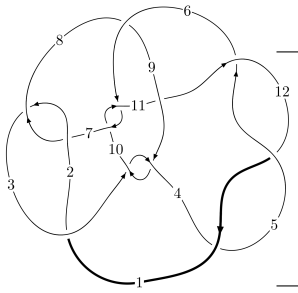
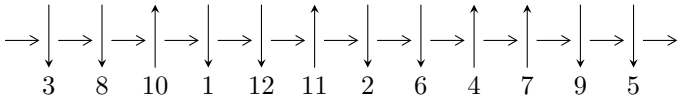
$12a_{0783}$ $(K12a_{0783})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 1.66774 \times 10^{316} u^{116} - 4.81256 \times 10^{316} u^{115} + \cdots + 3.09892 \times 10^{315} b - 8.67721 \times 10^{316},$$
$$- 4.47324 \times 10^{316} u^{116} + 1.35366 \times 10^{317} u^{115} + \cdots + 3.09892 \times 10^{315} a + 4.03023 \times 10^{317},$$
$$u^{117} - 3u^{116} + \cdots - 33u + 1 \rangle$$
$$I_2^u = \langle -1685u^{23} - 3592u^{22} + \cdots + 1939b + 1461,\ 337u^{23} + 663u^{22} + \cdots + 277a + 151,$$
$$u^{24} + 2u^{23} + \cdots + 6u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 141 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. $\boldsymbol{I_1^u = \langle 1.67 \times 10^{316} u^{116} - 4.81 \times 10^{316} u^{115} + \cdots + 3.10 \times 10^{315} b - 8.68 \times 10^{316},\ -4.47 \times 10^{316} u^{116} + 1.35 \times 10^{317} u^{115} + \cdots + 3.10 \times 10^{315} a + 4.03 \times 10^{317},\ u^{117} - 3u^{116} + \cdots - 33u + 1 \rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 14.4348u^{116} - 43.6818u^{115} + \cdots + 3655.33u - 130.053 \\ -5.38168u^{116} + 15.5298u^{115} + \cdots - 795.950u + 28.0008 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 9.05317u^{116} - 28.1520u^{115} + \cdots + 2859.38u - 102.052 \\ -5.38168u^{116} + 15.5298u^{115} + \cdots - 795.950u + 28.0008 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 18.3661u^{116} - 51.0532u^{115} + \cdots + 1634.41u - 43.2854 \\ -1.27374u^{116} + 2.87521u^{115} + \cdots + 377.420u - 16.6565 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 10.0940u^{116} - 30.7903u^{115} + \cdots + 2861.66u - 100.955 \\ -5.31587u^{116} + 15.3684u^{115} + \cdots - 824.059u + 29.1264 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 23.3386u^{116} - 66.6870u^{115} + \cdots + 3567.43u - 123.462 \\ 4.20132u^{116} - 12.3487u^{115} + \cdots + 1036.39u - 37.7570 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 17.6230u^{116} - 50.8082u^{115} + \cdots + 3952.88u - 154.468 \\ 6.09960u^{116} - 17.2854u^{115} + \cdots + 682.688u - 21.1410 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -27.0752u^{116} + 76.3531u^{115} + \cdots - 3792.58u + 122.109 \\ 0.611424u^{116} - 1.00040u^{115} + \cdots - 120.824u + 4.62257 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 12.7365u^{116} - 40.8301u^{115} + \cdots + 4568.87u - 176.087$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{117} + 53u^{116} + \cdots + 10193283u + 534361$
c_2, c_7	$u^{117} + u^{116} + \cdots + 2625u + 731$
c_3, c_9	$u^{117} + u^{116} + \cdots - 3840u + 7424$
c_4, c_5, c_{12}	$u^{117} - 3u^{116} + \cdots - 33u + 1$
c_6, c_{10}	$u^{117} + 43u^{115} + \cdots + 49298u + 2983$
c_8	$u^{117} - 8u^{116} + \cdots - 336u + 32$
