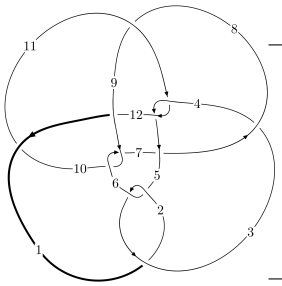
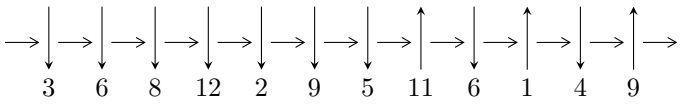
$12n_{0427}$ $(K12n_{0427})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -9.07936 \times 10^{110} u^{78} + 8.79010 \times 10^{109} u^{77} + \cdots + 6.15846 \times 10^{109} b - 9.76189 \times 10^{110},$$
$$5.98068 \times 10^{109} u^{78} - 1.62667 \times 10^{110} u^{77} + \cdots + 6.15846 \times 10^{109} a + 1.72158 \times 10^{110},\ u^{79} - u^{78} + \cdots - 5u -$$
$$I_2^u = \langle -12u^{22} + 36u^{21} + \cdots + 29b + 62,\ 17u^{22} + 65u^{21} + \cdots + 29a + 178,\ u^{23} - 6u^{21} + \cdots + 3u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 102 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. $\boldsymbol{I_1^u = \langle -9.08 \times 10^{110} u^{78} + 8.79 \times 10^{109} u^{77} + \cdots + 6.16 \times 10^{109} b - 9.76 \times 10^{110},\ 5.98 \times 10^{109} u^{78} - 1.63 \times 10^{110} u^{77} + \cdots + 6.16 \times 10^{109} a + 1.72 \times 10^{110},\ u^{79} - u^{78} + \cdots - 5u - 1 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.971132u^{78} + 2.64136u^{77} + \cdots + 6.04319u - 2.79547 \\ 14.7429u^{78} - 1.42732u^{77} + \cdots + 94.4842u + 15.8512 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 11.8768u^{78} - 3.37720u^{77} + \cdots + 83.6913u + 11.1756 \\ 11.9659u^{78} - 4.59087u^{77} + \cdots + 116.379u + 18.6517 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.971132u^{78} + 2.64136u^{77} + \cdots + 6.04319u - 2.79547 \\ 16.3558u^{78} - 0.971234u^{77} + \cdots + 101.864u + 17.5214 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.810554u^{78} + 3.36782u^{77} + \cdots - 7.29319u - 4.32558 \\ 12.4497u^{78} - 0.403268u^{77} + \cdots + 72.5802u + 12.6725 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} 12.8514u^{78} - 3.04231u^{77} + \cdots + 89.2245u + 12.3001 \\ 12.9406u^{78} - 4.25598u^{77} + \cdots + 121.912u + 19.7762 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -14.4160u^{78} + 5.24384u^{77} + \cdots - 95.6278u - 14.3701 \\ -11.5538u^{78} + 3.34984u^{77} + \cdots - 112.598u - 17.7373 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 17.1980u^{78} - 7.17604u^{77} + \cdots + 116.184u + 19.2207 \\ 6.15055u^{78} - 3.28266u^{77} + \cdots + 78.6335u + 11.8437 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 13.0730u^{78} - 4.80433u^{77} + \cdots + 106.377u + 11.6389$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{79}+47u^{78}+\cdots-15u+1$
c_2, c_5	$u^{79}+u^{78}+\cdots-5u+1$
c_3	$u^{79}+2u^{78}+\cdots-1585u-751$
c_4, c_{11}	$u^{79}+u^{78}+\cdots-95u-17$
c_6, c_9	$u^{79}+8u^{78}+\cdots+228781u+27293$
c_7	$u^{79}-10u^{78}+\cdots+105789720u-12203621$
c_8	$u^{79}+9u^{78}+\cdots+87u+1$
