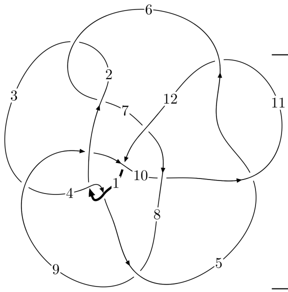
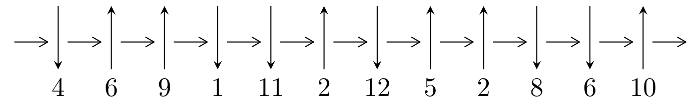
$12n_{0859}$ ($K12n_{0859}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 2.50974 \times 10^{289} u^{110} + 9.45965 \times 10^{289} u^{109} + \cdots + 4.90170 \times 10^{288} b + 2.02264 \times 10^{290}, \\ & 6.11196 \times 10^{290} u^{110} + 2.58646 \times 10^{291} u^{109} + \cdots + 9.31323 \times 10^{289} a + 9.60207 \times 10^{291}, \\ & u^{111} + 4u^{110} + \cdots + 75u + 19 \rangle \\ I_2^u = \langle & -6.13493 \times 10^{24} u^{36} + 8.28914 \times 10^{25} u^{35} + \cdots + 1.90673 \times 10^{25} b + 8.11899 \times 10^{26}, \\ & 8.06792 \times 10^{26} u^{36} - 5.25168 \times 10^{27} u^{35} + \cdots + 2.09740 \times 10^{26} a + 5.96222 \times 10^{27},\ u^{37} - 7u^{36} + \cdots - 14u + \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 148 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. $\boldsymbol{I_1^u = \langle 2.51 \times 10^{289}u^{110} + 9.46 \times 10^{289}u^{109} + \cdots + 4.90 \times 10^{288}b + 2.02 \times 10^{290},\ 6.11 \times 10^{290}u^{110} + 2.59 \times 10^{291}u^{109} + \cdots + 9.31 \times 10^{289}a + 9.60 \times 10^{291},\ u^{111} + 4u^{110} + \cdots + 75u + 19\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -6.56266u^{110} - 27.7719u^{109} + \cdots - 589.375u - 103.101 \\ -5.12015u^{110} - 19.2987u^{109} + \cdots - 268.585u - 41.2640 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.44251u^{110} - 8.47322u^{109} + \cdots - 320.791u - 61.8374 \\ -5.12015u^{110} - 19.2987u^{109} + \cdots - 268.585u - 41.2640 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 5.94521u^{110} + 22.0082u^{109} + \cdots + 71.6801u + 1.91739 \\ -1.75109u^{110} - 11.0597u^{109} + \cdots - 474.099u - 132.585 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -4.10108u^{110} - 17.5341u^{109} + \cdots - 396.139u - 56.7976 \\ -3.25646u^{110} - 11.7527u^{109} + \cdots - 125.743u - 16.4090 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.518015u^{110} - 2.04419u^{109} + \cdots + 20.7543u - 8.72507 \\ 3.27484u^{110} + 11.2402u^{109} + \cdots + 20.8357u - 12.9523 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -2.73350u^{110} - 7.81439u^{109} + \cdots + 76.4382u + 41.4901 \\ -1.58334u^{110} - 5.76715u^{109} + \cdots - 15.7115u + 9.06478 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -2.54528u^{110} - 9.91938u^{109} + \cdots + 58.1041u + 31.4535 \\ -3.15653u^{110} - 11.4493u^{109} + \cdots - 117.635u - 7.74256 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.611245u^{110} + 1.52992u^{109} + \cdots + 175.739u + 39.1960 \\ -3.15653u^{110} - 11.4493u^{109} + \cdots - 117.635u - 7.74256 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 37.2379u^{110} + 165.877u^{109} + \cdots + 3613.83u + 800.617$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{111} - 4u^{110} + \cdots + 75u - 19$
c_2, c_6	$u^{111} - 3u^{110} + \cdots + 11u + 1$
c_3	$u^{111} + u^{110} + \cdots - 11375608u + 498668$
c_5, c_{11}	$u^{111} - u^{110} + \cdots + 25708u + 2404$
c_7	$u^{111} + 8u^{110} + \cdots - 3750361u + 280259$
c_8	$u^{111} - 5u^{110} + \cdots + 1057226u + 206759$
c_9	$u^{111} - 2u^{110} + \cdots - 11878814u - 708719$
