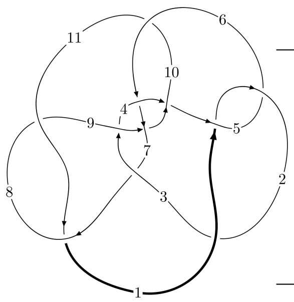
$11a_{101}$ ($K11a_{101}$)



A knot diagram[1]

Linearized knot diagam

→	↓	→	↓	→	↓	→	↑	→	↓	→	↑	→	↓	→	↓	→	↓	→	↑	→	↓	→
	5		1		9		10		2		4		3		11		7		6		8	

Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -5.86190 \times 10^{189} u^{104} + 3.24426 \times 10^{190} u^{103} + \cdots + 1.28496 \times 10^{191} b + 2.04597 \times 10^{191}, \\
& -9.93421 \times 10^{190} u^{104} - 1.87948 \times 10^{191} u^{103} + \cdots + 5.39685 \times 10^{192} a - 1.98703 \times 10^{193}, \\
& u^{105} - 3u^{104} + \cdots + 26u - 21 \rangle \\
I_2^u = \langle & -u^{17} - 4u^{16} + \cdots + b - 4,\ -10u^{17} - 12u^{16} + \cdots + a - 10,\ u^{18} + 2u^{17} + \cdots + 2u + 1 \rangle \\
I_3^u = \langle & -a^2 + b - a,\ a^4 + 2a^3 + 2a^2 + a + 1,\ u - 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 127 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. $\boldsymbol{I^u_1 = \langle -5.86\times 10^{189}u^{104} + 3.24\times 10^{190}u^{103} + \cdots + 1.28\times 10^{191}b + 2.05\times 10^{191},\ -9.93\times 10^{190}u^{104} - 1.88\times 10^{191}u^{103} + \cdots + 5.40\times 10^{192}a - 1.99\times 10^{193},\ u^{105} - 3u^{104} + \cdots + 26u - 21\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^2+1\\u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.0184074u^{104} + 0.0348256u^{103} + \cdots - 3.82299u + 3.68184\\0.0456192u^{104} - 0.252478u^{103} + \cdots + 11.7933u - 1.59224\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0.0754639u^{104} - 0.151948u^{103} + \cdots + 4.47496u + 3.26401\\0.0217419u^{104} - 0.195594u^{103} + \cdots + 13.2792u - 2.22961\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0.106302u^{104} - 0.0726312u^{103} + \cdots - 18.1193u + 6.55450\\-0.0367543u^{104} - 0.0382608u^{103} + \cdots + 0.133832u + 0.505694\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0.0375876u^{104} + 0.0739669u^{103} + \cdots + 2.09040u + 2.16319\\-0.123383u^{104} + 0.240256u^{103} + \cdots - 8.75520u + 3.25940\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0.00776219u^{104} + 0.0887609u^{103} + \cdots - 15.0253u + 5.17372\\-0.0721333u^{104} + 0.148940u^{103} + \cdots - 1.53959u - 0.932304\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-0.0513625u^{104} + 0.118285u^{103} + \cdots + 16.1435u - 2.45451\\0.00759574u^{104} + 0.0691986u^{103} + \cdots - 13.0165u + 3.52395\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-0.0513625u^{104} + 0.118285u^{103} + \cdots + 16.1435u - 2.45451\\0.00759574u^{104} + 0.0691986u^{103} + \cdots - 13.0165u + 3.52395\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.671537u^{104} + 1.42948u^{103} + \cdots + 1.71034u - 0.382946$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{105} + 3u^{104} + \cdots + 26u + 21$
c_2	$u^{105} + 41u^{104} + \cdots + 9538u + 441$
c_3	$u^{105} - u^{102} + \cdots - 35u + 1$
c_4	$u^{105} + 2u^{104} + \cdots - 373u + 41$
