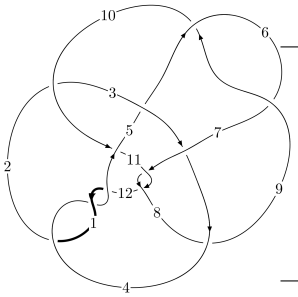
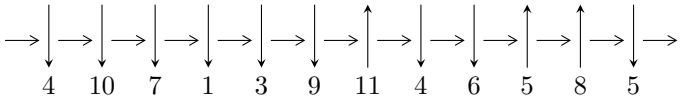
$12n_{0786}$ $(K12n_{0786})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.92258 \times 10^{217} u^{92} - 1.17339 \times 10^{215} u^{91} + \cdots + 5.50269 \times 10^{214} b + 4.31038 \times 10^{217}, \\ & - 1.20339 \times 10^{218} u^{92} - 2.33162 \times 10^{218} u^{91} + \cdots + 5.50269 \times 10^{214} a + 5.33906 \times 10^{217}, \\ & u^{93} + 2u^{92} + \cdots + 3u - 1 \rangle \\ I_2^u = \langle & -10608396395 u^{23} + 16008040214 u^{22} + \cdots + 27133411469 b + 6807317624, \\ & - 39241331316 u^{23} - 4066209209 u^{22} + \cdots + 27133411469 a - 90858330224, \\ & u^{24} - u^{23} + \cdots - 6u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 117 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. $\boldsymbol{I_1^u = \langle 1.92 \times 10^{217} u^{92} - 1.17 \times 10^{215} u^{91} + \cdots + 5.50 \times 10^{214} b + 4.31 \times 10^{217},\ -1.20 \times 10^{218} u^{92} - 2.33 \times 10^{218} u^{91} + \cdots + 5.50 \times 10^{214} a + 5.34 \times 10^{217},\ u^{93} + 2u^{92} + \cdots + 3u - 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2186.92u^{92} + 4237.23u^{91} + \cdots + 494.015u - 970.264 \\ -349.390u^{92} + 2.13239u^{91} + \cdots + 3262.94u - 783.323 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 970.001u^{92} + 1817.60u^{91} + \cdots - 172.176u - 323.551 \\ 555.549u^{92} + 1430.31u^{91} + \cdots + 2003.40u - 769.116 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 594.533u^{92} + 1273.52u^{91} + \cdots + 638.636u - 405.961 \\ 1243.00u^{92} + 2965.84u^{91} + \cdots + 3118.32u - 1347.63 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -268.181u^{92} - 747.988u^{91} + \cdots - 1064.88u + 427.216 \\ 727.736u^{92} + 835.981u^{91} + \cdots - 2598.74u + 446.237 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1040.25u^{92} + 2073.37u^{91} + \cdots + 381.277u - 545.222 \\ -952.405u^{92} - 1172.41u^{91} + \cdots + 3191.51u - 513.832 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1807.51u^{92} + 4783.68u^{91} + \cdots + 6936.30u - 2674.48 \\ -1482.28u^{92} - 2741.56u^{91} + \cdots + 115.240u + 560.669 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.82342u^{92} - 1725.47u^{91} + \cdots - 8721.80u + 2453.86 \\ -157.679u^{92} + 622.832u^{91} + \cdots + 4658.44u - 1262.27 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1467.45u^{92} - 3084.65u^{91} + \cdots - 1415.77u + 1033.53 \\ 2134.10u^{92} + 3027.40u^{91} + \cdots - 4950.71u + 536.369 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -3053.46u^{92} - 12740.4u^{91} + \cdots - 33773.0u + 10600.2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_{12}	$u^{93} + 7u^{92} + \cdots + 36u + 31$
