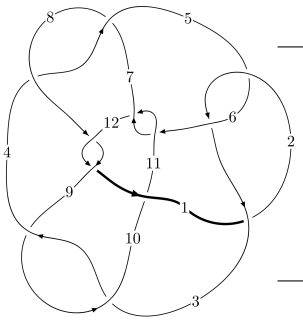
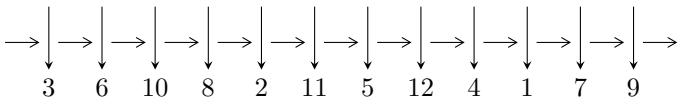
$12a_{0432}$ $(K12a_{0432})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 8.17956 \times 10^{513} u^{126} + 6.56820 \times 10^{513} u^{125} + \cdots + 6.50124 \times 10^{510} b + 9.89260 \times 10^{513},$$
$$- 2.16012 \times 10^{513} u^{126} - 2.23997 \times 10^{513} u^{125} + \cdots + 6.50124 \times 10^{510} a - 8.59599 \times 10^{512},$$
$$u^{127} - 39u^{125} + \cdots + 26u - 1 \rangle$$
$$I_2^u = \langle -1683522u^{21} - 10851287u^{20} + \cdots + 135991b + 8481275,$$
$$191582u^{21} + 1200977u^{20} + \cdots + 407973a + 2348438,\ u^{22} + 7u^{21} + \cdots - 11u - 3 \rangle$$

* 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. $\boldsymbol{I_1^u = \langle 8.18 \times 10^{513} u^{126} + 6.57 \times 10^{513} u^{125} + \cdots + 6.50 \times 10^{510} b + 9.89 \times 10^{513},\ -2.16 \times 10^{513} u^{126} - 2.24 \times 10^{513} u^{125} + \cdots + 6.50 \times 10^{510} a - 8.60 \times 10^{512},\ u^{127} - 39 u^{125} + \cdots + 26u - 1 \rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_1 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 332.262u^{126} + 344.545u^{125} + \cdots - 4418.94u + 132.221 \\ -1258.15u^{126} - 1010.30u^{125} + \cdots + 37831.1u - 1521.65 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -925.891u^{126} - 665.754u^{125} + \cdots + 33412.1u - 1389.43 \\ -1258.15u^{126} - 1010.30u^{125} + \cdots + 37831.1u - 1521.65 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 124.346u^{126} - 35.5978u^{125} + \cdots - 11588.4u + 504.585 \\ 35.6942u^{126} - 15.6952u^{125} + \cdots - 3727.56u + 160.148 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -102.852u^{126} - 177.716u^{125} + \cdots - 1620.58u + 63.8561 \\ 1184.64u^{126} + 900.526u^{125} + \cdots - 39219.1u + 1594.14 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -54.1645u^{126} - 4.38579u^{125} + \cdots + 3562.79u - 159.539 \\ 210.170u^{126} + 240.717u^{125} + \cdots - 2261.06u + 76.1834 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 154.927u^{126} + 24.7007u^{125} + \cdots - 10450.6u + 451.072 \\ 70.7956u^{126} - 14.9643u^{125} + \cdots - 6402.55u + 273.959 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 185.571u^{126} + 68.9838u^{125} + \cdots - 11041.8u + 462.863 \\ 433.621u^{126} + 356.001u^{125} + \cdots - 12831.4u + 516.286 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -73.6548u^{126} - 61.8141u^{125} + \cdots + 3792.30u - 186.708 \\ 222.809u^{126} + 191.525u^{125} + \cdots - 6309.64u + 253.297 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1954.67u^{126} - 1603.54u^{125} + \cdots + 57833.4u - 2355.39$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{127} + 51u^{126} + \cdots + 64748u + 961$
c_2, c_5	$u^{127} + 3u^{126} + \cdots - 322u + 31$
c_3, c_9	$u^{127} + 5u^{126} + \cdots + 33188u + 3019$
