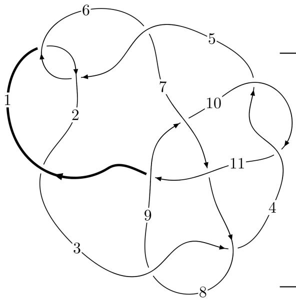
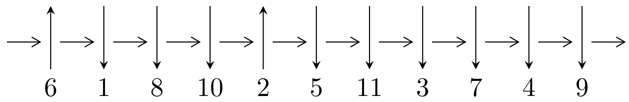
$11a_{148}$ ($K11a_{148}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 35u^{24} + 168u^{23} + \cdots + 2b - 32,\ -27u^{24} - 155u^{23} + \cdots + 2a + 101,\ u^{25} + 6u^{24} + \cdots + 2u - 4\rangle$$

$$\begin{aligned} I_2^u = \langle &2016599941u^{10}a^3 - 15792956111u^{10}a^2 + \cdots + 42968527616a + 47798397673, \\ &2u^{10}a^3 + 5u^{10}a^2 + \cdots - 11a - 4,\ u^{11} - u^{10} + 2u^9 - u^8 + 4u^7 - 2u^6 + 4u^5 - u^4 + 3u^3 + u^2 + 1\rangle \end{aligned}$$

$$\begin{aligned} I_3^u = \langle &-u^{11} + u^{10} - 3u^9 + u^8 - 6u^7 + 2u^6 - 9u^5 + 2u^4 - 7u^3 + b - 4u, \\ &u^{11} - 2u^{10} + 4u^9 - 4u^8 + 7u^7 - 8u^6 + 11u^5 - 11u^4 + 9u^3 - 7u^2 + a + 4u - 4, \\ &u^{12} - u^{11} + 3u^{10} - 2u^9 + 6u^8 - 4u^7 + 9u^6 - 5u^5 + 8u^4 - 3u^3 + 5u^2 - u + 1\rangle \end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 81 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. $\boldsymbol{I^u_1 = \langle 35u^{24} + 168u^{23} + \cdots + 2b - 32,\ -27u^{24} - 155u^{23} + \cdots + 2a + 101,\ u^{25} + 6u^{24} + \cdots + 2u - 4\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^2+1 \\ u^4 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^3 \\ u^3+u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{27}{2}u^{24} + \frac{155}{2}u^{23} + \cdots + 39u - \frac{101}{2} \\ -\frac{35}{2}u^{24} - 84u^{23} + \cdots + \frac{53}{2}u + 16 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{7}{2}u^{24} + \frac{37}{2}u^{23} + \cdots + 7u - \frac{21}{2} \\ -\frac{9}{2}u^{24} - 17u^{23} + \cdots + \frac{39}{2}u - 6 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -\frac{3}{4}u^{24} - u^{23} + \cdots + \frac{17}{4}u - 2 \\ -\frac{5}{2}u^{24} - 16u^{23} + \cdots - \frac{21}{2}u + 11 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{24} - \frac{7}{2}u^{23} + \cdots + \frac{3}{2}u - \frac{5}{2} \\ \frac{3}{2}u^{24} + 6u^{23} + \cdots + \frac{17}{2}u - 4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -\frac{17}{4}u^{24} - 24u^{23} + \cdots - \frac{37}{4}u + 16 \\ \frac{9}{2}u^{24} + 21u^{23} + \cdots - \frac{27}{2}u - 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -\frac{17}{4}u^{24} - 24u^{23} + \cdots - \frac{37}{4}u + 16 \\ \frac{9}{2}u^{24} + 21u^{23} + \cdots - \frac{27}{2}u - 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$= -15u^{24} - 91u^{23} - 314u^{22} - 764u^{21} - 1477u^{20} - 2371u^{19} - 3183u^{18} - 3544u^{17} - 3125u^{16} - 1943u^{15} - 107u^{14} + 1758u^{13} + 3237u^{12} + 3576u^{11} + 3208u^{10} + 1906u^9 + 604u^8 - 914u^7 - 1457u^6 - 1716u^5 - 1155u^4 - 780u^3 - 197u^2 - 64u + 58$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{25} - 6u^{24} + \cdots + 2u + 4$
c_2, c_6	$u^{25} + 8u^{24} + \cdots + 92u - 16$
c_3, c_4, c_8 c_{10}	$u^{25} + 11u^{23} + \cdots + u + 1$
