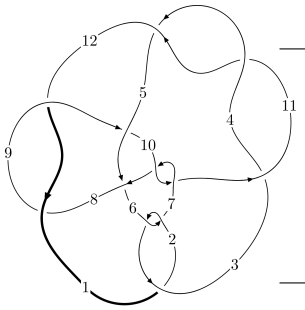
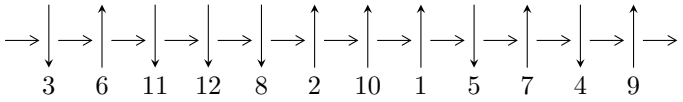
$12a_{0488}$ $(K12a_{0488})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -1.65087 \times 10^{248} u^{118} + 2.72906 \times 10^{248} u^{117} + \cdots + 2.57855 \times 10^{249} b + 1.16888 \times 10^{250}, \\ & 1.43063 \times 10^{250} u^{118} - 6.87154 \times 10^{249} u^{117} + \cdots + 4.89925 \times 10^{250} a - 3.41245 \times 10^{250}, \\ & u^{119} + 30 u^{117} + \cdots - 45 u + 19 \rangle \\ I_2^u = \langle & 13267248 u^{31} + 55919199 u^{30} + \cdots + 2842907 b + 19270283, \\ & 9664909 u^{31} + 35225564 u^{30} + \cdots + 2842907 a + 34133711,\ u^{32} + 3 u^{31} + \cdots + u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 151 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. $\boldsymbol{I_1^u = \langle -1.65 \times 10^{248} u^{118} + 2.73 \times 10^{248} u^{117} + \cdots + 2.58 \times 10^{249} b + 1.17 \times 10^{250},\ 1.43 \times 10^{250} u^{118} - 6.87 \times 10^{249} u^{117} + \cdots + 4.90 \times 10^{250} a - 3.41 \times 10^{250},\ u^{119} + 30 u^{117} + \cdots - 45u + 19 \rangle}$

(i) Arc colorings

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

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

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

$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.292010 u^{118} + 0.140257 u^{117} + \cdots - 3.40277 u + 0.696526 \\ 0.0640231 u^{118} - 0.105837 u^{117} + \cdots + 5.52131 u - 4.53310 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.762522 u^{118} + 0.270935 u^{117} + \cdots + 39.1067 u - 1.83376 \\ -0.352113 u^{118} + 0.127974 u^{117} + \cdots - 14.0857 u + 0.578793 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.245358 u^{118} - 0.0980200 u^{117} + \cdots - 29.2465 u + 7.46517 \\ -0.667052 u^{118} - 0.0422577 u^{117} + \cdots - 19.9808 u + 0.289591 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.356033 u^{118} + 0.246094 u^{117} + \cdots - 8.92408 u + 5.22962 \\ 0.0640231 u^{118} - 0.105837 u^{117} + \cdots + 5.52131 u - 4.53310 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0171301 u^{118} - 0.576448 u^{117} + \cdots + 57.5877 u - 21.0304 \\ 0.146326 u^{118} + 0.138789 u^{117} + \cdots - 4.58356 u - 0.367599 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.233262 u^{118} + 0.761502 u^{117} + \cdots - 46.6619 u + 20.3764 \\ 0.272002 u^{118} + 0.183648 u^{117} + \cdots - 4.44302 u + 5.56541 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0232125 u^{118} - 0.478908 u^{117} + \cdots + 49.3275 u - 17.7018 \\ 0.171123 u^{118} + 0.0186106 u^{117} + \cdots + 8.48928 u - 4.65434 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.15974 u^{118} + 0.0943856 u^{117} + \cdots + 31.1713 u + 1.75865$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{119} + 60u^{118} + \cdots - 4929u - 361$
c_2, c_6	$u^{119} + 30u^{117} + \cdots - 45u + 19$
c_3, c_4, c_{11}	$u^{119} + 3u^{118} + \cdots - 236u + 29$
c_5	$u^{119} - 8u^{118} + \cdots + 84246u - 6676$
c_7, c_{10}	$u^{119} + 6u^{118} + \cdots - 1800u - 200$