c_4, c_7	$u^{127} - 4u^{126} + \cdots - 8u + 1$
c_6, c_{11}	$u^{127} - 2u^{126} + \cdots + 2124u + 3559$
c_8, c_{12}	$u^{127} - 39u^{125} + \cdots + 26u + 1$
c_{10}	$u^{127} - 2u^{126} + \cdots + 12444u + 1273$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{127} + 61y^{126} + \cdots + 252764728y - 923521$
c_2, c_5	$y^{127} - 51y^{126} + \cdots + 64748y - 961$
c_3, c_9	$y^{127} + 87y^{126} + \cdots - 136207782y - 9114361$
c_4, c_7	$y^{127} + 80y^{126} + \cdots + 104y - 1$
c_6, c_{11}	$y^{127} - 74y^{126} + \cdots + 113971980y - 12666481$
c_8, c_{12}	$y^{127} - 78y^{126} + \cdots + 108y - 1$
c_{10}	$y^{127} + 10y^{126} + \cdots - 40468346y - 1620529$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.924683 + 0.369839I$ $a = 0.608340 - 1.273530I$ $b = 0.388767 + 0.488604I$	$-2.30026 - 2.96450I$	0
$u = 0.924683 - 0.369839I$ $a = 0.608340 + 1.273530I$ $b = 0.388767 - 0.488604I$	$-2.30026 + 2.96450I$	0
$u = 1.001120 + 0.147493I$ $a = -3.19117 + 0.15377I$ $b = -0.089038 - 0.925983I$	$-0.14172 - 2.38640I$	0
$u = 1.001120 - 0.147493I$ $a = -3.19117 - 0.15377I$ $b = -0.089038 + 0.925983I$	$-0.14172 + 2.38640I$	0
$u = 0.978649 + 0.131591I$ $a = 0.112195 - 1.062580I$ $b = 0.143483 + 0.046794I$	$-1.71435 + 2.00781I$	0
$u = 0.978649 - 0.131591I$ $a = 0.112195 + 1.062580I$ $b = 0.143483 - 0.046794I$	$-1.71435 - 2.00781I$	0
$u = 0.782053 + 0.653717I$ $a = -0.55451 + 1.69182I$ $b = -0.550760 - 0.827776I$	$-2.79611 - 0.76104I$	0
$u = 0.782053 - 0.653717I$ $a = -0.55451 - 1.69182I$ $b = -0.550760 + 0.827776I$	$-2.79611 + 0.76104I$	0
$u = -0.174076 + 1.005220I$ $a = 0.05242 - 1.45375I$ $b = 0.127324 + 1.393990I$	$8.45647 - 6.32148I$	0
$u = -0.174076 - 1.005220I$ $a = 0.05242 + 1.45375I$ $b = 0.127324 - 1.393990I$	$8.45647 + 6.32148I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.058630 + 0.164072I$ $a = 2.33472 + 0.80946I$ $b = 0.059832 + 0.858484I$	$-0.38624 + 1.70611I$	0
$u = 1.058630 - 0.164072I$ $a = 2.33472 - 0.80946I$ $b = 0.059832 - 0.858484I$	$-0.38624 - 1.70611I$	0
$u = -0.836922 + 0.378466I$ $a = 0.674692 + 0.298321I$ $b = 0.795291 + 0.260018I$	$-2.03359 + 1.57618I$	0
$u = -0.836922 - 0.378466I$ $a = 0.674692 - 0.298321I$ $b = 0.795291 - 0.260018I$	$-2.03359 - 1.57618I$	0
$u = 1.005480 + 0.400774I$ $a = -0.980953 + 0.573737I$ $b = -0.087151 - 0.903960I$	$-0.298985 - 0.775562I$	0
$u = 1.005480 - 0.400774I$ $a = -0.980953 - 0.573737I$ $b = -0.087151 + 0.903960I$	$-0.298985 + 0.775562I$	0
$u = -0.727229 + 0.555930I$ $a = -1.297510 - 0.284976I$ $b = -0.200909 - 0.061435I$	$2.78595 + 3.48689I$	0
$u = -0.727229 - 0.555930I$ $a = -1.297510 + 0.284976I$ $b = -0.200909 + 0.061435I$	$2.78595 - 3.48689I$	0
$u = -0.225415 + 1.071830I$ $a = -0.094820 + 1.372120I$ $b = -0.057743 - 1.348270I$	$9.41775 - 0.48167I$	0