c_7	$u^{25} + 25u^{24} + \cdots + 22528u + 2048$
c_9, c_{11}	$u^{25} + 2u^{24} + \cdots - 3u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{25} + 8y^{24} + \cdots + 92y - 16$
c_2, c_6	$y^{25} + 20y^{24} + \cdots + 34416y - 256$
c_3, c_4, c_8 c_{10}	$y^{25} + 22y^{24} + \cdots - y - 1$
c_7	$y^{25} + 5y^{24} + \cdots - 6291456y - 4194304$
c_9, c_{11}	$y^{25} + 10y^{24} + \cdots + y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.547785 + 0.829347I$ $a = -0.132188 + 1.028140I$ $b = 0.342369 - 0.476494I$	$-1.27014 + 2.16528I$	$-1.04869 - 7.02425I$
$u = 0.547785 - 0.829347I$ $a = -0.132188 - 1.028140I$ $b = 0.342369 + 0.476494I$	$-1.27014 - 2.16528I$	$-1.04869 + 7.02425I$
$u = 0.909758 + 0.111933I$ $a = 0.448280 + 0.761789I$ $b = -0.191053 - 0.377973I$	$7.60221 - 5.64749I$	$1.55411 + 4.80712I$
$u = 0.909758 - 0.111933I$ $a = 0.448280 - 0.761789I$ $b = -0.191053 + 0.377973I$	$7.60221 + 5.64749I$	$1.55411 - 4.80712I$
$u = 0.172465 + 0.850743I$ $a = 1.05588 + 0.98070I$ $b = -0.068333 - 0.860826I$	$-2.99666 + 1.65679I$	$-15.0147 - 0.6856I$
$u = 0.172465 - 0.850743I$ $a = 1.05588 - 0.98070I$ $b = -0.068333 + 0.860826I$	$-2.99666 - 1.65679I$	$-15.0147 + 0.6856I$
$u = -0.772738 + 0.848455I$ $a = -1.04991 + 1.28098I$ $b = 2.14935 + 0.25094I$	$2.58604 - 0.70386I$	$-5.85928 - 0.49941I$
$u = -0.772738 - 0.848455I$ $a = -1.04991 - 1.28098I$ $b = 2.14935 - 0.25094I$	$2.58604 + 0.70386I$	$-5.85928 + 0.49941I$
$u = -0.261992 + 0.786193I$ $a = -0.562785 - 0.125344I$ $b = 0.120830 + 0.426313I$	$-0.450467 - 1.265120I$	$-5.40648 + 4.55979I$
$u = -0.261992 - 0.786193I$ $a = -0.562785 + 0.125344I$ $b = 0.120830 - 0.426313I$	$-0.450467 + 1.265120I$	$-5.40648 - 4.55979I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.387681 + 1.123210I$ $a = -0.918133 - 0.226616I$ $b = 0.438533 + 0.451507I$	$4.17221 + 10.11180I$	$-4.52201 - 8.50269I$
$u = 0.387681 - 1.123210I$ $a = -0.918133 + 0.226616I$ $b = 0.438533 - 0.451507I$	$4.17221 - 10.11180I$	$-4.52201 + 8.50269I$
$u = -0.764005 + 0.915174I$ $a = 0.34371 - 1.87642I$ $b = -2.17540 + 1.02852I$	$2.38356 - 5.10130I$	$-6.46922 + 5.59973I$
$u = -0.764005 - 0.915174I$ $a = 0.34371 + 1.87642I$ $b = -2.17540 - 1.02852I$	$2.38356 + 5.10130I$	$-6.46922 - 5.59973I$
$u = -0.928755 + 0.776951I$ $a = 0.99963 - 1.17470I$ $b = -2.38197 - 0.23867I$	$13.0505 + 9.3478I$	$-0.12461 - 3.78791I$
$u = -0.928755 - 0.776951I$ $a = 0.99963 + 1.17470I$ $b = -2.38197 + 0.23867I$	$13.0505 - 9.3478I$	$-0.12461 + 3.78791I$
$u = -0.993283 + 0.737833I$ $a = -0.375273 + 0.709529I$ $b = 1.332200 - 0.192203I$	$11.57130 - 0.60521I$	$2.81259 + 0.07964I$
$u = -0.993283 - 0.737833I$ $a = -0.375273 - 0.709529I$ $b = 1.332200 + 0.192203I$	$11.57130 + 0.60521I$	$2.81259 - 0.07964I$
$u = 0.205874 + 1.279220I$ $a = 0.297105 - 0.434123I$ $b = -0.360870 + 0.141760I$	$2.70932 - 1.76563I$	$1.67735 + 6.00861I$