c_{10}	$u^{79}+6u^{78}+\cdots+180673434u+11333737$
c_{12}	$u^{79}-3u^{78}+\cdots-427561u+16969$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{79} - 23y^{78} + \cdots + 201y - 1$
c_2, c_5	$y^{79} - 47y^{78} + \cdots - 15y - 1$
c_3	$y^{79} - 18y^{78} + \cdots + 14546249y - 564001$
c_4, c_{11}	$y^{79} - 59y^{78} + \cdots - 10729y - 289$
c_6, c_9	$y^{79} - 86y^{78} + \cdots + 37605309847y - 744907849$
c_7	$y^{79} - 74y^{78} + \cdots + 3831097413487084y - 148928365511641$
c_8	$y^{79} + 17y^{78} + \cdots + 4035y - 1$
c_{10}	$y^{79} + 72y^{78} + \cdots + 6604146335611458y - 128453594385169$
c_{12}	$y^{79} + 57y^{78} + \cdots + 62831435943y - 287946961$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.124050+0.993308I$ $a=\ \ 0.04579-1.50731I$ $b=-0.099183+0.105938I$	$-3.53096-5.44418I$	0
$u=-0.124050-0.993308I$ $a=\ \ 0.04579+1.50731I$ $b=-0.099183-0.105938I$	$-3.53096+5.44418I$	0
$u=-1.00792$ $a=\ \ 1.83576$ $b=\ \ 3.13845$	-6.57376	0
$u=\ \ 0.124459+1.005840I$ $a=-0.20988-1.77449I$ $b=\ \ 0.0137860-0.0597242I$	$-8.55740+11.15110I$	0
$u=\ \ 0.124459-1.005840I$ $a=-0.20988+1.77449I$ $b=\ \ 0.0137860+0.0597242I$	$-8.55740-11.15110I$	0
$u=\ \ 0.144077+0.963515I$ $a=\ \ 0.42273-1.45073I$ $b=\ \ 0.385199+0.154386I$	$-7.42668-1.34593I$	0
$u=\ \ 0.144077-0.963515I$ $a=\ \ 0.42273+1.45073I$ $b=\ \ 0.385199-0.154386I$	$-7.42668+1.34593I$	0
$u=\ \ 0.860189+0.441139I$ $a=\ \ 1.057870+0.073073I$ $b=\ \ 0.93330+1.20699I$	$-3.06653+2.05333I$	0
$u=\ \ 0.860189-0.441139I$ $a=\ \ 1.057870-0.073073I$ $b=\ \ 0.93330-1.20699I$	$-3.06653-2.05333I$	0
$u=-0.996413+0.319112I$ $a=\ \ 0.650609-1.213410I$ $b=\ \ 0.649781-0.828840I$	$-0.44095+4.14481I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.996413-0.319112I$ $a=\ \ 0.650609+1.213410I$ $b=\ \ 0.649781+0.828840I$	$-0.44095-4.14481I$	0
$u=\ \ 0.655543+0.819980I$ $a=\ \ 0.255857+0.086779I$ $b=\ \ 0.588626-0.201877I$	$-0.66585+2.44129I$	0
$u=\ \ 0.655543-0.819980I$ $a=\ \ 0.255857-0.086779I$ $b=\ \ 0.588626+0.201877I$	$-0.66585-2.44129I$	0
$u=\ \ 0.967265+0.427782I$ $a=-0.488566-0.371683I$ $b=\ \ 0.273554+0.305272I$	$-3.57853-3.77822I$	0
$u=\ \ 0.967265-0.427782I$ $a=-0.488566+0.371683I$ $b=\ \ 0.273554-0.305272I$	$-3.57853+3.77822I$	0
$u=-0.777640+0.524131I$ $a=\ \ 0.060922+1.178250I$ $b=-1.05995+1.07375I$	$-1.88772-1.48161I$	$-6.00000+0.I$
$u=-0.777640-0.524131I$ $a=\ \ 0.060922-1.178250I$ $b=-1.05995-1.07375I$	$-1.88772+1.48161I$	$-6.00000+0.I$
$u=\ \ 0.874391+0.252735I$ $a=\ \ 0.106856+0.911284I$ $b=\ \ 1.077430+0.356830I$	$-0.337925-0.256564I$	$-8.30782+3.39103I$
$u=\ \ 0.874391-0.252735I$ $a=\ \ 0.106856-0.911284I$ $b=\ \ 1.077430-0.356830I$	$-0.337925+0.256564I$	$-8.30782-3.39103I$