c_2	$u^{93} - 6u^{92} + \cdots + 2531u + 103$
c_3	$u^{93} + 4u^{91} + \cdots - 30u + 1$
c_5	$u^{93} - 3u^{92} + \cdots - 22u + 3$
c_6, c_9	$u^{93} - 2u^{92} + \cdots + 3u + 1$
c_7, c_{11}	$u^{93} - 6u^{92} + \cdots - 33u + 1$
c_8	$u^{93} - u^{92} + \cdots + 3067u + 1049$
c_{10}	$u^{93} + 5u^{92} + \cdots + 48499913u + 3071059$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{93} + 33y^{92} + \cdots - 32556y - 961$
c_2	$y^{93} - 12y^{92} + \cdots + 3176499y - 10609$
c_3	$y^{93} + 8y^{92} + \cdots + 98y - 1$
c_5	$y^{93} + 7y^{92} + \cdots + 316y - 9$
c_6, c_9	$y^{93} + 60y^{92} + \cdots - 39y - 1$
c_7, c_{11}	$y^{93} - 32y^{92} + \cdots + 605y - 1$
c_8	$y^{93} - 17y^{92} + \cdots - 40616125y - 1100401$
c_{10}	$y^{93} + 39y^{92} + \cdots - 302038266937865y - 9431403381481$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.983543+0.189886I$ $a=\ \ 0.0479434-0.0594414I$ $b=-0.964325-0.836927I$	$-4.33888-5.44307I$	0
$u=-0.983543-0.189886I$ $a=\ \ 0.0479434+0.0594414I$ $b=-0.964325+0.836927I$	$-4.33888+5.44307I$	0
$u=\ \ 0.437652+0.894742I$ $a=\ \ 1.34164-0.44860I$ $b=\ \ 0.733399+0.285615I$	$-1.34298-2.68991I$	0
$u=\ \ 0.437652-0.894742I$ $a=\ \ 1.34164+0.44860I$ $b=\ \ 0.733399-0.285615I$	$-1.34298+2.68991I$	0
$u=\ \ 0.064066+1.007850I$ $a=-0.102771-0.633812I$ $b=-1.31555+0.52627I$	$1.95221+1.75855I$	0
$u=\ \ 0.064066-1.007850I$ $a=-0.102771+0.633812I$ $b=-1.31555-0.52627I$	$1.95221-1.75855I$	0
$u=-0.219350+0.986150I$ $a=-1.009910-0.952944I$ $b=-0.985870+0.226108I$	$-1.26066+2.02670I$	0
$u=-0.219350-0.986150I$ $a=-1.009910+0.952944I$ $b=-0.985870-0.226108I$	$-1.26066-2.02670I$	0
$u=\ \ 0.994198+0.203360I$ $a=\ \ 0.0270530-0.0851912I$ $b=-0.992506+0.553763I$	$-4.63796-0.81156I$	0
$u=\ \ 0.994198-0.203360I$ $a=\ \ 0.0270530+0.0851912I$ $b=-0.992506-0.553763I$	$-4.63796+0.81156I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.129951 + 1.033800I$ $a = 0.44287 + 1.44228I$ $b = -0.178263 - 0.786894I$	$1.80464 - 1.94003I$	0
$u = 0.129951 - 1.033800I$ $a = 0.44287 - 1.44228I$ $b = -0.178263 + 0.786894I$	$1.80464 + 1.94003I$	0
$u = -0.896564 + 0.237335I$ $a = 0.400721 - 0.177834I$ $b = 0.015477 - 0.837443I$	$2.48866 - 1.82083I$	0
$u = -0.896564 - 0.237335I$ $a = 0.400721 + 0.177834I$ $b = 0.015477 + 0.837443I$	$2.48866 + 1.82083I$	0
$u = 0.533598 + 0.752649I$ $a = 1.248080 - 0.398267I$ $b = -1.08447 + 1.01720I$	$-1.27960 + 2.87283I$	0
$u = 0.533598 - 0.752649I$ $a = 1.248080 + 0.398267I$ $b = -1.08447 - 1.01720I$	$-1.27960 - 2.87283I$	0
$u = -0.247343 + 1.049060I$ $a = -1.48412 - 0.92449I$ $b = 1.88874 + 1.28303I$	$0.45762 + 8.33356I$	0
$u = -0.247343 - 1.049060I$ $a = -1.48412 + 0.92449I$ $b = 1.88874 - 1.28303I$	$0.45762 - 8.33356I$	0
