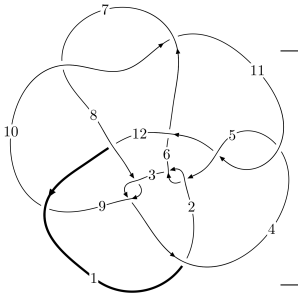
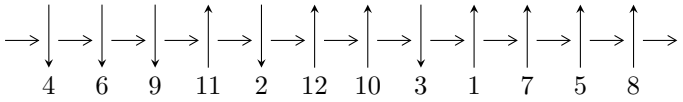
$12a_{0925}$ $(K12a_{0925})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.37208 \times 10^{955} u^{174} - 5.29428 \times 10^{954} u^{173} + \cdots + 1.52887 \times 10^{955} b + 1.80446 \times 10^{959}, \\ & - 6.40167 \times 10^{959} u^{174} - 5.34264 \times 10^{958} u^{173} + \cdots + 4.00718 \times 10^{958} a + 1.81672 \times 10^{963}, \\ & u^{175} + u^{174} + \cdots - 2853u - 2621 \rangle \\ I_2^u = \langle & 3.32259 \times 10^{40} u^{52} - 2.34870 \times 10^{40} u^{51} + \cdots + 1.43120 \times 10^{38} b + 4.37472 \times 10^{40}, \\ & - 1.47911 \times 10^{41} u^{52} + 8.39026 \times 10^{40} u^{51} + \cdots + 1.43120 \times 10^{38} a - 1.72574 \times 10^{41}, \\ & u^{53} - 14u^{51} + \cdots - 11u^2 + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 228 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. $\boldsymbol{I_1^u = \langle -6.37 \times 10^{955} u^{174} - 5.29 \times 10^{954} u^{173} + \cdots + 1.53 \times 10^{955} b + 1.80 \times 10^{959},\ -6.40 \times 10^{959} u^{174} - 5.34 \times 10^{958} u^{173} + \cdots + 4.01 \times 10^{958} a + 1.82 \times 10^{963},\ u^{175} + u^{174} + \cdots - 2853u - 2621 \rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 15.9755u^{174} + 1.33327u^{173} + \cdots - 36.3411u - 45336.5 \\ 4.16783u^{174} + 0.346286u^{173} + \cdots - 35.5749u - 11802.5 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -7.11073u^{174} - 0.574352u^{173} + \cdots - 66.0517u + 20079.5 \\ -0.176273u^{174} + 0.265217u^{173} + \cdots + 849.646u - 407.719 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.19707u^{174} + 0.161818u^{173} + \cdots + 772.531u + 2539.92 \\ 4.37966u^{174} + 0.848427u^{173} + \cdots + 1577.97u - 13977.9 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 13.0539u^{174} + 0.606725u^{173} + \cdots - 1662.11u - 35463.6 \\ 9.15087u^{174} + 0.394872u^{173} + \cdots - 1353.36u - 24800.8 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -5.51568u^{174} - 0.379165u^{173} + \cdots + 107.438u + 15356.9 \\ 0.0610535u^{174} + 0.307444u^{173} + \cdots + 912.877u - 1160.90 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1.37797u^{174} - 0.870688u^{173} + \cdots - 3364.65u - 674.753 \\ 5.18568u^{174} - 0.184804u^{173} + \cdots - 2096.15u - 12781.4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.476362u^{174} + 0.160489u^{173} + \cdots + 766.812u + 911.061 \\ -6.49332u^{174} - 0.319529u^{173} + \cdots + 879.629u + 17886.6 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -13.6307u^{174} - 1.30945u^{173} + \cdots - 209.392u + 39302.5 \\ -7.00162u^{174} - 0.711508u^{173} + \cdots - 27.9154u + 20160.6 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -32.4777u^{174} - 3.37563u^{173} + \cdots - 2284.15u + 94315.5$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{175} - 8u^{174} + \cdots + 1890868908462u - 280537441299$
c_2, c_5	$u^{175} + 4u^{174} + \cdots + 417270u + 63403$
c_3, c_8	$u^{175} + u^{174} + \cdots - 2853u - 2621$
c_4, c_{11}	$u^{175} + u^{174} + \cdots - 21401u + 1549$
c_6	$u^{175} - 2u^{174} + \cdots - 657105u + 475777$
c_7, c_{10}	$u^{175} + 6u^{174} + \cdots - 343340u - 23572$
c_9	$u^{175} - 6u^{174} + \cdots + 4627516764u + 594875704$
c_{12}	$u^{175} + 2u^{174} + \cdots - 218568u + 5697$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{175} - 52y^{174} + \cdots + 3.27 \times 10^{24}y - 7.87 \times 10^{22}$
c_2, c_5	$y^{175} - 96y^{174} + \cdots + 241757138316y - 4019940409$
c_3, c_8	$y^{175} - 107y^{174} + \cdots + 304239221y - 6869641$
c_4, c_{11}	$y^{175} - 87y^{174} + \cdots + 251496317y - 2399401$
c_6	$y^{175} + 18y^{174} + \cdots - 12874725123895y - 226363753729$
c_7, c_{10}	$y^{175} + 122y^{174} + \cdots - 6061106160y - 555639184$
c_9	$y^{175} + 62y^{174} + \cdots - 2.61 \times 10^{19}y - 3.54 \times 10^{17}$
c_{12}	$y^{175} + 62y^{174} + \cdots - 12813231636y - 32455809$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.008340+0.114977I$ $a=\ \ 0.06770+2.00673I$ $b=-0.639902-0.509941I$	$-0.72811+5.24649I$	0
$u=-1.008340-0.114977I$ $a=\ \ 0.06770-2.00673I$ $b=-0.639902+0.509941I$	$-0.72811-5.24649I$	0
