       | T1456 | -6   | 3   | S1177                             |
|       | T1457 | -6   | 3   | S1173                             |
|       | T1458 | -6   | 3   | S1175                             |
|       | T1459 | -6   | 3   | S1174                             |
|       | T1460 | -6   | 3   | S1176                             |
| m8a13 | T2874 | -8   | -3  | S2281                             |
|       | T2875 | -8   | -3  | S2282                             |
|       | T2872 | -8   | -1  | S2281, S2284                      |
|       | T2873 | -8   | -1  | S2283, S2282                      |
|       | T2876 | -8   | 1   | S2284, S2285                      |
|       | T2877 | -8   | 1   | S2283, S2286                      |
|       | T2878 | -8   | 3   | S2285                             |

| Knot  | ID    | $tb$ | $r$ | Parents                                  |
|-------|-------|------|-----|--|
|       | T2879 | -8   | 3   | S2286                                    |
| 8a14  | T1464 | -11  | -4  | S1183                                    |
|       | T1465 | -11  | -4  | S1182                                    |
|       | T1461 | -11  | -2  | S1182, S1178                             |
|       | T1462 | -11  | -2  | S1183, S1180                             |
|       | T1463 | -11  | -2  | S1179                                    |
|       | T1466 | -11  | 0   | S1179, S1186                             |
|       | T1467 | -11  | 0   | S1180, S1185                             |
|       | T1468 | -11  | 0   | S1187, S1178                             |
|       | T1469 | -11  | 2   | S1189, S1185                             |
|       | T1470 | -11  | 2   | S1187, S1188                             |
|       | T1471 | -11  | 2   | S1186                                    |
|       | T1472 | -11  | 4   | S1188                                    |
|       | T1473 | -11  | 4   | S1189                                    |
| m8a14 | T2880 | -3   | -2  | S2288                                    |
|       | T2881 | -3   | -2  | S2289                                    |
|       | T2882 | -3   | -2  | S2291                                    |
|       | T2883 | -3   | 0   | S2292, S2289                             |
|       | T2884 | -3   | 0   | S2294, S2291                             |
|       | T2885 | -3   | 0   | S2293, S2296, S2288                      |
|       | T2886 | -3   | 2   | S2296                                    |
|       | T2887 | -3   | 2   | S2292                                    |
|       | T2888 | -3   | 2   | S2294                                    |
|       | T2889 | -3   | 2   | S2293                                    |
| 8a15  | T1477 | -15  | -4  | S1196                                    |
|       | T1478 | -15  | -4  | S1195                                    |
|       | T1475 | -15  | -2  | S1196                                    |
|       | T1476 | -15  | -2  | S1192, S1195                             |
|       | T1479 | -15  | 0   | S1200, S1192                             |
|       | T1480 | -15  | 0   | S1197, S1191                             |
|       | T1482 | -15  | 2   | S1201                                    |
|       | T1483 | -15  | 2   | S1200, S1202                             |
|       | T1484 | -15  | 4   | S1202                                    |
| m8a15 | T1485 | -15  | 4   | S1201                                    |
|       | T2890 | 1    | -2  | S2300                                    |
|       | T2891 | 1    | -2  | S2299                                    |
|       | T2892 | 1    | -2  | S2298                                    |
|       | T2893 | 1    | -2  | S2297                                    |
|       | T2894 | 1    | 0   | S2304, S2298                             |
|       | T2895 | 1    | 0   | S2297, S2302, S2301, S2300, S2299, S2303 |
|       | T2896 | 1    | 2   | S2303                                    |
|       | T2897 | 1    | 2   | S2304                                    |
|       | T2898 | 1    | 2   | S2302                                    |
| 8a16  | T2899 | 1    | 2   | S2301                                    |
|       | T1488 | -4   | -3  | S1204                                    |
|       | T1489 | -4   | -3  | S1205                                    |
|       | T1486 | -4   | -1  | S1206, S1205                             |
|       | T1487 | -4   | -1  | S1207, S1204                             |
|       | T1490 | -4   | 1   | S1206, S1208                             |
|       | T1491 | -4   | 1   | S1207, S1209                             |
|       | T1492 | -4   | 3   | S1209                                    |
| m8a16 | T1493 | -4   | 3   | S1208                                    |
|       | T2906 | -10  | -5  | S2310                                    |
|       | T2903 | -10  | -3  | S2306                                    |
|       | T2904 | -10  | -3  | S2310, S2305, S2308                      |

| Knot  | ID    | $tb$ | $r$ | Parents             |
|-------|-------|------|-----|---------------------|
|       | T2900 | -10  | -1  | S2308, S2315        |
|       | T2901 | -10  | -1  | S2314, S2305        |
|       | T2902 | -10  | -1  | S2306, S2312        |
|       | T2908 | -10  | 1   | S2316, S2315        |
|       | T2909 | -10  | 1   | S2317, S2314        |
|       | T2910 | -10  | 1   | S2319, S2312        |
|       | T2911 | -10  | 3   | S2322, S2317, S2316 |
|       | T2912 | -10  | 3   | S2319               |
|       | T2913 | -10  | 5   | S2322               |
| 8a17  | T1498 | -7   | -4  | S1215               |
|       | T1499 | -7   | -4  | S1216               |
|       | T1500 | -7   | -4  | S1217               |
|       | T1501 | -7   | -4  | S1214               |
|       | T1494 | -7   | -2  | S1217, S1210        |
|       | T1495 | -7   | -2  | S1213, S1214        |
|       | T1496 | -7   | -2  | S1211, S1215        |
|       | T1497 | -7   | -2  | S1216, S1212        |
|       | T1502 | -7   | 0   | S1219, S1212        |
|       | T1503 | -7   | 0   | S1213, S1221        |
|       | T1504 | -7   | 0   | S1210, S1218        |
|       | T1505 | -7   | 0   | S1211, S1220        |
|       | T1506 | -7   | 2   | S1222, S1218        |
|       | T1507 | -7   | 2   | S1220, S1224        |
|       | T1508 | -7   | 2   | S1221, S1223        |
|       | T1509 | -7   | 2   | S1225, S1219        |
|       | T1510 | -7   | 4   | S1225               |
|       | T1511 | -7   | 4   | S1222               |
|       | T1512 | -7   | 4   | S1223               |
|       | T1513 | -7   | 4   | S1224               |
| 8a18  | T1515 | -7   | -4  | S1227               |
|       | T1514 | -7   | -2  | S1227, S1226        |
|       | T1516 | -7   | 0   | S1228, S1226        |
|       | T1517 | -7   | 2   | S1228, S1229        |
|       | T1518 | -7   | 4   | S1229               |
| 10n2  | T55   | -6   | -3  | S64                 |
|       | T54   | -6   | -1  | S64, S65            |
|       | T56   | -6   | 1   | S65, S66            |
|       | T57   | -6   | 3   | S66                 |
| m10n2 | T1643 | -8   | -5  | S1330               |
|       | T1642 | -8   | -3  | S1330, S1329        |
|       | T1641 | -8   | -1  | S1331, S1329        |
|       | T1644 | -8   | 1   | S1332, S1331        |
|       | T1645 | -8   | 3   | S1332, S1333        |
|       | T1646 | -8   | 5   | S1333               |
| 10n3  | T184  | -2   | -3  | S179                |
|       | T183  | -2   | -1  | S180, S179          |
|       | T185  | -2   | 1   | S180, S181          |
|       | T186  | -2   | 3   | S181                |
| m10n3 | T1744 | -12  | -5  | S1420               |
|       | T1743 | -12  | -3  | S1419, S1420        |
|       | T1742 | -12  | -1  | S1419, S1421        |
|       | T1745 | -12  | 1   | S1422, S1421        |
|       | T1746 | -12  | 3   | S1423, S1422        |
|       | T1747 | -12  | 5   | S1423               |
| 10n4  | T250  | -15  | -6  | S235                |

| Knot  | ID    | $tb$ | $r$ | Parents  |
|-------|-------|------|-----|--|
|       | T251  | -15  | -6  | S236   |
|       | T249  | -15  | -4  | S234, S235, S236   |
|       | T248  | -15  | -2  | S234, S233   |
|       | T252  | -15  | 0   | S237, S233   |
|       | T253  | -15  | 2   | S237, S238   |
|       | T254  | -15  | 4   | S239, S238, S240   |
|       | T255  | -15  | 6   | S239   |
|       | T256  | -15  | 6   | S240   |
| m10n4 | T1808 | 1    | -2  | S1471  |
|       | T1809 | 1    | -2  | S1472  |
|       | T1810 | 1    | 0   | S1473, S1471   |
|       | T1811 | 1    | 0   | S1472, S1474   |
|       | T1812 | 1    | 2   | S1473  |
|       | T1813 | 1    | 2   | S1474  |
| 10n6  | T285  | -8   | -3  | S263   |
|       | T286  | -8   | -3  | S264   |
|       | T284  | -8   | -1  | S264, S263, S268   |
|       | T287  | -8   | 1   | S272, S273, S268   |
|       | T288  | -8   | 3   | S272   |
|       | T289  | -8   | 3   | S273   |
| m10n6 | T1848 | -6   | -3  | S1504  |
|       | T1847 | -6   | -1  | S1505, S1504   |
|       | T1849 | -6   | 1   | S1505, S1506   |
|       | T1850 | -6   | 3   | S1506  |
| 10n7  | T291  | -4   | -3  | S274   |
|       | T292  | -4   | -3  | S275   |
|       | T290  | -4   | -1  | S275, S274, S277   |
|       | T293  | -4   | 1   | S278, S279, S277   |
|       | T294  | -4   | 3   | S279   |
|       | T295  | -4   | 3   | S278   |
| m10n7 | T1852 | -10  | -3  | S1507  |
|       | T1851 | -10  | -1  | S1508, S1507   |
|       | T1853 | -10  | 1   | S1508, S1509   |
|       | T1854 | -10  | 3   | S1509  |
| 10n8  | T297  | -13  | -4  | S282   |
|       | T298  | -13  | -4  | S281   |
|       | T296  | -13  | -2  | S282, S280, S281   |
|       | T299  | -13  | 0   | S283, S280   |
|       | T300  | -13  | 2   | S284, S283, S285   |
|       | T301  | -13  | 4   | S284   |
|       | T302  | -13  | 4   | S285   |
| m10n8 | T1856 | -1   | -2  | S1515  |
|       | T1857 | -1   | -2  | S1512  |
|       | T1858 | -1   | -2  | S1513  |
|       | T1859 | -1   | -2  | S1510  |
|       | T1860 | -1   | -2  | S1511  |
|       | T1861 | -1   | 0   | S1518, S1520, S1510, S1511, S1519, S1515, S1513, S1516, S1512, S1517 |
|       | T1862 | -1   | 2   | S1519  |
|       | T1863 | -1   | 2   | S1518  |
|       | T1864 | -1   | 2   | S1516  |
|       | T1865 | -1   | 2   | S1517  |
|       | T1866 | -1   | 2   | S1520  |
| 10n10 | T3    | -13  | -4  | S8   |
|       | T4    | -13  | -4  | S10  |

| Knot   | ID    | $tb$ | $r$ | Parents                 |
|--------|-------|------|-----|-------------------------|
|        | T5    | -13  | -4  | S9                      |
|        | T1    | -13  | -2  | S2                      |
|        | T2    | -13  | -2  | S9, S5, S10, S8         |
|        | T6    | -13  | 0   | S5                      |
|        | T7    | -13  | 0   | S16                     |
|        | T8    | -13  | 0   | S2, S14                 |
|        | T10   | -13  | 2   | S14                     |
|        | T9    | -13  | 2   | S20                     |
|        | T12   | -13  | 4   | S18                     |
|        | T13   | -13  | 4   | S20                     |
|        | T14   | -13  | 4   | S19                     |
| m10n10 | T1576 | -1   | -2  | S1281                   |
|        | T1577 | -1   | -2  | S1284                   |
|        | T1578 | -1   | -2  | S1285                   |
|        | T1579 | -1   | -2  | S1282                   |
|        | T1580 | -1   | -2  | S1283                   |
|        | T1581 | -1   | 0   | S1285, S1288            |
|        | T1582 | -1   | 0   | S1281, S1287            |
|        | T1583 | -1   | 0   | S1290, S1284            |
|        | T1584 | -1   | 0   | S1286, S1283            |
|        | T1585 | -1   | 0   | S1289, S1282            |
|        | T1586 | -1   | 2   | S1289                   |
|        | T1587 | -1   | 2   | S1288                   |
|        | T1588 | -1   | 2   | S1287                   |
|        | T1589 | -1   | 2   | S1290                   |
|        | T1590 | -1   | 2   | S1286                   |
| 10n11  | T16   | -17  | -4  | S22                     |
|        | T15   | -17  | -2  | S21, S22                |
|        | T17   | -17  | 0   | S21, S23                |
|        | T18   | -17  | 2   | S23, S24                |
|        | T19   | -17  | 4   | S24                     |
| m10n11 | T1591 | 3    | -2  | S1295                   |
|        | T1592 | 3    | -2  | S1292                   |
|        | T1593 | 3    | -2  | S1291                   |
|        | T1594 | 3    | -2  | S1293                   |
|        | T1595 | 3    | -2  | S1294                   |
|        | T1596 | 3    | 0   | S1300, S1291            |
|        | T1597 | 3    | 0   | S1297, S1292            |
|        | T1598 | 3    | 0   | S1294, S1299            |
|        | T1599 | 3    | 0   | S1296, S1293            |
|        | T1600 | 3    | 0   | S1298, S1295            |
|        | T1601 | 3    | 2   | S1297                   |
|        | T1602 | 3    | 2   | S1298                   |
|        | T1603 | 3    | 2   | S1296                   |
|        | T1604 | 3    | 2   | S1299                   |
|        | T1605 | 3    | 2   | S1300                   |
| 10n12  | T23   | -8   | -3  | S29                     |
|        | T24   | -8   | -3  | S25                     |
|        | T26   | -8   | -3  | S26                     |
|        | T27   | -8   | -3  | S28                     |
|        | T20   | -8   | -1  | S29, S30, S25, S33, S26 |
|        | T21   | -8   | -1  | S28, S32                |
|        | T28   | -8   | 1   | S40, S32                |
|        | T29   | -8   | 1   | S37, S39, S30, S33, S36 |
|        | T30   | -8   | 3   | S37                     |

| Knot   | ID    | $tb$ | $r$ | Parents             |
|--------|-------|------|-----|---------------------|
|        | T31   | -8   | 3   | S39                 |
|        | T32   | -8   | 3   | S40                 |
|        | T33   | -8   | 3   | S36                 |
| m10n12 | T1608 | -6   | -3  | S1301               |
|        | T1609 | -6   | -3  | S1302               |
|        | T1610 | -6   | -3  | S1303               |
|        | T1611 | -6   | -3  | S1304               |
|        | T1606 | -6   | -1  | S1304, S1303, S1306 |
|        | T1607 | -6   | -1  | S1308, S1302, S1301 |
|        | T1612 | -6   | 1   | S1308, S1309, S1310 |
|        | T1613 | -6   | 1   | S1312, S1311, S1306 |
|        | T1614 | -6   | 3   | S1311               |
|        | T1615 | -6   | 3   | S1312               |
|        | T1616 | -6   | 3   | S1309               |
|        | T1617 | -6   | 3   | S1310               |
| 10n14  | T34   | -9   | -2  | S43                 |
|        | T35   | -9   | -2  | S46                 |
|        | T36   | -9   | 0   | S46, S49            |
|        | T37   | -9   | 0   | S43, S48            |
|        | T38   | -9   | 2   | S49                 |
|        | T39   | -9   | 2   | S48                 |
| m10n14 | T1618 | -5   | -2  | S1315               |
|        | T1619 | -5   | -2  | S1314               |
|        | T1620 | -5   | -2  | S1313               |
|        | T1621 | -5   | -2  | S1316               |
|        | T1622 | -5   | 0   | S1315, S1320        |
|        | T1623 | -5   | 0   | S1313, S1319        |
|        | T1624 | -5   | 0   | S1316, S1318        |
|        | T1625 | -5   | 0   | S1314, S1317        |
|        | T1626 | -5   | 2   | S1317               |
|        | T1627 | -5   | 2   | S1318               |
|        | T1628 | -5   | 2   | S1319               |
|        | T1629 | -5   | 2   | S1320               |
| 10n15  | T40   | -9   | -2  | S55                 |
|        | T41   | -9   | -2  | S54                 |
|        | T42   | -9   | -2  | S56                 |
|        | T43   | -9   | 0   | S57, S55            |
|        | T44   | -9   | 0   | S59, S56            |
|        | T45   | -9   | 0   | S58, S54            |
|        | T46   | -9   | 2   | S58                 |
|        | T47   | -9   | 2   | S59                 |
|        | T48   | -9   | 2   | S57                 |
| m10n15 | T1630 | -5   | -2  | S1321               |
|        | T1631 | -5   | -2  | S1322               |
|        | T1632 | -5   | 0   | S1323, S1321        |
|        | T1633 | -5   | 0   | S1322, S1324        |
|        | T1634 | -5   | 2   | S1324               |
|        | T1635 | -5   | 2   | S1323               |
| 10n18  | T50   | -9   | -4  | S61                 |
|        | T49   | -9   | -2  | S60, S61            |
|        | T51   | -9   | 0   | S62, S60            |
|        | T52   | -9   | 2   | S63, S62            |
|        | T53   | -9   | 4   | S63                 |
| m10n18 | T1637 | -5   | -4  | S1326               |
|        | T1636 | -5   | -2  | S1326, S1325        |

| Knot   | ID    | tb  | r  | Parents  |
|--------|-------|-----|----|--|
|        | T1638 | -5  | 0  | S1327, S1325   |
|        | T1639 | -5  | 2  | S1327, S1328   |
|        | T1640 | -5  | 4  | S1328  |
| 10n20  | T60   | -2  | -3 | S68  |
|        | T61   | -2  | -3 | S67  |
|        | T58   | -2  | -1 | S67, S69   |
|        | T59   | -2  | -1 | S70, S68   |
|        | T62   | -2  | 1  | S71, S69   |
|        | T63   | -2  | 1  | S70, S72   |
|        | T64   | -2  | 3  | S71  |
|        | T65   | -2  | 3  | S72  |
| m10n20 | T1651 | -12 | -5 | S1340  |
|        | T1652 | -12 | -5 | S1339  |
|        | T1649 | -12 | -3 | S1338, S1340   |
|        | T1650 | -12 | -3 | S1339, S1334   |
|        | T1647 | -12 | -1 | S1341, S1334   |
|        | T1648 | -12 | -1 | S1338, S1342   |
|        | T1653 | -12 | 1  | S1341, S1347   |
|        | T1654 | -12 | 1  | S1346, S1342   |
|        | T1655 | -12 | 3  | S1346, S1349   |
|        | T1656 | -12 | 3  | S1348, S1347   |
|        | T1657 | -12 | 5  | S1349  |
|        | T1658 | -12 | 5  | S1348  |
| 10n21  | T67   | -11 | -4 | S74  |
|        | T68   | -11 | -4 | S75  |
|        | T66   | -11 | -2 | S74, S73, S75  |
|        | T69   | -11 | 0  | S76, S73   |
|        | T70   | -11 | 2  | S78, S76, S77  |
|        | T71   | -11 | 4  | S78  |
|        | T72   | -11 | 4  | S77  |
| m10n21 | T1659 | -3  | -2 | S1350  |
|        | T1660 | -3  | 0  | S1351, S1350   |
|        | T1661 | -3  | 2  | S1351  |
| 10n23  | T74   | -6  | -3 | S79  |
|        | T73   | -6  | -1 | S80, S79   |
|        | T75   | -6  | 1  | S80, S81   |
|        | T76   | -6  | 3  | S81  |
| m10n23 | T1663 | -8  | -3 | S1357  |
|        | T1664 | -8  | -3 | S1356  |
|        | T1665 | -8  | -3 | S1352  |
|        | T1666 | -8  | -3 | S1355  |
|        | T1667 | -8  | -3 | S1353  |
|        | T1668 | -8  | -3 | S1354  |
|        | T1669 | -8  | -3 | S1358  |
|        | T1662 | -8  | -1 | S1354, S1353, S1358, S1356, S1355, S1359, S1352, S1357 |
|        | T1670 | -8  | 1  | S1364, S1365, S1366, S1359, S1361, S1363, S1360, S1362 |
|        | T1671 | -8  | 3  | S1364  |
|        | T1672 | -8  | 3  | S1365  |
|        | T1673 | -8  | 3  | S1361  |
|        | T1674 | -8  | 3  | S1362  |
|        | T1675 | -8  | 3  | S1360  |
|        | T1676 | -8  | 3  | S1363  |
|        | T1677 | -8  | 3  | S1366  |
| 10n24  | T79   | -9  | -4 | S84  |
|        | T80   | -9  | -4 | S85  |

