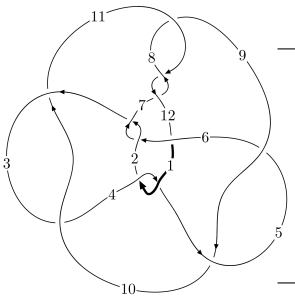
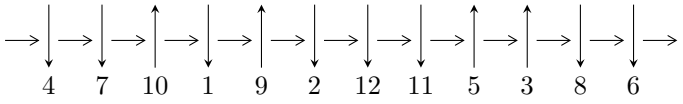
$12a_{1085}$ $(K12a_{1085})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -4.55506 \times 10^{297} u^{130} - 1.07595 \times 10^{298} u^{129} + \cdots + 3.32793 \times 10^{297} b + 1.89111 \times 10^{300}, \\ & 3.29789 \times 10^{300} u^{130} + 1.06460 \times 10^{301} u^{129} + \cdots + 3.33792 \times 10^{300} a + 2.16601 \times 10^{303}, \\ & u^{131} + 3u^{130} + \cdots + 6557u + 1003 \rangle \\ I_2^u = \langle & 9205u^{37} - 56551u^{36} + \cdots + 2759b - 17392,\ 999u^{37} + 1035u^{36} + \cdots + 2759a + 9185, \\ & u^{38} - 4u^{37} + \cdots - 8u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 169 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. $\boldsymbol{I_1^u = \langle -4.56 \times 10^{297} u^{130} - 1.08 \times 10^{298} u^{129} + \cdots + 3.33 \times 10^{297} b + 1.89 \times 10^{300},\ 3.30 \times 10^{300} u^{130} + 1.06 \times 10^{301} u^{129} + \cdots + 3.34 \times 10^{300} a + 2.17 \times 10^{303},\ u^{131} + 3u^{130} + \cdots + 6557u + 1003 \rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.988006u^{130} - 3.18941u^{129} + \cdots - 4307.93u - 648.910 \\ 1.36873u^{130} + 3.23310u^{129} + \cdots - 2225.95u - 568.252 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.380727u^{130} + 0.0436875u^{129} + \cdots - 6533.88u - 1217.16 \\ 1.36873u^{130} + 3.23310u^{129} + \cdots - 2225.95u - 568.252 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.446882u^{130} + 1.40976u^{129} + \cdots + 1941.40u + 215.692 \\ 0.117990u^{130} + 0.692334u^{129} + \cdots + 2224.63u + 374.684 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.593039u^{130} + 2.03783u^{129} + \cdots + 3733.75u + 516.466 \\ -0.0419501u^{130} + 0.305545u^{129} + \cdots + 2788.24u + 509.061 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.452060u^{130} + 0.814581u^{129} + \cdots + 2309.50u + 589.182 \\ -0.102605u^{130} + 0.105061u^{129} + \cdots + 923.553u + 181.597 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2.29003u^{130} - 5.13247u^{129} + \cdots + 6306.85u + 1492.58 \\ -1.98969u^{130} - 5.06913u^{129} + \cdots + 1208.27u + 424.354 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.365237u^{130} - 1.42252u^{129} + \cdots - 2974.24u - 244.912 \\ 0.777842u^{130} + 1.26849u^{129} + \cdots - 5034.27u - 976.706 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.287805u^{130} + 1.86995u^{129} + \cdots + 12047.8u + 2480.08$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{131} - 3u^{130} + \cdots - 5u + 1$
c_2, c_6	$u^{131} - u^{130} + \cdots + 124858u + 34547$
c_3, c_{10}	$u^{131} + u^{130} + \cdots - 3046848u + 2207401$
c_5, c_9	$u^{131} - 3u^{130} + \cdots - 20576u + 928$
c_7, c_8, c_{11}	$u^{131} - 3u^{130} + \cdots + 6557u - 1003$
c_{12}	$u^{131} + u^{130} + \cdots - 102925u + 30725$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{131} + 63y^{130} + \cdots - 95y - 1$
c_2, c_6	$y^{131} - 79y^{130} + \cdots + 24976423722y - 1193495209$
c_3, c_{10}	$y^{131} + 97y^{130} + \cdots - 107213854635398y - 4872619174801$
c_5, c_9	$y^{131} + 81y^{130} + \cdots + 109900800y - 861184$
c_7, c_8, c_{11}	$y^{131} + 123y^{130} + \cdots + 26057591y - 1006009$