c_6	$u^{105} + 9u^{104} + \cdots + 47u + 5$
c_7	$u^{105} + 3u^{104} + \cdots - 2530373u + 478501$
c_8, c_{11}	$u^{105} + 5u^{104} + \cdots + 914u + 55$
c_9	$u^{105} - 9u^{104} + \cdots - 328u + 48$
c_{10}	$u^{105} - 3u^{104} + \cdots + 546u + 59$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{105} - 41y^{104} + \cdots + 9538y - 441$
c_2	$y^{105} + 51y^{104} + \cdots - 9048002y - 194481$
c_3	$y^{105} + 84y^{103} + \cdots + 273y - 1$
c_4	$y^{105} - 12y^{104} + \cdots + 97145y - 1681$
c_6	$y^{105} + 5y^{104} + \cdots - 251y - 25$
c_7	$y^{105} + 29y^{104} + \cdots - 5403864823119y - 228963207001$
c_8, c_{11}	$y^{105} + 65y^{104} + \cdots + 142616y - 3025$
c_9	$y^{105} + 5y^{104} + \cdots - 54464y - 2304$
c_{10}	$y^{105} - 17y^{104} + \cdots + 56806y - 3481$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.739994 + 0.674362I$ $a = -0.00363 - 1.98612I$ $b = -0.319451 + 1.371430I$	$6.01729 + 2.93762I$	0
$u = \ \ 0.739994 - 0.674362I$ $a = -0.00363 + 1.98612I$ $b = -0.319451 - 1.371430I$	$6.01729 - 2.93762I$	0
$u = -0.996356 + 0.112850I$ $a = -0.754266 - 0.000581I$ $b = -0.663792 + 1.031300I$	$-2.38432 + 4.04449I$	0
$u = -0.996356 - 0.112850I$ $a = -0.754266 + 0.000581I$ $b = -0.663792 - 1.031300I$	$-2.38432 - 4.04449I$	0
$u = \ \ 0.704644 + 0.717723I$ $a = -0.45849 + 1.34634I$ $b = -0.315659 - 0.133734I$	$1.23630 - 4.64058I$	0
$u = \ \ 0.704644 - 0.717723I$ $a = -0.45849 - 1.34634I$ $b = -0.315659 + 0.133734I$	$1.23630 + 4.64058I$	0
$u = \ \ 0.621034 + 0.773307I$ $a = -0.410716 - 0.805404I$ $b = \ \ 1.131970 - 0.010819I$	$1.74977 + 6.39892I$	0
$u = \ \ 0.621034 - 0.773307I$ $a = -0.410716 + 0.805404I$ $b = \ \ 1.131970 + 0.010819I$	$1.74977 - 6.39892I$	0
$u = \ \ 0.955004 + 0.332452I$ $a = -0.334732 + 1.334190I$ $b = -0.943520 - 0.498433I$	$-3.24061 - 2.39399I$	0
$u = \ \ 0.955004 - 0.332452I$ $a = -0.334732 - 1.334190I$ $b = -0.943520 + 0.498433I$	$-3.24061 + 2.39399I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.639186 + 0.731369I$ $a = 0.049200 + 0.306897I$ $b = 0.691929 + 0.143673I$	$3.14263 + 0.23766I$	0
$u = -0.639186 - 0.731369I$ $a = 0.049200 - 0.306897I$ $b = 0.691929 - 0.143673I$	$3.14263 - 0.23766I$	0
$u = -0.873349 + 0.559236I$ $a = 0.241965 - 1.018150I$ $b = -1.50507 - 0.13441I$	$-2.19508 + 2.22433I$	0
$u = -0.873349 - 0.559236I$ $a = 0.241965 + 1.018150I$ $b = -1.50507 + 0.13441I$	$-2.19508 - 2.22433I$	0
$u = -0.712742 + 0.615251I$ $a = -1.35301 - 3.08293I$ $b = 0.045643 + 0.959720I$	$1.43043 - 3.49947I$	0
$u = -0.712742 - 0.615251I$ $a = -1.35301 + 3.08293I$ $b = 0.045643 - 0.959720I$	$1.43043 + 3.49947I$	0
$u = 0.702742 + 0.794345I$ $a = 0.77380 - 1.75107I$ $b = -0.47650 + 1.40660I$	$3.70990 + 3.71060I$	0
$u = 0.702742 - 0.794345I$ $a = 0.77380 + 1.75107I$ $b = -0.47650 - 1.40660I$	$3.70990 - 3.71060I$	0
$u = -0.717574 + 0.787844I$ $a = 0.24779 - 1.49492I$ $b = 0.008686 + 1.151720I$	$5.29707 + 2.41276I$	0