| Knot   | ID    | $tb$ | $r$ | Parents                    |
|--------|-------|------|-----|----------------------------|
|        | T77   | -9   | -2  | S83, S84                   |
|        | T78   | -9   | -2  | S85, S82                   |
|        | T81   | -9   | 0   | S83, S87                   |
|        | T82   | -9   | 0   | S82, S86                   |
|        | T83   | -9   | 2   | S88, S87                   |
|        | T84   | -9   | 2   | S86, S89                   |
|        | T85   | -9   | 4   | S88                        |
|        | T86   | -9   | 4   | S89                        |
| m10n24 | T1678 | -5   | -2  | S1372                      |
|        | T1679 | -5   | -2  | S1369                      |
|        | T1681 | -5   | -2  | S1371                      |
|        | T1682 | -5   | -2  | S1368                      |
|        | T1683 | -5   | 0   | S1368, S1373, S1369, S1375 |
|        | T1684 | -5   | 0   | S1376, S1374, S1371, S1372 |
|        | T1685 | -5   | 2   | S1374                      |
|        | T1686 | -5   | 2   | S1376                      |
|        | T1687 | -5   | 2   | S1373                      |
|        | T1688 | -5   | 2   | S1375                      |
| 10n25  | T91   | -2   | -3  | S93                        |
|        | T92   | -2   | -3  | S90                        |
|        | T93   | -2   | -3  | S92                        |
|        | T94   | -2   | -3  | S91                        |
|        | T87   | -2   | -1  | S95, S90                   |
|        | T88   | -2   | -1  | S97, S92                   |
|        | T89   | -2   | -1  | S94, S91                   |
|        | T90   | -2   | -1  | S93, S96                   |
|        | T95   | -2   | 1   | S98, S94                   |
|        | T96   | -2   | 1   | S101, S96                  |
|        | T97   | -2   | 1   | S97, S100                  |
|        | T98   | -2   | 1   | S95, S99                   |
|        | T100  | -2   | 3   | S98                        |
|        | T101  | -2   | 3   | S101                       |
|        | T102  | -2   | 3   | S100                       |
|        | T99   | -2   | 3   | S99                        |
| m10n25 | T1697 | -12  | -5  | S1381                      |
|        | T1698 | -12  | -5  | S1382                      |
|        | T1693 | -12  | -3  | S1381, S1378               |
|        | T1694 | -12  | -3  | S1382, S1380               |
|        | T1695 | -12  | -3  | S1377                      |
|        | T1696 | -12  | -3  | S1379                      |
|        | T1689 | -12  | -1  | S1377, S1388               |
|        | T1690 | -12  | -1  | S1379, S1383               |
|        | T1691 | -12  | -1  | S1387, S1378               |
|        | T1692 | -12  | -1  | S1385, S1380               |
|        | T1699 | -12  | 1   | S1390, S1385               |
|        | T1700 | -12  | 1   | S1383, S1392               |
|        | T1701 | -12  | 1   | S1387, S1389               |
|        | T1702 | -12  | 1   | S1391, S1388               |
|        | T1703 | -12  | 3   | S1394, S1389               |
|        | T1704 | -12  | 3   | S1390, S1393               |
|        | T1705 | -12  | 3   | S1391                      |
|        | T1706 | -12  | 3   | S1392                      |
|        | T1707 | -12  | 5   | S1394                      |
|        | T1708 | -12  | 5   | S1393                      |
| 10n26  | T107  | -15  | -6  | S106                       |



| Knot   | ID    | $tb$ | $r$ | Parents                    |
|--------|-------|------|-----|----------------------------|
|        | T108  | -15  | -6  | S107                       |
|        | T105  | -15  | -4  | S104, S106                 |
|        | T106  | -15  | -4  | S105, S107                 |
|        | T103  | -15  | -2  | S103, S104                 |
|        | T104  | -15  | -2  | S102, S105                 |
|        | T109  | -15  | 0   | S103, S109                 |
|        | T110  | -15  | 0   | S102, S108                 |
|        | T111  | -15  | 2   | S111, S108                 |
|        | T112  | -15  | 2   | S110, S109                 |
|        | T113  | -15  | 4   | S112, S111                 |
|        | T114  | -15  | 4   | S113, S110                 |
|        | T115  | -15  | 6   | S113                       |
|        | T116  | -15  | 6   | S112                       |
| m10n26 | T1709 | 1    | -2  | S1395                      |
|        | T1710 | 1    | -2  | S1396                      |
|        | T1711 | 1    | 0   | S1396, S1397               |
|        | T1712 | 1    | 0   | S1398, S1395               |
|        | T1713 | 1    | 2   | S1397                      |
|        | T1714 | 1    | 2   | S1398                      |
| 10n27  | T127  | -13  | -4  | S122                       |
|        | T128  | -13  | -4  | S123                       |
|        | T117  | -13  | -2  | S122, S119, S121, S117     |
|        | T121  | -13  | -2  | S120, S123, S115, S114     |
|        | T129  | -13  | 0   | S128, S115                 |
|        | T130  | -13  | 0   | S135, S120                 |
|        | T131  | -13  | 0   | S114, S130                 |
|        | T132  | -13  | 0   | S131, S119                 |
|        | T133  | -13  | 0   | S134, S121                 |
|        | T134  | -13  | 0   | S117, S132                 |
|        | T136  | -13  | 2   | S136, S134, S131, S132     |
|        | T138  | -13  | 2   | S138, S128, S130, S135     |
|        | T141  | -13  | 4   | S138                       |
|        | T143  | -13  | 4   | S136                       |
| m10n27 | T1715 | -1   | -2  | S1399                      |
|        | T1716 | -1   | -2  | S1401                      |
|        | T1717 | -1   | -2  | S1404                      |
|        | T1718 | -1   | -2  | S1403                      |
|        | T1719 | -1   | -2  | S1402                      |
|        | T1720 | -1   | -2  | S1400                      |
|        | T1721 | -1   | 0   | S1406, S1399, S1401, S1408 |
|        | T1722 | -1   | 0   | S1405, S1404               |
|        | T1723 | -1   | 0   | S1409, S1403               |
|        | T1724 | -1   | 0   | S1410, S1407, S1402, S1400 |
|        | T1725 | -1   | 2   | S1405                      |
|        | T1726 | -1   | 2   | S1409                      |
|        | T1727 | -1   | 2   | S1410                      |
|        | T1728 | -1   | 2   | S1407                      |
|        | T1729 | -1   | 2   | S1406                      |
|        | T1730 | -1   | 2   | S1408                      |
| 10n28  | T149  | -4   | -3  | S144                       |
|        | T150  | -4   | -3  | S152                       |
|        | T151  | -4   | -3  | S145                       |
|        | T152  | -4   | -3  | S150                       |
|        | T153  | -4   | -3  | S149                       |
|        | T154  | -4   | -3  | S146                       |

| Knot   | ID    | $tb$ | $r$ | Parents                |
|--------|-------|------|-----|------------------------|
|        | T155  | -4   | -3  | S142                   |
|        | T156  | -4   | -3  | S148                   |
|        | T157  | -4   | -3  | S147                   |
|        | T158  | -4   | -3  | S151                   |
|        | T159  | -4   | -3  | S143                   |
|        | T144  | -4   | -1  | S161, S151, S143, S142 |
|        | T145  | -4   | -1  | S145, S157, S150       |
|        | T146  | -4   | -1  | S152, S147, S155       |
|        | T147  | -4   | -1  | S146, S144, S148, S159 |
|        | T148  | -4   | -1  | S158, S149             |
|        | T160  | -4   | 1   | S161, S167, S169, S166 |
|        | T161  | -4   | 1   | S171, S163, S157       |
|        | T162  | -4   | 1   | S172, S158             |
|        | T163  | -4   | 1   | S162, S165, S159, S170 |
|        | T164  | -4   | 1   | S168, S155, S164       |
|        | T165  | -4   | 3   | S165                   |
|        | T166  | -4   | 3   | S166                   |
|        | T167  | -4   | 3   | S172                   |
|        | T168  | -4   | 3   | S163                   |
|        | T169  | -4   | 3   | S169                   |
|        | T170  | -4   | 3   | S168                   |
|        | T171  | -4   | 3   | S171                   |
|        | T172  | -4   | 3   | S170                   |
|        | T173  | -4   | 3   | S162                   |
|        | T174  | -4   | 3   | S164                   |
|        | T175  | -4   | 3   | S167                   |
| m10n28 | T1733 | -10  | -3  | S1412                  |
|        | T1734 | -10  | -3  | S1411                  |
|        | T1731 | -10  | -1  | S1412, S1413           |
|        | T1732 | -10  | -1  | S1411, S1414           |
|        | T1735 | -10  | 1   | S1415, S1413           |
|        | T1736 | -10  | 1   | S1416, S1414           |
|        | T1737 | -10  | 3   | S1415                  |
|        | T1738 | -10  | 3   | S1416                  |
| 10n29  | T178  | -19  | -4  | S174                   |
|        | T176  | -19  | -2  | S174, S175, S173       |
|        | T179  | -19  | 0   | S176, S173             |
|        | T180  | -19  | 2   | S177, S176, S178       |
|        | T181  | -19  | 4   | S177                   |
| m10n29 | T1739 | 5    | -2  | S1417                  |
|        | T1740 | 5    | 0   | S1417, S1418           |
|        | T1741 | 5    | 2   | S1418                  |
| 10n30  | T189  | -6   | -3  | S183                   |
|        | T190  | -6   | -3  | S182                   |
|        | T187  | -6   | -1  | S184, S183             |
|        | T188  | -6   | -1  | S185, S182             |
|        | T191  | -6   | 1   | S187, S185             |
|        | T192  | -6   | 1   | S184, S186             |
|        | T193  | -6   | 3   | S187                   |
|        | T194  | -6   | 3   | S186                   |
| m10n30 | T1750 | -8   | -3  | S1425                  |
|        | T1751 | -8   | -3  | S1424                  |
|        | T1748 | -8   | -1  | S1426, S1425           |
|        | T1749 | -8   | -1  | S1424, S1427           |
|        | T1752 | -8   | 1   | S1427, S1429           |

| Knot   | ID    | $tb$ | $r$ | Parents                      |
|--------|-------|------|-----|------------------------------|
|        | T1753 | -8   | 1   | S1426, S1428                 |
|        | T1754 | -8   | 3   | S1428                        |
|        | T1755 | -8   | 3   | S1429                        |
| 10n31  | T198  | -17  | -4  | S190                         |
|        | T195  | -17  | -2  | S190, S188, S189, S191       |
|        | T199  | -17  | 0   | S188, S192                   |
|        | T200  | -17  | 2   | S192, S194, S193, S195       |
|        | T202  | -17  | 4   | S195                         |
| m10n31 | T1756 | 3    | -2  | S1431                        |
|        | T1757 | 3    | -2  | S1430                        |
|        | T1758 | 3    | 0   | S1430, S1433                 |
|        | T1759 | 3    | 0   | S1431, S1432                 |
|        | T1760 | 3    | 2   | S1432                        |
|        | T1761 | 3    | 2   | S1433                        |
| 10n32  | T207  | -5   | -4  | S198                         |
|        | T204  | -5   | -2  | S196, S198, S197             |
|        | T208  | -5   | 0   | S196                         |
|        | T209  | -5   | 0   | S200                         |
|        | T210  | -5   | 0   | S201, S197                   |
|        | T211  | -5   | 2   | S200, S201, S203             |
|        | T212  | -5   | 4   | S203                         |
| m10n32 | T1763 | -9   | -4  | S1435                        |
|        | T1762 | -9   | -2  | S1435, S1434                 |
|        | T1764 | -9   | 0   | S1436, S1434                 |
|        | T1765 | -9   | 2   | S1436, S1437                 |
|        | T1766 | -9   | 4   | S1437                        |
| 10n33  | T215  | -4   | -3  | S205                         |
|        | T216  | -4   | -3  | S204                         |
|        | T218  | -4   | -3  | S207                         |
|        | T213  | -4   | -1  | S210, S205, S207, S209, S204 |
|        | T220  | -4   | 1   | S213, S215, S212, S210, S209 |
|        | T221  | -4   | 3   | S212                         |
|        | T222  | -4   | 3   | S215                         |
|        | T223  | -4   | 3   | S213                         |
| m10n33 | T1769 | -10  | -3  | S1439                        |
|        | T1770 | -10  | -3  | S1438                        |
|        | T1767 | -10  | -1  | S1441, S1439                 |
|        | T1768 | -10  | -1  | S1440, S1438                 |
|        | T1771 | -10  | 1   | S1440, S1442                 |
|        | T1772 | -10  | 1   | S1443, S1441                 |
|        | T1773 | -10  | 3   | S1442                        |
|        | T1774 | -10  | 3   | S1443                        |
| 10n34  | T225  | 1    | -2  | S216                         |
|        | T226  | 1    | 0   | S217, S216                   |
|        | T227  | 1    | 2   | S217                         |
| m10n34 | T1777 | -15  | -6  | S1446                        |
|        | T1776 | -15  | -4  | S1446, S1445                 |
|        | T1775 | -15  | -2  | S1444, S1445                 |
|        | T1778 | -15  | 0   | S1444, S1447                 |
|        | T1779 | -15  | 2   | S1448, S1447                 |
|        | T1780 | -15  | 4   | S1448, S1449                 |
|        | T1781 | -15  | 6   | S1449                        |
| 10n35  | T228  | -7   | -2  | S218                         |
|        | T229  | -7   | 0   | S218, S219                   |

| Knot   | ID    | $tb$ | $r$ | Parents             |
|--------|-------|------|-----|---------------------|
|        | T230  | -7   | 2   | S219                |
| m10n35 | T1783 | -7   | -4  | S1452               |
|        | T1784 | -7   | -4  | S1451               |
|        | T1782 | -7   | -2  | S1450, S1452, S1451 |
|        | T1785 | -7   | 0   | S1450, S1453        |
|        | T1786 | -7   | 2   | S1453, S1454, S1455 |
|        | T1787 | -7   | 4   | S1455               |
|        | T1788 | -7   | 4   | S1454               |
| 10n36  | T237  | -12  | -5  | S223                |
|        | T234  | -12  | -3  | S222                |
|        | T235  | -12  | -3  | S220                |
|        | T236  | -12  | -3  | S221, S223          |
|        | T231  | -12  | -1  | S225, S220          |
|        | T232  | -12  | -1  | S221, S224          |
|        | T233  | -12  | -1  | S226, S222          |
|        | T238  | -12  | 1   | S229, S225          |
|        | T239  | -12  | 1   | S228, S224          |
|        | T240  | -12  | 1   | S227, S226          |
|        | T241  | -12  | 3   | S229                |
|        | T242  | -12  | 3   | S230, S228          |
|        | T243  | -12  | 3   | S227                |
|        | T244  | -12  | 5   | S230                |
| m10n36 | T1792 | -2   | -3  | S1457               |
|        | T1793 | -2   | -3  | S1458               |
|        | T1794 | -2   | -3  | S1456               |
|        | T1789 | -2   | -1  | S1457, S1459        |
|        | T1790 | -2   | -1  | S1456, S1460        |
|        | T1791 | -2   | -1  | S1461, S1458        |
|        | T1795 | -2   | 1   | S1464, S1459        |
|        | T1796 | -2   | 1   | S1463, S1460        |
|        | T1797 | -2   | 1   | S1462, S1461        |
|        | T1798 | -2   | 3   | S1463               |
|        | T1799 | -2   | 3   | S1464               |
|        | T1800 | -2   | 3   | S1462               |
| 10n39  | T245  | -3   | -2  | S231                |
|        | T246  | -3   | 0   | S231, S232          |
|        | T247  | -3   | 2   | S232                |
| m10n39 | T1802 | -11  | -4  | S1466               |
|        | T1803 | -11  | -4  | S1467               |
|        | T1801 | -11  | -2  | S1465, S1467, S1466 |
|        | T1804 | -11  | 0   | S1465, S1468        |
|        | T1805 | -11  | 2   | S1468, S1470, S1469 |
|        | T1806 | -11  | 4   | S1470               |
|        | T1807 | -11  | 4   | S1469               |
| 10n40  | T259  | -10  | -3  | S241                |
|        | T260  | -10  | -3  | S242                |
|        | T257  | -10  | -1  | S243, S242          |
|        | T258  | -10  | -1  | S244, S241          |
|        | T261  | -10  | 1   | S244, S245          |
|        | T262  | -10  | 1   | S243, S246          |
|        | T263  | -10  | 3   | S246                |
|        | T264  | -10  | 3   | S245                |
| m10n40 | T1816 | -4   | -3  | S1476               |
|        | T1817 | -4   | -3  | S1478               |
|        | T1818 | -4   | -3  | S1475               |

| Knot   | ID    | $tb$ | $r$ | Parents   |
|--------|-------|------|-----|---|
|        | T1819 | -4   | -3  | S1477   |
|        | T1814 | -4   | -1  | S1477, S1475, S1479                             |
|        | T1815 | -4   | -1  | S1478, S1476, S1480                             |
|        | T1820 | -4   | 1   | S1484, S1482, S1479                             |
|        | T1821 | -4   | 1   | S1483, S1481, S1480                             |
|        | T1822 | -4   | 3   | S1481   |
|        | T1823 | -4   | 3   | S1484   |
|        | T1824 | -4   | 3   | S1483   |
|        | T1825 | -4   | 3   | S1482   |
| 10n41  | T266  | -6   | -3  | S247  |
|        | T265  | -6   | -1  | S248, S247                                      |
|        | T267  | -6   | 1   | S248, S249                                      |
|        | T268  | -6   | 3   | S249  |
| m10n41 | T1827 | -8   | -3  | S1488   |
|        | T1828 | -8   | -3  | S1485   |
|        | T1829 | -8   | -3  | S1486   |
|        | T1830 | -8   | -3  | S1487   |
|        | T1826 | -8   | -1  | S1492, S1486, S1487, S1491, S1488, S1490, S1485 |
|        | T1831 | -8   | 1   | S1494, S1491, S1493                             |
|        | T1832 | -8   | 1   | S1495, S1492, S1496                             |
|        | T1833 | -8   | 1   | S1497, S1490                                    |
|        | T1834 | -8   | 3   | S1494   |
|        | T1835 | -8   | 3   | S1497   |
|        | T1836 | -8   | 3   | S1493   |
|        | T1837 | -8   | 3   | S1495   |
|        | T1838 | -8   | 3   | S1496   |
| 10n42  | T269  | -1   | -2  | S254  |
|        | T270  | -1   | -2  | S251  |
|        | T271  | -1   | -2  | S255  |
|        | T272  | -1   | -2  | S250  |
|        | T273  | -1   | -2  | S252  |
|        | T274  | -1   | -2  | S253  |
|        | T275  | -1   | 0   | S252, S257, S261, S250                          |
|        | T276  | -1   | 0   | S260, S259, S253, S251                          |
|        | T277  | -1   | 0   | S254, S256, S255, S258                          |
|        | T278  | -1   | 2   | S256  |
|        | T279  | -1   | 2   | S257  |
|        | T280  | -1   | 2   | S261  |
|        | T281  | -1   | 2   | S260  |
|        | T282  | -1   | 2   | S259  |
|        | T283  | -1   | 2   | S258  |
| m10n42 | T1841 | -13  | -4  | S1500   |
|        | T1839 | -13  | -2  | S1499, S1500                                    |
|        | T1840 | -13  | -2  | S1498   |
|        | T1842 | -13  | 0   | S1502, S1499                                    |
|        | T1843 | -13  | 0   | S1498, S1501                                    |
|        | T1844 | -13  | 2   | S1502, S1503                                    |
|        | T1845 | -13  | 2   | S1501   |
|        | T1846 | -13  | 4   | S1503   |
| 11n12  | T350  | -10  | -3  | S323  |
|        | T351  | -10  | -3  | S325  |
|        | T352  | -10  | -3  | S324  |
|        | T353  | -10  | -3  | S322  |
|        | T349  | -10  | -1  | S322, S326, S325, S324, S323                    |
|        | T354  | -10  | 1   | S329, S330, S326, S327, S328                    |