c_8, c_{12}	$u^{119} - 3u^{118} + \cdots - 1224u + 2727$
c_9	$u^{119} + 2u^{118} + \cdots - 715329093u - 124700713$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{119} + 12y^{118} + \cdots + 9244951y - 130321$
c_2, c_6	$y^{119} + 60y^{118} + \cdots - 4929y - 361$
c_3, c_4, c_{11}	$y^{119} - 131y^{118} + \cdots - 91218y - 841$
c_5	$y^{119} - 30y^{118} + \cdots + 2009862604y - 44568976$
c_7, c_{10}	$y^{119} + 84y^{118} + \cdots - 1890400y - 40000$
c_8, c_{12}	$y^{119} + 89y^{118} + \cdots - 366139602y - 7436529$
c_9	$y^{119} - 62y^{118} + \cdots + 559579641828065865y - 15550267822708369$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.078496+1.006620I$ $a=-0.066856+0.754688I$ $b=\ \ 0.594329+0.314337I$	$-5.14761+1.62016I$	0
$u=-0.078496-1.006620I$ $a=-0.066856-0.754688I$ $b=\ \ 0.594329-0.314337I$	$-5.14761-1.62016I$	0
$u=\ \ 0.915404+0.371979I$ $a=-0.64387+1.32526I$ $b=-0.52974+1.37782I$	$-6.73097-5.70611I$	0
$u=\ \ 0.915404-0.371979I$ $a=-0.64387-1.32526I$ $b=-0.52974-1.37782I$	$-6.73097+5.70611I$	0
$u=-0.971804+0.146641I$ $a=-1.073250+0.068787I$ $b=-0.607735+0.718070I$	$-4.79116-2.35384I$	0
$u=-0.971804-0.146641I$ $a=-1.073250-0.068787I$ $b=-0.607735-0.718070I$	$-4.79116+2.35384I$	0
$u=\ \ 0.610950+0.757773I$ $a=\ \ 0.088819+1.042710I$ $b=-0.365398+0.311650I$	$0.348231+0.671437I$	0
$u=\ \ 0.610950-0.757773I$ $a=\ \ 0.088819-1.042710I$ $b=-0.365398-0.311650I$	$0.348231-0.671437I$	0
$u=-0.959729+0.055167I$ $a=\ \ 0.740938-0.325683I$ $b=\ \ 0.188991-0.919450I$	$-3.27901-1.00446I$	0
$u=-0.959729-0.055167I$ $a=\ \ 0.740938+0.325683I$ $b=\ \ 0.188991+0.919450I$	$-3.27901+1.00446I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.483520+0.920992I$ $a=-0.761211-1.077530I$ $b=-1.178340-0.167584I$	$1.52635-2.31331I$	0
$u=-0.483520-0.920992I$ $a=-0.761211+1.077530I$ $b=-1.178340+0.167584I$	$1.52635+2.31331I$	0
$u=0.557621+0.879341I$ $a=-1.156820-0.285053I$ $b=-0.682531-0.473571I$	$-0.04577+3.96034I$	0
$u=0.557621-0.879341I$ $a=-1.156820+0.285053I$ $b=-0.682531+0.473571I$	$-0.04577-3.96034I$	0
$u=1.022200+0.281034I$ $a=0.758036-0.978664I$ $b=0.53987-1.35453I$	$-11.3125-11.9691I$	0
$u=1.022200-0.281034I$ $a=0.758036+0.978664I$ $b=0.53987+1.35453I$	$-11.3125+11.9691I$	0
$u=0.001806+0.927592I$ $a=0.78130-2.73177I$ $b=0.345980+0.917689I$	$-9.46778+4.21449I$	0
$u=0.001806-0.927592I$ $a=0.78130+2.73177I$ $b=0.345980-0.917689I$	$-9.46778-4.21449I$	0
$u=-0.297606+1.031700I$ $a=0.945429+0.802633I$ $b=-0.094023-1.195090I$	$-4.19251+1.14824I$	0
$u=-0.297606-1.031700I$ $a=0.945429-0.802633I$ $b=-0.094023+1.195090I$	$-4.19251-1.14824I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.690673+0.825474I$ $a=\ \ 0.150303-0.265933I$ $b=\ \ 0.425489+0.705888I$	$-5.15633-4.20772I$	0
$u=-0.690673-0.825474I$ $a=\ \ 0.150303+0.265933I$ $b=\ \ 0.425489-0.705888I$	$-5.15633+4.20772I$	0
$u=-0.861339+0.322459I$ $a=\ \ 0.654805+0.598022I$ $b=\ \ 0.445085+1.258140I$	$-4.09112+7.73397I$	0
$u=-0.861339-0.322459I$ $a=\ \ 0.654805-0.598022I$ $b=\ \ 0.445085-1.258140I$	$-4.09112-7.73397I$	0