$u = -0.225415 - 1.071830I$ $a = -0.094820 - 1.372120I$ $b = -0.057743 + 1.348270I$	$9.41775 + 0.48167I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.884516 + 0.055608I$ $a = -1.73570 + 3.59443I$ $b = -0.084782 - 1.096170I$	$0.31178 + 1.84948I$	0
$u = 0.884516 - 0.055608I$ $a = -1.73570 - 3.59443I$ $b = -0.084782 + 1.096170I$	$0.31178 - 1.84948I$	0
$u = 1.009010 + 0.472200I$ $a = -0.828558 + 0.588752I$ $b = 0.021031 - 0.929926I$	$-0.275081 - 0.781566I$	0
$u = 1.009010 - 0.472200I$ $a = -0.828558 - 0.588752I$ $b = 0.021031 + 0.929926I$	$-0.275081 + 0.781566I$	0
$u = -0.616167 + 0.577419I$ $a = 1.85521 + 0.68990I$ $b = -0.0724564 - 0.0703583I$	$0.69570 + 8.80811I$	0
$u = -0.616167 - 0.577419I$ $a = 1.85521 - 0.68990I$ $b = -0.0724564 + 0.0703583I$	$0.69570 - 8.80811I$	0
$u = -1.015590 + 0.560681I$ $a = 0.720345 + 0.732910I$ $b = 0.931075 - 0.511817I$	$0.42465 + 8.09284I$	0
$u = -1.015590 - 0.560681I$ $a = 0.720345 - 0.732910I$ $b = 0.931075 + 0.511817I$	$0.42465 - 8.09284I$	0
$u = 1.154410 + 0.236419I$ $a = 0.813409 + 0.475466I$ $b = 0.276136 + 0.626016I$	$-1.27774 - 2.53272I$	0
$u = 1.154410 - 0.236419I$ $a = 0.813409 - 0.475466I$ $b = 0.276136 - 0.626016I$	$-1.27774 + 2.53272I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.050520+0.536489I$ $a=\ \ 0.784616+0.920323I$ $b=\ \ 1.00707-1.29629I$	$2.37250+3.37648I$	0
$u=-1.050520-0.536489I$ $a=\ \ 0.784616-0.920323I$ $b=\ \ 1.00707+1.29629I$	$2.37250-3.37648I$	0
$u=-1.052630+0.553384I$ $a=-0.767236-0.924602I$ $b=-1.10195+1.21661I$	$2.29330+7.94168I$	0
$u=-1.052630-0.553384I$ $a=-0.767236+0.924602I$ $b=-1.10195-1.21661I$	$2.29330-7.94168I$	0
$u=-0.452818+0.667940I$ $a=\ \ 0.824452+0.566550I$ $b=-0.53812-1.42737I$	$4.04606-3.19347I$	0
$u=-0.452818-0.667940I$ $a=\ \ 0.824452-0.566550I$ $b=-0.53812+1.42737I$	$4.04606+3.19347I$	0
$u=-0.445440+0.666343I$ $a=\ \ 0.434019+0.485862I$ $b=-0.532311-1.119660I$	$3.15024+0.50709I$	0
$u=-0.445440-0.666343I$ $a=\ \ 0.434019-0.485862I$ $b=-0.532311+1.119660I$	$3.15024-0.50709I$	0
$u=-0.601574+0.523680I$ $a=-0.446446+0.178316I$ $b=-0.412904-0.638276I$	$3.19727+0.99504I$	0
$u=-0.601574-0.523680I$ $a=-0.446446-0.178316I$ $b=-0.412904+0.638276I$	$3.19727-0.99504I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.060950+0.566207I$ $a=-0.730209-0.864846I$ $b=-1.069190+0.900490I$	$1.35731+4.29706I$	0
$u=-1.060950-0.566207I$ $a=-0.730209+0.864846I$ $b=-1.069190-0.900490I$	$1.35731-4.29706I$	0
$u=-0.459921+0.648792I$ $a=-0.884835-0.659165I$ $b=0.43189+1.47336I$	$4.10482+1.26411I$	0
$u=-0.459921-0.648792I$ $a=-0.884835+0.659165I$ $b=0.43189-1.47336I$	$4.10482-1.26411I$	0
$u=1.141480+0.404863I$ $a=0.0260910+0.0015194I$ $b=-1.53189+0.29731I$	$-2.64906-11.55230I$	0
$u=1.141480-0.404863I$ $a=0.0260910-0.0015194I$ $b=-1.53189-0.29731I$	$-2.64906+11.55230I$	0
$u=1.159150+0.383790I$ $a=0.0210091+0.0368586I$ $b=1.44124-0.15234I$	$-1.07882-5.87309I$	0
$u=1.159150-0.383790I$ $a=0.0210091-0.0368586I$ $b=1.44124+0.15234I$	$-1.07882+5.87309I$	0
