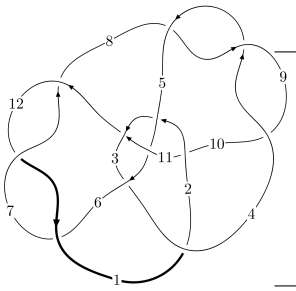
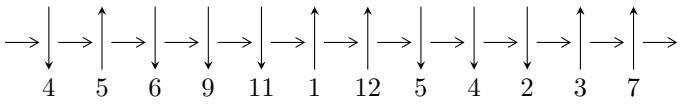
$12n_{0727}$ $(K12n_{0727})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -3.94440 \times 10^{300} u^{70} + 2.53784 \times 10^{301} u^{69} + \cdots + 3.21640 \times 10^{303} b + 1.14997 \times 10^{304}, \\ & -1.18258 \times 10^{304} u^{70} + 7.69862 \times 10^{304} u^{69} + \cdots + 3.29038 \times 10^{306} a + 3.83134 \times 10^{307}, \\ & u^{71} - 6u^{70} + \cdots - 4114u - 1331 \rangle \\ I_2^u = \langle & 1.81727 \times 10^{28} u^{25} - 2.58039 \times 10^{29} u^{24} + \cdots + 1.41382 \times 10^{28} b - 4.03240 \times 10^{29}, \\ & 7.46795 \times 10^{29} u^{25} - 1.06112 \times 10^{31} u^{24} + \cdots + 2.40350 \times 10^{29} a - 1.63428 \times 10^{31}, \\ & u^{26} - 15u^{25} + \cdots - 101u + 17 \rangle \end{aligned}$$

* 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. $\boldsymbol{I_1^u = \langle -3.94 \times 10^{300} u^{70} + 2.54 \times 10^{301} u^{69} + \cdots + 3.22 \times 10^{303} b + 1.15 \times 10^{304},\ -1.18 \times 10^{304} u^{70} + 7.70 \times 10^{304} u^{69} + \cdots + 3.29 \times 10^{306} a + 3.83 \times 10^{307},\ u^{71} - 6u^{70} + \cdots - 4114u - 1331 \rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.00359405u^{70} - 0.0233974u^{69} + \cdots - 10.2765u - 11.6441 \\ 0.00122634u^{70} - 0.00789030u^{69} + \cdots - 6.17758u - 3.57534 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.00598596u^{70} - 0.0384900u^{69} + \cdots - 20.1705u - 18.3721 \\ -0.000291346u^{70} + 0.00211473u^{69} + \cdots + 2.72153u + 0.00758362 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.00359405u^{70} - 0.0233974u^{69} + \cdots - 10.2765u - 11.6441 \\ 0.00223421u^{70} - 0.0144905u^{69} + \cdots - 8.93510u - 6.01514 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.00236772u^{70} - 0.0155071u^{69} + \cdots - 4.09892u - 8.06874 \\ 0.00196736u^{70} - 0.0127690u^{69} + \cdots - 8.37761u - 5.30669 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.000944024u^{70} - 0.00534102u^{69} + \cdots + 2.29413u - 4.92832 \\ -0.00266769u^{70} + 0.0173963u^{69} + \cdots + 10.1384u + 5.89187 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.00172367u^{70} + 0.0120553u^{69} + \cdots + 12.4325u + 0.963549 \\ -0.00266769u^{70} + 0.0173963u^{69} + \cdots + 10.1384u + 5.89187 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.00219214u^{70} + 0.0150659u^{69} + \cdots + 18.3981u + 2.02950 \\ -0.00416424u^{70} + 0.0270500u^{69} + \cdots + 13.2979u + 10.3819 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.00900947u^{70} - 0.0586001u^{69} + \cdots - 17.8826u - 23.4781 \\ 0.00120943u^{70} - 0.00763559u^{69} + \cdots - 2.89220u - 4.68656 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.00145832u^{70} - 0.00974600u^{69} + \cdots - 2.07797u - 3.06258 \\ 0.00371565u^{70} - 0.0241597u^{69} + \cdots - 10.5062u - 9.72889 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.00212616u^{70} - 0.0143000u^{69} + \cdots + 4.47275u - 9.19315$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{71}+6u^{70}+\cdots-4114u+1331$
