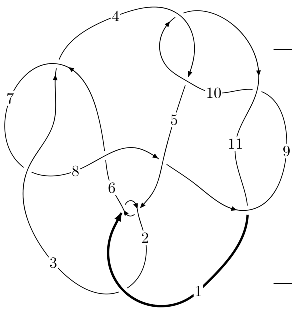
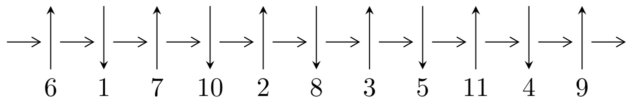
$11a_{128}$ ($K11a_{128}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -u^{27} + u^{26} + \cdots + 8b + 1,\ -u^{27} + u^{26} + \cdots + 8a - 7,\ u^{28} + 6u^{26} + \cdots - 2u + 1\rangle$$
$$I_2^u = \langle -1.55682 \times 10^{17} u^{41} + 7.44166 \times 10^{16} u^{40} + \cdots + 3.93707 \times 10^{17} b - 4.00955 \times 10^{17},$$
$$-3.62508 \times 10^{17} u^{41} + 5.17336 \times 10^{17} u^{40} + \cdots + 3.93707 \times 10^{17} a + 8.90477 \times 10^{17},\ u^{42} - u^{41} + \cdots + 2u +$$
$$I_3^u = \langle b - a - 1,\ a^3 - a^2 u + 3a^2 - 2au + a - 1,\ u^2 + 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 76 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.

$$I_1^u = \langle -u^{27}+u^{26}+\cdots+8b+1,\ -u^{27}+u^{26}+\cdots+8a-7,\ u^{28}+6u^{26}+\cdots-2u+1\rangle$$

(i) Arc colorings

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

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{1}{8}u^{27} - \frac{1}{8}u^{26} + \cdots + \frac{3}{8}u + \frac{7}{8} \\ \frac{1}{8}u^{27} - \frac{1}{8}u^{26} + \cdots + \frac{3}{8}u - \frac{1}{8} \end{pmatrix}$$

$$a_7 = \begin{pmatrix} \frac{1}{8}u^{27} - \frac{1}{8}u^{26} + \cdots + \frac{3}{8}u + \frac{7}{8} \\ \frac{1}{8}u^{27} - \frac{1}{8}u^{26} + \cdots + \frac{3}{8}u - \frac{1}{8} \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^4 + u^2 + 1 \\ \frac{1}{8}u^{27} - \frac{1}{8}u^{26} + \cdots + \frac{3}{8}u - \frac{1}{8} \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} \frac{1}{8}u^{27} + \frac{1}{8}u^{26} + \cdots - \frac{17}{8}u + \frac{1}{8} \\ \frac{5}{8}u^{27} + \frac{7}{8}u^{26} + \cdots - \frac{3}{8}u + \frac{9}{8} \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -\frac{3}{4}u^{27} + \frac{1}{4}u^{26} + \cdots - 2u + \frac{3}{2} \\ -\frac{9}{8}u^{27} - \frac{5}{8}u^{26} + \cdots - \frac{19}{8}u - \frac{1}{8} \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -\frac{1}{8}u^{27} - \frac{1}{8}u^{26} + \cdots + \frac{9}{8}u - \frac{1}{8} \\ -\frac{1}{8}u^{27} - \frac{1}{8}u^{26} + \cdots + \frac{9}{8}u - \frac{1}{8} \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -\frac{1}{8}u^{27} - \frac{1}{8}u^{26} + \cdots + \frac{9}{8}u - \frac{1}{8} \\ -\frac{1}{8}u^{27} - \frac{1}{8}u^{26} + \cdots + \frac{9}{8}u - \frac{1}{8} \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{9}{2}u^{27} - 26u^{25} + \cdots - 20u + \frac{7}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_5 c_7	$u^{28} + 6u^{26} + \cdots - 2u + 1$
c_2, c_6	$u^{28} + 12u^{27} + \cdots + 10u + 1$
c_4, c_{10}	$u^{28} + 3u^{27} + \cdots + u + 2$
c_8	$u^{28} - 15u^{27} + \cdots - 785u + 86$
c_9, c_{11}	$u^{28} - 9u^{27} + \cdots - 19u + 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_5 c_7	$y^{28} + 12y^{27} + \cdots + 10y + 1$
c_2, c_6	$y^{28} + 16y^{27} + \cdots + 30y + 1$
