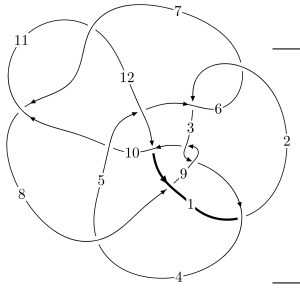
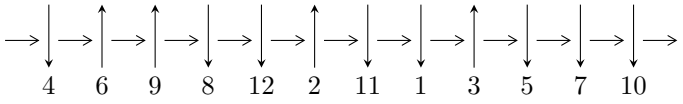
$12a_{0915}$ $(K12a_{0915})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.26463 \times 10^{1251} u^{188} - 2.01135 \times 10^{1251} u^{187} + \cdots + 1.15374 \times 10^{1253} b - 4.34866 \times 10^{1255},$$
$$- 3.65706 \times 10^{1255} u^{188} - 9.37314 \times 10^{1255} u^{187} + \cdots + 6.73843 \times 10^{1257} a + 2.72729 \times 10^{1260},$$
$$u^{189} + 2u^{188} + \cdots + 118941u - 58405 \rangle$$
$$I_2^u = \langle -9.00364 \times 10^{53} u^{53} - 7.38793 \times 10^{53} u^{52} + \cdots + 4.94949 \times 10^{51} b + 7.82607 \times 10^{53},$$
$$8.75690 \times 10^{53} u^{53} + 3.66837 \times 10^{53} u^{52} + \cdots + 4.94949 \times 10^{51} a - 2.10818 \times 10^{54},\ u^{54} + u^{53} + \cdots - 3u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 243 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. $\boldsymbol{I_1^u = \langle -1.26 \times 10^{1251} u^{188} - 2.01 \times 10^{1251} u^{187} + \cdots + 1.15 \times 10^{1253} b - 4.35 \times 10^{1255},\ -3.66 \times 10^{1255} u^{188} - 9.37 \times 10^{1255} u^{187} + \cdots + 6.74 \times 10^{1257} a + 2.73 \times 10^{1260},\ u^{189} + 2u^{188} + \cdots + 118941u - 58405 \rangle}$