c_{10}	$u^{111} + 11u^{110} + \cdots - 13685u - 1355$
c_{12}	$u^{111} + 8u^{110} + \cdots - 59598u - 25569$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{111} + 68y^{110} + \cdots - 21507y - 361$
c_2, c_6	$y^{111} - 75y^{110} + \cdots - 235y - 1$
c_3	$y^{111} - 15y^{110} + \cdots + 14994491642816y - 248669774224$
c_5, c_{11}	$y^{111} - 61y^{110} + \cdots + 397749808y - 5779216$
c_7	$y^{111} + 10y^{110} + \cdots - 12572239397577y - 78545107081$
c_8	$y^{111} - 3y^{110} + \cdots - 601815422274y - 42749284081$
c_9	$y^{111} - 24y^{110} + \cdots + 75899128605414y - 502282620961$
c_{10}	$y^{111} - 41y^{110} + \cdots + 78323675y - 1836025$
c_{12}	$y^{111} - 32y^{110} + \cdots + 18684218322y - 653773761$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.275201 + 0.940263I$ $a = -1.66878 - 0.15190I$ $b = -0.719972 + 0.496650I$	$-4.99690 + 6.02322I$	0
$u = -0.275201 - 0.940263I$ $a = -1.66878 + 0.15190I$ $b = -0.719972 - 0.496650I$	$-4.99690 - 6.02322I$	0
$u = 0.008257 + 0.975670I$ $a = -1.081250 + 0.727074I$ $b = -1.054850 - 0.926807I$	$4.64603 + 2.87969I$	0
$u = 0.008257 - 0.975670I$ $a = -1.081250 - 0.727074I$ $b = -1.054850 + 0.926807I$	$4.64603 - 2.87969I$	0
$u = 0.269038 + 0.990512I$ $a = 0.06286 - 2.13543I$ $b = -0.67117 - 2.58748I$	$1.29416 - 7.64485I$	0
$u = 0.269038 - 0.990512I$ $a = 0.06286 + 2.13543I$ $b = -0.67117 + 2.58748I$	$1.29416 + 7.64485I$	0
$u = 1.015590 + 0.261238I$ $a = -0.085276 + 0.232873I$ $b = 1.042080 + 0.399877I$	$-3.14755 + 4.80636I$	0
$u = 1.015590 - 0.261238I$ $a = -0.085276 - 0.232873I$ $b = 1.042080 - 0.399877I$	$-3.14755 - 4.80636I$	0
$u = 0.067968 + 1.053820I$ $a = 2.10702 - 1.28713I$ $b = 1.159640 - 0.307667I$	$5.06493 - 3.05615I$	0
$u = 0.067968 - 1.053820I$ $a = 2.10702 + 1.28713I$ $b = 1.159640 + 0.307667I$	$5.06493 + 3.05615I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.056890+0.141190I$ $a=-0.169855+0.212580I$ $b=-1.207740+0.615633I$	$3.86792-5.81284I$	0
$u=-1.056890-0.141190I$ $a=-0.169855-0.212580I$ $b=-1.207740-0.615633I$	$3.86792+5.81284I$	0
$u=-0.203436+0.909772I$ $a=1.307750-0.110479I$ $b=0.638602-0.771746I$	$0.60675+2.77436I$	0
$u=-0.203436-0.909772I$ $a=1.307750+0.110479I$ $b=0.638602+0.771746I$	$0.60675-2.77436I$	0
$u=0.273074+0.880594I$ $a=-1.15007+1.36087I$ $b=-0.49476+2.05464I$	$2.04876-2.43910I$	0
$u=0.273074-0.880594I$ $a=-1.15007-1.36087I$ $b=-0.49476-2.05464I$	$2.04876+2.43910I$	0
$u=0.944619+0.528913I$ $a=-0.242883-0.203509I$ $b=-0.722055+0.054677I$	$-0.771420-0.536538I$	0
$u=0.944619-0.528913I$ $a=-0.242883+0.203509I$ $b=-0.722055-0.054677I$	$-0.771420+0.536538I$	0
$u=-1.078500+0.127411I$ $a=-0.0065061-0.1213240I$ $b=1.16595-0.88431I$	$0.42740-12.79140I$	0
$u=-1.078500-0.127411I$ $a=-0.0065061+0.1213240I$ $b=1.16595+0.88431I$	$0.42740+12.79140I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.236625 + 0.869701I$ $a = -3.32187 - 0.04411I$ $b = -0.121924 + 0.748351I$	$0.42650 - 6.83508I$	0
$u = 0.236625 - 0.869701I$ $a = -3.32187 + 0.04411I$ $b = -0.121924 - 0.748351I$	$0.42650 + 6.83508I$	0
$u = -0.461544 + 0.772795I$ $a = -1.49141 + 1.22164I$ $b = -1.53587 + 0.71027I$	$0.82911 - 1.58249I$	0
$u = -0.461544 - 0.772795I$ $a = -1.49141 - 1.22164I$ $b = -1.53587 - 0.71027I$	$0.82911 + 1.58249I$	0
