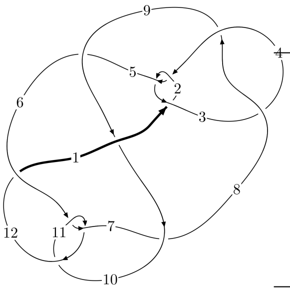
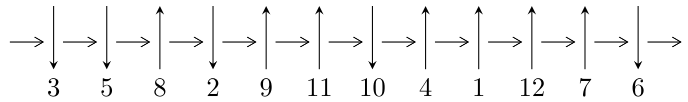
$12a_{0084}$ $(K12a_{0084})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$7{,}12 \xrightarrow[c_{11}]{} 11 \xrightarrow[c_{6}]{} 6 \xrightarrow[c_{12}]{} 1{,}3 \xrightarrow[c_{1}]{} 2 \xrightarrow[c_{10}]{} 10 \xrightarrow[c_{7}]{} 8 \xrightarrow[c_{3}]{} 4 \xrightarrow[c_{9}]{} 9 \xrightarrow[c_{5}]{} 5 \twoheadrightarrow c_2, c_4, c_8$$

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

$$I_1^u = \langle -u^{107} + u^{106} + \cdots + b + u,\ 3u^{107} - 3u^{106} + \cdots + a + 1,\ u^{108} - 2u^{107} + \cdots + 3u - 1\rangle$$
$$I_2^u = \langle u^3 + b - u - 1,\ -u^7 + 2u^5 + u^4 - 2u^3 - u^2 + a + 1,\ u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1\rangle$$

* 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. $I_1^u = \langle -u^{107}+u^{106}+\cdots+b+u,\ 3u^{107}-3u^{106}+\cdots+a+1,\ u^{108}-2u^{107}+\cdots+3u-1\rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}u^4-u^2+1\\u^6-2u^4+u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-3u^{107}+3u^{106}+\cdots+4u-1\\u^{107}-u^{106}+\cdots+3u^2-u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}2u^{107}-2u^{106}+\cdots-3u+1\\-u^{107}+u^{106}+\cdots-2u^2+u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-u^2+1\\u^2\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-u^5+2u^3-u\\u^5-u^3+u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-u^{107}+u^{106}+\cdots+3u^3-3u^2\\u^{107}-u^{106}+\cdots-4u^4+u^2\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-u^{12}+3u^{10}-5u^8+4u^6-2u^4-u^2+1\\-u^{14}+4u^{12}-7u^{10}+6u^8-2u^6+u^2\end{pmatrix}$$
$$a_5 = \begin{pmatrix}u^{23}-6u^{21}+\cdots+2u^3-2u\\u^{25}-7u^{23}+\cdots-2u^3+u\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 14u^{107}-15u^{106}+\cdots-29u+15$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{108} + 50u^{107} + \cdots + 43u + 1$
c_2, c_4	$u^{108} - 10u^{107} + \cdots + 11u - 1$
c_3, c_8	$u^{108} + u^{107} + \cdots - 7424u^2 + 512$
c_5	$u^{108} - 2u^{107} + \cdots + 2153835u - 699025$
c_6, c_{11}	$u^{108} - 2u^{107} + \cdots + 3u - 1$
c_7, c_{12}	$u^{108} - 6u^{107} + \cdots + 11u - 1$
c_9	$u^{108} + 14u^{107} + \cdots + 4453u + 349$
c_{10}	$u^{108} - 58u^{107} + \cdots + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{108} + 26y^{107} + \cdots - 1883y + 1$
c_2, c_4	$y^{108} - 50y^{107} + \cdots - 43y + 1$
c_3, c_8	$y^{108} - 57y^{107} + \cdots - 7602176y + 262144$
c_5	$y^{108} - 42y^{107} + \cdots - 6625342064775y + 488635950625$
c_6, c_{11}	$y^{108} - 58y^{107} + \cdots + y + 1$
c_7, c_{12}	$y^{108} + 86y^{107} + \cdots + 121y + 1$
c_9	$y^{108} - 6y^{107} + \cdots - 1457151y + 121801$
