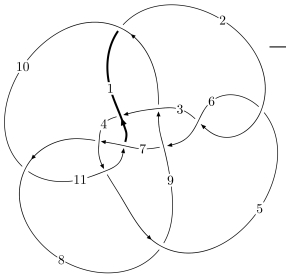
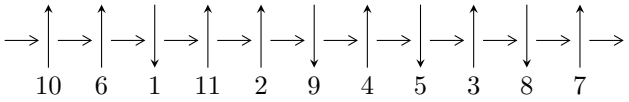
$11a_{301}$ $(K11a_{301})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.16899 \times 10^{426} u^{123} + 3.22194 \times 10^{424} u^{122} + \cdots + 2.77126 \times 10^{424} b - 1.62179 \times 10^{428},$$
$$- 3.58082 \times 10^{428} u^{123} + 4.35420 \times 10^{427} u^{122} + \cdots + 3.85206 \times 10^{426} a - 5.63094 \times 10^{430},$$
$$u^{124} - u^{123} + \cdots + 72u - 139 \rangle$$

$$I_2^u = \langle -9566660926250 u^{24} - 22937945374331 u^{23} + \cdots + 19862837987731 b - 37700474512606,$$
$$18263853921862 u^{24} - 37210165575977 u^{23} + \cdots + 19862837987731 a - 129534774263607,$$
$$u^{25} - 7u^{23} + \cdots - 2u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 149 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. $\boldsymbol{I_1^u = \langle -1.17 \times 10^{426} u^{123} + 3.22 \times 10^{424} u^{122} + \cdots + 2.77 \times 10^{424} b - 1.62 \times 10^{428},\ -3.58 \times 10^{428} u^{123} + 4.35 \times 10^{427} u^{122} + \cdots + 3.85 \times 10^{426} a - 5.63 \times 10^{430},\ u^{124} - u^{123} + \cdots + 72u - 139 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 92.9586u^{123} - 11.3036u^{122} + \cdots + 8759.18u + 14618.0 \\ 42.1826u^{123} - 1.16263u^{122} + \cdots + 2521.74u + 5852.16 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -5.00646u^{123} + 4.79793u^{122} + \cdots - 2365.30u - 1732.01 \\ -31.9252u^{123} + 10.1950u^{122} + \cdots - 5531.06u - 6308.34 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -124.235u^{123} + 22.8343u^{122} + \cdots - 15054.5u - 21208.6 \\ -85.2237u^{123} + 10.8039u^{122} + \cdots - 8254.49u - 13491.4 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} 50.7760u^{123} - 10.1409u^{122} + \cdots + 6237.44u + 8765.86 \\ 42.1826u^{123} - 1.16263u^{122} + \cdots + 2521.74u + 5852.16 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 34.5243u^{123} - 6.25865u^{122} + \cdots + 3698.51u + 5768.67 \\ 11.4223u^{123} - 0.700100u^{122} + \cdots + 943.261u + 1677.60 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 102.195u^{123} - 14.9472u^{122} + \cdots + 10619.6u + 16588.2 \\ 32.7163u^{123} - 0.757045u^{122} + \cdots + 1930.76u + 4508.98 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -19.4270u^{123} + 10.0533u^{122} + \cdots - 5043.28u - 4731.63 \\ -16.2148u^{123} + 7.73509u^{122} + \cdots - 3918.69u - 3758.08 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -19.4270u^{123} + 10.0533u^{122} + \cdots - 5043.28u - 4731.63 \\ -16.2148u^{123} + 7.73509u^{122} + \cdots - 3918.69u - 3758.08 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -3231.64u^{123} + 356.760u^{122} + \cdots - 305355.u - 504514.$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{124} - 4u^{123} + \cdots - 479u + 107$
c_2, c_5	$u^{124} - u^{123} + \cdots + 72u - 139$
c_3	$u^{124} - 9u^{123} + \cdots + 97u - 1$
c_4	$u^{124} - u^{123} + \cdots + 154u + 19$
c_6	$u^{124} + 3u^{123} + \cdots - 5094u + 1919$
c_7	$u^{124} - 3u^{123} + \cdots + 19u - 1$
