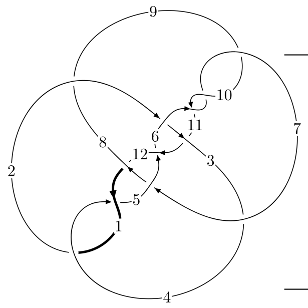
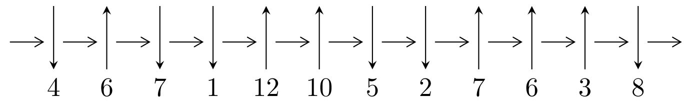
$12n_{0760}$ ($K12n_{0760}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle &3.36560\times 10^{16}u^{33} - 4.05432\times 10^{17}u^{32} + \cdots + 2.03548\times 10^{16}b - 4.65631\times 10^{16},\\
&4.40305\times 10^{16}u^{33} - 5.75517\times 10^{17}u^{32} + \cdots + 4.07095\times 10^{16}a - 1.59911\times 10^{17},\ u^{34} - 13u^{33} + \cdots - 6u +\\
I_2^u = \langle &-164346u^{11}a^3 + 243817u^{11}a^2 + \cdots + 1429364a + 308156,\ 5u^{11}a^2 - 2u^{11}a + \cdots - 4a - 3,\\
&u^{12} + 5u^{11} + 13u^{10} + 20u^9 + 21u^8 + 16u^7 + 12u^6 + 8u^5 + 6u^4 + 3u^3 + 3u^2 + 1\rangle\\
I_3^u = \langle &-127540u^{19} - 1007094u^{18} + \cdots + 123517b + 27064,\\
&-154604u^{19} - 1351146u^{18} + \cdots + 123517a - 395220,\ u^{20} + 8u^{19} + \cdots + u + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 102 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. $I_1^u =$ $\langle 3.37\times10^{16}u^{33}-4.05\times10^{17}u^{32}+\cdots+2.04\times10^{16}b-4.66\times10^{16},\ 4.40\times10^{16}u^{33}-5.76\times10^{17}u^{32}+\cdots+4.07\times10^{16}a-1.60\times10^{17},\ u^{34}-13u^{33}+\cdots-6u+4\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-1.08158u^{33}+14.1371u^{32}+\cdots-1.84914u+3.92810\\-1.65347u^{33}+19.9183u^{32}+\cdots-5.07189u+2.28758\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-1.00999u^{33}+11.8197u^{32}+\cdots-1.56347u+1.94713\\0.938990u^{33}-11.3875u^{32}+\cdots+3.53499u-3.25944\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}0.204732u^{33}-3.45935u^{32}+\cdots-6.67202u+1.64778\\1.28084u^{33}-16.1679u^{32}+\cdots+1.50444u-4.30443\end{pmatrix}$$
$$a_2 = \begin{pmatrix}0.571894u^{33}-5.78115u^{32}+\cdots+3.22275u+1.64052\\-1.65347u^{33}+19.9183u^{32}+\cdots-5.07189u+2.28758\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-0.267000u^{33}+3.12839u^{32}+\cdots+0.838672u+2.49762\\-0.625596u^{33}+6.10151u^{32}+\cdots-4.07077u-2.20949\end{pmatrix}$$
$$a_5 = \begin{pmatrix}4.42916u^{33}-52.7017u^{32}+\cdots+19.1323u-9.10875\\0.312839u^{33}+0.640403u^{32}+\cdots+0.133353u+11.3419\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-u\\u^3+u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.278275u^{33}+3.49089u^{32}+\cdots-12.0526u+6.77114\\0.126689u^{33}-1.92864u^{32}+\cdots-4.10149u-1.11310\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $=$

$$\frac{245172184142911492}{10177386517582189}u^{33}-\frac{2970953353069335864}{10177386517582189}u^{32}+\cdots+\frac{687896807227313368}{10177386517582189}u-\frac{550241350633760298}{10177386517582189}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{34} - 15u^{33} + \cdots - 260u + 16$
c_2, c_{11}	$u^{34} - 3u^{33} + \cdots + u + 1$
c_3, c_8	$u^{34} + u^{33} + \cdots + 104u + 52$