$u=-0.148498+1.081220I$ $a=-0.15032+1.59909I$ $b=-0.284344+0.412088I$	$-6.06830-1.45699I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.148498-1.081220I$ $a=-0.15032-1.59909I$ $b=-0.284344-0.412088I$	$-6.06830+1.45699I$	0
$u=0.111700+0.880869I$ $a=-0.27307+1.59148I$ $b=0.148200+0.097888I$	$-2.96592-0.33851I$	$-4.86982+0.I$
$u=0.111700-0.880869I$ $a=-0.27307-1.59148I$ $b=0.148200-0.097888I$	$-2.96592+0.33851I$	$-4.86982+0.I$
$u=1.095650+0.199276I$ $a=-0.233611+0.299177I$ $b=-0.413784-1.166340I$	$-1.65389-2.40002I$	0
$u=1.095650-0.199276I$ $a=-0.233611-0.299177I$ $b=-0.413784+1.166340I$	$-1.65389+2.40002I$	0
$u=-0.870987+0.694280I$ $a=-0.242416-0.409787I$ $b=-0.672718-0.142168I$	$2.25413+2.59808I$	0
$u=-0.870987-0.694280I$ $a=-0.242416+0.409787I$ $b=-0.672718+0.142168I$	$2.25413-2.59808I$	0
$u=1.090130+0.235481I$ $a=-0.99350-1.82783I$ $b=-1.34961-1.90635I$	$-4.58545-6.42996I$	0
$u=1.090130-0.235481I$ $a=-0.99350+1.82783I$ $b=-1.34961+1.90635I$	$-4.58545+6.42996I$	0
$u=-1.087020+0.301405I$ $a=0.377902-0.095022I$ $b=1.47034-1.51852I$	$-4.52644+7.46779I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.087020-0.301405I$ $a=\ \ 0.377902+0.095022I$ $b=\ \ 1.47034+1.51852I$	$-4.52644-7.46779I$	0
$u=-0.870532+0.729133I$ $a=-0.408189-0.291159I$ $b=-0.415327+0.247680I$	$2.25574+2.83763I$	0
$u=-0.870532-0.729133I$ $a=-0.408189+0.291159I$ $b=-0.415327-0.247680I$	$2.25574-2.83763I$	0
$u=\ \ 0.854887+0.086205I$ $a=-0.824990-0.760452I$ $b=-2.18721+0.40335I$	$0.20270-1.63900I$	$-6.18579+2.68412I$
$u=\ \ 0.854887-0.086205I$ $a=-0.824990+0.760452I$ $b=-2.18721-0.40335I$	$0.20270+1.63900I$	$-6.18579-2.68412I$
$u=-0.011138+0.799292I$ $a=\ \ 0.75122+2.24520I$ $b=\ \ 0.0809696+0.0150184I$	$-6.90468+2.02476I$	$-12.86621-3.49188I$
$u=-0.011138-0.799292I$ $a=\ \ 0.75122-2.24520I$ $b=\ \ 0.0809696-0.0150184I$	$-6.90468-2.02476I$	$-12.86621+3.49188I$
$u=-1.205070+0.075848I$ $a=\ \ 0.352959+0.793234I$ $b=\ \ 0.249679+0.319589I$	$-6.98811-1.03838I$	0
$u=-1.205070-0.075848I$ $a=\ \ 0.352959-0.793234I$ $b=\ \ 0.249679-0.319589I$	$-6.98811+1.03838I$	0
$u=-0.714612+0.322053I$ $a=\ \ 1.17385-1.10692I$ $b=\ \ 1.122240+0.616705I$	$-1.62856+5.22847I$	$-5.24615-6.25825I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.714612-0.322053I$ $a=\ 1.17385+1.10692I$ $b=\ 1.122240-0.616705I$	$-1.62856-5.22847I$	$-5.24615+6.25825I$
$u=\ 0.756993+0.152949I$ $a=\ 0.42209-2.06915I$ $b=\ 1.42709-0.91137I$	$-2.35393-5.09247I$	$-5.03911+4.20229I$
$u=\ 0.756993-0.152949I$ $a=\ 0.42209+2.06915I$ $b=\ 1.42709+0.91137I$	$-2.35393+5.09247I$	$-5.03911-4.20229I$
$u=-0.759300$ $a=\ 1.70752$ $b=\ 0.277959$	-5.85282	-17.3230