c_8	$u^{124} - u^{123} + \cdots + 104u + 13$
c_9	$u^{124} - 13u^{122} + \cdots - 27900u - 5737$
c_{10}	$u^{124} + 3u^{123} + \cdots - 26u - 5$
c_{11}	$u^{124} + u^{123} + \cdots - 23u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{124} - 32y^{123} + \cdots - 782845y + 11449$
c_2, c_5	$y^{124} - 75y^{123} + \cdots - 605108y + 19321$
c_3	$y^{124} + 27y^{123} + \cdots - 8505y + 1$
c_4	$y^{124} + 3y^{123} + \cdots + 15842y + 361$
c_6	$y^{124} + 11y^{123} + \cdots + 56088414y + 3682561$
c_7	$y^{124} - 17y^{123} + \cdots - 287y + 1$
c_8	$y^{124} - 23y^{123} + \cdots + 29224y + 169$
c_9	$y^{124} - 26y^{123} + \cdots + 93166514y + 32913169$
c_{10}	$y^{124} - 5y^{123} + \cdots - 7526y + 25$
c_{11}	$y^{124} - 7y^{123} + \cdots - 113y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.974071 + 0.190755I$ $a = -0.550421 - 0.599368I$ $b = 0.18852 - 1.65134I$	$-0.577215 + 1.239640I$	0
$u = 0.974071 - 0.190755I$ $a = -0.550421 + 0.599368I$ $b = 0.18852 + 1.65134I$	$-0.577215 - 1.239640I$	0
$u = -0.902521 + 0.400409I$ $a = -0.609673 - 1.244710I$ $b = -1.054330 + 0.045528I$	$3.54338 + 2.85043I$	0
$u = -0.902521 - 0.400409I$ $a = -0.609673 + 1.244710I$ $b = -1.054330 - 0.045528I$	$3.54338 - 2.85043I$	0
$u = 0.415249 + 0.881418I$ $a = 0.306635 + 0.205268I$ $b = -0.737227 - 0.595686I$	$1.58492 + 6.17096I$	0
$u = 0.415249 - 0.881418I$ $a = 0.306635 - 0.205268I$ $b = -0.737227 + 0.595686I$	$1.58492 - 6.17096I$	0
$u = -1.026590 + 0.019415I$ $a = 1.30114 - 1.03924I$ $b = 0.811133 + 0.640015I$	$4.16687 + 3.71959I$	0
$u = -1.026590 - 0.019415I$ $a = 1.30114 + 1.03924I$ $b = 0.811133 - 0.640015I$	$4.16687 - 3.71959I$	0
$u = -0.967014 + 0.360220I$ $a = -1.129450 + 0.668006I$ $b = -0.017238 - 0.228701I$	$-0.31910 - 5.18786I$	0
$u = -0.967014 - 0.360220I$ $a = -1.129450 - 0.668006I$ $b = -0.017238 + 0.228701I$	$-0.31910 + 5.18786I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.018330 + 0.170276I$ $a = -2.51955 - 0.33224I$ $b = -1.51339 - 0.05960I$	$1.91161 + 3.30620I$	0
$u = 1.018330 - 0.170276I$ $a = -2.51955 + 0.33224I$ $b = -1.51339 + 0.05960I$	$1.91161 - 3.30620I$	0
$u = -0.981740 + 0.336373I$ $a = 0.141564 + 0.271103I$ $b = 0.172395 - 0.978948I$	$0.03669 - 4.64999I$	0
$u = -0.981740 - 0.336373I$ $a = 0.141564 - 0.271103I$ $b = 0.172395 + 0.978948I$	$0.03669 + 4.64999I$	0
$u = -1.003740 + 0.303527I$ $a = 0.137773 + 1.402230I$ $b = 0.58661 + 1.97658I$	$0.79053 - 10.52770I$	0
$u = -1.003740 - 0.303527I$ $a = 0.137773 - 1.402230I$ $b = 0.58661 - 1.97658I$	$0.79053 + 10.52770I$	0
$u = 0.279917 + 0.908578I$ $a = -0.083523 + 0.475369I$ $b = 0.643948 + 0.220659I$	$0.412874 + 0.819655I$	0
$u = 0.279917 - 0.908578I$ $a = -0.083523 - 0.475369I$ $b = 0.643948 - 0.220659I$	$0.412874 - 0.819655I$	0
$u = 0.922490 + 0.200559I$ $a = 3.33471 + 0.42892I$ $b = 0.366441 + 0.434684I$	$0.58612 + 9.17333I$	0
$u = 0.922490 - 0.200559I$ $a = 3.33471 - 0.42892I$ $b = 0.366441 - 0.434684I$	$0.58612 - 9.17333I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.378914 + 0.858907I$ $a = -0.115862 - 0.434906I$ $b = 1.108480 - 0.790196I$	$-0.68132 - 4.84270I$	0