$u = -0.248085 + 0.882956I$ $a = -0.279883 + 0.572239I$ $b = 1.30860 - 0.54284I$	$4.79849 + 3.61847I$	0
$u = -0.248085 - 0.882956I$ $a = -0.279883 - 0.572239I$ $b = 1.30860 + 0.54284I$	$4.79849 - 3.61847I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.469993 + 0.983361I$ $a = 0.404945 + 0.623698I$ $b = 0.319679 + 0.191630I$	$2.52644 - 3.77461I$	0
$u = 0.469993 - 0.983361I$ $a = 0.404945 - 0.623698I$ $b = 0.319679 - 0.191630I$	$2.52644 + 3.77461I$	0
$u = -1.095110 + 0.053192I$ $a = 0.157178 + 0.352529I$ $b = 0.325305 - 0.401567I$	$3.87659 + 1.11388I$	0
$u = -1.095110 - 0.053192I$ $a = 0.157178 - 0.352529I$ $b = 0.325305 + 0.401567I$	$3.87659 - 1.11388I$	0
$u = 0.293799 + 1.073150I$ $a = -0.94094 + 1.25573I$ $b = 1.10199 - 1.45553I$	$-0.03086 - 2.86701I$	0
$u = 0.293799 - 1.073150I$ $a = -0.94094 - 1.25573I$ $b = 1.10199 + 1.45553I$	$-0.03086 + 2.86701I$	0
$u = 0.866888 + 0.084480I$ $a = 0.333690 - 0.521948I$ $b = -0.625888 - 0.525833I$	$0.019814 - 0.829463I$	0
$u = 0.866888 - 0.084480I$ $a = 0.333690 + 0.521948I$ $b = -0.625888 + 0.525833I$	$0.019814 + 0.829463I$	0
$u = -0.199400 + 0.840884I$ $a = 0.02352 + 3.32350I$ $b = 0.297727 - 0.018628I$	$-1.18673 + 7.11436I$	0
$u = -0.199400 - 0.840884I$ $a = 0.02352 - 3.32350I$ $b = 0.297727 + 0.018628I$	$-1.18673 - 7.11436I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.240921 + 1.118480I$ $a = -1.39128 + 1.27508I$ $b = -0.686143 - 0.525780I$	$1.51137 - 8.12842I$	0
$u = 0.240921 - 1.118480I$ $a = -1.39128 - 1.27508I$ $b = -0.686143 + 0.525780I$	$1.51137 + 8.12842I$	0
$u = -0.206885 + 0.829098I$ $a = 0.14083 - 1.66722I$ $b = -1.160490 + 0.298349I$	$-1.04687 + 1.12801I$	0
$u = -0.206885 - 0.829098I$ $a = 0.14083 + 1.66722I$ $b = -1.160490 - 0.298349I$	$-1.04687 - 1.12801I$	0
$u = -0.110650 + 0.841201I$ $a = 1.38963 + 0.78734I$ $b = -0.313850 - 0.597088I$	$1.47187 - 2.09814I$	0
$u = -0.110650 - 0.841201I$ $a = 1.38963 - 0.78734I$ $b = -0.313850 + 0.597088I$	$1.47187 + 2.09814I$	0
$u = -0.316582 + 0.784266I$ $a = 1.59660 - 0.20975I$ $b = -1.70364 - 0.59032I$	$-2.46533 + 1.52282I$	0
$u = -0.316582 - 0.784266I$ $a = 1.59660 + 0.20975I$ $b = -1.70364 + 0.59032I$	$-2.46533 - 1.52282I$	0
$u = -1.158880 + 0.071269I$ $a = -0.0491220 - 0.0120891I$ $b = 0.890799 + 0.840671I$	$-2.77300 - 11.97580I$	0
$u = -1.158880 - 0.071269I$ $a = -0.0491220 + 0.0120891I$ $b = 0.890799 - 0.840671I$	$-2.77300 + 11.97580I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.851154 + 0.804226I$ $a = 0.432837 - 0.202079I$ $b = 0.573597 + 0.344631I$	$-0.61886 - 2.66614I$	0
$u = 0.851154 - 0.804226I$ $a = 0.432837 + 0.202079I$ $b = 0.573597 - 0.344631I$	$-0.61886 + 2.66614I$	0
$u = 1.174050 + 0.069769I$ $a = 0.0448578 + 0.0571294I$ $b = 0.864348 - 0.618909I$	$-4.68532 + 4.84438I$	0