$u=\ \ 0.052380+0.983705I$ $a=-0.271367+0.895018I$ $b=-0.175627-1.046830I$	$0.09640+8.25979I$	0
$u=\ \ 0.052380-0.983705I$ $a=-0.271367-0.895018I$ $b=-0.175627+1.046830I$	$0.09640-8.25979I$	0
$u=-0.969775+0.092941I$ $a=\ \ 0.404042+1.238470I$ $b=\ \ 0.56097+1.30163I$	$0.779150-0.881346I$	0
$u=-0.969775-0.092941I$ $a=\ \ 0.404042-1.238470I$ $b=\ \ 0.56097-1.30163I$	$0.779150+0.881346I$	0
$u=\ \ 0.894099+0.360744I$ $a=-0.117949+0.659180I$ $b=\ \ 0.740112-0.004916I$	$-6.23141+0.57035I$	0
$u=\ \ 0.894099-0.360744I$ $a=-0.117949-0.659180I$ $b=\ \ 0.740112+0.004916I$	$-6.23141-0.57035I$	0
$u=-0.731796+0.610840I$ $a=-0.568517+0.583153I$ $b=\ \ 1.120150+0.353376I$	$1.57326-1.76025I$	0
$u=-0.731796-0.610840I$ $a=-0.568517-0.583153I$ $b=\ \ 1.120150-0.353376I$	$1.57326+1.76025I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.918709 + 0.237229I$ $a = 0.270110 - 0.894702I$ $b = -0.536386 + 0.661275I$	$2.86322 - 1.32931I$	0
$u = 0.918709 - 0.237229I$ $a = 0.270110 + 0.894702I$ $b = -0.536386 - 0.661275I$	$2.86322 + 1.32931I$	0
$u = 1.055870 + 0.100541I$ $a = -0.402174 + 0.029672I$ $b = 0.529728 + 0.479846I$	$-6.48509 + 0.71958I$	0
$u = 1.055870 - 0.100541I$ $a = -0.402174 - 0.029672I$ $b = 0.529728 - 0.479846I$	$-6.48509 - 0.71958I$	0
$u = -1.058450 + 0.124315I$ $a = -2.55497 - 0.49443I$ $b = -1.283910 + 0.415138I$	$-3.02613 + 1.59757I$	0
$u = -1.058450 - 0.124315I$ $a = -2.55497 + 0.49443I$ $b = -1.283910 - 0.415138I$	$-3.02613 - 1.59757I$	0
$u = -0.923940 + 0.062597I$ $a = -1.118240 + 0.104649I$ $b = -0.819568 + 1.135490I$	$0.99939 + 1.70499I$	0
$u = -0.923940 - 0.062597I$ $a = -1.118240 - 0.104649I$ $b = -0.819568 - 1.135490I$	$0.99939 - 1.70499I$	0
$u = -0.815324 + 0.429136I$ $a = -0.19301 - 1.45744I$ $b = -1.034920 + 0.535439I$	$1.35633 + 5.98085I$	0
$u = -0.815324 - 0.429136I$ $a = -0.19301 + 1.45744I$ $b = -1.034920 - 0.535439I$	$1.35633 - 5.98085I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.912619 + 0.122850I$ $a = -0.227881 - 1.307120I$ $b = -0.102478 - 1.254120I$	$1.44152 - 3.97683I$	0
$u = 0.912619 - 0.122850I$ $a = -0.227881 + 1.307120I$ $b = -0.102478 + 1.254120I$	$1.44152 + 3.97683I$	0
$u = 0.857554 + 0.331513I$ $a = 0.75497 + 1.63777I$ $b = -1.030800 - 0.444653I$	$-1.97267 - 9.14333I$	0
$u = 0.857554 - 0.331513I$ $a = 0.75497 - 1.63777I$ $b = -1.030800 + 0.444653I$	$-1.97267 + 9.14333I$	0
$u = 0.766214 + 0.499618I$ $a = -0.91660 - 1.50789I$ $b = 1.133460 - 0.201915I$	$-1.82975 + 5.58360I$	0
$u = 0.766214 - 0.499618I$ $a = -0.91660 + 1.50789I$ $b = 1.133460 + 0.201915I$	$-1.82975 - 5.58360I$	0
$u = -0.681198 + 0.607884I$ $a = 0.341632 + 0.617565I$ $b = 0.713431 + 0.601410I$	$-1.43546 - 3.18285I$	0
$u = -0.681198 - 0.607884I$ $a = 0.341632 - 0.617565I$ $b = 0.713431 - 0.601410I$	$-1.43546 + 3.18285I$	0
$u = 1.055600 + 0.262250I$ $a = -2.41064 + 0.62625I$ $b = -1.359230 - 0.365500I$	$-6.00895 - 5.26943I$	0
$u = 1.055600 - 0.262250I$ $a = -2.41064 - 0.62625I$ $b = -1.359230 + 0.365500I$	$-6.00895 + 5.26943I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.983587 + 0.477897I$ $a = 1.267250 - 0.165255I$ $b = 0.727556 + 0.809995I$	$-1.49248 - 2.13116I$	0
$u = 0.983587 - 0.477897I$ $a = 1.267250 + 0.165255I$ $b = 0.727556 - 0.809995I$	$-1.49248 + 2.13116I$	0
$u = -0.890066 + 0.167770I$ $a = 0.478732 + 0.037537I$ $b = 0.565199 - 0.581016I$	$-1.47170 + 0.87487I$	0
$u = -0.890066 - 0.167770I$ $a = 0.478732 - 0.037537I$ $b = 0.565199 + 0.581016I$	$-1.47170 - 0.87487I$	0
$u = 0.750069 + 0.798108I$ $a = 0.599263 - 0.776735I$ $b = 0.714467 - 0.072197I$	$0.409841 + 0.584531I$	0
$u = 0.750069 - 0.798108I$ $a = 0.599263 + 0.776735I$ $b = 0.714467 + 0.072197I$	$0.409841 - 0.584531I$	0
$u = 1.110910 + 0.016667I$ $a = -2.93249 + 0.41183I$ $b = -1.149250 - 0.374540I$	$-7.32014 + 1.45894I$	0
$u = 1.110910 - 0.016667I$ $a = -2.93249 - 0.41183I$ $b = -1.149250 + 0.374540I$	$-7.32014 - 1.45894I$	0
$u = -0.885283 + 0.024542I$ $a = 4.60948 - 1.59603I$ $b = 0.758385 - 0.020744I$	$-0.05882 - 4.46982I$	0
$u = -0.885283 - 0.024542I$ $a = 4.60948 + 1.59603I$ $b = 0.758385 + 0.020744I$	$-0.05882 + 4.46982I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.077380+0.293356I$ $a=\ \ 2.45114+0.40387I$ $b=\ \ 1.48414-0.56183I$	$-3.80384+10.36360I$	0