c_{10}	$y^{108} - 14y^{107} + \cdots - 7y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.996236 + 0.045280I$ $a = -0.116744 + 1.006360I$ $b = -0.406874 + 0.889939I$	$1.66851 + 2.03339I$	0
$u = 0.996236 - 0.045280I$ $a = -0.116744 - 1.006360I$ $b = -0.406874 - 0.889939I$	$1.66851 - 2.03339I$	0
$u = -0.862530 + 0.521960I$ $a = 1.133140 + 0.012092I$ $b = 0.830795 - 0.379581I$	$-2.08646 - 5.96170I$	0
$u = -0.862530 - 0.521960I$ $a = 1.133140 - 0.012092I$ $b = 0.830795 + 0.379581I$	$-2.08646 + 5.96170I$	0
$u = 0.844591 + 0.507051I$ $a = 0.59353 + 1.36298I$ $b = 0.270864 - 0.952687I$	$-2.96700 + 3.56740I$	0
$u = 0.844591 - 0.507051I$ $a = 0.59353 - 1.36298I$ $b = 0.270864 + 0.952687I$	$-2.96700 - 3.56740I$	0
$u = -0.794168 + 0.557145I$ $a = 0.266509 - 0.777339I$ $b = 0.464499 - 0.344043I$	$-2.97176 - 0.64254I$	0
$u = -0.794168 - 0.557145I$ $a = 0.266509 + 0.777339I$ $b = 0.464499 + 0.344043I$	$-2.97176 + 0.64254I$	0
$u = 0.885383 + 0.534389I$ $a = -0.603383 - 0.155335I$ $b = -0.367723 + 0.938689I$	$2.59244 + 6.40382I$	0
$u = 0.885383 - 0.534389I$ $a = -0.603383 + 0.155335I$ $b = -0.367723 - 0.938689I$	$2.59244 - 6.40382I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.876654 + 0.553713I$ $a = 1.138340 - 0.046475I$ $b = 0.354844 - 0.826320I$	$0.41046 + 11.93020I$	0
$u = 0.876654 - 0.553713I$ $a = 1.138340 + 0.046475I$ $b = 0.354844 + 0.826320I$	$0.41046 - 11.93020I$	0
$u = -0.956750$ $a = 0.894676$ $b = -1.61493$	0.334264	0
$u = -0.839356 + 0.456799I$ $a = -0.506274 - 0.352044I$ $b = -0.973741 - 0.147203I$	$-0.86996 - 1.97916I$	0
$u = -0.839356 - 0.456799I$ $a = -0.506274 + 0.352044I$ $b = -0.973741 + 0.147203I$	$-0.86996 + 1.97916I$	0
$u = -1.048940 + 0.048886I$ $a = -1.133180 + 0.113072I$ $b = 0.343147 + 0.845942I$	$6.58179 - 1.97370I$	0
$u = -1.048940 - 0.048886I$ $a = -1.133180 - 0.113072I$ $b = 0.343147 - 0.845942I$	$6.58179 + 1.97370I$	0
$u = 0.948392 + 0.456770I$ $a = 0.858154 - 0.677501I$ $b = 0.030428 + 1.311010I$	$3.81145 + 3.11422I$	0
$u = 0.948392 - 0.456770I$ $a = 0.858154 + 0.677501I$ $b = 0.030428 - 1.311010I$	$3.81145 - 3.11422I$	0
$u = -1.058660 + 0.084126I$ $a = 1.191570 - 0.207622I$ $b = -0.44160 - 1.44697I$	$4.80577 - 7.59628I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.058660 - 0.084126I$ $a = 1.191570 + 0.207622I$ $b = -0.44160 + 1.44697I$	$4.80577 + 7.59628I$	0
$u = -0.736275 + 0.560642I$ $a = 0.509790 + 0.501835I$ $b = -0.391752 + 0.666181I$	$-3.13683 - 3.82711I$	0
$u = -0.736275 - 0.560642I$ $a = 0.509790 - 0.501835I$ $b = -0.391752 - 0.666181I$	$-3.13683 + 3.82711I$	0
$u = 1.051040 + 0.322763I$ $a = -0.87818 + 1.25855I$ $b = -1.10882 - 1.15799I$	$2.55355 - 1.82439I$	0
$u = 1.051040 - 0.322763I$ $a = -0.87818 - 1.25855I$ $b = -1.10882 + 1.15799I$	$2.55355 + 1.82439I$	0