$u = 0.713611 + 0.529292I$ $a = 0.585808 + 0.306800I$ $b = 0.259462 - 0.808596I$	$-5.15394 - 2.61216I$	0
$u = 0.713611 - 0.529292I$ $a = 0.585808 - 0.306800I$ $b = 0.259462 + 0.808596I$	$-5.15394 + 2.61216I$	0
$u = 1.110890 + 0.069837I$ $a = 0.0652080 + 0.0323979I$ $b = 0.107631 + 1.122940I$	$-5.70817 - 1.45948I$	0
$u = 1.110890 - 0.069837I$ $a = 0.0652080 - 0.0323979I$ $b = 0.107631 - 1.122940I$	$-5.70817 + 1.45948I$	0
$u = -0.237461 + 0.845090I$ $a = 2.16570 + 1.55417I$ $b = 0.64302 + 2.18678I$	$-5.57793 + 1.17653I$	0
$u = -0.237461 - 0.845090I$ $a = 2.16570 - 1.55417I$ $b = 0.64302 - 2.18678I$	$-5.57793 - 1.17653I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.338976+0.788941I$ $a=-1.97899-0.01191I$ $b=-0.135954-1.404000I$	$-6.29732+1.56335I$	0
$u=-0.338976-0.788941I$ $a=-1.97899+0.01191I$ $b=-0.135954+1.404000I$	$-6.29732-1.56335I$	0
$u=-0.671253+0.522611I$ $a=-0.898132-0.522684I$ $b=0.750246+0.666293I$	$1.17995+3.44561I$	0
$u=-0.671253-0.522611I$ $a=-0.898132+0.522684I$ $b=0.750246-0.666293I$	$1.17995-3.44561I$	0
$u=-0.839318+0.060783I$ $a=0.493485+0.050564I$ $b=0.607833-0.088103I$	$-3.61948+0.00513I$	0
$u=-0.839318-0.060783I$ $a=0.493485-0.050564I$ $b=0.607833+0.088103I$	$-3.61948-0.00513I$	0
$u=0.262200+1.137650I$ $a=1.99952-0.20662I$ $b=0.880763-0.924406I$	$4.21579-3.30687I$	0
$u=0.262200-1.137650I$ $a=1.99952+0.20662I$ $b=0.880763+0.924406I$	$4.21579+3.30687I$	0
$u=-0.831831+0.026807I$ $a=-0.446008-0.058527I$ $b=1.155800+0.449895I$	$4.08247+1.05839I$	0
$u=-0.831831-0.026807I$ $a=-0.446008+0.058527I$ $b=1.155800-0.449895I$	$4.08247-1.05839I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.447141 + 1.081630I$ $a = 0.61140 - 1.30410I$ $b = 1.151160 - 0.361627I$	$5.88221 - 1.78475I$	0
$u = -0.447141 - 1.081630I$ $a = 0.61140 + 1.30410I$ $b = 1.151160 + 0.361627I$	$5.88221 + 1.78475I$	0
$u = -0.444421 + 0.660349I$ $a = 1.349300 + 0.372347I$ $b = -0.593114 - 0.380848I$	$1.50618 + 1.02895I$	0
$u = -0.444421 - 0.660349I$ $a = 1.349300 - 0.372347I$ $b = -0.593114 + 0.380848I$	$1.50618 - 1.02895I$	0
$u = 0.314688 + 0.716816I$ $a = -1.07783 - 1.35538I$ $b = 0.211726 + 1.211480I$	$0.13373 + 4.14099I$	0
$u = 0.314688 - 0.716816I$ $a = -1.07783 + 1.35538I$ $b = 0.211726 - 1.211480I$	$0.13373 - 4.14099I$	0
$u = 0.551417 + 1.086260I$ $a = 0.368193 - 0.274729I$ $b = -0.037286 + 0.326195I$	$-1.74777 - 5.52938I$	0
$u = 0.551417 - 1.086260I$ $a = 0.368193 + 0.274729I$ $b = -0.037286 - 0.326195I$	$-1.74777 + 5.52938I$	0
$u = -0.259852 + 1.193850I$ $a = -1.37826 + 1.79128I$ $b = -0.760498 - 0.282882I$	$3.97987 + 7.49973I$	0
$u = -0.259852 - 1.193850I$ $a = -1.37826 - 1.79128I$ $b = -0.760498 + 0.282882I$	$3.97987 - 7.49973I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.445330 + 1.139830I$ $a = -1.045090 - 0.267342I$ $b = -1.102600 - 0.164427I$	$-1.16332 - 3.35103I$	0
$u = 0.445330 - 1.139830I$ $a = -1.045090 + 0.267342I$ $b = -1.102600 + 0.164427I$	$-1.16332 + 3.35103I$	0
$u = -0.100145 + 0.768474I$ $a = -1.46998 - 0.05204I$ $b = -0.736228 + 0.492817I$	$0.045168 - 0.756689I$	0
$u = -0.100145 - 0.768474I$ $a = -1.46998 + 0.05204I$ $b = -0.736228 - 0.492817I$	$0.045168 + 0.756689I$	0
