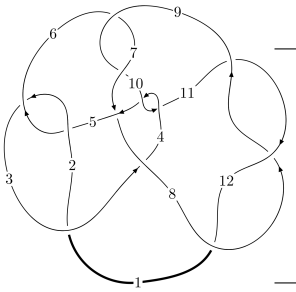
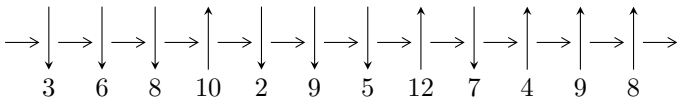
$12n_{0415}$ $(K12n_{0415})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$\underset{c_7}{5,7} \to \underset{c_4}{8,10} \to \underset{c_{10}}{4} \to \underset{c_3}{11} \to \underset{c_9}{3} \longrightarrow \underset{c_{11}}{9} \to \underset{c_6}{12} \to \underset{c_2}{6} \longrightarrow \underset{c_1}{2} \longrightarrow 1 \twoheadrightarrow c_5, c_8, c_{12}$$

Ideals for irreducible components[2]of $X_{\mathbf{par}}$

$$I_1^u = \langle 2.62328 \times 10^{249} u^{73} - 7.69335 \times 10^{248} u^{72} + \cdots + 6.16724 \times 10^{251} b + 2.89562 \times 10^{253},$$
$$3.89167 \times 10^{253} u^{73} + 3.50798 \times 10^{253} u^{72} + \cdots + 1.76568 \times 10^{255} a + 6.42586 \times 10^{256},$$
$$u^{74} - 18u^{72} + \cdots + 13014u - 2863 \rangle$$

$$I_2^u = \langle 1461328095574788 u^{22} + 4128500756671431 u^{21} + \cdots + 2694132033228847 b + 3183360713386177,$$
$$1596568487678737 u^{22} + 4700269669705836 u^{21} + \cdots + 2694132033228847 a + 3243990326400528,$$
$$u^{23} + 3u^{22} + \cdots + 6u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 97 representations.

[1]The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2]All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $\boldsymbol{I_1^u = \langle 2.62 \times 10^{249} u^{73} - 7.69 \times 10^{248} u^{72} + \cdots + 6.17 \times 10^{251} b + 2.90 \times 10^{253},\ 3.89 \times 10^{253} u^{73} + 3.51 \times 10^{253} u^{72} + \cdots + 1.77 \times 10^{255} a + 6.43 \times 10^{256},\ u^{74} - 18 u^{72} + \cdots + 13014 u - 2863 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0220406u^{73} - 0.0198675u^{72} + \cdots + 220.643u - 36.3930 \\ -0.00425356u^{73} + 0.00124745u^{72} + \cdots + 110.198u - 46.9517 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0000705915u^{73} - 0.00699554u^{72} + \cdots - 79.9649u + 50.6943 \\ -0.00337096u^{73} - 0.00295357u^{72} + \cdots + 37.0277u - 13.3009 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0523964u^{73} + 0.0340422u^{72} + \cdots - 668.716u + 180.347 \\ 0.00944346u^{73} - 0.00258887u^{72} + \cdots - 230.912u + 91.9988 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.00494268u^{73} - 0.00257029u^{72} + \cdots - 133.775u + 57.4216 \\ -0.000435248u^{73} - 0.00119965u^{72} + \cdots - 6.20955u - 0.631443 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0262941u^{73} - 0.0186201u^{72} + \cdots + 330.841u - 83.3447 \\ -0.00425356u^{73} + 0.00124745u^{72} + \cdots + 110.198u - 46.9517 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0478425u^{73} + 0.0317582u^{72} + \cdots - 609.789u + 166.141 \\ 0.00647358u^{73} - 0.00178615u^{72} + \cdots - 156.506u + 66.0267 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0105705u^{73} - 