$u = -0.743951 + 0.441122I$ $a = -0.168733 - 0.150783I$ $b = -0.556383 - 0.687073I$	$-1.16073 - 1.79746I$	$0. + 5.56509I$
$u = -0.743951 - 0.441122I$ $a = -0.168733 + 0.150783I$ $b = -0.556383 + 0.687073I$	$-1.16073 + 1.79746I$	$0. - 5.56509I$
$u = 1.048310 + 0.450986I$ $a = -1.40818 + 1.29023I$ $b = -0.72561 - 1.90324I$	$2.48243 - 1.91335I$	0
$u = 1.048310 - 0.450986I$ $a = -1.40818 - 1.29023I$ $b = -0.72561 + 1.90324I$	$2.48243 + 1.91335I$	0
$u = 0.624825 + 0.574772I$ $a = 1.028940 + 0.598373I$ $b = 0.699771 - 0.402827I$	$-0.29917 - 7.43550I$	$-0.31843 + 4.49348I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.624825 - 0.574772I$ $a = 1.028940 - 0.598373I$ $b = 0.699771 + 0.402827I$	$-0.29917 + 7.43550I$	$-0.31843 - 4.49348I$
$u = 0.677012 + 0.490046I$ $a = 1.91943 - 0.37048I$ $b = 0.010605 - 0.151479I$	$-3.45158 + 0.56668I$	$-1.98152 + 0.95502I$
$u = 0.677012 - 0.490046I$ $a = 1.91943 + 0.37048I$ $b = 0.010605 + 0.151479I$	$-3.45158 - 0.56668I$	$-1.98152 - 0.95502I$
$u = 0.143847 + 0.816906I$ $a = 3.60584 - 1.75236I$ $b = -2.72020 + 1.87600I$	$3.99543 - 12.45750I$	$3.16743 + 7.87882I$
$u = 0.143847 - 0.816906I$ $a = 3.60584 + 1.75236I$ $b = -2.72020 - 1.87600I$	$3.99543 + 12.45750I$	$3.16743 - 7.87882I$
$u = 0.131097 + 0.814628I$ $a = -2.82764 + 1.44556I$ $b = 2.19358 - 1.64273I$	$6.19290 - 6.68872I$	$6.18602 + 3.85805I$
$u = 0.131097 - 0.814628I$ $a = -2.82764 - 1.44556I$ $b = 2.19358 + 1.64273I$	$6.19290 + 6.68872I$	$6.18602 - 3.85805I$
$u = -0.638302 + 0.513402I$ $a = 0.298195 - 0.327642I$ $b = 0.150510 + 1.281760I$	$-2.71730 + 1.71656I$	$-2.69239 - 1.49770I$
$u = -0.638302 - 0.513402I$ $a = 0.298195 + 0.327642I$ $b = 0.150510 - 1.281760I$	$-2.71730 - 1.71656I$	$-2.69239 + 1.49770I$
$u = 0.084734 + 0.810618I$ $a = -0.281035 + 0.148733I$ $b = 0.451303 - 0.663859I$	$7.50477 - 2.37218I$	$7.60940 + 2.45508I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.084734 - 0.810618I$ $a = -0.281035 - 0.148733I$ $b = 0.451303 + 0.663859I$	$7.50477 + 2.37218I$	$7.60940 - 2.45508I$
$u = 0.062002 + 0.809107I$ $a = -0.694063 + 0.273767I$ $b = 0.216786 + 0.332131I$	$6.29498 + 3.41320I$	$6.03563 - 2.91284I$
$u = 0.062002 - 0.809107I$ $a = -0.694063 - 0.273767I$ $b = 0.216786 - 0.332131I$	$6.29498 - 3.41320I$	$6.03563 + 2.91284I$
$u = 0.597470 + 0.547708I$ $a = -0.948340 - 0.065977I$ $b = -0.633409 + 0.082605I$	$1.79154 - 2.04029I$	$2.75012 + 0.45973I$
$u = 0.597470 - 0.547708I$ $a = -0.948340 + 0.065977I$ $b = -0.633409 - 0.082605I$	$1.79154 + 2.04029I$	$2.75012 - 0.45973I$
$u = -0.130219 + 0.799256I$ $a = 1.52061 + 2.52254I$ $b = -0.66932 - 1.91757I$	$1.23189 + 6.19452I$	$2.03888 - 5.46938I$
$u = -0.130219 - 0.799256I$ $a = 1.52061 - 2.52254I$ $b = -0.66932 + 1.91757I$	$1.23189 - 6.19452I$	$2.03888 + 5.46938I$