$u = 1.174050 - 0.069769I$ $a = 0.0448578 - 0.0571294I$ $b = 0.864348 + 0.618909I$	$-4.68532 - 4.84438I$	0
$u = -0.190726 + 0.792018I$ $a = 0.27059 - 3.01873I$ $b = -0.96508 + 1.74473I$	$-2.64820 + 1.13387I$	0
$u = -0.190726 - 0.792018I$ $a = 0.27059 + 3.01873I$ $b = -0.96508 - 1.74473I$	$-2.64820 - 1.13387I$	0
$u = -0.330836 + 1.169320I$ $a = -0.01297 + 2.06258I$ $b = 0.99237 - 1.17801I$	$7.41773 + 6.08000I$	0
$u = -0.330836 - 1.169320I$ $a = -0.01297 - 2.06258I$ $b = 0.99237 + 1.17801I$	$7.41773 - 6.08000I$	0
$u = -0.354045 + 0.700122I$ $a = 1.54843 + 0.11322I$ $b = 0.929290 + 0.092186I$	$-1.32893 - 4.36708I$	0
$u = -0.354045 - 0.700122I$ $a = 1.54843 - 0.11322I$ $b = 0.929290 - 0.092186I$	$-1.32893 + 4.36708I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.194450 + 1.202250I$ $a = -0.49531 - 1.99273I$ $b = 0.75329 + 1.54194I$	$7.71205 - 3.80682I$	0
$u = 0.194450 - 1.202250I$ $a = -0.49531 + 1.99273I$ $b = 0.75329 - 1.54194I$	$7.71205 + 3.80682I$	0
$u = 0.218625 + 0.681653I$ $a = -0.85841 + 2.99840I$ $b = -0.21627 - 1.78802I$	$-1.61951 - 6.44837I$	0
$u = 0.218625 - 0.681653I$ $a = -0.85841 - 2.99840I$ $b = -0.21627 + 1.78802I$	$-1.61951 + 6.44837I$	0
$u = 0.017631 + 0.715431I$ $a = 0.47465 - 3.25113I$ $b = -0.163044 - 0.119086I$	$-2.55281 - 0.24180I$	0
$u = 0.017631 - 0.715431I$ $a = 0.47465 + 3.25113I$ $b = -0.163044 + 0.119086I$	$-2.55281 + 0.24180I$	0
$u = 0.744749 + 1.048260I$ $a = 0.300159 - 0.475233I$ $b = 0.497058 + 0.330795I$	$-0.55657 - 2.66778I$	0
$u = 0.744749 - 1.048260I$ $a = 0.300159 + 0.475233I$ $b = 0.497058 - 0.330795I$	$-0.55657 + 2.66778I$	0
$u = -0.386984 + 1.279280I$ $a = 0.239840 + 1.359720I$ $b = 0.84999 - 1.23688I$	$7.03023 + 2.41777I$	0
$u = -0.386984 - 1.279280I$ $a = 0.239840 - 1.359720I$ $b = 0.84999 + 1.23688I$	$7.03023 - 2.41777I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.542422 + 1.234570I$ $a = -0.00076 + 1.62500I$ $b = -1.006110 - 0.985167I$	$-1.41567 - 4.64756I$	0
$u = 0.542422 - 1.234570I$ $a = -0.00076 - 1.62500I$ $b = -1.006110 + 0.985167I$	$-1.41567 + 4.64756I$	0
$u = -1.042740 + 0.858031I$ $a = -0.378206 + 0.158138I$ $b = 0.219796 + 0.290474I$	$4.21931 + 0.74875I$	0
$u = -1.042740 - 0.858031I$ $a = -0.378206 - 0.158138I$ $b = 0.219796 - 0.290474I$	$4.21931 - 0.74875I$	0
$u = -0.549245 + 1.245670I$ $a = -0.11891 - 1.71903I$ $b = -1.12234 + 1.21886I$	$-1.04941 + 10.92380I$	0
$u = -0.549245 - 1.245670I$ $a = -0.11891 + 1.71903I$ $b = -1.12234 - 1.21886I$	$-1.04941 - 10.92380I$	0
$u = -0.573542 + 1.256320I$ $a = -0.480956 - 1.200230I$ $b = -0.48885 + 1.38965I$	$5.62490 + 7.35420I$	0
$u = -0.573542 - 1.256320I$ $a = -0.480956 + 1.200230I$ $b = -0.48885 - 1.38965I$	$5.62490 - 7.35420I$	0