c_{12}	$y^{131} - y^{130} + \cdots - 182071674025y - 944025625$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.934694+0.329104I$ $a=-0.550835-0.743791I$ $b=-1.31849+0.55849I$	$-6.0155+13.7624I$	0
$u=-0.934694-0.329104I$ $a=-0.550835+0.743791I$ $b=-1.31849-0.55849I$	$-6.0155-13.7624I$	0
$u=\ 0.679855+0.683286I$ $a=-0.462761-0.629021I$ $b=\ 1.131680-0.277058I$	$-1.55411+2.60636I$	0
$u=\ 0.679855-0.683286I$ $a=-0.462761+0.629021I$ $b=\ 1.131680+0.277058I$	$-1.55411-2.60636I$	0
$u=-1.007500+0.249395I$ $a=\ 0.528639+0.553378I$ $b=\ 1.197060-0.485687I$	$-8.29895+6.75694I$	0
$u=-1.007500-0.249395I$ $a=\ 0.528639-0.553378I$ $b=\ 1.197060+0.485687I$	$-8.29895-6.75694I$	0
$u=-0.609549+0.880930I$ $a=\ 1.033680+0.650673I$ $b=\ 0.538625-0.320977I$	$-3.78924+2.21930I$	0
$u=-0.609549-0.880930I$ $a=\ 1.033680-0.650673I$ $b=\ 0.538625+0.320977I$	$-3.78924-2.21930I$	0
$u=\ 0.818465+0.409101I$ $a=-0.333227+0.716166I$ $b=-1.258220-0.258704I$	$-4.60969-2.75132I$	0
$u=\ 0.818465-0.409101I$ $a=-0.333227-0.716166I$ $b=-1.258220+0.258704I$	$-4.60969+2.75132I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.769460 + 0.454615I$ $a = -0.430525 + 0.833443I$ $b = -1.278700 - 0.122735I$	$-4.55934 - 2.49188I$	0
$u = 0.769460 - 0.454615I$ $a = -0.430525 - 0.833443I$ $b = -1.278700 + 0.122735I$	$-4.55934 + 2.49188I$	0
$u = 0.688328 + 0.873746I$ $a = -0.592425 + 0.433927I$ $b = -0.861384 + 0.124540I$	$-3.06768 - 2.44235I$	0
$u = 0.688328 - 0.873746I$ $a = -0.592425 - 0.433927I$ $b = -0.861384 - 0.124540I$	$-3.06768 + 2.44235I$	0
$u = 0.789233 + 0.386969I$ $a = 0.349506 - 0.813447I$ $b = 1.297670 + 0.546358I$	$-2.45784 - 7.50441I$	0
$u = 0.789233 - 0.386969I$ $a = 0.349506 + 0.813447I$ $b = 1.297670 - 0.546358I$	$-2.45784 + 7.50441I$	0
$u = -0.035834 + 1.125340I$ $a = -0.86865 - 2.41662I$ $b = 0.666170 + 0.860764I$	$-0.31847 - 5.32965I$	0
$u = -0.035834 - 1.125340I$ $a = -0.86865 + 2.41662I$ $b = 0.666170 - 0.860764I$	$-0.31847 + 5.32965I$	0
$u = -0.031587 + 1.145130I$ $a = 0.35907 + 2.14111I$ $b = -0.848661 - 0.423254I$	$-3.53022 + 0.23230I$	0
$u = -0.031587 - 1.145130I$ $a = 0.35907 - 2.14111I$ $b = -0.848661 + 0.423254I$	$-3.53022 - 0.23230I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.752508 + 0.352699I$ $a = -0.984423 + 0.573636I$ $b = -1.134740 - 0.157369I$	$-4.22971 - 2.52046I$	0
$u = 0.752508 - 0.352699I$ $a = -0.984423 - 0.573636I$ $b = -1.134740 + 0.157369I$	$-4.22971 + 2.52046I$	0
$u = 0.025206 + 1.187290I$ $a = 0.34341 - 2.21812I$ $b = 0.742032 + 0.026090I$	$0.21152 + 5.29954I$	0
$u = 0.025206 - 1.187290I$ $a = 0.34341 + 2.21812I$ $b = 0.742032 - 0.026090I$	$0.21152 - 5.29954I$	0
$u = -0.131118 + 1.184340I$ $a = 0.907058 + 0.602299I$ $b = -1.55156 - 0.34705I$	$-5.46941 + 0.66431I$	0
$u = -0.131118 - 1.184340I$ $a = 0.907058 - 0.602299I$ $b = -1.55156 + 0.34705I$	$-5.46941 - 0.66431I$	0
$u = -0.717221 + 0.957662I$ $a = 0.401088 - 0.263128I$ $b = -1.194890 - 0.413863I$	$-4.17251 - 8.11451I$	0
$u = -0.717221 - 0.957662I$ $a = 0.401088 + 0.263128I$ $b = -1.194890 + 0.413863I$	$-4.17251 + 8.11451I$	0
$u = -0.798624 + 0.068130I$ $a = -0.707332 + 0.137978I$ $b = -0.811384 - 0.753650I$	$0.96424 - 2.83403I$	0