$u = 0.205874 - 1.279220I$ $a = 0.297105 + 0.434123I$ $b = -0.360870 - 0.141760I$	$2.70932 + 1.76563I$	$1.67735 - 6.00861I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.815577+1.026240I$ $a=-0.83474+1.97424I$ $b=\ \ 2.55672-0.85139I$	$12.2597-15.7728I$	$-1.36713+8.34320I$
$u=-0.815577-1.026240I$ $a=-0.83474-1.97424I$ $b=\ \ 2.55672+0.85139I$	$12.2597+15.7728I$	$-1.36713-8.34320I$
$u=-0.834263+1.074420I$ $a=\ \ 0.617688-1.026740I$ $b=-1.46448+0.32121I$	$10.51100-6.06025I$	$0.84273+5.20676I$
$u=-0.834263-1.074420I$ $a=\ \ 0.617688+1.026740I$ $b=-1.46448-0.32121I$	$10.51100+6.06025I$	$0.84273-5.20676I$
$u=\ \ 0.294100$ $a=-1.77854$ $b=\ \ 0.404195$	-0.887194	-11.1490

II. $I_2^u = \langle 2.02\times10^{9}a^3u^{10} - 1.58\times10^{10}a^2u^{10} + \cdots + 4.30\times10^{10}a + 4.78\times 10^{10},\ 2u^{10}a^3 + 5u^{10}a^2 + \cdots - 11a - 4,\ u^{11} - u^{10} + \cdots + u^2 + 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}u^2+1\\u^4\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-u^3\\u^3+u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}a\\-0.0501087a^3u^{10} + 0.392425a^2u^{10} + \cdots - 1.06769a - 1.18770\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0.0730076a^3u^{10} + 0.0208690a^2u^{10} + \cdots + 1.15943a - 0.436827\\-0.0458109a^3u^{10} + 0.201699a^2u^{10} + \cdots - 1.42746a - 1.14085\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-0.101413a^3u^{10} + 0.463802a^2u^{10} + \cdots - 0.220601a - 0.144396\\-0.00665696a^3u^{10} - 0.286527a^2u^{10} + \cdots - 0.381572a - 2.85287\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.0552205a^3u^{10} + 0.0271607a^2u^{10} + \cdots + 0.272604a - 0.228788\\-0.0458109a^3u^{10} + 0.201699a^2u^{10} + \cdots - 1.42746a - 1.14085\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-0.113164a^3u^{10} + 0.205988a^2u^{10} + \cdots - 0.610611a + 0.745692\\0.204647a^3u^{10} + 0.121534a^2u^{10} + \cdots - 0.319396a + 1.27947\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-0.113164a^3u^{10} + 0.205988a^2u^{10} + \cdots - 0.610611a + 0.745692\\0.204647a^3u^{10} + 0.121534a^2u^{10} + \cdots - 0.319396a + 1.27947\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{601490176}{3658590779}u^{10}a^3 + \frac{5167626756}{3658590779}u^{10}a^2 + \cdots - \frac{9844699240}{3658590779}a - \frac{14836404290}{3658590779}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^{11} + u^{10} + 2u^9 + u^8 + 4u^7 + 2u^6 + 4u^5 + u^4 + 3u^3 - u^2 - 1)^4$
c_2, c_6	$(u^{11} + 3u^{10} + \cdots - 2u - 1)^4$
c_3, c_4, c_8 c_{10}	$u^{44} + u^{43} + \cdots - 10u + 1$
c_7	$(u^2 - u + 1)^{22}$
c_9, c_{11}	$u^{44} - 13u^{43} + \cdots - 7082u + 793$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{11} + 3y^{10} + \cdots - 2y - 1)^4$
c_2, c_6	$(y^{11} + 11y^{10} + \cdots + 6y - 1)^4$
c_3, c_4, c_8 c_{10}	$y^{44} + 39y^{43} + \cdots - 72y + 1$
c_7	$(y^2 + y + 1)^{22}$