0.00873866u^{72} + \cdots + 119.067u - 31.9627 \\ -0.00592470u^{73} - 0.00536770u^{72} + \cdots + 55.6302u - 8.52990 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.00824933u^{73} + 0.00495099u^{72} + \cdots - 115.733u + 38.0504 \\ 0.00567037u^{73} + 0.00516383u^{72} + \cdots - 56.2245u + 5.68267 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0375306u^{73} - 0.0237185u^{72} + \cdots + 489.967u - 141.244 \\ -0.00173001u^{73} + 0.00381214u^{72} + \cdots + 81.4010u - 43.0091 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0209656u^{73} + 0.000371330u^{72} + \cdots - 411.018u + 116.524$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{74} + 24u^{73} + \cdots + 43970u + 2209$
c_2, c_5	$u^{74} + 4u^{73} + \cdots + 52u + 47$
c_3	$u^{74} + 29u^{72} + \cdots - 70400u - 24287$
c_4, c_{10}	$u^{74} + 3u^{73} + \cdots - 43360u - 4517$
c_6, c_9	$u^{74} + 3u^{73} + \cdots - 132u + 2447$
c_7	$u^{74} - 18u^{72} + \cdots + 13014u - 2863$
c_8, c_{11}, c_{12}	$u^{74} + 4u^{73} + \cdots - 148u - 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{74} + 64y^{73} + \cdots - 202684506y + 4879681$
c_2, c_5	$y^{74} - 24y^{73} + \cdots - 43970y + 2209$
c_3	$y^{74} + 58y^{73} + \cdots - 49646717274y + 589858369$
c_4, c_{10}	$y^{74} + 43y^{73} + \cdots + 78391260y + 20403289$
c_6, c_9	$y^{74} - 39y^{73} + \cdots - 103437432y + 5987809$
c_7	$y^{74} - 36y^{73} + \cdots - 172879960y + 8196769$
c_8, c_{11}, c_{12}	$y^{74} + 26y^{73} + \cdots - 6546y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.716939+0.702052I$ $a=\ \ 0.30263-1.41247I$ $b=-1.177540+0.285975I$	$-1.91366+4.24234I$	0
$u=-0.716939-0.702052I$ $a=\ \ 0.30263+1.41247I$ $b=-1.177540-0.285975I$	$-1.91366-4.24234I$	0
$u=\ \ 0.816631+0.612281I$ $a=-0.145660-1.130310I$ $b=-0.396070+1.216810I$	$4.09032-3.11910I$	0
$u=\ \ 0.816631-0.612281I$ $a=-0.145660+1.130310I$ $b=-0.396070-1.216810I$	$4.09032+3.11910I$	0
$u=-0.725639+0.606653I$ $a=-1.35528-0.64131I$ $b=-0.947841+0.475507I$	$4.37251+2.51666I$	$0.-3.92703I$
$u=-0.725639-0.606653I$ $a=-1.35528+0.64131I$ $b=-0.947841-0.475507I$	$4.37251-2.51666I$	$0.+3.92703I$
$u=-0.852419+0.625156I$ $a=\ \ 1.304660-0.001023I$ $b=\ \ 0.820732-0.436023I$	$3.15839-4.36525I$	0
$u=-0.852419-0.625156I$ $a=\ \ 1.304660+0.001023I$ $b=\ \ 0.820732+0.436023I$	$3.15839+4.36525I$	0
$u=-0.673467+0.818072I$ $a=\ \ 1.06661-1.08020I$ $b=-0.880323+0.113571I$	$-3.27559+3.44834I$	0
$u=-0.673467-0.818072I$ $a=\ \ 1.06661+1.08020I$ $b=-0.880323-0.113571I$	$-3.27559-3.44834I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.06373$ $a = 1.17437$ $b = 0.718671$	-0.362734	-17.0640
$u = -0.903098 + 0.592548I$ $a = -0.266612 + 0.712330I$ $b = 1.281040 - 0.243461I$	$-2.73174 + 0.73218I$	0