$u = -0.798624 - 0.068130I$ $a = -0.707332 - 0.137978I$ $b = -0.811384 + 0.753650I$	$0.96424 + 2.83403I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.841415 + 0.864267I$ $a = 0.123708 + 0.437579I$ $b = -1.046930 + 0.038601I$	$-3.66191 - 2.86764I$	0
$u = 0.841415 - 0.864267I$ $a = 0.123708 - 0.437579I$ $b = -1.046930 - 0.038601I$	$-3.66191 + 2.86764I$	0
$u = -0.170127 + 1.208950I$ $a = -1.147570 + 0.063788I$ $b = 1.73263 + 0.21832I$	$-3.89869 + 4.95633I$	0
$u = -0.170127 - 1.208950I$ $a = -1.147570 - 0.063788I$ $b = 1.73263 - 0.21832I$	$-3.89869 - 4.95633I$	0
$u = 0.552137 + 0.539168I$ $a = -0.601591 + 0.174461I$ $b = 0.307493 - 0.623301I$	$0.68998 - 3.26031I$	0
$u = 0.552137 - 0.539168I$ $a = -0.601591 - 0.174461I$ $b = 0.307493 + 0.623301I$	$0.68998 + 3.26031I$	0
$u = -0.084779 + 1.233320I$ $a = -0.277224 + 0.582683I$ $b = -1.388380 - 0.064832I$	$-4.78082 + 1.55259I$	0
$u = -0.084779 - 1.233320I$ $a = -0.277224 - 0.582683I$ $b = -1.388380 + 0.064832I$	$-4.78082 - 1.55259I$	0
$u = -0.697567 + 0.288833I$ $a = 0.509289 - 0.451238I$ $b = 0.092417 + 0.707095I$	$-5.12293 + 2.23297I$	0
$u = -0.697567 - 0.288833I$ $a = 0.509289 + 0.451238I$ $b = 0.092417 - 0.707095I$	$-5.12293 - 2.23297I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.119894+1.260100I$ $a=\ 0.090350+0.352826I$ $b=\ 1.56261+0.03072I$	$-3.04352-1.72138I$	0
$u=-0.119894-1.260100I$ $a=\ 0.090350-0.352826I$ $b=\ 1.56261-0.03072I$	$-3.04352+1.72138I$	0
$u=-0.667494+0.272419I$ $a=-0.174243+0.449009I$ $b=-0.053870-1.094810I$	$-2.09095+7.97659I$	0
$u=-0.667494-0.272419I$ $a=-0.174243-0.449009I$ $b=-0.053870+1.094810I$	$-2.09095-7.97659I$	0
$u=\ 0.545298+0.467803I$ $a=\ 0.571463+0.100897I$ $b=\ 0.938446-0.555977I$	$-1.20051+3.65561I$	0
$u=\ 0.545298-0.467803I$ $a=\ 0.571463-0.100897I$ $b=\ 0.938446+0.555977I$	$-1.20051-3.65561I$	0
$u=-0.458111+0.528404I$ $a=-1.86536-0.22014I$ $b=-0.200295+0.463592I$	$-1.05071-4.43531I$	0
$u=-0.458111-0.528404I$ $a=-1.86536+0.22014I$ $b=-0.200295-0.463592I$	$-1.05071+4.43531I$	0
$u=\ 0.615847+0.313571I$ $a=\ 1.88745-0.94174I$ $b=\ 1.102450+0.400010I$	$-1.65081-7.22240I$	$-7.00170+8.40269I$
$u=\ 0.615847-0.313571I$ $a=\ 1.88745+0.94174I$ $b=\ 1.102450-0.400010I$	$-1.65081+7.22240I$	$-7.00170-8.40269I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.595933 + 0.324234I$ $a = 0.461656 - 0.734192I$ $b = 0.389923 + 0.502982I$	$0.111356 - 0.603783I$	$-4.00000 + 2.81913I$
$u = 0.595933 - 0.324234I$ $a = 0.461656 + 0.734192I$ $b = 0.389923 - 0.502982I$	$0.111356 + 0.603783I$	$-4.00000 - 2.81913I$
$u = 0.135341 + 1.316130I$ $a = 0.35019 - 2.02274I$ $b = -0.26473 + 1.40134I$	$5.28796 - 0.51685I$	0
$u = 0.135341 - 1.316130I$ $a = 0.35019 + 2.02274I$ $b = -0.26473 - 1.40134I$	$5.28796 + 0.51685I$	0
$u = -0.684844 + 1.155350I$ $a = -0.353479 + 0.149555I$ $b = 1.072870 + 0.356066I$	$-5.62717 - 0.84114I$	0
$u = -0.684844 - 1.155350I$ $a = -0.353479 - 0.149555I$ $b = 1.072870 - 0.356066I$	$-5.62717 + 0.84114I$	0
$u = -0.140360 + 1.349520I$ $a = -0.201290 + 1.328550I$ $b = 1.116370 - 0.449257I$	$2.62547 + 1.91932I$	0
$u = -0.140360 - 1.349520I$ $a = -0.201290 - 1.328550I$ $b = 1.116370 + 0.449257I$	$2.62547 - 1.91932I$	0
$u = 0.179299 + 1.349430I$ $a = -0.80224 + 1.81570I$ $b = 0.64697 - 1.39086I$	$5.93037 - 3.80995I$	0