$u = 0.378914 - 0.858907I$ $a = -0.115862 + 0.434906I$ $b = 1.108480 + 0.790196I$	$-0.68132 + 4.84270I$	0
$u = -0.130351 + 1.065560I$ $a = 0.1316640 - 0.0246824I$ $b = -0.928596 - 0.693787I$	$-1.66000 + 5.39588I$	0
$u = -0.130351 - 1.065560I$ $a = 0.1316640 + 0.0246824I$ $b = -0.928596 + 0.693787I$	$-1.66000 - 5.39588I$	0
$u = -0.164338 + 0.905321I$ $a = -0.137158 + 0.359740I$ $b = -0.502584 - 0.731753I$	$-3.01569 + 1.80444I$	0
$u = -0.164338 - 0.905321I$ $a = -0.137158 - 0.359740I$ $b = -0.502584 + 0.731753I$	$-3.01569 - 1.80444I$	0
$u = -0.620175 + 0.676778I$ $a = 0.824982 + 0.856254I$ $b = 0.926159 + 0.574802I$	$-1.33088 + 2.75508I$	0
$u = -0.620175 - 0.676778I$ $a = 0.824982 - 0.856254I$ $b = 0.926159 - 0.574802I$	$-1.33088 - 2.75508I$	0
$u = 0.910883 + 0.103249I$ $a = -0.51429 + 2.60594I$ $b = -0.48468 + 2.94007I$	$1.26801 + 2.24082I$	0
$u = 0.910883 - 0.103249I$ $a = -0.51429 - 2.60594I$ $b = -0.48468 - 2.94007I$	$1.26801 - 2.24082I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.082870+0.066267I$ $a=-1.65298+1.04405I$ $b=-0.805102+0.004521I$	$4.35169-3.41606I$	0
$u=-1.082870-0.066267I$ $a=-1.65298-1.04405I$ $b=-0.805102-0.004521I$	$4.35169+3.41606I$	0
$u=1.053560+0.259839I$ $a=0.898561-0.879190I$ $b=1.15540-1.00135I$	$1.29889+0.96212I$	0
$u=1.053560-0.259839I$ $a=0.898561+0.879190I$ $b=1.15540+1.00135I$	$1.29889-0.96212I$	0
$u=0.887361$ $a=-4.65221$ $b=-3.43727$	-0.348139	0
$u=-0.056287+1.124510I$ $a=0.196703+0.216907I$ $b=0.823769+0.715592I$	$0.63793+5.24548I$	0
$u=-0.056287-1.124510I$ $a=0.196703-0.216907I$ $b=0.823769-0.715592I$	$0.63793-5.24548I$	0
$u=-0.473726+0.726376I$ $a=0.938944-0.217302I$ $b=-0.275723-0.695996I$	$-1.87990+0.88255I$	0
$u=-0.473726-0.726376I$ $a=0.938944+0.217302I$ $b=-0.275723+0.695996I$	$-1.87990-0.88255I$	0
$u=0.135528+1.139780I$ $a=-0.085154+0.123003I$ $b=-0.995014+0.762423I$	$-0.38053-13.73560I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.135528 - 1.139780I$ $a = -0.085154 - 0.123003I$ $b = -0.995014 - 0.762423I$	$-0.38053 + 13.73560I$	0
$u = -0.666621 + 0.487837I$ $a = -1.86929 - 0.95932I$ $b = -1.325170 + 0.034639I$	$-1.16295 - 7.26280I$	0
$u = -0.666621 - 0.487837I$ $a = -1.86929 + 0.95932I$ $b = -1.325170 - 0.034639I$	$-1.16295 + 7.26280I$	0
$u = -0.754686 + 0.314010I$ $a = 2.00776 + 0.12441I$ $b = 0.315807 - 0.807809I$	$-2.56211 - 1.56337I$	0
$u = -0.754686 - 0.314010I$ $a = 2.00776 - 0.12441I$ $b = 0.315807 + 0.807809I$	$-2.56211 + 1.56337I$	0
$u = 0.286796 + 1.148040I$ $a = 0.228907 - 0.211489I$ $b = 0.989083 - 0.438122I$	$1.05806 - 3.93290I$	0
$u = 0.286796 - 1.148040I$ $a = 0.228907 + 0.211489I$ $b = 0.989083 + 0.438122I$	$1.05806 + 3.93290I$	0
$u = -0.728555 + 0.361797I$ $a = 1.304420 - 0.161462I$ $b = 0.104359 - 1.261440I$	$-2.62639 - 1.64108I$	0
$u = -0.728555 - 0.361797I$ $a = 1.304420 + 0.161462I$ $b = 0.104359 + 1.261440I$	$-2.62639 + 1.64108I$	0