$u=-1.077380-0.293356I$ $a=\ \ 2.45114-0.40387I$ $b=\ \ 1.48414+0.56183I$	$-3.80384-10.36360I$	0
$u=\ \ 0.882540$ $a=\ \ 4.88625$ $b=\ \ 0.757507$	3.90842	0
$u=-1.061440+0.363688I$ $a=\ \ 1.55159+0.32538I$ $b=\ \ 0.917976-0.612189I$	$-1.40636+2.81522I$	0
$u=-1.061440-0.363688I$ $a=\ \ 1.55159-0.32538I$ $b=\ \ 0.917976+0.612189I$	$-1.40636-2.81522I$	0
$u=\ \ 1.104410+0.224190I$ $a=\ \ 2.09979-0.37926I$ $b=\ \ 1.30053+0.77145I$	$-1.80068-6.55713I$	0
$u=\ \ 1.104410-0.224190I$ $a=\ \ 2.09979+0.37926I$ $b=\ \ 1.30053-0.77145I$	$-1.80068+6.55713I$	0
$u=\ \ 0.313944+0.808747I$ $a=\ \ 0.103102+0.433947I$ $b=-0.850043-0.444944I$	$1.81980+0.11582I$	0
$u=\ \ 0.313944-0.808747I$ $a=\ \ 0.103102-0.433947I$ $b=-0.850043+0.444944I$	$1.81980-0.11582I$	0
$u=-1.126140+0.168539I$ $a=\ \ 1.54899+1.33006I$ $b=\ \ 0.986495-0.615170I$	$-7.60050+5.26863I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.126140-0.168539I$ $a=1.54899-1.33006I$ $b=0.986495+0.615170I$	$-7.60050-5.26863I$	0
$u=1.101550+0.327879I$ $a=0.601592-0.264941I$ $b=0.463340+0.801709I$	$-1.11431-4.04608I$	0
$u=1.101550-0.327879I$ $a=0.601592+0.264941I$ $b=0.463340-0.801709I$	$-1.11431+4.04608I$	0
$u=0.294355+1.111750I$ $a=0.089913+0.361865I$ $b=1.46643-0.36244I$	$-5.19682-3.12832I$	0
$u=0.294355-1.111750I$ $a=0.089913-0.361865I$ $b=1.46643+0.36244I$	$-5.19682+3.12832I$	0
$u=-0.555505+1.007470I$ $a=0.056272+0.654668I$ $b=-1.065360-0.663216I$	$-4.41497-0.27045I$	0
$u=-0.555505-1.007470I$ $a=0.056272-0.654668I$ $b=-1.065360+0.663216I$	$-4.41497+0.27045I$	0
$u=-1.050050+0.493222I$ $a=-0.510811+0.751441I$ $b=0.648656-0.018944I$	$-5.54541+6.77031I$	0
$u=-1.050050-0.493222I$ $a=-0.510811-0.751441I$ $b=0.648656+0.018944I$	$-5.54541-6.77031I$	0
$u=1.061500+0.473801I$ $a=-0.148639-0.686284I$ $b=0.394648-0.169968I$	$-0.57205-4.46548I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.061500 - 0.473801I$ $a = -0.148639 + 0.686284I$ $b = 0.394648 + 0.169968I$	$-0.57205 + 4.46548I$	0
$u = -0.130560 + 0.823512I$ $a = 0.590084 + 0.629492I$ $b = 0.096768 - 0.484498I$	$-2.76466 - 3.57057I$	0
$u = -0.130560 - 0.823512I$ $a = 0.590084 - 0.629492I$ $b = 0.096768 + 0.484498I$	$-2.76466 + 3.57057I$	0
$u = 0.140766 + 0.807970I$ $a = -0.59109 - 1.62492I$ $b = -0.088000 + 0.863080I$	$5.30870 - 1.78531I$	0
$u = 0.140766 - 0.807970I$ $a = -0.59109 + 1.62492I$ $b = -0.088000 - 0.863080I$	$5.30870 + 1.78531I$	0
$u = -0.148594 + 1.173010I$ $a = -0.407767 + 0.518930I$ $b = -1.282450 - 0.593367I$	$-3.3301 - 14.1176I$	0
$u = -0.148594 - 1.173010I$ $a = -0.407767 - 0.518930I$ $b = -1.282450 + 0.593367I$	$-3.3301 + 14.1176I$	0
$u = -1.157350 + 0.257215I$ $a = -0.137219 + 0.951199I$ $b = 0.277699 + 0.698109I$	$-3.62656 + 4.64520I$	0
$u = -1.157350 - 0.257215I$ $a = -0.137219 - 0.951199I$ $b = 0.277699 - 0.698109I$	$-3.62656 - 4.64520I$	0
$u = 0.764638 + 0.280136I$ $a = -0.137922 - 0.343939I$ $b = -0.161390 - 0.992421I$	$1.47080 + 1.90539I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.764638 - 0.280136I$ $a = -0.137922 + 0.343939I$ $b = -0.161390 + 0.992421I$	$1.47080 - 1.90539I$	0
$u = 0.619257 + 0.514956I$ $a = -0.66997 + 1.96532I$ $b = -0.934962 - 0.523006I$	$-3.97045 - 4.40481I$	0
$u = 0.619257 - 0.514956I$ $a = -0.66997 - 1.96532I$ $b = -0.934962 + 0.523006I$	$-3.97045 + 4.40481I$	0
$u = -0.640063 + 0.469754I$ $a = -1.268060 - 0.484721I$ $b = -1.026780 + 0.705633I$	$-1.34087 + 7.56322I$	0
$u = -0.640063 - 0.469754I$ $a = -1.268060 + 0.484721I$ $b = -1.026780 - 0.705633I$	$-1.34087 - 7.56322I$	0
$u = 0.018313 + 0.788627I$ $a = 0.695905 + 0.160230I$ $b = 1.312860 + 0.110976I$	$-5.42053 - 0.73784I$	0
$u = 0.018313 - 0.788627I$ $a = 0.695905 - 0.160230I$ $b = 1.312860 - 0.110976I$	$-5.42053 + 0.73784I$	0
$u = 0.068963 + 1.210180I$ $a = 0.609750 + 0.396868I$ $b = 1.159300 - 0.409788I$	$-5.77869 + 7.27147I$	0
$u = 0.068963 - 1.210180I$ $a = 0.609750 - 0.396868I$ $b = 1.159300 + 0.409788I$	$-5.77869 - 7.27147I$	0
$u = 1.174220 + 0.406921I$ $a = 2.56128 - 0.72573I$ $b = 1.227910 + 0.245565I$	$-8.17152 - 7.99853I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$1.174220-0.406921I$		