$u = 0.179299 - 1.349430I$ $a = -0.80224 - 1.81570I$ $b = 0.64697 + 1.39086I$	$5.93037 + 3.80995I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.276716 + 1.333720I$ $a = 0.318553 - 0.745790I$ $b = 1.064700 + 0.376173I$	$4.72117 - 2.74730I$	0
$u = 0.276716 - 1.333720I$ $a = 0.318553 + 0.745790I$ $b = 1.064700 - 0.376173I$	$4.72117 + 2.74730I$	0
$u = -0.395334 + 1.305160I$ $a = -0.36074 - 1.63019I$ $b = -0.960863 + 0.772999I$	$4.85292 + 7.20961I$	0
$u = -0.395334 - 1.305160I$ $a = -0.36074 + 1.63019I$ $b = -0.960863 - 0.772999I$	$4.85292 - 7.20961I$	0
$u = 0.635440 + 0.006329I$ $a = 1.09310 - 1.01779I$ $b = 0.590265 - 0.091851I$	$0.443485 - 0.658778I$	$-6.88794 - 0.16623I$
$u = 0.635440 - 0.006329I$ $a = 1.09310 + 1.01779I$ $b = 0.590265 + 0.091851I$	$0.443485 + 0.658778I$	$-6.88794 + 0.16623I$
$u = -0.602014 + 0.190107I$ $a = -0.117972 - 1.364090I$ $b = -1.189610 + 0.529459I$	$-8.28202 + 1.92303I$	$-12.09420 - 6.84885I$
$u = -0.602014 - 0.190107I$ $a = -0.117972 + 1.364090I$ $b = -1.189610 - 0.529459I$	$-8.28202 - 1.92303I$	$-12.09420 + 6.84885I$
$u = -0.236766 + 1.349600I$ $a = -0.95781 + 1.84822I$ $b = 1.27816 - 0.66979I$	$-2.40209 + 0.83917I$	0
$u = -0.236766 - 1.349600I$ $a = -0.95781 - 1.84822I$ $b = 1.27816 + 0.66979I$	$-2.40209 - 0.83917I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.097821 + 1.371550I$ $a = 0.081815 - 1.219470I$ $b = -0.347833 + 0.449614I$	$4.86122 - 2.83742I$	0
$u = 0.097821 - 1.371550I$ $a = 0.081815 + 1.219470I$ $b = -0.347833 - 0.449614I$	$4.86122 + 2.83742I$	0
$u = -0.182001 + 1.368620I$ $a = 0.10079 - 1.69592I$ $b = -1.214110 + 0.687059I$	$6.96416 + 5.92527I$	0
$u = -0.182001 - 1.368620I$ $a = 0.10079 + 1.69592I$ $b = -1.214110 - 0.687059I$	$6.96416 - 5.92527I$	0
$u = -0.598169 + 0.129833I$ $a = 0.550974 + 1.159430I$ $b = 1.48357 - 0.42359I$	$-7.10762 - 2.21508I$	$-10.60536 + 2.23170I$
$u = -0.598169 - 0.129833I$ $a = 0.550974 - 1.159430I$ $b = 1.48357 + 0.42359I$	$-7.10762 + 2.21508I$	$-10.60536 - 2.23170I$
$u = -0.190570 + 1.375840I$ $a = -1.07455 + 1.87376I$ $b = 1.152520 - 0.159315I$	$-1.53807 + 6.24014I$	0
$u = -0.190570 - 1.375840I$ $a = -1.07455 - 1.87376I$ $b = 1.152520 + 0.159315I$	$-1.53807 - 6.24014I$	0
$u = -0.294482 + 1.363240I$ $a = 0.756292 + 0.710811I$ $b = -0.727685 - 0.916619I$	$5.57411 + 1.03954I$	0
$u = -0.294482 - 1.363240I$ $a = 0.756292 - 0.710811I$ $b = -0.727685 + 0.916619I$	$5.57411 - 1.03954I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.245737+1.376050I$ $a=\ \ 0.76197-1.82749I$ $b=-0.944287+0.769941I$	$-3.28024+5.04757I$	0
$u=-0.245737-1.376050I$ $a=\ \ 0.76197+1.82749I$ $b=-0.944287-0.769941I$	$-3.28024-5.04757I$	0
$u=-0.20359+1.40017I$ $a=\ \ 1.14728-1.56629I$ $b=-0.840553+0.145478I$	$-2.49420+2.92894I$	0
$u=-0.20359-1.40017I$ $a=\ \ 1.14728+1.56629I$ $b=-0.840553-0.145478I$	$-2.49420-2.92894I$	0
$u=-0.09468+1.41900I$ $a=-0.136059-1.064040I$ $b=-0.818408+0.488902I$	$5.40126-2.73374I$	0
$u=-0.09468-1.41900I$ $a=-0.136059+1.064040I$ $b=-0.818408-0.488902I$	$5.40126+2.73374I$	0
$u=-0.27503+1.40354I$ $a=-0.390920-1.279640I$ $b=\ \ 0.249244+1.055930I$	$0.23806+5.77413I$	0
$u=-0.27503-1.40354I$ $a=-0.390920+1.279640I$ $b=\ \ 0.249244-1.055930I$	$0.23806-5.77413I$	0
$u=-0.26689+1.40609I$ $a=\ \ 0.61770+1.56594I$ $b=-0.263332-1.335610I$	$3.26018+11.39960I$	0