$u=\ \ 0.755924+0.473545I$ $a=-0.289346-0.331743I$ $b=-0.254049-0.757979I$	$0.21533+1.51725I$	0
$u=\ \ 0.755924-0.473545I$ $a=-0.289346+0.331743I$ $b=-0.254049+0.757979I$	$0.21533-1.51725I$	0
$u=-0.247532+1.081640I$ $a=-1.69931-0.65268I$ $b=-0.211828-0.379548I$	$-10.56410-5.20427I$	0
$u=-0.247532-1.081640I$ $a=-1.69931+0.65268I$ $b=-0.211828+0.379548I$	$-10.56410+5.20427I$	0
$u=\ \ 0.391633+1.039930I$ $a=-1.14573+1.23527I$ $b=-0.344583-1.276950I$	$-3.11586+3.83174I$	0
$u=\ \ 0.391633-1.039930I$ $a=-1.14573-1.23527I$ $b=-0.344583+1.276950I$	$-3.11586-3.83174I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.346137+1.071550I$ $a=\ \ 0.095834+0.830795I$ $b=-0.11817-1.56259I$	$-14.9180+0.0272I$	0
$u=-0.346137-1.071550I$ $a=\ \ 0.095834-0.830795I$ $b=-0.11817+1.56259I$	$-14.9180-0.0272I$	0
$u=\ \ 0.624726+0.597146I$ $a=\ \ 0.588397+0.077030I$ $b=\ \ 0.382126-0.228734I$	$-0.091081+1.070900I$	0
$u=\ \ 0.624726-0.597146I$ $a=\ \ 0.588397-0.077030I$ $b=\ \ 0.382126+0.228734I$	$-0.091081-1.070900I$	0
$u=-0.480364+0.710793I$ $a=-1.43891-0.64056I$ $b=-0.977189+0.403194I$	$2.15917-1.67533I$	0
$u=-0.480364-0.710793I$ $a=-1.43891+0.64056I$ $b=-0.977189-0.403194I$	$2.15917+1.67533I$	0
$u=\ \ 0.397106+1.070930I$ $a=-2.06076+1.01698I$ $b=-0.018775-1.148820I$	$-7.02483+1.08003I$	0
$u=\ \ 0.397106-1.070930I$ $a=-2.06076-1.01698I$ $b=-0.018775+1.148820I$	$-7.02483-1.08003I$	0
$u=-0.449317+1.052270I$ $a=\ \ 0.803311+0.104774I$ $b=\ \ 0.510546+0.420152I$	$-5.15832-3.39168I$	0
$u=-0.449317-1.052270I$ $a=\ \ 0.803311-0.104774I$ $b=\ \ 0.510546-0.420152I$	$-5.15832+3.39168I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.340211 + 1.097430I$ $a = -0.483940 - 0.075688I$ $b = 0.52633 - 1.74736I$	$-15.3194 + 3.5604I$	0
$u = 0.340211 - 1.097430I$ $a = -0.483940 + 0.075688I$ $b = 0.52633 + 1.74736I$	$-15.3194 - 3.5604I$	0
$u = -0.376858 + 1.086750I$ $a = 1.80905 + 0.75040I$ $b = 0.622858 - 1.182940I$	$-7.24480 - 3.53534I$	0
$u = -0.376858 - 1.086750I$ $a = 1.80905 - 0.75040I$ $b = 0.622858 + 1.182940I$	$-7.24480 + 3.53534I$	0
$u = -0.694027 + 0.468933I$ $a = 1.232930 + 0.362811I$ $b = 0.833219 - 0.067656I$	$-0.41000 + 3.05649I$	$0. - 3.81841I$
$u = -0.694027 - 0.468933I$ $a = 1.232930 - 0.362811I$ $b = 0.833219 + 0.067656I$	$-0.41000 - 3.05649I$	$0. + 3.81841I$
$u = 0.320264 + 1.120320I$ $a = 0.795246 - 1.083370I$ $b = 1.078340 - 0.475511I$	$-11.25190 - 3.18862I$	0
$u = 0.320264 - 1.120320I$ $a = 0.795246 + 1.083370I$ $b = 1.078340 + 0.475511I$	$-11.25190 + 3.18862I$	0
$u = 0.456472 + 1.081110I$ $a = -0.96919 + 1.09392I$ $b = -1.55906 + 0.30538I$	$-4.93294 + 3.53621I$	0
$u = 0.456472 - 1.081110I$ $a = -0.96919 - 1.09392I$ $b = -1.55906 - 0.30538I$	$-4.93294 - 3.53621I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.048098+0.813192I$ $a=\ 0.546020-1.277930I$ $b=\ 0.10854+1.69149I$	$-13.22850-1.96623I$	$-4.87577+2.86715I$
$u=-0.048098-0.813192I$ $a=\ 0.546020+1.277930I$ $b=\ 0.10854-1.69149I$	$-13.22850+1.96623I$	$-4.87577-2.86715I$
$u=\ 0.783036+0.906435I$ $a=\ 0.732493-0.007307I$ $b=\ 0.282695+0.746721I$	$-1.02424+4.22944I$	0