c_9, c_{11}	$y^{44} + 19y^{43} + \cdots + 14956920y + 628849$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.274458 + 0.988557I$ $a = -0.761443 - 0.782702I$ $b = 0.437204 + 0.625252I$	$-0.246814 - 0.916836I$	$-7.79937 + 0.65377I$
$u = -0.274458 + 0.988557I$ $a = 1.150000 + 0.163504I$ $b = -0.078138 + 0.311249I$	$-0.24681 - 4.97660I$	$-7.79937 + 7.58197I$
$u = -0.274458 + 0.988557I$ $a = -1.07620 + 0.93707I$ $b = 0.763501 - 0.929299I$	$-0.24681 - 4.97660I$	$-7.79937 + 7.58197I$
$u = -0.274458 + 0.988557I$ $a = -0.228586 + 0.296333I$ $b = -0.244639 + 0.277316I$	$-0.246814 - 0.916836I$	$-7.79937 + 0.65377I$
$u = -0.274458 - 0.988557I$ $a = -0.761443 + 0.782702I$ $b = 0.437204 - 0.625252I$	$-0.246814 + 0.916836I$	$-7.79937 - 0.65377I$
$u = -0.274458 - 0.988557I$ $a = 1.150000 - 0.163504I$ $b = -0.078138 - 0.311249I$	$-0.24681 + 4.97660I$	$-7.79937 - 7.58197I$
$u = -0.274458 - 0.988557I$ $a = -1.07620 - 0.93707I$ $b = 0.763501 + 0.929299I$	$-0.24681 + 4.97660I$	$-7.79937 - 7.58197I$
$u = -0.274458 - 0.988557I$ $a = -0.228586 - 0.296333I$ $b = -0.244639 - 0.277316I$	$-0.246814 + 0.916836I$	$-7.79937 - 0.65377I$
$u = 0.838197 + 0.796762I$ $a = 0.259768 + 0.864513I$ $b = -1.65309 - 0.61568I$	$6.91185 + 0.61290I$	$-1.20869 - 2.83037I$
$u = 0.838197 + 0.796762I$ $a = 0.03670 - 1.50054I$ $b = 1.36614 + 0.90157I$	$6.91185 + 0.61290I$	$-1.20869 - 2.83037I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.838197 + 0.796762I$ $a = 0.69454 + 1.55821I$ $b = -2.43426 + 0.15762I$	$6.91185 - 3.44687I$	$-1.20869 + 4.09783I$
$u = 0.838197 + 0.796762I$ $a = -1.39359 - 1.49694I$ $b = 2.82533 - 0.05206I$	$6.91185 - 3.44687I$	$-1.20869 + 4.09783I$
$u = 0.838197 - 0.796762I$ $a = 0.259768 - 0.864513I$ $b = -1.65309 + 0.61568I$	$6.91185 - 0.61290I$	$-1.20869 + 2.83037I$
$u = 0.838197 - 0.796762I$ $a = 0.03670 + 1.50054I$ $b = 1.36614 - 0.90157I$	$6.91185 - 0.61290I$	$-1.20869 + 2.83037I$
$u = 0.838197 - 0.796762I$ $a = 0.69454 - 1.55821I$ $b = -2.43426 - 0.15762I$	$6.91185 + 3.44687I$	$-1.20869 - 4.09783I$
$u = 0.838197 - 0.796762I$ $a = -1.39359 + 1.49694I$ $b = 2.82533 + 0.05206I$	$6.91185 + 3.44687I$	$-1.20869 - 4.09783I$
$u = -0.813506 + 0.895281I$ $a = -0.053255 + 1.073330I$ $b = 2.14570 - 1.02655I$	$10.57740 - 1.01164I$	$2.06121 - 0.64168I$
$u = -0.813506 + 0.895281I$ $a = 1.18879 - 1.57660I$ $b = -1.85365 - 0.68950I$	$10.57740 - 5.07141I$	$2.06121 + 6.28652I$
$u = -0.813506 + 0.895281I$ $a = 1.96101 - 0.26916I$ $b = -2.56967 - 1.24825I$	$10.57740 - 5.07141I$	$2.06121 + 6.28652I$
$u = -0.813506 + 0.895281I$ $a = 0.07683 + 2.57735I$ $b = 1.74410 - 1.83528I$	$10.57740 - 1.01164I$	$2.06121 - 0.64168I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.813506 - 0.895281I$ $a = -0.053255 - 1.073330I$ $b = 2.14570 + 1.02655I$	$10.57740 + 1.01164I$	$2.06121 + 0.64168I$