$u=-0.26689-1.40609I$ $a=\ \ 0.61770-1.56594I$ $b=-0.263332+1.335610I$	$3.26018-11.39960I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.24673 + 1.41926I$ $a = 0.15074 - 1.55465I$ $b = 1.283560 + 0.468672I$	$3.88495 - 10.41490I$	0
$u = 0.24673 - 1.41926I$ $a = 0.15074 + 1.55465I$ $b = 1.283560 - 0.468672I$	$3.88495 + 10.41490I$	0
$u = 0.29309 + 1.41111I$ $a = -0.00538 - 1.49492I$ $b = 0.763063 + 0.589715I$	$5.39679 - 4.00449I$	0
$u = 0.29309 - 1.41111I$ $a = -0.00538 + 1.49492I$ $b = 0.763063 - 0.589715I$	$5.39679 + 4.00449I$	0
$u = 0.09209 + 1.44027I$ $a = -0.009980 - 1.173310I$ $b = 0.077908 + 0.755724I$	$5.60105 - 2.33906I$	0
$u = 0.09209 - 1.44027I$ $a = -0.009980 + 1.173310I$ $b = 0.077908 - 0.755724I$	$5.60105 + 2.33906I$	0
$u = -0.05220 + 1.44278I$ $a = 0.76947 + 1.22543I$ $b = -0.481725 - 1.001430I$	$9.36512 - 0.24380I$	0
$u = -0.05220 - 1.44278I$ $a = 0.76947 - 1.22543I$ $b = -0.481725 + 1.001430I$	$9.36512 + 0.24380I$	0
$u = 0.15627 + 1.44707I$ $a = -0.665878 + 0.986739I$ $b = 0.885210 - 0.764178I$	$5.06496 + 1.24276I$	0
$u = 0.15627 - 1.44707I$ $a = -0.665878 - 0.986739I$ $b = 0.885210 + 0.764178I$	$5.06496 - 1.24276I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.493511+0.222405I$ $a=\ \ 0.27867-2.67640I$ $b=-1.098540+0.009317I$	$-7.73990+0.30324I$	$-10.22397+1.81420I$
$u=-0.493511-0.222405I$ $a=\ \ 0.27867+2.67640I$ $b=-1.098540-0.009317I$	$-7.73990-0.30324I$	$-10.22397-1.81420I$
$u=\ \ 0.30264+1.43258I$ $a=\ \ 0.261994+1.189960I$ $b=-1.271090-0.348276I$	$1.44040-6.34992I$	0
$u=\ \ 0.30264-1.43258I$ $a=\ \ 0.261994-1.189960I$ $b=-1.271090+0.348276I$	$1.44040+6.34992I$	0
$u=-0.487402+0.179252I$ $a=-1.76300-0.40363I$ $b=-0.955363+0.526859I$	$2.04111+3.47849I$	$0.98681-5.99163I$
$u=-0.487402-0.179252I$ $a=-1.76300+0.40363I$ $b=-0.955363-0.526859I$	$2.04111-3.47849I$	$0.98681+5.99163I$
$u=\ \ 0.29366+1.45267I$ $a=\ \ 0.345081+1.327240I$ $b=-1.280140-0.348591I$	$1.46725-6.38484I$	0
$u=\ \ 0.29366-1.45267I$ $a=\ \ 0.345081-1.327240I$ $b=-1.280140+0.348591I$	$1.46725+6.38484I$	0
$u=-0.235458+0.457864I$ $a=\ \ 0.621199-0.179878I$ $b=-0.554225-0.747913I$	$3.24807-1.24361I$	$3.59115+1.44966I$
$u=-0.235458-0.457864I$ $a=\ \ 0.621199+0.179878I$ $b=-0.554225+0.747913I$	$3.24807+1.24361I$	$3.59115-1.44966I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.31495 + 1.45741I$ $a = 0.50195 + 1.43358I$ $b = -1.278780 - 0.542741I$	$1.31586 - 6.84522I$	0
$u = 0.31495 - 1.45741I$ $a = 0.50195 - 1.43358I$ $b = -1.278780 + 0.542741I$	$1.31586 + 6.84522I$	0
$u = 0.30653 + 1.46274I$ $a = -0.52357 - 1.71904I$ $b = 1.30238 + 0.79237I$	$3.46299 - 11.48740I$	0
$u = 0.30653 - 1.46274I$ $a = -0.52357 + 1.71904I$ $b = 1.30238 - 0.79237I$	$3.46299 + 11.48740I$	0
$u = -0.479468 + 0.147171I$ $a = 1.22541 + 2.78516I$ $b = 1.363860 - 0.031652I$	$-6.46178 + 3.74739I$	$-12.72826 - 5.14170I$
$u = -0.479468 - 0.147171I$ $a = 1.22541 - 2.78516I$ $b = 1.363860 + 0.031652I$	$-6.46178 - 3.74739I$	$-12.72826 + 5.14170I$
$u = -0.41159 + 1.44962I$ $a = -0.18195 + 1.55187I$ $b = 1.263230 - 0.632475I$	$-2.88992 + 11.81910I$	0
$u = -0.41159 - 1.44962I$ $a = -0.18195 - 1.55187I$ $b = 1.263230 + 0.632475I$	$-2.88992 - 11.81910I$	0
$u = -0.37251 + 1.46706I$ $a = 0.30220 - 1.72005I$ $b = -1.36377 + 0.69905I$	$-0.2841 + 18.4649I$	0