c_{11}	$u^{117} - 3u^{116} + \cdots + 76u - 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{117} + 35y^{116} + \cdots - 9546989252781y - 285541678321$
c_2, c_7	$y^{117} - 53y^{116} + \cdots + 10193283y - 534361$
c_3, c_9	$y^{117} + 75y^{116} + \cdots - 1432518656y - 55115776$
c_4, c_5, c_{12}	$y^{117} + 121y^{116} + \cdots + 91y - 1$
c_6, c_{10}	$y^{117} + 86y^{116} + \cdots - 304360514y - 8898289$
c_8	$y^{117} + 22y^{116} + \cdots - 63744y - 1024$
c_{11}	$y^{117} - 5y^{116} + \cdots + 526y - 9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.823621+0.550525I$ $a=\ \ 0.879159-0.328519I$ $b=-0.467634-1.204290I$	$-3.41835+7.95463I$	0
$u=-0.823621-0.550525I$ $a=\ \ 0.879159+0.328519I$ $b=-0.467634+1.204290I$	$-3.41835-7.95463I$	0
$u=\ \ 0.894141+0.511446I$ $a=-0.780617-0.519456I$ $b=\ \ 0.58826-1.31392I$	$-5.7687-13.7661I$	0
$u=\ \ 0.894141-0.511446I$ $a=-0.780617+0.519456I$ $b=\ \ 0.58826+1.31392I$	$-5.7687+13.7661I$	0
$u=-0.884123+0.552686I$ $a=-0.507230+0.478718I$ $b=\ \ 0.427383+0.938946I$	$0.49446+2.31225I$	0
$u=-0.884123-0.552686I$ $a=-0.507230-0.478718I$ $b=\ \ 0.427383-0.938946I$	$0.49446-2.31225I$	0
$u=-0.884826+0.567387I$ $a=\ \ 0.382268+0.016594I$ $b=\ \ 0.213689-1.041540I$	$-3.41075-2.38257I$	0
$u=-0.884826-0.567387I$ $a=\ \ 0.382268-0.016594I$ $b=\ \ 0.213689+1.041540I$	$-3.41075+2.38257I$	0
$u=\ \ 0.903111+0.107618I$ $a=\ \ 0.570322+0.901913I$ $b=\ \ 0.071397+0.951586I$	$-2.61957-1.38881I$	0
$u=\ \ 0.903111-0.107618I$ $a=\ \ 0.570322-0.901913I$ $b=\ \ 0.071397-0.951586I$	$-2.61957+1.38881I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.543248+0.726897I$ $a=\ \ 0.023976+0.258840I$ $b=-0.482842+0.201823I$	$1.76136+3.29242I$	0
$u=-0.543248-0.726897I$ $a=\ \ 0.023976-0.258840I$ $b=-0.482842-0.201823I$	$1.76136-3.29242I$	0
$u=\ \ 0.109290+1.108720I$ $a=\ \ 0.049329-0.395592I$ $b=\ \ 0.292744+1.122070I$	$-0.596112+0.807380I$	0
$u=\ \ 0.109290-1.108720I$ $a=\ \ 0.049329+0.395592I$ $b=\ \ 0.292744-1.122070I$	$-0.596112-0.807380I$	0
$u=\ \ 0.514267+0.720818I$ $a=-0.464389+0.032530I$ $b=-0.09329-1.46240I$	$-8.74988+0.47669I$	0
$u=\ \ 0.514267-0.720818I$ $a=-0.464389-0.032530I$ $b=-0.09329+1.46240I$	$-8.74988-0.47669I$	0
$u=\ \ 1.033930+0.438997I$ $a=\ \ 0.423742+0.626882I$ $b=-0.406738+1.124730I$	$-0.83319-6.95313I$	0
$u=\ \ 1.033930-0.438997I$ $a=\ \ 0.423742-0.626882I$ $b=-0.406738-1.124730I$	$-0.83319+6.95313I$	0
$u=-0.335464+0.800015I$ $a=\ \ 0.72265+1.29877I$ $b=\ \ 0.060176-1.119970I$	$-1.45414+2.96537I$	0
$u=-0.335464-0.800015I$ $a=\ \ 0.72265-1.29877I$ $b=\ \ 0.060176+1.119970I$	$-1.45414-2.96537I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.927366 + 0.715486I$ $a = -0.396497 + 0.077797I$ $b = -0.424770 - 1.119600I$	$-5.27147 + 7.80861I$	0
$u = 0.927366 - 0.715486I$ $a = -0.396497 - 0.077797I$ $b = -0.424770 + 1.119600I$	$-5.27147 - 7.80861I$	0
$u = 0.179005 + 1.161270I$ $a = -0.014852 + 1.362400I$ $b = -0.34866 - 1.47737I$	$-2.10538 + 2.69369I$	0