$u = -0.903098 - 0.592548I$ $a = -0.266612 - 0.712330I$ $b = 1.281040 + 0.243461I$	$-2.73174 - 0.73218I$	0
$u = 0.985502 + 0.449873I$ $a = -0.196631 - 0.931982I$ $b = 1.55766 + 0.61167I$	$-6.28650 - 4.67409I$	0
$u = 0.985502 - 0.449873I$ $a = -0.196631 + 0.931982I$ $b = 1.55766 - 0.61167I$	$-6.28650 + 4.67409I$	0
$u = -0.640773 + 0.884634I$ $a = -0.861652 + 0.852553I$ $b = 1.057100 - 0.700305I$	$-5.13856 + 5.00397I$	0
$u = -0.640773 - 0.884634I$ $a = -0.861652 - 0.852553I$ $b = 1.057100 + 0.700305I$	$-5.13856 - 5.00397I$	0
$u = -0.948790 + 0.566130I$ $a = -0.138082 + 1.073610I$ $b = -0.42227 - 1.37744I$	$2.82069 + 9.00069I$	0
$u = -0.948790 - 0.566130I$ $a = -0.138082 - 1.073610I$ $b = -0.42227 + 1.37744I$	$2.82069 - 9.00069I$	0
$u = 0.707873 + 0.524027I$ $a = -0.579354 - 0.901201I$ $b = 1.55178 - 0.11686I$	$-6.09027 + 3.52399I$	$-9.61885 - 4.91747I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.707873 - 0.524027I$ $a = -0.579354 + 0.901201I$ $b = 1.55178 + 0.11686I$	$-6.09027 - 3.52399I$	$-9.61885 + 4.91747I$
$u = 0.923459 + 0.638543I$ $a = -1.161220 + 0.518619I$ $b = -1.000280 - 0.498046I$	$3.46828 - 9.04581I$	0
$u = 0.923459 - 0.638543I$ $a = -1.161220 - 0.518619I$ $b = -1.000280 + 0.498046I$	$3.46828 + 9.04581I$	0
$u = 0.987910 + 0.559553I$ $a = 1.248430 - 0.014833I$ $b = 0.823741 + 0.340152I$	$3.57201 - 1.47959I$	0
$u = 0.987910 - 0.559553I$ $a = 1.248430 + 0.014833I$ $b = 0.823741 - 0.340152I$	$3.57201 + 1.47959I$	0
$u = 0.877611 + 0.726426I$ $a = 0.042974 + 0.803893I$ $b = 0.695871 - 1.040800I$	$3.64324 + 3.84902I$	0
$u = 0.877611 - 0.726426I$ $a = 0.042974 - 0.803893I$ $b = 0.695871 + 1.040800I$	$3.64324 - 3.84902I$	0
$u = 1.103270 + 0.336547I$ $a = -0.103428 - 1.230930I$ $b = 1.18743 + 0.79431I$	$-5.63165 - 5.26461I$	0
$u = 1.103270 - 0.336547I$ $a = -0.103428 + 1.230930I$ $b = 1.18743 - 0.79431I$	$-5.63165 + 5.26461I$	0
$u = -0.796570 + 0.190576I$ $a = 0.010188 + 1.017090I$ $b = 0.211582 - 1.283020I$	$-1.99263 + 2.54885I$	$-10.22170 - 5.40906I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.796570-0.190576I$ $a=\ 0.010188-1.017090I$ $b=\ 0.211582+1.283020I$	$-1.99263-2.54885I$	$-10.22170+5.40906I$
$u=-1.066590+0.569316I$ $a=\ 0.012147-0.814089I$ $b=\ 0.702734+1.086420I$	$3.27734+2.13042I$	0
$u=-1.066590-0.569316I$ $a=\ 0.012147+0.814089I$ $b=\ 0.702734-1.086420I$	$3.27734-2.13042I$	0
$u=\ 0.727771+0.217403I$ $a=-0.99187+1.55253I$ $b=-1.219090+0.099908I$	$-5.53125+1.75381I$	$-18.7515+4.1564I$
$u=\ 0.727771-0.217403I$ $a=-0.99187-1.55253I$ $b=-1.219090-0.099908I$	$-5.53125-1.75381I$	$-18.7515-4.1564I$
$u=-0.745350$ $a=\ 0.431663$ $b=\ 0.526516$	-1.12204	-10.0080
$u=\ 1.094760+0.647316I$ $a=\ 0.029119+1.101910I$ $b=-1.44938-0.46309I$	$-7.43280-8.42443I$	0
$u=\ 1.094760-0.647316I$ $a=\ 0.029119-1.101910I$ $b=-1.44938+0.46309I$	$-7.43280+8.42443I$	0