$u = -0.37251 - 1.46706I$ $a = 0.30220 + 1.72005I$ $b = -1.36377 - 0.69905I$	$-0.2841 - 18.4649I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.15497 + 1.50627I$ $a = -0.579728 + 0.885343I$ $b = 0.168592 - 0.730217I$	$7.41143 - 5.79072I$	0
$u = 0.15497 - 1.50627I$ $a = -0.579728 - 0.885343I$ $b = 0.168592 + 0.730217I$	$7.41143 + 5.79072I$	0
$u = 0.450685 + 0.076849I$ $a = 0.137900 + 0.983570I$ $b = 0.225727 - 1.228120I$	$1.32498 - 1.46936I$	$-11.05701 + 7.24912I$
$u = 0.450685 - 0.076849I$ $a = 0.137900 - 0.983570I$ $b = 0.225727 + 1.228120I$	$1.32498 + 1.46936I$	$-11.05701 - 7.24912I$
$u = 0.307858 + 0.294452I$ $a = -0.237615 - 0.774490I$ $b = 0.187265 + 0.319997I$	$-0.157593 - 0.840081I$	$-3.96230 + 7.90139I$
$u = 0.307858 - 0.294452I$ $a = -0.237615 + 0.774490I$ $b = 0.187265 - 0.319997I$	$-0.157593 + 0.840081I$	$-3.96230 - 7.90139I$
$u = -0.413445$ $a = 1.92266$ $b = 0.972945$	-1.73763	-4.30590
$u = 0.15426 + 1.61387I$ $a = -0.769002 - 0.192663I$ $b = 0.747488 - 0.125288I$	$6.30063 - 0.48490I$	0
$u = 0.15426 - 1.61387I$ $a = -0.769002 + 0.192663I$ $b = 0.747488 + 0.125288I$	$6.30063 + 0.48490I$	0
$u = 0.04137 + 1.66993I$ $a = 0.690441 + 0.325659I$ $b = -0.806095 - 0.233900I$	$5.90696 - 5.93601I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.04137-1.66993I$		
$a=$	$0.690441-0.325659I$	$5.90696+5.93601I$	0
$b=$	$-0.806095+0.233900I$		

II. $I_2^u = \langle 9205u^{37} - 56551u^{36} + \cdots + 2759b - 17392,\ 999u^{37} + 1035u^{36} + \cdots + 2759a + 9185,\ u^{38} - 4u^{37} + \cdots - 8u + 1\rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.362088u^{37} - 0.375136u^{36} + \cdots + 24.8387u - 3.32910 \\ -3.33635u^{37} + 20.4969u^{36} + \cdots - 45.9677u + 6.30373 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -3.69844u^{37} + 20.1218u^{36} + \cdots - 21.1290u + 2.97463 \\ -3.33635u^{37} + 20.4969u^{36} + \cdots - 45.9677u + 6.30373 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2.16274u^{37} - 9.34433u^{36} + \cdots + 28.3226u - 5.23740 \\ -1.69337u^{37} + 5.72309u^{36} + \cdots - 0.935484u + 0.837260 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 4.93838u^{37} - 19.8499u^{36} + \cdots + 28.0323u - 6.31352 \\ -1.78144u^{37} + 8.85067u^{36} + \cdots - 13.7097u + 2.31606 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 3.73541u^{37} - 16.4505u^{36} + \cdots - 23.6129u + 7.34252 \\ 1.83182u^{37} - 5.25154u^{36} + \cdots - 0.483871u - 0.848133 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 15.7061u^{37} - 63.6231u^{36} + \cdots + 10.2258u - 2.00326 \\ 10.8130u^{37} - 50.0656u^{36} + \cdots + 32.3871u - 2.11671 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -6.60747u^{37} + 24.7572u^{36} + \cdots + 9.77419u - 1.07575 \\ -3.02972u^{37} + 18.2200u^{36} + \cdots - 30.9032u + 4.14099 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{38745}{2759}u^{37} - \frac{94167}{2759}u^{36} + \cdots - \frac{3468}{31}u + \frac{36250}{2759}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{38} - 6u^{37} + \cdots + 13u^2 + 1$
c_2	$u^{38} - 13u^{36} + \cdots - 3u + 1$
c_3	$u^{38} + 19u^{36} + \cdots + u + 1$
c_4	$u^{38} + 6u^{37} + \cdots + 13u^2 + 1$
c_5	$u^{38} - 2u^{37} + \cdots + 12u^2 + 1$
c_6	$u^{38} - 13u^{36} + \cdots + 3u + 1$