c_2	$u^{71}+21u^{69}+\cdots-83828u+3624$
c_3	$u^{71}-u^{70}+\cdots-247794u+25577$
c_4, c_8, c_9	$u^{71}+9u^{69}+\cdots+19u-1$
c_5	$u^{71}+u^{70}+\cdots-2u+11$
c_6, c_7, c_{12}	$u^{71}+39u^{69}+\cdots-5u+27$
c_{10}	$u^{71}-34u^{69}+\cdots+56160u+8128$
c_{11}	$u^{71}-4u^{70}+\cdots+1157u+17$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{71} - 78y^{70} + \cdots + 1815484y - 1771561$
c_2	$y^{71} + 42y^{70} + \cdots + 1092384208y - 13133376$
c_3	$y^{71} - 23y^{70} + \cdots + 22971145086y - 654182929$
c_4, c_8, c_9	$y^{71} + 18y^{70} + \cdots + 101y - 1$
c_5	$y^{71} - 5y^{70} + \cdots + 4008y - 121$
c_6, c_7, c_{12}	$y^{71} + 78y^{70} + \cdots - 65369y - 729$
c_{10}	$y^{71} - 68y^{70} + \cdots - 2954669056y - 66064384$
c_{11}	$y^{71} + 20y^{70} + \cdots + 471071y - 289$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.855093+0.691769I$ $a=-0.819852+0.703890I$ $b=\ 0.751162+1.181190I$	$-4.12043-2.13457I$	0
$u=-0.855093-0.691769I$ $a=-0.819852-0.703890I$ $b=\ 0.751162-1.181190I$	$-4.12043+2.13457I$	0
$u=-0.945495+0.576536I$ $a=\ 0.383796-0.492811I$ $b=-0.313568-1.042450I$	$1.80017-2.63067I$	0
$u=-0.945495-0.576536I$ $a=\ 0.383796+0.492811I$ $b=-0.313568+1.042450I$	$1.80017+2.63067I$	0
$u=\ 0.410222+0.694548I$ $a=\ 0.629449+0.468517I$ $b=\ 0.892647-0.752338I$	$1.07011-1.96163I$	$4.17135+0.I$
$u=\ 0.410222-0.694548I$ $a=\ 0.629449-0.468517I$ $b=\ 0.892647+0.752338I$	$1.07011+1.96163I$	$4.17135+0.I$
$u=\ 0.710634+1.047830I$ $a=-0.754572-0.114387I$ $b=-0.168552+0.356847I$	$-4.75391-4.28782I$	0
$u=\ 0.710634-1.047830I$ $a=-0.754572+0.114387I$ $b=-0.168552-0.356847I$	$-4.75391+4.28782I$	0
$u=-0.722568+0.079323I$ $a=\ 0.05240-2.01983I$ $b=-0.108948-0.811922I$	$5.63700-3.03551I$	$11.5234-18.6135I$
$u=-0.722568-0.079323I$ $a=\ 0.05240+2.01983I$ $b=-0.108948+0.811922I$	$5.63700+3.03551I$	$11.5234+18.6135I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.29924$ $a = -0.201632$ $b = -1.10829$	-2.21745	0
$u = 0.421745 + 0.482603I$ $a = 1.286390 - 0.505129I$ $b = 0.17570 + 2.03467I$	$-7.18912 - 6.23246I$	$-7.19469 + 7.21845I$
$u = 0.421745 - 0.482603I$ $a = 1.286390 + 0.505129I$ $b = 0.17570 - 2.03467I$	$-7.18912 + 6.23246I$	$-7.19469 - 7.21845I$
$u = -1.394060 + 0.131721I$ $a = 0.938577 - 0.467693I$ $b = 2.02334 - 0.02777I$	$-13.85970 - 0.07874I$	0