$u = 0.293488 + 1.192270I$ $a = 1.69050 + 0.02346I$ $b = 0.972454 - 0.865758I$	$4.19599 - 3.22298I$	0
$u = 0.293488 - 1.192270I$ $a = 1.69050 - 0.02346I$ $b = 0.972454 + 0.865758I$	$4.19599 + 3.22298I$	0
$u = -0.280377 + 1.214070I$ $a = 2.09638 + 0.11720I$ $b = 2.00898 + 0.67625I$	$5.90966 + 3.14124I$	0
$u = -0.280377 - 1.214070I$ $a = 2.09638 - 0.11720I$ $b = 2.00898 - 0.67625I$	$5.90966 - 3.14124I$	0
$u = -0.737383 + 0.092217I$ $a = 0.259636 - 0.112181I$ $b = -1.080860 + 0.872100I$	$2.57136 - 5.52359I$	0
$u = -0.737383 - 0.092217I$ $a = 0.259636 + 0.112181I$ $b = -1.080860 - 0.872100I$	$2.57136 + 5.52359I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.738210 + 0.077832I$ $a = -0.410329 - 0.870145I$ $b = 0.416517 - 0.282826I$	$-4.53991 + 0.81092I$	0
$u = 0.738210 - 0.077832I$ $a = -0.410329 + 0.870145I$ $b = 0.416517 + 0.282826I$	$-4.53991 - 0.81092I$	0
$u = -0.459139 + 1.195040I$ $a = 2.01127 - 0.25782I$ $b = 1.43948 + 1.12235I$	$5.82742 + 9.96822I$	0
$u = -0.459139 - 1.195040I$ $a = 2.01127 + 0.25782I$ $b = 1.43948 - 1.12235I$	$5.82742 - 9.96822I$	0
$u = -1.29696$ $a = 0.254156$ $b = -0.605822$	-2.36547	0
$u = 0.408571 + 0.565367I$ $a = -1.92263 + 0.91363I$ $b = -0.50537 + 1.33287I$	$1.35718 - 0.65015I$	0
$u = 0.408571 - 0.565367I$ $a = -1.92263 - 0.91363I$ $b = -0.50537 - 1.33287I$	$1.35718 + 0.65015I$	0
$u = 0.275750 + 1.281120I$ $a = -1.267620 - 0.360467I$ $b = -1.164700 + 0.486012I$	$2.25301 + 0.74215I$	0
$u = 0.275750 - 1.281120I$ $a = -1.267620 + 0.360467I$ $b = -1.164700 - 0.486012I$	$2.25301 - 0.74215I$	0
$u = -0.509886 + 1.209580I$ $a = -0.968689 + 0.852632I$ $b = -1.40376 - 0.22411I$	$7.48694 + 3.68062I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.509886 - 1.209580I$ $a = -0.968689 - 0.852632I$ $b = -1.40376 + 0.22411I$	$7.48694 - 3.68062I$	0
$u = -0.280540 + 0.626809I$ $a = 1.72125 + 0.36677I$ $b = 0.604732 - 0.417904I$	$-5.87578 - 3.33399I$	0
$u = -0.280540 - 0.626809I$ $a = 1.72125 - 0.36677I$ $b = 0.604732 + 0.417904I$	$-5.87578 + 3.33399I$	0
$u = 0.332184 + 1.282280I$ $a = -1.144800 + 0.071823I$ $b = -0.591057 + 0.882017I$	$0.02593 - 6.00299I$	0
$u = 0.332184 - 1.282280I$ $a = -1.144800 - 0.071823I$ $b = -0.591057 - 0.882017I$	$0.02593 + 6.00299I$	0
$u = -0.448427 + 1.254430I$ $a = -1.72331 + 0.34160I$ $b = -1.64583 - 0.95608I$	$7.92858 + 5.65757I$	0
$u = -0.448427 - 1.254430I$ $a = -1.72331 - 0.34160I$ $b = -1.64583 + 0.95608I$	$7.92858 - 5.65757I$	0
$u = 0.649724 + 1.209040I$ $a = 0.934100 + 0.639804I$ $b = 1.109860 - 0.186332I$	$1.52430 - 5.45836I$	0
$u = 0.649724 - 1.209040I$ $a = 0.934100 - 0.639804I$ $b = 1.109860 + 0.186332I$	$1.52430 + 5.45836I$	0
$u = -0.319391 + 1.343010I$ $a = -1.62626 - 0.38363I$ $b = -1.73839 - 1.28747I$	$6.78734 + 6.74957I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.319391 - 1.343010I$ $a = -1.62626 + 0.38363I$ $b = -1.73839 + 1.28747I$	$6.78734 - 6.74957I$	0
$u = 0.595501 + 1.255810I$ $a = -1.43242 - 0.50104I$ $b = -1.46776 + 0.72438I$	$-0.01416 - 10.61690I$	0
$u = 0.595501 - 1.255810I$ $a = -1.43242 + 0.50104I$ $b = -1.46776 - 0.72438I$	$-0.01416 + 10.61690I$	0
$u = -0.519632 + 1.303580I$ $a = -1.51849 + 0.52896I$ $b = -1.172690 - 0.361484I$	$0.19967 + 5.22519I$	0