c_4, c_{10}	$y^{28} + 9y^{27} + \cdots + 19y + 4$
c_8	$y^{28} - 3y^{27} + \cdots + 53715y + 7396$
c_9, c_{11}	$y^{28} + 21y^{27} + \cdots + 111y + 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.759562 + 0.603461I$ $a = 0.262237 - 0.123439I$ $b = -0.155404 + 1.183400I$	$5.48513 - 0.99092I$	$8.59434 + 2.33645I$
$u = -0.759562 - 0.603461I$ $a = 0.262237 + 0.123439I$ $b = -0.155404 - 1.183400I$	$5.48513 + 0.99092I$	$8.59434 - 2.33645I$
$u = 0.616775 + 0.724242I$ $a = -0.025809 - 0.273919I$ $b = -0.104321 - 0.909807I$	$0.69719 + 2.24985I$	$1.09419 - 3.47682I$
$u = 0.616775 - 0.724242I$ $a = -0.025809 + 0.273919I$ $b = -0.104321 + 0.909807I$	$0.69719 - 2.24985I$	$1.09419 + 3.47682I$
$u = -0.724810 + 0.770942I$ $a = -0.188930 - 0.061129I$ $b = 0.124282 + 0.902212I$	$2.05272 - 7.06945I$	$3.67598 + 8.34686I$
$u = -0.724810 - 0.770942I$ $a = -0.188930 + 0.061129I$ $b = 0.124282 - 0.902212I$	$2.05272 + 7.06945I$	$3.67598 - 8.34686I$
$u = -0.802758 + 0.434476I$ $a = 0.573015 - 0.162109I$ $b = -0.603664 + 1.171140I$	$1.06471 + 4.87874I$	$4.05798 - 2.77982I$
$u = -0.802758 - 0.434476I$ $a = 0.573015 + 0.162109I$ $b = -0.603664 - 1.171140I$	$1.06471 - 4.87874I$	$4.05798 + 2.77982I$
$u = 0.416029 + 1.025630I$ $a = -1.55269 - 1.44392I$ $b = -1.71795 - 0.79732I$	$-6.63635 - 0.10967I$	$-3.90050 - 2.81899I$
$u = 0.416029 - 1.025630I$ $a = -1.55269 + 1.44392I$ $b = -1.71795 + 0.79732I$	$-6.63635 + 0.10967I$	$-3.90050 + 2.81899I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.436495+1.052560I$ $a=-1.72314+1.24024I$ $b=-1.80300+0.47325I$	$-7.02411-5.90283I$	$-4.75289+7.68964I$
$u=-0.436495-1.052560I$ $a=-1.72314-1.24024I$ $b=-1.80300-0.47325I$	$-7.02411+5.90283I$	$-4.75289-7.68964I$
$u=\ \ 0.606810+1.011990I$ $a=-1.232890-0.281742I$ $b=-0.498787+0.101237I$	$0.54803+3.32331I$	$2.18088-2.29510I$
$u=\ \ 0.606810-1.011990I$ $a=-1.232890+0.281742I$ $b=-0.498787-0.101237I$	$0.54803-3.32331I$	$2.18088+2.29510I$
$u=\ \ 0.715634+0.398949I$ $a=\ \ 0.607712+0.041457I$ $b=-0.543805-0.932641I$	$0.030119+0.482942I$	$2.45869-2.54239I$
$u=\ \ 0.715634-0.398949I$ $a=\ \ 0.607712-0.041457I$ $b=-0.543805+0.932641I$	$0.030119-0.482942I$	$2.45869+2.54239I$
$u=-0.570794+1.089040I$ $a=-1.68154+0.34539I$ $b=-1.015660-0.550205I$	$-1.89491-7.14346I$	$-3.37367+6.75053I$
$u=-0.570794-1.089040I$ $a=-1.68154-0.34539I$ $b=-1.015660+0.550205I$	$-1.89491+7.14346I$	$-3.37367-6.75053I$
$u=\ \ 0.626024+1.122830I$ $a=-1.73728-0.00452I$ $b=-0.646939+1.032570I$	$2.17277+9.75277I$	$3.46320-8.11852I$
$u=\ \ 0.626024-1.122830I$ $a=-1.73728+0.00452I$ $b=-0.646939-1.032570I$	$2.17277-9.75277I$	$3.46320+8.11852I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.023188 + 0.692895I$ $a = 2.34879 - 0.20424I$ $b = 1.59940 - 0.20555I$	$-4.98395 + 2.93184I$	$0.79314 - 3.40006I$