$u = -1.394060 - 0.131721I$ $a = 0.938577 + 0.467693I$ $b = 2.02334 + 0.02777I$	$-13.85970 + 0.07874I$	0
$u = 0.174970 + 0.540137I$ $a = 0.639636 - 0.981256I$ $b = -0.071320 - 0.148905I$	$-1.21580 - 0.98742I$	$-6.40420 + 1.68200I$
$u = 0.174970 - 0.540137I$ $a = 0.639636 + 0.981256I$ $b = -0.071320 + 0.148905I$	$-1.21580 + 0.98742I$	$-6.40420 - 1.68200I$
$u = 0.476772 + 0.258180I$ $a = -1.49190 + 1.16051I$ $b = 0.063631 + 0.926165I$	$-8.00321 + 1.13862I$	$-8.21760 + 1.16511I$
$u = 0.476772 - 0.258180I$ $a = -1.49190 - 1.16051I$ $b = 0.063631 - 0.926165I$	$-8.00321 - 1.13862I$	$-8.21760 - 1.16511I$
$u = -1.42761 + 0.39916I$ $a = -0.864889 + 0.393780I$ $b = -1.89045 + 0.33289I$	$-5.91928 + 4.99041I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.42761-0.39916I$ $a=-0.864889-0.393780I$ $b=-1.89045-0.33289I$	$-5.91928-4.99041I$	0
$u=-1.32126+0.67554I$ $a=\ \ 0.0726928+0.0562535I$ $b=\ \ 0.348804+0.734113I$	$-1.86664-2.54988I$	0
$u=-1.32126-0.67554I$ $a=\ \ 0.0726928-0.0562535I$ $b=\ \ 0.348804-0.734113I$	$-1.86664+2.54988I$	0
$u=-0.479123+0.152614I$ $a=-1.28987+0.59984I$ $b=-0.740321+0.170047I$	$-0.70765+1.68837I$	$-1.63894-3.69018I$
$u=-0.479123-0.152614I$ $a=-1.28987-0.59984I$ $b=-0.740321-0.170047I$	$-0.70765-1.68837I$	$-1.63894+3.69018I$
$u=\ \ 0.27206+1.47654I$ $a=-0.388494+0.277917I$ $b=-0.289408-0.266420I$	$0.11277-4.26226I$	0
$u=\ \ 0.27206-1.47654I$ $a=-0.388494-0.277917I$ $b=-0.289408+0.266420I$	$0.11277+4.26226I$	0
$u=-1.50420+0.03923I$ $a=-0.686049+0.733307I$ $b=-1.58379+0.51372I$	$-5.23867+2.59454I$	0
$u=-1.50420-0.03923I$ $a=-0.686049-0.733307I$ $b=-1.58379-0.51372I$	$-5.23867-2.59454I$	0
$u=-0.487748+0.064878I$ $a=\ \ 1.03010-3.02691I$ $b=-0.711670-0.570558I$	$-3.00603+4.33794I$	$-5.75149-2.20133I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.487748-0.064878I$ $a=\ \ 1.03010+3.02691I$ $b=-0.711670+0.570558I$	$-3.00603-4.33794I$	$-5.75149+2.20133I$
$u=\ \ 1.47327+0.47471I$ $a=-0.938303-0.554952I$ $b=-1.58558-0.11609I$	$-10.53540-5.22803I$	0
$u=\ \ 1.47327-0.47471I$ $a=-0.938303+0.554952I$ $b=-1.58558+0.11609I$	$-10.53540+5.22803I$	0
$u=-1.56403+0.07841I$ $a=\ \ 0.649067+0.652560I$ $b=\ \ 1.61142+0.17827I$	$-6.26383+3.91447I$	0
$u=-1.56403-0.07841I$ $a=\ \ 0.649067-0.652560I$ $b=\ \ 1.61142-0.17827I$	$-6.26383-3.91447I$	0
$u=\ \ 0.382869+0.152364I$ $a=-0.700984-0.217875I$ $b=-0.16005-1.81276I$	$0.89217-2.87299I$	$-12.8712+10.4575I$
$u=\ \ 0.382869-0.152364I$ $a=-0.700984+0.217875I$ $b=-0.16005+1.81276I$	$0.89217+2.87299I$	$-12.8712-10.4575I$
$u=\ \ 0.148157+0.376556I$ $a=\ \ 1.93101+0.10965I$ $b=\ \ 0.023725-0.684740I$	$0.53283-1.57625I$	$-0.35637+4.67830I$