$u=0.773781+0.006379I$ $a=0.096914+0.879200I$ $b=0.15875-2.30172I$	$6.59700+2.90052I$	0
$u=0.773781-0.006379I$ $a=0.096914-0.879200I$ $b=0.15875+2.30172I$	$6.59700-2.90052I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.737225 + 0.083244I$ $a = 1.12451 - 1.75733I$ $b = 0.397770 + 1.232700I$	$1.43975 - 1.67693I$	0
$u = 0.737225 - 0.083244I$ $a = 1.12451 + 1.75733I$ $b = 0.397770 - 1.232700I$	$1.43975 + 1.67693I$	0
$u = -0.318561 + 0.665718I$ $a = -0.653109 - 1.207280I$ $b = 0.274464 + 1.243040I$	$2.85662 - 2.16898I$	0
$u = -0.318561 - 0.665718I$ $a = -0.653109 + 1.207280I$ $b = 0.274464 - 1.243040I$	$2.85662 + 2.16898I$	0
$u = -1.269100 + 0.104073I$ $a = 0.0726301 + 0.1055050I$ $b = 1.085320 + 0.179204I$	$-5.27482 + 1.33689I$	0
$u = -1.269100 - 0.104073I$ $a = 0.0726301 - 0.1055050I$ $b = 1.085320 - 0.179204I$	$-5.27482 - 1.33689I$	0
$u = 0.097674 + 1.269920I$ $a = 0.31176 + 1.64860I$ $b = -0.342279 - 0.755360I$	$-3.11716 - 0.32407I$	0
$u = 0.097674 - 1.269920I$ $a = 0.31176 - 1.64860I$ $b = -0.342279 + 0.755360I$	$-3.11716 + 0.32407I$	0
$u = -1.197100 + 0.437234I$ $a = 0.75198 + 1.29733I$ $b = 0.597393 - 1.278020I$	$-1.84583 + 7.27986I$	0
$u = -1.197100 - 0.437234I$ $a = 0.75198 - 1.29733I$ $b = 0.597393 + 1.278020I$	$-1.84583 - 7.27986I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.153150+0.546793I$ $a=\ \ 0.872106+0.906516I$ $b=\ \ 0.654320-1.178270I$	$0.40118+6.95050I$	0
$u=-1.153150-0.546793I$ $a=\ \ 0.872106-0.906516I$ $b=\ \ 0.654320+1.178270I$	$0.40118-6.95050I$	0
$u=-1.201810+0.438235I$ $a=-0.83517-1.39186I$ $b=-0.621108+1.254040I$	$-3.89066+12.51970I$	0
$u=-1.201810-0.438235I$ $a=-0.83517+1.39186I$ $b=-0.621108-1.254040I$	$-3.89066-12.51970I$	0
$u=-1.208050+0.443567I$ $a=-0.55693-1.44468I$ $b=-0.533112+1.221620I$	$-7.23269+4.76345I$	0
$u=-1.208050-0.443567I$ $a=-0.55693+1.44468I$ $b=-0.533112-1.221620I$	$-7.23269-4.76345I$	0
$u=\ \ 1.213250+0.434526I$ $a=\ \ 0.091496-0.161829I$ $b=-1.121500+0.415639I$	$-7.27454-4.33559I$	0
$u=\ \ 1.213250-0.434526I$ $a=\ \ 0.091496+0.161829I$ $b=-1.121500-0.415639I$	$-7.27454+4.33559I$	0
$u=\ \ 0.357259+0.613433I$ $a=\ \ 0.765566-0.836335I$ $b=-0.621129+0.405100I$	$-1.79502-3.79376I$	0
$u=\ \ 0.357259-0.613433I$ $a=\ \ 0.765566+0.836335I$ $b=-0.621129-0.405100I$	$-1.79502+3.79376I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.259380 + 0.331712I$ $a = 0.484701 - 0.313085I$ $b = 0.59164 + 1.41847I$	$4.00694 - 3.94852I$	0
$u = 1.259380 - 0.331712I$ $a = 0.484701 + 0.313085I$ $b = 0.59164 - 1.41847I$	$4.00694 + 3.94852I$	0
$u = -1.298960 + 0.172997I$ $a = -0.019714 - 0.173778I$ $b = -1.067280 - 0.302728I$	$-6.92031 + 6.49364I$	0
$u = -1.298960 - 0.172997I$ $a = -0.019714 + 0.173778I$ $b = -1.067280 + 0.302728I$	$-6.92031 - 6.49364I$	0
$u = 1.257550 + 0.386287I$ $a = -0.575391 + 0.378627I$ $b = -0.41722 - 1.42360I$	$3.66569 + 1.78366I$	0