c_5	$u^{34} - 24u^{33} + \cdots - 65536u + 4096$
c_6, c_9, c_{10}	$u^{34} + 13u^{33} + \cdots + 6u + 4$
c_7, c_{12}	$u^{34} - u^{33} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{34} + 25y^{33} + \cdots + 6608y + 256$
c_2, c_{11}	$y^{34} - 37y^{33} + \cdots - 3y + 1$
c_3, c_8	$y^{34} + 15y^{33} + \cdots + 26832y + 2704$
c_5	$y^{34} + 18y^{33} + \cdots + 41943040y + 16777216$
c_6, c_9, c_{10}	$y^{34} + 13y^{33} + \cdots + 4y + 16$
c_7, c_{12}	$y^{34} + 9y^{33} + \cdots + 24y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.177745 + 0.860510I$ $a = -0.987660 + 0.758962I$ $b = -0.133957 + 0.738294I$	$-0.48946 - 2.43392I$	$-4.03642 + 1.50736I$
$u = -0.177745 - 0.860510I$ $a = -0.987660 - 0.758962I$ $b = -0.133957 - 0.738294I$	$-0.48946 + 2.43392I$	$-4.03642 - 1.50736I$
$u = 0.807369 + 0.789323I$ $a = -0.046019 - 1.265130I$ $b = -1.54529 - 0.84093I$	$4.30370 + 4.79186I$	$12.7548 - 15.8539I$
$u = 0.807369 - 0.789323I$ $a = -0.046019 + 1.265130I$ $b = -1.54529 + 0.84093I$	$4.30370 - 4.79186I$	$12.7548 + 15.8539I$
$u = -0.742638 + 0.428063I$ $a = -0.092694 - 1.192120I$ $b = -0.201006 - 0.534634I$	$3.50069 - 1.29985I$	$5.39595 + 2.66124I$
$u = -0.742638 - 0.428063I$ $a = -0.092694 + 1.192120I$ $b = -0.201006 + 0.534634I$	$3.50069 + 1.29985I$	$5.39595 - 2.66124I$
$u = -0.199740 + 0.757222I$ $a = 0.768202 + 1.019930I$ $b = 0.694012 + 0.122979I$	$1.79897 - 2.51887I$	$1.62969 + 2.73665I$
$u = -0.199740 - 0.757222I$ $a = 0.768202 - 1.019930I$ $b = 0.694012 - 0.122979I$	$1.79897 + 2.51887I$	$1.62969 - 2.73665I$
$u = 0.807251 + 0.921530I$ $a = -0.549456 - 1.161350I$ $b = -1.63739 - 0.33756I$	$4.49772 + 3.04334I$	0
$u = 0.807251 - 0.921530I$ $a = -0.549456 + 1.161350I$ $b = -1.63739 + 0.33756I$	$4.49772 - 3.04334I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.968837 + 0.772002I$ $a = 0.600368 + 0.589855I$ $b = 1.331840 - 0.217349I$	$1.19675 - 4.92326I$	0
$u = 0.968837 - 0.772002I$ $a = 0.600368 - 0.589855I$ $b = 1.331840 + 0.217349I$	$1.19675 + 4.92326I$	0
$u = 0.704114 + 1.059300I$ $a = -0.900068 - 0.778966I$ $b = -1.362050 + 0.199758I$	$3.45060 + 0.99312I$	0
$u = 0.704114 - 1.059300I$ $a = -0.900068 + 0.778966I$ $b = -1.362050 - 0.199758I$	$3.45060 - 0.99312I$	0
$u = 1.086830 + 0.767498I$ $a = 0.484855 + 0.792427I$ $b = 1.57485 + 0.28400I$	$10.11120 - 2.61148I$	0
$u = 1.086830 - 0.767498I$ $a = 0.484855 - 0.792427I$ $b = 1.57485 - 0.28400I$	$10.11120 + 2.61148I$	0
$u = 0.878326 + 1.055870I$ $a = 0.371450 + 1.291500I$ $b = 1.53857 + 0.80521I$	$0.37459 + 11.68900I$	0
$u = 0.878326 - 1.055870I$ $a = 0.371450 - 1.291500I$ $b = 1.53857 - 0.80521I$	$0.37459 - 11.68900I$	0
$u = -0.386020 + 0.458150I$ $a = -0.537326 + 0.629358I$ $b = -0.052527 + 0.335533I$	$0.064441 - 1.136870I$	$0.93772 + 5.85683I$