$u = -0.723255 + 0.345420I$ $a = 1.266870 + 0.189137I$ $b = 0.080366 - 1.149700I$	$-2.63047 - 1.63595I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.723255-0.345420I$ $a=\ 1.266870-0.189137I$ $b=\ 0.080366+1.149700I$	$-2.63047+1.63595I$	0
$u=\ 0.787800+0.133246I$ $a=-2.62792-0.88042I$ $b=-0.516699-0.958806I$	$-1.281750+0.477205I$	0
$u=\ 0.787800-0.133246I$ $a=-2.62792+0.88042I$ $b=-0.516699+0.958806I$	$-1.281750-0.477205I$	0
$u=\ 0.778187+0.053999I$ $a=\ 1.61480-0.37114I$ $b=\ 1.37632-1.01669I$	$0.90588-1.95079I$	0
$u=\ 0.778187-0.053999I$ $a=\ 1.61480+0.37114I$ $b=\ 1.37632+1.01669I$	$0.90588+1.95079I$	0
$u=\ 0.718578+0.271560I$ $a=\ 0.382999-1.234620I$ $b=-0.353143+0.997828I$	$0.14344-6.85085I$	0
$u=\ 0.718578-0.271560I$ $a=\ 0.382999+1.234620I$ $b=-0.353143-0.997828I$	$0.14344+6.85085I$	0
$u=-1.140130+0.497947I$ $a=\ 1.076980+0.259507I$ $b=\ 0.836530-0.927323I$	$0.30443-5.54665I$	0
$u=-1.140130-0.497947I$ $a=\ 1.076980-0.259507I$ $b=\ 0.836530+0.927323I$	$0.30443+5.54665I$	0
$u=\ 1.237590+0.200677I$ $a=\ 1.58426-1.36687I$ $b=\ 0.612212+0.277647I$	$3.80630+8.79406I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.237590 - 0.200677I$ $a = 1.58426 + 1.36687I$ $b = 0.612212 - 0.277647I$	$3.80630 - 8.79406I$	0
$u = 0.306946 + 1.234070I$ $a = -0.152024 + 0.100168I$ $b = -0.300540 + 0.478215I$	$-4.24023 + 4.13181I$	0
$u = 0.306946 - 1.234070I$ $a = -0.152024 - 0.100168I$ $b = -0.300540 - 0.478215I$	$-4.24023 - 4.13181I$	0
$u = 1.227070 + 0.361377I$ $a = 1.77999 - 0.19483I$ $b = 1.53283 + 0.92594I$	$7.16425 + 1.23899I$	0
$u = 1.227070 - 0.361377I$ $a = 1.77999 + 0.19483I$ $b = 1.53283 - 0.92594I$	$7.16425 - 1.23899I$	0
$u = -1.230140 + 0.372722I$ $a = -1.85670 - 0.21833I$ $b = -1.13837 + 0.91038I$	$5.49496 - 6.43122I$	0
$u = -1.230140 - 0.372722I$ $a = -1.85670 + 0.21833I$ $b = -1.13837 - 0.91038I$	$5.49496 + 6.43122I$	0
$u = 0.209325 + 0.665517I$ $a = 0.427567 - 0.436139I$ $b = 0.873908 + 0.720217I$	$1.42391 + 2.71255I$	0
$u = 0.209325 - 0.665517I$ $a = 0.427567 + 0.436139I$ $b = 0.873908 - 0.720217I$	$1.42391 - 2.71255I$	0
$u = 1.175830 + 0.567049I$ $a = -1.77982 + 0.42085I$ $b = -1.50816 - 0.91766I$	$1.83731 + 10.15770I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.175830 - 0.567049I$ $a = -1.77982 - 0.42085I$ $b = -1.50816 + 0.91766I$	$1.83731 - 10.15770I$	0
$u = -1.161980 + 0.628531I$ $a = 0.812408 + 0.785645I$ $b = 1.275580 - 0.191268I$	$5.32803 - 7.42169I$	0
$u = -1.161980 - 0.628531I$ $a = 0.812408 - 0.785645I$ $b = 1.275580 + 0.191268I$	$5.32803 + 7.42169I$	0
$u = -0.202862 + 0.644395I$ $a = 0.556626 - 0.439222I$ $b = -0.971016 + 0.386930I$	$3.09709 + 2.40486I$	0
$u = -0.202862 - 0.644395I$ $a = 0.556626 + 0.439222I$ $b = -0.971016 - 0.386930I$	$3.09709 - 2.40486I$	0
$u = -1.282750 + 0.332541I$ $a = -1.65423 + 0.05968I$ $b = -1.282310 + 0.497854I$	$5.41452 - 4.79102I$	0
$u = -1.282750 - 0.332541I$ $a = -1.65423 - 0.05968I$ $b = -1.282310 - 0.497854I$	$5.41452 + 4.79102I$	0
$u = -1.298610 + 0.346791I$ $a = 1.69914 - 0.20196I$ $b = 1.52916 - 1.06885I$	$6.66391 - 10.08310I$	0
$u = -1.298610 - 0.346791I$ $a = 1.69914 + 0.20196I$ $b = 1.52916 + 1.06885I$	$6.66391 + 10.08310I$	0