$u = -0.717574 - 0.787844I$ $a = 0.24779 + 1.49492I$ $b = 0.008686 - 1.151720I$	$5.29707 - 2.41276I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.034220 + 0.263826I$ $a = 0.376217 + 0.538683I$ $b = -0.248610 + 0.058839I$	$-2.22921 - 0.56313I$	0
$u = 1.034220 - 0.263826I$ $a = 0.376217 - 0.538683I$ $b = -0.248610 - 0.058839I$	$-2.22921 + 0.56313I$	0
$u = -0.746082 + 0.554107I$ $a = -0.106561 - 0.269895I$ $b = -0.791032 - 0.852363I$	$0.515363 - 0.751368I$	0
$u = -0.746082 - 0.554107I$ $a = -0.106561 + 0.269895I$ $b = -0.791032 + 0.852363I$	$0.515363 + 0.751368I$	0
$u = 0.872372 + 0.624977I$ $a = 0.647622 + 1.115110I$ $b = -1.43569 + 0.11086I$	$-1.77580 - 2.44321I$	0
$u = 0.872372 - 0.624977I$ $a = 0.647622 - 1.115110I$ $b = -1.43569 - 0.11086I$	$-1.77580 + 2.44321I$	0
$u = 1.062710 + 0.196859I$ $a = 1.223850 + 0.353605I$ $b = 0.466155 - 0.892338I$	$-2.09066 + 2.59250I$	0
$u = 1.062710 - 0.196859I$ $a = 1.223850 - 0.353605I$ $b = 0.466155 + 0.892338I$	$-2.09066 - 2.59250I$	0
$u = -0.904124 + 0.143933I$ $a = -1.137730 - 0.581704I$ $b = -0.997296 + 0.489711I$	$-4.17184 + 1.85108I$	0
$u = -0.904124 - 0.143933I$ $a = -1.137730 + 0.581704I$ $b = -0.997296 - 0.489711I$	$-4.17184 - 1.85108I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.739990 + 0.531797I$ $a = -0.61736 + 2.52001I$ $b = -0.320667 - 1.080820I$	$0.43413 - 3.31458I$	0
$u = 0.739990 - 0.531797I$ $a = -0.61736 - 2.52001I$ $b = -0.320667 + 1.080820I$	$0.43413 + 3.31458I$	0
$u = 0.842087 + 0.691910I$ $a = -0.77060 + 1.47914I$ $b = 0.32251 - 1.60831I$	$6.64218 - 5.69412I$	0
$u = 0.842087 - 0.691910I$ $a = -0.77060 - 1.47914I$ $b = 0.32251 + 1.60831I$	$6.64218 + 5.69412I$	0
$u = -1.091690 + 0.038289I$ $a = 0.778221 - 0.609668I$ $b = 0.793651 + 0.444672I$	$-4.05808 + 5.63577I$	0
$u = -1.091690 - 0.038289I$ $a = 0.778221 + 0.609668I$ $b = 0.793651 - 0.444672I$	$-4.05808 - 5.63577I$	0
$u = 0.871499 + 0.695856I$ $a = 1.42749 - 1.69493I$ $b = 0.45738 + 1.46954I$	$6.55301 + 0.36358I$	0
$u = 0.871499 - 0.695856I$ $a = 1.42749 + 1.69493I$ $b = 0.45738 - 1.46954I$	$6.55301 - 0.36358I$	0
$u = -0.867026 + 0.127583I$ $a = -0.40021 - 1.59881I$ $b = -0.077948 - 1.079960I$	$2.21304 - 3.42010I$	0
$u = -0.867026 - 0.127583I$ $a = -0.40021 + 1.59881I$ $b = -0.077948 + 1.079960I$	$2.21304 + 3.42010I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.523544+0.702765I$ $a=\ \ 0.69115+1.53730I$ $b=-0.45129-1.46814I$	$3.78630-4.41777I$	0
$u=-0.523544-0.702765I$ $a=\ \ 0.69115-1.53730I$ $b=-0.45129+1.46814I$	$3.78630+4.41777I$	0
$u=-0.968752+0.584437I$ $a=-0.700178-0.530675I$ $b=-0.885614+0.568414I$	$-0.24099+5.32174I$	0
$u=-0.968752-0.584437I$ $a=-0.700178+0.530675I$ $b=-0.885614-0.568414I$	$-0.24099-5.32174I$	0
$u=-0.556771+1.007560I$ $a=-0.07814-1.44514I$ $b=\ \ 0.371110+1.241100I$	$7.20552-3.60295I$	0
$u=-0.556771-1.007560I$ $a=-0.07814+1.44514I$ $b=\ \ 0.371110-1.241100I$	$7.20552+3.60295I$	0
$u=\ \ 0.953631+0.649911I$ $a=-2.07755+1.58789I$ $b=-0.390960-1.281680I$	$5.35487-8.08102I$	0