$u=\ 1.002520+0.747637I$ $a=\ 0.169318-0.323597I$ $b=-0.213329+0.028211I$	$-1.68225-8.27881I$	0
$u=\ 1.002520-0.747637I$ $a=\ 0.169318+0.323597I$ $b=-0.213329-0.028211I$	$-1.68225+8.27881I$	0
$u=-0.690200+0.252371I$ $a=-0.650362-1.021330I$ $b=-1.241910-0.053379I$	$1.59486+1.49978I$	$-0.07297-3.73762I$
$u=-0.690200-0.252371I$ $a=-0.650362+1.021330I$ $b=-1.241910+0.053379I$	$1.59486-1.49978I$	$-0.07297+3.73762I$
$u=-1.208530+0.474510I$ $a=\ 1.40585+0.74277I$ $b=\ 2.77928+1.38636I$	$-10.38010+2.53397I$	0
$u=-1.208530-0.474510I$ $a=\ 1.40585-0.74277I$ $b=\ 2.77928-1.38636I$	$-10.38010-2.53397I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.224290 + 0.452162I$ $a = -1.73180 - 0.11246I$ $b = -3.45824 - 0.11592I$	$-10.54610 - 6.52041I$	0
$u = 1.224290 - 0.452162I$ $a = -1.73180 + 0.11246I$ $b = -3.45824 + 0.11592I$	$-10.54610 + 6.52041I$	0
$u = 0.374424 + 0.557104I$ $a = -0.298573 + 0.266159I$ $b = 0.242278 + 0.712052I$	$-1.95304 - 0.10654I$	$-6.12961 + 0.27546I$
$u = 0.374424 - 0.557104I$ $a = -0.298573 - 0.266159I$ $b = 0.242278 - 0.712052I$	$-1.95304 + 0.10654I$	$-6.12961 - 0.27546I$
$u = -1.265280 + 0.418387I$ $a = 1.407490 + 0.110564I$ $b = 2.67014 + 0.03204I$	$-7.15565 + 4.82155I$	0
$u = -1.265280 - 0.418387I$ $a = 1.407490 - 0.110564I$ $b = 2.67014 - 0.03204I$	$-7.15565 - 4.82155I$	0
$u = 1.244170 + 0.526496I$ $a = -1.215800 + 0.223081I$ $b = -2.34833 + 0.63093I$	$-6.36388 - 4.79049I$	0
$u = 1.244170 - 0.526496I$ $a = -1.215800 - 0.223081I$ $b = -2.34833 - 0.63093I$	$-6.36388 + 4.79049I$	0
$u = -1.318950 + 0.404408I$ $a = -1.115090 + 0.101971I$ $b = -2.54344 - 0.28658I$	$-12.04730 + 6.05783I$	0
$u = -1.318950 - 0.404408I$ $a = -1.115090 - 0.101971I$ $b = -2.54344 + 0.28658I$	$-12.04730 - 6.05783I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.275450 + 0.561649I$ $a = 1.108870 - 0.514663I$ $b = 2.30481 - 0.53958I$	$-10.87960 - 4.18016I$	0
$u = 1.275450 - 0.561649I$ $a = 1.108870 + 0.514663I$ $b = 2.30481 + 0.53958I$	$-10.87960 + 4.18016I$	0
$u = 0.604300$ $a = -0.346901$ $b = 0.407027$	-0.845319	-12.4810
$u = -1.283240 + 0.553621I$ $a = -1.264520 - 0.190049I$ $b = -2.61620 - 0.22912I$	$-7.10608 + 10.99590I$	0
$u = -1.283240 - 0.553621I$ $a = -1.264520 + 0.190049I$ $b = -2.61620 + 0.22912I$	$-7.10608 - 10.99590I$	0
$u = 1.340750 + 0.402994I$ $a = 1.098720 - 0.190005I$ $b = 2.39136 - 0.49670I$	$-8.23565 + 0.56859I$	0
$u = 1.340750 - 0.402994I$ $a = 1.098720 + 0.190005I$ $b = 2.39136 + 0.49670I$	$-8.23565 - 0.56859I$	0
$u = 1.285480 + 0.558802I$ $a = 1.49634 - 0.09704I$ $b = 2.91711 - 0.19888I$	$-12.1399 - 16.7524I$	0
$u = 1.285480 - 0.558802I$ $a = 1.49634 + 0.09704I$ $b = 2.91711 + 0.19888I$	$-12.1399 + 16.7524I$	0