$u = 1.257550 - 0.386287I$ $a = -0.575391 - 0.378627I$ $b = -0.41722 + 1.42360I$	$3.66569 - 1.78366I$	0
$u = 1.286290 + 0.278937I$ $a = 0.170919 + 0.423935I$ $b = 0.555351 + 0.051213I$	$-1.50923 - 2.71926I$	0
$u = 1.286290 - 0.278937I$ $a = 0.170919 - 0.423935I$ $b = 0.555351 - 0.051213I$	$-1.50923 + 2.71926I$	0
$u = 0.862934 + 1.015180I$ $a = 0.503053 - 0.819633I$ $b = -0.400943 + 0.862874I$	$-2.72267 + 3.06869I$	0
$u = 0.862934 - 1.015180I$ $a = 0.503053 + 0.819633I$ $b = -0.400943 - 0.862874I$	$-2.72267 - 3.06869I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.161472 + 0.641545I$ $a = 0.05726 + 2.39661I$ $b = -0.622146 - 0.967348I$	$-0.28299 - 8.51393I$	0
$u = 0.161472 - 0.641545I$ $a = 0.05726 - 2.39661I$ $b = -0.622146 + 0.967348I$	$-0.28299 + 8.51393I$	0
$u = -0.401688 + 0.484464I$ $a = -0.022561 + 0.265264I$ $b = 0.653497 + 0.672795I$	$1.96530 - 3.75159I$	0
$u = -0.401688 - 0.484464I$ $a = -0.022561 - 0.265264I$ $b = 0.653497 - 0.672795I$	$1.96530 + 3.75159I$	0
$u = -1.051880 + 0.882877I$ $a = -0.817930 - 0.857421I$ $b = -0.224316 + 0.740933I$	$3.01498 + 3.93528I$	0
$u = -1.051880 - 0.882877I$ $a = -0.817930 + 0.857421I$ $b = -0.224316 - 0.740933I$	$3.01498 - 3.93528I$	0
$u = -1.333810 + 0.344639I$ $a = 0.245238 + 1.128230I$ $b = 0.319262 - 1.376920I$	$0.24013 + 3.70238I$	0
$u = -1.333810 - 0.344639I$ $a = 0.245238 - 1.128230I$ $b = 0.319262 + 1.376920I$	$0.24013 - 3.70238I$	0
$u = 0.220063 + 1.360140I$ $a = 0.437105 - 1.167090I$ $b = -0.418588 + 1.225930I$	$4.49284 + 12.10370I$	0
$u = 0.220063 - 1.360140I$ $a = 0.437105 + 1.167090I$ $b = -0.418588 - 1.225930I$	$4.49284 - 12.10370I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.272320+0.582698I$ $a=\ 1.006390+0.763368I$ $b=\ 0.413656-1.251780I$	$5.06176+12.02310I$	0
$u=-1.272320-0.582698I$ $a=\ 1.006390-0.763368I$ $b=\ 0.413656+1.251780I$	$5.06176-12.02310I$	0
$u=-1.27288+0.61808I$ $a=-0.953283-0.738378I$ $b=-0.371548+1.192540I$	$6.14425+6.49037I$	0
$u=-1.27288-0.61808I$ $a=-0.953283+0.738378I$ $b=-0.371548-1.192540I$	$6.14425-6.49037I$	0
$u=-0.564726+0.147823I$ $a=\ 1.224540+0.150475I$ $b=\ 0.470129-1.091880I$	$2.21800+3.54719I$	0
$u=-0.564726-0.147823I$ $a=\ 1.224540-0.150475I$ $b=\ 0.470129+1.091880I$	$2.21800-3.54719I$	0
$u=\ 0.119494+0.539630I$ $a=-0.26031-2.64092I$ $b=\ 0.491015+0.967513I$	$1.64848-3.37767I$	$-9.26258+3.81874I$
$u=\ 0.119494-0.539630I$ $a=-0.26031+2.64092I$ $b=\ 0.491015-0.967513I$	$1.64848+3.37767I$	$-9.26258-3.81874I$
$u=\ 0.18857+1.48353I$ $a=-0.373456+1.149540I$ $b=\ 0.339116-1.193690I$	$6.48528+5.65093I$	0
$u=\ 0.18857-1.48353I$ $a=-0.373456-1.149540I$ $b=\ 0.339116+1.193690I$	$6.48528-5.65093I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.50529+0.03501I$ $a=\ \ 0.0706949-0.0047897I$ $b=-0.565038-0.097086I$	$-10.45100-0.00475I$	0