$u = 0.179005 - 1.161270I$ $a = -0.014852 - 1.362400I$ $b = -0.34866 + 1.47737I$	$-2.10538 - 2.69369I$	0
$u = 0.686090 + 0.410531I$ $a = -1.52456 - 0.48044I$ $b = 0.208285 - 1.343460I$	$-9.63014 - 4.71202I$	0
$u = 0.686090 - 0.410531I$ $a = -1.52456 + 0.48044I$ $b = 0.208285 + 1.343460I$	$-9.63014 + 4.71202I$	0
$u = -0.731192 + 0.191208I$ $a = -0.529894 - 1.236080I$ $b = -0.488545 - 0.420301I$	$-3.04512 - 4.06095I$	0
$u = -0.731192 - 0.191208I$ $a = -0.529894 + 1.236080I$ $b = -0.488545 + 0.420301I$	$-3.04512 + 4.06095I$	0
$u = 0.183580 + 0.718841I$ $a = -0.293362 + 0.722372I$ $b = 0.503030 + 0.203505I$	$2.15124 + 1.14844I$	0
$u = 0.183580 - 0.718841I$ $a = -0.293362 - 0.722372I$ $b = 0.503030 - 0.203505I$	$2.15124 - 1.14844I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.402505+0.600498I$ $a=\ \ 0.073364-1.195060I$ $b=-0.704880+0.467391I$	$-2.29151+2.22633I$	0
$u=-0.402505-0.600498I$ $a=\ \ 0.073364+1.195060I$ $b=-0.704880-0.467391I$	$-2.29151-2.22633I$	0
$u=-0.510980+0.511223I$ $a=-0.329365-0.168857I$ $b=\ \ 1.145480-0.040555I$	$-1.89926+7.77304I$	0
$u=-0.510980-0.511223I$ $a=-0.329365+0.168857I$ $b=\ \ 1.145480+0.040555I$	$-1.89926-7.77304I$	0
$u=-0.031981+1.295900I$ $a=\ \ 1.91372-0.25329I$ $b=-0.004589+0.595418I$	$-0.49033+6.08864I$	0
$u=-0.031981-1.295900I$ $a=\ \ 1.91372+0.25329I$ $b=-0.004589-0.595418I$	$-0.49033-6.08864I$	0
$u=-0.631032+0.299385I$ $a=-0.577972+0.611171I$ $b=\ \ 0.979166+0.564250I$	$-3.34894+1.33915I$	0
$u=-0.631032-0.299385I$ $a=-0.577972-0.611171I$ $b=\ \ 0.979166-0.564250I$	$-3.34894-1.33915I$	0
$u=\ \ 0.005585+1.309210I$ $a=-1.47104+0.80161I$ $b=\ \ 0.333045-0.740450I$	$1.98828+1.89618I$	0
$u=\ \ 0.005585-1.309210I$ $a=-1.47104-0.80161I$ $b=\ \ 0.333045+0.740450I$	$1.98828-1.89618I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.154129 + 1.302490I$ $a = 2.25963 - 0.64816I$ $b = -1.18123 + 1.23666I$	$-1.44906 - 8.22432I$	0
$u = 0.154129 - 1.302490I$ $a = 2.25963 + 0.64816I$ $b = -1.18123 - 1.23666I$	$-1.44906 + 8.22432I$	0
$u = -0.650118 + 0.160046I$ $a = 0.434603 - 0.372811I$ $b = -0.487202 - 1.161570I$	$-3.58375 + 0.59174I$	0
$u = -0.650118 - 0.160046I$ $a = 0.434603 + 0.372811I$ $b = -0.487202 + 1.161570I$	$-3.58375 - 0.59174I$	0
$u = -0.172418 + 1.338520I$ $a = -1.67003 - 0.50766I$ $b = 0.91972 + 1.07639I$	$1.04521 + 3.50568I$	0
$u = -0.172418 - 1.338520I$ $a = -1.67003 + 0.50766I$ $b = 0.91972 - 1.07639I$	$1.04521 - 3.50568I$	0
$u = -0.297953 + 1.325140I$ $a = -0.970664 + 0.277028I$ $b = 0.481784 + 0.485463I$	$2.47338 + 2.95926I$	0
$u = -0.297953 - 1.325140I$ $a = -0.970664 - 0.277028I$ $b = 0.481784 - 0.485463I$	$2.47338 - 2.95926I$	0
$u = 0.101671 + 1.355120I$ $a = 1.32440 - 1.38228I$ $b = -0.65371 + 1.46359I$	$-3.00489 - 0.37587I$	0