$a=$	$2.56128+0.72573I$	$-8.17152+7.99853I$	0
$b=$	$1.227910-0.245565I$		
$u=$	$-0.245489+1.220510I$		
$a=$	$0.554382-0.267502I$	$-1.92129-1.96501I$	0
$b=$	$1.155370+0.256181I$		
$u=$	$-0.245489-1.220510I$		
$a=$	$0.554382+0.267502I$	$-1.92129+1.96501I$	0
$b=$	$1.155370-0.256181I$		
$u=$	$-0.619235+0.424388I$		
$a=$	$0.730260-0.027654I$	$-1.32344+1.75688I$	0
$b=$	$0.138368-0.650286I$		
$u=$	$-0.619235-0.424388I$		
$a=$	$0.730260+0.027654I$	$-1.32344-1.75688I$	0
$b=$	$0.138368+0.650286I$		
$u=$	$-0.499157+0.558083I$		
$a=$	$1.17487-0.96889I$	$-3.85851-2.55091I$	0
$b=$	$-0.829562+0.095388I$		
$u=$	$-0.499157-0.558083I$		
$a=$	$1.17487+0.96889I$	$-3.85851+2.55091I$	0
$b=$	$-0.829562-0.095388I$		
$u=$	$-1.226400+0.318205I$		
$a=$	$2.44179+0.60903I$	$-3.35407+7.74672I$	0
$b=$	$1.166520-0.436983I$		
$u=$	$-1.226400-0.318205I$		
$a=$	$2.44179-0.60903I$	$-3.35407-7.74672I$	0
$b=$	$1.166520+0.436983I$		
$u=$	$-1.117490+0.599149I$		
$a=$	$1.51665+1.46224I$	$-6.93585+0.03498I$	0
$b=$	$1.002940-0.072372I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.117490-0.599149I$ $a=\ 1.51665-1.46224I$ $b=\ 1.002940+0.072372I$	$-6.93585-0.03498I$	0
$u=\ 1.254460+0.223040I$ $a=\ 2.65308-0.66422I$ $b=\ 1.135600+0.530534I$	$-6.13100-9.36045I$	0
$u=\ 1.254460-0.223040I$ $a=\ 2.65308+0.66422I$ $b=\ 1.135600-0.530534I$	$-6.13100+9.36045I$	0
$u=-1.087070+0.683942I$ $a=\ 0.272679+0.266678I$ $b=\ 0.843710+0.265451I$	$0.002842+1.006490I$	0
$u=-1.087070-0.683942I$ $a=\ 0.272679-0.266678I$ $b=\ 0.843710-0.265451I$	$0.002842-1.006490I$	0
$u=\ 0.661990+0.268164I$ $a=-0.688289-0.333784I$ $b=-0.839786-0.696152I$	$0.56526-5.07278I$	0
$u=\ 0.661990-0.268164I$ $a=-0.688289+0.333784I$ $b=-0.839786+0.696152I$	$0.56526+5.07278I$	0
$u=\ 0.335407+1.244040I$ $a=-1.266040-0.155532I$ $b=-0.717952+0.021782I$	$3.71341-3.52873I$	0
$u=\ 0.335407-1.244040I$ $a=-1.266040+0.155532I$ $b=-0.717952-0.021782I$	$3.71341+3.52873I$	0
$u=\ 1.191900+0.500396I$ $a=\ 0.157852-0.714867I$ $b=\ 0.636888-0.475720I$	$-0.98080-4.93698I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.191900 - 0.500396I$ $a = 0.157852 + 0.714867I$ $b = 0.636888 + 0.475720I$	$-0.98080 + 4.93698I$	0
$u = -0.638722 + 1.126880I$ $a = -0.377501 - 0.675726I$ $b = -1.081380 + 0.332470I$	$1.67900 + 5.40673I$	0
$u = -0.638722 - 1.126880I$ $a = -0.377501 + 0.675726I$ $b = -1.081380 - 0.332470I$	$1.67900 - 5.40673I$	0
$u = 1.261520 + 0.301281I$ $a = 0.579930 + 0.064910I$ $b = 0.304684 + 1.160470I$	$-1.08964 - 3.91173I$	0
$u = 1.261520 - 0.301281I$ $a = 0.579930 - 0.064910I$ $b = 0.304684 - 1.160470I$	$-1.08964 + 3.91173I$	0
$u = -0.647164 + 0.262298I$ $a = 0.33760 + 1.75787I$ $b = -0.739546 + 0.278175I$	$-5.12039 + 4.35071I$	0
$u = -0.647164 - 0.262298I$ $a = 0.33760 - 1.75787I$ $b = -0.739546 - 0.278175I$	$-5.12039 - 4.35071I$	0
$u = -1.231500 + 0.453162I$ $a = -2.08904 - 0.92007I$ $b = -1.49855 + 0.17664I$	$-9.09985 + 5.23913I$	0
$u = -1.231500 - 0.453162I$ $a = -2.08904 + 0.92007I$ $b = -1.49855 - 0.17664I$	$-9.09985 - 5.23913I$	0
$u = 0.221710 + 1.307120I$ $a = -0.285676 - 0.469695I$ $b = -1.28686 + 0.60598I$	$1.42759 + 7.54557I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.221710 - 1.307120I$ $a = -0.285676 + 0.469695I$ $b = -1.28686 - 0.60598I$	$1.42759 - 7.54557I$	0
$u = 1.230740 + 0.511440I$ $a = -1.74491 + 1.14224I$ $b = -1.368610 - 0.170839I$	$-8.76679 - 3.97759I$	0
$u = 1.230740 - 0.511440I$ $a = -1.74491 - 1.14224I$ $b = -1.368610 + 0.170839I$	$-8.76679 + 3.97759I$	0
$u = 1.161600 + 0.654083I$ $a = -0.249946 - 0.007995I$ $b = 0.796581 - 0.849957I$	$-5.49836 - 0.49981I$	0
$u = 1.161600 - 0.654083I$ $a = -0.249946 + 0.007995I$ $b = 0.796581 + 0.849957I$	$-5.49836 + 0.49981I$	0
$u = -1.254300 + 0.476731I$ $a = 0.305065 - 0.131370I$ $b = -0.036167 - 0.925380I$	$-6.25848 + 8.38918I$	0
$u = -1.254300 - 0.476731I$ $a = 0.305065 + 0.131370I$ $b = -0.036167 + 0.925380I$	$-6.25848 - 8.38918I$	0
$u = 1.332760 + 0.251941I$ $a = 1.53065 - 0.17190I$ $b = 1.36195 - 0.43879I$	$-10.53900 - 3.28777I$	0
$u = 1.332760 - 0.251941I$ $a = 1.53065 + 0.17190I$ $b = 1.36195 + 0.43879I$	$-10.53900 + 3.28777I$	0