$u = 0.124021 + 0.786804I$ $a = 1.37622 - 2.82570I$ $b = -1.15779 + 2.57523I$	$0.12959 - 3.69092I$	$3.30927 + 4.30775I$
$u = 0.124021 - 0.786804I$ $a = 1.37622 + 2.82570I$ $b = -1.15779 - 2.57523I$	$0.12959 + 3.69092I$	$3.30927 - 4.30775I$
$u = -0.102979 + 0.784283I$ $a = -1.95071 - 1.53814I$ $b = 1.05096 + 1.30453I$	$2.11051 + 1.68118I$	$3.82795 - 0.19790I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.102979 - 0.784283I$ $a = -1.95071 + 1.53814I$ $b = \quad 1.05096 - 1.30453I$	$2.11051 - 1.68118I$	$3.82795 + 0.19790I$
$u = \quad 1.162950 + 0.364150I$ $a = \quad 1.036500 - 0.765772I$ $b = \quad 0.37000 + 1.58101I$	$3.58952 + 2.14988I$	0
$u = \quad 1.162950 - 0.364150I$ $a = \quad 1.036500 + 0.765772I$ $b = \quad 0.37000 - 1.58101I$	$3.58952 - 2.14988I$	0
$u = -0.178445 + 0.755692I$ $a = -0.96043 + 1.86608I$ $b = \quad 0.99543 - 1.15166I$	$-0.33248 + 1.46092I$	$3.18525 + 1.98059I$
$u = -0.178445 - 0.755692I$ $a = -0.96043 - 1.86608I$ $b = \quad 0.99543 + 1.15166I$	$-0.33248 - 1.46092I$	$3.18525 - 1.98059I$
$u = -1.136950 + 0.452088I$ $a = \quad 0.02675 - 2.17145I$ $b = -3.00297 + 0.76343I$	$0.82492 - 2.79638I$	0
$u = -1.136950 - 0.452088I$ $a = \quad 0.02675 + 2.17145I$ $b = -3.00297 - 0.76343I$	$0.82492 + 2.79638I$	0
$u = \quad 1.155100 + 0.420420I$ $a = \quad 0.09813 - 1.43768I$ $b = \quad 1.40058 + 0.80355I$	$4.17176 + 2.11595I$	0
$u = \quad 1.155100 - 0.420420I$ $a = \quad 0.09813 + 1.43768I$ $b = \quad 1.40058 - 0.80355I$	$4.17176 - 2.11595I$	0
$u = \quad 1.145120 + 0.469099I$ $a = -0.19347 + 2.77467I$ $b = -2.56390 - 1.37308I$	$0.67784 + 5.12770I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.145120 - 0.469099I$ $a = -0.19347 - 2.77467I$ $b = -2.56390 + 1.37308I$	$0.67784 - 5.12770I$	0
$u = 0.757499$ $a = -0.645860$ $b = -0.119944$	1.00529	10.9620
$u = -1.141430 + 0.505632I$ $a = 1.09724 - 1.94822I$ $b = -2.74030 - 0.37394I$	$1.52022 - 9.42870I$	0
$u = -1.141430 - 0.505632I$ $a = 1.09724 + 1.94822I$ $b = -2.74030 + 0.37394I$	$1.52022 + 9.42870I$	0
$u = -1.164500 + 0.479359I$ $a = -0.09977 + 1.55618I$ $b = 2.06379 - 0.72550I$	$3.74724 - 6.11973I$	0
$u = -1.164500 - 0.479359I$ $a = -0.09977 - 1.55618I$ $b = 2.06379 + 0.72550I$	$3.74724 + 6.11973I$	0
$u = -1.202640 + 0.391140I$ $a = 1.83220 - 1.20176I$ $b = -1.91566 - 2.36399I$	$4.05037 - 0.30836I$	0
$u = -1.202640 - 0.391140I$ $a = 1.83220 + 1.20176I$ $b = -1.91566 + 2.36399I$	$4.05037 + 0.30836I$	0
$u = -0.222565 + 0.698008I$ $a = 2.26836 - 0.90098I$ $b = -1.87082 + 0.17421I$	$-1.13913 + 4.84842I$	$0.19053 - 6.61375I$
$u = -0.222565 - 0.698008I$ $a = 2.26836 + 0.90098I$ $b = -1.87082 - 0.17421I$	$-1.13913 - 4.84842I$	$0.19053 + 6.61375I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.209040 + 0.385166I$ $a = 1.71742 + 0.62467I$ $b = -1.83241 + 1.49495I$	$5.22886 - 2.18421I$	0