$u=\ \ 0.953631-0.649911I$ $a=-2.07755-1.58789I$ $b=-0.390960+1.281680I$	$5.35487+8.08102I$	0
$u=\ \ 0.936806+0.674442I$ $a=\ \ 0.411966-0.245905I$ $b=-0.703893+0.390935I$	$0.603292-0.732253I$	0
$u=\ \ 0.936806-0.674442I$ $a=\ \ 0.411966+0.245905I$ $b=-0.703893-0.390935I$	$0.603292+0.732253I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.607933 + 0.981916I$ $a = -0.37768 + 1.50010I$ $b = 0.53317 - 1.35907I$	$6.05536 + 12.20240I$	0
$u = 0.607933 - 0.981916I$ $a = -0.37768 - 1.50010I$ $b = 0.53317 + 1.35907I$	$6.05536 - 12.20240I$	0
$u = -0.975859 + 0.621747I$ $a = 1.13351 + 2.50633I$ $b = 0.197170 - 1.088220I$	$0.59498 + 8.39732I$	0
$u = -0.975859 - 0.621747I$ $a = 1.13351 - 2.50633I$ $b = 0.197170 + 1.088220I$	$0.59498 - 8.39732I$	0
$u = -0.843437 + 0.793529I$ $a = -0.409882 - 0.975452I$ $b = 0.519206 + 1.191500I$	$5.49450 + 0.84862I$	0
$u = -0.843437 - 0.793529I$ $a = -0.409882 + 0.975452I$ $b = 0.519206 - 1.191500I$	$5.49450 - 0.84862I$	0
$u = -0.592273 + 1.001820I$ $a = 0.40109 + 1.55763I$ $b = -0.179100 - 1.346320I$	$7.47132 - 2.85952I$	0
$u = -0.592273 - 1.001820I$ $a = 0.40109 - 1.55763I$ $b = -0.179100 + 1.346320I$	$7.47132 + 2.85952I$	0
$u = 1.166930 + 0.102460I$ $a = 0.244286 + 0.337232I$ $b = -0.456043 + 1.078420I$	$-1.36269 + 2.57650I$	0
$u = 1.166930 - 0.102460I$ $a = 0.244286 - 0.337232I$ $b = -0.456043 - 1.078420I$	$-1.36269 - 2.57650I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.023120 + 0.572530I$ $a = 1.05565 - 1.39581I$ $b = 0.087494 + 0.954698I$	$-0.509462 - 1.065740I$	0
$u = 1.023120 - 0.572530I$ $a = 1.05565 + 1.39581I$ $b = 0.087494 - 0.954698I$	$-0.509462 + 1.065740I$	0
$u = 1.142920 + 0.284510I$ $a = 1.045750 + 0.233066I$ $b = 0.329260 + 0.724314I$	$-2.64401 - 1.00097I$	0
$u = 1.142920 - 0.284510I$ $a = 1.045750 - 0.233066I$ $b = 0.329260 - 0.724314I$	$-2.64401 + 1.00097I$	0
$u = -0.887449 + 0.774416I$ $a = 1.00120 + 1.53589I$ $b = 0.661868 - 1.121830I$	$5.35733 + 5.02068I$	0
$u = -0.887449 - 0.774416I$ $a = 1.00120 - 1.53589I$ $b = 0.661868 + 1.121830I$	$5.35733 - 5.02068I$	0
$u = -1.015240 + 0.661398I$ $a = 0.201760 + 0.488347I$ $b = 0.809497 + 0.102022I$	$2.01213 + 5.10232I$	0
$u = -1.015240 - 0.661398I$ $a = 0.201760 - 0.488347I$ $b = 0.809497 - 0.102022I$	$2.01213 - 5.10232I$	0
$u = -1.101410 + 0.522783I$ $a = -0.303133 + 0.595211I$ $b = 0.184844 + 0.573566I$	$-1.08423 + 6.56298I$	0
$u = -1.101410 - 0.522783I$ $a = -0.303133 - 0.595211I$ $b = 0.184844 - 0.573566I$	$-1.08423 - 6.56298I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.982163 + 0.730546I$ $a = 1.50146 + 1.08061I$ $b = 0.100432 - 1.001600I$	$4.50787 + 3.31342I$	0
$u = -0.982163 - 0.730546I$ $a = 1.50146 - 1.08061I$ $b = 0.100432 + 1.001600I$	$4.50787 - 3.31342I$	0
$u = 1.000300 + 0.716440I$ $a = -1.20544 + 1.95779I$ $b = -0.60105 - 1.43750I$	$2.80470 - 9.41027I$	0
$u = 1.000300 - 0.716440I$ $a = -1.20544 - 1.95779I$ $b = -0.60105 + 1.43750I$	$2.80470 + 9.41027I$	0