$u = 0.276801 + 0.570508I$ $a = 0.286998 + 0.049882I$ $b = -0.444883 + 0.822005I$	$0.37927 - 1.97711I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.276801 - 0.570508I$ $a = 0.286998 - 0.049882I$ $b = -0.444883 - 0.822005I$	$0.37927 + 1.97711I$	0
$u = 0.375201 + 0.492490I$ $a = 0.744863 - 0.250786I$ $b = -0.166968 + 0.139307I$	$1.114590 + 0.401874I$	0
$u = 0.375201 - 0.492490I$ $a = 0.744863 + 0.250786I$ $b = -0.166968 - 0.139307I$	$1.114590 - 0.401874I$	0
$u = 0.085429 + 0.591958I$ $a = -1.91604 + 1.08934I$ $b = -0.442090 - 0.675980I$	$3.00195 - 4.31106I$	0
$u = 0.085429 - 0.591958I$ $a = -1.91604 - 1.08934I$ $b = -0.442090 + 0.675980I$	$3.00195 + 4.31106I$	0
$u = 1.301550 + 0.522330I$ $a = -0.439028 - 0.363167I$ $b = 0.282008 - 1.239440I$	$-3.7589 - 13.6502I$	0
$u = 1.301550 - 0.522330I$ $a = -0.439028 + 0.363167I$ $b = 0.282008 + 1.239440I$	$-3.7589 + 13.6502I$	0
$u = 0.150731 + 0.572727I$ $a = 0.235175 + 0.122498I$ $b = -0.594135 - 0.567255I$	$1.74023 + 0.39935I$	0
$u = 0.150731 - 0.572727I$ $a = 0.235175 - 0.122498I$ $b = -0.594135 + 0.567255I$	$1.74023 - 0.39935I$	0
$u = 0.330324 + 0.481603I$ $a = 0.620211 - 0.426795I$ $b = 1.098310 - 0.449362I$	$-3.99697 + 2.30639I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.330324 - 0.481603I$ $a = 0.620211 + 0.426795I$ $b = 1.098310 + 0.449362I$	$-3.99697 - 2.30639I$	0
$u = -1.37512 + 0.36567I$ $a = -1.61474 - 0.50797I$ $b = -1.62668 - 0.20347I$	$-10.64380 + 7.96001I$	0
$u = -1.37512 - 0.36567I$ $a = -1.61474 + 0.50797I$ $b = -1.62668 + 0.20347I$	$-10.64380 - 7.96001I$	0
$u = -1.42368 + 0.05365I$ $a = -1.92968 - 0.59993I$ $b = -1.007090 - 0.305244I$	$-9.73211 - 0.72862I$	0
$u = -1.42368 - 0.05365I$ $a = -1.92968 + 0.59993I$ $b = -1.007090 + 0.305244I$	$-9.73211 + 0.72862I$	0
$u = -1.34316 + 0.47875I$ $a = 0.540948 + 0.003445I$ $b = -0.169189 - 1.158220I$	$-4.17992 - 3.09056I$	0
$u = -1.34316 - 0.47875I$ $a = 0.540948 - 0.003445I$ $b = -0.169189 + 1.158220I$	$-4.17992 + 3.09056I$	0
$u = 1.38981 + 0.33380I$ $a = -1.74926 + 0.39755I$ $b = -1.383630 - 0.033651I$	$-7.78454 - 3.02046I$	0
$u = 1.38981 - 0.33380I$ $a = -1.74926 - 0.39755I$ $b = -1.383630 + 0.033651I$	$-7.78454 + 3.02046I$	0
$u = -1.37065 + 0.41141I$ $a = 2.08744 + 0.48751I$ $b = 0.943955 - 0.351472I$	$-1.84180 + 8.35189I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.37065-0.41141I$ $a=\ \ 2.08744-0.48751I$ $b=\ \ 0.943955+0.351472I$	$-1.84180-8.35189I$	0
$u=-0.10147+1.43531I$ $a=-0.077662-1.057210I$ $b=-0.30045+1.43856I$	$5.08012-1.04482I$	0
$u=-0.10147-1.43531I$ $a=-0.077662+1.057210I$ $b=-0.30045-1.43856I$	$5.08012+1.04482I$	0
$u=-1.34660+0.53135I$ $a=-0.302884+0.299279I$ $b=\ \ 0.440339+1.295460I$	$0.59625+7.19814I$	0
$u=-1.34660-0.53135I$ $a=-0.302884-0.299279I$ $b=\ \ 0.440339-1.295460I$	$0.59625-7.19814I$	0
$u=-1.34014+0.60969I$ $a=\ \ 1.65962+0.99269I$ $b=\ \ 1.32556-0.68118I$	$-7.0959+20.3913I$	0
$u=-1.34014-0.60969I$ $a=\ \ 1.65962-0.99269I$ $b=\ \ 1.32556+0.68118I$	$-7.0959-20.3913I$	0
$u=-1.35716+0.60958I$ $a=-1.55427-0.87412I$ $b=-1.268760+0.442159I$	$-5.64483+8.45646I$	0
$u=-1.35716-0.60958I$ $a=-1.55427+0.87412I$ $b=-1.268760-0.442159I$	$-5.64483-8.45646I$	0
$u=-1.47733+0.19605I$ $a=\ \ 1.403440+0.140394I$ $b=\ \ 1.36593+0.44138I$	$-5.36633-2.05046I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.47733-0.19605I$ $a=\ 1.403440-0.140394I$ $b=\ 1.36593-0.44138I$	$-5.36633+2.05046I$	0
$u=\ 1.37551+0.58206I$ $a=-1.67685+0.84959I$ $b=-1.262590-0.516035I$	$-9.9360-13.5352I$	0
$u=\ 1.37551-0.58206I$ $a=-1.67685-0.84959I$ $b=-1.262590+0.516035I$	$-9.9360+13.5352I$	0
$u=\ 1.37676+0.58869I$ $a=\ 1.74311-0.68706I$ $b=\ 0.914411+0.204323I$	$-0.07993-3.14611I$	0
$u=\ 1.37676-0.58869I$ $a=\ 1.74311+0.68706I$ $b=\ 0.914411-0.204323I$	$-0.07993+3.14611I$	0
$u=\ 1.38162+0.58756I$ $a=-1.44313+0.89154I$ $b=-1.50726-0.43510I$	$-8.81779-3.38404I$	0
$u=\ 1.38162-0.58756I$ $a=-1.44313-0.89154I$ $b=-1.50726+0.43510I$	$-8.81779+3.38404I$	0
$u=\ 1.36377+0.63586I$ $a=\ 1.51294-0.92796I$ $b=\ 1.30941+0.72075I$	$-2.3490-14.2732I$	0
$u=\ 1.36377-0.63586I$ $a=\ 1.51294+0.92796I$ $b=\ 1.30941-0.72075I$	$-2.3490+14.2732I$	0
$u=\ 1.52541+0.05793I$ $a=-1.59016+0.44216I$ $b=-0.878284+0.146429I$	$-8.89709+1.21364I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.52541 - 0.05793I$ $a = -1.59016 - 0.44216I$ $b = -0.878284 - 0.146429I$	$-8.89709 - 1.21364I$	0