$u=-1.151840+0.553031I$ $a=-0.327823+0.995375I$ $b=\ 1.101040-0.883548I$	$-5.16306+2.04636I$	0
$u=-1.151840-0.553031I$ $a=-0.327823-0.995375I$ $b=\ 1.101040+0.883548I$	$-5.16306-2.04636I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.548937+0.402419I$ $a=1.005520-0.125825I$ $b=0.161005-0.487205I$	$-1.59696+0.08613I$	$-7.31610-0.28304I$
$u=-0.548937-0.402419I$ $a=1.005520+0.125825I$ $b=0.161005+0.487205I$	$-1.59696-0.08613I$	$-7.31610+0.28304I$
$u=0.587757+0.294439I$ $a=0.78373+2.38110I$ $b=-0.958294-0.111877I$	$-3.68519+2.60434I$	$-6.57430-4.30794I$
$u=0.587757-0.294439I$ $a=0.78373-2.38110I$ $b=-0.958294+0.111877I$	$-3.68519-2.60434I$	$-6.57430+4.30794I$
$u=0.349150+1.296500I$ $a=0.580015-0.365543I$ $b=-0.649378+0.576102I$	$5.27936+1.69380I$	0
$u=0.349150-1.296500I$ $a=0.580015+0.365543I$ $b=-0.649378-0.576102I$	$5.27936-1.69380I$	0
$u=-0.582914+1.254360I$ $a=0.522915+0.267349I$ $b=-0.611014-0.628501I$	$4.67633+4.65211I$	0
$u=-0.582914-1.254360I$ $a=0.522915-0.267349I$ $b=-0.611014+0.628501I$	$4.67633-4.65211I$	0
$u=0.512431+0.309854I$ $a=-1.07215-2.01686I$ $b=1.167200+0.731529I$	$-5.26261-1.53830I$	$-8.07293-0.86476I$
$u=0.512431-0.309854I$ $a=-1.07215+2.01686I$ $b=1.167200-0.731529I$	$-5.26261+1.53830I$	$-8.07293+0.86476I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.167408+0.549877I$ $a=0.176866+0.792527I$ $b=0.612175-0.774514I$	$-0.94767+2.37842I$	$1.45207-6.62770I$
$u=-0.167408-0.549877I$ $a=0.176866-0.792527I$ $b=0.612175+0.774514I$	$-0.94767-2.37842I$	$1.45207+6.62770I$
$u=1.45999+0.14673I$ $a=-0.257995+0.912915I$ $b=-0.978818-0.301296I$	$-9.34243-0.54949I$	0
$u=1.45999-0.14673I$ $a=-0.257995-0.912915I$ $b=-0.978818+0.301296I$	$-9.34243+0.54949I$	0
$u=0.357638+0.335061I$ $a=0.47848-1.58337I$ $b=-0.124566+0.560482I$	$1.26391-1.01316I$	$4.15434+2.93912I$
$u=0.357638-0.335061I$ $a=0.47848+1.58337I$ $b=-0.124566-0.560482I$	$1.26391+1.01316I$	$4.15434-2.93912I$
$u=-1.33023+0.79257I$ $a=0.103633+0.876670I$ $b=1.130880-0.742570I$	$2.09763+2.66972I$	0
$u=-1.33023-0.79257I$ $a=0.103633-0.876670I$ $b=1.130880+0.742570I$	$2.09763-2.66972I$	0
$u=1.43130+0.70692I$ $a=0.126806-0.913430I$ $b=1.151750+0.760760I$	$1.66250-8.85630I$	0
$u=1.43130-0.70692I$ $a=0.126806+0.913430I$ $b=1.151750-0.760760I$	$1.66250+8.85630I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.32165+0.93185I$ $a=\ \ 0.107037-0.955241I$ $b=-1.30349+0.69335I$	$1.08526+9.88947I$	0
$u=-1.32165-0.93185I$ $a=\ \ 0.107037+0.955241I$ $b=-1.30349-0.69335I$	$1.08526-9.88947I$	0
$u=\ \ 1.63837+0.07026I$ $a=-0.334265+0.455015I$ $b=-0.981857-0.453814I$	$-7.20676-4.22563I$	0
$u=\ \ 1.63837-0.07026I$ $a=-0.334265-0.455015I$ $b=-0.981857+0.453814I$	$-7.20676+4.22563I$	0