$u = -0.386020 - 0.458150I$ $a = -0.537326 - 0.629358I$ $b = -0.052527 - 0.335533I$	$0.064441 + 1.136870I$	$0.93772 - 5.85683I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.89212 + 1.15663I$ $a = 0.747140 + 1.031830I$ $b = 1.57182 + 0.30895I$	$8.86289 + 9.81740I$	0
$u = 0.89212 - 1.15663I$ $a = 0.747140 - 1.031830I$ $b = 1.57182 - 0.30895I$	$8.86289 - 9.81740I$	0
$u = 1.22079 + 0.87455I$ $a = -0.716079 - 0.451230I$ $b = -1.395450 + 0.196055I$	$6.07747 - 9.60440I$	0
$u = 1.22079 - 0.87455I$ $a = -0.716079 + 0.451230I$ $b = -1.395450 - 0.196055I$	$6.07747 + 9.60440I$	0
$u = 0.98696 + 1.14798I$ $a = -0.477391 - 1.245850I$ $b = -1.55779 - 0.81772I$	$5.1283 + 17.4721I$	0
$u = 0.98696 - 1.14798I$ $a = -0.477391 + 1.245850I$ $b = -1.55779 + 0.81772I$	$5.1283 - 17.4721I$	0
$u = -0.00685 + 1.55539I$ $a = 0.394264 + 0.143907I$ $b = 0.343831 - 0.076929I$	$-7.56742 - 2.39125I$	0
$u = -0.00685 - 1.55539I$ $a = 0.394264 - 0.143907I$ $b = 0.343831 + 0.076929I$	$-7.56742 + 2.39125I$	0
$u = 0.201303 + 0.350187I$ $a = 1.40378 - 2.09303I$ $b = -1.034130 - 0.541372I$	$1.50426 + 2.26332I$	$0.52367 - 3.19533I$
$u = 0.201303 - 0.350187I$ $a = 1.40378 + 2.09303I$ $b = -1.034130 + 0.541372I$	$1.50426 - 2.26332I$	$0.52367 + 3.19533I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.399608 + 0.017982I$ $a = \quad 2.46321 - 2.18711I$ $b = \quad 0.683499 - 0.647318I$	$1.77799 - 2.09204I$	$-0.21369 + 3.52332I$
$u = -0.399608 - 0.017982I$ $a = \quad 2.46321 + 2.18711I$ $b = \quad 0.683499 + 0.647318I$	$1.77799 + 2.09204I$	$-0.21369 - 3.52332I$
$u = -0.14129 + 1.69680I$ $a = -0.176576 - 0.469335I$ $b = -0.318827 - 0.269592I$	$-5.11425 - 5.43935I$	0
$u = -0.14129 - 1.69680I$ $a = -0.176576 + 0.469335I$ $b = -0.318827 + 0.269592I$	$-5.11425 + 5.43935I$	0

II. $\boldsymbol{I_2^u = \langle -1.64 \times 10^5 a^3 u^{11} + 2.44 \times 10^5 a^2 u^{11} + \cdots + 1.43 \times 10^6 a + 3.08 \times 10^5,\ 5u^{11}a^2 - 2u^{11}a + \cdots - 4a - 3,\ u^{12} + 5u^{11} + \cdots + 3u^2 + 1 \rangle}$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} a \\ 0.173165a^3u^{11} - 0.256901a^2u^{11} + \cdots - 1.50607a - 0.324693 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -0.173165a^3u^{11} + 0.256901a^2u^{11} + \cdots + 2.50607a + 0.324693 \\ 0.0438292a^3u^{11} + 0.198053a^2u^{11} + \cdots - 0.0752979a + 0.187445 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.233575a^3u^{11} - 0.244925a^2u^{11} + \cdots - 0.00431686a - 0.0487698 \\ -0.137377a^3u^{11} - 0.991313a^2u^{11} + \cdots - 0.124280a + 0.0462769 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.173165a^3u^{11} + 0.256901a^2u^{11} + \cdots + 2.50607a + 0.324693 \\ 0.173165a^3u^{11} - 0.256901a^2u^{11} + \cdots - 1.50607a - 0.324693 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.590217a^3u^{11} - 0.580359a^2u^{11} + \cdots + 2.60386a + 1.74028 \\ 0.384443a^3u^{11} + 0.245718a^2u^{11} + \cdots - 0.729774a - 1.29352 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.482755a^3u^{11} + 0.427855a^2u^{11} + \cdots + 0.290788a + 1.76402 \\ -0.137377a^3u^{11} - 0.991313a^2u^{11} + \cdots - 0.124280a - 0.953723 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.808272a^3u^{11} - 0.111891a^2u^{11} + \cdots + 0.482231a + 0.268134 \\ 1.17922a^3u^{11} + 0.858278a^2u^{11} + \cdots - 0.362268a - 0.363181 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{52152}{94907}u^{11}a^3 + \frac{376330}{94907}u^{11}a^2 + \cdots + \frac{47180}{94907}a - \frac{1346266}{94907}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$(u^{12}+3u^{11}+\cdots-2u+1)^4$
c_2, c_{11}	$u^{48}-3u^{47}+\cdots-1764u+304$
c_3, c_8	$u^{48}-u^{47}+\cdots-10752u+31744$
c_5	$(u^2+u+1)^{24}$
c_6, c_9, c_{10}	$(u^{12}-5u^{11}+\cdots+3u^2+1)^4$
c_7, c_{12}	$u^{48}+u^{47}+\cdots-8u+4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{12} + 9y^{11} + \cdots - 6y + 1)^4$
c_2, c_{11}	$y^{48} - 25y^{47} + \cdots - 3021104y + 92416$
c_3, c_8	$y^{48} + 19y^{47} + \cdots - 4422631424y + 1007681536$
c_5	$(y^2 + y + 1)^{24}$
c_6, c_9, c_{10}	$(y^{12} + y^{11} + \cdots + 6y + 1)^4$
c_7, c_{12}	$y^{48} - 9y^{47} + \cdots + 648y + 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.096849+0.815314I$ $a=-0.991274+0.244561I$ $b=\ \ 0.180533+0.571823I$	$-0.55801-2.43094I$	$-5.64801+1.26417I$
$u=-0.096849+0.815314I$ $a=-0.334752+0.461645I$ $b=-1.62106+0.09220I$	$-0.55801-6.49071I$	$-5.64801+8.19237I$
$u=-0.096849+0.815314I$ $a=-1.04597+1.22420I$ $b=-0.380309+0.923695I$	$-0.55801-2.43094I$	$-5.64801+1.26417I$
$u=-0.096849+0.815314I$ $a=\ \ 0.08139-2.96033I$ $b=\ \ 0.425795-1.012970I$	$-0.55801-6.49071I$	$-5.64801+8.19237I$
$u=-0.096849-0.815314I$ $a=-0.991274-0.244561I$ $b=\ \ 0.180533-0.571823I$	$-0.55801+2.43094I$	$-5.64801-1.26417I$
$u=-0.096849-0.815314I$ $a=-0.334752-0.461645I$ $b=-1.62106-0.09220I$	$-0.55801+6.49071I$	$-5.64801-8.19237I$
$u=-0.096849-0.815314I$ $a=-1.04597-1.22420I$ $b=-0.380309-0.923695I$	$-0.55801+2.43094I$	$-5.64801-1.26417I$
$u=-0.096849-0.815314I$ $a=\ \ 0.08139+2.96033I$ $b=\ \ 0.425795+1.012970I$	$-0.55801+6.49071I$	$-5.64801-8.19237I$
$u=-0.897414+0.962359I$ $a=-0.512515+0.835613I$ $b=-1.54234+0.56752I$	$1.93740-5.36645I$	$-3.82297+5.38834I$
$u=-0.897414+0.962359I$ $a=-0.635177+0.979032I$ $b=-1.154690+0.241144I$	$1.93740-1.30669I$	$-3.82297-1.53987I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.897414 + 0.962359I$ $a = 0.067373 - 1.313560I$ $b = 1.182180 - 0.750468I$	$1.93740 - 5.36645I$	$-3.82297 + 5.38834I$
$u = -0.897414 + 0.962359I$ $a = 0.443837 - 0.354556I$ $b = 1.176330 + 0.162236I$	$1.93740 - 1.30669I$	$-3.82297 - 1.53987I$
$u = -0.897414 - 0.962359I$ $a = -0.512515 - 0.835613I$ $b = -1.54234 - 0.56752I$	$1.93740 + 5.36645I$	$-3.82297 - 5.38834I$