$u = -0.519632 - 1.303580I$ $a = -1.51849 - 0.52896I$ $b = -1.172690 + 0.361484I$	$0.19967 - 5.22519I$	0
$u = -0.57152 + 1.29938I$ $a = 1.76760 - 0.41531I$ $b = 1.57268 + 0.78579I$	$7.48757 + 11.61040I$	0
$u = -0.57152 - 1.29938I$ $a = 1.76760 + 0.41531I$ $b = 1.57268 - 0.78579I$	$7.48757 - 11.61040I$	0
$u = 0.57393 + 1.30349I$ $a = -1.258510 + 0.260259I$ $b = -0.642563 + 1.019860I$	$-1.91021 - 4.45206I$	0
$u = 0.57393 - 1.30349I$ $a = -1.258510 - 0.260259I$ $b = -0.642563 - 1.019860I$	$-1.91021 + 4.45206I$	0
$u = -0.57654 + 1.30702I$ $a = -1.79727 + 0.24737I$ $b = -1.51657 - 1.11069I$	$4.1086 + 18.6576I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.57654 - 1.30702I$ $a = -1.79727 - 0.24737I$ $b = -1.51657 + 1.11069I$	$4.1086 - 18.6576I$	0
$u = -0.36392 + 1.39393I$ $a = 1.080680 - 0.889817I$ $b = 1.094080 - 0.092347I$	$8.99561 - 0.74820I$	0
$u = -0.36392 - 1.39393I$ $a = 1.080680 + 0.889817I$ $b = 1.094080 + 0.092347I$	$8.99561 + 0.74820I$	0
$u = 0.094811 + 0.549038I$ $a = 3.77075 - 1.38548I$ $b = 1.52223 - 1.11379I$	$-0.07750 + 5.29942I$	$-5.40871 - 2.98457I$
$u = 0.094811 - 0.549038I$ $a = 3.77075 + 1.38548I$ $b = 1.52223 + 1.11379I$	$-0.07750 - 5.29942I$	$-5.40871 + 2.98457I$
$u = -0.03969 + 1.44624I$ $a = 1.81423 - 0.86290I$ $b = 0.810507 - 0.314287I$	$7.88736 - 1.01294I$	0
$u = -0.03969 - 1.44624I$ $a = 1.81423 + 0.86290I$ $b = 0.810507 + 0.314287I$	$7.88736 + 1.01294I$	0
$u = -0.346914 + 0.399228I$ $a = 2.09323 - 2.49228I$ $b = 1.47129 - 0.39004I$	$0.02497 + 5.27393I$	$-3.58834 - 5.27961I$
$u = -0.346914 - 0.399228I$ $a = 2.09323 + 2.49228I$ $b = 1.47129 + 0.39004I$	$0.02497 - 5.27393I$	$-3.58834 + 5.27961I$
$u = -0.37718 + 1.44983I$ $a = -0.716966 + 0.800137I$ $b = -1.076310 + 0.259767I$	$5.63085 - 7.45344I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.37718 - 1.44983I$ $a = -0.716966 - 0.800137I$ $b = -1.076310 - 0.259767I$	$5.63085 + 7.45344I$	0
$u = 0.57631 + 1.39320I$ $a = 0.935947 - 0.425096I$ $b = 0.472657 - 1.103060I$	$-1.17664 - 7.45881I$	0
$u = 0.57631 - 1.39320I$ $a = 0.935947 + 0.425096I$ $b = 0.472657 + 1.103060I$	$-1.17664 + 7.45881I$	0
$u = -0.63748 + 1.37589I$ $a = 0.701318 - 0.217635I$ $b = 0.925253 + 0.716207I$	$1.91629 + 6.72215I$	0
$u = -0.63748 - 1.37589I$ $a = 0.701318 + 0.217635I$ $b = 0.925253 - 0.716207I$	$1.91629 - 6.72215I$	0
$u = 0.186229 + 0.352117I$ $a = -0.996682 - 0.693951I$ $b = -0.390010 + 0.415908I$	$0.019457 - 0.961906I$	$0.49448 + 6.92525I$
$u = 0.186229 - 0.352117I$ $a = -0.996682 + 0.693951I$ $b = -0.390010 - 0.415908I$	$0.019457 + 0.961906I$	$0.49448 - 6.92525I$
$u = 0.089771 + 0.296787I$ $a = 2.36115 + 1.57012I$ $b = -0.699669 - 0.920603I$	$1.75575 + 1.12430I$	$-5.03943 - 0.11930I$
$u = 0.089771 - 0.296787I$ $a = 2.36115 - 1.57012I$ $b = -0.699669 + 0.920603I$	$1.75575 - 1.12430I$	$-5.03943 + 0.11930I$
$u = 1.33469 + 1.10518I$ $a = -0.0009648 - 0.1055420I$ $b = 0.0978189 + 0.0356464I$	$-7.01760 - 4.66538I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 1.33469 - 1.10518I$		
$a = -0.0009648 + 0.1055420I$	$-7.01760 + 4.66538I$	0
$b = \quad 0.0978189 - 0.0356464I$		