$u = 0.101671 - 1.355120I$ $a = 1.32440 + 1.38228I$ $b = -0.65371 - 1.46359I$	$-3.00489 + 0.37587I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.521043 + 1.261250I$ $a = 0.576159 + 0.158488I$ $b = 0.151512 + 0.745889I$	$1.74357 + 0.70351I$	0
$u = 0.521043 - 1.261250I$ $a = 0.576159 - 0.158488I$ $b = 0.151512 - 0.745889I$	$1.74357 - 0.70351I$	0
$u = 0.042813 + 1.366880I$ $a = 0.01714 + 1.46662I$ $b = -0.16031 - 2.18447I$	$-3.54384 - 1.70880I$	0
$u = 0.042813 - 1.366880I$ $a = 0.01714 - 1.46662I$ $b = -0.16031 + 2.18447I$	$-3.54384 + 1.70880I$	0
$u = -0.322206 + 0.536631I$ $a = -1.016520 - 0.150138I$ $b = 0.304603 + 0.787145I$	$-0.33317 + 1.47731I$	$-4.00000 - 3.46903I$
$u = -0.322206 - 0.536631I$ $a = -1.016520 + 0.150138I$ $b = 0.304603 - 0.787145I$	$-0.33317 - 1.47731I$	$-4.00000 + 3.46903I$
$u = 0.189917 + 1.373320I$ $a = -1.95190 + 0.28181I$ $b = 0.718301 - 1.009000I$	$1.51558 - 6.19254I$	0
$u = 0.189917 - 1.373320I$ $a = -1.95190 - 0.28181I$ $b = 0.718301 + 1.009000I$	$1.51558 + 6.19254I$	0
$u = 0.285517 + 1.363260I$ $a = -1.49773 - 0.07523I$ $b = 0.295518 - 0.750349I$	$2.06044 - 5.45428I$	0
$u = 0.285517 - 1.363260I$ $a = -1.49773 + 0.07523I$ $b = 0.295518 + 0.750349I$	$2.06044 + 5.45428I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.067806 + 1.396920I$ $a = 0.835447 - 0.008036I$ $b = -0.26236 + 1.39556I$	$3.07434 - 3.88441I$	0
$u = 0.067806 - 1.396920I$ $a = 0.835447 + 0.008036I$ $b = -0.26236 - 1.39556I$	$3.07434 + 3.88441I$	0
$u = 0.000835 + 1.406560I$ $a = -1.346950 + 0.071829I$ $b = 0.425276 + 1.059150I$	$4.92018 - 2.05187I$	0
$u = 0.000835 - 1.406560I$ $a = -1.346950 - 0.071829I$ $b = 0.425276 - 1.059150I$	$4.92018 + 2.05187I$	0
$u = 0.571446 + 0.150027I$ $a = 0.98274 + 1.20657I$ $b = -0.519717 + 1.075700I$	$-3.33365 - 3.47759I$	$-11.24105 + 4.72691I$
$u = 0.571446 - 0.150027I$ $a = 0.98274 - 1.20657I$ $b = -0.519717 - 1.075700I$	$-3.33365 + 3.47759I$	$-11.24105 - 4.72691I$
$u = 0.589947 + 0.030203I$ $a = -0.393805 - 0.733976I$ $b = 0.75592 - 1.34795I$	$-5.52040 - 5.62216I$	$-13.4525 + 5.1611I$
$u = 0.589947 - 0.030203I$ $a = -0.393805 + 0.733976I$ $b = 0.75592 + 1.34795I$	$-5.52040 + 5.62216I$	$-13.4525 - 5.1611I$
$u = -0.23559 + 1.40990I$ $a = 1.89282 - 0.27860I$ $b = -1.213310 - 0.527341I$	$2.10227 + 4.48694I$	0
$u = -0.23559 - 1.40990I$ $a = 1.89282 + 0.27860I$ $b = -1.213310 + 0.527341I$	$2.10227 - 4.48694I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.05326+1.43162I$ $a=\ \ 1.62952+0.38146I$ $b=-0.630137-0.915075I$	$5.79734+2.20208I$	0
$u=-0.05326-1.43162I$ $a=\ \ 1.62952-0.38146I$ $b=-0.630137+0.915075I$	$5.79734-2.20208I$	0
$u=\ \ 0.10086+1.43008I$ $a=-1.83472-0.17438I$ $b=\ \ 0.494211-1.188990I$	$1.80679-7.97564I$	0
$u=\ \ 0.10086-1.43008I$ $a=-1.83472+0.17438I$ $b=\ \ 0.494211+1.188990I$	$1.80679+7.97564I$	0
$u=\ \ 0.392829+0.395363I$ $a=\ \ 0.972048-0.353878I$ $b=-0.862074-0.089310I$	$-0.01409-3.27867I$	$-1.12600+4.52290I$