$u = -1.32888 + 0.76202I$ $a = 1.18883 + 1.04197I$ $b = 1.20462 - 0.80755I$	$-6.72128 + 7.21119I$	0
$u = -1.32888 - 0.76202I$ $a = 1.18883 - 1.04197I$ $b = 1.20462 + 0.80755I$	$-6.72128 - 7.21119I$	0
$u = -0.463129 + 0.037953I$ $a = 0.591795 - 0.376644I$ $b = 0.886324 - 0.307856I$	$-1.46629 + 0.61331I$	$-6.68087 + 1.30735I$
$u = -0.463129 - 0.037953I$ $a = 0.591795 + 0.376644I$ $b = 0.886324 + 0.307856I$	$-1.46629 - 0.61331I$	$-6.68087 - 1.30735I$
$u = -0.039278 + 0.434058I$ $a = -2.29975 + 0.71426I$ $b = -0.977335 + 0.298452I$	$-4.89990 + 4.37822I$	$-1.92116 - 6.85769I$
$u = -0.039278 - 0.434058I$ $a = -2.29975 - 0.71426I$ $b = -0.977335 - 0.298452I$	$-4.89990 - 4.37822I$	$-1.92116 + 6.85769I$
$u = 1.52942 + 0.34829I$ $a = 1.315230 - 0.277888I$ $b = 1.34392 - 0.44415I$	$-9.04257 + 8.37334I$	0
$u = 1.52942 - 0.34829I$ $a = 1.315230 + 0.277888I$ $b = 1.34392 + 0.44415I$	$-9.04257 - 8.37334I$	0
$u = -1.54856 + 0.41904I$ $a = -1.43565 - 0.23882I$ $b = -1.183120 - 0.194524I$	$-11.18890 - 1.08010I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.54856-0.41904I$ $a=-1.43565+0.23882I$ $b=-1.183120+0.194524I$	$-11.18890+1.08010I$	0
$u=-0.326506+0.179382I$ $a=-1.70122-0.83343I$ $b=-1.203310-0.622332I$	$-1.62999-7.81122I$	$3.69855+4.30402I$
$u=-0.326506-0.179382I$ $a=-1.70122+0.83343I$ $b=-1.203310+0.622332I$	$-1.62999+7.81122I$	$3.69855-4.30402I$
$u=\ \ 0.244239+0.209836I$ $a=-1.74084-0.44589I$ $b=-0.981116-0.608112I$	$0.59753-5.00515I$	$1.10628+2.34393I$
$u=\ \ 0.244239-0.209836I$ $a=-1.74084+0.44589I$ $b=-0.981116+0.608112I$	$0.59753+5.00515I$	$1.10628-2.34393I$

II. $\boldsymbol{I_2^u = \langle 3.32 \times 10^{40} u^{52} - 2.35 \times 10^{40} u^{51} + \cdots + 1.43 \times 10^{38} b + 4.37 \times 10^{40},\ -1.48 \times 10^{41} u^{52} + 8.39 \times 10^{40} u^{51} + \cdots + 1.43 \times 10^{38} a - 1.73 \times 10^{41},\ u^{53} - 14u^{51} + \cdots - 11u^2 + 1 \rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1033.47u^{52} - 586.239u^{51} + \cdots - 2034.70u + 1205.80 \\ -232.154u^{52} + 164.107u^{51} + \cdots + 392.787u - 305.668 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 759.826u^{52} - 495.375u^{51} + \cdots - 1526.02u + 1012.14 \\ -598.451u^{52} + 397.853u^{51} + \cdots + 1082.59u - 726.395 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -215.060u^{52} + 146.327u^{51} + \cdots + 316.395u - 209.630 \\ -1114.17u^{52} + 736.678u^{51} + \cdots + 2057.47u - 1368.10 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 387.513u^{52} - 216.690u^{51} + \cdots - 768.298u + 432.814 \\ 716.532u^{52} - 530.992u^{51} + \cdots - 1375.06u + 978.824 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 248.772u^{52} - 156.582u^{51} + \cdots - 582.712u + 380.721 \\ -650.335u^{52} + 433.769u^{51} + \cdots + 1158.37u - 777.746 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -546.571u^{52} + 377.064u^{51} + \cdots + 1061.69u - 754.703 \\ -351.767u^{52} + 224.351u^{51} + \cdots + 754.487u - 536.484 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 52.9636u^{52} - 105.670u^{51} + \cdots - 87.6800u + 204.640 \\ 430.934u^{52} - 311.679u^{51} + \cdots - 856.757u + 660.094 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -703.420u^{52} + 455.534u^{51} + \cdots + 1343.06u - 886.322 \\ -1439.52u^{52} + 949.093u^{51} + \cdots + 2690.94u - 1793.54 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3884.37u^{52} - 2682.08u^{51} + \cdots - 7739.45u + 5487.07$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{53} - 9u^{52} + \cdots + 195u - 11$
c_2	$u^{53} + 3u^{52} + \cdots + 3u + 1$
c_3	$u^{53} - 14u^{51} + \cdots - 11u^2 + 1$
c_4	$u^{53} - 14u^{51} + \cdots + 19u^2 - 1$
c_5	$u^{53} - 3u^{52} + \cdots + 3u - 1$
c_6	$u^{53} - u^{52} + \cdots + 36u - 1$
c_7	$u^{53} + 7u^{52} + \cdots + 32u + 4$
c_8	$u^{53} - 14u^{51} + \cdots + 11u^2 - 1$
c_9	$u^{53} + u^{52} + \cdots - 8u - 1$
c_{10}	$u^{53} - 7u^{52} + \cdots + 32u - 4$
c_{11}	$u^{53} - 14u^{51} + \cdots - 19u^2 + 1$
c_{12}	$u^{53} - u^{52} + \cdots + 7u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{53} - y^{52} + \cdots - 40955y - 121$