$u = 1.209040 - 0.385166I$ $a = 1.71742 - 0.62467I$ $b = -1.83241 - 1.49495I$	$5.22886 + 2.18421I$	0
$u = 1.204680 + 0.402555I$ $a = -1.26758 - 1.07962I$ $b = 1.95466 - 0.62458I$	$5.96030 + 2.39991I$	0
$u = 1.204680 - 0.402555I$ $a = -1.26758 + 1.07962I$ $b = 1.95466 + 0.62458I$	$5.96030 - 2.39991I$	0
$u = -1.218960 + 0.373729I$ $a = 1.28881 - 2.33294I$ $b = -3.43800 - 0.73078I$	$8.12114 + 8.44678I$	0
$u = -1.218960 - 0.373729I$ $a = 1.28881 + 2.33294I$ $b = -3.43800 + 0.73078I$	$8.12114 - 8.44678I$	0
$u = -1.169270 + 0.512657I$ $a = -1.59144 + 0.40697I$ $b = 1.37778 + 1.55667I$	$2.55887 - 6.19584I$	0
$u = -1.169270 - 0.512657I$ $a = -1.59144 - 0.40697I$ $b = 1.37778 - 1.55667I$	$2.55887 + 6.19584I$	0
$u = -1.218850 + 0.382506I$ $a = -1.11458 + 1.98277I$ $b = 2.71467 + 0.72532I$	$10.26200 + 2.62921I$	0
$u = -1.218850 - 0.382506I$ $a = -1.11458 - 1.98277I$ $b = 2.71467 - 0.72532I$	$10.26200 - 2.62921I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.219230+0.410203I$ $a=-0.293141+0.611641I$ $b=\ \ 0.165616+0.496896I$	$11.39680-1.85953I$	0
$u=-1.219230-0.410203I$ $a=-0.293141-0.611641I$ $b=\ \ 0.165616-0.496896I$	$11.39680+1.85953I$	0
$u=-1.218670+0.421998I$ $a=-0.0530124-0.0106381I$ $b=\ \ 0.796121-0.443440I$	$10.10610-7.72026I$	0
$u=-1.218670-0.421998I$ $a=-0.0530124+0.0106381I$ $b=\ \ 0.796121+0.443440I$	$10.10610+7.72026I$	0
$u=-1.193200+0.495711I$ $a=\ \ 0.85770+1.66666I$ $b=\ \ 1.37649-2.19377I$	$5.29844-6.37819I$	0
$u=-1.193200-0.495711I$ $a=\ \ 0.85770-1.66666I$ $b=\ \ 1.37649+2.19377I$	$5.29844+6.37819I$	0
$u=\ \ 1.190870+0.503297I$ $a=-2.33474+1.75949I$ $b=-1.22260-3.21110I$	$3.25616+8.43967I$	0
$u=\ \ 1.190870-0.503297I$ $a=-2.33474-1.75949I$ $b=-1.22260+3.21110I$	$3.25616-8.43967I$	0
$u=-1.193950+0.507765I$ $a=-1.59403-1.60536I$ $b=-0.71201+2.91016I$	$4.36216-10.99680I$	0
$u=-1.193950-0.507765I$ $a=-1.59403+1.60536I$ $b=-0.71201-2.91016I$	$4.36216+10.99680I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.373685 + 0.593371I$ $a = 0.99356 - 2.18083I$ $b = 0.10408 + 1.63116I$	$0.56829 + 6.09045I$	$0.26032 - 5.28921I$
$u = 0.373685 - 0.593371I$ $a = 0.99356 + 2.18083I$ $b = 0.10408 - 1.63116I$	$0.56829 - 6.09045I$	$0.26032 + 5.28921I$
$u = 1.208280 + 0.482125I$ $a = -0.332020 - 0.609645I$ $b = 0.114022 + 0.174059I$	$9.67754 + 1.26401I$	0
$u = 1.208280 - 0.482125I$ $a = -0.332020 + 0.609645I$ $b = 0.114022 - 0.174059I$	$9.67754 - 1.26401I$	0
$u = 1.206020 + 0.492028I$ $a = 0.468494 - 0.213799I$ $b = 0.702505 + 0.491534I$	$10.81450 + 7.11198I$	0
$u = 1.206020 - 0.492028I$ $a = 0.468494 + 0.213799I$ $b = 0.702505 - 0.491534I$	$10.81450 - 7.11198I$	0