$u=\ \ 0.392829-0.395363I$ $a=\ \ 0.972048+0.353878I$ $b=-0.862074+0.089310I$	$-0.01409+3.27867I$	$-1.12600-4.52290I$
$u=-0.526645$ $a=\ \ 0.170705$ $b=-0.396012$	-1.22542	-7.59440
$u=\ \ 0.14747+1.47198I$ $a=-1.60654-0.38950I$ $b=\ \ 1.256990+0.425301I$	$6.13929-5.31752I$	0
$u=\ \ 0.14747-1.47198I$ $a=-1.60654+0.38950I$ $b=\ \ 1.256990-0.425301I$	$6.13929+5.31752I$	0
$u=\ \ 0.23432+1.48664I$ $a=\ \ 1.68860-0.71078I$ $b=-0.352886+1.212040I$	$-3.44609-8.03987I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.23432 - 1.48664I$ $a = 1.68860 + 0.71078I$ $b = -0.352886 - 1.212040I$	$-3.44609 + 8.03987I$	0
$u = -0.18985 + 1.49347I$ $a = 1.67005 - 0.47304I$ $b = -1.56712 + 0.24896I$	$4.61397 + 10.40970I$	0
$u = -0.18985 - 1.49347I$ $a = 1.67005 + 0.47304I$ $b = -1.56712 - 0.24896I$	$4.61397 - 10.40970I$	0
$u = -0.08394 + 1.52109I$ $a = 1.35057 + 0.74054I$ $b = -0.619107 - 0.668117I$	$6.46201 + 2.72953I$	0
$u = -0.08394 - 1.52109I$ $a = 1.35057 - 0.74054I$ $b = -0.619107 + 0.668117I$	$6.46201 - 2.72953I$	0
$u = 0.11844 + 1.53057I$ $a = 1.220390 + 0.284829I$ $b = -1.039580 - 0.406581I$	$9.51686 - 0.34246I$	0
$u = 0.11844 - 1.53057I$ $a = 1.220390 - 0.284829I$ $b = -1.039580 + 0.406581I$	$9.51686 + 0.34246I$	0
$u = -0.18396 + 1.53942I$ $a = -1.126870 + 0.247647I$ $b = 1.014630 - 0.185823I$	$9.06433 + 6.00935I$	0
$u = -0.18396 - 1.53942I$ $a = -1.126870 - 0.247647I$ $b = 1.014630 + 0.185823I$	$9.06433 - 6.00935I$	0
$u = -0.29207 + 1.53254I$ $a = 1.367380 + 0.203140I$ $b = -0.689755 - 1.149300I$	$7.22273 + 6.49045I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.29207-1.53254I$ $a=\ \ 1.367380-0.203140I$ $b=-0.689755+1.149300I$	$7.22273-6.49045I$	0
$u=-0.02699+1.56109I$ $a=-0.747730+0.563415I$ $b=\ \ 0.648365-0.091496I$	$4.92005+3.52483I$	0
$u=-0.02699-1.56109I$ $a=-0.747730-0.563415I$ $b=\ \ 0.648365+0.091496I$	$4.92005-3.52483I$	0
$u=\ \ 0.35127+1.52895I$ $a=-1.328450+0.150987I$ $b=\ \ 0.59330-1.30601I$	$5.54664-11.83250I$	0
$u=\ \ 0.35127-1.52895I$ $a=-1.328450-0.150987I$ $b=\ \ 0.59330+1.30601I$	$5.54664+11.83250I$	0
$u=\ \ 0.32370+1.53537I$ $a=\ \ 1.60596-0.34916I$ $b=-0.75234+1.41304I$	$0.8424-18.2009I$	0
$u=\ \ 0.32370-1.53537I$ $a=\ \ 1.60596+0.34916I$ $b=-0.75234-1.41304I$	$0.8424+18.2009I$	0
$u=-0.29178+1.54216I$ $a=-1.53508-0.42912I$ $b=\ \ 0.69158+1.25263I$	$3.37954+12.04530I$	0
$u=-0.29178-1.54216I$ $a=-1.53508+0.42912I$ $b=\ \ 0.69158-1.25263I$	$3.37954-12.04530I$	0
$u=-0.07201+1.58383I$ $a=-0.62713-1.46462I$ $b=\ \ 0.123823+0.804225I$	$6.50048+4.26640I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.07201-1.58383I$ $a=-0.62713+1.46462I$ $b=\ \ 0.123823-0.804225I$	$6.50048-4.26640I$	0
$u=\ \ 0.50977+1.50725I$ $a=\ \ 0.719688+0.014267I$ $b=-0.271664+1.229580I$	$1.60592-4.30209I$	0
$u=\ \ 0.50977-1.50725I$ $a=\ \ 0.719688-0.014267I$ $b=-0.271664-1.229580I$	$1.60592+4.30209I$	0