$u = 0.023188 - 0.692895I$ $a = 2.34879 + 0.20424I$ $b = 1.59940 + 0.20555I$	$-4.98395 - 2.93184I$	$0.79314 + 3.40006I$
$u = -0.588545 + 1.173310I$ $a = -2.06199 + 0.06635I$ $b = -1.18576 - 1.39834I$	$-4.61324 - 9.81937I$	$-3.57047 + 5.81179I$
$u = -0.588545 - 1.173310I$ $a = -2.06199 - 0.06635I$ $b = -1.18576 + 1.39834I$	$-4.61324 + 9.81937I$	$-3.57047 - 5.81179I$
$u = 0.605210 + 1.183850I$ $a = -2.06950 + 0.03808I$ $b = -1.05260 + 1.57196I$	$-3.5733 + 15.6943I$	$-1.82098 - 10.41623I$
$u = 0.605210 - 1.183850I$ $a = -2.06950 - 0.03808I$ $b = -1.05260 - 1.57196I$	$-3.5733 - 15.6943I$	$-1.82098 + 10.41623I$
$u = 0.273295 + 0.395938I$ $a = 0.982020 - 0.270229I$ $b = 0.104195 - 0.451120I$	$0.225861 + 1.065080I$	$3.10010 - 6.65254I$
$u = 0.273295 - 0.395938I$ $a = 0.982020 + 0.270229I$ $b = 0.104195 + 0.451120I$	$0.225861 - 1.065080I$	$3.10010 + 6.65254I$

II.
$\boldsymbol{I_2^u = \langle -1.56\times10^{17}u^{41}+7.44\times10^{16}u^{40}+\cdots+3.94\times10^{17}b-4.01\times10^{17},\ -3.63\times10^{17}u^{41}+5.17\times10^{17}u^{40}+\cdots+3.94\times10^{17}a+8.90\times10^{17},\ u^{42}-u^{41}+\cdots+2u+1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_6 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.920756u^{41}-1.31402u^{40}+\cdots-0.678222u-2.26178\\0.395427u^{41}-0.189015u^{40}+\cdots+0.318945u+1.01841\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0.525329u^{41}-1.12500u^{40}+\cdots-0.997167u-2.28019\\0.154289u^{41}-0.155024u^{40}+\cdots+0.0143489u+1.24208\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0.525329u^{41}-1.12500u^{40}+\cdots-0.997167u-3.28019\\0.395427u^{41}-0.189015u^{40}+\cdots+0.318945u+1.01841\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u\\u^3+u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^3\\u^5+u^3+u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-1.16179u^{41}+1.49863u^{40}+\cdots-7.64525u-3.07967\\-0.0610512u^{41}+0.300717u^{40}+\cdots+4.24243u+0.892006\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-1.05647u^{41}-0.115032u^{40}+\cdots+1.79735u+2.62565\\0.333742u^{41}-0.317542u^{40}+\cdots-2.13420u-1.49818\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1.61808u^{41}-1.69040u^{40}+\cdots+4.35493u+2.24321\\-0.222935u^{41}+0.0950704u^{40}+\cdots-2.85741u-0.597649\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1.61808u^{41}-1.69040u^{40}+\cdots+4.35493u+2.24321\\-0.222935u^{41}+0.0950704u^{40}+\cdots-2.85741u-0.597649\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{750018447371229972}{393706681309071797}u^{41}+\frac{1326377308854531456}{393706681309071797}u^{40}+\cdots+\frac{3939201724436401700}{393706681309071797}u+\frac{974136661643821530}{393706681309071797}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_5 c_7	$u^{42} - u^{41} + \cdots + 2u + 1$
c_2, c_6	$u^{42} + 23u^{41} + \cdots + 22u^2 + 1$
c_4, c_{10}	$(u^{21} - u^{20} + \cdots + u - 1)^2$