$u = -1.35867 + 0.40255I$ $a = -1.282670 - 0.351429I$ $b = -2.48277 - 0.74627I$	$-13.3361 - 6.1955I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.35867-0.40255I$ $a=-1.282670+0.351429I$ $b=-2.48277+0.74627I$	$-13.3361+6.1955I$	0
$u=\ \ 1.37038+0.38850I$ $a=-1.53013+0.38050I$ $b=-2.45200+0.42466I$	$-11.12530-3.60644I$	0
$u=\ \ 1.37038-0.38850I$ $a=-1.53013-0.38050I$ $b=-2.45200-0.42466I$	$-11.12530+3.60644I$	0
$u=-1.32407+0.56602I$ $a=\ \ 1.383350-0.123531I$ $b=\ \ 2.40408+0.15262I$	$-9.81222+7.35945I$	0
$u=-1.32407-0.56602I$ $a=\ \ 1.383350+0.123531I$ $b=\ \ 2.40408-0.15262I$	$-9.81222-7.35945I$	0
$u=-0.253383+0.206686I$ $a=-1.85540+1.55580I$ $b=-0.751106+0.542245I$	$1.37257-1.37746I$	$0.75336+3.11081I$
$u=-0.253383-0.206686I$ $a=-1.85540-1.55580I$ $b=-0.751106-0.542245I$	$1.37257+1.37746I$	$0.75336-3.11081I$
$u=-0.063007+0.180194I$ $a=-5.07786+2.45613I$ $b=\ \ 0.548490-0.799172I$	$-1.92545-4.88532I$	$-6.44213+5.94399I$
$u=-0.063007-0.180194I$ $a=-5.07786-2.45613I$ $b=\ \ 0.548490+0.799172I$	$-1.92545+4.88532I$	$-6.44213-5.94399I$

II. $I_2^u = \langle -12u^{22} + 36u^{21} + \cdots + 29b + 62,\ 17u^{22} + 65u^{21} + \cdots + 29a + 178,\ u^{23} - 6u^{21} + \cdots + 3u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.586207u^{22} - 2.24138u^{21} + \cdots - 4.20690u - 6.13793 \\ 0.413793u^{22} - 1.24138u^{21} + \cdots - 3.20690u - 2.13793 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.06897u^{22} - 2.79310u^{21} + \cdots + 17.0345u - 14.3103 \\ -5.79310u^{22} + 3.37931u^{21} + \cdots - 8.10345u - 1.06897 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.586207u^{22} - 2.24138u^{21} + \cdots - 4.20690u - 6.13793 \\ 4.13793u^{22} - 4.41379u^{21} + \cdots + 2.93103u - 4.37931 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -3.89655u^{22} - 1.31034u^{21} + \cdots - 12.5517u - 7.03448 \\ -0.379310u^{22} - 0.862069u^{21} + \cdots - 10.3103u - 1.20690 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} 3.44828u^{22} - 6.34483u^{21} + \cdots + 40.2759u - 20.4828 \\ -1.27586u^{22} - 0.172414u^{21} + \cdots + 15.1379u - 7.24138 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 4.58621u^{22} + 2.24138u^{21} + \cdots + 9.20690u + 7.13793 \\ -2.03448u^{22} + 5.10345u^{21} + \cdots - 8.48276u + 4.34483 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 6.51724u^{22} + 0.448276u^{21} + \cdots + 13.2414u + 9.82759 \\ 2.86207u^{22} - 2.58621u^{21} + \cdots + 13.0690u - 0.620690 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{336}{29}u^{22} - \frac{486}{29}u^{21} + \cdots + \frac{1079}{29}u - \frac{605}{29}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{23} - 12u^{22} + \cdots + 17u - 1$
c_2	$u^{23} - 6u^{21} + \cdots + 3u - 1$