$u=\ 0.783036-0.906435I$ $a=\ 0.732493+0.007307I$ $b=\ 0.282695-0.746721I$	$-1.02424-4.22944I$	0
$u=-0.590224+1.044060I$ $a=\ 0.791102+0.738149I$ $b=\ 0.953043-0.051008I$	$-2.07376-7.99377I$	0
$u=-0.590224-1.044060I$ $a=\ 0.791102-0.738149I$ $b=\ 0.953043+0.051008I$	$-2.07376+7.99377I$	0
$u=\ 0.515096+1.085300I$ $a=\ 1.37662-0.49500I$ $b=\ 0.176990+1.072700I$	$-2.11670+3.02849I$	0
$u=\ 0.515096-1.085300I$ $a=\ 1.37662+0.49500I$ $b=\ 0.176990-1.072700I$	$-2.11670-3.02849I$	0
$u=\ 0.661505+1.003050I$ $a=\ 0.250669-0.344058I$ $b=\ 0.088473+0.250492I$	$-1.11997+4.05223I$	0
$u=\ 0.661505-1.003050I$ $a=\ 0.250669+0.344058I$ $b=\ 0.088473-0.250492I$	$-1.11997-4.05223I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.992539+0.678641I$ $a=-0.207770+0.955665I$ $b=-0.046228+1.099290I$	$-4.92580-0.78909I$	0
$u=-0.992539-0.678641I$ $a=-0.207770-0.955665I$ $b=-0.046228-1.099290I$	$-4.92580+0.78909I$	0
$u=0.502054+1.093030I$ $a=1.22292-1.16724I$ $b=0.214525+1.380870I$	$-6.25245+6.03157I$	0
$u=0.502054-1.093030I$ $a=1.22292+1.16724I$ $b=0.214525-1.380870I$	$-6.25245-6.03157I$	0
$u=0.733796+0.280195I$ $a=1.83401-0.78059I$ $b=1.084740+0.057816I$	$-7.20334-6.18714I$	$-2.58267+3.56489I$
$u=0.733796-0.280195I$ $a=1.83401+0.78059I$ $b=1.084740-0.057816I$	$-7.20334+6.18714I$	$-2.58267-3.56489I$
$u=-0.154870+1.212180I$ $a=-0.281737-1.085590I$ $b=0.257713+1.193340I$	$-9.35505+4.62458I$	0
$u=-0.154870-1.212180I$ $a=-0.281737+1.085590I$ $b=0.257713-1.193340I$	$-9.35505-4.62458I$	0
$u=0.271992+0.726580I$ $a=-0.928303+0.091287I$ $b=-0.616444+1.054960I$	$-1.81332-0.95297I$	$-7.18259-4.49578I$
$u=0.271992-0.726580I$ $a=-0.928303-0.091287I$ $b=-0.616444-1.054960I$	$-1.81332+0.95297I$	$-7.18259+4.49578I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.543939+1.101550I$ $a=-1.65517-0.58118I$ $b=-0.52640+1.34651I$	$-2.49241-8.21984I$	0
$u=-0.543939-1.101550I$ $a=-1.65517+0.58118I$ $b=-0.52640-1.34651I$	$-2.49241+8.21984I$	0
$u=\ 0.067829+0.768409I$ $a=-0.96334+1.71841I$ $b=\ 0.266423+0.709161I$	$-5.13022+1.42643I$	$-5.68961-4.05615I$
$u=\ 0.067829-0.768409I$ $a=-0.96334-1.71841I$ $b=\ 0.266423-0.709161I$	$-5.13022-1.42643I$	$-5.68961+4.05615I$
$u=-0.547528+1.099960I$ $a=-2.12152+0.21831I$ $b=-0.210386+1.214010I$	$-13.4502-7.1902I$	0
$u=-0.547528-1.099960I$ $a=-2.12152-0.21831I$ $b=-0.210386-1.214010I$	$-13.4502+7.1902I$	0
$u=-0.683513+0.356634I$ $a=-0.618553-0.865136I$ $b=-0.488959-1.144820I$	$-0.31858+3.47575I$	$1.97968-4.35878I$
$u=-0.683513-0.356634I$ $a=-0.618553+0.865136I$ $b=-0.488959+1.144820I$	$-0.31858-3.47575I$	$1.97968+4.35878I$
$u=-0.652062+0.393739I$ $a=-0.80892-1.88179I$ $b=\ 0.016975-1.229550I$	$-11.36620+2.46799I$	$-7.23736-0.73082I$
$u=-0.652062-0.393739I$ $a=-0.80892+1.88179I$ $b=\ 0.016975+1.229550I$	$-11.36620-2.46799I$	$-7.23736+0.73082I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.510279+1.132000I$ $a=-0.585905-0.278024I$ $b=\ 0.128771+1.287050I$	$-6.19002-3.93927I$	0
$u=-0.510279-1.132000I$ $a=-0.585905+0.278024I$ $b=\ 0.128771-1.287050I$	$-6.19002+3.93927I$	0