$u=-0.40539+1.54997I$ $a=-0.758892+0.025602I$ $b=\ \ 0.544697+1.090190I$	$2.13920+0.58565I$	0
$u=-0.40539-1.54997I$ $a=-0.758892-0.025602I$ $b=\ \ 0.544697-1.090190I$	$2.13920-0.58565I$	0
$u=\ \ 0.264896+0.227741I$ $a=\ \ 2.32745+4.81945I$ $b=-0.438195+0.985028I$	$-3.68627-6.57641I$	$-6.0906+14.4276I$
$u=\ \ 0.264896-0.227741I$ $a=\ \ 2.32745-4.81945I$ $b=-0.438195-0.985028I$	$-3.68627+6.57641I$	$-6.0906-14.4276I$
$u=\ \ 0.004403+0.332582I$ $a=-2.88969-0.52513I$ $b=\ \ 0.347860+0.593700I$	$0.09627+1.61123I$	$1.73081-3.75080I$
$u=\ \ 0.004403-0.332582I$ $a=-2.88969+0.52513I$ $b=\ \ 0.347860-0.593700I$	$0.09627-1.61123I$	$1.73081+3.75080I$
$u=\ \ 0.257134+0.073353I$ $a=\ \ 2.25016-3.92424I$ $b=\ \ 0.143081-1.083750I$	$-1.81150-2.79938I$	$-7.57775+3.29414I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.257134 - 0.073353I$ $a = 2.25016 + 3.92424I$ $b = 0.143081 + 1.083750I$	$-1.81150 + 2.79938I$	$-7.57775 - 3.29414I$
$u = 0.198175 + 0.105985I$ $a = -2.62932 + 0.27342I$ $b = 0.23770 - 1.80775I$	$-7.87710 + 0.99471I$	$-22.1666 + 2.1412I$
$u = 0.198175 - 0.105985I$ $a = -2.62932 - 0.27342I$ $b = 0.23770 + 1.80775I$	$-7.87710 - 0.99471I$	$-22.1666 - 2.1412I$
$u = 0.1042850 + 0.0603552I$ $a = 8.64641 + 1.47836I$ $b = -0.230228 - 0.530376I$	$-0.01147 - 1.88319I$	$-1.26035 + 0.85019I$
$u = 0.1042850 - 0.0603552I$ $a = 8.64641 - 1.47836I$ $b = -0.230228 + 0.530376I$	$-0.01147 + 1.88319I$	$-1.26035 - 0.85019I$
$u = -0.14920 + 1.87935I$ $a = -0.073247 - 0.203177I$ $b = 0.079370 + 0.645887I$	$4.51367 + 2.88709I$	0
$u = -0.14920 - 1.87935I$ $a = -0.073247 + 0.203177I$ $b = 0.079370 - 0.645887I$	$4.51367 - 2.88709I$	0

II. $I_2^u = \langle -1685u^{23} - 3592u^{22} + \cdots + 1939b + 1461,\ 337u^{23} + 663u^{22} + \cdots + 277a + 151,\ u^{24} + 2u^{23} + \cdots + 6u^2 + 1 \rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.21661u^{23} - 2.39350u^{22} + \cdots - 1.84477u - 0.545126 \\ 0.869005u^{23} + 1.85250u^{22} + \cdots - 3.11088u - 0.753481 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.347602u^{23} - 0.541001u^{22} + \cdots - 4.95565u - 1.29861 \\ 0.869005u^{23} + 1.85250u^{22} + \cdots - 3.11088u - 0.753481 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.05260u^{23} + 1.68128u^{22} + \cdots + 6.00516u - 0.453326 \\ 0.522434u^{23} + 3.42290u^{22} + \cdots + 2.73749u - 0.825683 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.300155u^{23} - 0.416710u^{22} + \cdots - 3.97060u - 0.883961 \\ 2.11552u^{23} + 4.47653u^{22} + \cdots - 1.94946u - 0.642599 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.121712u^{23} - 1.14492u^{22} + \cdots + 4.12532u - 0.715833 \\ -0.901496u^{23} + 0.638473u^{22} + \cdots + 0.284167u - 0.878288 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.143889u^{23} + 0.460031u^{22} + \cdots - 0.661166u + 0.916452 \\ u^{21} + 2u^{20} + \cdots - u^3 + 4u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.406395u^{23} - 0.890665u^{22} + \cdots - 1.78494u + 1.79629 \\ -0.777205u^{23} + 0.0618876u^{22} + \cdots - 1.33110u + 2.90356 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{4066}{1939}u^{23} + \frac{18365}{1939}u^{22} + \cdots + \frac{26328}{1939}u + \frac{10242}{1939}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{24} - 12u^{23} + \cdots - 16u + 1$