c_8	$(u^{21} + 5u^{20} + \cdots - 11u - 3)^2$
c_9, c_{11}	$(u^{21} - 7u^{20} + \cdots + 3u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_5 c_7	$y^{42} + 23y^{41} + \cdots + 22y^2 + 1$
c_2, c_6	$y^{42} - 9y^{41} + \cdots + 44y + 1$
c_4, c_{10}	$(y^{21} + 7y^{20} + \cdots + 3y - 1)^2$
c_8	$(y^{21} + 3y^{20} + \cdots - 41y - 9)^2$
c_9, c_{11}	$(y^{21} + 15y^{20} + \cdots + 27y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.384983 + 0.893506I$ $a = -1.61437 - 0.96323I$ $b = -0.207726 + 0.818105I$	$-1.26832 + 1.59690I$	$3.13274 - 4.73829I$
$u = 0.384983 - 0.893506I$ $a = -1.61437 + 0.96323I$ $b = -0.207726 - 0.818105I$	$-1.26832 - 1.59690I$	$3.13274 + 4.73829I$
$u = 0.900670 + 0.302277I$ $a = -0.0782845 - 0.0466257I$ $b = 0.86562 + 1.42640I$	$-0.91901 - 10.18330I$	$1.25382 + 7.21296I$
$u = 0.900670 - 0.302277I$ $a = -0.0782845 + 0.0466257I$ $b = 0.86562 - 1.42640I$	$-0.91901 + 10.18330I$	$1.25382 - 7.21296I$
$u = -0.656782 + 0.830369I$ $a = 1.211820 - 0.034605I$ $b = 0.128800 + 0.461641I$	$1.85425 + 1.80763I$	$4.25907 - 2.73625I$
$u = -0.656782 - 0.830369I$ $a = 1.211820 + 0.034605I$ $b = 0.128800 - 0.461641I$	$1.85425 - 1.80763I$	$4.25907 + 2.73625I$
$u = 0.843980 + 0.412000I$ $a = 0.264230 - 0.021493I$ $b = 0.433674 + 1.104090I$	$4.29768 - 4.29720I$	$6.75143 + 3.93304I$
$u = 0.843980 - 0.412000I$ $a = 0.264230 + 0.021493I$ $b = 0.433674 - 1.104090I$	$4.29768 + 4.29720I$	$6.75143 - 3.93304I$
$u = 0.742093 + 0.573520I$ $a = 0.729163 + 0.038018I$ $b = 0.128800 + 0.461641I$	$1.85425 + 1.80763I$	$4.25907 - 2.73625I$
$u = 0.742093 - 0.573520I$ $a = 0.729163 - 0.038018I$ $b = 0.128800 - 0.461641I$	$1.85425 - 1.80763I$	$4.25907 + 2.73625I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.528906 + 0.927109I$ $a = 1.321410 + 0.194864I$ $b = 0.641247 - 0.630310I$	$0.10785 + 2.26276I$	$-0.12423 - 3.11409I$
$u = 0.528906 - 0.927109I$ $a = 1.321410 - 0.194864I$ $b = 0.641247 + 0.630310I$	$0.10785 - 2.26276I$	$-0.12423 + 3.11409I$
$u = -0.860486 + 0.285796I$ $a = -0.0772165 - 0.0782315I$ $b = 0.93790 - 1.24922I$	$-1.96895 + 4.48385I$	$-0.56586 - 2.47352I$
$u = -0.860486 - 0.285796I$ $a = -0.0772165 + 0.0782315I$ $b = 0.93790 + 1.24922I$	$-1.96895 - 4.48385I$	$-0.56586 + 2.47352I$
$u = -0.239332 + 1.082520I$ $a = -1.021360 + 0.939730I$ $b = -0.510732$	-4.11368	$-8.21539 + 0.I$
$u = -0.239332 - 1.082520I$ $a = -1.021360 - 0.939730I$ $b = -0.510732$	-4.11368	$-8.21539 + 0.I$
$u = 0.125880 + 1.108300I$ $a = 0.910717 + 0.374635I$ $b = 1.127110 + 0.099375I$	$-4.65974 + 2.68588I$	$-1.85070 - 3.67518I$
$u = 0.125880 - 1.108300I$ $a = 0.910717 - 0.374635I$ $b = 1.127110 - 0.099375I$	$-4.65974 - 2.68588I$	$-1.85070 + 3.67518I$
$u = 0.478722 + 1.037960I$ $a = -1.54549 - 1.29421I$ $b = -0.98839 + 1.06606I$	$-6.19421 + 6.51836I$	$-3.49661 - 6.69162I$