$u=\ \ 1.43230+0.87405I$ $a=\ \ 0.073145+0.937596I$ $b=-1.33985-0.75216I$	$-0.2552-16.3943I$	0
$u=\ \ 1.43230-0.87405I$ $a=\ \ 0.073145-0.937596I$ $b=-1.33985+0.75216I$	$-0.2552+16.3943I$	0
$u=-0.75225+1.53216I$ $a=-0.575876+0.020768I$ $b=\ \ 0.927838+0.313898I$	$3.25869-1.35968I$	0
$u=-0.75225-1.53216I$ $a=-0.575876-0.020768I$ $b=\ \ 0.927838-0.313898I$	$3.25869+1.35968I$	0
$u=\ \ 0.53309+1.67694I$ $a=-0.606198+0.062510I$ $b=\ \ 0.913932-0.375862I$	$2.90226+7.73992I$	0
$u=\ \ 0.53309-1.67694I$ $a=-0.606198-0.062510I$ $b=\ \ 0.913932+0.375862I$	$2.90226-7.73992I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.78852+0.02547I$ $a=-0.125774-0.413957I$ $b=-0.890367+0.466218I$	$-6.84616-0.38474I$	0
$u=-1.78852-0.02547I$ $a=-0.125774+0.413957I$ $b=-0.890367-0.466218I$	$-6.84616+0.38474I$	0
$u=-1.71798+0.50060I$ $a=\quad 0.105225-0.669355I$ $b=-0.847647+0.313678I$	$-8.79128+2.04137I$	0
$u=-1.71798-0.50060I$ $a=\quad 0.105225+0.669355I$ $b=-0.847647-0.313678I$	$-8.79128-2.04137I$	0

II.

$\boldsymbol{I_2^u = \langle 1.46\times 10^{15}u^{22}+4.13\times 10^{15}u^{21}+\cdots+2.69\times 10^{15}b+3.18\times 10^{15},\ 1.60\times 10^{15}u^{22}+4.70\times 10^{15}u^{21}+\cdots+2.69\times 10^{15}a+3.24\times 10^{15},\ u^{23}+3u^{22}+\cdots+6u+1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.592610u^{22} - 1.74463u^{21} + \cdots - 6.32240u - 1.20409 \\ -0.542411u^{22} - 1.53240u^{21} + \cdots - 5.91499u - 1.18159 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.117334u^{22} - 0.263754u^{21} + \cdots + 0.501536u - 0.270027 \\ 0.102622u^{22} + 0.248072u^{21} + \cdots - 0.0954132u - 0.532814 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.270027u^{22} - 0.692746u^{21} + \cdots - 6.61102u - 1.12170 \\ -0.623415u^{22} - 1.71095u^{21} + \cdots - 6.71583u - 1.17090 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0420606u^{22} - 0.0511738u^{21} + \cdots + 0.818276u - 0.714593 \\ 0.100823u^{22} + 0.342981u^{21} + \cdots - 0.0912474u - 0.519574 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.13502u^{22} - 3.27704u^{21} + \cdots - 12.2374u - 2.38569 \\ -0.542411u^{22} - 1.53240u^{21} + \cdots - 5.91499u - 1.18159 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.210231u^{22} - 0.649178u^{21} + \cdots - 5.46247u - 3.01907 \\ -0.563620u^{22} - 1.66738u^{21} + \cdots - 5.56728u - 2.06828 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.05719u^{22} + 3.25881u^{21} + \cdots + 9.50823u + 5.19583 \\ 0.524378u^{22} + 1.55775u^{21} + \cdots + 4.33437u + 2.09435 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.01297u^{22} - 3.07951u^{21} + \cdots - 9.11724u - 5.56190 \\ -0.415388u^{22} - 1.17628u^{21} + \cdots - 4.24093u - 2.41225 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.714593u^{22} - 2.10172u^{21} + \cdots - 11.3509u - 5.10583 \\ -0.579370u^{22} - 1.70311u^{21} + \cdots - 5.42619u - 2.12882 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= \frac{2841804052879228}{2694132033228847}u^{22} + \frac{7206898421736419}{2694132033228847}u^{21} + \cdots + \frac{44791864499482061}{2694132033228847}u - \frac{4765268002334834}{2694132033228847}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{23} - 11u^{22} + \cdots + 16u - 1$