c_2	$u^{24} - 6u^{22} + \cdots - 8u^2 + 1$
c_3	$u^{24} + 12u^{22} + \cdots + 10u^2 + 1$
c_4, c_5	$u^{24} + 2u^{23} + \cdots + 6u^2 + 1$
c_6	$u^{24} + u^{23} + \cdots - 3u + 1$
c_7	$u^{24} - 6u^{22} + \cdots - 8u^2 + 1$
c_8	$u^{24} + u^{23} + \cdots + u + 1$
c_9	$u^{24} + 12u^{22} + \cdots + 10u^2 + 1$
c_{10}	$u^{24} - u^{23} + \cdots + 3u + 1$
c_{11}	$u^{24} + 8u^{23} + \cdots + u + 1$
c_{12}	$u^{24} - 2u^{23} + \cdots + 6u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{24} + 12y^{23} + \cdots + 4y + 1$
c_2, c_7	$y^{24} - 12y^{23} + \cdots - 16y + 1$
c_3, c_9	$y^{24} + 24y^{23} + \cdots + 20y + 1$
c_4, c_5, c_{12}	$y^{24} + 30y^{23} + \cdots + 12y + 1$
c_6, c_{10}	$y^{24} + 23y^{23} + \cdots + 5y + 1$
c_8	$y^{24} + 11y^{23} + \cdots + 19y + 1$
c_{11}	$y^{24} - 8y^{23} + \cdots + y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.113131 + 1.085500I$ $a = 0.484006 - 0.820118I$ $b = 0.106785 + 1.115640I$	$-0.13509 + 1.91473I$	$-3.80538 - 3.43701I$
$u = 0.113131 - 1.085500I$ $a = 0.484006 + 0.820118I$ $b = 0.106785 - 1.115640I$	$-0.13509 - 1.91473I$	$-3.80538 + 3.43701I$
$u = 0.010909 + 1.291100I$ $a = -0.50635 + 1.75639I$ $b = 0.16121 - 2.04902I$	$-4.33106 + 0.97717I$	$-11.27303 - 0.03325I$
$u = 0.010909 - 1.291100I$ $a = -0.50635 - 1.75639I$ $b = 0.16121 + 2.04902I$	$-4.33106 - 0.97717I$	$-11.27303 + 0.03325I$
$u = -0.693546 + 0.049578I$ $a = -0.394521 + 0.989180I$ $b = 0.353132 + 0.546489I$	$-1.34198 + 2.02611I$	$-4.30842 - 3.95442I$
$u = -0.693546 - 0.049578I$ $a = -0.394521 - 0.989180I$ $b = 0.353132 - 0.546489I$	$-1.34198 - 2.02611I$	$-4.30842 + 3.95442I$
$u = 0.296105 + 1.280590I$ $a = 1.197840 + 0.144804I$ $b = -0.357670 + 1.170760I$	$0.49269 - 4.35200I$	$-6.56880 + 4.28514I$
$u = 0.296105 - 1.280590I$ $a = 1.197840 - 0.144804I$ $b = -0.357670 - 1.170760I$	$0.49269 + 4.35200I$	$-6.56880 - 4.28514I$
$u = 0.126979 + 1.360070I$ $a = -2.38874 + 0.15858I$ $b = 0.732031 - 0.898763I$	$0.26842 - 7.65945I$	$-5.23747 + 7.87875I$
$u = 0.126979 - 1.360070I$ $a = -2.38874 - 0.15858I$ $b = 0.732031 + 0.898763I$	$0.26842 + 7.65945I$	$-5.23747 - 7.87875I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.228171+1.357130I$ $a=\ \ 1.75150-0.37320I$ $b=-0.824161-0.397988I$	$3.21586+5.18507I$	$1.57369-4.91800I$
$u=-0.228171-1.357130I$ $a=\ \ 1.75150+0.37320I$ $b=-0.824161+0.397988I$	$3.21586-5.18507I$	$1.57369+4.91800I$
$u=-0.326108+0.518250I$ $a=-1.45239-1.26861I$ $b=\ \ 0.013207+0.685604I$	$0.01839+2.78521I$	$-0.48950-8.10627I$