$u=-1.50529-0.03501I$ $a=\ \ 0.0706949+0.0047897I$ $b=-0.565038+0.097086I$	$-10.45100+0.00475I$	0
$u=-1.36114+0.65421I$ $a=-0.034874-1.319730I$ $b=-0.242019+1.149090I$	$-1.06726-3.05908I$	0
$u=-1.36114-0.65421I$ $a=-0.034874+1.319730I$ $b=-0.242019-1.149090I$	$-1.06726+3.05908I$	0
$u=-0.386808+0.299675I$ $a=-1.69449-0.66931I$ $b=-0.115282+1.113170I$	$2.87043-1.55752I$	$-5.63745+2.96668I$
$u=-0.386808-0.299675I$ $a=-1.69449+0.66931I$ $b=-0.115282-1.113170I$	$2.87043+1.55752I$	$-5.63745-2.96668I$
$u=\ \ 1.34890+0.70189I$ $a=-0.592966+1.150850I$ $b=-0.73755-1.38108I$	$0.9269-19.1649I$	0
$u=\ \ 1.34890-0.70189I$ $a=-0.592966-1.150850I$ $b=-0.73755+1.38108I$	$0.9269+19.1649I$	0
$u=\ \ 1.30303+0.79417I$ $a=-0.490291+1.241560I$ $b=-0.668032-1.222380I$	$-4.64596-10.67220I$	0
$u=\ \ 1.30303-0.79417I$ $a=-0.490291-1.241560I$ $b=-0.668032+1.222380I$	$-4.64596+10.67220I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.463744 + 0.010276I$ $a = 2.55852 - 1.24842I$ $b = 0.823004 + 0.846488I$	$1.75112 - 3.20540I$	$-10.31126 + 2.63714I$
$u = 0.463744 - 0.010276I$ $a = 2.55852 + 1.24842I$ $b = 0.823004 - 0.846488I$	$1.75112 + 3.20540I$	$-10.31126 - 2.63714I$
$u = 1.36751 + 0.71926I$ $a = 0.554202 - 1.135900I$ $b = 0.68582 + 1.37268I$	$2.77946 - 13.02150I$	0
$u = 1.36751 - 0.71926I$ $a = 0.554202 + 1.135900I$ $b = 0.68582 - 1.37268I$	$2.77946 + 13.02150I$	0
$u = 1.39852 + 0.75614I$ $a = 0.289773 - 0.591729I$ $b = -0.420374 + 0.764458I$	$-2.85311 + 3.24742I$	0
$u = 1.39852 - 0.75614I$ $a = 0.289773 + 0.591729I$ $b = -0.420374 - 0.764458I$	$-2.85311 - 3.24742I$	0
$u = 0.199161 + 0.349879I$ $a = -0.935812 + 0.869803I$ $b = 0.507738 - 0.055240I$	$-0.544908 + 0.211795I$	$-12.17551 + 0.68143I$
$u = 0.199161 - 0.349879I$ $a = -0.935812 - 0.869803I$ $b = 0.507738 + 0.055240I$	$-0.544908 - 0.211795I$	$-12.17551 - 0.68143I$
$u = 0.381857 + 0.099919I$ $a = -3.45284 - 0.09653I$ $b = -0.939323 + 0.623104I$	$0.04615 + 8.48721I$	$-12.82008 - 5.96405I$
$u = 0.381857 - 0.099919I$ $a = -3.45284 + 0.09653I$ $b = -0.939323 - 0.623104I$	$0.04615 - 8.48721I$	$-12.82008 + 5.96405I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.318022$ $a = -1.19666$ $b = \ 0.287314$	-0.622941	-15.6690
$u = \ 1.46815 + 1.10036I$ $a = \ 0.259727 - 1.198990I$ $b = \ 0.425109 + 1.179570I$	$1.82476 - 6.58740I$	0
$u = \ 1.46815 - 1.10036I$ $a = \ 0.259727 + 1.198990I$ $b = \ 0.425109 - 1.179570I$	$1.82476 + 6.58740I$	0
$u = \ 0.0805217 + 0.0598194I$ $a = -5.9887 + 16.5167I$ $b = -0.377241 - 0.492619I$	$-3.26822 - 1.10078I$	$-22.7416 + 6.4971I$
$u = \ 0.0805217 - 0.0598194I$ $a = -5.9887 - 16.5167I$ $b = -0.377241 + 0.492619I$	$-3.26822 + 1.10078I$	$-22.7416 - 6.4971I$
$u = -2.28802 + 0.42384I$ $a = \ 0.157528 + 0.522143I$ $b = -0.054931 - 0.848761I$	$-2.52941 - 4.08544I$	0
$u = -2.28802 - 0.42384I$ $a = \ 0.157528 - 0.522143I$ $b = -0.054931 + 0.848761I$	$-2.52941 + 4.08544I$	0

II.