$u = 0.300896 + 1.369670I$ $a = -0.362195 - 1.263370I$ $b = 1.20392 + 1.17959I$	$5.85732 - 6.29692I$	0
$u = 0.300896 - 1.369670I$ $a = -0.362195 + 1.263370I$ $b = 1.20392 - 1.17959I$	$5.85732 + 6.29692I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.51677+1.32088I$ $a=\ \ 0.295741+1.321040I$ $b=\ \ 0.637987-0.784814I$	$8.07240+6.60899I$	0
$u=-0.51677-1.32088I$ $a=\ \ 0.295741-1.321040I$ $b=\ \ 0.637987+0.784814I$	$8.07240-6.60899I$	0
$u=\ \ 0.50730+1.33527I$ $a=\ \ 0.085286+1.266530I$ $b=-0.92354-1.27262I$	$4.29131-5.92882I$	0
$u=\ \ 0.50730-1.33527I$ $a=\ \ 0.085286-1.266530I$ $b=-0.92354+1.27262I$	$4.29131+5.92882I$	0
$u=\ \ 0.58234+1.33991I$ $a=\ \ 0.04137-1.44155I$ $b=\ \ 1.08115+1.00548I$	$-0.71546-10.95490I$	0
$u=\ \ 0.58234-1.33991I$ $a=\ \ 0.04137+1.44155I$ $b=\ \ 1.08115-1.00548I$	$-0.71546+10.95490I$	0
$u=-0.58040+1.34422I$ $a=\ \ 0.06000+1.56952I$ $b=\ \ 1.13715-1.22968I$	$1.2137+18.0601I$	0
$u=-0.58040-1.34422I$ $a=\ \ 0.06000-1.56952I$ $b=\ \ 1.13715+1.22968I$	$1.2137-18.0601I$	0
$u=-0.42863+1.40115I$ $a=-0.073508-1.146130I$ $b=-0.217875+0.867252I$	$8.64430+4.57082I$	0
$u=-0.42863-1.40115I$ $a=-0.073508+1.146130I$ $b=-0.217875-0.867252I$	$8.64430-4.57082I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.05957 + 1.49368I$ $a = 0.248648 + 0.698068I$ $b = -0.230719 - 0.751570I$	$1.62426 - 1.33087I$	0
$u = 0.05957 - 1.49368I$ $a = 0.248648 - 0.698068I$ $b = -0.230719 + 0.751570I$	$1.62426 + 1.33087I$	0
$u = 0.331631$ $a = 1.03808$ $b = -0.534199$	-0.883861	-11.2400
$u = -0.328613 + 0.028247I$ $a = 0.971809 + 0.099963I$ $b = 0.908758 + 0.836136I$	$4.16715 - 3.11772I$	$-9.62079 + 8.90431I$
$u = -0.328613 - 0.028247I$ $a = 0.971809 - 0.099963I$ $b = 0.908758 - 0.836136I$	$4.16715 + 3.11772I$	$-9.62079 - 8.90431I$
$u = 0.68737 + 1.56791I$ $a = 0.136384 + 0.408190I$ $b = -0.607705 - 0.351428I$	$1.41423 - 6.57009I$	0
$u = 0.68737 - 1.56791I$ $a = 0.136384 - 0.408190I$ $b = -0.607705 + 0.351428I$	$1.41423 + 6.57009I$	0
$u = -0.34577 + 1.67716I$ $a = -0.224012 - 0.427916I$ $b = 0.006078 + 0.650800I$	$2.70253 - 5.70337I$	0
$u = -0.34577 - 1.67716I$ $a = -0.224012 + 0.427916I$ $b = 0.006078 - 0.650800I$	$2.70253 + 5.70337I$	0
$u = 0.223333 + 0.094354I$ $a = 5.03386 - 1.53563I$ $b = 0.003370 - 0.785282I$	$-2.75918 - 0.40290I$	$-8.55360 - 0.38930I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.223333-0.094354I$		
$a=$	$5.03386+1.53563I$	$-2.75918+0.40290I$	$-8.55360+0.38930I$
$b=$	$0.003370+0.785282I$		
$u=$	$0.009908+0.190677I$		
$a=$	$-2.99495+7.59395I$	$-1.61885-6.30244I$	$-7.04303+4.01413I$
$b=$	$0.179764-1.127260I$		
$u=$	$0.009908-0.190677I$		
$a=$	$-2.99495-7.59395I$	$-1.61885+6.30244I$	$-7.04303-4.01413I$
$b=$	$0.179764+1.127260I$		

II.