| Knot   | ID    | $tb$ | $r$ | Parents                |
|--------|-------|------|-----|------------------------|
|        | T355  | -10  | 3   | S327                   |
|        | T356  | -10  | 3   | S330                   |
|        | T357  | -10  | 3   | S328                   |
|        | T358  | -10  | 3   | S329                   |
| m11n12 | T1912 | -4   | -3  | S1554                  |
|        | T1913 | -4   | -3  | S1555                  |
|        | T1910 | -4   | -1  | S1557, S1554           |
|        | T1911 | -4   | -1  | S1555, S1556           |
|        | T1914 | -4   | 1   | S1556, S1559           |
|        | T1915 | -4   | 1   | S1557, S1558           |
|        | T1916 | -4   | 3   | S1558                  |
|        | T1917 | -4   | 3   | S1559                  |
| 11n20  | T448  | -5   | -2  | S401                   |
|        | T449  | -5   | -2  | S400                   |
|        | T450  | -5   | 0   | S400, S403, S402, S401 |
|        | T451  | -5   | 2   | S402                   |
|        | T452  | -5   | 2   | S403                   |
| m11n20 | T2024 | -9   | -2  | S1643                  |
|        | T2025 | -9   | 0   | S1643, S1644           |
|        | T2026 | -9   | 2   | S1644                  |
| 11n23  | T455  | -12  | -3  | S404                   |
|        | T456  | -12  | -3  | S405                   |
|        | T453  | -12  | -1  | S406, S405             |
|        | T454  | -12  | -1  | S404, S407             |
|        | T457  | -12  | 1   | S407, S408             |
|        | T458  | -12  | 1   | S409, S406             |
|        | T459  | -12  | 3   | S409                   |
|        | T460  | -12  | 3   | S408                   |
| m11n23 | T2029 | -2   | -3  | S1647                  |
|        | T2030 | -2   | -3  | S1646                  |
|        | T2031 | -2   | -3  | S1648                  |
|        | T2032 | -2   | -3  | S1645                  |
|        | T2027 | -2   | -1  | S1645, S1647, S1649    |
|        | T2028 | -2   | -1  | S1648, S1646, S1650    |
|        | T2033 | -2   | 1   | S1649, S1653, S1652    |
|        | T2034 | -2   | 1   | S1654, S1650, S1651    |
|        | T2035 | -2   | 3   | S1651                  |
|        | T2036 | -2   | 3   | S1653                  |
|        | T2037 | -2   | 3   | S1652                  |
|        | T2038 | -2   | 3   | S1654                  |
| 11n24  | T463  | -8   | -3  | S412                   |
|        | T464  | -8   | -3  | S410                   |
|        | T465  | -8   | -3  | S411                   |
|        | T466  | -8   | -3  | S413                   |
|        | T461  | -8   | -1  | S411, S415, S413       |
|        | T462  | -8   | -1  | S412, S414, S410       |
|        | T467  | -8   | 1   | S414, S417, S418       |
|        | T468  | -8   | 1   | S415, S416, S419       |
|        | T469  | -8   | 3   | S419                   |
|        | T470  | -8   | 3   | S418                   |
|        | T471  | -8   | 3   | S416                   |
|        | T472  | -8   | 3   | S417                   |
| m11n24 | T2042 | -6   | -3  | S1655                  |
|        | T2043 | -6   | -3  | S1657                  |
|        | T2044 | -6   | -3  | S1659                  |

| Knot   | ID    | $tb$ | $r$ | Parents             |
|--------|-------|------|-----|---------------------|
|        | T2045 | -6   | -3  | S1658               |
|        | T2046 | -6   | -3  | S1656               |
|        | T2039 | -6   | -1  | S1660, S1658, S1655 |
|        | T2040 | -6   | -1  | S1657, S1661, S1656 |
|        | T2041 | -6   | -1  | S1659, S1662        |
|        | T2047 | -6   | 1   | S1660, S1665, S1664 |
|        | T2048 | -6   | 1   | S1663, S1666, S1661 |
|        | T2049 | -6   | 1   | S1667, S1662        |
|        | T2050 | -6   | 3   | S1667               |
|        | T2051 | -6   | 3   | S1664               |
|        | T2052 | -6   | 3   | S1665               |
|        | T2053 | -6   | 3   | S1666               |
|        | T2054 | -6   | 3   | S1663               |
| 11n27  | T475  | -15  | -4  | S422                |
|        | T476  | -15  | -4  | S423                |
|        | T473  | -15  | -2  | S423, S420          |
|        | T474  | -15  | -2  | S422, S421          |
|        | T477  | -15  | 0   | S420, S424          |
|        | T478  | -15  | 0   | S425, S421          |
|        | T479  | -15  | 2   | S427, S424          |
|        | T480  | -15  | 2   | S426, S425          |
|        | T481  | -15  | 4   | S427                |
|        | T482  | -15  | 4   | S426                |
| m11n27 | T2055 | 1    | -2  | S1668               |
|        | T2056 | 1    | -2  | S1669               |
|        | T2057 | 1    | 0   | S1670, S1669        |
|        | T2058 | 1    | 0   | S1671, S1668        |
|        | T2059 | 1    | 2   | S1670               |
|        | T2060 | 1    | 2   | S1671               |
| 11n37  | T483  | -5   | -2  | S429                |
|        | T484  | -5   | -2  | S428                |
|        | T485  | -5   | 0   | S431, S428          |
|        | T486  | -5   | 0   | S429, S430          |
|        | T487  | -5   | 2   | S430                |
|        | T488  | -5   | 2   | S431                |
| m11n37 | T2063 | -9   | -4  | S1675               |
|        | T2064 | -9   | -4  | S1674               |
|        | T2065 | -9   | -4  | S1677               |
|        | T2066 | -9   | -4  | S1676               |
|        | T2061 | -9   | -2  | S1673, S1674, S1677 |
|        | T2062 | -9   | -2  | S1675, S1676, S1672 |
|        | T2067 | -9   | 0   | S1678, S1672        |
|        | T2068 | -9   | 0   | S1679, S1673        |
|        | T2069 | -9   | 2   | S1678, S1683, S1680 |
|        | T2070 | -9   | 2   | S1679, S1681, S1682 |
|        | T2071 | -9   | 4   | S1680               |
|        | T2072 | -9   | 4   | S1683               |
|        | T2073 | -9   | 4   | S1682               |
|        | T2074 | -9   | 4   | S1681               |
| 11n48  | T489  | -5   | -2  | S432                |
|        | T490  | -5   | 0   | S432, S433          |
|        | T491  | -5   | 2   | S433                |
| m11n48 | T2076 | -9   | -4  | S1686               |
|        | T2077 | -9   | -4  | S1687               |
|        | T2078 | -9   | -4  | S1685               |

| Knot   | ID    | $tb$ | $r$ | Parents                    |
|--------|-------|------|-----|----------------------------|
|        | T2075 | -9   | -2  | S1687, S1684, S1685, S1686 |
|        | T2079 | -9   | 0   | S1684, S1688               |
|        | T2080 | -9   | 2   | S1689, S1688, S1691, S1690 |
|        | T2081 | -9   | 4   | S1691                      |
|        | T2082 | -9   | 4   | S1689                      |
|        | T2083 | -9   | 4   | S1690                      |
| 11n49  | T492  | -7   | -2  | S434                       |
|        | T493  | -7   | 0   | S434, S435                 |
|        | T494  | -7   | 2   | S435                       |
| m11n49 | T2084 | -7   | -2  | S1693                      |
|        | T2085 | -7   | 0   | S1693, S1694               |
|        | T2086 | -7   | 2   | S1694                      |
| 11n50  | T497  | -4   | -3  | S436                       |
|        | T498  | -4   | -3  | S437                       |
|        | T495  | -4   | -1  | S437, S438                 |
|        | T496  | -4   | -1  | S439, S436                 |
|        | T499  | -4   | 1   | S439, S441                 |
|        | T500  | -4   | 1   | S438, S440                 |
|        | T501  | -4   | 3   | S440                       |
|        | T502  | -4   | 3   | S441                       |
| m11n50 | T2089 | -10  | -3  | S1697                      |
|        | T2090 | -10  | -3  | S1700                      |
|        | T2091 | -10  | -3  | S1698                      |
|        | T2092 | -10  | -3  | S1699                      |
|        | T2093 | -10  | -3  | S1701                      |
|        | T2094 | -10  | -3  | S1696                      |
|        | T2087 | -10  | -1  | S1700, S1697, S1699, S1703 |
|        | T2088 | -10  | -1  | S1698, S1701, S1705, S1696 |
|        | T2095 | -10  | 1   | S1711, S1706, S1707, S1703 |
|        | T2096 | -10  | 1   | S1709, S1710, S1708, S1705 |
|        | T2097 | -10  | 3   | S1711                      |
|        | T2098 | -10  | 3   | S1706                      |
|        | T2099 | -10  | 3   | S1709                      |
|        | T2100 | -10  | 3   | S1708                      |
|        | T2101 | -10  | 3   | S1707                      |
|        | T2102 | -10  | 3   | S1710                      |
| 11n57  | T504  | -15  | -4  | S443                       |
|        | T505  | -15  | -4  | S444                       |
|        | T503  | -15  | -2  | S442, S443, S444           |
|        | T506  | -15  | 0   | S442, S445                 |
|        | T507  | -15  | 2   | S447, S445, S448           |
|        | T508  | -15  | 4   | S448                       |
|        | T509  | -15  | 4   | S447                       |
| m11n57 | T2103 | 1    | -2  | S1712                      |
|        | T2104 | 1    | 0   | S1712, S1713               |
|        | T2105 | 1    | 2   | S1713                      |
| 11n61  | T512  | -12  | -3  | S449                       |
|        | T513  | -12  | -3  | S450                       |
|        | T514  | -12  | -3  | S451                       |
|        | T510  | -12  | -1  | S449, S453                 |
|        | T511  | -12  | -1  | S451, S452, S450           |
|        | T515  | -12  | 1   | S455, S453                 |
|        | T516  | -12  | 1   | S454, S452, S456           |
|        | T517  | -12  | 3   | S455                       |
|        | T518  | -12  | 3   | S456                       |



| Knot   | ID    | $tb$ | $r$ | Parents                    |
|--------|-------|------|-----|----------------------------|
|        | T519  | -12  | 3   | S454                       |
| m11n61 | T2107 | -2   | -3  | S1715                      |
|        | T2108 | -2   | -3  | S1714                      |
|        | T2106 | -2   | -1  | S1715, S1714, S1716        |
|        | T2109 | -2   | 1   | S1716, S1717, S1718        |
|        | T2110 | -2   | 3   | S1717                      |
|        | T2111 | -2   | 3   | S1718                      |
| 11n65  | T521  | -4   | -3  | S457                       |
|        | T520  | -4   | -1  | S458, S457                 |
|        | T522  | -4   | 1   | S458, S459                 |
|        | T523  | -4   | 3   | S459                       |
| m11n65 | T2113 | -10  | -3  | S1720                      |
|        | T2114 | -10  | -3  | S1719                      |
|        | T2112 | -10  | -1  | S1719, S1720, S1721        |
|        | T2115 | -10  | 1   | S1722, S1723, S1721        |
|        | T2116 | -10  | 3   | S1722                      |
|        | T2117 | -10  | 3   | S1723                      |
| 11n70  | T525  | -11  | -4  | S461                       |
|        | T526  | -11  | -4  | S462                       |
|        | T524  | -11  | -2  | S462, S460, S461           |
|        | T527  | -11  | 0   | S460, S463                 |
|        | T528  | -11  | 2   | S464, S465, S463           |
|        | T529  | -11  | 4   | S464                       |
|        | T530  | -11  | 4   | S465                       |
| m11n70 | T2118 | -3   | -2  | S1724                      |
|        | T2119 | -3   | 0   | S1725, S1724               |
|        | T2120 | -3   | 2   | S1725                      |
| 11n79  | T531  | -9   | -2  | S466                       |
|        | T532  | -9   | 0   | S466, S467                 |
|        | T533  | -9   | 2   | S467                       |
| m11n79 | T2121 | -5   | -2  | S1726                      |
|        | T2122 | -5   | 0   | S1727, S1726               |
|        | T2123 | -5   | 2   | S1727                      |
| 11n81  | T534  | -15  | -2  | S468                       |
|        | T535  | -15  | 0   | S469, S468                 |
|        | T536  | -15  | 2   | S469                       |
| m11n81 | T2124 | 1    | -2  | S1728                      |
|        | T2125 | 1    | 0   | S1729, S1728               |
|        | T2126 | 1    | 2   | S1729                      |
| 11n82  | T538  | -8   | -3  | S470                       |
|        | T537  | -8   | -1  | S471, S470                 |
|        | T539  | -8   | 1   | S471, S472                 |
|        | T540  | -8   | 3   | S472                       |
| m11n82 | T2129 | -6   | -3  | S1730                      |
|        | T2130 | -6   | -3  | S1733                      |
|        | T2131 | -6   | -3  | S1732                      |
|        | T2132 | -6   | -3  | S1731                      |
|        | T2127 | -6   | -1  | S1732, S1730, S1733, S1736 |
|        | T2128 | -6   | -1  | S1731, S1735               |
|        | T2133 | -6   | 1   | S1738, S1739, S1736, S1737 |
|        | T2134 | -6   | 1   | S1740, S1735               |
|        | T2135 | -6   | 3   | S1739                      |
|        | T2136 | -6   | 3   | S1740                      |
|        | T2137 | -6   | 3   | S1738                      |

| Knot   | ID    | $tb$ | $r$ | Parents                           |
|--------|-------|------|-----|-----------------------------------|
| 11n84  | T2138 | -6   | 3   | S1737                             |
|        | T541  | -1   | -2  | S474                              |
|        | T542  | -1   | -2  | S473                              |
|        | T543  | -1   | 0   | S474, S476                        |
|        | T544  | -1   | 0   | S473, S475                        |
|        | T545  | -1   | 2   | S476                              |
| m11n84 | T546  | -1   | 2   | S475                              |
|        | T2140 | -13  | -4  | S1745                             |
|        | T2141 | -13  | -4  | S1742                             |
|        | T2142 | -13  | -4  | S1744                             |
|        | T2143 | -13  | -4  | S1743                             |
|        | T2139 | -13  | -2  | S1745, S1743, S1744, S1741, S1742 |
|        | T2144 | -13  | 0   | S1746, S1741                      |
|        | T2145 | -13  | 2   | S1746, S1750, S1749, S1747, S1748 |
|        | T2146 | -13  | 4   | S1749                             |
|        | T2147 | -13  | 4   | S1747                             |
| 11n86  | T2148 | -13  | 4   | S1748                             |
|        | T2149 | -13  | 4   | S1750                             |
|        | T548  | -9   | -4  | S480                              |
|        | T549  | -9   | -4  | S479                              |
|        | T550  | -9   | -4  | S478                              |
|        | T547  | -9   | -2  | S478, S480, S479, S477            |
|        | T551  | -9   | 0   | S481, S477                        |
|        | T552  | -9   | 2   | S481, S484, S482, S483            |
|        | T553  | -9   | 4   | S484                              |
| m11n86 | T554  | -9   | 4   | S483                              |
|        | T555  | -9   | 4   | S482                              |
|        | T2150 | -5   | -2  | S1751                             |
|        | T2151 | -5   | -2  | S1752                             |
|        | T2152 | -5   | 0   | S1754, S1752                      |
|        | T2153 | -5   | 0   | S1751, S1753                      |
| 11n88  | T2154 | -5   | 2   | S1754                             |
|        | T2155 | -5   | 2   | S1753                             |
|        | T557  | -15  | -4  | S486                              |
|        | T556  | -15  | -2  | S486, S485                        |
|        | T558  | -15  | 0   | S487, S485                        |
| m11n88 | T559  | -15  | 2   | S488, S487                        |
|        | T560  | -15  | 4   | S488                              |
|        | T2156 | 1    | -2  | S1755                             |
| 11n92  | T2157 | 1    | 0   | S1756, S1755                      |
|        | T2158 | 1    | 2   | S1756                             |
|        | T562  | -6   | -3  | S489                              |
| m11n92 | T563  | -6   | -3  | S490                              |
|        | T561  | -6   | -1  | S491, S489, S490                  |
|        | T564  | -6   | 1   | S491, S493, S492                  |
|        | T565  | -6   | 3   | S493                              |
|        | T566  | -6   | 3   | S492                              |
|        | T2160 | -8   | -3  | S1757                             |
| 11n96  | T2159 | -8   | -1  | S1757, S1759, S1760               |
|        | T2161 | -8   | 1   | S1762, S1760, S1759               |
|        | T2163 | -8   | 3   | S1762                             |
|        | T568  | -8   | -3  | S494                              |
|        | T567  | -8   | -1  | S494, S495                        |
|        | T569  | -8   | 1   | S496, S495                        |

| Knot    | ID    | tb  | r  | Parents                |
|---------|-------|-----|----|------------------------|
|         | T570  | -8  | 3  | S496                   |
| m11n96  | T2166 | -6  | -3 | S1764                  |
|         | T2167 | -6  | -3 | S1765                  |
|         | T2165 | -6  | -1 | S1765, S1766, S1764    |
|         | T2168 | -6  | 1  | S1767, S1768, S1766    |
|         | T2169 | -6  | 3  | S1768                  |
|         | T2170 | -6  | 3  | S1767                  |
| 11n99   | T571  | -1  | -2 | S497                   |
|         | T572  | -1  | 0  | S497, S498             |
|         | T573  | -1  | 2  | S498                   |
| m11n99  | T2172 | -13 | -4 | S1770                  |
|         | T2173 | -13 | -4 | S1771                  |
|         | T2171 | -13 | -2 | S1770, S1769, S1771    |
|         | T2174 | -13 | 0  | S1769, S1772           |
|         | T2175 | -13 | 2  | S1773, S1774, S1772    |
|         | T2176 | -13 | 4  | S1773                  |
|         | T2177 | -13 | 4  | S1774                  |
| 11n102  | T303  | -3  | -2 | S286                   |
|         | T304  | -3  | 0  | S286, S287             |
|         | T305  | -3  | 2  | S287                   |
| m11n102 | T1867 | -11 | -2 | S1522                  |
|         | T1868 | -11 | 0  | S1522, S1523           |
|         | T1869 | -11 | 2  | S1523                  |
| 11n104  | T306  | -15 | -2 | S288                   |
|         | T307  | -15 | 0  | S288, S289             |
|         | T308  | -15 | 2  | S289                   |
| m11n104 | T1870 | 1   | -2 | S1524                  |
|         | T1871 | 1   | 0  | S1525, S1524           |
|         | T1872 | 1   | 2  | S1525                  |
| 11n106  | T310  | -6  | -3 | S292                   |
|         | T311  | -6  | -3 | S290                   |
|         | T312  | -6  | -3 | S291                   |
|         | T309  | -6  | -1 | S293, S291, S290, S292 |
|         | T313  | -6  | 1  | S293, S294, S296, S295 |
|         | T314  | -6  | 3  | S294                   |
|         | T315  | -6  | 3  | S296                   |
|         | T316  | -6  | 3  | S295                   |
| m11n106 | T1875 | -8  | -3 | S1526                  |
|         | T1876 | -8  | -3 | S1528                  |
|         | T1877 | -8  | -3 | S1527                  |
|         | T1873 | -8  | -1 | S1527, S1530, S1528    |
|         | T1874 | -8  | -1 | S1526, S1529           |
|         | T1878 | -8  | 1  | S1533, S1534, S1530    |
|         | T1879 | -8  | 1  | S1529, S1532           |
|         | T1880 | -8  | 3  | S1533                  |
|         | T1881 | -8  | 3  | S1532                  |
|         | T1882 | -8  | 3  | S1534                  |
| 11n107  | T318  | -12 | -3 | S297                   |
|         | T317  | -12 | -1 | S297, S298             |
|         | T319  | -12 | 1  | S299, S298             |
|         | T320  | -12 | 3  | S299                   |
| m11n107 | T1884 | -2  | -3 | S1535                  |
|         | T1883 | -2  | -1 | S1536, S1535           |
|         | T1885 | -2  | 1  | S1536, S1537           |

| Knot    | ID    | $tb$ | $r$ | Parents                    |
|---------|-------|------|-----|----------------------------|
| 11n110  | T1886 | -2   | 3   | S1537                      |
|         | T323  | -9   | -4  | S302                       |
|         | T324  | -9   | -4  | S304                       |
|         | T325  | -9   | -4  | S303                       |
|         | T326  | -9   | -4  | S305                       |
|         | T321  | -9   | -2  | S305, S300, S303           |
|         | T322  | -9   | -2  | S301, S302, S304           |
|         | T327  | -9   | 0   | S307, S300                 |
|         | T328  | -9   | 0   | S301, S306                 |
|         | T329  | -9   | 2   | S307, S308, S309           |
|         | T330  | -9   | 2   | S311, S310, S306           |
|         | T331  | -9   | 4   | S311                       |
|         | T332  | -9   | 4   | S310                       |
|         | T333  | -9   | 4   | S308                       |
|         | T334  | -9   | 4   | S309                       |
| m11n110 | T1887 | -5   | -2  | S1538                      |
|         | T1888 | -5   | -2  | S1539                      |
|         | T1889 | -5   | 0   | S1538, S1541               |
|         | T1890 | -5   | 0   | S1540, S1539               |
|         | T1891 | -5   | 2   | S1541                      |
|         | T1892 | -5   | 2   | S1540                      |
| 11n111  | T336  | -11  | -4  | S313                       |
|         | T335  | -11  | -2  | S313, S312                 |
|         | T337  | -11  | 0   | S314, S312                 |
|         | T338  | -11  | 2   | S314, S315                 |
|         | T339  | -11  | 4   | S315                       |
| m11n111 | T1893 | -3   | -2  | S1542                      |
|         | T1894 | -3   | -2  | S1543                      |
|         | T1895 | -3   | 0   | S1544, S1542               |
|         | T1896 | -3   | 0   | S1543, S1545               |
|         | T1897 | -3   | 2   | S1545                      |
|         | T1898 | -3   | 2   | S1544                      |
| 11n116  | T340  | -5   | -2  | S316                       |
|         | T341  | -5   | -2  | S317                       |
|         | T342  | -5   | 0   | S319, S317                 |
|         | T343  | -5   | 0   | S316, S318                 |
|         | T344  | -5   | 2   | S318                       |
|         | T345  | -5   | 2   | S319                       |
| m11n116 | T1899 | -9   | -2  | S1547                      |
|         | T1900 | -9   | -2  | S1546                      |
|         | T1901 | -9   | 0   | S1547, S1548               |
|         | T1902 | -9   | 0   | S1549, S1546               |
|         | T1903 | -9   | 2   | S1548                      |
|         | T1904 | -9   | 2   | S1549                      |
| 11n117  | T346  | -9   | -2  | S320                       |
|         | T347  | -9   | 0   | S321, S320                 |
|         | T348  | -9   | 2   | S321                       |
| m11n117 | T1905 | -5   | -2  | S1550                      |
|         | T1906 | -5   | -2  | S1551                      |
|         | T1907 | -5   | 0   | S1550, S1551, S1553, S1552 |
|         | T1908 | -5   | 2   | S1553                      |
|         | T1909 | -5   | 2   | S1552                      |
| 11n122  | T359  | -1   | -2  | S332                       |
|         | T360  | -1   | -2  | S331                       |