c_2	$u^{23} + u^{22} + \cdots + 8u^2 - 1$
c_3	$u^{23} - u^{22} + \cdots + 4u - 1$
c_4	$u^{23} + 10u^{21} + \cdots - 15u^2 - 1$
c_5	$u^{23} - u^{22} + \cdots - 8u^2 + 1$
c_6	$u^{23} - 4u^{22} + \cdots + 4u - 1$
c_7	$u^{23} + 3u^{22} + \cdots + 6u + 1$
c_8	$u^{23} + 3u^{22} + \cdots + 10u^2 + 1$
c_9	$u^{23} + 4u^{22} + \cdots + 4u + 1$
c_{10}	$u^{23} + 10u^{21} + \cdots + 15u^2 + 1$
c_{11}, c_{12}	$u^{23} - 3u^{22} + \cdots - 10u^2 - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{23} + 13y^{22} + \cdots + 24y - 1$
c_2, c_5	$y^{23} - 11y^{22} + \cdots + 16y - 1$
c_3	$y^{23} - 9y^{22} + \cdots - 16y - 1$
c_4, c_{10}	$y^{23} + 20y^{22} + \cdots - 30y - 1$
c_6, c_9	$y^{23} - 14y^{22} + \cdots + 2y - 1$
c_7	$y^{23} - 19y^{22} + \cdots + 18y - 1$
c_8, c_{11}, c_{12}	$y^{23} + 19y^{22} + \cdots - 20y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.097082 + 0.991659I$ $a = 0.444791 - 0.593937I$ $b = 0.149236 - 0.531911I$	$3.82576 + 6.25542I$	$-3.51359 - 5.00794I$
$u = 0.097082 - 0.991659I$ $a = 0.444791 + 0.593937I$ $b = 0.149236 + 0.531911I$	$3.82576 - 6.25542I$	$-3.51359 + 5.00794I$
$u = -0.397411 + 0.909180I$ $a = 0.535050 + 0.552383I$ $b = 0.252207 + 0.450516I$	$4.33752 - 0.13788I$	$-1.94233 - 0.17804I$
$u = -0.397411 - 0.909180I$ $a = 0.535050 - 0.552383I$ $b = 0.252207 - 0.450516I$	$4.33752 + 0.13788I$	$-1.94233 + 0.17804I$
$u = -0.961508$ $a = 1.04087$ $b = 0.520017$	0.0445346	3.78180
$u = 0.872955 + 0.391799I$ $a = -0.323038 - 1.284040I$ $b = 1.55292 + 0.84258I$	$-6.98893 - 5.61250I$	$-13.5942 + 7.8509I$
$u = 0.872955 - 0.391799I$ $a = -0.323038 + 1.284040I$ $b = 1.55292 - 0.84258I$	$-6.98893 + 5.61250I$	$-13.5942 - 7.8509I$
$u = -0.977976 + 0.506225I$ $a = -0.445016 + 1.128470I$ $b = 1.07432 - 0.99007I$	$-5.53290 + 2.77009I$	$-10.96973 - 6.70873I$
$u = -0.977976 - 0.506225I$ $a = -0.445016 - 1.128470I$ $b = 1.07432 + 0.99007I$	$-5.53290 - 2.77009I$	$-10.96973 + 6.70873I$
$u = -0.569838 + 0.674226I$ $a = -1.15917 + 1.45654I$ $b = 0.980600 - 0.294865I$	$-3.04705 + 4.07672I$	$-5.80689 - 10.51567I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.569838-0.674226I$ $a=-1.15917-1.45654I$ $b=\ \ 0.980600+0.294865I$	$-3.04705-4.07672I$	$-5.80689+10.51567I$
$u=\ \ 0.568784+0.293534I$ $a=\ \ 0.16725-2.08764I$ $b=\ \ 1.287630-0.060312I$	$-5.24112+2.07673I$	$-6.26908-7.23881I$