$u=\ \ 0.148157-0.376556I$ $a=\ \ 1.93101-0.10965I$ $b=\ \ 0.023725+0.684740I$	$0.53283+1.57625I$	$-0.35637-4.67830I$
$u=-1.59234+0.18903I$ $a=\ \ 0.687009-0.705876I$ $b=\ \ 1.62510-0.75960I$	$-12.3054+8.0119I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.59234-0.18903I$ $a=\ \ 0.687009+0.705876I$ $b=\ \ 1.62510+0.75960I$	$-12.3054-8.0119I$	0
$u=\ \ 1.10230+1.16672I$ $a=-0.466795-0.288870I$ $b=-1.165100+0.306719I$	$-4.13954-5.68269I$	0
$u=\ \ 1.10230-1.16672I$ $a=-0.466795+0.288870I$ $b=-1.165100-0.306719I$	$-4.13954+5.68269I$	0
$u=-1.61148+0.10779I$ $a=-0.756015-0.575680I$ $b=-1.88784+0.14386I$	$-14.5113+8.0913I$	0
$u=-1.61148-0.10779I$ $a=-0.756015+0.575680I$ $b=-1.88784-0.14386I$	$-14.5113-8.0913I$	0
$u=\ \ 1.46018+0.70741I$ $a=\ \ 0.768889+0.351230I$ $b=\ \ 1.313330+0.199314I$	$-3.54491-4.46297I$	0
$u=\ \ 1.46018-0.70741I$ $a=\ \ 0.768889-0.351230I$ $b=\ \ 1.313330-0.199314I$	$-3.54491+4.46297I$	0
$u=-0.322767+0.162961I$ $a=\ \ 1.33442-3.57982I$ $b=\ \ 0.254043+0.172356I$	$4.14941-3.70094I$	$-11.43399+0.94316I$
$u=-0.322767-0.162961I$ $a=\ \ 1.33442+3.57982I$ $b=\ \ 0.254043-0.172356I$	$4.14941+3.70094I$	$-11.43399-0.94316I$
$u=\ \ 1.65016+0.01664I$ $a=-0.429508+0.544500I$ $b=-1.48683-0.09273I$	$-4.20874+1.34264I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.65016 - 0.01664I$ $a = -0.429508 - 0.544500I$ $b = -1.48683 + 0.09273I$	$-4.20874 - 1.34264I$	0
$u = 1.67418 + 0.32491I$ $a = 0.379399 - 0.718688I$ $b = 2.07435 + 0.18801I$	$-11.38140 + 1.75020I$	0
$u = 1.67418 - 0.32491I$ $a = 0.379399 + 0.718688I$ $b = 2.07435 - 0.18801I$	$-11.38140 - 1.75020I$	0
$u = -1.62600 + 0.55530I$ $a = 0.746967 - 0.398701I$ $b = 1.83339 - 0.57222I$	$-5.92756 + 11.43370I$	0
$u = -1.62600 - 0.55530I$ $a = 0.746967 + 0.398701I$ $b = 1.83339 + 0.57222I$	$-5.92756 - 11.43370I$	0
$u = 1.72385 + 0.18316I$ $a = 0.585265 + 0.329500I$ $b = 1.205890 + 0.199118I$	$-4.64355 - 2.14704I$	0
$u = 1.72385 - 0.18316I$ $a = 0.585265 - 0.329500I$ $b = 1.205890 - 0.199118I$	$-4.64355 + 2.14704I$	0
$u = -0.015750 + 0.241127I$ $a = -4.15863 + 0.61171I$ $b = -0.308108 - 1.085500I$	$2.55861 - 3.61261I$	$2.20434 + 4.61612I$
$u = -0.015750 - 0.241127I$ $a = -4.15863 - 0.61171I$ $b = -0.308108 + 1.085500I$	$2.55861 + 3.61261I$	$2.20434 - 4.61612I$
$u = 1.65996 + 0.62813I$ $a = 0.221771 + 0.297064I$ $b = 1.114910 + 0.227577I$	$-6.13318 - 2.83653I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.65996 - 0.62813I$ $a = 0.221771 - 0.297064I$ $b = 1.114910 - 0.227577I$	$-6.13318 + 2.83653I$	0
$u = 1.64032 + 0.80088I$ $a = -0.569497 - 0.254760I$ $b = -1.56673 - 0.52622I$	$-4.25059 - 4.20433I$	0
$u = 1.64032 - 0.80088I$ $a = -0.569497 + 0.254760I$ $b = -1.56673 + 0.52622I$	$-4.25059 + 4.20433I$	0