$\boldsymbol{I_2^u = \langle -1.68\times 10^6 u^{21} - 1.09\times 10^7 u^{20} + \cdots + 1.36\times 10^5 b + 8.48\times 10^6,\ 1.92\times 10^5 u^{21} + 1.20\times 10^6 u^{20} + \cdots + 4.08\times 10^5 a + 2.35\times 10^6,\ u^{22} + 7u^{21} + \cdots - 11u - 3\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_1 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.469595u^{21} - 2.94377u^{20} + \cdots - 17.4894u - 5.75636 \\ 12.3797u^{21} + 79.7942u^{20} + \cdots - 122.099u - 62.3664 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 11.9101u^{21} + 76.8504u^{20} + \cdots - 139.588u - 68.1228 \\ 12.3797u^{21} + 79.7942u^{20} + \cdots - 122.099u - 62.3664 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.11237u^{21} + 8.35906u^{20} + \cdots + 8.73789u - 0.0169619 \\ -1.07400u^{21} - 5.92699u^{20} + \cdots + 9.56307u + 0.0677104 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -6.63331u^{21} - 44.4609u^{20} + \cdots + 43.9037u + 23.9077 \\ -10.1022u^{21} - 64.3959u^{20} + \cdots + 96.2399u + 48.6921 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.644097u^{21} - 4.58268u^{20} + \cdots + 13.8100u + 7.64814 \\ 6.20657u^{21} + 37.3134u^{20} + \cdots - 61.1479u - 18.6874 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 2.11237u^{21} + 14.3591u^{20} + \cdots - 0.262108u - 3.01696 \\ -1.07400u^{21} - 5.92699u^{20} + \cdots + 10.5631u + 0.0677104 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0805642u^{21} + 1.57433u^{20} + \cdots + 31.5750u + 9.36826 \\ 3.83648u^{21} + 22.0179u^{20} + \cdots - 58.4728u - 20.1151 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2.89990u^{21} - 18.7465u^{20} + \cdots + 43.5670u + 15.9911 \\ -4.42275u^{21} - 28.6209u^{20} + \cdots + 25.8646u + 11.0943 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{1486951}{135991}u^{21} - \frac{10206074}{135991}u^{20} + \cdots + \frac{14368380}{135991}u + \frac{8259156}{135991}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{22} - 10u^{21} + \cdots - 11u + 1$
c_2	$u^{22} + 2u^{21} + \cdots + 3u + 1$
c_3	$u^{22} - 4u^{21} + \cdots + 9u + 1$
c_4	$u^{22} - 3u^{21} + \cdots - 5u - 1$
c_5	$u^{22} - 2u^{21} + \cdots - 3u + 1$
c_6	$u^{22} - u^{21} + \cdots + u - 1$
c_7	$u^{22} + 3u^{21} + \cdots + 5u - 1$
c_8	$u^{22} + 7u^{21} + \cdots - 11u - 3$
c_9	$u^{22} + 4u^{21} + \cdots - 9u + 1$
c_{10}	$u^{22} - 9u^{21} + \cdots + 15u - 1$
c_{11}	$u^{22} + u^{21} + \cdots - u - 1$
c_{12}	$u^{22} - 7u^{21} + \cdots + 11u - 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{22} + 14y^{21} + \cdots - 3y + 1$
c_2, c_5	$y^{22} - 10y^{21} + \cdots - 11y + 1$
c_3, c_9	$y^{22} + 16y^{21} + \cdots - 21y + 1$
c_4, c_7	$y^{22} + 21y^{21} + \cdots - 31y + 1$
c_6, c_{11}	$y^{22} - 13y^{21} + \cdots - 15y + 1$
c_8, c_{12}	$y^{22} - 21y^{21} + \cdots - 115y + 9$
c_{10}	$y^{22} - y^{21} + \cdots - 29y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.798228+0.496203I$ $a=\ 1.52068+1.20636I$ $b=\ 0.880231-0.646781I$	$-0.04947+9.77454I$	$-14.1904-12.4970I$
$u=-0.798228-0.496203I$ $a=\ 1.52068-1.20636I$ $b=\ 0.880231+0.646781I$	$-0.04947-9.77454I$	$-14.1904+12.4970I$
$u=\ 1.042980+0.225050I$ $a=-0.578857+0.908661I$ $b=-0.360687-1.212330I$	$1.11478-3.27462I$	$-11.05385+2.00603I$
$u=\ 1.042980-0.225050I$ $a=-0.578857-0.908661I$ $b=-0.360687+1.212330I$	$1.11478+3.27462I$	$-11.05385-2.00603I$
$u=\ 0.888187+0.217314I$ $a=\ 1.35164-2.10727I$ $b=\ 0.122875+1.080670I$	$0.35331+1.61940I$	$-14.0508+2.8072I$