$u = -1.048930 + 0.643496I$ $a = -1.30143 - 1.45853I$ $b = -0.65511 + 1.45873I$	$2.28544 + 9.63826I$	0
$u = -1.048930 - 0.643496I$ $a = -1.30143 + 1.45853I$ $b = -0.65511 - 1.45873I$	$2.28544 - 9.63826I$	0
$u = 0.237807 + 1.211570I$ $a = -0.019047 - 1.255930I$ $b = 0.186131 + 1.098200I$	$3.78005 - 5.81600I$	0
$u = 0.237807 - 1.211570I$ $a = -0.019047 + 1.255930I$ $b = 0.186131 - 1.098200I$	$3.78005 + 5.81600I$	0
$u = 1.029710 + 0.682335I$ $a = -0.204403 - 0.720463I$ $b = 1.264740 - 0.144159I$	$0.52957 - 11.92170I$	0
$u = 1.029710 - 0.682335I$ $a = -0.204403 + 0.720463I$ $b = 1.264740 + 0.144159I$	$0.52957 + 11.92170I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.828894 + 0.953806I$ $a = -0.38958 + 1.50653I$ $b = -0.267682 - 0.788116I$	$1.42823 - 4.82513I$	0
$u = 0.828894 - 0.953806I$ $a = -0.38958 - 1.50653I$ $b = -0.267682 + 0.788116I$	$1.42823 + 4.82513I$	0
$u = -0.247645 + 0.673285I$ $a = 0.329154 + 0.092322I$ $b = 0.232356 - 0.603903I$	$1.31308 - 2.02353I$	$-1.45876 - 0.03065I$
$u = -0.247645 - 0.673285I$ $a = 0.329154 - 0.092322I$ $b = 0.232356 + 0.603903I$	$1.31308 + 2.02353I$	$-1.45876 + 0.03065I$
$u = 0.709328$ $a = 1.19069$ $b = -0.164470$	-1.21866	-8.07920
$u = 1.277390 + 0.256564I$ $a = 0.752259 - 0.588703I$ $b = 0.234618 + 0.830546I$	$-0.99712 - 1.17089I$	0
$u = 1.277390 - 0.256564I$ $a = 0.752259 + 0.588703I$ $b = 0.234618 - 0.830546I$	$-0.99712 + 1.17089I$	0
$u = -1.311490 + 0.202186I$ $a = 0.579840 + 0.214833I$ $b = 0.474299 - 1.083500I$	$-2.04022 + 10.35480I$	0
$u = -1.311490 - 0.202186I$ $a = 0.579840 - 0.214833I$ $b = 0.474299 + 1.083500I$	$-2.04022 - 10.35480I$	0
$u = 1.112650 + 0.751251I$ $a = 1.20328 - 1.58693I$ $b = 0.62681 + 1.37577I$	$4.4701 - 18.5210I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.112650 - 0.751251I$ $a = 1.20328 + 1.58693I$ $b = 0.62681 - 1.37577I$	$4.4701 + 18.5210I$	0
$u = -1.117760 + 0.756995I$ $a = -1.00207 - 1.37454I$ $b = -0.32630 + 1.39265I$	$5.83122 + 9.23477I$	0
$u = -1.117760 - 0.756995I$ $a = -1.00207 + 1.37454I$ $b = -0.32630 - 1.39265I$	$5.83122 - 9.23477I$	0
$u = -1.136440 + 0.740786I$ $a = 1.25852 + 1.35712I$ $b = 0.497698 - 1.232560I$	$5.39646 + 9.93649I$	0
$u = -1.136440 - 0.740786I$ $a = 1.25852 - 1.35712I$ $b = 0.497698 + 1.232560I$	$5.39646 - 9.93649I$	0
$u = 0.039444 + 0.557659I$ $a = 0.991976 + 0.968484I$ $b = -0.205599 - 0.907238I$	$0.90741 - 2.03803I$	$-2.19325 + 4.21221I$
$u = 0.039444 - 0.557659I$ $a = 0.991976 - 0.968484I$ $b = -0.205599 + 0.907238I$	$0.90741 + 2.03803I$	$-2.19325 - 4.21221I$
$u = 1.42240 + 0.27773I$ $a = -0.142074 + 0.305204I$ $b = -0.020374 - 0.935500I$	$-1.052790 - 0.389667I$	0
$u = 1.42240 - 0.27773I$ $a = -0.142074 - 0.305204I$ $b = -0.020374 + 0.935500I$	$-1.052790 + 0.389667I$	0