$u=\ 0.543113+1.116850I$ $a=\ 2.05669-0.15147I$ $b=\ 0.79420+1.37241I$	$-13.8603+3.9134I$	0
$u=\ 0.543113-1.116850I$ $a=\ 2.05669+0.15147I$ $b=\ 0.79420-1.37241I$	$-13.8603-3.9134I$	0
$u=\ 0.674419+0.342927I$ $a=\ 1.00312-2.08896I$ $b=\ 0.53117-1.32772I$	$-11.59410+0.83287I$	$-6.75862-0.75002I$
$u=\ 0.674419-0.342927I$ $a=\ 1.00312+2.08896I$ $b=\ 0.53117+1.32772I$	$-11.59410-0.83287I$	$-6.75862+0.75002I$
$u=\ 0.096088+1.248340I$ $a=\ 0.285246-0.360833I$ $b=-0.21055+1.53910I$	$-12.56200-2.66586I$	0
$u=\ 0.096088-1.248340I$ $a=\ 0.285246+0.360833I$ $b=-0.21055-1.53910I$	$-12.56200+2.66586I$	0
$u=\ 0.538749+1.136970I$ $a=\ 0.972594-0.790349I$ $b=\ 1.369210-0.022434I$	$-9.7097+11.0092I$	0
$u=\ 0.538749-1.136970I$ $a=\ 0.972594+0.790349I$ $b=\ 1.369210+0.022434I$	$-9.7097-11.0092I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.437001 + 0.581796I$ $a = 0.618989 + 0.090764I$ $b = 0.191919 - 0.254301I$	$-0.049496 + 1.115420I$	$-0.81495 - 4.80874I$
$u = 0.437001 - 0.581796I$ $a = 0.618989 - 0.090764I$ $b = 0.191919 + 0.254301I$	$-0.049496 - 1.115420I$	$-0.81495 + 4.80874I$
$u = -0.593259 + 0.405090I$ $a = 1.50120 - 0.06643I$ $b = 0.426259 - 1.057760I$	$-3.89565 - 0.82573I$	$-5.97212 + 1.08099I$
$u = -0.593259 - 0.405090I$ $a = 1.50120 + 0.06643I$ $b = 0.426259 + 1.057760I$	$-3.89565 + 0.82573I$	$-5.97212 - 1.08099I$
$u = 0.685821 + 0.140809I$ $a = -0.088618 - 0.127752I$ $b = -0.227172 - 0.754115I$	$0.172712 + 1.341810I$	$4.35669 - 5.00388I$
$u = 0.685821 - 0.140809I$ $a = -0.088618 + 0.127752I$ $b = -0.227172 + 0.754115I$	$0.172712 - 1.341810I$	$4.35669 + 5.00388I$
$u = -0.589368 + 1.159650I$ $a = 1.61520 + 0.63825I$ $b = 0.45460 - 1.37656I$	$-6.6101 - 13.0759I$	0
$u = -0.589368 - 1.159650I$ $a = 1.61520 - 0.63825I$ $b = 0.45460 + 1.37656I$	$-6.6101 + 13.0759I$	0
$u = -0.561619 + 1.194920I$ $a = -0.411856 - 0.225658I$ $b = -0.769675 - 0.464014I$	$-7.90142 - 3.02909I$	0
$u = -0.561619 - 1.194920I$ $a = -0.411856 + 0.225658I$ $b = -0.769675 + 0.464014I$	$-7.90142 + 3.02909I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.621678 + 1.167560I$ $a = -1.78507 + 0.15260I$ $b = -0.66971 - 1.49268I$	$-9.1673 + 11.3333I$	0
$u = 0.621678 - 1.167560I$ $a = -1.78507 - 0.15260I$ $b = -0.66971 + 1.49268I$	$-9.1673 - 11.3333I$	0
$u = 0.537970 + 0.316163I$ $a = 0.241745 + 0.437529I$ $b = 0.305665 - 1.213190I$	$-4.04390 - 1.75558I$	$-4.82168 + 1.54778I$
$u = 0.537970 - 0.316163I$ $a = 0.241745 - 0.437529I$ $b = 0.305665 + 1.213190I$	$-4.04390 + 1.75558I$	$-4.82168 - 1.54778I$
$u = 0.529899 + 1.277630I$ $a = -0.860939 + 0.572991I$ $b = -0.286354 - 1.123670I$	$-3.87171 + 6.09769I$	0
$u = 0.529899 - 1.277630I$ $a = -0.860939 - 0.572991I$ $b = -0.286354 + 1.123670I$	$-3.87171 - 6.09769I$	0
$u = 0.626802 + 1.233510I$ $a = 1.65574 - 0.32709I$ $b = 0.61948 + 1.44793I$	$-14.2533 + 17.8825I$	0
$u = 0.626802 - 1.233510I$ $a = 1.65574 + 0.32709I$ $b = 0.61948 - 1.44793I$	$-14.2533 - 17.8825I$	0
$u = -0.937303 + 1.056320I$ $a = 0.745739 - 0.529997I$ $b = 0.129943 - 1.063170I$	$-6.02731 - 6.08825I$	0