c_3	$u^{23} + u^{22} + \cdots + u + 1$
c_4	$u^{23} - 8u^{21} + \cdots - u + 5$
c_5	$u^{23} - 6u^{21} + \cdots + 3u + 1$
c_6	$u^{23} - 15u^{22} + \cdots + 51u - 5$
c_7	$u^{23} + 3u^{22} + \cdots - 24u + 19$
c_8	$u^{23} + 8u^{22} + \cdots - 3u - 1$
c_9	$u^{23} + 15u^{22} + \cdots + 51u + 5$
c_{10}	$u^{23} - u^{22} + \cdots + 40u - 19$
c_{11}	$u^{23} - 8u^{21} + \cdots - u - 5$
c_{12}	$u^{23} + 4u^{22} + \cdots - 7u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{23} + 4y^{22} + \cdots + 69y - 1$
c_2, c_5	$y^{23} - 12y^{22} + \cdots + 17y - 1$
c_3	$y^{23} + y^{22} + \cdots + y - 1$
c_4, c_{11}	$y^{23} - 16y^{22} + \cdots + 11y - 25$
c_6, c_9	$y^{23} - 7y^{22} + \cdots - 329y - 25$
c_7	$y^{23} - 19y^{22} + \cdots + 1184y - 361$
c_8	$y^{23} + 24y^{21} + \cdots + 11y - 1$
c_{10}	$y^{23} + 7y^{22} + \cdots + 2018y - 361$
c_{12}	$y^{23} + 12y^{22} + \cdots + 11y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.741033 + 0.707784I$ $a = 0.346463 + 0.724986I$ $b = 0.292617 + 0.066396I$	$0.01294 + 3.03667I$	$-3.29385 - 4.70963I$
$u = 0.741033 - 0.707784I$ $a = 0.346463 - 0.724986I$ $b = 0.292617 - 0.066396I$	$0.01294 - 3.03667I$	$-3.29385 + 4.70963I$
$u = 0.999976 + 0.286700I$ $a = -0.466877 - 0.796422I$ $b = -0.787607 + 0.431045I$	$-0.49287 - 2.88561I$	$-6.13993 + 4.79776I$
$u = 0.999976 - 0.286700I$ $a = -0.466877 + 0.796422I$ $b = -0.787607 - 0.431045I$	$-0.49287 + 2.88561I$	$-6.13993 - 4.79776I$
$u = -0.908909 + 0.291662I$ $a = -0.687671 + 1.171800I$ $b = -1.00814 + 2.16111I$	$-3.10340 - 3.51447I$	$-10.21023 + 3.16506I$
$u = -0.908909 - 0.291662I$ $a = -0.687671 - 1.171800I$ $b = -1.00814 - 2.16111I$	$-3.10340 + 3.51447I$	$-10.21023 - 3.16506I$
$u = -0.806475 + 0.679820I$ $a = 0.577898 + 0.014874I$ $b = 0.708260 - 0.504395I$	$2.69708 + 3.05485I$	$1.87315 - 8.21021I$
$u = -0.806475 - 0.679820I$ $a = 0.577898 - 0.014874I$ $b = 0.708260 + 0.504395I$	$2.69708 - 3.05485I$	$1.87315 + 8.21021I$
$u = -0.891878 + 0.236181I$ $a = 0.51820 - 1.71239I$ $b = -0.178682 - 0.443321I$	$-2.96370 + 5.82303I$	$-10.5506 - 9.5130I$
$u = -0.891878 - 0.236181I$ $a = 0.51820 + 1.71239I$ $b = -0.178682 + 0.443321I$	$-2.96370 - 5.82303I$	$-10.5506 + 9.5130I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.042903+0.915541I$ $a=-0.28646+1.73775I$ $b=-0.296665+0.230996I$	$-5.34196-1.12606I$	$-6.62744-0.03733I$
$u=-0.042903-0.915541I$ $a=-0.28646-1.73775I$ $b=-0.296665-0.230996I$	$-5.34196+1.12606I$	$-6.62744+0.03733I$
$u=0.958656+0.645813I$ $a=-0.397487-0.543897I$ $b=-0.819521-0.826094I$	$-0.66948-8.24106I$	$-4.12296+7.31736I$
$u=0.958656-0.645813I$ $a=-0.397487+0.543897I$ $b=-0.819521+0.826094I$	$-0.66948+8.24106I$	$-4.12296-7.31736I$