| Knot    | ID    | $tb$ | $r$ | Parents             |
|---------|-------|------|-----|---------------------|
|         | T361  | -1   | 0   | S331, S333          |
|         | T362  | -1   | 0   | S334, S332          |
|         | T363  | -1   | 2   | S334                |
|         | T364  | -1   | 2   | S333                |
| m11n122 | T1920 | -13  | -4  | S1562               |
|         | T1921 | -13  | -4  | S1563               |
|         | T1922 | -13  | -4  | S1565               |
|         | T1923 | -13  | -4  | S1564               |
|         | T1918 | -13  | -2  | S1560, S1563, S1562 |
|         | T1919 | -13  | -2  | S1564, S1561, S1565 |
|         | T1924 | -13  | 0   | S1566, S1561        |
|         | T1925 | -13  | 0   | S1560, S1567        |
|         | T1926 | -13  | 2   | S1569, S1570, S1567 |
|         | T1927 | -13  | 2   | S1566, S1568, S1571 |
|         | T1928 | -13  | 4   | S1570               |
|         | T1929 | -13  | 4   | S1571               |
|         | T1930 | -13  | 4   | S1568               |
|         | T1931 | -13  | 4   | S1569               |
| 11n126  | T366  | -17  | -4  | S336                |
|         | T365  | -17  | -2  | S336, S335          |
|         | T368  | -17  | 0   | S335                |
|         | T369  | -17  | 2   | S338, S337          |
|         | T370  | -17  | 4   | S338                |
| m11n126 | T1932 | 3    | -2  | S1572               |
|         | T1933 | 3    | 0   | S1572, S1573        |
|         | T1934 | 3    | 2   | S1573               |
| 11n132  | T375  | -4   | -3  | S340                |
|         | T376  | -4   | -3  | S341                |
|         | T377  | -4   | -3  | S339                |
|         | T378  | -4   | -3  | S342                |
|         | T371  | -4   | -1  | S341, S344          |
|         | T372  | -4   | -1  | S342, S343          |
|         | T373  | -4   | -1  | S339, S347          |
|         | T374  | -4   | -1  | S340, S345          |
|         | T379  | -4   | 1   | S343, S349          |
|         | T380  | -4   | 1   | S350, S347          |
|         | T381  | -4   | 1   | S352, S345          |
|         | T382  | -4   | 1   | S344, S351          |
|         | T383  | -4   | 3   | S349                |
|         | T384  | -4   | 3   | S352                |
|         | T385  | -4   | 3   | S350                |
|         | T386  | -4   | 3   | S351                |
| m11n132 | T1939 | -10  | -3  | S1578               |
|         | T1940 | -10  | -3  | S1577               |
|         | T1941 | -10  | -3  | S1579               |
|         | T1942 | -10  | -3  | S1575               |
|         | T1943 | -10  | -3  | S1576               |
|         | T1944 | -10  | -3  | S1574               |
|         | T1935 | -10  | -1  | S1578, S1582, S1576 |
|         | T1936 | -10  | -1  | S1581, S1574        |
|         | T1937 | -10  | -1  | S1575, S1579, S1583 |
|         | T1938 | -10  | -1  | S1577, S1580        |
|         | T1945 | -10  | 1   | S1587, S1582, S1584 |
|         | T1946 | -10  | 1   | S1588, S1580        |
|         | T1947 | -10  | 1   | S1589, S1585, S1583 |

| Knot    | ID    | $tb$ | $r$ | Parents                    |
|---------|-------|------|-----|----------------------------|
|         | T1948 | -10  | 1   | S1586, S1581               |
|         | T1949 | -10  | 3   | S1587                      |
|         | T1950 | -10  | 3   | S1588                      |
|         | T1951 | -10  | 3   | S1586                      |
|         | T1952 | -10  | 3   | S1585                      |
|         | T1953 | -10  | 3   | S1584                      |
|         | T1954 | -10  | 3   | S1589                      |
| 11n133  | T388  | -12  | -3  | S353                       |
|         | T387  | -12  | -1  | S354, S353                 |
|         | T389  | -12  | 1   | S354, S355                 |
|         | T390  | -12  | 3   | S355                       |
| m11n133 | T1956 | -2   | -3  | S1590                      |
|         | T1955 | -2   | -1  | S1590, S1591               |
|         | T1957 | -2   | 1   | S1591, S1592               |
|         | T1958 | -2   | 3   | S1592                      |
| 11n134  | T391  | -1   | -2  | S356                       |
|         | T392  | -1   | -2  | S357                       |
|         | T393  | -1   | 0   | S356, S359                 |
|         | T394  | -1   | 0   | S357, S358                 |
|         | T395  | -1   | 2   | S358                       |
|         | T396  | -1   | 2   | S359                       |
| m11n134 | T1961 | -13  | -4  | S1597                      |
|         | T1962 | -13  | -4  | S1598                      |
|         | T1963 | -13  | -4  | S1599                      |
|         | T1964 | -13  | -4  | S1596                      |
|         | T1965 | -13  | -4  | S1600                      |
|         | T1966 | -13  | -4  | S1595                      |
|         | T1959 | -13  | -2  | S1599, S1594, S1597, S1596 |
|         | T1960 | -13  | -2  | S1593, S1598, S1595, S1600 |
|         | T1967 | -13  | 0   | S1594, S1602               |
|         | T1968 | -13  | 0   | S1593, S1601               |
|         | T1969 | -13  | 2   | S1605, S1602, S1606, S1608 |
|         | T1970 | -13  | 2   | S1601, S1607, S1603, S1604 |
|         | T1971 | -13  | 4   | S1606                      |
|         | T1972 | -13  | 4   | S1605                      |
|         | T1973 | -13  | 4   | S1604                      |
|         | T1974 | -13  | 4   | S1608                      |
|         | T1975 | -13  | 4   | S1603                      |
|         | T1976 | -13  | 4   | S1607                      |
| 11n135  | T397  | -13  | -2  | S360                       |
|         | T398  | -13  | 0   | S360, S363                 |
|         | T399  | -13  | 2   | S363                       |
| m11n135 | T1977 | -1   | -2  | S1609                      |
|         | T1978 | -1   | 0   | S1609, S1610               |
|         | T1979 | -1   | 2   | S1610                      |
| 11n138  | T401  | -7   | -4  | S365                       |
|         | T400  | -7   | -2  | S365, S364                 |
|         | T402  | -7   | 0   | S366, S364                 |
|         | T403  | -7   | 2   | S367, S366                 |
|         | T404  | -7   | 4   | S367                       |
| m11n138 | T1980 | -7   | -2  | S1611                      |
|         | T1981 | -7   | 0   | S1612, S1611               |
|         | T1982 | -7   | 2   | S1612                      |
| 11n139  | T405  | -11  | -2  | S368                       |

| Knot    | ID    | $tb$ | $r$ | Parents          |
|---------|-------|------|-----|------------------|
|         | T406  | -11  | -2  | S369             |
|         | T407  | -11  | 0   | S368, S370       |
|         | T408  | -11  | 0   | S371, S369       |
|         | T409  | -11  | 2   | S370             |
|         | T410  | -11  | 2   | S371             |
| m11n139 | T1983 | -3   | -2  | S1613            |
|         | T1984 | -3   | -2  | S1614            |
|         | T1985 | -3   | 0   | S1614, S1615     |
|         | T1986 | -3   | 0   | S1613, S1616     |
|         | T1987 | -3   | 2   | S1615            |
|         | T1988 | -3   | 2   | S1616            |
| 11n141  | T411  | -5   | -2  | S372             |
|         | T412  | -5   | 0   | S373, S372       |
|         | T413  | -5   | 2   | S373             |
| m11n141 | T1989 | -9   | -2  | S1617            |
|         | T1990 | -9   | 0   | S1617, S1618     |
|         | T1991 | -9   | 2   | S1618            |
| 11n142  | T414  | -5   | -2  | S374             |
|         | T415  | -5   | 0   | S374, S375       |
|         | T416  | -5   | 2   | S375             |
| m11n142 | T1992 | -9   | -2  | S1619            |
|         | T1993 | -9   | 0   | S1620, S1619     |
|         | T1994 | -9   | 2   | S1620            |
| 11n143  | T418  | -9   | -4  | S377             |
|         | T417  | -9   | -2  | S376, S377       |
|         | T419  | -9   | 0   | S378, S376       |
|         | T420  | -9   | 2   | S378, S379       |
|         | T421  | -9   | 4   | S379             |
| m11n143 | T1995 | -5   | -2  | S1621            |
|         | T1996 | -5   | 0   | S1622, S1621     |
|         | T1997 | -5   | 2   | S1622            |
| 11n145  | T423  | -8   | -3  | S380             |
|         | T424  | -8   | -3  | S381             |
|         | T422  | -8   | -1  | S381, S382, S380 |
|         | T425  | -8   | 1   | S383, S382, S384 |
|         | T426  | -8   | 3   | S383             |
|         | T427  | -8   | 3   | S384             |
| m11n145 | T1999 | -6   | -3  | S1623            |
|         | T1998 | -6   | -1  | S1624, S1623     |
|         | T2000 | -6   | 1   | S1625, S1624     |
|         | T2001 | -6   | 3   | S1625            |
| 11n147  | T430  | -12  | -3  | S386             |
|         | T431  | -12  | -3  | S385             |
|         | T428  | -12  | -1  | S388, S385       |
|         | T429  | -12  | -1  | S386, S387       |
|         | T432  | -12  | 1   | S389, S387       |
|         | T433  | -12  | 1   | S388, S390       |
|         | T434  | -12  | 3   | S390             |
|         | T435  | -12  | 3   | S389             |
| m11n147 | T2004 | -2   | -3  | S1627            |
|         | T2005 | -2   | -3  | S1626            |
|         | T2002 | -2   | -1  | S1628, S1627     |
|         | T2003 | -2   | -1  | S1626, S1629     |
|         | T2006 | -2   | 1   | S1630, S1628     |

| Knot    | ID    | $tb$ | $r$ | Parents  |
|---------|-------|------|-----|--|
|         | T2007 | -2   | 1   | S1629, S1631   |
|         | T2008 | -2   | 3   | S1631  |
|         | T2009 | -2   | 3   | S1630  |
| 11n164  | T436  | -13  | -2  | S391   |
|         | T437  | -13  | 0   | S392, S391   |
|         | T438  | -13  | 2   | S392   |
| m11n164 | T2010 | -1   | -2  | S1632  |
|         | T2011 | -1   | -2  | S1634  |
|         | T2012 | -1   | -2  | S1633  |
|         | T2013 | -1   | 0   | S1634, S1637, S1635, S1633, S1636, S1632                   |
|         | T2014 | -1   | 2   | S1636  |
|         | T2015 | -1   | 2   | S1637  |
|         | T2016 | -1   | 2   | S1635  |
| 11n173  | T440  | -12  | -3  | S393   |
|         | T439  | -12  | -1  | S394, S393   |
|         | T441  | -12  | 1   | S394, S395   |
|         | T442  | -12  | 3   | S395   |
| m11n173 | T2018 | -2   | -3  | S1638  |
|         | T2017 | -2   | -1  | S1638, S1639   |
|         | T2019 | -2   | 1   | S1640, S1639   |
|         | T2020 | -2   | 3   | S1640  |
| 11n183  | T444  | -17  | -4  | S397   |
|         | T443  | -17  | -2  | S397, S396   |
|         | T445  | -17  | 0   | S398, S396   |
|         | T446  | -17  | 2   | S399, S398   |
|         | T447  | -17  | 4   | S399   |
| m11n183 | T2021 | 3    | -2  | S1641  |
|         | T2022 | 3    | 0   | S1641, S1642   |
|         | T2023 | 3    | 2   | S1642  |
| 12n25   | T586  | -7   | -2  | S512   |
|         | T587  | -7   | -2  | S509   |
|         | T588  | -7   | -2  | S510   |
|         | T589  | -7   | -2  | S511   |
|         | T590  | -7   | -2  | S513   |
|         | T591  | -7   | 0   | S509, S512, S516, S514, S518, S511, S513, S517, S515, S510 |
|         | T592  | -7   | 2   | S514   |
|         | T593  | -7   | 2   | S518   |
|         | T594  | -7   | 2   | S517   |
|         | T595  | -7   | 2   | S516   |
|         | T596  | -7   | 2   | S515   |
| m12n25  | T2187 | -7   | -2  | S1782  |
|         | T2190 | -7   | 0   | S1785, S1783   |
|         | T2191 | -7   | 2   | S1785, S1784   |
| 12n121  | T576  | -2   | -3  | S499   |
|         | T574  | -2   | -1  | S503   |
|         | T575  | -2   | -1  | S501, S499, S500   |
|         | T577  | -2   | 1   | S501   |
|         | T578  | -2   | 1   | S503, S500, S504   |
|         | T579  | -2   | 3   | S504   |
| m12n121 | T2179 | -12  | -3  | S1775  |
|         | T2178 | -12  | -1  | S1775, S1776   |
|         | T2180 | -12  | 1   | S1777, S1776   |
|         | T2181 | -12  | 3   | S1777  |
| 12n243  | T581  | -19  | -4  | S506   |



| Knot    | ID    | $tb$ | $r$ | Parents                    |
|---------|-------|------|-----|----------------------------|
|         | T580  | -19  | -2  | S506, S505                 |
|         | T583  | -19  | 0   | S507                       |
|         | T584  | -19  | 2   | S508, S507                 |
|         | T585  | -19  | 4   | S508                       |
| m12n243 | T2182 | 5    | -2  | S1779                      |
|         | T2183 | 5    | -2  | S1778                      |
|         | T2184 | 5    | 0   | S1779, S1778, S1780, S1781 |
|         | T2185 | 5    | 2   | S1780                      |
|         | T2186 | 5    | 2   | S1781                      |
| 12n253  | T599  | -2   | -3  | S519                       |
|         | T600  | -2   | -3  | S520                       |
|         | T597  | -2   | -1  | S522, S519                 |
|         | T598  | -2   | -1  | S520, S521                 |
|         | T601  | -2   | 1   | S523, S522                 |
|         | T602  | -2   | 1   | S524, S521                 |
|         | T603  | -2   | 3   | S523                       |
|         | T604  | -2   | 3   | S524                       |
| m12n253 | T2194 | -12  | -3  | S1787                      |
|         | T2195 | -12  | -3  | S1786                      |
|         | T2192 | -12  | -1  | S1788, S1786               |
|         | T2193 | -12  | -1  | S1787, S1789               |
|         | T2196 | -12  | 1   | S1788, S1791               |
|         | T2197 | -12  | 1   | S1790, S1789               |
|         | T2198 | -12  | 3   | S1790                      |
|         | T2199 | -12  | 3   | S1791                      |
| 12n254  | T607  | -15  | -4  | S527                       |
|         | T608  | -15  | -4  | S528                       |
|         | T605  | -15  | -2  | S525, S527                 |
|         | T606  | -15  | -2  | S528, S526                 |
|         | T609  | -15  | 0   | S530, S526                 |
|         | T610  | -15  | 0   | S529, S525                 |
|         | T611  | -15  | 2   | S532, S529                 |
|         | T612  | -15  | 2   | S531, S530                 |
|         | T613  | -15  | 4   | S532                       |
|         | T614  | -15  | 4   | S531                       |
| m12n254 | T2200 | 1    | -2  | S1793                      |
|         | T2201 | 1    | -2  | S1792                      |
|         | T2202 | 1    | 0   | S1793, S1794               |
|         | T2203 | 1    | 0   | S1795, S1792               |
|         | T2204 | 1    | 2   | S1795                      |
|         | T2205 | 1    | 2   | S1794                      |
| 12n280  | T615  | -11  | -2  | S533                       |
|         | T616  | -11  | 0   | S533, S534                 |
|         | T617  | -11  | 2   | S534                       |
| m12n280 | T2206 | -3   | -2  | S1796                      |
|         | T2207 | -3   | 0   | S1796, S1797               |
|         | T2208 | -3   | 2   | S1797                      |
| 12n285  | T618  | -11  | -2  | S535                       |
|         | T619  | -11  | 0   | S535, S536                 |
|         | T620  | -11  | 2   | S536                       |
| m12n285 | T2209 | -3   | -2  | S1799                      |
|         | T2210 | -3   | -2  | S1798                      |
|         | T2211 | -3   | 0   | S1801, S1799               |
|         | T2212 | -3   | 0   | S1800, S1798               |

| Knot    | ID    | $tb$ | $r$ | Parents                |
|---------|-------|------|-----|------------------------|
|         | T2213 | -3   | 2   | S1801                  |
|         | T2214 | -3   | 2   | S1800                  |
| 12n293  | T622  | -15  | -4  | S539                   |
|         | T623  | -15  | -4  | S538                   |
|         | T621  | -15  | -2  | S538, S539, S537       |
|         | T624  | -15  | 0   | S537, S540             |
|         | T625  | -15  | 2   | S541, S540, S542       |
|         | T626  | -15  | 4   | S542                   |
|         | T627  | -15  | 4   | S541                   |
| m12n293 | T2215 | 1    | -2  | S1802                  |
|         | T2216 | 1    | 0   | S1803, S1802           |
|         | T2217 | 1    | 2   | S1803                  |
| 12n309  | T629  | -8   | -3  | S543                   |
|         | T628  | -8   | -1  | S543, S544             |
|         | T630  | -8   | 1   | S545, S544             |
|         | T631  | -8   | 3   | S545                   |
| m12n309 | T2219 | -6   | -3  | S1804                  |
|         | T2218 | -6   | -1  | S1805, S1804           |
|         | T2220 | -6   | 1   | S1805, S1806           |
|         | T2221 | -6   | 3   | S1806                  |
| 12n318  | T634  | -4   | -3  | S547                   |
|         | T635  | -4   | -3  | S546                   |
|         | T632  | -4   | -1  | S549, S546             |
|         | T633  | -4   | -1  | S547, S548             |
|         | T636  | -4   | 1   | S549, S550             |
|         | T637  | -4   | 1   | S548, S551             |
|         | T638  | -4   | 3   | S551                   |
|         | T639  | -4   | 3   | S550                   |
| m12n318 | T2224 | -10  | -3  | S1808                  |
|         | T2225 | -10  | -3  | S1807                  |
|         | T2222 | -10  | -1  | S1809, S1807           |
|         | T2223 | -10  | -1  | S1810, S1808           |
|         | T2226 | -10  | 1   | S1812, S1809           |
|         | T2227 | -10  | 1   | S1811, S1810           |
|         | T2228 | -10  | 3   | S1811                  |
|         | T2229 | -10  | 3   | S1812                  |
| 12n321  | T641  | -15  | -4  | S553                   |
|         | T642  | -15  | -4  | S554                   |
|         | T640  | -15  | -2  | S554, S553, S552       |
|         | T643  | -15  | 0   | S555, S552             |
|         | T644  | -15  | 2   | S557, S555, S556       |
|         | T645  | -15  | 4   | S556                   |
|         | T646  | -15  | 4   | S557                   |
| m12n321 | T2230 | 1    | -2  | S1813                  |
|         | T2231 | 1    | 0   | S1813, S1814           |
|         | T2232 | 1    | 2   | S1814                  |
| 12n323  | T649  | -6   | -3  | S562                   |
|         | T650  | -6   | -3  | S561                   |
|         | T651  | -6   | -3  | S563                   |
|         | T652  | -6   | -3  | S559                   |
|         | T653  | -6   | -3  | S560                   |
|         | T654  | -6   | -3  | S558                   |
|         | T647  | -6   | -1  | S565, S560, S559, S558 |
|         | T648  | -6   | -1  | S564, S562, S563, S561 |