$u = 0.604325 + 0.233411I$ $a = 1.84343 + 0.30852I$ $b = 0.967821 + 0.447808I$	$1.125910 - 0.058649I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.604325 - 0.233411I$ $a = 1.84343 - 0.30852I$ $b = 0.967821 - 0.447808I$	$1.125910 + 0.058649I$	0
$u = 1.185910 + 0.649910I$ $a = -0.580653 + 0.717763I$ $b = -0.801512 + 0.145810I$	$3.67966 + 2.39413I$	0
$u = 1.185910 - 0.649910I$ $a = -0.580653 - 0.717763I$ $b = -0.801512 - 0.145810I$	$3.67966 - 2.39413I$	0
$u = -1.274830 + 0.478814I$ $a = 1.50288 + 0.28827I$ $b = 0.816944 - 0.720888I$	$0.50756 - 6.82066I$	0
$u = -1.274830 - 0.478814I$ $a = 1.50288 - 0.28827I$ $b = 0.816944 + 0.720888I$	$0.50756 + 6.82066I$	0
$u = 1.361950 + 0.132338I$ $a = -0.695642 - 0.556534I$ $b = -0.511936 - 1.025280I$	$3.21210 + 0.97964I$	0
$u = 1.361950 - 0.132338I$ $a = -0.695642 + 0.556534I$ $b = -0.511936 + 1.025280I$	$3.21210 - 0.97964I$	0
$u = -1.362380 + 0.228703I$ $a = -1.299050 - 0.539427I$ $b = -0.941017 + 0.180195I$	$7.28528 - 0.60219I$	0
$u = -1.362380 - 0.228703I$ $a = -1.299050 + 0.539427I$ $b = -0.941017 - 0.180195I$	$7.28528 + 0.60219I$	0
$u = 1.247090 + 0.604854I$ $a = 1.270370 - 0.100290I$ $b = 0.921060 + 0.661147I$	$-1.12331 + 2.07608I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.247090 - 0.604854I$ $a = 1.270370 + 0.100290I$ $b = 0.921060 - 0.661147I$	$-1.12331 - 2.07608I$	0
$u = -0.130974 + 1.391330I$ $a = -0.0691127 + 0.1187760I$ $b = 0.303924 + 0.360032I$	$-4.06171 + 4.34396I$	0
$u = -0.130974 - 1.391330I$ $a = -0.0691127 - 0.1187760I$ $b = 0.303924 - 0.360032I$	$-4.06171 - 4.34396I$	0
$u = -1.29947 + 0.56604I$ $a = 1.52653 + 0.24016I$ $b = 1.31484 - 1.03648I$	$1.99861 - 11.17670I$	0
$u = -1.29947 - 0.56604I$ $a = 1.52653 - 0.24016I$ $b = 1.31484 + 1.03648I$	$1.99861 + 11.17670I$	0
$u = 1.38103 + 0.32486I$ $a = 0.899456 - 0.301151I$ $b = 1.106960 + 0.221913I$	$3.58744 - 0.34494I$	0
$u = 1.38103 - 0.32486I$ $a = 0.899456 + 0.301151I$ $b = 1.106960 - 0.221913I$	$3.58744 + 0.34494I$	0
$u = 0.580493$ $a = 1.40164$ $b = 0.803283$	1.11567	9.71800
$u = 1.27280 + 0.66609I$ $a = -0.605546 + 0.480238I$ $b = -0.664241 - 0.474436I$	$3.09909 + 5.04243I$	0
$u = 1.27280 - 0.66609I$ $a = -0.605546 - 0.480238I$ $b = -0.664241 + 0.474436I$	$3.09909 - 5.04243I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.33096+0.55807I$ $a=-1.64134-0.10295I$ $b=-1.32194+0.87901I$	$4.62342-11.12340I$	0
$u=-1.33096-0.55807I$ $a=-1.64134+0.10295I$ $b=-1.32194-0.87901I$	$4.62342+11.12340I$	0
$u=-0.353484+0.426613I$ $a=\ \ 1.45741-0.05629I$ $b=-0.103953+0.615400I$	$-1.90205+1.81393I$	0
$u=-0.353484-0.426613I$ $a=\ \ 1.45741+0.05629I$ $b=-0.103953-0.615400I$	$-1.90205-1.81393I$	0
$u=\ \ 1.32500+0.59302I$ $a=\ \ 1.63291-0.22353I$ $b=\ \ 1.36335+0.98073I$	$3.3644+19.8329I$	0
$u=\ \ 1.32500-0.59302I$ $a=\ \ 1.63291+0.22353I$ $b=\ \ 1.36335-0.98073I$	$3.3644-19.8329I$	0
$u=\ \ 1.30440+0.63891I$ $a=-1.45468+0.41014I$ $b=-1.33399-0.63559I$	$4.33583+10.29570I$	0
$u=\ \ 1.30440-0.63891I$ $a=-1.45468-0.41014I$ $b=-1.33399+0.63559I$	$4.33583-10.29570I$	0