$\boldsymbol{I_2^u = \langle -1.06\times 10^{10}u^{23}+1.60\times 10^{10}u^{22}+\cdots+2.71\times 10^{10}b+6.81\times 10^{9},\ -3.92\times 10^{10}u^{23}-4.07\times 10^{9}u^{22}+\cdots+2.71\times 10^{10}a-9.09\times 10^{10},\ u^{24}-u^{23}+\cdots-6u+1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.44624u^{23} + 0.149860u^{22} + \cdots - 20.0547u + 3.34858 \\ 0.390972u^{23} - 0.589975u^{22} + \cdots + 6.46503u - 0.250883 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.786802u^{23} + 1.25865u^{22} + \cdots - 18.3894u + 2.00336 \\ 1.24315u^{23} - 0.895775u^{22} + \cdots + 1.95260u + 0.873361 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.439634u^{23} + 0.588286u^{22} + \cdots - 13.5094u + 1.95148 \\ 1.39757u^{23} - 1.02840u^{22} + \cdots - 0.0803203u + 1.14621 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.98981u^{23} + 3.36144u^{22} + \cdots - 53.5864u + 8.96160 \\ 2.40291u^{23} - 2.10814u^{22} + \cdots + 22.8164u - 2.25096 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.74314u^{23} - 3.07315u^{22} + \cdots + 11.6793u + 1.14875 \\ -0.966229u^{23} + 0.911538u^{22} + \cdots + 9.68180u - 2.72345 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1.11810u^{23} + 2.62405u^{22} + \cdots - 13.6089u + 3.30447 \\ 0.986047u^{23} - 2.57096u^{22} + \cdots + 12.7495u - 3.07575 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.84203u^{23} + 1.09916u^{22} + \cdots + 17.4728u - 2.40686 \\ 0.179665u^{23} + 1.04101u^{22} + \cdots - 11.8044u + 1.15597 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -2.97483u^{23} + 7.63647u^{22} + \cdots - 54.3438u + 8.73461 \\ 2.81647u^{23} - 3.99876u^{22} + \cdots + 17.6180u - 2.53227 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= -\frac{62579771269}{27133411469}u^{23} + \frac{75568649014}{27133411469}u^{22} + \cdots + \frac{848802615232}{27133411469}u - \frac{208436702424}{27133411469}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$u^{24} - 8u^{23} + \cdots - 5u + 1$
c_2	$u^{24} + u^{23} + \cdots - 6u + 1$
c_3	$u^{24} - u^{23} + \cdots - u + 1$
c_4	$u^{24} + 8u^{23} + \cdots + 5u + 1$
c_5	$u^{24} + 2u^{23} + \cdots + u + 1$
c_6	$u^{24} - u^{23} + \cdots - 6u + 1$
c_7	$u^{24} - u^{23} + \cdots - 2u + 1$
c_8	$u^{24} - 2u^{22} + \cdots - 4u + 7$
c_9	$u^{24} + u^{23} + \cdots + 6u + 1$
c_{10}	$u^{24} - 4u^{23} + \cdots - 22u + 7$
c_{11}	$u^{24} + u^{23} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{24} + 14y^{23} + \cdots + 23y + 1$