| Knot    | ID    | $tb$ | $r$ | Parents                |
|---------|-------|------|-----|------------------------|
|         | T655  | -6   | 1   | S568, S566, S571, S564 |
|         | T656  | -6   | 1   | S567, S570, S565, S569 |
|         | T657  | -6   | 3   | S571                   |
|         | T658  | -6   | 3   | S566                   |
|         | T659  | -6   | 3   | S570                   |
|         | T660  | -6   | 3   | S567                   |
|         | T661  | -6   | 3   | S568                   |
|         | T662  | -6   | 3   | S569                   |
| m12n323 | T2235 | -8   | -3  | S1815                  |
|         | T2236 | -8   | -3  | S1816                  |
|         | T2233 | -8   | -1  | S1818, S1816           |
|         | T2234 | -8   | -1  | S1815, S1817           |
|         | T2237 | -8   | 1   | S1819, S1817           |
|         | T2238 | -8   | 1   | S1818, S1820           |
|         | T2239 | -8   | 3   | S1820                  |
|         | T2240 | -8   | 3   | S1819                  |
| 12n328  | T664  | -19  | -4  | S573                   |
|         | T663  | -19  | -2  | S573, S572             |
|         | T665  | -19  | 0   | S572, S574             |
|         | T666  | -19  | 2   | S575, S574             |
|         | T667  | -19  | 4   | S575                   |
| m12n328 | T2241 | 5    | -2  | S1821                  |
|         | T2242 | 5    | 0   | S1821, S1822           |
|         | T2243 | 5    | 2   | S1822                  |
| 12n340  | T669  | -11  | -4  | S579                   |
|         | T670  | -11  | -4  | S577                   |
|         | T671  | -11  | -4  | S578                   |
|         | T668  | -11  | -2  | S576, S579, S578, S577 |
|         | T672  | -11  | 0   | S576, S580             |
|         | T673  | -11  | 2   | S583, S581, S580, S582 |
|         | T674  | -11  | 4   | S583                   |
|         | T675  | -11  | 4   | S582                   |
|         | T676  | -11  | 4   | S581                   |
| m12n340 | T2244 | -3   | -2  | S1823                  |
|         | T2245 | -3   | -2  | S1824                  |
|         | T2246 | -3   | 0   | S1824, S1826           |
|         | T2247 | -3   | 0   | S1823, S1825           |
|         | T2248 | -3   | 2   | S1826                  |
|         | T2249 | -3   | 2   | S1825                  |
| 12n356  | T677  | -7   | -2  | S585                   |
|         | T678  | -7   | -2  | S584                   |
|         | T679  | -7   | 0   | S584, S587             |
|         | T680  | -7   | 0   | S586, S585             |
|         | T681  | -7   | 2   | S587                   |
|         | T682  | -7   | 2   | S586                   |
| 12n358  | T683  | -3   | -2  | S589                   |
|         | T685  | -3   | -2  | S592                   |
|         | T686  | -3   | -2  | S590                   |
|         | T687  | -3   | -2  | S591                   |
|         | T688  | -3   | 0   | S590, S595, S598, S589 |
|         | T689  | -3   | 0   | S597, S592, S594, S591 |
|         | T690  | -3   | 2   | S597                   |
|         | T691  | -3   | 2   | S598                   |
|         | T692  | -3   | 2   | S594                   |

| Knot    | ID    | $tb$ | $r$ | Parents                    |
|---------|-------|------|-----|----------------------------|
|         | T695  | -3   | 2   | S595                       |
| m12n358 | T2254 | -11  | -4  | S1832                      |
|         | T2255 | -11  | -4  | S1831                      |
|         | T2250 | -11  | -2  | S1827                      |
|         | T2251 | -11  | -2  | S1831, S1828               |
|         | T2252 | -11  | -2  | S1829                      |
|         | T2253 | -11  | -2  | S1830, S1832               |
|         | T2258 | -11  | 0   | S1834, S1827               |
|         | T2259 | -11  | 0   | S1828, S1833               |
|         | T2260 | -11  | 2   | S1833                      |
|         | T2261 | -11  | 2   | S1834, S1837               |
|         | T2262 | -11  | 2   | S1838, S1836               |
|         | T2263 | -11  | 4   | S1837                      |
|         | T2264 | -11  | 4   | S1838                      |
| 12n370  | T697  | -11  | -4  | S601                       |
|         | T698  | -11  | -4  | S602                       |
|         | T696  | -11  | -2  | S600, S601, S602           |
|         | T699  | -11  | 0   | S600, S603                 |
|         | T700  | -11  | 2   | S603, S605, S604           |
|         | T701  | -11  | 4   | S605                       |
|         | T702  | -11  | 4   | S604                       |
| m12n370 | T2265 | -3   | -2  | S1839                      |
|         | T2266 | -3   | -2  | S1840                      |
|         | T2267 | -3   | 0   | S1841, S1840               |
|         | T2268 | -3   | 0   | S1839, S1842               |
|         | T2269 | -3   | 2   | S1841                      |
|         | T2270 | -3   | 2   | S1842                      |
| 12n371  | T704  | -10  | -3  | S606                       |
|         | T703  | -10  | -1  | S607, S606                 |
|         | T705  | -10  | 1   | S607, S608                 |
|         | T706  | -10  | 3   | S608                       |
| m12n371 | T2272 | -4   | -3  | S1844                      |
|         | T2271 | -4   | -1  | S1844, S1845               |
|         | T2273 | -4   | 1   | S1848, S1845               |
|         | T2274 | -4   | 3   | S1848                      |
| 12n375  | T708  | -15  | -4  | S610                       |
|         | T707  | -15  | -2  | S610, S609                 |
|         | T709  | -15  | 0   | S611, S609                 |
|         | T710  | -15  | 2   | S612, S611                 |
|         | T711  | -15  | 4   | S612                       |
| m12n375 | T2275 | 1    | -2  | S1850                      |
|         | T2276 | 1    | -2  | S1849                      |
|         | T2277 | 1    | 0   | S1849, S1850, S1852, S1851 |
|         | T2278 | 1    | 2   | S1852                      |
|         | T2279 | 1    | 2   | S1851                      |
| 12n403  | T712  | -3   | -2  | S613                       |
|         | T713  | -3   | -2  | S614                       |
|         | T714  | -3   | 0   | S615, S613, S614, S616     |
|         | T715  | -3   | 2   | S615                       |
|         | T716  | -3   | 2   | S616                       |
| m12n403 | T2280 | -11  | -2  | S1853                      |
|         | T2282 | -11  | 0   | S1853, S1856               |
|         | T2285 | -11  | 2   | S1855                      |
| 12n407  | T719  | -15  | -4  | S619                       |

| Knot    | ID    | $tb$ | $r$ | Parents                           |
|---------|-------|------|-----|-----------------------------------|
|         | T720  | -15  | -4  | S620                              |
|         | T717  | -15  | -2  | S618, S620                        |
|         | T718  | -15  | -2  | S617, S619                        |
|         | T721  | -15  | 0   | S618, S622                        |
|         | T722  | -15  | 0   | S617, S621                        |
|         | T723  | -15  | 2   | S623, S621                        |
|         | T724  | -15  | 2   | S624, S622                        |
|         | T725  | -15  | 4   | S624                              |
|         | T726  | -15  | 4   | S623                              |
| m12n407 | T2286 | 1    | -2  | S1860                             |
|         | T2287 | 1    | -2  | S1859                             |
|         | T2289 | 1    | -2  | S1858                             |
|         | T2290 | 1    | -2  | S1861                             |
|         | T2291 | 1    | -2  | S1857                             |
|         | T2292 | 1    | 0   | S1861, S1866, S1857, S1865, S1867 |
|         | T2293 | 1    | 0   | S1859, S1864, S1860, S1858, S1868 |
|         | T2294 | 1    | 2   | S1865                             |
|         | T2295 | 1    | 2   | S1868                             |
|         | T2296 | 1    | 2   | S1866                             |
|         | T2297 | 1    | 2   | S1867                             |
|         | T2298 | 1    | 2   | S1864                             |
| 12n426  | T728  | -19  | -4  | S626                              |
|         | T727  | -19  | -2  | S626, S625                        |
|         | T729  | -19  | 0   | S627, S625                        |
|         | T730  | -19  | 2   | S628, S627                        |
|         | T731  | -19  | 4   | S628                              |
| m12n426 | T2299 | 5    | -2  | S1869                             |
|         | T2300 | 5    | 0   | S1869, S1870                      |
|         | T2301 | 5    | 2   | S1870                             |
| 12n438  | T733  | -11  | -2  | S629                              |
|         | T735  | -11  | 0   | S631, S629                        |
|         | T737  | -11  | 2   | S632                              |
| m12n438 | T2302 | -3   | -2  | S1872                             |
|         | T2303 | -3   | -2  | S1871                             |
|         | T2304 | -3   | 0   | S1873, S1874, S1871, S1872        |
|         | T2305 | -3   | 2   | S1873                             |
|         | T2306 | -3   | 2   | S1874                             |
| 12n439  | T739  | -4   | -3  | S633                              |
|         | T738  | -4   | -1  | S634, S633                        |
|         | T740  | -4   | 1   | S634, S635                        |
|         | T741  | -4   | 3   | S635                              |
| m12n439 | T2308 | -10  | -3  | S1875                             |
|         | T2307 | -10  | -1  | S1876, S1875                      |
|         | T2309 | -10  | 1   | S1876, S1877                      |
|         | T2310 | -10  | 3   | S1877                             |
| 12n443  | T743  | -6   | -3  | S636                              |
|         | T744  | -6   | -3  | S637                              |
|         | T742  | -6   | -1  | S636, S637, S638                  |
|         | T745  | -6   | 1   | S640, S639, S638                  |
|         | T746  | -6   | 3   | S639                              |
|         | T747  | -6   | 3   | S640                              |
| m12n443 | T2312 | -8   | -3  | S1878                             |
|         | T2311 | -8   | -1  | S1878, S1879                      |
|         | T2313 | -8   | 1   | S1879, S1880                      |

| Knot    | ID    | $tb$ | $r$ | Parents                    |
|---------|-------|------|-----|----------------------------|
|         | T2314 | -8   | 3   | S1880                      |
| 12n451  | T749  | -2   | -3  | S641                       |
|         | T750  | -2   | -3  | S642                       |
|         | T748  | -2   | -1  | S642, S643, S641           |
|         | T751  | -2   | 1   | S644, S643, S645           |
|         | T752  | -2   | 3   | S644                       |
|         | T753  | -2   | 3   | S645                       |
| m12n451 | T2316 | -12  | -3  | S1881                      |
|         | T2315 | -12  | -1  | S1882, S1881               |
|         | T2317 | -12  | 1   | S1882, S1883               |
|         | T2318 | -12  | 3   | S1883                      |
| 12n452  | T755  | -11  | -4  | S647                       |
|         | T754  | -11  | -2  | S646, S647                 |
|         | T756  | -11  | 0   | S646, S648                 |
|         | T757  | -11  | 2   | S649, S648                 |
|         | T758  | -11  | 4   | S649                       |
| m12n452 | T2319 | -3   | -2  | S1884                      |
|         | T2320 | -3   | -2  | S1885                      |
|         | T2321 | -3   | 0   | S1886, S1887, S1884, S1885 |
|         | T2322 | -3   | 2   | S1886                      |
|         | T2323 | -3   | 2   | S1887                      |
| 12n462  | T759  | -7   | -2  | S650                       |
|         | T760  | -7   | -2  | S651                       |
|         | T761  | -7   | 0   | S650, S652                 |
|         | T762  | -7   | 0   | S653, S651                 |
|         | T763  | -7   | 2   | S653                       |
|         | T764  | -7   | 2   | S652                       |
| 12n475  | T766  | -8   | -3  | S654                       |
|         | T765  | -8   | -1  | S655, S654                 |
|         | T767  | -8   | 1   | S656, S655                 |
|         | T768  | -8   | 3   | S656                       |
| m12n475 | T2325 | -6   | -3  | S1888                      |
|         | T2324 | -6   | -1  | S1888, S1889               |
|         | T2326 | -6   | 1   | S1890, S1889               |
|         | T2327 | -6   | 3   | S1890                      |
| 12n487  | T770  | -13  | -4  | S659                       |
|         | T771  | -13  | -4  | S658                       |
|         | T769  | -13  | -2  | S657, S659, S658           |
|         | T772  | -13  | 0   | S660, S657                 |
|         | T773  | -13  | 2   | S661, S660, S662           |
|         | T774  | -13  | 4   | S662                       |
|         | T775  | -13  | 4   | S661                       |
| m12n487 | T2328 | -1   | -2  | S1892                      |
|         | T2329 | -1   | -2  | S1891                      |
|         | T2330 | -1   | 0   | S1894, S1891               |
|         | T2331 | -1   | 0   | S1892, S1893               |
|         | T2332 | -1   | 2   | S1894                      |
|         | T2333 | -1   | 2   | S1893                      |
| 12n488  | T777  | -8   | -3  | S663                       |
|         | T776  | -8   | -1  | S664, S663                 |
|         | T778  | -8   | 1   | S665, S664                 |
|         | T779  | -8   | 3   | S665                       |
| m12n488 | T2335 | -6   | -3  | S1895                      |
|         | T2334 | -6   | -1  | S1895, S1896               |

| Knot    | ID    | $tb$ | $r$ | Parents                    |
|---------|-------|------|-----|----------------------------|
|         | T2336 | -6   | 1   | S1896, S1897               |
|         | T2337 | -6   | 3   | S1897                      |
| 12n502  | T781  | -19  | -4  | S667                       |
|         | T780  | -19  | -2  | S667, S666                 |
|         | T782  | -19  | 0   | S666                       |
|         | T784  | -19  | 2   | S668, S669                 |
|         | T785  | -19  | 4   | S669                       |
| m12n502 | T2338 | 5    | -2  | S1899                      |
|         | T2339 | 5    | -2  | S1898                      |
|         | T2340 | 5    | 0   | S1899, S1898, S1900, S1901 |
|         | T2341 | 5    | 2   | S1901                      |
|         | T2342 | 5    | 2   | S1900                      |
| 12n603  | T787  | -15  | -4  | S671                       |
|         | T786  | -15  | -2  | S671, S670                 |
|         | T788  | -15  | 0   | S672                       |
|         | T790  | -15  | 2   | S673, S672                 |
|         | T791  | -15  | 4   | S673                       |
| m12n603 | T2343 | 1    | -2  | S1902                      |
|         | T2344 | 1    | -2  | S1903                      |
|         | T2345 | 1    | 0   | S1904, S1903, S1905, S1902 |
|         | T2346 | 1    | 2   | S1904                      |
|         | T2347 | 1    | 2   | S1905                      |
| 12n706  | T792  | -7   | -2  | S674                       |
|         | T793  | -7   | 0   | S674, S675                 |
|         | T794  | -7   | 2   | S675                       |
| 12n725  | T796  | -21  | -4  | S677                       |
|         | T795  | -21  | -2  | S677, S676                 |
|         | T797  | -21  | 0   | S676, S678                 |
|         | T798  | -21  | 2   | S679, S678                 |
|         | T799  | -21  | 4   | S679                       |
| m12n725 | T2348 | 7    | -2  | S1906                      |
|         | T2349 | 7    | 0   | S1906, S1907               |
|         | T2350 | 7    | 2   | S1907                      |
| 12n729  | T802  | -15  | -4  | S683                       |
|         | T803  | -15  | -4  | S682                       |
|         | T800  | -15  | -2  | S682, S681                 |
|         | T801  | -15  | -2  | S683, S680                 |
|         | T804  | -15  | 0   | S685, S680                 |
|         | T805  | -15  | 0   | S684, S681                 |
|         | T806  | -15  | 2   | S685, S686                 |
|         | T807  | -15  | 2   | S684, S687                 |
|         | T808  | -15  | 4   | S687                       |
| m12n729 | T809  | -15  | 4   | S686                       |
|         | T2351 | 1    | -2  | S1908                      |
|         | T2352 | 1    | -2  | S1909                      |
|         | T2353 | 1    | 0   | S1909, S1910               |
|         | T2354 | 1    | 0   | S1911, S1908               |
|         | T2355 | 1    | 2   | S1910                      |
| 12n730  | T2356 | 1    | 2   | S1911                      |
|         | T812  | -12  | -3  | S689                       |
|         | T813  | -12  | -3  | S688                       |
|         | T810  | -12  | -1  | S690, S689                 |
|         | T811  | -12  | -1  | S691, S688                 |
|         | T814  | -12  | 1   | S690, S693                 |

| Knot    | ID    | $tb$ | $r$ | Parents      |
|---------|-------|------|-----|--------------|
|         | T815  | -12  | 1   | S692, S691   |
|         | T816  | -12  | 3   | S692         |
|         | T817  | -12  | 3   | S693         |
| m12n730 | T2359 | -2   | -3  | S1913        |
|         | T2360 | -2   | -3  | S1912        |
|         | T2357 | -2   | -1  | S1914, S1912 |
|         | T2358 | -2   | -1  | S1913, S1915 |
|         | T2361 | -2   | 1   | S1917, S1915 |
|         | T2362 | -2   | 1   | S1914, S1916 |
|         | T2363 | -2   | 3   | S1916        |
|         | T2364 | -2   | 3   | S1917        |
| 12n749  | T819  | -14  | -3  | S694         |
|         | T818  | -14  | -1  | S695, S694   |
|         | T820  | -14  | 1   | S695, S696   |
|         | T821  | -14  | 3   | S696         |
| m12n749 | T2366 | 0    | -3  | S1918        |
|         | T2365 | 0    | -1  | S1918, S1919 |
|         | T2367 | 0    | 1   | S1919, S1920 |
|         | T2368 | 0    | 3   | S1920        |
| 12n750  | T823  | -17  | -4  | S698         |
|         | T822  | -17  | -2  | S698, S697   |
|         | T824  | -17  | 0   | S697, S699   |
|         | T825  | -17  | 2   | S700, S699   |
|         | T826  | -17  | 4   | S700         |
| m12n750 | T2369 | 3    | -2  | S1921        |
|         | T2370 | 3    | 0   | S1921, S1922 |
|         | T2371 | 3    | 2   | S1922        |
| 12n768  | T827  | -3   | -2  | S702         |
|         | T828  | -3   | -2  | S701         |
|         | T829  | -3   | 0   | S704, S702   |
|         | T830  | -3   | 0   | S703, S701   |
|         | T831  | -3   | 2   | S703         |
| m12n768 | T832  | -3   | 2   | S704         |
|         | T2374 | -11  | -4  | S1926        |
|         | T2375 | -11  | -4  | S1925        |
|         | T2372 | -11  | -2  | S1925, S1924 |
|         | T2373 | -11  | -2  | S1926, S1923 |
|         | T2376 | -11  | 0   | S1928, S1923 |
|         | T2377 | -11  | 0   | S1927, S1924 |
|         | T2378 | -11  | 2   | S1929, S1927 |
|         | T2379 | -11  | 2   | S1928, S1930 |
| 12n801  | T2380 | -11  | 4   | S1930        |
|         | T2381 | -11  | 4   | S1929        |
|         | T834  | -15  | -4  | S706         |
|         | T833  | -15  | -2  | S706, S705   |
|         | T835  | -15  | 0   | S707, S705   |
|         | T836  | -15  | 2   | S708, S707   |
|         | T837  | -15  | 4   | S708         |
| m12n801 | T2382 | 1    | -2  | S1931        |
|         | T2383 | 1    | 0   | S1931, S1932 |
|         | T2384 | 1    | 2   | S1932        |
| 12n807  | T839  | -15  | -4  | S710         |
|         | T838  | -15  | -2  | S709, S710   |
|         | T840  | -15  | 0   | S709, S711   |