$u = 0.266843 + 0.324688I$ $a = 2.45970 + 2.39117I$ $b = 0.412521 + 0.477500I$	$0.56603 - 4.69971I$	$-5.71567 + 9.51983I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.266843 - 0.324688I$ $a = 2.45970 - 2.39117I$ $b = 0.412521 - 0.477500I$	$0.56603 + 4.69971I$	$-5.71567 - 9.51983I$
$u = -0.394234 + 0.067762I$ $a = 1.30258 + 1.27803I$ $b = -0.16126 - 1.43661I$	$3.75692 - 3.86041I$	$-9.69028 + 2.00461I$
$u = -0.394234 - 0.067762I$ $a = 1.30258 - 1.27803I$ $b = -0.16126 + 1.43661I$	$3.75692 + 3.86041I$	$-9.69028 - 2.00461I$
$u = 0.203779 + 0.335462I$ $a = 1.65509 + 0.07138I$ $b = -0.659402 - 0.044946I$	$-1.40825 - 0.47122I$	$-8.26224 + 1.56845I$
$u = 0.203779 - 0.335462I$ $a = 1.65509 - 0.07138I$ $b = -0.659402 + 0.044946I$	$-1.40825 + 0.47122I$	$-8.26224 - 1.56845I$

II. $\boldsymbol{I_2^u =}$
$\boldsymbol{\langle -u^{17} - 4u^{16} + \cdots + b - 4,\ -10u^{17} - 12u^{16} + \cdots + a - 10,\ u^{18} + 2u^{17} + \cdots + 2u + 1 \rangle}$

(i) Arc colorings

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

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

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

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

$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 10u^{17} + 12u^{16} + \cdots + 12u + 10 \\ u^{17} + 4u^{16} + \cdots + 2u + 4 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 9u^{17} + 10u^{16} + \cdots + 11u + 7 \\ 2u^{17} + 5u^{16} + \cdots + 4u + 5 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^{17} - u^{16} + \cdots - 4u + 1 \\ -u^{17} + 2u^{16} + \cdots + u + 2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 11u^{17} + 11u^{16} + \cdots + 14u + 8 \\ 5u^{16} + 2u^{15} + \cdots + 2u + 4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 2u^{17} + 3u^{16} + \cdots + u + 4 \\ -3u^{17} - u^{16} + \cdots - 3u + 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 4u^{16} + u^{15} + \cdots + u + 5 \\ -7u^{17} - 9u^{16} + \cdots - 10u - 7 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 4u^{16} + u^{15} + \cdots + u + 5 \\ -7u^{17} - 9u^{16} + \cdots - 10u - 7 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 25u^{17} + 12u^{16} - 84u^{15} - 72u^{14} + 146u^{13} + 101u^{12} - 185u^{11} - 83u^{10} + 275u^9 + 112u^8 - 197u^7 - 92u^6 + 121u^5 + 29u^4 - 39u^3 + 7u^2 + 33u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} + 2u^{17} + \cdots + 2u + 1$
c_2	$u^{18} + 8u^{17} + \cdots + 4u + 1$
c_3	$u^{18} + 2u^{16} + \cdots + 4u^2 + 1$
c_4	$u^{18} + 4u^{16} + \cdots + 2u^2 + 1$
c_5	$u^{18} - 2u^{17} + \cdots - 2u + 1$
c_6	$u^{18} - u^{16} + \cdots + 3u^2 + 1$
c_7	$u^{18} - 3u^{16} + \cdots + 8u + 1$
c_8	$u^{18} - 6u^{17} + \cdots - 2u + 1$
c_9	$u^{18} + 4u^{17} + \cdots + 47u + 13$
c_{10}	$u^{18} + 2u^{17} + \cdots + 2u + 1$
c_{11}	$u^{18} + 6u^{17} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{18} - 8y^{17} + \cdots - 4y + 1$
c_2	$y^{18} + 4y^{17} + \cdots + 16y + 1$
c_3	$y^{18} + 4y^{17} + \cdots + 8y + 1$
c_4	$y^{18} + 8y^{17} + \cdots + 4y + 1$
c_6	$y^{18} - 2y^{17} + \cdots + 6y + 1$