$u = 1.83846 + 0.15287I$ $a = -0.758538 - 0.383840I$ $b = -1.331450 - 0.464071I$	$-11.84970 - 3.46057I$	0
$u = 1.83846 - 0.15287I$ $a = -0.758538 + 0.383840I$ $b = -1.331450 + 0.464071I$	$-11.84970 + 3.46057I$	0
$u = -1.83511 + 0.54816I$ $a = -0.671789 + 0.461716I$ $b = -1.84620 + 0.81072I$	$-13.2269 + 16.1533I$	0
$u = -1.83511 - 0.54816I$ $a = -0.671789 - 0.461716I$ $b = -1.84620 - 0.81072I$	$-13.2269 - 16.1533I$	0
$u = 1.88229 + 0.64838I$ $a = 0.595875 + 0.243854I$ $b = 2.08889 + 1.05320I$	$-12.11790 - 5.04846I$	0
$u = 1.88229 - 0.64838I$ $a = 0.595875 - 0.243854I$ $b = 2.08889 - 1.05320I$	$-12.11790 + 5.04846I$	0
$u = 0.95261 + 2.08261I$ $a = 0.368349 - 0.051748I$ $b = 0.369727 + 0.475458I$	$-4.97472 - 7.25323I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.95261-2.08261I$		
$a=$	$0.368349+0.051748I$	$-4.97472+7.25323I$	0
$b=$	$0.369727-0.475458I$		

II. $I_2^u =$
$\langle \mathbf{1.82\times10^{28}u^{25}-2.58\times10^{29}u^{24}+\cdots+1.41\times10^{28}b-4.03\times10^{29},\ 7.47\times10^{29}u^{25}-1.06\times10^{31}u^{24}+\cdots+2.40\times10^{29}a-1.63\times10^{31},\ u^{26}-15u^{25}+\cdots-101u+17}\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-3.10711u^{25}+44.1490u^{24}+\cdots-328.871u+67.9957\\-1.28536u^{25}+18.2511u^{24}+\cdots-135.744u+28.5212\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-0.655818u^{25}+9.30697u^{24}+\cdots-95.1260u+20.8098\\-0.530299u^{25}+7.41367u^{24}+\cdots-44.4278u+10.1489\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-3.10711u^{25}+44.1490u^{24}+\cdots-328.871u+67.9957\\-3.37677u^{25}+47.7008u^{24}+\cdots-331.152u+70.3022\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-1.82176u^{25}+25.8978u^{24}+\cdots-193.127u+39.4744\\-2.44472u^{25}+34.7318u^{24}+\cdots-249.052u+52.8055\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0.591281u^{25}-8.46536u^{24}+\cdots+70.0301u-12.0716\\1.20833u^{25}-17.2333u^{24}+\cdots+125.414u-27.5409\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1.79962u^{25}-25.6987u^{24}+\cdots+195.444u-39.6125\\1.20833u^{25}-17.2333u^{24}+\cdots+125.414u-27.5409\end{pmatrix}$$
$$a_3 = \begin{pmatrix}0.602497u^{25}-8.55949u^{24}+\cdots+83.4410u-15.2225\\0.390285u^{25}-5.51948u^{24}+\cdots+40.4172u-8.92985\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-1.85417u^{25}+26.3205u^{24}+\cdots-177.574u+38.8645\\-2.37946u^{25}+33.8095u^{24}+\cdots-241.981u+51.5010\end{pmatrix}$$
$$a_8 = \begin{pmatrix}3.18445u^{25}-45.6260u^{24}+\cdots+342.896u-71.8998\\2.94676u^{25}-42.1104u^{24}+\cdots+309.393u-67.3954\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 37.5068u^{25}-533.454u^{24}+\cdots+3882.73u-825.984$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26} - 15u^{25} + \cdots - 101u + 17$