II. $I_2^u = \langle -6.13 \times 10^{24} u^{36} + 8.29 \times 10^{25} u^{35} + \cdots + 1.91 \times 10^{25} b + 8.12 \times 10^{26},\ 8.07 \times 10^{26} u^{36} - 5.25 \times 10^{27} u^{35} + \cdots + 2.10 \times 10^{26} a + 5.96 \times 10^{27},\ u^{37} - 7u^{36} + \cdots - 14u + 11 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -3.84663u^{36} + 25.0390u^{35} + \cdots - 39.9693u - 28.4268 \\ 0.321752u^{36} - 4.34731u^{35} + \cdots + 53.9505u - 42.5808 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -4.16839u^{36} + 29.3863u^{35} + \cdots - 93.9198u + 14.1540 \\ 0.321752u^{36} - 4.34731u^{35} + \cdots + 53.9505u - 42.5808 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.339839u^{36} + 0.869980u^{35} + \cdots + 42.9331u - 22.3971 \\ 0.600351u^{36} - 7.51986u^{35} + \cdots + 49.0392u - 46.3271 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -5.29976u^{36} + 35.5979u^{35} + \cdots - 85.9054u - 9.44007 \\ 1.17279u^{36} - 9.54332u^{35} + \cdots + 57.4031u - 37.7748 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 4.73273u^{36} - 26.1686u^{35} + \cdots - 7.63740u + 66.7415 \\ -3.62282u^{36} + 25.2825u^{35} + \cdots - 56.0322u + 1.93405 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 2.13430u^{36} - 15.1155u^{35} + \cdots + 30.7567u + 5.97723 \\ 1.51955u^{36} - 10.4450u^{35} + \cdots + 31.3426u - 8.81096 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -6.65000u^{36} + 47.8144u^{35} + \cdots - 167.906u + 59.6352 \\ -3.72603u^{36} + 25.2468u^{35} + \cdots - 58.4254u - 7.56368 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -2.92397u^{36} + 22.5675u^{35} + \cdots - 109.480u + 67.1988 \\ -3.72603u^{36} + 25.2468u^{35} + \cdots - 58.4254u - 7.56368 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{1392107954766385319572852 09}{1906726202433257804183346 1}u^{36} + \frac{9307097031866626208906273 00}{1906726202433257804183346 1}u^{35} + \cdots + \frac{1325568973957052380713475 60}{1906726202433257804183346 1}u + \frac{7925677973250962585719937 87}{1906726202433257804183346 1}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{37} - 7u^{36} + \cdots - 14u + 11$
c_2	$u^{37} - 2u^{36} + \cdots + 2u - 1$
c_3	$u^{37} + 10u^{35} + \cdots + 24u - 4$
c_4	$u^{37} + 7u^{36} + \cdots - 14u - 11$
c_5	$u^{37} - 13u^{35} + \cdots + 12u + 4$
c_6	$u^{37} + 2u^{36} + \cdots + 2u + 1$
c_7	$u^{37} + 7u^{36} + \cdots + 54u + 53$
c_8	$u^{37} - 2u^{35} + \cdots + 95u + 25$
c_9	$u^{37} - u^{36} + \cdots - 3u - 1$
c_{10}	$u^{37} + 22u^{36} + \cdots + 18u + 1$
c_{11}	$u^{37} - 13u^{35} + \cdots + 12u - 4$
c_{12}	$u^{37} - 3u^{36} + \cdots + 7u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{37} + 23y^{36} + \cdots - 970y - 121$
c_2, c_6	$y^{37} - 12y^{36} + \cdots - 18y - 1$
c_3	$y^{37} + 20y^{36} + \cdots + 2240y^2 - 16$
c_5, c_{11}	$y^{37} - 26y^{36} + \cdots + 16y - 16$
c_7	$y^{37} - 23y^{36} + \cdots - 197000y - 2809$
c_8	$y^{37} - 4y^{36} + \cdots - 13625y - 625$
c_9	$y^{37} + 15y^{36} + \cdots - 13y - 1$
c_{10}	$y^{37} - 22y^{36} + \cdots + 24y - 1$
c_{12}	$y^{37} - 13y^{36} + \cdots + 27y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.330463 + 0.969719I$ $a = 1.46817 - 0.20828I$ $b = 0.627177 + 0.356013I$	$-5.05407 - 6.33702I$	$-4.7870 + 17.1928I$