$u=\ 0.888187-0.217314I$ $a=\ 1.35164+2.10727I$ $b=\ 0.122875-1.080670I$	$0.35331-1.61940I$	$-14.0508-2.8072I$
$u=-0.989218+0.513877I$ $a=-0.988124-0.856083I$ $b=-1.011480+0.923743I$	$1.87955+5.23041I$	$-9.85081-7.87459I$
$u=-0.989218-0.513877I$ $a=-0.988124+0.856083I$ $b=-1.011480-0.923743I$	$1.87955-5.23041I$	$-9.85081+7.87459I$
$u=\ 0.160846+0.831869I$ $a=-1.18257+2.12516I$ $b=\ 0.205177-0.619198I$	$-2.74331+0.99833I$	$-7.66925-5.40834I$
$u=\ 0.160846-0.831869I$ $a=-1.18257-2.12516I$ $b=\ 0.205177+0.619198I$	$-2.74331-0.99833I$	$-7.66925+5.40834I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.139400 + 0.203867I$ $a = 1.57525 + 0.38512I$ $b = 0.063898 + 0.911249I$	$-0.36683 - 2.35155I$	$-14.0241 - 5.0966I$
$u = 1.139400 - 0.203867I$ $a = 1.57525 - 0.38512I$ $b = 0.063898 - 0.911249I$	$-0.36683 + 2.35155I$	$-14.0241 + 5.0966I$
$u = -0.581694 + 0.584825I$ $a = 0.527101 + 0.613336I$ $b = -0.54623 - 1.30793I$	$3.11558 - 0.75050I$	$-10.18883 + 0.22592I$
$u = -0.581694 - 0.584825I$ $a = 0.527101 - 0.613336I$ $b = -0.54623 + 1.30793I$	$3.11558 + 0.75050I$	$-10.18883 - 0.22592I$
$u = 0.756954$ $a = -0.787897$ $b = -0.514795$	-2.31185	-17.3930
$u = -0.600485 + 0.049418I$ $a = 0.0761917 - 0.0163432I$ $b = -0.17252 - 2.19938I$	$6.97704 - 2.83290I$	$2.16640 + 1.07370I$
$u = -0.600485 - 0.049418I$ $a = 0.0761917 + 0.0163432I$ $b = -0.17252 + 2.19938I$	$6.97704 + 2.83290I$	$2.16640 - 1.07370I$
$u = -1.19394 + 0.77206I$ $a = -0.510316 - 1.079710I$ $b = -0.662717 + 1.138290I$	$2.37795 + 5.68180I$	$-9.31656 - 4.65986I$
$u = -1.19394 - 0.77206I$ $a = -0.510316 + 1.079710I$ $b = -0.662717 - 1.138290I$	$2.37795 - 5.68180I$	$-9.31656 + 4.65986I$
$u = -1.59408$ $a = -0.196128$ $b = 0.156521$	-10.2779	13.9620

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-2.14928+0.57892I$ $a=-0.132312-0.710703I$ $b=\ \ 0.160592+0.678612I$	$-3.07388-4.19841I$	0
$u=-2.14928-0.57892I$ $a=-0.132312+0.710703I$ $b=\ \ 0.160592-0.678612I$	$-3.07388+4.19841I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{22}-10u^{21}+\cdots-11u+1)(u^{127}+51u^{126}+\cdots+64748u+961)$
c_2	$(u^{22}+2u^{21}+\cdots+3u+1)(u^{127}+3u^{126}+\cdots-322u+31)$
c_3	$(u^{22}-4u^{21}+\cdots+9u+1)(u^{127}+5u^{126}+\cdots+33188u+3019)$
c_4	$(u^{22}-3u^{21}+\cdots-5u-1)(u^{127}-4u^{126}+\cdots-8u+1)$
c_5	$(u^{22}-2u^{21}+\cdots-3u+1)(u^{127}+3u^{126}+\cdots-322u+31)$
c_6	$(u^{22}-u^{21}+\cdots+u-1)(u^{127}-2u^{126}+\cdots+2124u+3559)$
c_7	$(u^{22}+3u^{21}+\cdots+5u-1)(u^{127}-4u^{126}+\cdots-8u+1)$
c_8	$(u^{22}+7u^{21}+\cdots-11u-3)(u^{127}-39u^{125}+\cdots+26u+1)$
c_9	$(u^{22}+4u^{21}+\cdots-9u+1)(u^{127}+5u^{126}+\cdots+33188u+3019)$
c_{10}	$(u^{22}-9u^{21}+\cdots+15u-1)(u^{127}-2u^{126}+\cdots+12444u+1273)$
c_{11}	$(u^{22}+u^{21}+\cdots-u-1)(u^{127}-2u^{126}+\cdots+2124u+3559)$
c_{12}	$(u^{22}-7u^{21}+\cdots+11u-3)(u^{127}-39u^{125}+\cdots+26u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{22}+14y^{21}+\cdots-3y+1)$ $\cdot(y^{127}+61y^{126}+\cdots+252764728y-923521)$
c_2, c_5	$(y^{22}-10y^{21}+\cdots-11y+1)(y^{127}-51y^{126}+\cdots+64748y-961)$
c_3, c_9	$(y^{22}+16y^{21}+\cdots-21y+1)$ $\cdot(y^{127}+87y^{126}+\cdots-136207782y-9114361)$
c_4, c_7	$(y^{22}+21y^{21}+\cdots-31y+1)(y^{127}+80y^{126}+\cdots+104y-1)$
c_6, c_{11}	$(y^{22}-13y^{21}+\cdots-15y+1)$ $\cdot(y^{127}-74y^{126}+\cdots+113971980y-12666481)$
c_8, c_{12}	$(y^{22}-21y^{21}+\cdots-115y+9)(y^{127}-78y^{126}+\cdots+108y-1)$
c_{10}	$(y^{22}-y^{21}+\cdots-29y+1)$ $\cdot(y^{127}+10y^{126}+\cdots-40468346y-1620529)$