c_2	$u^{26} + 5u^{25} + \cdots - 5u + 1$
c_3	$u^{26} + 3u^{24} + \cdots - 3u + 1$
c_4	$u^{26} + u^{25} + \cdots + 15u^2 + 1$
c_5	$u^{26} + 2u^{24} + \cdots + u + 1$
c_6, c_7	$u^{26} + u^{25} + \cdots + 12u^2 + 1$
c_8, c_9	$u^{26} - u^{25} + \cdots + 15u^2 + 1$
c_{10}	$u^{26} + u^{25} + \cdots + 2u + 1$
c_{11}	$u^{26} - 3u^{25} + \cdots + 4u^2 + 1$
c_{12}	$u^{26} - u^{25} + \cdots + 12u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{26} - 25y^{25} + \cdots + 5779y + 289$
c_2	$y^{26} + 7y^{25} + \cdots - 17y + 1$
c_3	$y^{26} + 6y^{25} + \cdots - 7y + 1$
c_4, c_8, c_9	$y^{26} + 19y^{25} + \cdots + 30y + 1$
c_5	$y^{26} + 4y^{25} + \cdots + 15y + 1$
c_6, c_7, c_{12}	$y^{26} + 27y^{25} + \cdots + 24y + 1$
c_{10}	$y^{26} - 3y^{25} + \cdots + 18y + 1$
c_{11}	$y^{26} - 3y^{25} + \cdots + 8y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.864308+0.204939I$ $a=\ 0.186119-1.391440I$ $b=\ 0.204230+0.442832I$	$1.11658-3.25284I$	$-4.16744+2.63544I$
$u=-0.864308-0.204939I$ $a=\ 0.186119+1.391440I$ $b=\ 0.204230-0.442832I$	$1.11658+3.25284I$	$-4.16744-2.63544I$
$u=\ 0.849606+0.867710I$ $a=\ 0.803097+0.746392I$ $b=\ 0.054218+0.580187I$	$-1.91725-5.67035I$	$-0.92317+5.56816I$
$u=\ 0.849606-0.867710I$ $a=\ 0.803097-0.746392I$ $b=\ 0.054218-0.580187I$	$-1.91725+5.67035I$	$-0.92317-5.56816I$
$u=-0.580864+0.526165I$ $a=\ 0.533785-0.477846I$ $b=-0.244597-1.212810I$	$1.40384-2.95716I$	$-4.93957+6.03245I$
$u=-0.580864-0.526165I$ $a=\ 0.533785+0.477846I$ $b=-0.244597+1.212810I$	$1.40384+2.95716I$	$-4.93957-6.03245I$
$u=\ 0.776301+0.021090I$ $a=-0.16415-1.90935I$ $b=-0.126508-0.814918I$	$5.55935-3.18078I$	$-11.4069+23.8136I$
$u=\ 0.776301-0.021090I$ $a=-0.16415+1.90935I$ $b=-0.126508+0.814918I$	$5.55935+3.18078I$	$-11.4069-23.8136I$
$u=\ 1.54475+0.13063I$ $a=-0.574750-0.512807I$ $b=-1.39653-0.25903I$	$-3.49621-2.32528I$	0
$u=\ 1.54475-0.13063I$ $a=-0.574750+0.512807I$ $b=-1.39653+0.25903I$	$-3.49621+2.32528I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.134314 + 0.405030I$ $a = 1.052970 + 0.305581I$ $b = 0.09833 - 1.66833I$	$1.21192 - 2.75463I$	$9.33595 + 4.66646I$
$u = 0.134314 - 0.405030I$ $a = 1.052970 - 0.305581I$ $b = 0.09833 + 1.66833I$	$1.21192 + 2.75463I$	$9.33595 - 4.66646I$
$u = 1.42907 + 0.69274I$ $a = -0.722395 - 0.301247I$ $b = -1.356760 - 0.328411I$	$-3.25675 - 3.77350I$	0
$u = 1.42907 - 0.69274I$ $a = -0.722395 + 0.301247I$ $b = -1.356760 + 0.328411I$	$-3.25675 + 3.77350I$	0
$u = -0.009597 + 0.317703I$ $a = -4.07677 + 0.50597I$ $b = -0.192964 - 0.537531I$	$4.48592 - 3.78471I$	$11.82654 + 6.62208I$
$u = -0.009597 - 0.317703I$ $a = -4.07677 - 0.50597I$ $b = -0.192964 + 0.537531I$	$4.48592 + 3.78471I$	$11.82654 - 6.62208I$