$u=\ \ 1.44240+0.31637I$ $a=-0.809487+0.607107I$ $b=-0.642803-0.062231I$	$6.05427+0.44106I$	0
$u=\ \ 1.44240-0.31637I$ $a=-0.809487-0.607107I$ $b=-0.642803+0.062231I$	$6.05427-0.44106I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.47872$ $a=-1.68740$ $b=-0.848700$	7.51916	0
$u=-1.35588+0.60851I$ $a=-1.068080+0.072365I$ $b=-0.908541+0.909807I$	$-0.03985-10.93610I$	0
$u=-1.35588-0.60851I$ $a=-1.068080-0.072365I$ $b=-0.908541-0.909807I$	$-0.03985+10.93610I$	0
$u=-0.406025+0.276507I$ $a=-3.44365+0.11048I$ $b=-0.957307+0.818654I$	$-0.84000+7.70761I$	$0.-3.67559I$
$u=-0.406025-0.276507I$ $a=-3.44365-0.11048I$ $b=-0.957307-0.818654I$	$-0.84000-7.70761I$	$0.+3.67559I$
$u=-0.222879+0.437713I$ $a=1.55971+1.03665I$ $b=-0.361004-0.071038I$	$-1.81230+1.33593I$	$-2.04288-1.77817I$
$u=-0.222879-0.437713I$ $a=1.55971-1.03665I$ $b=-0.361004+0.071038I$	$-1.81230-1.33593I$	$-2.04288+1.77817I$
$u=1.38822+0.62525I$ $a=0.485638-0.270242I$ $b=0.801730+0.353444I$	$4.35720+0.37879I$	0
$u=1.38822-0.62525I$ $a=0.485638+0.270242I$ $b=0.801730-0.353444I$	$4.35720-0.37879I$	0
$u=-1.51152+0.32263I$ $a=0.773892+0.510468I$ $b=0.905113+0.082409I$	$5.24614+8.13622I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.51152-0.32263I$ $a=\ \ 0.773892-0.510468I$ $b=\ \ 0.905113-0.082409I$	$5.24614-8.13622I$	0
$u=\ \ 1.63558$ $a=-1.22916$ $b=-0.672269$	6.58901	0
$u=\ \ 0.204781+0.248646I$ $a=\ \ 1.43302+0.84174I$ $b=\ \ 0.524269+0.994387I$	$0.63025+2.44930I$	$0.344766-0.605560I$
$u=\ \ 0.204781-0.248646I$ $a=\ \ 1.43302-0.84174I$ $b=\ \ 0.524269-0.994387I$	$0.63025-2.44930I$	$0.344766+0.605560I$

II.

$\boldsymbol{I_2^u = \langle -9.57\times10^{12}u^{24}-2.29\times10^{13}u^{23}+\cdots+1.99\times10^{13}b-3.77\times10^{13},\ 1.83\times10^{13}u^{24}-3.72\times10^{13}u^{23}+\cdots+1.99\times10^{13}a-1.30\times10^{14},\ u^{25}-7u^{23}+\cdots-2u-1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_2 = \begin{pmatrix}1\\u^2\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-0.919499u^{24}+1.87336u^{23}+\cdots+9.01043u+6.52146\\0.481636u^{24}+1.15482u^{23}+\cdots+1.50120u+1.89804\end{pmatrix}$$

$$a_1 = \begin{pmatrix}1.63797u^{24}+1.05045u^{23}+\cdots+3.06790u+4.17197\\-1.08477u^{24}-0.826635u^{23}+\cdots-6.38423u-1.55079\end{pmatrix}$$

$$a_4 = \begin{pmatrix}2.08841u^{24}+2.46628u^{23}+\cdots+14.4424u+5.35519\\-0.490490u^{24}+1.75251u^{23}+\cdots+7.12683u+3.09157\end{pmatrix}$$

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

$$a_9 = \begin{pmatrix}-1.40113u^{24}+0.718539u^{23}+\cdots+7.50924u+4.62342\\0.481636u^{24}+1.15482u^{23}+\cdots+1.50120u+1.89804\end{pmatrix}$$