$u = -0.813506 - 0.895281I$ $a = 1.18879 + 1.57660I$ $b = -1.85365 + 0.68950I$	$10.57740 + 5.07141I$	$2.06121 - 6.28652I$
$u = -0.813506 - 0.895281I$ $a = 1.96101 + 0.26916I$ $b = -2.56967 + 1.24825I$	$10.57740 + 5.07141I$	$2.06121 - 6.28652I$
$u = -0.813506 - 0.895281I$ $a = 0.07683 - 2.57735I$ $b = 1.74410 + 1.83528I$	$10.57740 + 1.01164I$	$2.06121 + 0.64168I$
$u = 0.783273 + 0.973706I$ $a = 1.036200 + 0.662931I$ $b = -1.80909 + 0.34245I$	$6.36658 + 5.44535I$	$-2.22908 - 2.09050I$
$u = 0.783273 + 0.973706I$ $a = -0.89046 - 1.26486I$ $b = 1.58433 - 0.03492I$	$6.36658 + 5.44535I$	$-2.22908 - 2.09050I$
$u = 0.783273 + 0.973706I$ $a = -0.58020 - 1.92757I$ $b = 2.64742 + 0.71348I$	$6.36658 + 9.50512I$	$-2.22908 - 9.01871I$
$u = 0.783273 + 0.973706I$ $a = 1.02861 + 2.35476I$ $b = -2.80137 - 1.06189I$	$6.36658 + 9.50512I$	$-2.22908 - 9.01871I$
$u = 0.783273 - 0.973706I$ $a = 1.036200 - 0.662931I$ $b = -1.80909 - 0.34245I$	$6.36658 - 5.44535I$	$-2.22908 + 2.09050I$
$u = 0.783273 - 0.973706I$ $a = -0.89046 + 1.26486I$ $b = 1.58433 + 0.03492I$	$6.36658 - 5.44535I$	$-2.22908 + 2.09050I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.783273 - 0.973706I$ $a = -0.58020 + 1.92757I$ $b = 2.64742 - 0.71348I$	$6.36658 - 9.50512I$	$-2.22908 + 9.01871I$
$u = 0.783273 - 0.973706I$ $a = 1.02861 - 2.35476I$ $b = -2.80137 + 1.06189I$	$6.36658 - 9.50512I$	$-2.22908 + 9.01871I$
$u = 0.267638 + 0.666716I$ $a = -0.382603 - 0.064806I$ $b = -0.65101 - 1.57425I$	$4.63007 + 3.16118I$	$-2.01220 - 9.52195I$
$u = 0.267638 + 0.666716I$ $a = 0.02805 - 2.21970I$ $b = 0.74533 + 1.93262I$	$4.63007 - 0.89859I$	$-2.01220 - 2.59375I$
$u = 0.267638 + 0.666716I$ $a = -2.48453 + 0.39943I$ $b = -0.398387 - 0.438790I$	$4.63007 - 0.89859I$	$-2.01220 - 2.59375I$
$u = 0.267638 + 0.666716I$ $a = 3.18724 - 1.15243I$ $b = -0.816152 + 1.127800I$	$4.63007 + 3.16118I$	$-2.01220 - 9.52195I$
$u = 0.267638 - 0.666716I$ $a = -0.382603 + 0.064806I$ $b = -0.65101 + 1.57425I$	$4.63007 - 3.16118I$	$-2.01220 + 9.52195I$
$u = 0.267638 - 0.666716I$ $a = 0.02805 + 2.21970I$ $b = 0.74533 - 1.93262I$	$4.63007 + 0.89859I$	$-2.01220 + 2.59375I$
$u = 0.267638 - 0.666716I$ $a = -2.48453 - 0.39943I$ $b = -0.398387 + 0.438790I$	$4.63007 + 0.89859I$	$-2.01220 + 2.59375I$
$u = 0.267638 - 0.666716I$ $a = 3.18724 + 1.15243I$ $b = -0.816152 - 1.127800I$	$4.63007 - 3.16118I$	$-2.01220 + 9.52195I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.602288$ $a = -0.778528 + 0.855239I$ $b = \ \ 0.012044 - 0.807490I$	$2.73943 + 2.02988I$	$-1.62374 - 3.46410I$
$u = -0.602288$ $a = -0.778528 - 0.855239I$ $b = \ \ 0.012044 + 0.807490I$	$2.73943 - 2.02988I$	$-1.62374 + 3.46410I$
$u = -0.602288$ $a = \ \ 0.48164 + 1.36946I$ $b = -0.461645 - 0.028759I$	$2.73943 - 2.02988I$	$-1.62374 + 3.46410I$
$u = -0.602288$ $a = \ \ 0.48164 - 1.36946I$ $b = -0.461645 + 0.028759I$	$2.73943 + 2.02988I$	$-1.62374 - 3.46410I$

III.