c_7	$y^{18} - 6y^{17} + \cdots - 26y + 1$
c_8, c_{11}	$y^{18} + 8y^{17} + \cdots + 16y + 1$
c_9	$y^{18} - 10y^{17} + \cdots + 287y + 169$
c_{10}	$y^{18} - 14y^{17} + \cdots + 10y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.866037 + 0.622834I$ $a = 0.511124 - 1.090210I$ $b = -1.48733 - 0.08783I$	$-1.41709 + 2.44188I$	$5.08235 - 4.37378I$
$u = -0.866037 - 0.622834I$ $a = 0.511124 + 1.090210I$ $b = -1.48733 + 0.08783I$	$-1.41709 - 2.44188I$	$5.08235 + 4.37378I$
$u = -0.621434 + 0.693802I$ $a = 0.42128 + 2.04009I$ $b = -0.27976 - 1.42569I$	$4.97290 - 3.51801I$	$0.06010 + 3.45707I$
$u = -0.621434 - 0.693802I$ $a = 0.42128 - 2.04009I$ $b = -0.27976 + 1.42569I$	$4.97290 + 3.51801I$	$0.06010 - 3.45707I$
$u = 0.867195 + 0.330617I$ $a = -0.196161 + 1.071470I$ $b = -1.035840 - 0.187211I$	$-3.15340 - 1.42820I$	$-13.04256 - 1.16995I$
$u = 0.867195 - 0.330617I$ $a = -0.196161 - 1.071470I$ $b = -1.035840 + 0.187211I$	$-3.15340 + 1.42820I$	$-13.04256 + 1.16995I$
$u = 0.631710 + 0.902435I$ $a = 0.34312 - 2.01414I$ $b = 0.157524 + 0.820252I$	$2.00612 - 4.90356I$	$3.85332 + 8.49862I$
$u = 0.631710 - 0.902435I$ $a = 0.34312 + 2.01414I$ $b = 0.157524 - 0.820252I$	$2.00612 + 4.90356I$	$3.85332 - 8.49862I$
$u = -1.058500 + 0.470398I$ $a = -0.325723 - 0.619881I$ $b = 0.095630 - 0.511385I$	$-1.16935 + 7.23800I$	$-7.01755 - 11.25029I$
$u = -1.058500 - 0.470398I$ $a = -0.325723 + 0.619881I$ $b = 0.095630 + 0.511385I$	$-1.16935 - 7.23800I$	$-7.01755 + 11.25029I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.034500+0.678208I$ $a=-1.39724-1.64751I$ $b=-0.45509+1.38511I$	$3.72776+8.87878I$	$-1.84390-7.64771I$
$u=-1.034500-0.678208I$ $a=-1.39724+1.64751I$ $b=-0.45509-1.38511I$	$3.72776-8.87878I$	$-1.84390+7.64771I$
$u=-0.663344+0.366591I$ $a=\ \ 0.57381+2.59156I$ $b=\ \ 0.234163+0.558499I$	$0.33317-3.63726I$	$-8.91882+3.24390I$
$u=-0.663344-0.366591I$ $a=\ \ 0.57381-2.59156I$ $b=\ \ 0.234163-0.558499I$	$0.33317+3.63726I$	$-8.91882-3.24390I$
$u=\ \ 0.361361+0.532422I$ $a=-0.447856+0.920402I$ $b=-0.050374-1.315620I$	$4.34573-4.19547I$	$2.04350+7.15132I$
$u=\ \ 0.361361-0.532422I$ $a=-0.447856-0.920402I$ $b=-0.050374+1.315620I$	$4.34573+4.19547I$	$2.04350-7.15132I$
$u=\ \ 1.383550+0.265753I$ $a=-0.482355+0.445640I$ $b=-0.178928-0.850199I$	$-1.42117-1.04333I$	$-13.21645+1.56037I$
$u=\ \ 1.383550-0.265753I$ $a=-0.482355-0.445640I$ $b=-0.178928+0.850199I$	$-1.42117+1.04333I$	$-13.21645-1.56037I$

III. $\boldsymbol{I_3^u = \langle -a^2 + b - a,\ a^4 + 2a^3 + 2a^2 + a + 1,\ u - 1\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} a \\ a^2 + a \end{pmatrix}$$
$$a_7 = \begin{pmatrix} a \\ a^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -a^3 - a^2 + 1 \\ a^2 + a + 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -a^3 - 2a^2 - a \\ a^2 + a + 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -a^3 - 2a^2 - a \\ a^2 + a + 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} a^3 + 2a^2 + 2a \\ -a \end{pmatrix}$$