| Knot    | ID    | $tb$ | $r$ | Parents          |
|---------|-------|------|-----|------------------|
|         | T841  | -15  | 2   | S712, S711       |
|         | T842  | -15  | 4   | S712             |
| m12n807 | T2385 | 1    | -2  | S1933            |
|         | T2386 | 1    | 0   | S1934, S1933     |
|         | T2387 | 1    | 2   | S1934            |
| 12n809  | T843  | -11  | -2  | S713             |
|         | T844  | -11  | 0   | S713, S714       |
|         | T845  | -11  | 2   | S714             |
| m12n809 | T2388 | -3   | -2  | S1935            |
|         | T2389 | -3   | 0   | S1935, S1936     |
|         | T2390 | -3   | 2   | S1936            |
| 12n811  | T847  | -12  | -3  | S715             |
|         | T846  | -12  | -1  | S716, S715       |
|         | T848  | -12  | 1   | S717, S716       |
|         | T849  | -12  | 3   | S717             |
| m12n811 | T2392 | -2   | -3  | S1937            |
|         | T2391 | -2   | -1  | S1938, S1937     |
|         | T2393 | -2   | 1   | S1938, S1939     |
|         | T2394 | -2   | 3   | S1939            |
| 12n830  | T851  | -17  | -4  | S719             |
|         | T852  | -17  | -4  | S720             |
|         | T850  | -17  | -2  | S718, S720, S719 |
|         | T853  | -17  | 0   | S718, S721       |
|         | T854  | -17  | 2   | S723, S722, S721 |
|         | T855  | -17  | 4   | S723             |
|         | T856  | -17  | 4   | S722             |
| m12n830 | T2395 | 3    | -2  | S1940            |
|         | T2396 | 3    | 0   | S1940, S1941     |
|         | T2397 | 3    | 2   | S1941            |
| 12n835  | T858  | -6   | -3  | S724             |
|         | T857  | -6   | -1  | S724, S725       |
|         | T859  | -6   | 1   | S726, S725       |
|         | T860  | -6   | 3   | S726             |
| m12n835 | T2399 | -8   | -3  | S1942            |
|         | T2398 | -8   | -1  | S1942, S1943     |
|         | T2400 | -8   | 1   | S1943, S1944     |
|         | T2401 | -8   | 3   | S1944            |
| 12n838  | T861  | -11  | -2  | S727             |
|         | T862  | -11  | 0   | S728, S727       |
|         | T863  | -11  | 2   | S728             |
| m12n838 | T2402 | -3   | -2  | S1945            |
|         | T2405 | -3   | 0   | S1945, S1948     |
|         | T2406 | -3   | 2   | S1947            |
| 12n873  | T864  | -7   | -2  | S729             |
|         | T865  | -7   | -2  | S730             |
|         | T866  | -7   | 0   | S729, S732       |
|         | T867  | -7   | 0   | S730, S731       |
|         | T868  | -7   | 2   | S732             |
|         | T869  | -7   | 2   | S731             |
| 13n192  | T956  | -1   | -2  | S801             |
|         | T957  | -1   | 0   | S802, S801       |
|         | T958  | -1   | 2   | S802             |
| m13n192 | T2476 | -13  | -2  | S1997            |
|         | T2477 | -13  | 0   | S1998, S1997     |

| Knot    | ID    | $tb$ | $r$ | Parents          |
|---------|-------|------|-----|------------------|
|         | T2478 | -13  | 2   | S1998            |
| 13n469  | T1133 | -5   | -2  | S934             |
|         | T1134 | -5   | 0   | S934, S935       |
|         | T1135 | -5   | 2   | S935             |
|         |       |      |     |                  |
| m13n469 | T2639 | -9   | -2  | S2114            |
|         | T2640 | -9   | 0   | S2117, S2114     |
|         | T2641 | -9   | 2   | S2117            |
| 13n584  | T1138 | 0    | -3  | S936             |
|         | T1139 | 0    | -3  | S937             |
|         | T1136 | 0    | -1  | S938, S937       |
|         | T1137 | 0    | -1  | S939, S936       |
|         | T1140 | 0    | 1   | S939, S940       |
|         | T1141 | 0    | 1   | S941, S938       |
|         | T1142 | 0    | 3   | S941             |
|         | T1143 | 0    | 3   | S940             |
| m13n584 | T2644 | -14  | -3  | S2118            |
|         | T2645 | -14  | -3  | S2119            |
|         | T2642 | -14  | -1  | S2121, S2119     |
|         | T2643 | -14  | -1  | S2120, S2118     |
|         | T2646 | -14  | 1   | S2121, S2122     |
|         | T2647 | -14  | 1   | S2120, S2123     |
|         | T2648 | -14  | 3   | S2123            |
|         | T2649 | -14  | 3   | S2122            |
| 13n586  | T1145 | -6   | -3  | S942             |
|         | T1144 | -6   | -1  | S943, S942       |
|         | T1146 | -6   | 1   | S944, S943       |
|         | T1147 | -6   | 3   | S944             |
| m13n586 | T2651 | -8   | -3  | S2124            |
|         | T2650 | -8   | -1  | S2125, S2124     |
|         | T2652 | -8   | 1   | S2126, S2125     |
|         | T2653 | -8   | 3   | S2126            |
| 13n588  | T1150 | -17  | -4  | S948             |
|         | T1151 | -17  | -4  | S950             |
|         | T1152 | -17  | -4  | S949             |
|         | T1153 | -17  | -4  | S947             |
|         | T1148 | -17  | -2  | S950, S946, S947 |
|         | T1149 | -17  | -2  | S945, S948, S949 |
|         | T1154 | -17  | 0   | S945, S951       |
|         | T1155 | -17  | 0   | S946, S952       |
|         | T1156 | -17  | 2   | S954, S952, S956 |
|         | T1157 | -17  | 2   | S953, S955, S951 |
|         | T1158 | -17  | 4   | S953             |
|         | T1159 | -17  | 4   | S956             |
|         | T1160 | -17  | 4   | S955             |
|         | T1161 | -17  | 4   | S954             |
| m13n588 | T2654 | 3    | -2  | S2127            |
|         | T2655 | 3    | -2  | S2128            |
|         | T2656 | 3    | 0   | S2128, S2130     |
|         | T2657 | 3    | 0   | S2127, S2129     |
|         | T2658 | 3    | 2   | S2129            |
|         | T2659 | 3    | 2   | S2130            |
| 13n592  | T1164 | -4   | -3  | S957             |
|         | T1165 | -4   | -3  | S958             |
|         | T1162 | -4   | -1  | S957, S960       |

| Knot     | ID    | $tb$ | $r$ | Parents          |
|----------|-------|------|-----|------------------|
|          | T1163 | -4   | -1  | S958, S959       |
|          | T1166 | -4   | 1   | S961, S960       |
|          | T1167 | -4   | 1   | S959, S962       |
|          | T1168 | -4   | 3   | S962             |
|          | T1169 | -4   | 3   | S961             |
| m13n592  | T2662 | -10  | -3  | S2131            |
|          | T2663 | -10  | -3  | S2132            |
|          | T2660 | -10  | -1  | S2131, S2134     |
|          | T2661 | -10  | -1  | S2132, S2133     |
|          | T2664 | -10  | 1   | S2136, S2133     |
|          | T2665 | -10  | 1   | S2135, S2134     |
|          | T2666 | -10  | 3   | S2136            |
|          | T2667 | -10  | 3   | S2135            |
| 13n604   | T1171 | -21  | -4  | S964             |
|          | T1170 | -21  | -2  | S963, S964       |
|          | T1172 | -21  | 0   | S963, S965       |
|          | T1173 | -21  | 2   | S965, S966       |
|          | T1174 | -21  | 4   | S966             |
| m13n604  | T2668 | 7    | -2  | S2137            |
|          | T2669 | 7    | 0   | S2137, S2138     |
|          | T2670 | 7    | 2   | S2138            |
| 13n1180  | T871  | -17  | -4  | S734             |
|          | T870  | -17  | -2  | S733, S734       |
|          | T872  | -17  | 0   | S735, S733       |
|          | T873  | -17  | 2   | S736, S735       |
|          | T874  | -17  | 4   | S736             |
| m13n1180 | T2408 | 3    | -2  | S1949            |
|          | T2409 | 3    | 0   | S1949, S1950     |
|          | T2410 | 3    | 2   | S1950            |
| 13n1192  | T876  | 0    | -3  | S737             |
|          | T875  | 0    | -1  | S737, S738       |
|          | T877  | 0    | 1   | S739, S738       |
|          | T878  | 0    | 3   | S739             |
| m13n1192 | T2412 | -14  | -3  | S1951            |
|          | T2411 | -14  | -1  | S1951, S1952     |
|          | T2413 | -14  | 1   | S1953, S1952     |
|          | T2414 | -14  | 3   | S1953            |
| 13n1271  | T879  | -13  | -2  | S740             |
|          | T880  | -13  | -2  | S741             |
|          | T881  | -13  | 0   | S740, S742       |
|          | T882  | -13  | 0   | S741, S743       |
|          | T883  | -13  | 2   | S743             |
|          | T884  | -13  | 2   | S742             |
| m13n1271 | T2415 | -1   | -2  | S1954            |
|          | T2416 | -1   | -2  | S1955            |
|          | T2417 | -1   | 0   | S1955, S1956     |
|          | T2418 | -1   | 0   | S1957, S1954     |
|          | T2419 | -1   | 2   | S1956            |
|          | T2420 | -1   | 2   | S1957            |
| 13n1692  | T887  | -4   | -3  | S747             |
|          | T888  | -4   | -3  | S745             |
|          | T889  | -4   | -3  | S746             |
|          | T890  | -4   | -3  | S744             |
|          | T885  | -4   | -1  | S748, S744, S747 |

| Knot     | ID    | $tb$ | $r$ | Parents          |
|----------|-------|------|-----|------------------|
|          | T886  | -4   | -1  | S749, S745, S746 |
|          | T891  | -4   | 1   | S748, S750, S753 |
|          | T892  | -4   | 1   | S749, S751, S752 |
|          | T893  | -4   | 3   | S753             |
|          | T894  | -4   | 3   | S752             |
|          | T895  | -4   | 3   | S750             |
|          | T896  | -4   | 3   | S751             |
| m13n1692 | T2423 | -10  | -3  | S1959            |
|          | T2424 | -10  | -3  | S1958            |
|          | T2421 | -10  | -1  | S1961, S1959     |
|          | T2422 | -10  | -1  | S1960, S1958     |
|          | T2425 | -10  | 1   | S1960, S1962     |
|          | T2426 | -10  | 1   | S1961, S1963     |
|          | T2427 | -10  | 3   | S1963            |
|          | T2428 | -10  | 3   | S1962            |
| 13n1718  | T899  | -14  | -3  | S755             |
|          | T900  | -14  | -3  | S754             |
|          | T897  | -14  | -1  | S756, S754       |
|          | T898  | -14  | -1  | S755, S757       |
|          | T901  | -14  | 1   | S756, S759       |
|          | T902  | -14  | 1   | S757, S758       |
|          | T903  | -14  | 3   | S759             |
|          | T904  | -14  | 3   | S758             |
| m13n1718 | T2431 | 0    | -3  | S1964            |
|          | T2432 | 0    | -3  | S1965            |
|          | T2429 | 0    | -1  | S1964, S1966     |
|          | T2430 | 0    | -1  | S1967, S1965     |
|          | T2433 | 0    | 1   | S1969, S1966     |
|          | T2434 | 0    | 1   | S1968, S1967     |
|          | T2435 | 0    | 3   | S1968            |
|          | T2436 | 0    | 3   | S1969            |
| 13n1735  | T907  | 0    | -3  | S761             |
|          | T908  | 0    | -3  | S760             |
|          | T905  | 0    | -1  | S760, S762       |
|          | T906  | 0    | -1  | S763, S761       |
|          | T909  | 0    | 1   | S762, S765       |
|          | T910  | 0    | 1   | S763, S764       |
|          | T911  | 0    | 3   | S765             |
|          | T912  | 0    | 3   | S764             |
| m13n1735 | T2439 | -14  | -3  | S1971            |
|          | T2440 | -14  | -3  | S1970            |
|          | T2437 | -14  | -1  | S1972, S1971     |
|          | T2438 | -14  | -1  | S1973, S1970     |
|          | T2441 | -14  | 1   | S1974, S1972     |
|          | T2442 | -14  | 1   | S1973, S1975     |
|          | T2443 | -14  | 3   | S1975            |
|          | T2444 | -14  | 3   | S1974            |
| 13n1762  | T915  | -13  | -4  | S769             |
|          | T916  | -13  | -4  | S768             |
|          | T913  | -13  | -2  | S769, S766       |
|          | T914  | -13  | -2  | S768, S767       |
|          | T917  | -13  | 0   | S771, S766       |
|          | T918  | -13  | 0   | S770, S767       |
|          | T919  | -13  | 2   | S772, S771       |
|          | T920  | -13  | 2   | S770, S773       |

| Knot     | ID    | $tb$ | $r$ | Parents          |
|----------|-------|------|-----|------------------|
|          | T921  | -13  | 4   | S772             |
|          | T922  | -13  | 4   | S773             |
| m13n1762 | T2445 | -1   | -2  | S1976            |
|          | T2446 | -1   | -2  | S1977            |
|          | T2447 | -1   | 0   | S1977, S1978     |
|          | T2448 | -1   | 0   | S1979, S1976     |
|          | T2449 | -1   | 2   | S1978            |
|          | T2450 | -1   | 2   | S1979            |
| 13n1779  | T923  | -17  | -2  | S774             |
|          | T924  | -17  | 0   | S774, S775       |
|          | T925  | -17  | 2   | S775             |
| m13n1779 | T2451 | 3    | -2  | S1980            |
|          | T2452 | 3    | 0   | S1981, S1980     |
|          | T2453 | 3    | 2   | S1981            |
| 13n1836  | T927  | -6   | -3  | S776             |
|          | T926  | -6   | -1  | S776, S777       |
|          | T928  | -6   | 1   | S777, S778       |
|          | T929  | -6   | 3   | S778             |
| m13n1836 | T2455 | -8   | -3  | S1982            |
|          | T2454 | -8   | -1  | S1983, S1982     |
|          | T2456 | -8   | 1   | S1983, S1984     |
|          | T2457 | -8   | 3   | S1984            |
| 13n1864  | T930  | -7   | -2  | S780             |
|          | T931  | -7   | 0   | S780, S782       |
|          | T932  | -7   | 2   | S782             |
| m13n1864 | T2458 | -7   | -2  | S1985            |
|          | T2459 | -7   | 0   | S1985, S1986     |
|          | T2460 | -7   | 2   | S1986            |
| 13n1901  | T933  | -9   | -2  | S784             |
|          | T934  | -9   | -2  | S783             |
|          | T935  | -9   | 0   | S784, S786       |
|          | T936  | -9   | 0   | S783, S785       |
|          | T937  | -9   | 2   | S785             |
|          | T938  | -9   | 2   | S786             |
| m13n1901 | T2461 | -5   | -2  | S1987            |
|          | T2462 | -5   | -2  | S1988            |
|          | T2463 | -5   | 0   | S1990, S1988     |
|          | T2464 | -5   | 0   | S1989, S1987     |
|          | T2465 | -5   | 2   | S1989            |
|          | T2466 | -5   | 2   | S1990            |
| 13n1907  | T940  | -17  | -4  | S789             |
|          | T941  | -17  | -4  | S788             |
|          | T939  | -17  | -2  | S788, S787, S789 |
|          | T942  | -17  | 0   | S787, S790       |
|          | T943  | -17  | 2   | S792, S791, S790 |
|          | T944  | -17  | 4   | S792             |
|          | T945  | -17  | 4   | S791             |
| m13n1907 | T2467 | 3    | -2  | S1991            |
|          | T2468 | 3    | 0   | S1992, S1991     |
|          | T2469 | 3    | 2   | S1992            |
| 13n1916  | T948  | -13  | -4  | S796             |
|          | T949  | -13  | -4  | S795             |
|          | T946  | -13  | -2  | S795, S794       |
|          | T947  | -13  | -2  | S793, S796       |

| Knot     | ID    | $tb$ | $r$ | Parents             |
|----------|-------|------|-----|---------------------|
|          | T950  | -13  | 0   | S793, S798          |
|          | T951  | -13  | 0   | S797, S794          |
|          | T952  | -13  | 2   | S798, S799          |
|          | T953  | -13  | 2   | S797, S800          |
|          | T954  | -13  | 4   | S799                |
|          | T955  | -13  | 4   | S800                |
| m13n1916 | T2470 | -1   | -2  | S1993               |
|          | T2471 | -1   | -2  | S1994               |
|          | T2472 | -1   | 0   | S1993, S1996        |
|          | T2473 | -1   | 0   | S1994, S1995        |
|          | T2474 | -1   | 2   | S1996               |
|          | T2475 | -1   | 2   | S1995               |
| 13n1945  | T961  | -6   | -3  | S804                |
|          | T962  | -6   | -3  | S803                |
|          | T959  | -6   | -1  | S805, S804          |
|          | T960  | -6   | -1  | S803, S806          |
|          | T963  | -6   | 1   | S806, S807          |
|          | T964  | -6   | 1   | S805, S808          |
|          | T965  | -6   | 3   | S808                |
|          | T966  | -6   | 3   | S807                |
| m13n1945 | T2481 | -8   | -3  | S1999               |
|          | T2482 | -8   | -3  | S2001               |
|          | T2483 | -8   | -3  | S2000               |
|          | T2484 | -8   | -3  | S2002               |
|          | T2479 | -8   | -1  | S2000, S2004, S2002 |
|          | T2480 | -8   | -1  | S2001, S1999, S2003 |
|          | T2485 | -8   | 1   | S2005, S2007, S2004 |
|          | T2486 | -8   | 1   | S2003, S2008, S2006 |
|          | T2487 | -8   | 3   | S2007               |
|          | T2488 | -8   | 3   | S2008               |
|          | T2489 | -8   | 3   | S2006               |
|          | T2490 | -8   | 3   | S2005               |
| 13n2102  | T969  | -17  | -4  | S811                |
|          | T970  | -17  | -4  | S812                |
|          | T967  | -17  | -2  | S810, S811          |
|          | T968  | -17  | -2  | S809, S812          |
|          | T971  | -17  | 0   | S810, S813          |
|          | T972  | -17  | 0   | S809, S814          |
|          | T973  | -17  | 2   | S814, S816          |
|          | T974  | -17  | 2   | S813, S815          |
|          | T975  | -17  | 4   | S816                |
|          | T976  | -17  | 4   | S815                |
| m13n2102 | T2491 | 3    | -2  | S2010               |
|          | T2492 | 3    | -2  | S2009               |
|          | T2493 | 3    | 0   | S2009, S2012        |
|          | T2494 | 3    | 0   | S2011, S2010        |
|          | T2495 | 3    | 2   | S2011               |
|          | T2496 | 3    | 2   | S2012               |
| 13n2180  | T977  | -5   | -2  | S818                |
|          | T978  | -5   | 0   | S820, S818          |
|          | T979  | -5   | 2   | S820                |
| m13n2180 | T2497 | -9   | -2  | S2013               |
|          | T2498 | -9   | 0   | S2013, S2014        |
|          | T2499 | -9   | 2   | S2014               |
| 13n2303  | T982  | -4   | -3  | S822                |

| Knot     | ID    | $tb$ | $r$ | Parents      |
|----------|-------|------|-----|--------------|
|          | T983  | -4   | -3  | S821         |
|          | T980  | -4   | -1  | S824, S821   |
|          | T981  | -4   | -1  | S823, S822   |
|          | T984  | -4   | 1   | S825, S824   |
|          | T985  | -4   | 1   | S826, S823   |
|          | T986  | -4   | 3   | S825         |
|          | T987  | -4   | 3   | S826         |
| m13n2303 | T2502 | -10  | -3  | S2016        |
|          | T2503 | -10  | -3  | S2015        |
|          | T2500 | -10  | -1  | S2017, S2016 |
|          | T2501 | -10  | -1  | S2015, S2018 |
|          | T2504 | -10  | 1   | S2019, S2018 |
|          | T2505 | -10  | 1   | S2017, S2020 |
|          | T2506 | -10  | 3   | S2019        |
|          | T2507 | -10  | 3   | S2020        |
| 13n2428  | T990  | -17  | -4  | S830         |
|          | T991  | -17  | -4  | S829         |
|          | T988  | -17  | -2  | S827, S829   |
|          | T989  | -17  | -2  | S828, S830   |
|          | T992  | -17  | 0   | S832, S827   |
|          | T993  | -17  | 0   | S828, S831   |
|          | T994  | -17  | 2   | S833, S831   |
|          | T995  | -17  | 2   | S832, S834   |
|          | T996  | -17  | 4   | S834         |
|          | T997  | -17  | 4   | S833         |
| m13n2428 | T2508 | 3    | -2  | S2022        |
|          | T2509 | 3    | -2  | S2021        |
|          | T2510 | 3    | 0   | S2022, S2024 |
|          | T2511 | 3    | 0   | S2021, S2023 |
|          | T2512 | 3    | 2   | S2023        |
|          | T2513 | 3    | 2   | S2024        |
| 13n2436  | T1000 | -4   | -3  | S836         |
|          | T1001 | -4   | -3  | S835         |
|          | T998  | -4   | -1  | S835, S837   |
|          | T999  | -4   | -1  | S836, S838   |
|          | T1002 | -4   | 1   | S837, S840   |
|          | T1003 | -4   | 1   | S839, S838   |
|          | T1004 | -4   | 3   | S840         |
|          | T1005 | -4   | 3   | S839         |
| m13n2436 | T2516 | -10  | -3  | S2025        |
|          | T2517 | -10  | -3  | S2026        |
|          | T2514 | -10  | -1  | S2028, S2025 |
|          | T2515 | -10  | -1  | S2026, S2027 |
|          | T2518 | -10  | 1   | S2029, S2028 |
|          | T2519 | -10  | 1   | S2030, S2027 |
|          | T2520 | -10  | 3   | S2029        |
|          | T2521 | -10  | 3   | S2030        |
| 13n2491  | T1008 | -14  | -3  | S841         |
|          | T1009 | -14  | -3  | S842         |
|          | T1006 | -14  | -1  | S844, S842   |
|          | T1007 | -14  | -1  | S843, S841   |
|          | T1010 | -14  | 1   | S843, S845   |
|          | T1011 | -14  | 1   | S844, S846   |
|          | T1012 | -14  | 3   | S845         |