$$\boldsymbol{I_3^u = \langle -u^{11}+u^{10}+\cdots+b-4u,\ u^{11}-2u^{10}+\cdots+a-4,\ u^{12}-u^{11}+\cdots-u+1\rangle}$$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}u^2+1\\u^4\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-u^3\\u^3+u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-u^{11}+2u^{10}+\cdots-4u+4\\u^{11}-u^{10}+3u^9-u^8+6u^7-2u^6+9u^5-2u^4+7u^3+4u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-u^{11}+2u^{10}+\cdots-3u+4\\2u^{11}-2u^{10}+\cdots+5u-1\end{pmatrix}$$
$$a_4 = \begin{pmatrix}3u^{11}-3u^{10}+\cdots+9u-1\\-u^{11}-2u^9-u^8-4u^7-2u^6-4u^5-4u^4-2u^3-4u^2-u-3\end{pmatrix}$$
$$a_8 = \begin{pmatrix}u^{10}-u^9+2u^8-u^7+4u^6-3u^5+6u^4-3u^3+4u^2-u+3\\u^{11}-u^{10}+3u^9-u^8+5u^7-2u^6+8u^5-2u^4+6u^3+4u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-2u^{11}+u^{10}-4u^9+u^8-8u^7+2u^6-10u^5+u^4-6u^3-2u^2-4u-2\\u^{10}-u^9+2u^8-2u^7+4u^6-4u^5+5u^4-5u^3+4u^2-3u+2\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-2u^{11}+u^{10}-4u^9+u^8-8u^7+2u^6-10u^5+u^4-6u^3-2u^2-4u-2\\u^{10}-u^9+2u^8-2u^7+4u^6-4u^5+5u^4-5u^3+4u^2-3u+2\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^{10}-5u^9+4u^8-9u^7+6u^6-15u^5+9u^4-17u^3+6u^2-5u-3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{12} + 5y^{11} + \cdots + 9y + 1$
c_2, c_6	$y^{12} + 9y^{11} + \cdots - 11y + 1$
c_3, c_4, c_8 c_{10}	$y^{12} + 14y^{11} + \cdots + 14y + 1$
c_7	$y^{12} + 4y^{11} + \cdots + 2y + 1$
c_9, c_{11}	$y^{12} + 2y^{11} + \cdots + 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.429976 + 0.814812I$ $a = -0.081378 + 0.968613I$ $b = -0.252948 - 0.481751I$	$-1.76614 - 1.77242I$	$-11.74681 + 0.90385I$
$u = -0.429976 - 0.814812I$ $a = -0.081378 - 0.968613I$ $b = -0.252948 + 0.481751I$	$-1.76614 + 1.77242I$	$-11.74681 - 0.90385I$
$u = 0.796369 + 0.772849I$ $a = -0.03503 + 1.67593I$ $b = -2.00388 - 1.18404I$	$7.61677 - 1.25384I$	$1.08380 + 0.96345I$
$u = 0.796369 - 0.772849I$ $a = -0.03503 - 1.67593I$ $b = -2.00388 + 1.18404I$	$7.61677 + 1.25384I$	$1.08380 - 0.96345I$
$u = 0.111695 + 1.124500I$ $a = 0.025899 - 0.751777I$ $b = 0.396961 + 0.440767I$	$2.20710 - 1.19387I$	$-6.38204 - 1.53253I$
$u = 0.111695 - 1.124500I$ $a = 0.025899 + 0.751777I$ $b = 0.396961 - 0.440767I$	$2.20710 + 1.19387I$	$-6.38204 + 1.53253I$