c_7, c_8	$u^{38} - 4u^{37} + \cdots - 8u + 1$
c_9	$u^{38} + 2u^{37} + \cdots + 12u^2 + 1$
c_{10}	$u^{38} + 19u^{36} + \cdots - u + 1$
c_{11}	$u^{38} + 4u^{37} + \cdots + 8u + 1$
c_{12}	$u^{38} + 4u^{35} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{38} + 20y^{37} + \cdots + 26y + 1$
c_2, c_6	$y^{38} - 26y^{37} + \cdots - 23y + 1$
c_3, c_{10}	$y^{38} + 38y^{37} + \cdots + 29y + 1$
c_5, c_9	$y^{38} + 26y^{37} + \cdots + 24y + 1$
c_7, c_8, c_{11}	$y^{38} + 40y^{37} + \cdots - 12y + 1$
c_{12}	$y^{38} + 48y^{35} + \cdots + 104y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.829400 + 0.632757I$ $a = -0.170115 + 0.704812I$ $b = -1.239580 - 0.048864I$	$-4.76235 - 2.95488I$	$-15.5954 + 11.2760I$
$u = 0.829400 - 0.632757I$ $a = -0.170115 - 0.704812I$ $b = -1.239580 + 0.048864I$	$-4.76235 + 2.95488I$	$-15.5954 - 11.2760I$
$u = -0.341815 + 0.886808I$ $a = -0.745313 - 0.042177I$ $b = 1.264250 - 0.007560I$	$-6.83477 + 1.58763I$	$-9.91981 - 3.28044I$
$u = -0.341815 - 0.886808I$ $a = -0.745313 + 0.042177I$ $b = 1.264250 + 0.007560I$	$-6.83477 - 1.58763I$	$-9.91981 + 3.28044I$
$u = -0.435787 + 0.968265I$ $a = 0.84494 + 1.47737I$ $b = 0.704165 - 0.031988I$	$-4.57268 + 1.68867I$	$-13.15213 - 1.79024I$
$u = -0.435787 - 0.968265I$ $a = 0.84494 - 1.47737I$ $b = 0.704165 + 0.031988I$	$-4.57268 - 1.68867I$	$-13.15213 + 1.79024I$
$u = 0.789359 + 0.814600I$ $a = -0.548122 + 0.298692I$ $b = -0.695934 - 0.027027I$	$-2.48977 - 2.87526I$	$1.95441 + 6.56125I$
$u = 0.789359 - 0.814600I$ $a = -0.548122 - 0.298692I$ $b = -0.695934 + 0.027027I$	$-2.48977 + 2.87526I$	$1.95441 - 6.56125I$
$u = 0.010399 + 1.228700I$ $a = 0.309231 + 1.044540I$ $b = -1.55837 - 0.15277I$	$-3.01915 + 3.01131I$	$-4.00000 - 4.54272I$
$u = 0.010399 - 1.228700I$ $a = 0.309231 - 1.044540I$ $b = -1.55837 + 0.15277I$	$-3.01915 - 3.01131I$	$-4.00000 + 4.54272I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.118933+1.261090I$ $a=\ 0.73189-2.55289I$ $b=-0.641544+0.528214I$	$0.96913+6.34369I$	0
$u=-0.118933-1.261090I$ $a=\ 0.73189+2.55289I$ $b=-0.641544-0.528214I$	$0.96913-6.34369I$	0
$u=-0.086452+1.266230I$ $a=\ 0.000309-0.691748I$ $b=\ 1.43503+0.25509I$	$-4.35576+0.36726I$	0
$u=-0.086452-1.266230I$ $a=\ 0.000309+0.691748I$ $b=\ 1.43503-0.25509I$	$-4.35576-0.36726I$	0
$u=\ 0.703635+0.134692I$ $a=\ 0.783186-0.127218I$ $b=\ 0.849502-0.616494I$	$1.59940+2.45766I$	$-0.390517+0.523015I$
$u=\ 0.703635-0.134692I$ $a=\ 0.783186+0.127218I$ $b=\ 0.849502+0.616494I$	$1.59940-2.45766I$	$-0.390517-0.523015I$
$u=\ 0.320411+1.314720I$ $a=\ 0.18423-1.59625I$ $b=\ 1.065150+0.673724I$	$5.41099-6.24607I$	0
$u=\ 0.320411-1.314720I$ $a=\ 0.18423+1.59625I$ $b=\ 1.065150-0.673724I$	$5.41099+6.24607I$	0
$u=\ 0.131173+0.630994I$ $a=\ 1.18600+1.35748I$ $b=-1.397290+0.072984I$	$-5.34784-3.35504I$	$-6.43794+3.35733I$
$u=\ 0.131173-0.630994I$ $a=\ 1.18600-1.35748I$ $b=-1.397290-0.072984I$	$-5.34784+3.35504I$	$-6.43794-3.35733I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.101309 + 1.364240I$ $a = 0.12394 - 1.81977I$ $b = -0.326910 + 1.080040I$	$6.18251 - 2.31836I$	0
$u = 0.101309 - 1.364240I$ $a = 0.12394 + 1.81977I$ $b = -0.326910 - 1.080040I$	$6.18251 + 2.31836I$	0
$u = 0.165128 + 1.395830I$ $a = -0.457028 + 1.056400I$ $b = 0.501289 - 0.970385I$	$6.91204 - 0.54005I$	0