$u=-0.326108-0.518250I$ $a=-1.45239+1.26861I$ $b=\ \ 0.013207-0.685604I$	$0.01839-2.78521I$	$-0.48950+8.10627I$
$u=-0.45169+1.35811I$ $a=-0.764534+0.286125I$ $b=\ \ 0.503902+0.904770I$	$1.87501+1.10922I$	$-2.95798-5.93787I$
$u=-0.45169-1.35811I$ $a=-0.764534-0.286125I$ $b=\ \ 0.503902-0.904770I$	$1.87501-1.10922I$	$-2.95798+5.93787I$
$u=-0.07790+1.54958I$ $a=\ \ 0.75737+1.32249I$ $b=-0.151808-0.540193I$	$7.04082+4.09558I$	$7.34529-3.32752I$
$u=-0.07790-1.54958I$ $a=\ \ 0.75737-1.32249I$ $b=-0.151808+0.540193I$	$7.04082-4.09558I$	$7.34529+3.32752I$
$u=\ \ 0.390247+0.175349I$ $a=-1.64397-2.64413I$ $b=-0.496968-0.905233I$	$-3.89298+5.95215I$	$-9.80137-3.18285I$
$u=\ \ 0.390247-0.175349I$ $a=-1.64397+2.64413I$ $b=-0.496968+0.905233I$	$-3.89298-5.95215I$	$-9.80137+3.18285I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.040143 + 0.387273I$ $a = -0.807008 + 0.242917I$ $b = -0.14881 - 1.75983I$	$-7.58139 - 1.13756I$	$0.76901 + 8.80189I$
$u = \quad 0.040143 - 0.387273I$ $a = -0.807008 - 0.242917I$ $b = -0.14881 + 1.75983I$	$-7.58139 + 1.13756I$	$0.76901 - 8.80189I$
$u = -0.20010 + 1.81273I$ $a = -0.233224 - 0.344620I$ $b = \quad 0.109145 + 0.698413I$	$4.37131 + 3.02945I$	$-12.7461 - 16.4628I$
$u = -0.20010 - 1.81273I$ $a = -0.233224 + 0.344620I$ $b = \quad 0.109145 - 0.698413I$	$4.37131 - 3.02945I$	$-12.7461 + 16.4628I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{24}-12u^{23}+\cdots-16u+1)$ $\cdot(u^{117}+53u^{116}+\cdots+10193283u+534361)$
c_2	$(u^{24}-6u^{22}+\cdots-8u^2+1)(u^{117}+u^{116}+\cdots+2625u+731)$
c_3	$(u^{24}+12u^{22}+\cdots+10u^2+1)(u^{117}+u^{116}+\cdots-3840u+7424)$
c_4, c_5	$(u^{24}+2u^{23}+\cdots+6u^2+1)(u^{117}-3u^{116}+\cdots-33u+1)$
c_6	$(u^{24}+u^{23}+\cdots-3u+1)(u^{117}+43u^{115}+\cdots+49298u+2983)$
c_7	$(u^{24}-6u^{22}+\cdots-8u^2+1)(u^{117}+u^{116}+\cdots+2625u+731)$
c_8	$(u^{24}+u^{23}+\cdots+u+1)(u^{117}-8u^{116}+\cdots-336u+32)$
c_9	$(u^{24}+12u^{22}+\cdots+10u^2+1)(u^{117}+u^{116}+\cdots-3840u+7424)$
c_{10}	$(u^{24}-u^{23}+\cdots+3u+1)(u^{117}+43u^{115}+\cdots+49298u+2983)$
c_{11}	$(u^{24}+8u^{23}+\cdots+u+1)(u^{117}-3u^{116}+\cdots+76u-3)$
c_{12}	$(u^{24}-2u^{23}+\cdots+6u^2+1)(u^{117}-3u^{116}+\cdots-33u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{24}+12y^{23}+\cdots+4y+1)$ $\cdot(y^{117}+35y^{116}+\cdots-9546989252781y-285541678321)$
c_2, c_7	$(y^{24}-12y^{23}+\cdots-16y+1)$ $\cdot(y^{117}-53y^{116}+\cdots+10193283y-534361)$
c_3, c_9	$(y^{24}+24y^{23}+\cdots+20y+1)$ $\cdot(y^{117}+75y^{116}+\cdots-1432518656y-55115776)$
c_4, c_5, c_{12}	$(y^{24}+30y^{23}+\cdots+12y+1)(y^{117}+121y^{116}+\cdots+91y-1)$
c_6, c_{10}	$(y^{24}+23y^{23}+\cdots+5y+1)$ $\cdot(y^{117}+86y^{116}+\cdots-304360514y-8898289)$
c_8	$(y^{24}+11y^{23}+\cdots+19y+1)(y^{117}+22y^{116}+\cdots-63744y-1024)$
c_{11}	$(y^{24}-8y^{23}+\cdots+y+1)(y^{117}-5y^{116}+\cdots+526y-9)$