$u = -0.897414 - 0.962359I$ $a = -0.635177 - 0.979032I$ $b = -1.154690 - 0.241144I$	$1.93740 + 1.30669I$	$-3.82297 + 1.53987I$
$u = -0.897414 - 0.962359I$ $a = 0.067373 + 1.313560I$ $b = 1.182180 + 0.750468I$	$1.93740 + 5.36645I$	$-3.82297 - 5.38834I$
$u = -0.897414 - 0.962359I$ $a = 0.443837 + 0.354556I$ $b = 1.176330 - 0.162236I$	$1.93740 + 1.30669I$	$-3.82297 + 1.53987I$
$u = 0.492148 + 0.450600I$ $a = 1.238170 + 0.532971I$ $b = -0.806292 - 0.362544I$	$1.25303 + 4.19921I$	$2.04009 - 7.81755I$
$u = 0.492148 + 0.450600I$ $a = -0.45433 + 1.76693I$ $b = -0.60135 + 2.02277I$	$1.25303 + 8.25898I$	$2.0401 - 14.7458I$
$u = 0.492148 + 0.450600I$ $a = 0.65546 - 1.77721I$ $b = -0.60266 - 1.36196I$	$1.25303 + 4.19921I$	$2.04009 - 7.81755I$
$u = 0.492148 + 0.450600I$ $a = -1.57002 - 2.78474I$ $b = -0.187637 + 0.059665I$	$1.25303 + 8.25898I$	$2.0401 - 14.7458I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.492148 - 0.450600I$ $a = 1.238170 - 0.532971I$ $b = -0.806292 + 0.362544I$	$1.25303 - 4.19921I$	$2.04009 + 7.81755I$
$u = 0.492148 - 0.450600I$ $a = -0.45433 - 1.76693I$ $b = -0.60135 - 2.02277I$	$1.25303 - 8.25898I$	$2.0401 + 14.7458I$
$u = 0.492148 - 0.450600I$ $a = 0.65546 + 1.77721I$ $b = -0.60266 + 1.36196I$	$1.25303 - 4.19921I$	$2.04009 + 7.81755I$
$u = 0.492148 - 0.450600I$ $a = -1.57002 + 2.78474I$ $b = -0.187637 - 0.059665I$	$1.25303 - 8.25898I$	$2.0401 + 14.7458I$
$u = 0.225615 + 0.583583I$ $a = 0.49226 - 1.52837I$ $b = 0.30789 - 1.81604I$	$-3.58098 + 2.94957I$	$-9.5307 - 10.6461I$
$u = 0.225615 + 0.583583I$ $a = -0.0844684 - 0.0883145I$ $b = 1.43468 + 0.37842I$	$-3.58098 - 1.11020I$	$-9.53074 - 3.71786I$
$u = 0.225615 + 0.583583I$ $a = 2.65608 + 1.33311I$ $b = 0.126282 - 0.172499I$	$-3.58098 + 2.94957I$	$-9.5307 - 10.6461I$
$u = 0.225615 + 0.583583I$ $a = -1.32060 + 2.91249I$ $b = 0.070364 + 0.991849I$	$-3.58098 - 1.11020I$	$-9.53074 - 3.71786I$
$u = 0.225615 - 0.583583I$ $a = 0.49226 + 1.52837I$ $b = 0.30789 + 1.81604I$	$-3.58098 - 2.94957I$	$-9.5307 + 10.6461I$
$u = 0.225615 - 0.583583I$ $a = -0.0844684 + 0.0883145I$ $b = 1.43468 - 0.37842I$	$-3.58098 + 1.11020I$	$-9.53074 + 3.71786I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.225615 - 0.583583I$ $a = 2.65608 - 1.33311I$ $b = 0.126282 + 0.172499I$	$-3.58098 - 2.94957I$	$-9.5307 + 10.6461I$
$u = 0.225615 - 0.583583I$ $a = -1.32060 - 2.91249I$ $b = 0.070364 - 0.991849I$	$-3.58098 + 1.11020I$	$-9.53074 + 3.71786I$
$u = -1.216860 + 0.709160I$ $a = -0.953155 + 0.065735I$ $b = -1.62157 - 0.26350I$	$6.16619 - 0.50759I$	$8.43865 - 1.75135I$
$u = -1.216860 + 0.709160I$ $a = 0.146312 - 0.814725I$ $b = 1.046850 - 0.073374I$	$6.16619 - 0.50759I$	$8.43865 - 1.75135I$
$u = -1.216860 + 0.709160I$ $a = 0.881067 - 0.903352I$ $b = 1.74042 - 0.74034I$	$6.16619 - 4.56735I$	$8.43865 + 5.17685I$