$u=\ \ 0.568784-0.293534I$ $a=\ \ 0.16725+2.08764I$ $b=\ \ 1.287630+0.060312I$	$-5.24112-2.07673I$	$-6.26908+7.23881I$
$u=\ \ 1.42807+0.41817I$ $a=\ \ 0.000706+0.731151I$ $b=-1.148590+0.004763I$	$-8.86000+1.96377I$	$-10.83420-2.39028I$
$u=\ \ 1.42807-0.41817I$ $a=\ \ 0.000706-0.731151I$ $b=-1.148590-0.004763I$	$-8.86000-1.96377I$	$-10.83420+2.39028I$
$u=\ \ 1.48753+0.16424I$ $a=-0.075659+0.763221I$ $b=-1.199090-0.600094I$	$-9.27667-4.28031I$	$-11.14224+4.83692I$
$u=\ \ 1.48753-0.16424I$ $a=-0.075659-0.763221I$ $b=-1.199090+0.600094I$	$-9.27667+4.28031I$	$-11.14224-4.83692I$
$u=-1.66536+0.15472I$ $a=-0.102078-0.714089I$ $b=-0.841750+0.536468I$	$-7.98540+0.49241I$	$-7.97071-0.07690I$
$u=-1.66536-0.15472I$ $a=-0.102078+0.714089I$ $b=-0.841750-0.536468I$	$-7.98540-0.49241I$	$-7.97071+0.07690I$
$u=-1.62734+0.46856I$ $a=-0.023907-0.681032I$ $b=-0.856175+0.112603I$	$-7.54516+2.39900I$	$-7.00245-3.48589I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.62734-0.46856I$ $a=-0.023907+0.681032I$ $b=-0.856175-0.112603I$	$-7.54516-2.39900I$	$-7.00245+3.48589I$
$u=-0.235742+0.140970I$ $a=\ \ 0.460643-0.882128I$ $b=\ \ 0.488678-0.957391I$	$-1.41139+1.89306I$	$-5.84545+1.64063I$
$u=-0.235742-0.140970I$ $a=\ \ 0.460643+0.882128I$ $b=\ \ 0.488678+0.957391I$	$-1.41139-1.89306I$	$-5.84545-1.64063I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{23}-11u^{22}+\cdots+16u-1)(u^{74}+24u^{73}+\cdots+43970u+2209)$
c_2	$(u^{23}+u^{22}+\cdots+8u^2-1)(u^{74}+4u^{73}+\cdots+52u+47)$
c_3	$(u^{23}-u^{22}+\cdots+4u-1)(u^{74}+29u^{72}+\cdots-70400u-24287)$
c_4	$(u^{23}+10u^{21}+\cdots-15u^2-1)(u^{74}+3u^{73}+\cdots-43360u-4517)$
c_5	$(u^{23}-u^{22}+\cdots-8u^2+1)(u^{74}+4u^{73}+\cdots+52u+47)$
c_6	$(u^{23}-4u^{22}+\cdots+4u-1)(u^{74}+3u^{73}+\cdots-132u+2447)$
c_7	$(u^{23}+3u^{22}+\cdots+6u+1)(u^{74}-18u^{72}+\cdots+13014u-2863)$
c_8	$(u^{23}+3u^{22}+\cdots+10u^2+1)(u^{74}+4u^{73}+\cdots-148u-7)$
c_9	$(u^{23}+4u^{22}+\cdots+4u+1)(u^{74}+3u^{73}+\cdots-132u+2447)$
c_{10}	$(u^{23}+10u^{21}+\cdots+15u^2+1)(u^{74}+3u^{73}+\cdots-43360u-4517)$
c_{11}, c_{12}	$(u^{23}-3u^{22}+\cdots-10u^2-1)(u^{74}+4u^{73}+\cdots-148u-7)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{23}+13y^{22}+\cdots+24y-1)$ $\cdot(y^{74}+64y^{73}+\cdots-202684506y+4879681)$
c_2, c_5	$(y^{23}-11y^{22}+\cdots+16y-1)(y^{74}-24y^{73}+\cdots-43970y+2209)$
c_3	$(y^{23}-9y^{22}+\cdots-16y-1)$ $\cdot(y^{74}+58y^{73}+\cdots-49646717274y+589858369)$
c_4, c_{10}	$(y^{23}+20y^{22}+\cdots-30y-1)$ $\cdot(y^{74}+43y^{73}+\cdots+78391260y+20403289)$
c_6, c_9	$(y^{23}-14y^{22}+\cdots+2y-1)$ $\cdot(y^{74}-39y^{73}+\cdots-103437432y+5987809)$
c_7	$(y^{23}-19y^{22}+\cdots+18y-1)$ $\cdot(y^{74}-36y^{73}+\cdots-172879960y+8196769)$
c_8, c_{11}, c_{12}	$(y^{23}+19y^{22}+\cdots-20y-1)(y^{74}+26y^{73}+\cdots-6546y+49)$