| Knot     | ID    | $tb$ | $r$ | Parents      |
|----------|-------|------|-----|--------------|
| m13n2491 | T1013 | -14  | 3   | S846         |
|          | T2524 | 0    | -3  | S2031        |
|          | T2525 | 0    | -3  | S2032        |
|          | T2522 | 0    | -1  | S2034, S2031 |
|          | T2523 | 0    | -1  | S2033, S2032 |
|          | T2526 | 0    | 1   | S2034, S2035 |
|          | T2527 | 0    | 1   | S2033, S2036 |
|          | T2528 | 0    | 3   | S2036        |
|          | T2529 | 0    | 3   | S2035        |
| 13n2492  | T1016 | -17  | -4  | S849         |
|          | T1017 | -17  | -4  | S850         |
|          | T1014 | -17  | -2  | S849, S847   |
|          | T1015 | -17  | -2  | S848, S850   |
|          | T1018 | -17  | 0   | S852, S848   |
|          | T1019 | -17  | 0   | S847, S851   |
|          | T1020 | -17  | 2   | S851, S854   |
|          | T1021 | -17  | 2   | S852, S853   |
|          | T1022 | -17  | 4   | S853         |
| m13n2492 | T1023 | -17  | 4   | S854         |
|          | T2530 | 3    | -2  | S2038        |
|          | T2531 | 3    | -2  | S2037        |
|          | T2532 | 3    | 0   | S2040, S2037 |
|          | T2533 | 3    | 0   | S2038, S2039 |
|          | T2534 | 3    | 2   | S2040        |
| 13n2527  | T2535 | 3    | 2   | S2039        |
|          | T1024 | -7   | -2  | S856         |
|          | T1025 | -7   | -2  | S855         |
|          | T1026 | -7   | 0   | S856, S858   |
|          | T1027 | -7   | 0   | S855, S857   |
|          | T1028 | -7   | 2   | S858         |
| m13n2527 | T1029 | -7   | 2   | S857         |
|          | T2536 | -7   | -2  | S2042        |
|          | T2537 | -7   | -2  | S2041        |
|          | T2538 | -7   | 0   | S2042, S2044 |
|          | T2539 | -7   | 0   | S2041, S2043 |
|          | T2540 | -7   | 2   | S2043        |
| 13n2533  | T2541 | -7   | 2   | S2044        |
|          | T1032 | -9   | -4  | S862         |
|          | T1033 | -9   | -4  | S861         |
|          | T1030 | -9   | -2  | S859, S861   |
|          | T1031 | -9   | -2  | S860, S862   |
|          | T1034 | -9   | 0   | S863, S859   |
|          | T1035 | -9   | 0   | S860, S864   |
|          | T1036 | -9   | 2   | S866, S863   |
|          | T1037 | -9   | 2   | S864, S865   |
| m13n2533 | T1038 | -9   | 4   | S865         |
|          | T1039 | -9   | 4   | S866         |
|          | T2542 | -5   | -2  | S2045        |
|          | T2543 | -5   | -2  | S2046        |
|          | T2544 | -5   | 0   | S2045, S2047 |
|          | T2545 | -5   | 0   | S2046, S2048 |
| 13n2769  | T2546 | -5   | 2   | S2047        |
|          | T2547 | -5   | 2   | S2048        |
|          | T1040 | -11  | -2  | S868         |
|          | T1041 | -11  | -2  | S867         |



| Knot     | ID    | $tb$ | $r$ | Parents             |
|----------|-------|------|-----|---------------------|
|          | T1042 | -11  | 0   | S867, S869          |
|          | T1043 | -11  | 0   | S870, S868          |
|          | T1044 | -11  | 2   | S870                |
|          | T1045 | -11  | 2   | S869                |
| m13n2769 | T2548 | -3   | -2  | S2050               |
|          | T2549 | -3   | -2  | S2049               |
|          | T2550 | -3   | 0   | S2049, S2052        |
|          | T2551 | -3   | 0   | S2051, S2050        |
|          | T2552 | -3   | 2   | S2052               |
|          | T2553 | -3   | 2   | S2051               |
| 13n2787  | T1048 | -6   | -3  | S871                |
|          | T1049 | -6   | -3  | S872                |
|          | T1046 | -6   | -1  | S872, S874          |
|          | T1047 | -6   | -1  | S873, S871          |
|          | T1050 | -6   | 1   | S876, S873          |
|          | T1051 | -6   | 1   | S875, S874          |
|          | T1052 | -6   | 3   | S876                |
|          | T1053 | -6   | 3   | S875                |
| m13n2787 | T2556 | -8   | -3  | S2053               |
|          | T2557 | -8   | -3  | S2056               |
|          | T2558 | -8   | -3  | S2055               |
|          | T2559 | -8   | -3  | S2054               |
|          | T2554 | -8   | -1  | S2057, S2053, S2055 |
|          | T2555 | -8   | -1  | S2054, S2058, S2056 |
|          | T2560 | -8   | 1   | S2058, S2062, S2060 |
|          | T2561 | -8   | 1   | S2057, S2061, S2059 |
|          | T2562 | -8   | 3   | S2059               |
|          | T2563 | -8   | 3   | S2060               |
|          | T2564 | -8   | 3   | S2061               |
|          | T2565 | -8   | 3   | S2062               |
| 13n2872  | T1054 | -11  | -2  | S877                |
|          | T1055 | -11  | 0   | S877, S878          |
|          | T1056 | -11  | 2   | S878                |
| m13n2872 | T2566 | -3   | -2  | S2063               |
|          | T2567 | -3   | 0   | S2063, S2064        |
|          | T2568 | -3   | 2   | S2064               |
| 13n3158  | T1057 | -3   | -2  | S880                |
|          | T1058 | -3   | -2  | S879                |
|          | T1059 | -3   | 0   | S882, S880          |
|          | T1060 | -3   | 0   | S881, S879          |
|          | T1061 | -3   | 2   | S881                |
|          | T1062 | -3   | 2   | S882                |
| m13n3158 | T2569 | -11  | -2  | S2066               |
|          | T2570 | -11  | -2  | S2065               |
|          | T2571 | -11  | 0   | S2065, S2068        |
|          | T2572 | -11  | 0   | S2067, S2066        |
|          | T2573 | -11  | 2   | S2067               |
|          | T2574 | -11  | 2   | S2068               |
| 13n3414  | T1063 | -5   | -2  | S884                |
|          | T1064 | -5   | -2  | S883                |
|          | T1065 | -5   | 0   | S885, S883          |
|          | T1066 | -5   | 0   | S886, S884          |
|          | T1067 | -5   | 2   | S885                |
|          | T1068 | -5   | 2   | S886                |

| Knot     | ID    | $tb$ | $r$ | Parents          |
|----------|-------|------|-----|------------------|
| m13n3414 | T2575 | -9   | -2  | S2069            |
|          | T2576 | -9   | -2  | S2070            |
|          | T2577 | -9   | 0   | S2069, S2071     |
|          | T2578 | -9   | 0   | S2072, S2070     |
|          | T2579 | -9   | 2   | S2072            |
|          | T2580 | -9   | 2   | S2071            |
| 13n3582  | T1070 | -10  | -3  | S887             |
|          | T1071 | -10  | -3  | S888             |
|          | T1069 | -10  | -1  | S888, S889, S887 |
|          | T1072 | -10  | 1   | S889, S890, S891 |
|          | T1073 | -10  | 3   | S891             |
|          | T1074 | -10  | 3   | S890             |
| m13n3582 | T2582 | -4   | -3  | S2073            |
|          | T2581 | -4   | -1  | S2074, S2073     |
|          | T2583 | -4   | 1   | S2074, S2075     |
|          | T2584 | -4   | 3   | S2075            |
| 13n3589  | T1075 | -15  | -2  | S892             |
|          | T1076 | -15  | 0   | S893, S892       |
|          | T1077 | -15  | 2   | S893             |
| m13n3589 | T2585 | 1    | -2  | S2076            |
|          | T2586 | 1    | 0   | S2076, S2077     |
|          | T2587 | 1    | 2   | S2077            |
| 13n3596  | T1078 | -13  | -2  | S894             |
|          | T1079 | -13  | 0   | S894, S895       |
|          | T1080 | -13  | 2   | S895             |
| m13n3596 | T2588 | -1   | -2  | S2078            |
|          | T2589 | -1   | 0   | S2078, S2079     |
|          | T2590 | -1   | 2   | S2079            |
| 13n3602  | T1081 | -13  | -2  | S896             |
|          | T1082 | -13  | 0   | S896, S897       |
|          | T1083 | -13  | 2   | S897             |
| m13n3602 | T2591 | -1   | -2  | S2080            |
|          | T2592 | -1   | 0   | S2080, S2081     |
|          | T2593 | -1   | 2   | S2081            |
| 13n3956  | T1086 | -10  | -3  | S899             |
|          | T1087 | -10  | -3  | S898             |
|          | T1084 | -10  | -1  | S899, S901       |
|          | T1085 | -10  | -1  | S898, S900       |
|          | T1088 | -10  | 1   | S901, S902       |
|          | T1089 | -10  | 1   | S900, S903       |
|          | T1090 | -10  | 3   | S902             |
|          | T1091 | -10  | 3   | S903             |
| m13n3956 | T2596 | -4   | -3  | S2083            |
|          | T2597 | -4   | -3  | S2082            |
|          | T2594 | -4   | -1  | S2082, S2084     |
|          | T2595 | -4   | -1  | S2085, S2083     |
|          | T2598 | -4   | 1   | S2087, S2084     |
|          | T2599 | -4   | 1   | S2085, S2086     |
|          | T2600 | -4   | 3   | S2086            |
|          | T2601 | -4   | 3   | S2087            |
| 13n3960  | T1092 | 3    | -2  | S904             |
|          | T1093 | 3    | 0   | S905, S904       |
|          | T1094 | 3    | 2   | S905             |
| m13n3960 | T2603 | -17  | -4  | S2089            |

| Knot     | ID    | $tb$ | $r$ | Parents      |
|----------|-------|------|-----|--------------|
|          | T2602 | -17  | -2  | S2089, S2088 |
|          | T2604 | -17  | 0   | S2088, S2090 |
|          | T2605 | -17  | 2   | S2090, S2091 |
|          | T2606 | -17  | 4   | S2091        |
| 13n3979  | T1096 | -8   | -3  | S906         |
|          | T1095 | -8   | -1  | S907, S906   |
|          | T1097 | -8   | 1   | S907, S908   |
|          | T1098 | -8   | 3   | S908         |
| m13n3979 | T2608 | -6   | -3  | S2092        |
|          | T2607 | -6   | -1  | S2092, S2093 |
|          | T2609 | -6   | 1   | S2094, S2093 |
|          | T2610 | -6   | 3   | S2094        |
| 13n4024  | T1100 | -13  | -4  | S910         |
|          | T1099 | -13  | -2  | S909, S910   |
|          | T1101 | -13  | 0   | S911, S909   |
|          | T1102 | -13  | 2   | S912, S911   |
|          | T1103 | -13  | 4   | S912         |
| m13n4024 | T2611 | -1   | -2  | S2095        |
|          | T2612 | -1   | 0   | S2095, S2096 |
|          | T2613 | -1   | 2   | S2096        |
| 13n4084  | T1104 | -15  | -2  | S913         |
|          | T1105 | -15  | 0   | S914, S913   |
|          | T1106 | -15  | 2   | S914         |
| m13n4084 | T2614 | 1    | -2  | S2097        |
|          | T2615 | 1    | 0   | S2097, S2098 |
|          | T2616 | 1    | 2   | S2098        |
| 13n4104  | T1107 | -5   | -2  | S916         |
|          | T1108 | -5   | -2  | S915         |
|          | T1109 | -5   | 0   | S915, S917   |
|          | T1110 | -5   | 0   | S916, S918   |
|          | T1111 | -5   | 2   | S917         |
|          | T1112 | -5   | 2   | S918         |
| m13n4104 | T2617 | -9   | -2  | S2099        |
|          | T2618 | -9   | -2  | S2100        |
|          | T2619 | -9   | 0   | S2099, S2101 |
|          | T2620 | -9   | 0   | S2100, S2102 |
|          | T2621 | -9   | 2   | S2102        |
|          | T2622 | -9   | 2   | S2101        |
| 13n4508  | T1113 | -13  | -2  | S919         |
|          | T1114 | -13  | -2  | S920         |
|          | T1115 | -13  | 0   | S922, S920   |
|          | T1116 | -13  | 0   | S921, S919   |
|          | T1117 | -13  | 2   | S921         |
|          | T1118 | -13  | 2   | S922         |
| m13n4508 | T2623 | -1   | -2  | S2104        |
|          | T2624 | -1   | -2  | S2103        |
|          | T2625 | -1   | 0   | S2103, S2106 |
|          | T2626 | -1   | 0   | S2104, S2105 |
|          | T2627 | -1   | 2   | S2106        |
|          | T2628 | -1   | 2   | S2105        |
| 13n4587  | T1120 | -21  | -4  | S924         |
|          | T1119 | -21  | -2  | S923, S924   |
|          | T1121 | -21  | 0   | S923, S925   |
|          | T1122 | -21  | 2   | S926, S925   |

| Knot     | ID    | $tb$ | $r$ | Parents      |
|----------|-------|------|-----|--------------|
|          | T1123 | -21  | 4   | S926         |
| m13n4587 | T2629 | 7    | -2  | S2107        |
|          | T2630 | 7    | 0   | S2108, S2107 |
|          | T2631 | 7    | 2   | S2108        |
|          |       |      |     |              |
| 13n4634  | T1125 | -10  | -3  | S927         |
|          | T1124 | -10  | -1  | S927, S928   |
|          | T1126 | -10  | 1   | S928, S929   |
|          | T1127 | -10  | 3   | S929         |
| m13n4634 | T2633 | -4   | -3  | S2109        |
|          | T2632 | -4   | -1  | S2109, S2110 |
|          | T2634 | -4   | 1   | S2111, S2110 |
|          | T2635 | -4   | 3   | S2111        |
| 13n4639  | T1129 | -19  | -4  | S931         |
|          | T1128 | -19  | -2  | S931, S930   |
|          | T1130 | -19  | 0   | S932, S930   |
|          | T1131 | -19  | 2   | S933, S932   |
|          | T1132 | -19  | 4   | S933         |
| m13n4639 | T2636 | 5    | -2  | S2112        |
|          | T2637 | 5    | 0   | S2113, S2112 |
|          | T2638 | 5    | 2   | S2113        |
| 14n3155  | T1226 | -7   | -2  | S1003        |
|          | T1227 | -7   | -2  | S1004        |
|          | T1228 | -7   | 0   | S1006, S1004 |
|          | T1229 | -7   | 0   | S1005, S1003 |
|          | T1230 | -7   | 2   | S1006        |
|          | T1231 | -7   | 2   | S1005        |
| 14n5294  | T1232 | -11  | -2  | S1007        |
|          | T1233 | -11  | 0   | S1008, S1007 |
|          | T1234 | -11  | 2   | S1008        |
| m14n5294 | T2703 | -3   | -2  | S2161        |
|          | T2704 | -3   | 0   | S2161, S2162 |
|          | T2705 | -3   | 2   | S2162        |
| 14n8212  | T1235 | -7   | -2  | S1010        |
|          | T1236 | -7   | -2  | S1009        |
|          | T1237 | -7   | 0   | S1011, S1009 |
|          | T1238 | -7   | 0   | S1012, S1010 |
|          | T1239 | -7   | 2   | S1012        |
|          | T1240 | -7   | 2   | S1011        |
| 14n8584  | T1241 | -7   | -2  | S1014        |
|          | T1242 | -7   | -2  | S1013        |
|          | T1243 | -7   | 0   | S1014, S1016 |
|          | T1244 | -7   | 0   | S1015, S1013 |
|          | T1245 | -7   | 2   | S1016        |
|          | T1246 | -7   | 2   | S1015        |
| m14n8584 | T2706 | -7   | -2  | S2163        |
|          | T2707 | -7   | -2  | S2164        |
|          | T2708 | -7   | 0   | S2163, S2165 |
|          | T2709 | -7   | 0   | S2166, S2164 |
|          | T2710 | -7   | 2   | S2165        |
|          | T2711 | -7   | 2   | S2166        |
| 14n8700  | T1247 | -7   | -2  | S1018        |
|          | T1248 | -7   | -2  | S1017        |
|          | T1249 | -7   | 0   | S1019, S1017 |
|          | T1250 | -7   | 0   | S1020, S1018 |

| Knot      | ID    | $tb$ | $r$ | Parents      |
|-----------|-------|------|-----|--------------|
|           | T1251 | -7   | 2   | S1020        |
|           | T1252 | -7   | 2   | S1019        |
| 14n9408   | T1253 | -11  | -2  | S1021        |
|           | T1254 | -11  | -2  | S1022        |
|           | T1255 | -11  | 0   | S1022, S1024 |
|           | T1256 | -11  | 0   | S1021, S1023 |
|           | T1257 | -11  | 2   | S1023        |
|           | T1258 | -11  | 2   | S1024        |
| m14n9408  | T2712 | -3   | -2  | S2168        |
|           | T2713 | -3   | -2  | S2167        |
|           | T2714 | -3   | 0   | S2167, S2169 |
|           | T2715 | -3   | 0   | S2170, S2168 |
|           | T2716 | -3   | 2   | S2170        |
|           | T2717 | -3   | 2   | S2169        |
| 14n9994   | T1259 | -11  | -2  | S1026        |
|           | T1260 | -11  | -2  | S1025        |
|           | T1261 | -11  | 0   | S1028, S1025 |
|           | T1262 | -11  | 0   | S1027, S1026 |
|           | T1263 | -11  | 2   | S1028        |
|           | T1264 | -11  | 2   | S1027        |
| m14n9994  | T2718 | -3   | -2  | S2171        |
|           | T2719 | -3   | -2  | S2172        |
|           | T2720 | -3   | 0   | S2173, S2171 |
|           | T2721 | -3   | 0   | S2172, S2174 |
|           | T2722 | -3   | 2   | S2173        |
|           | T2723 | -3   | 2   | S2174        |
| 14n14356  | T1176 | -21  | -4  | S968         |
|           | T1175 | -21  | -2  | S967, S968   |
|           | T1178 | -21  | 0   | S967         |
|           | T1179 | -21  | 2   | S969, S970   |
|           | T1180 | -21  | 4   | S970         |
| m14n14356 | T2671 | 7    | -2  | S2139        |
|           | T2672 | 7    | 0   | S2140, S2139 |
|           | T2673 | 7    | 2   | S2140        |
| 14n14798  | T1181 | -7   | -2  | S971         |
|           | T1182 | -7   | -2  | S972         |
|           | T1183 | -7   | 0   | S973, S972   |
|           | T1184 | -7   | 0   | S971, S974   |
|           | T1185 | -7   | 2   | S973         |
|           | T1186 | -7   | 2   | S974         |
| 14n16364  | T1188 | -21  | -4  | S976         |
|           | T1187 | -21  | -2  | S975, S976   |
|           | T1189 | -21  | 0   | S975         |
|           | T1191 | -21  | 2   | S978, S977   |
|           | T1192 | -21  | 4   | S978         |
| m14n16364 | T2674 | 7    | -2  | S2141        |
|           | T2675 | 7    | 0   | S2142, S2141 |
|           | T2676 | 7    | 2   | S2142        |
| 14n17954  | T1193 | -7   | -2  | S979         |
|           | T1194 | -7   | 0   | S979, S980   |
|           | T1195 | -7   | 2   | S980         |
| 14n21069  | T1196 | -13  | -2  | S981         |
|           | T1197 | -13  | 0   | S982, S981   |
|           | T1198 | -13  | 2   | S982         |