$u = 0.330463 - 0.969719I$ $a = 1.46817 + 0.20828I$ $b = 0.627177 - 0.356013I$	$-5.05407 + 6.33702I$	$-4.7870 - 17.1928I$
$u = 0.790089 + 0.666394I$ $a = 0.705711 + 0.099805I$ $b = 0.412269 - 0.102346I$	$-1.45630 - 0.48597I$	$-6.61644 - 0.55397I$
$u = 0.790089 - 0.666394I$ $a = 0.705711 - 0.099805I$ $b = 0.412269 + 0.102346I$	$-1.45630 + 0.48597I$	$-6.61644 + 0.55397I$
$u = -0.232229 + 0.870877I$ $a = 2.16925 + 1.29713I$ $b = 0.52873 + 2.02225I$	$-5.36937 + 1.10038I$	$15.1897 + 4.2295I$
$u = -0.232229 - 0.870877I$ $a = 2.16925 - 1.29713I$ $b = 0.52873 - 2.02225I$	$-5.36937 - 1.10038I$	$15.1897 - 4.2295I$
$u = 0.211158 + 1.092760I$ $a = -2.26528 + 0.53961I$ $b = -1.18222 + 1.12432I$	$3.95808 - 2.37774I$	$2.35043 - 0.75443I$
$u = 0.211158 - 1.092760I$ $a = -2.26528 - 0.53961I$ $b = -1.18222 - 1.12432I$	$3.95808 + 2.37774I$	$2.35043 + 0.75443I$
$u = 0.489504 + 1.001060I$ $a = -0.545570 - 0.427066I$ $b = -0.507831 - 0.657356I$	$-0.18769 - 4.28641I$	$-0.80386 + 6.56314I$
$u = 0.489504 - 1.001060I$ $a = -0.545570 + 0.427066I$ $b = -0.507831 + 0.657356I$	$-0.18769 + 4.28641I$	$-0.80386 - 6.56314I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.437592 + 0.750199I$ $a = -1.48589 - 0.17041I$ $b = -0.126173 - 1.328120I$	$-6.94726 + 1.85249I$	$-12.06148 - 5.73596I$
$u = -0.437592 - 0.750199I$ $a = -1.48589 + 0.17041I$ $b = -0.126173 + 1.328120I$	$-6.94726 - 1.85249I$	$-12.06148 + 5.73596I$
$u = 1.156220 + 0.062059I$ $a = -0.1311650 - 0.0278334I$ $b = -0.022902 - 0.911903I$	$-6.34523 - 1.06200I$	$-13.26883 - 0.73503I$
$u = 1.156220 - 0.062059I$ $a = -0.1311650 + 0.0278334I$ $b = -0.022902 + 0.911903I$	$-6.34523 + 1.06200I$	$-13.26883 + 0.73503I$
$u = 0.155934 + 1.150980I$ $a = 1.069730 - 0.484926I$ $b = -0.029865 - 1.229920I$	$2.32861 - 6.31812I$	$2.89455 + 5.81344I$
$u = 0.155934 - 1.150980I$ $a = 1.069730 + 0.484926I$ $b = -0.029865 + 1.229920I$	$2.32861 + 6.31812I$	$2.89455 - 5.81344I$
$u = 0.020892 + 0.838018I$ $a = 2.99463 - 1.05963I$ $b = 0.78200 - 1.23327I$	$0.91561 + 5.64419I$	$2.81136 - 4.44440I$
$u = 0.020892 - 0.838018I$ $a = 2.99463 + 1.05963I$ $b = 0.78200 + 1.23327I$	$0.91561 - 5.64419I$	$2.81136 + 4.44440I$
$u = 0.095532 + 0.760637I$ $a = -0.885169 + 0.561579I$ $b = 0.464083 + 1.311950I$	$2.56785 + 0.92887I$	$4.86731 + 1.64841I$
$u = 0.095532 - 0.760637I$ $a = -0.885169 - 0.561579I$ $b = 0.464083 - 1.311950I$	$2.56785 - 0.92887I$	$4.86731 - 1.64841I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.25986$ $a=0.106576$ $b=-0.724260$	-2.12922	12.5890
$u=0.417191+0.586889I$ $a=-1.44888+0.10396I$ $b=-0.440224-0.358961I$	$-6.15742+3.16073I$	$-14.5529+3.7169I$
$u=0.417191-0.586889I$ $a=-1.44888-0.10396I$ $b=-0.440224+0.358961I$	$-6.15742-3.16073I$	$-14.5529-3.7169I$
$u=-0.359495+1.285780I$ $a=-1.73838-0.18497I$ $b=-1.75474-1.19332I$	$6.72411+6.21316I$	0
$u=-0.359495-1.285780I$ $a=-1.73838+0.18497I$ $b=-1.75474+1.19332I$	$6.72411-6.21316I$	0
$u=-0.497902+1.304690I$ $a=0.884570-0.539656I$ $b=0.897160+0.568011I$	$2.21197+6.06940I$	0
$u=-0.497902-1.304690I$ $a=0.884570+0.539656I$ $b=0.897160-0.568011I$	$2.21197-6.06940I$	0
$u=0.58344+1.31959I$ $a=1.138170-0.117523I$ $b=0.600071-0.759765I$	$-2.48957-5.01486I$	0