$u = -0.937303 - 1.056320I$ $a = 0.745739 + 0.529997I$ $b = 0.129943 + 1.063170I$	$-6.02731 + 6.08825I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.619787+1.271060I$ $a=\ \ 1.255140+0.240539I$ $b=\ \ 0.338150-1.076830I$	$-7.09795-6.75128I$	0
$u=-0.619787-1.271060I$ $a=\ \ 1.255140-0.240539I$ $b=\ \ 0.338150+1.076830I$	$-7.09795+6.75128I$	0
$u=\ \ 0.22497+1.43098I$ $a=-0.168772+0.215068I$ $b=\ \ 0.33325-1.38805I$	$-17.2212-7.5435I$	0
$u=\ \ 0.22497-1.43098I$ $a=-0.168772-0.215068I$ $b=\ \ 0.33325+1.38805I$	$-17.2212+7.5435I$	0
$u=-0.53544+1.38996I$ $a=-1.048240-0.603541I$ $b=-0.501083+1.008100I$	$-9.50876-7.77474I$	0
$u=-0.53544-1.38996I$ $a=-1.048240+0.603541I$ $b=-0.501083-1.008100I$	$-9.50876+7.77474I$	0
$u=\ \ 0.204794+0.373554I$ $a=-2.33042+3.03774I$ $b=-0.895901-0.325763I$	$-2.74347+0.07821I$	$-6.22322+1.60330I$
$u=\ \ 0.204794-0.373554I$ $a=-2.33042-3.03774I$ $b=-0.895901+0.325763I$	$-2.74347-0.07821I$	$-6.22322-1.60330I$
$u=-0.307401$ $a=\ \ 3.48306$ $b=-0.351226$	-2.83082	-3.89520

II. $\boldsymbol{I_2^u = \langle 1.33\times 10^7 u^{31} + 5.59\times 10^7 u^{30} + \cdots + 2.84\times 10^6 b + 1.93\times 10^7,\ 9.66\times 10^6 u^{31} + 3.52\times 10^7 u^{30} + \cdots + 2.84\times 10^6 a + 3.41\times 10^7,\ u^{32} + 3u^{31} + \cdots + u + 1\rangle}$

(i) Arc colorings

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

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

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

$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -3.39966u^{31} - 12.3907u^{30} + \cdots - 7.23773u - 12.0066 \\ -4.66679u^{31} - 19.6697u^{30} + \cdots - 3.96613u - 6.77837 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -3.43239u^{31} - 11.5894u^{30} + \cdots - 4.68622u - 10.3560 \\ -4.58213u^{31} - 17.6944u^{30} + \cdots - 11.9616u - 11.0638 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -8.64001u^{31} - 31.6062u^{30} + \cdots - 22.3751u - 1.43627 \\ 5.26505u^{31} + 25.6840u^{30} + \cdots + 13.8497u + 17.3110 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.26713u^{31} + 7.27904u^{30} + \cdots - 3.27160u - 5.22825 \\ -4.66679u^{31} - 19.6697u^{30} + \cdots - 3.96613u - 6.77837 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 17.5481u^{31} + 41.3628u^{30} + \cdots + 28.4769u - 4.54830 \\ -2.23403u^{31} + 0.928813u^{30} + \cdots + 3.61847u + 10.9127 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -10.4327u^{31} - 40.9863u^{30} + \cdots - 28.0060u - 15.3194 \\ -1.87433u^{31} - 1.72077u^{30} + \cdots - 8.88520u + 1.36863 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 16.0792u^{31} + 42.9328u^{30} + \cdots + 28.9923u + 1.17315 \\ 0.642914u^{31} + 4.74166u^{30} + \cdots + 7.77463u + 7.26678 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{23519058}{2842907}u^{31} + \frac{34049853}{2842907}u^{30} + \cdots + \frac{21173213}{2842907}u - \frac{11961054}{2842907}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{32} - 17u^{31} + \cdots - 21u + 1$
c_2	$u^{32} - 3u^{31} + \cdots - u + 1$