$u = -1.216860 + 0.709160I$ $a = 0.171000 + 0.579101I$ $b = -1.161320 + 0.411057I$	$6.16619 - 4.56735I$	$8.43865 + 5.17685I$
$u = -1.216860 - 0.709160I$ $a = -0.953155 - 0.065735I$ $b = -1.62157 + 0.26350I$	$6.16619 + 0.50759I$	$8.43865 + 1.75135I$
$u = -1.216860 - 0.709160I$ $a = 0.146312 + 0.814725I$ $b = 1.046850 + 0.073374I$	$6.16619 + 0.50759I$	$8.43865 + 1.75135I$
$u = -1.216860 - 0.709160I$ $a = 0.881067 + 0.903352I$ $b = 1.74042 + 0.74034I$	$6.16619 + 4.56735I$	$8.43865 - 5.17685I$
$u = -1.216860 - 0.709160I$ $a = 0.171000 - 0.579101I$ $b = -1.161320 - 0.411057I$	$6.16619 + 4.56735I$	$8.43865 - 5.17685I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00664 + 1.21018I$ $a = 0.368637 - 0.732620I$ $b = 1.42346 - 0.46423I$	$4.65197 - 7.43387I$	$4.52298 + 12.02747I$
$u = -1.00664 + 1.21018I$ $a = 1.052560 - 0.811213I$ $b = 1.47525 - 0.31651I$	$4.65197 - 3.37411I$	$4.52298 + 5.09926I$
$u = -1.00664 + 1.21018I$ $a = -0.270267 + 0.605480I$ $b = -1.024180 + 0.013550I$	$4.65197 - 3.37411I$	$4.52298 + 5.09926I$
$u = -1.00664 + 1.21018I$ $a = -0.58161 + 1.51297I$ $b = -1.38663 + 1.00635I$	$4.65197 - 7.43387I$	$4.52298 + 12.02747I$
$u = -1.00664 - 1.21018I$ $a = 0.368637 + 0.732620I$ $b = 1.42346 + 0.46423I$	$4.65197 + 7.43387I$	$4.52298 - 12.02747I$
$u = -1.00664 - 1.21018I$ $a = 1.052560 + 0.811213I$ $b = 1.47525 + 0.31651I$	$4.65197 + 3.37411I$	$4.52298 - 5.09926I$
$u = -1.00664 - 1.21018I$ $a = -0.270267 - 0.605480I$ $b = -1.024180 - 0.013550I$	$4.65197 + 3.37411I$	$4.52298 - 5.09926I$
$u = -1.00664 - 1.21018I$ $a = -0.58161 - 1.51297I$ $b = -1.38663 - 1.00635I$	$4.65197 + 7.43387I$	$4.52298 - 12.02747I$

III.

$\boldsymbol{I_3^u = \langle -1.28\times 10^5 u^{19} - 1.01\times 10^6 u^{18} + \cdots + 1.24\times 10^5 b + 2.71\times 10^4,\ -1.55\times 10^5 u^{19} - 1.35\times 10^6 u^{18} + \cdots + 1.24\times 10^5 a - 3.95\times 10^5,\ u^{20} + 8u^{19} + \cdots + u + 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1.25168u^{19} + 10.9389u^{18} + \cdots + 5.92810u + 3.19972 \\ 1.03257u^{19} + 8.15348u^{18} + \cdots + 3.19972u - 0.219112 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.685072u^{19} + 6.77196u^{18} + \cdots + 4.90555u + 4.34433 \\ 0.994365u^{19} + 7.79298u^{18} + \cdots + 2.99900u + 0.146781 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1.41270u^{19} + 10.8173u^{18} + \cdots + 2.62466u - 3.71599 \\ -0.0514585u^{19} - 0.844532u^{18} + \cdots - 2.71599u - 1.46416 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.219112u^{19} + 2.78546u^{18} + \cdots + 2.72838u + 3.41883 \\ 1.03257u^{19} + 8.15348u^{18} + \cdots + 3.19972u - 0.219112 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.372111u^{19} - 3.33171u^{18} + \cdots - 5.09162u - 1.99085 \\ 0.0253083u^{19} + 0.0849600u^{18} + \cdots - 0.193803u - 0.124768 