$u = -0.103369 + 0.689509I$ $a = -1.77124 + 0.01238I$ $b = 1.153010 + 0.351986I$	$0.73695 + 1.71605I$	$3.77885 - 4.08947I$
$u = -0.103369 - 0.689509I$ $a = -1.77124 - 0.01238I$ $b = 1.153010 - 0.351986I$	$0.73695 - 1.71605I$	$3.77885 + 4.08947I$
$u = 1.199320 + 0.511223I$ $a = 0.85148 - 2.56521I$ $b = 2.77014 + 2.25841I$	$9.3507 + 11.5458I$	0
$u = 1.199320 - 0.511223I$ $a = 0.85148 + 2.56521I$ $b = 2.77014 - 2.25841I$	$9.3507 - 11.5458I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.197420 + 0.516487I$ $a = -0.85661 + 3.27243I$ $b = -3.39472 - 2.66789I$	$7.1127 + 17.3483I$	0
$u = 1.197420 - 0.516487I$ $a = -0.85661 - 3.27243I$ $b = -3.39472 + 2.66789I$	$7.1127 - 17.3483I$	0
$u = 0.420708 + 0.535584I$ $a = -0.92459 + 1.42942I$ $b = -0.269487 - 1.012120I$	$2.34630 + 0.88690I$	$3.32220 - 0.66120I$
$u = 0.420708 - 0.535584I$ $a = -0.92459 - 1.42942I$ $b = -0.269487 + 1.012120I$	$2.34630 - 0.88690I$	$3.32220 + 0.66120I$
$u = 0.135866 + 0.578350I$ $a = 2.77684 - 1.08354I$ $b = -1.55817 + 0.48586I$	$-2.14700 - 0.95478I$	$-2.72488 - 0.71056I$
$u = 0.135866 - 0.578350I$ $a = 2.77684 + 1.08354I$ $b = -1.55817 - 0.48586I$	$-2.14700 + 0.95478I$	$-2.72488 + 0.71056I$
$u = -0.267648 + 0.455125I$ $a = 1.52493 - 0.19731I$ $b = -1.085270 - 0.811385I$	$-1.84189 - 1.02568I$	$-3.36402 + 1.61311I$
$u = -0.267648 - 0.455125I$ $a = 1.52493 + 0.19731I$ $b = -1.085270 + 0.811385I$	$-1.84189 + 1.02568I$	$-3.36402 - 1.61311I$

II. $\boldsymbol{I^u_2 = \langle u^3 + b - u - 1,\ -u^7 + 2u^5 + u^4 - 2u^3 - u^2 + a + 1,\ u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^4 - u^2 + 1 \\ u^6 - 2u^4 + u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^7 - 2u^5 - u^4 + 2u^3 + u^2 - 1 \\ -u^3 + u + 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^7 - 2u^5 + 2u^3 \\ u^6 - 2u^4 - u^3 + u^2 + u + 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^5 + 2u^3 - u \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^7 - 2u^5 - u^4 + 2u^3 + u^2 - 1 \\ -u^3 + u + 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^5 + 2u^3 - u \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^4 + u^2 - 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -u^8 + 2u^7 + u^6 - 4u^5 - 3u^4 + 6u^3 + u^2 + u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^9$
c_3, c_8	u^9
c_4	$(u+1)^9$
c_5, c_9	$u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1$
c_6	$u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1$
c_7	$u^9 - 3u^8 + 8u^7 - 13u^6 + 17u^5 - 17u^4 + 12u^3 - 6u^2 + u + 1$
c_{10}	$u^9 + 5u^8 + 12u^7 + 15u^6 + 9u^5 - u^4 - 4u^3 - 2u^2 + u + 1$
c_{11}	$u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1$
c_{12}	$u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^9$
c_3, c_8	y^9
c_5, c_9	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_6, c_{11}	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$