$u=-0.932276+0.684370I$ $a=0.220474+0.637743I$ $b=0.614045+0.246642I$	$2.30961+2.21517I$	$-5.35115+8.29705I$
$u=-0.932276-0.684370I$ $a=0.220474-0.637743I$ $b=0.614045-0.246642I$	$2.30961-2.21517I$	$-5.35115-8.29705I$
$u=0.732993+0.234436I$ $a=0.104383+0.620473I$ $b=1.38315+0.95696I$	$0.500246+0.529647I$	$-2.76731+1.70335I$
$u=0.732993-0.234436I$ $a=0.104383-0.620473I$ $b=1.38315-0.95696I$	$0.500246-0.529647I$	$-2.76731-1.70335I$
$u=1.249510+0.470199I$ $a=-1.35976+0.50699I$ $b=-2.56148+0.64724I$	$-9.21032-3.62425I$	$-10.21319+2.92816I$
$u=1.249510-0.470199I$ $a=-1.35976-0.50699I$ $b=-2.56148-0.64724I$	$-9.21032+3.62425I$	$-10.21319-2.92816I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.274960+0.459002I$ $a=\ \ 1.45276-0.13786I$ $b=\ \ 2.72479-0.00258I$	$-9.24494+6.08267I$	$-10.44404-3.52440I$
$u=-1.274960-0.459002I$ $a=\ \ 1.45276+0.13786I$ $b=\ \ 2.72479+0.00258I$	$-9.24494-6.08267I$	$-10.44404+3.52440I$
$u=\ \ 0.350478$ $a=-4.04386$ $b=-1.14153$	-4.91416	-7.30480

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{23}-12u^{22}+\cdots+17u-1)(u^{79}+47u^{78}+\cdots-15u+1)$
c_2	$(u^{23}-6u^{21}+\cdots+3u-1)(u^{79}+u^{78}+\cdots-5u+1)$
c_3	$(u^{23}+u^{22}+\cdots+u+1)(u^{79}+2u^{78}+\cdots-1585u-751)$
c_4	$(u^{23}-8u^{21}+\cdots-u+5)(u^{79}+u^{78}+\cdots-95u-17)$
c_5	$(u^{23}-6u^{21}+\cdots+3u+1)(u^{79}+u^{78}+\cdots-5u+1)$
c_6	$(u^{23}-15u^{22}+\cdots+51u-5)(u^{79}+8u^{78}+\cdots+228781u+27293)$
c_7	$(u^{23}+3u^{22}+\cdots-24u+19)$ $\cdot(u^{79}-10u^{78}+\cdots+105789720u-12203621)$
c_8	$(u^{23}+8u^{22}+\cdots-3u-1)(u^{79}+9u^{78}+\cdots+87u+1)$
c_9	$(u^{23}+15u^{22}+\cdots+51u+5)(u^{79}+8u^{78}+\cdots+228781u+27293)$
c_{10}	$(u^{23}-u^{22}+\cdots+40u-19)$ $\cdot(u^{79}+6u^{78}+\cdots+180673434u+11333737)$
c_{11}	$(u^{23}-8u^{21}+\cdots-u-5)(u^{79}+u^{78}+\cdots-95u-17)$
c_{12}	$(u^{23}+4u^{22}+\cdots-7u+1)(u^{79}-3u^{78}+\cdots-427561u+16969)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{23}+4y^{22}+\cdots+69y-1)(y^{79}-23y^{78}+\cdots+201y-1)$
c_2, c_5	$(y^{23}-12y^{22}+\cdots+17y-1)(y^{79}-47y^{78}+\cdots-15y-1)$
c_3	$(y^{23}+y^{22}+\cdots+y-1)(y^{79}-18y^{78}+\cdots+1.45462\times10^{7}y-564001)$
c_4, c_{11}	$(y^{23}-16y^{22}+\cdots+11y-25)(y^{79}-59y^{78}+\cdots-10729y-289)$
c_6, c_9	$(y^{23}-7y^{22}+\cdots-329y-25)$ $\cdot(y^{79}-86y^{78}+\cdots+37605309847y-744907849)$
c_7	$(y^{23}-19y^{22}+\cdots+1184y-361)$ $\cdot(y^{79}-74y^{78}+\cdots+3831097413487084y-148928365511641)$
c_8	$(y^{23}+24y^{21}+\cdots+11y-1)(y^{79}+17y^{78}+\cdots+4035y-1)$
c_{10}	$(y^{23}+7y^{22}+\cdots+2018y-361)$ $\cdot(y^{79}+72y^{78}+\cdots+6604146335611458y-128453594385169)$
c_{12}	$(y^{23}+12y^{22}+\cdots+11y-1)$ $\cdot(y^{79}+57y^{78}+\cdots+62831435943y-287946961)$