$u = 0.87400 + 1.47831I$ $a = -0.353593 - 0.101977I$ $b = -0.554591 + 0.920025I$	$-5.03069 - 6.13674I$	0
$u = 0.87400 - 1.47831I$ $a = -0.353593 + 0.101977I$ $b = -0.554591 - 0.920025I$	$-5.03069 + 6.13674I$	0
$u = 1.71960 + 0.30377I$ $a = 0.738522 + 0.421344I$ $b = 1.66000 + 0.51845I$	$-11.21240 - 4.02957I$	0
$u = 1.71960 - 0.30377I$ $a = 0.738522 - 0.421344I$ $b = 1.66000 - 0.51845I$	$-11.21240 + 4.02957I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.64718+0.72109I$ $a=-0.189318+0.319878I$ $b=\ \ 0.262918+0.821704I$	$-1.23857-2.33603I$	0
$u=-1.64718-0.72109I$ $a=-0.189318-0.319878I$ $b=\ \ 0.262918-0.821704I$	$-1.23857+2.33603I$	0
$u=\ \ 1.80081+0.23661I$ $a=\ \ 0.225923-0.567408I$ $b=\ \ 0.980847-0.181371I$	$-6.18238-0.70471I$	0
$u=\ \ 1.80081-0.23661I$ $a=\ \ 0.225923+0.567408I$ $b=\ \ 0.980847+0.181371I$	$-6.18238+0.70471I$	0
$u=\ \ 1.47350+1.23126I$ $a=\ \ 0.569959+0.170947I$ $b=\ \ 1.111410+0.223196I$	$-6.11739-5.18649I$	0
$u=\ \ 1.47350-1.23126I$ $a=\ \ 0.569959-0.170947I$ $b=\ \ 1.111410-0.223196I$	$-6.11739+5.18649I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{26}-15u^{25}+\cdots-101u+17)(u^{71}+6u^{70}+\cdots-4114u+1331)$
c_2	$(u^{26}+5u^{25}+\cdots-5u+1)(u^{71}+21u^{69}+\cdots-83828u+3624)$
c_3	$(u^{26}+3u^{24}+\cdots-3u+1)(u^{71}-u^{70}+\cdots-247794u+25577)$
c_4	$(u^{26}+u^{25}+\cdots+15u^2+1)(u^{71}+9u^{69}+\cdots+19u-1)$
c_5	$(u^{26}+2u^{24}+\cdots+u+1)(u^{71}+u^{70}+\cdots-2u+11)$
c_6, c_7	$(u^{26}+u^{25}+\cdots+12u^2+1)(u^{71}+39u^{69}+\cdots-5u+27)$
c_8, c_9	$(u^{26}-u^{25}+\cdots+15u^2+1)(u^{71}+9u^{69}+\cdots+19u-1)$
c_{10}	$(u^{26}+u^{25}+\cdots+2u+1)(u^{71}-34u^{69}+\cdots+56160u+8128)$
c_{11}	$(u^{26}-3u^{25}+\cdots+4u^2+1)(u^{71}-4u^{70}+\cdots+1157u+17)$
c_{12}	$(u^{26}-u^{25}+\cdots+12u^2+1)(u^{71}+39u^{69}+\cdots-5u+27)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{26} - 25y^{25} + \cdots + 5779y + 289)$ $\cdot (y^{71} - 78y^{70} + \cdots + 1815484y - 1771561)$
c_2	$(y^{26} + 7y^{25} + \cdots - 17y + 1)$ $\cdot (y^{71} + 42y^{70} + \cdots + 1092384208y - 13133376)$
c_3	$(y^{26} + 6y^{25} + \cdots - 7y + 1)$ $\cdot (y^{71} - 23y^{70} + \cdots + 22971145086y - 654182929)$
c_4, c_8, c_9	$(y^{26} + 19y^{25} + \cdots + 30y + 1)(y^{71} + 18y^{70} + \cdots + 101y - 1)$
c_5	$(y^{26} + 4y^{25} + \cdots + 15y + 1)(y^{71} - 5y^{70} + \cdots + 4008y - 121)$
c_6, c_7, c_{12}	$(y^{26} + 27y^{25} + \cdots + 24y + 1)(y^{71} + 78y^{70} + \cdots - 65369y - 729)$
c_{10}	$(y^{26} - 3y^{25} + \cdots + 18y + 1)$ $\cdot (y^{71} - 68y^{70} + \cdots - 2954669056y - 66064384)$
c_{11}	$(y^{26} - 3y^{25} + \cdots + 8y + 1)(y^{71} + 20y^{70} + \cdots + 471071y - 289)$