c_2	$y^{24} - 7y^{23} + \cdots - 4y + 1$
c_3	$y^{24} + 9y^{23} + \cdots + 5y + 1$
c_5	$y^{24} + 4y^{23} + \cdots - y + 1$
c_6, c_9	$y^{24} + 17y^{23} + \cdots + 18y + 1$
c_7, c_{11}	$y^{24} - 15y^{23} + \cdots - 14y + 1$
c_8	$y^{24} - 4y^{23} + \cdots + 152y + 49$
c_{10}	$y^{24} - 8y^{23} + \cdots - 260y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.778175 + 0.797715I$ $a = -0.568555 + 0.005801I$ $b = -0.588229 - 0.259324I$	$-0.67529 - 2.31026I$	$-3.79173 - 6.69902I$
$u = \ 0.778175 - 0.797715I$ $a = -0.568555 - 0.005801I$ $b = -0.588229 + 0.259324I$	$-0.67529 + 2.31026I$	$-3.79173 + 6.69902I$
$u = \ 0.311253 + 0.823685I$ $a = \ 0.193306 + 1.036400I$ $b = -1.093120 + 0.024292I$	$-1.28774 - 1.51144I$	$-6.85991 + 9.11770I$
$u = \ 0.311253 - 0.823685I$ $a = \ 0.193306 - 1.036400I$ $b = -1.093120 - 0.024292I$	$-1.28774 + 1.51144I$	$-6.85991 - 9.11770I$
$u = -0.096179 + 0.856749I$ $a = -0.68359 - 3.09050I$ $b = \ 0.377131 + 1.015570I$	$-0.59789 + 6.68274I$	$-0.01321 - 5.04238I$
$u = -0.096179 - 0.856749I$ $a = -0.68359 + 3.09050I$ $b = \ 0.377131 - 1.015570I$	$-0.59789 - 6.68274I$	$-0.01321 + 5.04238I$
$u = \ 0.114071 + 0.851132I$ $a = -0.16885 + 2.84807I$ $b = -0.725864 - 0.963828I$	$-1.95456 - 0.82184I$	$-3.32595 - 0.64273I$
$u = \ 0.114071 - 0.851132I$ $a = -0.16885 - 2.84807I$ $b = -0.725864 + 0.963828I$	$-1.95456 + 0.82184I$	$-3.32595 + 0.64273I$
$u = \ 0.269973 + 1.207950I$ $a = -0.33468 - 1.94681I$ $b = \ 1.11156 + 1.48063I$	$7.42060 - 4.68753I$	$2.01822 + 5.91782I$
$u = \ 0.269973 - 1.207950I$ $a = -0.33468 + 1.94681I$ $b = \ 1.11156 - 1.48063I$	$7.42060 + 4.68753I$	$2.01822 - 5.91782I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.349525+1.330510I$ $a=\ \ 0.05903+1.58367I$ $b=\ \ 0.535095-1.183460I$	$10.21350+5.46975I$	$5.02737-4.59089I$
$u=-0.349525-1.330510I$ $a=\ \ 0.05903-1.58367I$ $b=\ \ 0.535095+1.183460I$	$10.21350-5.46975I$	$5.02737+4.59089I$
$u=-1.333910+0.453959I$ $a=-0.0544505+0.0877177I$ $b=\ \ 0.111907-0.436796I$	$4.42237+1.08521I$	$13.6808-7.4874I$
$u=-1.333910-0.453959I$ $a=-0.0544505-0.0877177I$ $b=\ \ 0.111907+0.436796I$	$4.42237-1.08521I$	$13.6808+7.4874I$
$u=\ \ 0.51933+1.33414I$ $a=\ \ 0.058252+1.154100I$ $b=-0.90059-1.21225I$	$4.06468-6.55923I$	$-3.90378+10.72811I$
$u=\ \ 0.51933-1.33414I$ $a=\ \ 0.058252-1.154100I$ $b=-0.90059+1.21225I$	$4.06468+6.55923I$	$-3.90378-10.72811I$
$u=-0.57136+1.36818I$ $a=-0.289135-1.059480I$ $b=-0.466295+0.855907I$	$8.29180+5.63108I$	$1.53548-4.54639I$