$$a_4 = \begin{pmatrix} a^3 + 2a^2 + 2a \\ -a \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3a^3 + 2a^2 - a - 9$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^4$
c_2, c_5	$(u+1)^4$
c_3, c_4	$u^4+u^3-u^2-u+1$
c_6, c_7	$u^4+2u^3+2u^2+u+1$
c_8, c_{10}	$(u^2-u+1)^2$
c_9	u^4
c_{11}	$(u^2+u+1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y-1)^4$
c_3, c_4	$y^4 - 3y^3 + 5y^2 - 3y + 1$
c_6, c_7	$y^4 + 2y^2 + 3y + 1$
c_8, c_{10}, c_{11}	$(y^2 + y + 1)^2$
c_9	y^4

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 0.070696 + 0.758745I$ $b = -0.500000 + 0.866025I$	$-1.64493 + 2.02988I$	$-10.57732 - 1.82047I$
$u = 1.00000$ $a = 0.070696 - 0.758745I$ $b = -0.500000 - 0.866025I$	$-1.64493 - 2.02988I$	$-10.57732 + 1.82047I$
$u = 1.00000$ $a = -1.070700 + 0.758745I$ $b = -0.500000 - 0.866025I$	$-1.64493 - 2.02988I$	$-4.92268 + 2.50966I$
$u = 1.00000$ $a = -1.070700 - 0.758745I$ $b = -0.500000 + 0.866025I$	$-1.64493 + 2.02988I$	$-4.92268 - 2.50966I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^4)(u^{18}+2u^{17}+\cdots+2u+1)(u^{105}+3u^{104}+\cdots+26u+21)$
c_2	$((u+1)^4)(u^{18}+8u^{17}+\cdots+4u+1)(u^{105}+41u^{104}+\cdots+9538u+441)$
c_3	$(u^4+u^3-u^2-u+1)(u^{18}+2u^{16}+\cdots+4u^2+1)$ $\cdot(u^{105}-u^{102}+\cdots-35u+1)$
c_4	$(u^4+u^3-u^2-u+1)(u^{18}+4u^{16}+\cdots+2u^2+1)$ $\cdot(u^{105}+2u^{104}+\cdots-373u+41)$
c_5	$((u+1)^4)(u^{18}-2u^{17}+\cdots-2u+1)(u^{105}+3u^{104}+\cdots+26u+21)$
c_6	$(u^4+2u^3+2u^2+u+1)(u^{18}-u^{16}+\cdots+3u^2+1)$ $\cdot(u^{105}+9u^{104}+\cdots+47u+5)$
c_7	$(u^4+2u^3+2u^2+u+1)(u^{18}-3u^{16}+\cdots+8u+1)$ $\cdot(u^{105}+3u^{104}+\cdots-2530373u+478501)$
c_8	$((u^2-u+1)^2)(u^{18}-6u^{17}+\cdots-2u+1)(u^{105}+5u^{104}+\cdots+914u+55)$
c_9	$u^4(u^{18}+4u^{17}+\cdots+47u+13)(u^{105}-9u^{104}+\cdots-328u+48)$
c_{10}	$((u^2-u+1)^2)(u^{18}+2u^{17}+\cdots+2u+1)(u^{105}-3u^{104}+\cdots+546u+59)$
c_{11}	$((u^2+u+1)^2)(u^{18}+6u^{17}+\cdots+2u+1)(u^{105}+5u^{104}+\cdots+914u+55)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$((y-1)^4)(y^{18}-8y^{17}+\cdots-4y+1)(y^{105}-41y^{104}+\cdots+9538y-441)$
c_2	$((y-1)^4)(y^{18}+4y^{17}+\cdots+16y+1)$ $\cdot(y^{105}+51y^{104}+\cdots-9048002y-194481)$
c_3	$(y^4-3y^3+5y^2-3y+1)(y^{18}+4y^{17}+\cdots+8y+1)$ $\cdot(y^{105}+84y^{103}+\cdots+273y-1)$
c_4	$(y^4-3y^3+5y^2-3y+1)(y^{18}+8y^{17}+\cdots+4y+1)$ $\cdot(y^{105}-12y^{104}+\cdots+97145y-1681)$
c_6	$(y^4+2y^2+3y+1)(y^{18}-2y^{17}+\cdots+6y+1)$ $\cdot(y^{105}+5y^{104}+\cdots-251y-25)$
c_7	$(y^4+2y^2+3y+1)(y^{18}-6y^{17}+\cdots-26y+1)$ $\cdot(y^{105}+29y^{104}+\cdots-5403864823119y-228963207001)$
c_8, c_{11}	$((y^2+y+1)^2)(y^{18}+8y^{17}+\cdots+16y+1)$ $\cdot(y^{105}+65y^{104}+\cdots+142616y-3025)$
c_9	$y^4(y^{18}-10y^{17}+\cdots+287y+169)$ $\cdot(y^{105}+5y^{104}+\cdots-54464y-2304)$
c_{10}	$((y^2+y+1)^2)(y^{18}-14y^{17}+\cdots+10y+1)$ $\cdot(y^{105}-17y^{104}+\cdots+56806y-3481)$