c_3, c_4	$u^{32} - 2u^{31} + \cdots + 2u + 1$
c_5	$u^{32} - 3u^{31} + \cdots - 5u + 1$
c_6	$u^{32} + 3u^{31} + \cdots + u + 1$
c_7	$u^{32} + 5u^{31} + \cdots + 5u + 1$
c_8	$u^{32} - 2u^{31} + \cdots - 4u + 1$
c_9	$u^{32} - u^{31} + \cdots + 7u + 1$
c_{10}	$u^{32} - 5u^{31} + \cdots - 5u + 1$
c_{11}	$u^{32} + 2u^{31} + \cdots - 2u + 1$
c_{12}	$u^{32} + 2u^{31} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{32} + 9y^{31} + \cdots - 3y + 1$
c_2, c_6	$y^{32} + 17y^{31} + \cdots + 21y + 1$
c_3, c_4, c_{11}	$y^{32} - 38y^{31} + \cdots - 2y + 1$
c_5	$y^{32} - 5y^{31} + \cdots + 15y + 1$
c_7, c_{10}	$y^{32} + 21y^{31} + \cdots + 17y + 1$
c_8, c_{12}	$y^{32} + 22y^{31} + \cdots + 18y + 1$
c_9	$y^{32} - 9y^{31} + \cdots + 63y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.244355+1.001080I$ $a=\ 0.175786-0.119616I$ $b=\ 0.28700+1.57877I$	$-14.0153-2.9014I$	$-8.58329+4.37270I$
$u=-0.244355-1.001080I$ $a=\ 0.175786+0.119616I$ $b=\ 0.28700-1.57877I$	$-14.0153+2.9014I$	$-8.58329-4.37270I$
$u=\ 0.466507+0.848674I$ $a=-0.931897+0.897797I$ $b=-1.035000-0.058257I$	$1.57895+1.91755I$	$-3.23512+3.06824I$
$u=\ 0.466507-0.848674I$ $a=-0.931897-0.897797I$ $b=-1.035000+0.058257I$	$1.57895-1.91755I$	$-3.23512-3.06824I$
$u=-0.209610+0.904146I$ $a=\ 0.62713+1.54435I$ $b=\ 0.10983-1.67176I$	$-13.60320+1.03060I$	$-8.50803+2.16104I$
$u=-0.209610-0.904146I$ $a=\ 0.62713-1.54435I$ $b=\ 0.10983+1.67176I$	$-13.60320-1.03060I$	$-8.50803-2.16104I$
$u=\ 0.335770+1.018650I$ $a=\ 1.87447-1.41187I$ $b=\ 0.375270+1.145370I$	$-6.10686+2.97201I$	$-5.79820-3.74528I$
$u=\ 0.335770-1.018650I$ $a=\ 1.87447+1.41187I$ $b=\ 0.375270-1.145370I$	$-6.10686-2.97201I$	$-5.79820+3.74528I$
$u=\ 0.738935+0.551423I$ $a=-0.293292-0.794585I$ $b=-0.233844-0.798910I$	$-0.41683+1.58308I$	$-7.57916-3.54516I$
$u=\ 0.738935-0.551423I$ $a=-0.293292+0.794585I$ $b=-0.233844+0.798910I$	$-0.41683-1.58308I$	$-7.57916+3.54516I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.063360+0.262371I$ $a=-0.709244+0.075805I$ $b=-0.330876+0.825193I$	$-2.72342-1.51623I$	$2.90616+4.93151I$
$u=-1.063360-0.262371I$ $a=-0.709244-0.075805I$ $b=-0.330876-0.825193I$	$-2.72342+1.51623I$	$2.90616-4.93151I$
$u=0.272554+0.810542I$ $a=0.94056-1.46434I$ $b=0.445189-0.929042I$	$-5.25626-0.40933I$	$-6.95010-2.39281I$
$u=0.272554-0.810542I$ $a=0.94056+1.46434I$ $b=0.445189+0.929042I$	$-5.25626+0.40933I$	$-6.95010+2.39281I$
$u=-0.480049+1.048670I$ $a=-0.952566-0.562126I$ $b=-1.121920-0.298361I$	$-3.88311-3.23962I$	$-1.19442+2.52336I$
$u=-0.480049-1.048670I$ $a=-0.952566+0.562126I$ $b=-1.121920+0.298361I$	$-3.88311+3.23962I$	$-1.19442-2.52336I$
$u=-0.521856+0.602990I$ $a=-0.87576-1.61499I$ $b=-0.675926+0.264624I$	$-2.33282-0.83391I$	$-0.98287+5.28157I$
$u=-0.521856-0.602990I$ $a=-0.87576+1.61499I$ $b=-0.675926-0.264624I$	$-2.33282+0.83391I$	$-0.98287-5.28157I$
$u=0.720595+1.012900I$ $a=0.519796+0.434107I$ $b=0.012893+0.731422I$	$-1.73523+4.05892I$	$-11.07407-2.72386I$