$$a_7 = \begin{pmatrix}0.291964u^{24}+2.53805u^{23}+\cdots+9.23640u+6.15545\\-2.95424u^{24}-0.433937u^{23}+\cdots-7.62230u-0.618631\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-1.71564u^{24}+2.19576u^{23}+\cdots+10.8410u+6.44072\\-0.0985707u^{24}+0.842274u^{23}+\cdots+0.809417u+1.55797\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-5.54043u^{24}-3.33819u^{23}+\cdots-17.8534u-5.96692\\-0.0415282u^{24}+0.855191u^{23}+\cdots+3.73724u+2.18862\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-5.54043u^{24}-3.33819u^{23}+\cdots-17.8534u-5.96692\\-0.0415282u^{24}+0.855191u^{23}+\cdots+3.73724u+2.18862\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= \frac{2527171677251330}{19862837987731}u^{24}-\frac{1931170181748924}{19862837987731}u^{23}+\cdots-\frac{1872128133180695}{19862837987731}u-\frac{2807884245071952}{19862837987731}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{25} - 7u^{24} + \cdots - u + 1$
c_2	$u^{25} - 7u^{23} + \cdots - 2u - 1$
c_3	$u^{25} + 4u^{24} + \cdots + u + 1$
c_4	$u^{25} + 2u^{24} + \cdots - 4u + 1$
c_5	$u^{25} - 7u^{23} + \cdots - 2u + 1$
c_6	$u^{25} - 6u^{24} + \cdots - 4u + 1$
c_7	$u^{25} + 2u^{24} + \cdots - 5u + 1$
c_8	$u^{25} + 2u^{24} + \cdots - 16u - 1$
c_9	$u^{25} + 3u^{24} + \cdots - 6u + 1$
c_{10}	$u^{25} + 10u^{24} + \cdots + 4u - 1$
c_{11}	$u^{25} + 2u^{24} + \cdots - 17u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{25} - 23y^{24} + \cdots + 23y - 1$
c_2, c_5	$y^{25} - 14y^{24} + \cdots + 2y - 1$
c_3	$y^{25} - 4y^{24} + \cdots + 99y - 1$
c_4	$y^{25} - 8y^{24} + \cdots + 30y^2 - 1$
c_6	$y^{25} - 12y^{24} + \cdots - 28y - 1$
c_7	$y^{25} - 4y^{24} + \cdots + 9y - 1$
c_8	$y^{25} - 2y^{24} + \cdots + 114y - 1$
c_9	$y^{25} + 3y^{24} + \cdots + 32y - 1$
c_{10}	$y^{25} - 12y^{24} + \cdots + 28y - 1$
c_{11}	$y^{25} - 10y^{24} + \cdots + 111y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.250280 + 0.975610I$ $a = 0.034088 - 0.322185I$ $b = 0.953676 - 0.664284I$	$-0.03348 - 4.41999I$	$3.63153 + 5.52366I$
$u = 0.250280 - 0.975610I$ $a = 0.034088 + 0.322185I$ $b = 0.953676 + 0.664284I$	$-0.03348 + 4.41999I$	$3.63153 - 5.52366I$
$u = -0.873467 + 0.111550I$ $a = -0.15281 - 2.23455I$ $b = -0.11201 - 2.52927I$	$1.22395 - 2.21489I$	$-22.7692 - 42.0523I$
$u = -0.873467 - 0.111550I$ $a = -0.15281 + 2.23455I$ $b = -0.11201 + 2.52927I$	$1.22395 + 2.21489I$	$-22.7692 + 42.0523I$
$u = -0.876104$ $a = 4.38408$ $b = 3.16510$	-0.364419	-189.580
$u = 0.808927 + 0.298395I$ $a = -2.03184 - 0.02543I$ $b = -0.183119 - 1.339210I$	$-1.90155 + 1.42245I$	$2.96243 - 4.09194I$
$u = 0.808927 - 0.298395I$ $a = -2.03184 + 0.02543I$ $b = -0.183119 + 1.339210I$	$-1.90155 - 1.42245I$	$2.96243 + 4.09194I$
$u = -1.013840 + 0.591892I$ $a = 0.436651 + 0.888392I$ $b = 0.693003 - 0.449935I$	$2.51471 - 5.48521I$	$6.21875 + 9.80992I$
$u = -1.013840 - 0.591892I$ $a = 0.436651 - 0.888392I$ $b = 0.693003 + 0.449935I$	$2.51471 + 5.48521I$	$6.21875 - 9.80992I$
$u = 0.787623 + 0.086296I$ $a = 2.63005 - 0.47173I$ $b = 0.314112 - 0.808920I$	$0.45122 + 8.35463I$	$4.47613 - 5.35998I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.787623 - 0.086296I$ $a = 2.63005 + 0.47173I$ $b = 0.314112 + 0.808920I$	$0.45122 - 8.35463I$	$4.47613 + 5.35998I$
$u = 1.260840 + 0.179149I$ $a = 1.321060 - 0.088095I$ $b = 0.370446 + 0.711874I$	$2.80785 + 8.52963I$	$4.73872 - 7.98573I$
$u = 1.260840 - 0.179149I$ $a = 1.321060 + 0.088095I$ $b = 0.370446 - 0.711874I$	$2.80785 - 8.52963I$	$4.73872 + 7.98573I$