$u=0.58344-1.31959I$ $a=1.138170+0.117523I$ $b=0.600071+0.759765I$	$-2.48957+5.01486I$	0
$u=-0.08131+1.45044I$ $a=-1.72119+0.88843I$ $b=-0.820310+0.305825I$	$7.85531-1.16591I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.08131 - 1.45044I$ $a = -1.72119 - 0.88843I$ $b = -0.820310 - 0.305825I$	$7.85531 + 1.16591I$	0
$u = 0.61362 + 1.38794I$ $a = -0.856322 + 0.234037I$ $b = -0.577930 + 0.946142I$	$-1.89505 - 7.33551I$	0
$u = 0.61362 - 1.38794I$ $a = -0.856322 - 0.234037I$ $b = -0.577930 - 0.946142I$	$-1.89505 + 7.33551I$	0
$u = -0.452526 + 0.035117I$ $a = -1.24367 - 1.43822I$ $b = 0.967861 - 0.831701I$	$2.70807 - 2.95640I$	$-0.93484 + 2.88220I$
$u = -0.452526 - 0.035117I$ $a = -1.24367 + 1.43822I$ $b = 0.967861 + 0.831701I$	$2.70807 + 2.95640I$	$-0.93484 - 2.88220I$
$u = 1.32694 + 1.08802I$ $a = -0.116548 + 0.093587I$ $b = 0.044971 + 0.286445I$	$-7.10745 - 4.64492I$	0
$u = 1.32694 - 1.08802I$ $a = -0.116548 - 0.093587I$ $b = 0.044971 - 0.286445I$	$-7.10745 + 4.64492I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{37} - 7u^{36} + \cdots - 14u + 11)(u^{111} - 4u^{110} + \cdots + 75u - 19)$
c_2	$(u^{37} - 2u^{36} + \cdots + 2u - 1)(u^{111} - 3u^{110} + \cdots + 11u + 1)$
c_3	$(u^{37} + 10u^{35} + \cdots + 24u - 4)$ $\cdot (u^{111} + u^{110} + \cdots - 11375608u + 498668)$
c_4	$(u^{37} + 7u^{36} + \cdots - 14u - 11)(u^{111} - 4u^{110} + \cdots + 75u - 19)$
c_5	$(u^{37} - 13u^{35} + \cdots + 12u + 4)(u^{111} - u^{110} + \cdots + 25708u + 2404)$
c_6	$(u^{37} + 2u^{36} + \cdots + 2u + 1)(u^{111} - 3u^{110} + \cdots + 11u + 1)$
c_7	$(u^{37} + 7u^{36} + \cdots + 54u + 53)$ $\cdot (u^{111} + 8u^{110} + \cdots - 3750361u + 280259)$
c_8	$(u^{37} - 2u^{35} + \cdots + 95u + 25)$ $\cdot (u^{111} - 5u^{110} + \cdots + 1057226u + 206759)$
c_9	$(u^{37} - u^{36} + \cdots - 3u - 1)(u^{111} - 2u^{110} + \cdots - 1.18788 \times 10^{7}u - 708719)$
c_{10}	$(u^{37} + 22u^{36} + \cdots + 18u + 1)(u^{111} + 11u^{110} + \cdots - 13685u - 1355)$
c_{11}	$(u^{37} - 13u^{35} + \cdots + 12u - 4)(u^{111} - u^{110} + \cdots + 25708u + 2404)$
c_{12}	$(u^{37} - 3u^{36} + \cdots + 7u + 1)(u^{111} + 8u^{110} + \cdots - 59598u - 25569)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{37} + 23y^{36} + \cdots - 970y - 121)(y^{111} + 68y^{110} + \cdots - 21507y - 361)$
c_2, c_6	$(y^{37} - 12y^{36} + \cdots - 18y - 1)(y^{111} - 75y^{110} + \cdots - 235y - 1)$
c_3	$(y^{37} + 20y^{36} + \cdots + 2240y^2 - 16)$ $\cdot (y^{111} - 15y^{110} + \cdots + 14994491642816y - 248669774224)$
c_5, c_{11}	$(y^{37} - 26y^{36} + \cdots + 16y - 16)$ $\cdot (y^{111} - 61y^{110} + \cdots + 397749808y - 5779216)$
c_7	$(y^{37} - 23y^{36} + \cdots - 197000y - 2809)$ $\cdot (y^{111} + 10y^{110} + \cdots - 12572239397577y - 78545107081)$
c_8	$(y^{37} - 4y^{36} + \cdots - 13625y - 625)$ $\cdot (y^{111} - 3y^{110} + \cdots - 601815422274y - 42749284081)$
c_9	$(y^{37} + 15y^{36} + \cdots - 13y - 1)$ $\cdot (y^{111} - 24y^{110} + \cdots + 75899128605414y - 502282620961)$
c_{10}	$(y^{37} - 22y^{36} + \cdots + 24y - 1)$ $\cdot (y^{111} - 41y^{110} + \cdots + 78323675y - 1836025)$
c_{12}	$(y^{37} - 13y^{36} + \cdots + 27y - 1)$ $\cdot (y^{111} - 32y^{110} + \cdots + 18684218322y - 653773761)$