$u=0.720595-1.012900I$ $a=0.519796-0.434107I$ $b=0.012893-0.731422I$	$-1.73523-4.05892I$	$-11.07407+2.72386I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.404463+1.178790I$ $a=\ \ 1.87923+0.69754I$ $b=\ \ 0.443975-0.781421I$	$-10.82960-6.50752I$	$-9.69732+6.51911I$
$u=-0.404463-1.178790I$ $a=\ \ 1.87923-0.69754I$ $b=\ \ 0.443975+0.781421I$	$-10.82960+6.50752I$	$-9.69732-6.51911I$
$u=\ \ 0.469457+1.157090I$ $a=-0.859440+0.796950I$ $b=-0.219767-1.254670I$	$-4.20018+4.91022I$	$-6.82400-3.99429I$
$u=\ \ 0.469457-1.157090I$ $a=-0.859440-0.796950I$ $b=-0.219767+1.254670I$	$-4.20018-4.91022I$	$-6.82400+3.99429I$
$u=-0.240239+0.657275I$ $a=\ \ 0.31562+3.69610I$ $b=\ \ 0.365654+0.540621I$	$-8.66222+3.74835I$	$-2.43697-0.42632I$
$u=-0.240239-0.657275I$ $a=\ \ 0.31562-3.69610I$ $b=\ \ 0.365654-0.540621I$	$-8.66222-3.74835I$	$-2.43697+0.42632I$
$u=-0.866303+1.047850I$ $a=\ \ 0.015620+0.269050I$ $b=-0.054903-0.629002I$	$-4.68720-5.21266I$	$-1.37626+6.81309I$
$u=-0.866303-1.047850I$ $a=\ \ 0.015620-0.269050I$ $b=-0.054903+0.629002I$	$-4.68720+5.21266I$	$-1.37626-6.81309I$
$u=-0.63652+1.33642I$ $a=-1.100650-0.306996I$ $b=-0.360587+1.134080I$	$-7.23142-7.49462I$	$-7.19409+10.36504I$
$u=-0.63652-1.33642I$ $a=-1.100650+0.306996I$ $b=-0.360587-1.134080I$	$-7.23142+7.49462I$	$-7.19409-10.36504I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.162934 + 0.435737I$		
$a = -0.625356 - 1.074570I$	$-1.43186 - 1.52438I$	$-0.47227 + 4.77149I$
$b = -0.506984 + 1.007970I$		
$u = \quad 0.162934 - 0.435737I$		
$a = -0.625356 + 1.074570I$	$-1.43186 + 1.52438I$	$-0.47227 - 4.77149I$
$b = -0.506984 - 1.007970I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{32}-17u^{31}+\cdots-21u+1)(u^{119}+60u^{118}+\cdots-4929u-361)$
c_2	$(u^{32}-3u^{31}+\cdots-u+1)(u^{119}+30u^{117}+\cdots-45u+19)$
c_3, c_4	$(u^{32}-2u^{31}+\cdots+2u+1)(u^{119}+3u^{118}+\cdots-236u+29)$
c_5	$(u^{32}-3u^{31}+\cdots-5u+1)(u^{119}-8u^{118}+\cdots+84246u-6676)$
c_6	$(u^{32}+3u^{31}+\cdots+u+1)(u^{119}+30u^{117}+\cdots-45u+19)$
c_7	$(u^{32}+5u^{31}+\cdots+5u+1)(u^{119}+6u^{118}+\cdots-1800u-200)$
c_8	$(u^{32}-2u^{31}+\cdots-4u+1)(u^{119}-3u^{118}+\cdots-1224u+2727)$
c_9	$(u^{32}-u^{31}+\cdots+7u+1)$ $\cdot(u^{119}+2u^{118}+\cdots-715329093u-124700713)$
c_{10}	$(u^{32}-5u^{31}+\cdots-5u+1)(u^{119}+6u^{118}+\cdots-1800u-200)$
c_{11}	$(u^{32}+2u^{31}+\cdots-2u+1)(u^{119}+3u^{118}+\cdots-236u+29)$
c_{12}	$(u^{32}+2u^{31}+\cdots+4u+1)(u^{119}-3u^{118}+\cdots-1224u+2727)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{32}+9y^{31}+\cdots-3y+1)(y^{119}+12y^{118}+\cdots+9244951y-130321)$
c_2, c_6	$(y^{32}+17y^{31}+\cdots+21y+1)(y^{119}+60y^{118}+\cdots-4929y-361)$
c_3, c_4, c_{11}	$(y^{32}-38y^{31}+\cdots-2y+1)(y^{119}-131y^{118}+\cdots-91218y-841)$
c_5	$(y^{32}-5y^{31}+\cdots+15y+1)$ $\cdot(y^{119}-30y^{118}+\cdots+2009862604y-44568976)$
c_7, c_{10}	$(y^{32}+21y^{31}+\cdots+17y+1)$ $\cdot(y^{119}+84y^{118}+\cdots-1890400y-40000)$
c_8, c_{12}	$(y^{32}+22y^{31}+\cdots+18y+1)$ $\cdot(y^{119}+89y^{118}+\cdots-366139602y-7436529)$
c_9	$(y^{32}-9y^{31}+\cdots+63y+1)$ $\cdot(y^{119}-62y^{118}+\cdots+559579641828065865y-15550267822708369)$