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.0850814u^{19} - 0.341281u^{18} + \cdots + 7.95479u + 5.36282 \\ 0.182671u^{19} + 1.18521u^{18} + \cdots + 2.89866u + 0.319211 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.979841u^{19} + 7.65593u^{18} + \cdots - 0.788045u - 3.66453 \\ -0.182793u^{19} - 1.80174u^{18} + \cdots - 3.64437u - 0.979841 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{499031}{123517}u^{19} - \frac{4050048}{123517}u^{18} + \cdots - \frac{2050088}{123517}u - \frac{1463308}{123517}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} - 6u^{19} + \cdots - 60u + 13$
c_2, c_{11}	$u^{20} + u^{19} + \cdots - 2u + 1$
c_3, c_8	$u^{20} + u^{19} + \cdots + 14u + 4$
c_4	$u^{20} + 6u^{19} + \cdots + 60u + 13$
c_5	$u^{20} + u^{19} + \cdots + 16u + 4$
c_6	$u^{20} + 8u^{19} + \cdots + u + 1$
c_7, c_{12}	$u^{20} + u^{19} + \cdots - u + 1$
c_9, c_{10}	$u^{20} - 8u^{19} + \cdots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{20} + 16y^{19} + \cdots + 898y + 169$
c_2, c_{11}	$y^{20} - 7y^{19} + \cdots + 14y + 1$
c_3, c_8	$y^{20} + 9y^{19} + \cdots - 140y + 16$
c_5	$y^{20} + 17y^{19} + \cdots + 24y + 16$
c_6, c_9, c_{10}	$y^{20} + 12y^{19} + \cdots + 17y + 1$
c_7, c_{12}	$y^{20} - 5y^{19} + \cdots - 11y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.259172 + 0.789945I$ $a = -0.453090 - 1.212650I$ $b = 0.649863 - 0.751845I$	$-0.42253 - 4.22906I$	$-5.35058 + 7.44660I$
$u = -0.259172 - 0.789945I$ $a = -0.453090 + 1.212650I$ $b = 0.649863 + 0.751845I$	$-0.42253 + 4.22906I$	$-5.35058 - 7.44660I$
$u = -0.895921 + 0.782105I$ $a = 0.130078 - 1.052420I$ $b = 1.43054 - 0.71304I$	$3.95309 - 4.42208I$	$0.03830 + 2.60323I$
$u = -0.895921 - 0.782105I$ $a = 0.130078 + 1.052420I$ $b = 1.43054 + 0.71304I$	$3.95309 + 4.42208I$	$0.03830 - 2.60323I$
$u = -0.006166 + 0.794036I$ $a = 1.42462 + 0.70783I$ $b = 0.202350 + 0.972159I$	$-0.21086 + 3.04136I$	$2.18801 - 12.60182I$
$u = -0.006166 - 0.794036I$ $a = 1.42462 - 0.70783I$ $b = 0.202350 - 0.972159I$	$-0.21086 - 3.04136I$	$2.18801 + 12.60182I$
$u = -0.861598 + 1.089010I$ $a = 0.674552 - 0.746963I$ $b = 1.272090 - 0.051603I$	$3.03798 - 2.11515I$	$2.18905 + 2.74412I$
$u = -0.861598 - 1.089010I$ $a = 0.674552 + 0.746963I$ $b = 1.272090 + 0.051603I$	$3.03798 + 2.11515I$	$2.18905 - 2.74412I$
$u = -0.03594 + 1.46709I$ $a = -0.396238 - 0.317108I$ $b = -0.121323 - 0.406539I$	$-7.89022 - 2.18840I$	$-12.61867 - 3.03439I$
$u = -0.03594 - 1.46709I$ $a = -0.396238 + 0.317108I$ $b = -0.121323 + 0.406539I$	$-7.89022 + 2.18840I$	$-12.61867 + 3.03439I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.23438 + 0.88194I$ $a = -0.580747 + 0.471657I$ $b = -1.243720 - 0.010639I$	$5.17052 - 1.53215I$	$3.03837 + 1.45772I$
$u = -1.23438 - 0.88194I$ $a = -0.580747 - 0.471657I$ $b = -1.243720 + 0.010639I$	$5.17052 + 1.53215I$	$3.03837 - 1.45772I$