$u = 1.264940 + 0.584485I$ $a = -1.54790 + 0.29909I$ $b = -1.38823 - 0.82215I$	$3.14760 + 10.12390I$	$5.21619 - 8.21271I$
$u = 1.264940 - 0.584485I$ $a = -1.54790 - 0.29909I$ $b = -1.38823 + 0.82215I$	$3.14760 - 10.12390I$	$5.21619 + 8.21271I$
$u = -0.09052 + 1.43658I$ $a = -0.005297 - 0.194948I$ $b = -0.244346 - 0.043928I$	$-3.88143 - 4.15868I$	$18.7400 - 3.0875I$
$u = -0.09052 - 1.43658I$ $a = -0.005297 + 0.194948I$ $b = -0.244346 + 0.043928I$	$-3.88143 + 4.15868I$	$18.7400 + 3.0875I$
$u = -1.42273 + 0.43828I$ $a = -0.577689 - 0.230097I$ $b = -0.767690 + 0.407747I$	$4.38188 - 0.00909I$	$13.9093 - 7.6065I$
$u = -1.42273 - 0.43828I$ $a = -0.577689 + 0.230097I$ $b = -0.767690 - 0.407747I$	$4.38188 + 0.00909I$	$13.9093 + 7.6065I$
$u = -0.184677 + 0.468629I$ $a = 0.92429 + 1.56196I$ $b = 0.825373 + 0.464229I$	$-0.00198 + 1.97890I$	$3.19371 - 3.54742I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.184677-0.468629I$ $a=\ \ 0.92429-1.56196I$ $b=\ \ 0.825373-0.464229I$	$-0.00198-1.97890I$	$3.19371+3.54742I$
$u=-0.287378+0.397064I$ $a=\ \ 2.16717+0.40917I$ $b=\ \ 0.197887-0.987490I$	$-2.28761-0.16331I$	$-3.97387+2.11947I$
$u=-0.287378-0.397064I$ $a=\ \ 2.16717-0.40917I$ $b=\ \ 0.197887+0.987490I$	$-2.28761+0.16331I$	$-3.97387-2.11947I$
$u=\ \ 1.53907$ $a=-1.66641$ $b=-0.795782$	7.10071	7.64140
$u=-1.66296$ $a=-1.11321$ $b=-0.687534$	6.74035	34.2530

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{25}-7u^{24}+\cdots-u+1)(u^{124}-4u^{123}+\cdots-479u+107)$
c_2	$(u^{25}-7u^{23}+\cdots-2u-1)(u^{124}-u^{123}+\cdots+72u-139)$
c_3	$(u^{25}+4u^{24}+\cdots+u+1)(u^{124}-9u^{123}+\cdots+97u-1)$
c_4	$(u^{25}+2u^{24}+\cdots-4u+1)(u^{124}-u^{123}+\cdots+154u+19)$
c_5	$(u^{25}-7u^{23}+\cdots-2u+1)(u^{124}-u^{123}+\cdots+72u-139)$
c_6	$(u^{25}-6u^{24}+\cdots-4u+1)(u^{124}+3u^{123}+\cdots-5094u+1919)$
c_7	$(u^{25}+2u^{24}+\cdots-5u+1)(u^{124}-3u^{123}+\cdots+19u-1)$
c_8	$(u^{25}+2u^{24}+\cdots-16u-1)(u^{124}-u^{123}+\cdots+104u+13)$
c_9	$(u^{25}+3u^{24}+\cdots-6u+1)(u^{124}-13u^{122}+\cdots-27900u-5737)$
c_{10}	$(u^{25}+10u^{24}+\cdots+4u-1)(u^{124}+3u^{123}+\cdots-26u-5)$
c_{11}	$(u^{25}+2u^{24}+\cdots-17u+1)(u^{124}+u^{123}+\cdots-23u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{25}-23y^{24}+\cdots+23y-1)(y^{124}-32y^{123}+\cdots-782845y+11449)$
c_2, c_5	$(y^{25}-14y^{24}+\cdots+2y-1)(y^{124}-75y^{123}+\cdots-605108y+19321)$
c_3	$(y^{25}-4y^{24}+\cdots+99y-1)(y^{124}+27y^{123}+\cdots-8505y+1)$
c_4	$(y^{25}-8y^{24}+\cdots+30y^2-1)(y^{124}+3y^{123}+\cdots+15842y+361)$
c_6	$(y^{25}-12y^{24}+\cdots-28y-1)$ $\cdot(y^{124}+11y^{123}+\cdots+56088414y+3682561)$
c_7	$(y^{25}-4y^{24}+\cdots+9y-1)(y^{124}-17y^{123}+\cdots-287y+1)$
c_8	$(y^{25}-2y^{24}+\cdots+114y-1)(y^{124}-23y^{123}+\cdots+29224y+169)$
c_9	$(y^{25}+3y^{24}+\cdots+32y-1)$ $\cdot(y^{124}-26y^{123}+\cdots+93166514y+32913169)$
c_{10}	$(y^{25}-12y^{24}+\cdots+28y-1)(y^{124}-5y^{123}+\cdots-7526y+25)$
c_{11}	$(y^{25}-10y^{24}+\cdots+111y-1)(y^{124}-7y^{123}+\cdots-113y+1)$