$u = -0.839842 + 0.897845I$ $a = -0.241344 - 0.625397I$ $b = 0.269373 + 0.299156I$	$10.06100 - 3.11950I$	$0.49742 + 2.52128I$
$u = -0.839842 - 0.897845I$ $a = -0.241344 + 0.625397I$ $b = 0.269373 - 0.299156I$	$10.06100 + 3.11950I$	$0.49742 - 2.52128I$
$u = 0.752518 + 0.986539I$ $a = -1.33320 - 1.17743I$ $b = 2.13710 - 0.37562I$	$6.95919 + 7.10303I$	$-0.32122 - 6.73031I$
$u = 0.752518 - 0.986539I$ $a = -1.33320 + 1.17743I$ $b = 2.13710 + 0.37562I$	$6.95919 - 7.10303I$	$-0.32122 + 6.73031I$

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.109236 + 0.556796I$ $a = \quad 2.66505 - 0.92579I$ $b = -0.04661 + 1.52320I$	$4.53093 + 2.25781I$	$-3.63115 - 0.42527I$
$u = \quad 0.109236 - 0.556796I$ $a = \quad 2.66505 + 0.92579I$ $b = -0.04661 - 1.52320I$	$4.53093 - 2.25781I$	$-3.63115 + 0.42527I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{11}+u^{10}+2u^9+u^8+4u^7+2u^6+4u^5+u^4+3u^3-u^2-1)^4$ $\cdot(u^{12}-u^{11}+\cdots-u+1)(u^{25}-6u^{24}+\cdots+2u+4)$
c_2, c_6	$((u^{11}+3u^{10}+\cdots-2u-1)^4)(u^{12}+5u^{11}+\cdots+9u+1)$ $\cdot(u^{25}+8u^{24}+\cdots+92u-16)$
c_3, c_{10}	$(u^{12}+7u^{10}+\cdots-4u+1)(u^{25}+11u^{23}+\cdots+u+1)$ $\cdot(u^{44}+u^{43}+\cdots-10u+1)$
c_4, c_8	$(u^{12}+7u^{10}+\cdots+4u+1)(u^{25}+11u^{23}+\cdots+u+1)$ $\cdot(u^{44}+u^{43}+\cdots-10u+1)$
c_5	$(u^{11}+u^{10}+2u^9+u^8+4u^7+2u^6+4u^5+u^4+3u^3-u^2-1)^4$ $\cdot(u^{12}+u^{11}+\cdots+u+1)(u^{25}-6u^{24}+\cdots+2u+4)$
c_7	$(u^2-u+1)^{22}$ $\cdot(u^{12}+2u^{11}+4u^{10}+u^9-2u^8-5u^7-6u^6-3u^5+3u^3+3u^2+2u+1)$ $\cdot(u^{25}+25u^{24}+\cdots+22528u+2048)$
c_9, c_{11}	$(u^{12}-2u^{11}+3u^{10}-3u^9+3u^7-6u^6+5u^5-2u^4-u^3+4u^2-2u+1)$ $\cdot(u^{25}+2u^{24}+\cdots-3u+1)(u^{44}-13u^{43}+\cdots-7082u+793)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$((y^{11}+3y^{10}+\cdots-2y-1)^4)(y^{12}+5y^{11}+\cdots+9y+1)$ $\cdot(y^{25}+8y^{24}+\cdots+92y-16)$
c_2, c_6	$((y^{11}+11y^{10}+\cdots+6y-1)^4)(y^{12}+9y^{11}+\cdots-11y+1)$ $\cdot(y^{25}+20y^{24}+\cdots+34416y-256)$
c_3, c_4, c_8 c_{10}	$(y^{12}+14y^{11}+\cdots+14y+1)(y^{25}+22y^{24}+\cdots-y-1)$ $\cdot(y^{44}+39y^{43}+\cdots-72y+1)$
c_7	$((y^2+y+1)^{22})(y^{12}+4y^{11}+\cdots+2y+1)$ $\cdot(y^{25}+5y^{24}+\cdots-6291456y-4194304)$
c_9, c_{11}	$(y^{12}+2y^{11}+\cdots+4y+1)(y^{25}+10y^{24}+\cdots+y-1)$ $\cdot(y^{44}+19y^{43}+\cdots+14956920y+628849)$