$u = 0.478722 - 1.037960I$ $a = -1.54549 + 1.29421I$ $b = -0.98839 - 1.06606I$	$-6.19421 - 6.51836I$	$-3.49661 + 6.69162I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.444142 + 1.066230I$ $a = -1.44535 + 1.30052I$ $b = -1.065450 - 0.815532I$	$-6.94955 - 0.90110I$	$-5.44354 + 1.25880I$
$u = -0.444142 - 1.066230I$ $a = -1.44535 - 1.30052I$ $b = -1.065450 + 0.815532I$	$-6.94955 + 0.90110I$	$-5.44354 - 1.25880I$
$u = -0.638288 + 0.999696I$ $a = 1.45241 - 0.09124I$ $b = 0.433674 + 1.104090I$	$4.29768 - 4.29720I$	$6.75143 + 3.93304I$
$u = -0.638288 - 0.999696I$ $a = 1.45241 + 0.09124I$ $b = 0.433674 - 1.104090I$	$4.29768 + 4.29720I$	$6.75143 - 3.93304I$
$u = -0.046915 + 1.192480I$ $a = 0.505321 - 0.535434I$ $b = 0.882596 - 0.417746I$	$-4.44976 + 2.73152I$	$-0.80842 - 2.00184I$
$u = -0.046915 - 1.192480I$ $a = 0.505321 + 0.535434I$ $b = 0.882596 + 0.417746I$	$-4.44976 - 2.73152I$	$-0.80842 + 2.00184I$
$u = -0.690143 + 0.400372I$ $a = 0.429900 - 0.357030I$ $b = 0.641247 - 0.630310I$	$0.10785 + 2.26276I$	$-0.12423 - 3.11409I$
$u = -0.690143 - 0.400372I$ $a = 0.429900 + 0.357030I$ $b = 0.641247 + 0.630310I$	$0.10785 - 2.26276I$	$-0.12423 + 3.11409I$
$u = 0.580018 + 1.088560I$ $a = 1.53519 + 0.23279I$ $b = 0.93790 - 1.24922I$	$-1.96895 + 4.48385I$	$-0.56586 - 2.47352I$
$u = 0.580018 - 1.088560I$ $a = 1.53519 - 0.23279I$ $b = 0.93790 + 1.24922I$	$-1.96895 - 4.48385I$	$-0.56586 + 2.47352I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.135211 + 1.234020I$ $a = -0.331836 - 1.074640I$ $b = -0.207726 - 0.818105I$	$-1.26832 - 1.59690I$	$3.13274 + 4.73829I$
$u = 0.135211 - 1.234020I$ $a = -0.331836 + 1.074640I$ $b = -0.207726 + 0.818105I$	$-1.26832 + 1.59690I$	$3.13274 - 4.73829I$
$u = -0.613478 + 1.100460I$ $a = 1.58130 - 0.19672I$ $b = 0.86562 + 1.42640I$	$-0.91901 - 10.18330I$	$1.00000 + 7.21296I$
$u = -0.613478 - 1.100460I$ $a = 1.58130 + 0.19672I$ $b = 0.86562 - 1.42640I$	$-0.91901 + 10.18330I$	$1.00000 - 7.21296I$
$u = -0.264739 + 1.262700I$ $a = -0.67780 + 1.45363I$ $b = -1.065450 + 0.815532I$	$-6.94955 + 0.90110I$	$-5.44354 - 1.25880I$
$u = -0.264739 - 1.262700I$ $a = -0.67780 - 1.45363I$ $b = -1.065450 - 0.815532I$	$-6.94955 - 0.90110I$	$-5.44354 + 1.25880I$
$u = 0.243106 + 1.291400I$ $a = -0.55702 - 1.49792I$ $b = -0.98839 - 1.06606I$	$-6.19421 - 6.51836I$	$-3.49661 + 6.69162I$
$u = 0.243106 - 1.291400I$ $a = -0.55702 + 1.49792I$ $b = -0.98839 + 1.06606I$	$-6.19421 + 6.51836I$	$-3.49661 - 6.69162I$
$u = 0.315798 + 0.452715I$ $a = -2.24033 - 1.05440I$ $b = 0.882596 + 0.417746I$	$-4.44976 - 2.73152I$	$-0.80842 + 2.00184I$
$u = 0.315798 - 0.452715I$ $a = -2.24033 + 1.05440I$ $b = 0.882596 - 0.417746I$	$-4.44976 + 2.73152I$	$-0.80842 - 2.00184I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.325064+0.154969I$ $a=-1.85243+2.34864I$ $b=\ \ 1.127110-0.099375I$	$-4.65974-2.68588I$	$-1.85070+3.67518I$
$u=-0.325064-0.154969I$ $a=-1.85243-2.34864I$ $b=\ \ 1.127110+0.099375I$	$-4.65974+2.68588I$	$-1.85070-3.67518I$