c_2, c_5	$y^{53} - 25y^{52} + \cdots + 41y - 1$
c_3, c_8	$y^{53} - 28y^{52} + \cdots + 22y - 1$
c_4, c_{11}	$y^{53} - 28y^{52} + \cdots + 38y - 1$
c_6	$y^{53} + 9y^{52} + \cdots + 274y - 1$
c_7, c_{10}	$y^{53} + 37y^{52} + \cdots - 368y - 16$
c_9	$y^{53} + 13y^{52} + \cdots - 34y - 1$
c_{12}	$y^{53} + 33y^{52} + \cdots - 59y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.752844 + 0.713687I$ $a = 0.198059 - 0.480468I$ $b = 0.914130 - 0.339042I$	$0.09340 + 1.65159I$	0
$u = 0.752844 - 0.713687I$ $a = 0.198059 + 0.480468I$ $b = 0.914130 + 0.339042I$	$0.09340 - 1.65159I$	0
$u = 0.299078 + 1.026960I$ $a = -0.393358 + 0.613280I$ $b = -1.140540 - 0.485752I$	$1.34681 - 6.32629I$	0
$u = 0.299078 - 1.026960I$ $a = -0.393358 - 0.613280I$ $b = -1.140540 + 0.485752I$	$1.34681 + 6.32629I$	0
$u = -1.059390 + 0.320455I$ $a = 1.290580 - 0.016665I$ $b = 0.727852 - 1.003420I$	$0.12206 + 2.81902I$	0
$u = -1.059390 - 0.320455I$ $a = 1.290580 + 0.016665I$ $b = 0.727852 + 1.003420I$	$0.12206 - 2.81902I$	0
$u = 0.819880 + 0.298094I$ $a = -0.722650 + 0.495336I$ $b = -0.947182 - 0.712365I$	$0.27515 - 5.80106I$	$0. + 9.09280I$
$u = 0.819880 - 0.298094I$ $a = -0.722650 - 0.495336I$ $b = -0.947182 + 0.712365I$	$0.27515 + 5.80106I$	$0. - 9.09280I$
$u = -1.030080 + 0.471732I$ $a = 0.415358 - 0.419386I$ $b = -0.624176 + 0.253691I$	$-5.40111 + 7.24256I$	0
$u = -1.030080 - 0.471732I$ $a = 0.415358 + 0.419386I$ $b = -0.624176 - 0.253691I$	$-5.40111 - 7.24256I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.095380 + 0.356719I$ $a = -0.223666 - 0.310574I$ $b = -0.151815 - 0.857240I$	$0.17444 - 5.06362I$	0
$u = 1.095380 - 0.356719I$ $a = -0.223666 + 0.310574I$ $b = -0.151815 + 0.857240I$	$0.17444 + 5.06362I$	0
$u = -0.260655 + 0.769473I$ $a = 0.298108 - 0.749014I$ $b = 1.188530 + 0.204645I$	$-5.11094 + 2.19227I$	$-1.08190 - 2.25516I$
$u = -0.260655 - 0.769473I$ $a = 0.298108 + 0.749014I$ $b = 1.188530 - 0.204645I$	$-5.11094 - 2.19227I$	$-1.08190 + 2.25516I$
$u = -0.629209 + 0.510184I$ $a = -0.773759 - 0.759289I$ $b = 1.004930 + 0.404428I$	$-5.17858 + 2.02235I$	$-2.59548 - 3.49504I$
$u = -0.629209 - 0.510184I$ $a = -0.773759 + 0.759289I$ $b = 1.004930 - 0.404428I$	$-5.17858 - 2.02235I$	$-2.59548 + 3.49504I$
$u = -0.797683 + 0.111339I$ $a = -0.466604 - 0.948576I$ $b = -0.639151 - 1.191020I$	$1.51765 - 0.97300I$	$9.68105 - 1.37819I$
$u = -0.797683 - 0.111339I$ $a = -0.466604 + 0.948576I$ $b = -0.639151 + 1.191020I$	$1.51765 + 0.97300I$	$9.68105 + 1.37819I$
$u = 0.794471 + 0.121913I$ $a = 0.563563 - 1.291760I$ $b = 0.251719 - 1.118650I$	$1.70258 + 3.06326I$	$5.81290 - 2.73140I$
$u = 0.794471 - 0.121913I$ $a = 0.563563 + 1.291760I$ $b = 0.251719 + 1.118650I$	$1.70258 - 3.06326I$	$5.81290 + 2.73140I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.991191 + 0.675691I$ $a = 0.424392 - 0.523521I$ $b = -0.708148 + 0.720515I$	$-4.71573 + 1.55508I$	0
$u = 0.991191 - 0.675691I$ $a = 0.424392 + 0.523521I$ $b = -0.708148 - 0.720515I$	$-4.71573 - 1.55508I$	0
$u = 1.165290 + 0.336388I$ $a = 0.71543 - 1.76538I$ $b = 0.571523 - 0.095423I$	$-1.59579 - 6.35701I$	0
$u = 1.165290 - 0.336388I$ $a = 0.71543 + 1.76538I$ $b = 0.571523 + 0.095423I$	$-1.59579 + 6.35701I$	0
$u = -0.411876 + 1.152010I$ $a = -1.174370 + 0.130403I$ $b = -0.633482 - 0.149689I$	$3.91392 + 3.35036I$	0
$u = -0.411876 - 1.152010I$ $a = -1.174370 - 0.130403I$ $b = -0.633482 + 0.149689I$	$3.91392 - 3.35036I$	0
$u = 1.141410 + 0.462340I$ $a = 1.91918 - 1.28362I$ $b = 1.104120 + 0.578790I$	$-5.49466 - 6.54899I$	0
$u = 1.141410 - 0.462340I$ $a = 1.91918 + 1.28362I$ $b = 1.104120 - 0.578790I$	$-5.49466 + 6.54899I$	0
$u = -1.214970 + 0.215579I$ $a = 2.50327 + 0.14853I$ $b = 1.252620 - 0.440926I$	$-4.78145 + 8.92871I$	0
$u = -1.214970 - 0.215579I$ $a = 2.50327 - 0.14853I$ $b = 1.252620 + 0.440926I$	$-4.78145 - 8.92871I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.726895+0.011194I$ $a=-0.92003-1.45073I$ $b=-1.173500+0.560834I$	$-2.47355+8.00979I$	$-5.29973-6.12277I$
$u=-0.726895-0.011194I$ $a=-0.92003+1.45073I$ $b=-1.173500-0.560834I$	$-2.47355-8.00979I$	$-5.29973+6.12277I$