| Knot      | ID    | $tb$ | $r$ | Parents      |
|-----------|-------|------|-----|--------------|
| m14n21069 | T2677 | -1   | -2  | S2143        |
|           | T2678 | -1   | 0   | S2143, S2144 |
|           | T2679 | -1   | 2   | S2144        |
| 14n21152  | T1199 | -13  | -2  | S983         |
|           | T1200 | -13  | -2  | S984         |
|           | T1201 | -13  | 0   | S984, S986   |
|           | T1202 | -13  | 0   | S985, S983   |
|           | T1203 | -13  | 2   | S985         |
|           | T1204 | -13  | 2   | S986         |
| m14n21152 | T2680 | -1   | -2  | S2146        |
|           | T2681 | -1   | -2  | S2145        |
|           | T2682 | -1   | 0   | S2147, S2145 |
|           | T2683 | -1   | 0   | S2148, S2146 |
|           | T2684 | -1   | 2   | S2148        |
|           | T2685 | -1   | 2   | S2147        |
| 14n21419  | T1205 | -13  | -2  | S988         |
|           | T1206 | -13  | -2  | S987         |
|           | T1207 | -13  | 0   | S989, S987   |
|           | T1208 | -13  | 0   | S990, S988   |
|           | T1209 | -13  | 2   | S989         |
|           | T1210 | -13  | 2   | S990         |
| m14n21419 | T2686 | -1   | -2  | S2149        |
|           | T2687 | -1   | -2  | S2150        |
|           | T2688 | -1   | 0   | S2151, S2149 |
|           | T2689 | -1   | 0   | S2150, S2152 |
|           | T2690 | -1   | 2   | S2151        |
|           | T2691 | -1   | 2   | S2152        |
| 14n21472  | T1212 | -6   | -3  | S991         |
|           | T1211 | -6   | -1  | S991, S992   |
|           | T1213 | -6   | 1   | S993, S992   |
|           | T1214 | -6   | 3   | S993         |
| m14n21472 | T2693 | -8   | -3  | S2153        |
|           | T2692 | -8   | -1  | S2154, S2153 |
|           | T2694 | -8   | 1   | S2155, S2154 |
|           | T2695 | -8   | 3   | S2155        |
| 14n21881  | T1217 | -23  | -6  | S996         |
|           | T1216 | -23  | -4  | S995, S996   |
|           | T1215 | -23  | -2  | S995, S994   |
|           | T1218 | -23  | 0   | S994, S997   |
|           | T1219 | -23  | 2   | S997, S998   |
|           | T1220 | -23  | 4   | S999, S998   |
|           | T1221 | -23  | 6   | S999         |
| m14n21881 | T2696 | 9    | -2  | S2156        |
|           | T2697 | 9    | 0   | S2156, S2157 |
|           | T2698 | 9    | 2   | S2157        |
| 14n22172  | T1223 | -10  | -3  | S1000        |
|           | T1222 | -10  | -1  | S1001, S1000 |
|           | T1224 | -10  | 1   | S1001, S1002 |
|           | T1225 | -10  | 3   | S1002        |
| m14n22172 | T2700 | -4   | -3  | S2158        |
|           | T2699 | -4   | -1  | S2158, S2159 |
|           | T2701 | -4   | 1   | S2160, S2159 |
|           | T2702 | -4   | 3   | S2160        |
| 15n40180  | T1283 | -8   | -3  | S1041        |

| Knot      | ID    | $tb$ | $r$ | Parents             |
|-----------|-------|------|-----|---------------------|
|           | T1282 | -8   | -1  | S1041, S1042        |
|           | T1284 | -8   | 1   | S1043, S1042        |
|           | T1285 | -8   | 3   | S1043               |
| m15n40180 | T2740 | -6   | -3  | S2185               |
|           | T2739 | -6   | -1  | S2186, S2185        |
|           | T2741 | -6   | 1   | S2186, S2187        |
|           | T2742 | -6   | 3   | S2187               |
|           |       |      |     |                     |
| 15n40184  | T1288 | -12  | -3  | S1044               |
|           | T1289 | -12  | -3  | S1045               |
|           | T1286 | -12  | -1  | S1047, S1045        |
|           | T1287 | -12  | -1  | S1046, S1044        |
|           | T1290 | -12  | 1   | S1048, S1047        |
|           | T1291 | -12  | 1   | S1046, S1049        |
|           | T1292 | -12  | 3   | S1048               |
|           | T1293 | -12  | 3   | S1049               |
| m15n40184 | T2745 | -2   | -3  | S2188               |
|           | T2746 | -2   | -3  | S2189               |
|           | T2743 | -2   | -1  | S2191, S2188        |
|           | T2744 | -2   | -1  | S2190, S2189        |
|           | T2747 | -2   | 1   | S2192, S2190        |
|           | T2748 | -2   | 1   | S2193, S2191        |
|           | T2749 | -2   | 3   | S2193               |
|           | T2750 | -2   | 3   | S2192               |
| 15n40211  | T1295 | -23  | -4  | S1051               |
|           | T1294 | -23  | -2  | S1050, S1051        |
|           | T1297 | -23  | 0   | S1052               |
|           | T1298 | -23  | 2   | S1052, S1053        |
|           | T1299 | -23  | 4   | S1053               |
| m15n40211 | T2751 | 9    | -2  | S2194               |
|           | T2752 | 9    | 0   | S2195, S2194        |
|           | T2753 | 9    | 2   | S2195               |
| 15n40214  | T1301 | -19  | -4  | S1055               |
|           | T1300 | -19  | -2  | S1054, S1055        |
|           | T1302 | -19  | 0   | S1054, S1056        |
|           | T1303 | -19  | 2   | S1056, S1057        |
|           | T1304 | -19  | 4   | S1057               |
| m15n40214 | T2754 | 5    | -2  | S2196               |
|           | T2755 | 5    | 0   | S2196, S2197        |
|           | T2756 | 5    | 2   | S2197               |
| 15n41127  | T1306 | -8   | -3  | S1058               |
|           | T1305 | -8   | -1  | S1058, S1059        |
|           | T1307 | -8   | 1   | S1060, S1059        |
|           | T1308 | -8   | 3   | S1060               |
| m15n41127 | T2758 | -6   | -3  | S2198               |
|           | T2757 | -6   | -1  | S2198, S2199        |
|           | T2759 | -6   | 1   | S2200, S2199        |
|           | T2760 | -6   | 3   | S2200               |
| 15n41131  | T1310 | -15  | -4  | S1062               |
|           | T1311 | -15  | -4  | S1063               |
|           | T1309 | -15  | -2  | S1062, S1063, S1061 |
|           | T1312 | -15  | 0   | S1064, S1061        |
|           | T1313 | -15  | 2   | S1064, S1065, S1066 |
|           | T1314 | -15  | 4   | S1066               |
|           | T1315 | -15  | 4   | S1065               |

| Knot      | ID    | $tb$ | $r$ | Parents      |
|-----------|-------|------|-----|--------------|
| m15n41131 | T2761 | 1    | -2  | S2201        |
|           | T2762 | 1    | 0   | S2202, S2201 |
|           | T2763 | 1    | 2   | S2202        |
| 15n41189  | T1317 | -16  | -3  | S1067        |
|           | T1316 | -16  | -1  | S1067, S1068 |
|           | T1318 | -16  | 1   | S1069, S1068 |
|           | T1319 | -16  | 3   | S1069        |
| m15n41189 | T2765 | 2    | -3  | S2203        |
|           | T2764 | 2    | -1  | S2203, S2204 |
|           | T2766 | 2    | 1   | S2205, S2204 |
|           | T2767 | 2    | 3   | S2205        |
| 15n45482  | T1320 | -11  | -2  | S1070        |
|           | T1321 | -11  | 0   | S1070, S1071 |
|           | T1322 | -11  | 2   | S1071        |
| m15n45482 | T2768 | -3   | -2  | S2206        |
|           | T2769 | -3   | 0   | S2207, S2206 |
|           | T2770 | -3   | 2   | S2207        |
| 15n47800  | T1325 | -12  | -3  | S1072        |
|           | T1326 | -12  | -3  | S1073        |
|           | T1323 | -12  | -1  | S1074, S1072 |
|           | T1324 | -12  | -1  | S1075, S1073 |
|           | T1327 | -12  | 1   | S1076, S1074 |
|           | T1328 | -12  | 1   | S1077, S1075 |
|           | T1329 | -12  | 3   | S1077        |
|           | T1330 | -12  | 3   | S1076        |
| m15n47800 | T2773 | -2   | -3  | S2209        |
|           | T2774 | -2   | -3  | S2208        |
|           | T2771 | -2   | -1  | S2208, S2210 |
|           | T2772 | -2   | -1  | S2211, S2209 |
|           | T2775 | -2   | 1   | S2211, S2213 |
|           | T2776 | -2   | 1   | S2210, S2212 |
|           | T2777 | -2   | 3   | S2213        |
| 15n49058  | T2778 | -2   | 3   | S2212        |
|           | T1331 | -15  | -2  | S1078        |
|           | T1332 | -15  | 0   | S1079, S1078 |
| m15n49058 | T1333 | -15  | 2   | S1079        |
|           | T2779 | 1    | -2  | S2214        |
|           | T2780 | 1    | 0   | S2214, S2215 |
| 15n51709  | T2781 | 1    | 2   | S2215        |
|           | T1335 | -4   | -3  | S1080        |
|           | T1334 | -4   | -1  | S1080, S1081 |
|           | T1336 | -4   | 1   | S1082, S1081 |
| m15n51709 | T1337 | -4   | 3   | S1082        |
|           | T2783 | -10  | -3  | S2216        |
|           | T2782 | -10  | -1  | S2216, S2217 |
|           | T2784 | -10  | 1   | S2218, S2217 |
| 15n52931  | T2785 | -10  | 3   | S2218        |
|           | T1338 | -19  | -2  | S1083        |
|           | T1339 | -19  | 0   | S1083, S1084 |
| m15n52931 | T1340 | -19  | 2   | S1084        |
|           | T2786 | 5    | -2  | S2219        |
|           | T2787 | 5    | 0   | S2220, S2219 |
| 15n52940  | T2788 | 5    | 2   | S2220        |
|           | T1342 | -19  | -4  | S1086        |



| Knot      | ID    | $tb$ | $r$ | Parents      |
|-----------|-------|------|-----|--------------|
|           | T1341 | -19  | -2  | S1085, S1086 |
|           | T1343 | -19  | 0   | S1087, S1085 |
|           | T1344 | -19  | 2   | S1087, S1088 |
|           | T1345 | -19  | 4   | S1088        |
| m15n52940 | T2789 | 5    | -2  | S2221        |
|           | T2790 | 5    | 0   | S2221, S2222 |
|           | T2791 | 5    | 2   | S2222        |
| 15n52944  | T1347 | -12  | -3  | S1089        |
|           | T1346 | -12  | -1  | S1089, S1090 |
|           | T1348 | -12  | 1   | S1091, S1090 |
|           | T1349 | -12  | 3   | S1091        |
| m15n52944 | T2793 | -2   | -3  | S2223        |
|           | T2792 | -2   | -1  | S2224, S2223 |
|           | T2794 | -2   | 1   | S2224, S2225 |
|           | T2795 | -2   | 3   | S2225        |
| 15n53218  | T1350 | -15  | -2  | S1092        |
|           | T1351 | -15  | -2  | S1093        |
|           | T1352 | -15  | 0   | S1092, S1095 |
|           | T1353 | -15  | 0   | S1094, S1093 |
|           | T1354 | -15  | 2   | S1094        |
|           | T1355 | -15  | 2   | S1095        |
| m15n53218 | T2796 | 1    | -2  | S2226        |
|           | T2797 | 1    | -2  | S2227        |
|           | T2798 | 1    | 0   | S2228, S2227 |
|           | T2799 | 1    | 0   | S2229, S2226 |
|           | T2800 | 1    | 2   | S2229        |
|           | T2801 | 1    | 2   | S2228        |
| 15n56026  | T1358 | -8   | -3  | S1096        |
|           | T1357 | -8   | -1  | S1097, S1096 |
|           | T1360 | -8   | 1   | S1098, S1099 |
|           | T1361 | -8   | 3   | S1099        |
| m15n56026 | T2803 | -6   | -3  | S2230        |
|           | T2802 | -6   | -1  | S2230, S2231 |
|           | T2804 | -6   | 1   | S2231, S2232 |
|           | T2805 | -6   | 3   | S2232        |
| 15n56079  | T1363 | -15  | -4  | S1101        |
|           | T1362 | -15  | -2  | S1101, S1100 |
|           | T1364 | -15  | 0   | S1102        |
|           | T1366 | -15  | 2   | S1102, S1103 |
|           | T1367 | -15  | 4   | S1103        |
| m15n56079 | T2806 | 1    | -2  | S2233        |
|           | T2807 | 1    | 0   | S2233, S2234 |
|           | T2808 | 1    | 2   | S2234        |
| 15n59005  | T1369 | -8   | -3  | S1104        |
|           | T1368 | -8   | -1  | S1105, S1104 |
|           | T1370 | -8   | 1   | S1105, S1106 |
|           | T1371 | -8   | 3   | S1106        |
| m15n59005 | T2810 | -6   | -3  | S2235        |
|           | T2809 | -6   | -1  | S2235, S2236 |
|           | T2811 | -6   | 1   | S2237, S2236 |
|           | T2812 | -6   | 3   | S2237        |
| 15n124802 | T1266 | -17  | -4  | S1030        |
|           | T1265 | -17  | -2  | S1030, S1029 |
|           | T1267 | -17  | 0   | S1031, S1029 |

| Knot       | ID    | $tb$ | $r$ | Parents      |
|------------|-------|------|-----|--------------|
|            | T1268 | -17  | 2   | S1032, S1031 |
|            | T1269 | -17  | 4   | S1032        |
| m15n124802 | T2724 | 3    | -2  | S2175        |
|            | T2725 | 3    | 0   | S2176, S2175 |
|            | T2726 | 3    | 2   | S2176        |
| 15n124988  | T1270 | -17  | -2  | S1033        |
|            | T1271 | -17  | 0   | S1034, S1033 |
|            | T1272 | -17  | 2   | S1034        |
| m15n124988 | T2727 | 3    | -2  | S2177        |
|            | T2728 | 3    | 0   | S2177, S2178 |
|            | T2729 | 3    | 2   | S2178        |
| 15n127271  | T1273 | -13  | -2  | S1035        |
|            | T1274 | -13  | 0   | S1036, S1035 |
|            | T1275 | -13  | 2   | S1036        |
| m15n127271 | T2730 | -1   | -2  | S2179        |
|            | T2731 | -1   | 0   | S2180, S2179 |
|            | T2732 | -1   | 2   | S2180        |
| 15n130933  | T1276 | -3   | -2  | S1037        |
|            | T1277 | -3   | -2  | S1038        |
|            | T1278 | -3   | 0   | S1040, S1038 |
|            | T1279 | -3   | 0   | S1037, S1039 |
|            | T1280 | -3   | 2   | S1039        |
|            | T1281 | -3   | 2   | S1040        |
| m15n130933 | T2733 | -11  | -2  | S2181        |
|            | T2734 | -11  | -2  | S2182        |
|            | T2735 | -11  | 0   | S2182, S2184 |
|            | T2736 | -11  | 0   | S2181, S2183 |
|            | T2737 | -11  | 2   | S2183        |
|            | T2738 | -11  | 2   | S2184        |
| 16n207543  | T1372 | -3   | -2  | S1107        |
|            | T1373 | -3   | 0   | S1108, S1107 |
|            | T1374 | -3   | 2   | S1108        |
| m16n207543 | T2813 | -11  | -2  | S2238        |
|            | T2814 | -11  | 0   | S2238, S2239 |
|            | T2815 | -11  | 2   | S2239        |
| 16n226759  | T1375 | -13  | -2  | S1110        |
|            | T1376 | -13  | -2  | S1109        |
|            | T1377 | -13  | 0   | S1111, S1109 |
|            | T1378 | -13  | 0   | S1110, S1112 |
|            | T1379 | -13  | 2   | S1112        |
|            | T1380 | -13  | 2   | S1111        |
| m16n226759 | T2816 | -1   | -2  | S2241        |
|            | T2817 | -1   | -2  | S2240        |
|            | T2818 | -1   | 0   | S2242, S2240 |
|            | T2819 | -1   | 0   | S2241, S2243 |
|            | T2820 | -1   | 2   | S2242        |
|            | T2821 | -1   | 2   | S2243        |
| 16n245346  | T1381 | -3   | -2  | S1113        |
|            | T1382 | -3   | 0   | S1114, S1113 |
|            | T1383 | -3   | 2   | S1114        |
| m16n245346 | T2822 | -11  | -2  | S2244        |
|            | T2823 | -11  | 0   | S2244, S2245 |
|            | T2824 | -11  | 2   | S2245        |
| 16n245347  | T1384 | -9   | -2  | S1116        |

| Knot       | ID    | $tb$ | $r$ | Parents      |
|------------|-------|------|-----|--------------|
|            | T1385 | -9   | -2  | S1115        |
|            | T1386 | -9   | 0   | S1116, S1118 |
|            | T1387 | -9   | 0   | S1115, S1117 |
|            | T1388 | -9   | 2   | S1117        |
|            | T1389 | -9   | 2   | S1118        |
| m16n245347 | T2825 | -5   | -2  | S2247        |
|            | T2826 | -5   | -2  | S2246        |
|            | T2827 | -5   | 0   | S2247, S2248 |
|            | T2828 | -5   | 0   | S2246, S2249 |
|            | T2829 | -5   | 2   | S2248        |
|            | T2830 | -5   | 2   | S2249        |
| 16n246031  | T1390 | -5   | -2  | S1120        |
|            | T1391 | -5   | -2  | S1119        |
|            | T1392 | -5   | 0   | S1122, S1119 |
|            | T1393 | -5   | 0   | S1120, S1121 |
|            | T1394 | -5   | 2   | S1121        |
|            | T1395 | -5   | 2   | S1122        |
| m16n246031 | T2831 | -9   | -2  | S2250        |
|            | T2832 | -9   | -2  | S2251        |
|            | T2833 | -9   | 0   | S2250, S2252 |
|            | T2834 | -9   | 0   | S2253, S2251 |
|            | T2835 | -9   | 2   | S2252        |
|            | T2836 | -9   | 2   | S2253        |
| 16n246032  | T1396 | -7   | -2  | S1123        |
|            | T1397 | -7   | 0   | S1123, S1124 |
|            | T1398 | -7   | 2   | S1124        |
| m16n246032 | T2837 | -7   | -2  | S2254        |
|            | T2838 | -7   | 0   | S2254, S2255 |
|            | T2839 | -7   | 2   | S2255        |
| 16n765768  | T1399 | -15  | -2  | S1125        |
|            | T1400 | -15  | 0   | S1126, S1125 |
|            | T1401 | -15  | 2   | S1126        |
| m16n765768 | T2840 | 1    | -2  | S2256        |
|            | T2841 | 1    | 0   | S2256, S2257 |
|            | T2842 | 1    | 2   | S2257        |
| 17?        | T1403 | -25  | -4  | S1128        |
|            | T1402 | -25  | -2  | S1128, S1127 |
|            | T1405 | -25  | 0   | S1127        |
|            | T1406 | -25  | 2   | S1130, S1129 |
|            | T1407 | -25  | 4   | S1130        |
| m17?       | T2843 | 11   | -2  | S2258        |
|            | T2844 | 11   | 0   | S2258, S2259 |
|            | T2845 | 11   | 2   | S2259        |

TABLE 3. The positive and negative stabilizations of the knots from Table 2. As in Table 2, the fourth column lists the grids that stabilize to the given one.

## REFERENCES

- [BMVV<sup>+</sup>] Nilangshu Bhattacharyya, Justin Murray, Shea Vela-Vick, Adithyan Pandikkadan, and Cyrus Cox, Private communication.
- [CDGW] Marc Culler, Nathan M. Dunfield, Matthias Goerner, and Jeffrey R. Weeks, *SnapPy, a computer program for studying the geometry and topology of 3-manifolds*, Available at <http://snappy.computop.org> (05/27/2023).

- [CN13] Wutichai Chongchitmate and Lenhard Ng, *An atlas of Legendrian knots*, Exp. Math. **22** (2013), no. 1, 26–37. MR 3038780
- [Cro95] Peter R. Cromwell, *Embedding knots and links in an open book. I. Basic properties*, Topology Appl. **64** (1995), no. 1, 37–58. MR 1339757
- [EH01] John B. Etnyre and Ko Honda, *Knots and Contact Geometry I: Torus Knots and the Figure Eight Knot*, Journal of Symplectic Geometry **1** (2001), no. 1, 63 – 120.
- [ENV13] John B. Etnyre, Lenhard L. Ng, and Vera Vértési, *Legendrian and transverse twist knots*, Journal of the European Mathematical Society **015** (2013), no. 3, 969–995.
- [JPS<sup>+</sup>23] Mitchell Jubeir, Ina Petkova, Noah Schwartz, Zachary Winkeler, and C.-M. Michael Wong, *Spectral GRID invariants and lagrangian cobordisms*, preprint, 2023, [arXiv:2303.16130](https://arxiv.org/abs/2303.16130).
- [NOT08] Lenhard Ng, Peter Ozsváth, and Dylan Thurston, *Transverse knots distinguished by knot Floer homology*, J. Symplectic Geom. **6** (2008), no. 4, 461–490. MR 2471100
- [OSSz15] Peter S. Ozsváth, András I. Stipsicz, and Zoltán Szabó, *Grid homology for knots and links*, Mathematical Surveys and Monographs, vol. 208, American Mathematical Society, Providence, RI, 2015. MR 3381987
- [OSzT08] Peter Ozsváth, Zoltán Szabó, and Dylan Thurston, *Legendrian knots, transverse knots and combinatorial Floer homology*, Geom. Topol. **12** (2008), no. 2, 941–980. MR 2403802
- [The23] The Sage Developers, *Sagemath, the Sage Mathematics Software System (Version 9.8)*, 2023, <https://www.sagemath.org>.

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