III. $I_3^u = \langle b - a - 1,\ a^3 - a^2u + 3a^2 - 2au + a - 1,\ u^2 + 1\rangle$

(i) Arc colorings

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

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} a \\ a+1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} a+1 \\ a+2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1 \\ a+1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ 0 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} au \\ -a^2u - 2au - u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} a^2 + a - 1 \\ -a^2u - 2au - a - 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -au \\ -au - u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -au \\ -au - u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4a^2 + 4au - 8a + 4u - 4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_5 c_7	$(y+1)^6$
c_2, c_6	$(y-1)^6$
c_4, c_{10}	$(y^3+y^2+2y+1)^2$
c_8	$(y^3-3y^2+2y+1)^2$
c_9, c_{11}	$(y^3+3y^2+2y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = -1.000000 + 0.569840I$ $b = 0.569840I$	-2.17641	$-6 - 0.980489 + 0.10I$
$u = 1.000000I$ $a = 0.307141 + 0.215080I$ $b = 1.307140 + 0.215080I$	$-6.31400 - 2.82812I$	$-7.50976 + 2.97945I$
$u = 1.000000I$ $a = -2.30714 + 0.21508I$ $b = -1.307140 + 0.215080I$	$-6.31400 + 2.82812I$	$-7.50976 - 2.97945I$
$u = -1.000000I$ $a = -1.000000 - 0.569840I$ $b = -0.569840I$	-2.17641	$-6 - 0.980489 + 0.10I$
$u = -1.000000I$ $a = 0.307141 - 0.215080I$ $b = 1.307140 - 0.215080I$	$-6.31400 + 2.82812I$	$-7.50976 - 2.97945I$
$u = -1.000000I$ $a = -2.30714 - 0.21508I$ $b = -1.307140 - 0.215080I$	$-6.31400 - 2.82812I$	$-7.50976 + 2.97945I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_3, c_5 c_7	$((u^2+1)^3)(u^{28}+6u^{26}+\cdots-2u+1)(u^{42}-u^{41}+\cdots+2u+1)$
c_2	$((u+1)^6)(u^{28}+12u^{27}+\cdots+10u+1)(u^{42}+23u^{41}+\cdots+22u^2+1)$
c_4, c_{10}	$(u^6+u^4+2u^2+1)(u^{21}-u^{20}+\cdots+u-1)^2(u^{28}+3u^{27}+\cdots+u+2)$
c_6	$((u-1)^6)(u^{28}+12u^{27}+\cdots+10u+1)(u^{42}+23u^{41}+\cdots+22u^2+1)$
c_8	$(u^6-3u^4+2u^2+1)(u^{21}+5u^{20}+\cdots-11u-3)^2$ $\cdot(u^{28}-15u^{27}+\cdots-785u+86)$
c_9	$((u^3+u^2+2u+1)^2)(u^{21}-7u^{20}+\cdots+3u+1)^2$ $\cdot(u^{28}-9u^{27}+\cdots-19u+4)$
c_{11}	$((u^3-u^2+2u-1)^2)(u^{21}-7u^{20}+\cdots+3u+1)^2$ $\cdot(u^{28}-9u^{27}+\cdots-19u+4)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_5 c_7	$((y+1)^6)(y^{28}+12y^{27}+\cdots+10y+1)(y^{42}+23y^{41}+\cdots+22y^2+1)$
c_2, c_6	$((y-1)^6)(y^{28}+16y^{27}+\cdots+30y+1)(y^{42}-9y^{41}+\cdots+44y+1)$
c_4, c_{10}	$((y^3+y^2+2y+1)^2)(y^{21}+7y^{20}+\cdots+3y-1)^2$ $\cdot\,(y^{28}+9y^{27}+\cdots+19y+4)$
c_8	$((y^3-3y^2+2y+1)^2)(y^{21}+3y^{20}+\cdots-41y-9)^2$ $\cdot\,(y^{28}-3y^{27}+\cdots+53715y+7396)$
c_9, c_{11}	$((y^3+3y^2+2y-1)^2)(y^{21}+15y^{20}+\cdots+27y-1)^2$ $\cdot\,(y^{28}+21y^{27}+\cdots+111y+16)$