c_7, c_{12}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_{10}	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.772920+0.510351I$ $a=-0.855828+0.530357I$ $b=\ 0.084886-0.271383I$	$-3.42837-2.09337I$	$-2.59545+4.13635I$
$u=-0.772920-0.510351I$ $a=-0.855828-0.530357I$ $b=\ 0.084886+0.271383I$	$-3.42837+2.09337I$	$-2.59545-4.13635I$
$u=\ 0.825933$ $a=-0.162845$ $b=\ 1.26251$	-0.446489	0.580470
$u=\ 1.173910+0.391555I$ $a=-0.852888-0.566992I$ $b=\ 1.09612-1.16718I$	$2.72642+1.33617I$	$3.11790-0.38556I$
$u=\ 1.173910-0.391555I$ $a=-0.852888+0.566992I$ $b=\ 1.09612+1.16718I$	$2.72642-1.33617I$	$3.11790+0.38556I$
$u=-0.141484+0.739668I$ $a=-0.77654-1.46791I$ $b=\ 0.629127+1.099930I$	$-1.02799+2.45442I$	$-1.02595-3.19656I$
$u=-0.141484-0.739668I$ $a=-0.77654+1.46791I$ $b=\ 0.629127-1.099930I$	$-1.02799-2.45442I$	$-1.02595+3.19656I$
$u=-1.172470+0.500383I$ $a=\ 1.06667+0.97795I$ $b=\ 0.55861-1.43795I$	$1.95319-7.08493I$	$2.21327+6.71575I$
$u=-1.172470-0.500383I$ $a=\ 1.06667-0.97795I$ $b=\ 0.55861+1.43795I$	$1.95319+7.08493I$	$2.21327-6.71575I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^{108}+50u^{107}+\cdots+43u+1)$
c_2	$((u-1)^9)(u^{108}-10u^{107}+\cdots+11u-1)$
c_3, c_8	$u^9(u^{108}+u^{107}+\cdots-7424u^2+512)$
c_4	$((u+1)^9)(u^{108}-10u^{107}+\cdots+11u-1)$
c_5	$(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot(u^{108}-2u^{107}+\cdots+2153835u-699025)$
c_6	$(u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1)$ $\cdot(u^{108}-2u^{107}+\cdots+3u-1)$
c_7	$(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^{108}-6u^{107}+\cdots+11u-1)$
c_9	$(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot(u^{108}+14u^{107}+\cdots+4453u+349)$
c_{10}	$(u^9+5u^8+12u^7+15u^6+9u^5-u^4-4u^3-2u^2+u+1)$ $\cdot(u^{108}-58u^{107}+\cdots+u+1)$
c_{11}	$(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{108}-2u^{107}+\cdots+3u-1)$
c_{12}	$(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{108}-6u^{107}+\cdots+11u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^9)(y^{108}+26y^{107}+\cdots-1883y+1)$
c_2, c_4	$((y-1)^9)(y^{108}-50y^{107}+\cdots-43y+1)$
c_3, c_8	$y^9(y^{108}-57y^{107}+\cdots-7602176y+262144)$
c_5	$(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{108}-42y^{107}+\cdots-6625342064775y+488635950625)$
c_6, c_{11}	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{108}-58y^{107}+\cdots+y+1)$
c_7, c_{12}	$(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot(y^{108}+86y^{107}+\cdots+121y+1)$
c_9	$(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{108}-6y^{107}+\cdots-1457151y+121801)$
c_{10}	$(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(y^{108}-14y^{107}+\cdots-7y+1)$