$u = -1.01176 + 1.13887I$ $a = -0.434877 + 1.068860I$ $b = -1.37724 + 0.69674I$	$4.29670 - 6.43818I$	$0.75875 + 3.16318I$
$u = -1.01176 - 1.13887I$ $a = -0.434877 - 1.068860I$ $b = -1.37724 - 0.69674I$	$4.29670 + 6.43818I$	$0.75875 - 3.16318I$
$u = 0.008780 + 0.407930I$ $a = 1.72037 + 2.51790I$ $b = -0.612822 + 0.965409I$	$-3.50293 + 2.03494I$	$-8.02468 - 3.62963I$
$u = 0.008780 - 0.407930I$ $a = 1.72037 - 2.51790I$ $b = -0.612822 - 0.965409I$	$-3.50293 - 2.03494I$	$-8.02468 + 3.62963I$
$u = 0.305216 + 0.259032I$ $a = -0.09291 - 3.82400I$ $b = 0.534986 - 1.018830I$	$0.87428 + 7.54309I$	$-2.98032 - 4.37955I$
$u = 0.305216 - 0.259032I$ $a = -0.09291 + 3.82400I$ $b = 0.534986 + 1.018830I$	$0.87428 - 7.54309I$	$-2.98032 + 4.37955I$
$u = -0.00905 + 1.65571I$ $a = 0.008243 + 0.541451I$ $b = -0.234725 + 0.401012I$	$-5.30604 - 5.88407I$	$-4.73823 + 11.00994I$
$u = -0.00905 - 1.65571I$ $a = 0.008243 - 0.541451I$ $b = -0.234725 - 0.401012I$	$-5.30604 + 5.88407I$	$-4.73823 - 11.00994I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^{12}+3u^{11}+\cdots-2u+1)^4)(u^{20}-6u^{19}+\cdots-60u+13)$ $\cdot(u^{34}-15u^{33}+\cdots-260u+16)$
c_2, c_{11}	$(u^{20}+u^{19}+\cdots-2u+1)(u^{34}-3u^{33}+\cdots+u+1)$ $\cdot(u^{48}-3u^{47}+\cdots-1764u+304)$
c_3, c_8	$(u^{20}+u^{19}+\cdots+14u+4)(u^{34}+u^{33}+\cdots+104u+52)$ $\cdot(u^{48}-u^{47}+\cdots-10752u+31744)$
c_4	$((u^{12}+3u^{11}+\cdots-2u+1)^4)(u^{20}+6u^{19}+\cdots+60u+13)$ $\cdot(u^{34}-15u^{33}+\cdots-260u+16)$
c_5	$((u^2+u+1)^{24})(u^{20}+u^{19}+\cdots+16u+4)$ $\cdot(u^{34}-24u^{33}+\cdots-65536u+4096)$
c_6	$((u^{12}-5u^{11}+\cdots+3u^2+1)^4)(u^{20}+8u^{19}+\cdots+u+1)$ $\cdot(u^{34}+13u^{33}+\cdots+6u+4)$
c_7, c_{12}	$(u^{20}+u^{19}+\cdots-u+1)(u^{34}-u^{33}+\cdots+2u+1)$ $\cdot(u^{48}+u^{47}+\cdots-8u+4)$
c_9, c_{10}	$((u^{12}-5u^{11}+\cdots+3u^2+1)^4)(u^{20}-8u^{19}+\cdots-u+1)$ $\cdot(u^{34}+13u^{33}+\cdots+6u+4)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y^{12} + 9y^{11} + \cdots - 6y + 1)^4)(y^{20} + 16y^{19} + \cdots + 898y + 169)$ $\cdot (y^{34} + 25y^{33} + \cdots + 6608y + 256)$
c_2, c_{11}	$(y^{20} - 7y^{19} + \cdots + 14y + 1)(y^{34} - 37y^{33} + \cdots - 3y + 1)$ $\cdot (y^{48} - 25y^{47} + \cdots - 3021104y + 92416)$
c_3, c_8	$(y^{20} + 9y^{19} + \cdots - 140y + 16)(y^{34} + 15y^{33} + \cdots + 26832y + 2704)$ $\cdot (y^{48} + 19y^{47} + \cdots - 4422631424y + 1007681536)$
c_5	$((y^2 + y + 1)^{24})(y^{20} + 17y^{19} + \cdots + 24y + 16)$ $\cdot (y^{34} + 18y^{33} + \cdots + 41943040y + 16777216)$
c_6, c_9, c_{10}	$((y^{12} + y^{11} + \cdots + 6y + 1)^4)(y^{20} + 12y^{19} + \cdots + 17y + 1)$ $\cdot (y^{34} + 13y^{33} + \cdots + 4y + 16)$
c_7, c_{12}	$(y^{20} - 5y^{19} + \cdots - 11y + 1)(y^{34} + 9y^{33} + \cdots + 24y + 1)$ $\cdot (y^{48} - 9y^{47} + \cdots + 648y + 16)$