$u = 0.165128 - 1.395830I$ $a = -0.457028 - 1.056400I$ $b = 0.501289 + 0.970385I$	$6.91204 + 0.54005I$	0
$u = -0.190488 + 1.401030I$ $a = -1.13343 + 1.67701I$ $b = 0.944358 - 0.423476I$	$-2.28105 + 3.72505I$	0
$u = -0.190488 - 1.401030I$ $a = -1.13343 - 1.67701I$ $b = 0.944358 + 0.423476I$	$-2.28105 - 3.72505I$	0
$u = -0.185652 + 0.490467I$ $a = -2.34521 - 1.74414I$ $b = -0.615697 - 0.331521I$	$-1.81186 - 5.12468I$	$-10.99630 + 5.38188I$
$u = -0.185652 - 0.490467I$ $a = -2.34521 + 1.74414I$ $b = -0.615697 + 0.331521I$	$-1.81186 + 5.12468I$	$-10.99630 - 5.38188I$
$u = -0.458666 + 0.230830I$ $a = -0.42238 + 2.36574I$ $b = 1.159010 - 0.243734I$	$-7.53914 + 1.24505I$	$-7.52833 - 3.93066I$
$u = -0.458666 - 0.230830I$ $a = -0.42238 - 2.36574I$ $b = 1.159010 + 0.243734I$	$-7.53914 - 1.24505I$	$-7.52833 + 3.93066I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.27999 + 1.48577I$ $a = 0.533925 + 1.215120I$ $b = -1.306890 - 0.294184I$	$1.90461 - 6.77646I$	0
$u = 0.27999 - 1.48577I$ $a = 0.533925 - 1.215120I$ $b = -1.306890 + 0.294184I$	$1.90461 + 6.77646I$	0
$u = 0.15634 + 1.50594I$ $a = -0.089046 + 0.381398I$ $b = 0.361477 - 0.494318I$	$7.10055 - 0.57651I$	0
$u = 0.15634 - 1.50594I$ $a = -0.089046 - 0.381398I$ $b = 0.361477 + 0.494318I$	$7.10055 + 0.57651I$	0
$u = 0.08831 + 1.59990I$ $a = 0.164655 - 0.091726I$ $b = -0.456278 - 0.095256I$	$6.25093 - 5.33963I$	0
$u = 0.08831 - 1.59990I$ $a = 0.164655 + 0.091726I$ $b = -0.456278 + 0.095256I$	$6.25093 + 5.33963I$	0
$u = 0.242340 + 0.071540I$ $a = 2.04834 + 2.05279I$ $b = -0.045740 - 0.914708I$	$1.74940 + 1.07831I$	$0.42240 + 1.41945I$
$u = 0.242340 - 0.071540I$ $a = 2.04834 - 2.05279I$ $b = -0.045740 + 0.914708I$	$1.74940 - 1.07831I$	$0.42240 - 1.41945I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{38}-6u^{37}+\cdots+13u^2+1)(u^{131}-3u^{130}+\cdots-5u+1)$
c_2	$(u^{38}-13u^{36}+\cdots-3u+1)(u^{131}-u^{130}+\cdots+124858u+34547)$
c_3	$(u^{38}+19u^{36}+\cdots+u+1)(u^{131}+u^{130}+\cdots-3046848u+2207401)$
c_4	$(u^{38}+6u^{37}+\cdots+13u^2+1)(u^{131}-3u^{130}+\cdots-5u+1)$
c_5	$(u^{38}-2u^{37}+\cdots+12u^2+1)(u^{131}-3u^{130}+\cdots-20576u+928)$
c_6	$(u^{38}-13u^{36}+\cdots+3u+1)(u^{131}-u^{130}+\cdots+124858u+34547)$
c_7, c_8	$(u^{38}-4u^{37}+\cdots-8u+1)(u^{131}-3u^{130}+\cdots+6557u-1003)$
c_9	$(u^{38}+2u^{37}+\cdots+12u^2+1)(u^{131}-3u^{130}+\cdots-20576u+928)$
c_{10}	$(u^{38}+19u^{36}+\cdots-u+1)(u^{131}+u^{130}+\cdots-3046848u+2207401)$
c_{11}	$(u^{38}+4u^{37}+\cdots+8u+1)(u^{131}-3u^{130}+\cdots+6557u-1003)$
c_{12}	$(u^{38}+4u^{35}+\cdots-2u+1)(u^{131}+u^{130}+\cdots-102925u+30725)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{38}+20y^{37}+\cdots+26y+1)(y^{131}+63y^{130}+\cdots-95y-1)$
c_2, c_6	$(y^{38}-26y^{37}+\cdots-23y+1)$ $\cdot(y^{131}-79y^{130}+\cdots+24976423722y-1193495209)$
c_3, c_{10}	$(y^{38}+38y^{37}+\cdots+29y+1)$ $\cdot(y^{131}+97y^{130}+\cdots-107213854635398y-4872619174801)$
c_5, c_9	$(y^{38}+26y^{37}+\cdots+24y+1)$ $\cdot(y^{131}+81y^{130}+\cdots+109900800y-861184)$
c_7, c_8, c_{11}	$(y^{38}+40y^{37}+\cdots-12y+1)$ $\cdot(y^{131}+123y^{130}+\cdots+26057591y-1006009)$
c_{12}	$(y^{38}+48y^{35}+\cdots+104y+1)$ $\cdot(y^{131}-y^{130}+\cdots-182071674025y-944025625)$