$u=-0.525289+0.501536I$ $a=-1.03635+1.25446I$ $b=\ \ 0.795025+0.150056I$	$-3.87787-3.22018I$	$0.+5.52484I$
$u=-0.525289-0.501536I$ $a=-1.03635-1.25446I$ $b=\ \ 0.795025-0.150056I$	$-3.87787+3.22018I$	$0.-5.52484I$
$u=\ \ 0.708618+0.119698I$ $a=\ \ 3.70903+1.70788I$ $b=-0.522684-0.189476I$	$0.50284+4.33535I$	$8.51434-0.68763I$
$u=\ \ 0.708618-0.119698I$ $a=\ \ 3.70903-1.70788I$ $b=-0.522684+0.189476I$	$0.50284-4.33535I$	$8.51434+0.68763I$
$u=-1.175600+0.528767I$ $a=\ \ 1.050890+0.713469I$ $b=\ \ 0.529417-0.234138I$	$0.83195+2.49544I$	0
$u=-1.175600-0.528767I$ $a=\ \ 1.050890-0.713469I$ $b=\ \ 0.529417+0.234138I$	$0.83195-2.49544I$	0
$u=\ \ 1.224470+0.408994I$ $a=-2.12820+0.72335I$ $b=-1.45549-0.05041I$	$-9.22566-6.14828I$	0
$u=\ \ 1.224470-0.408994I$ $a=-2.12820-0.72335I$ $b=-1.45549+0.05041I$	$-9.22566+6.14828I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.658241$ $a=\ \ 4.15037$ $b=-0.417329$	4.44579	13.6430
$u=\ \ 0.028280+1.387320I$ $a=-0.052279+1.089990I$ $b=-0.24874-1.39671I$	$5.12796+0.95282I$	0
$u=\ \ 0.028280-1.387320I$ $a=-0.052279-1.089990I$ $b=-0.24874+1.39671I$	$5.12796-0.95282I$	0
$u=-1.293790+0.538796I$ $a=-1.61599-1.03387I$ $b=-1.49779+0.33300I$	$-8.18982+3.34786I$	0
$u=-1.293790-0.538796I$ $a=-1.61599+1.03387I$ $b=-1.49779-0.33300I$	$-8.18982-3.34786I$	0
$u=\ \ 0.515235+0.205408I$ $a=\ \ 1.39548-2.24020I$ $b=\ \ 1.041340+0.290147I$	$-4.99057-3.63097I$	$-5.49740+2.27793I$
$u=\ \ 0.515235-0.205408I$ $a=\ \ 1.39548+2.24020I$ $b=\ \ 1.041340-0.290147I$	$-4.99057+3.63097I$	$-5.49740-2.27793I$
$u=-1.46902+0.06627I$ $a=-2.01781+0.22433I$ $b=-0.962652+0.218339I$	$-9.29019+0.18307I$	0
$u=-1.46902-0.06627I$ $a=-2.01781-0.22433I$ $b=-0.962652-0.218339I$	$-9.29019-0.18307I$	0
$u=\ \ 1.46774+0.12916I$ $a=-1.46035+0.55805I$ $b=-0.958796+0.218988I$	$-9.27640+1.59820I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.46774 - 0.12916I$ $a = -1.46035 - 0.55805I$ $b = -0.958796 - 0.218988I$	$-9.27640 - 1.59820I$	0
$u = -0.080303 + 0.512048I$ $a = 0.426879 + 1.243660I$ $b = 0.991593 - 0.288651I$	$-0.736838 + 0.952251I$	$3.21681 - 1.98889I$
$u = -0.080303 - 0.512048I$ $a = 0.426879 - 1.243660I$ $b = 0.991593 + 0.288651I$	$-0.736838 - 0.952251I$	$3.21681 + 1.98889I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{53}-9u^{52}+\cdots+195u-11)$ $\cdot(u^{175}-8u^{174}+\cdots+1890868908462u-280537441299)$
c_2	$(u^{53}+3u^{52}+\cdots+3u+1)(u^{175}+4u^{174}+\cdots+417270u+63403)$
c_3	$(u^{53}-14u^{51}+\cdots-11u^2+1)(u^{175}+u^{174}+\cdots-2853u-2621)$
c_4	$(u^{53}-14u^{51}+\cdots+19u^2-1)(u^{175}+u^{174}+\cdots-21401u+1549)$
c_5	$(u^{53}-3u^{52}+\cdots+3u-1)(u^{175}+4u^{174}+\cdots+417270u+63403)$
c_6	$(u^{53}-u^{52}+\cdots+36u-1)(u^{175}-2u^{174}+\cdots-657105u+475777)$
c_7	$(u^{53}+7u^{52}+\cdots+32u+4)(u^{175}+6u^{174}+\cdots-343340u-23572)$
c_8	$(u^{53}-14u^{51}+\cdots+11u^2-1)(u^{175}+u^{174}+\cdots-2853u-2621)$
c_9	$(u^{53}+u^{52}+\cdots-8u-1)$ $\cdot(u^{175}-6u^{174}+\cdots+4627516764u+594875704)$
c_{10}	$(u^{53}-7u^{52}+\cdots+32u-4)(u^{175}+6u^{174}+\cdots-343340u-23572)$
c_{11}	$(u^{53}-14u^{51}+\cdots-19u^2+1)(u^{175}+u^{174}+\cdots-21401u+1549)$
c_{12}	$(u^{53}-u^{52}+\cdots+7u+1)(u^{175}+2u^{174}+\cdots-218568u+5697)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{53} - y^{52} + \cdots - 40955y - 121)$ $\cdot (y^{175} - 52y^{174} + \cdots + 3.27 \times 10^{24}y - 7.87 \times 10^{22})$
c_2, c_5	$(y^{53} - 25y^{52} + \cdots + 41y - 1)$ $\cdot (y^{175} - 96y^{174} + \cdots + 241757138316y - 4019940409)$
c_3, c_8	$(y^{53} - 28y^{52} + \cdots + 22y - 1)$ $\cdot (y^{175} - 107y^{174} + \cdots + 304239221y - 6869641)$
c_4, c_{11}	$(y^{53} - 28y^{52} + \cdots + 38y - 1)$ $\cdot (y^{175} - 87y^{174} + \cdots + 251496317y - 2399401)$
c_6	$(y^{53} + 9y^{52} + \cdots + 274y - 1)$ $\cdot (y^{175} + 18y^{174} + \cdots - 12874725123895y - 226363753729)$
c_7, c_{10}	$(y^{53} + 37y^{52} + \cdots - 368y - 16)$ $\cdot (y^{175} + 122y^{174} + \cdots - 6061106160y - 555639184)$
c_9	$(y^{53} + 13y^{52} + \cdots - 34y - 1)$ $\cdot (y^{175} + 62y^{174} + \cdots - 2.61 \times 10^{19}y - 3.54 \times 10^{17})$
c_{12}	$(y^{53} + 33y^{52} + \cdots - 59y - 1)$ $\cdot (y^{175} + 62y^{174} + \cdots - 12813231636y - 32455809)$