$u=-0.57136-1.36818I$ $a=-0.289135+1.059480I$ $b=-0.466295-0.855907I$	$8.29180-5.63108I$	$1.53548+4.54639I$
$u=\ \ 0.30186+1.45264I$ $a=\ \ 0.037002-0.190838I$ $b=\ \ 0.510216-0.055521I$	$1.89854-6.18052I$	$0.42008+6.34301I$
$u=\ \ 0.30186-1.45264I$ $a=\ \ 0.037002+0.190838I$ $b=\ \ 0.510216+0.055521I$	$1.89854+6.18052I$	$0.42008-6.34301I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.477150 + 0.154808I$ $a = 1.45462 + 1.26189I$ $b = -0.896648 + 0.507741I$	$-0.03348 + 1.98965I$	$-4.72004 - 3.46066I$
$u = 0.477150 - 0.154808I$ $a = 1.45462 - 1.26189I$ $b = -0.896648 - 0.507741I$	$-0.03348 - 1.98965I$	$-4.72004 + 3.46066I$
$u = 0.079160 + 0.354427I$ $a = -1.202950 - 0.019294I$ $b = 1.024830 - 0.782735I$	$4.42600 + 2.75033I$	$0.43266 + 5.26979I$
$u = 0.079160 - 0.354427I$ $a = -1.202950 + 0.019294I$ $b = 1.024830 + 0.782735I$	$4.42600 - 2.75033I$	$0.43266 - 5.26979I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$(u^{24} - 8u^{23} + \cdots - 5u + 1)(u^{93} + 7u^{92} + \cdots + 36u + 31)$
c_2	$(u^{24} + u^{23} + \cdots - 6u + 1)(u^{93} - 6u^{92} + \cdots + 2531u + 103)$
c_3	$(u^{24} - u^{23} + \cdots - u + 1)(u^{93} + 4u^{91} + \cdots - 30u + 1)$
c_4	$(u^{24} + 8u^{23} + \cdots + 5u + 1)(u^{93} + 7u^{92} + \cdots + 36u + 31)$
c_5	$(u^{24} + 2u^{23} + \cdots + u + 1)(u^{93} - 3u^{92} + \cdots - 22u + 3)$
c_6	$(u^{24} - u^{23} + \cdots - 6u + 1)(u^{93} - 2u^{92} + \cdots + 3u + 1)$
c_7	$(u^{24} - u^{23} + \cdots - 2u + 1)(u^{93} - 6u^{92} + \cdots - 33u + 1)$
c_8	$(u^{24} - 2u^{22} + \cdots - 4u + 7)(u^{93} - u^{92} + \cdots + 3067u + 1049)$
c_9	$(u^{24} + u^{23} + \cdots + 6u + 1)(u^{93} - 2u^{92} + \cdots + 3u + 1)$
c_{10}	$(u^{24} - 4u^{23} + \cdots - 22u + 7)$ $\cdot (u^{93} + 5u^{92} + \cdots + 48499913u + 3071059)$
c_{11}	$(u^{24} + u^{23} + \cdots + 2u + 1)(u^{93} - 6u^{92} + \cdots - 33u + 1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$(y^{24}+14y^{23}+\cdots+23y+1)(y^{93}+33y^{92}+\cdots-32556y-961)$
c_2	$(y^{24}-7y^{23}+\cdots-4y+1)(y^{93}-12y^{92}+\cdots+3176499y-10609)$
c_3	$(y^{24}+9y^{23}+\cdots+5y+1)(y^{93}+8y^{92}+\cdots+98y-1)$
c_5	$(y^{24}+4y^{23}+\cdots-y+1)(y^{93}+7y^{92}+\cdots+316y-9)$
c_6, c_9	$(y^{24}+17y^{23}+\cdots+18y+1)(y^{93}+60y^{92}+\cdots-39y-1)$
c_7, c_{11}	$(y^{24}-15y^{23}+\cdots-14y+1)(y^{93}-32y^{92}+\cdots+605y-1)$
c_8	$(y^{24}-4y^{23}+\cdots+152y+49)$ $\cdot(y^{93}-17y^{92}+\cdots-40616125y-1100401)$
c_{10}	$(y^{24}-8y^{23}+\cdots-260y+49)$ $\cdot(y^{93}+39y^{92}+\cdots-302038266937865y-9431403381481)$