(i) Arc colorings

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

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

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

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

$$a_{12} = \begin{pmatrix} 0.00542717u^{188} + 0.0139100u^{187} + \cdots + 382.471u - 404.738 \\ 0.0109611u^{188} + 0.0174333u^{187} + \cdots - 2251.87u + 376.919 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.0147816u^{188} + 0.0316648u^{187} + \cdots - 1194.89u - 352.915 \\ 0.00405229u^{188} + 0.00688912u^{187} + \cdots - 711.369u + 48.7705 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0163883u^{188} + 0.0313432u^{187} + \cdots - 1869.40u - 27.8189 \\ 0.0109611u^{188} + 0.0174333u^{187} + \cdots - 2251.87u + 376.919 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0112796u^{188} - 0.0197827u^{187} + \cdots + 1435.28u + 26.7246 \\ -0.00110456u^{188} - 0.00287936u^{187} + \cdots - 292.853u + 152.533 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.00964069u^{188} + 0.0148069u^{187} + \cdots - 2323.57u + 405.075 \\ 0.00751632u^{188} + 0.0172737u^{187} + \cdots + 12.1275u - 389.388 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0289478u^{188} - 0.0463809u^{187} + \cdots + 5767.71u - 765.938 \\ -0.0262397u^{188} - 0.0501126u^{187} + \cdots + 2937.81u + 175.792 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.00176167u^{188} + 0.0109615u^{187} + \cdots + 4439.35u - 1765.87 \\ 0.00268700u^{188} + 0.0197346u^{187} + \cdots + 4070.65u - 1897.80 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.00169698u^{188} + 0.0196334u^{187} + \cdots + 4731.83u - 2099.87 \\ 0.00460298u^{188} + 0.0247604u^{187} + \cdots + 4356.43u - 2129.32 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0158544u^{188} + 0.0408087u^{187} + \cdots - 931.471u - 383.977$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{189} - 3u^{188} + \cdots + 477364u - 16517$
c_2, c_6	$u^{189} - 2u^{188} + \cdots + 118941u + 58405$
c_3, c_9	$u^{189} + u^{188} + \cdots + 1777914u + 1267391$
c_4	$u^{189} + 4u^{188} + \cdots - 64079539000u + 4971467125$
c_5	$u^{189} + u^{188} + \cdots + 6444964u + 558157$
c_7, c_{11}	$u^{189} + 5u^{188} + \cdots - 572070u + 16507$
c_8	$u^{189} + 3u^{188} + \cdots - 14u + 1$
c_{10}	$u^{189} + u^{188} + \cdots + 50897940u + 7370057$
c_{12}	$u^{189} - 15u^{188} + \cdots - 30374880u + 1807073$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{189} + y^{188} + \cdots + 49971649360y - 272811289$
c_2, c_6	$y^{189} + 94y^{188} + \cdots - 130612517649y - 3411144025$
c_3, c_9	$y^{189} + 135y^{188} + \cdots - 81751009774592y - 1606279946881$
c_4	$y^{189} + 104y^{188} + \cdots - 1.76 \times 10^{21}y - 2.47 \times 10^{19}$
c_5	$y^{189} + 25y^{188} + \cdots - 24262094234224y - 311539236649$
c_7, c_{11}	$y^{189} + 127y^{188} + \cdots + 48428270082y - 272481049$
c_8	$y^{189} - 5y^{188} + \cdots + 44y - 1$
c_{10}	$y^{189} + 53y^{188} + \cdots - 329523948949056y - 54317740183249$
c_{12}	$y^{189} + 5y^{188} + \cdots - 213376445564522y - 3265512827329$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.067562 + 0.993666I$ $a = -0.267499 - 1.270710I$ $b = 0.440694 + 0.994216I$	$-0.74624 - 2.81261I$	0
$u = 0.067562 - 0.993666I$ $a = -0.267499 + 1.270710I$ $b = 0.440694 - 0.994216I$	$-0.74624 + 2.81261I$	0
$u = 0.630369 + 0.768096I$ $a = -2.47900 - 0.30501I$ $b = 0.58918 - 1.30282I$	$4.14360 + 8.55032I$	0
$u = 0.630369 - 0.768096I$ $a = -2.47900 + 0.30501I$ $b = 0.58918 + 1.30282I$	$4.14360 - 8.55032I$	0
$u = 0.510576 + 0.847575I$ $a = 2.13261 - 0.16877I$ $b = -0.63701 + 1.33023I$	$6.20832 + 1.81257I$	0
$u = 0.510576 - 0.847575I$ $a = 2.13261 + 0.16877I$ $b = -0.63701 - 1.33023I$	$6.20832 - 1.81257I$	0
$u = -0.917893 + 0.362064I$ $a = 0.127270 + 0.463090I$ $b = 0.225853 + 1.222980I$	$3.79380 - 3.29707I$	0
$u = -0.917893 - 0.362064I$ $a = 0.127270 - 0.463090I$ $b = 0.225853 - 1.222980I$	$3.79380 + 3.29707I$	0
$u = -0.194764 + 0.999558I$ $a = -1.71200 + 0.32202I$ $b = 1.380270 - 0.290565I$	$-4.32558 - 0.68091I$	0
$u = -0.194764 - 0.999558I$ $a = -1.71200 - 0.32202I$ $b = 1.380270 + 0.290565I$	$-4.32558 + 0.68091I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.692832 + 0.691609I$ $a = 0.198448 + 0.083327I$ $b = 0.41938 + 1.43772I$	$4.30322 - 3.29973I$	0
$u = 0.692832 - 0.691609I$ $a = 0.198448 - 0.083327I$ $b = 0.41938 - 1.43772I$	$4.30322 + 3.29973I$	0
$u = -0.361489 + 0.965972I$ $a = 0.732225 - 0.194832I$ $b = -0.367068 + 1.340850I$	$3.03261 + 0.04426I$	0
$u = -0.361489 - 0.965972I$ $a = 0.732225 + 0.194832I$ $b = -0.367068 - 1.340850I$	$3.03261 - 0.04426I$	0
$u = 0.454181 + 0.850872I$ $a = -1.42130 - 0.79734I$ $b = 0.854381 - 0.545454I$	$-2.30675 + 2.00402I$	0
$u = 0.454181 - 0.850872I$ $a = -1.42130 + 0.79734I$ $b = 0.854381 + 0.545454I$	$-2.30675 - 2.00402I$	0
$u = -0.311636 + 0.911864I$ $a = 2.05776 - 1.43772I$ $b = -2.05400 + 0.20120I$	$-6.91874 - 1.30838I$	0
$u = -0.311636 - 0.911864I$ $a = 2.05776 + 1.43772I$ $b = -2.05400 - 0.20120I$	$-6.91874 + 1.30838I$	0
$u = -0.463140 + 0.928696I$ $a = 1.16557 - 1.81104I$ $b = -0.148287 - 1.207340I$	$3.41518 - 5.11949I$	0
$u = -0.463140 - 0.928696I$ $a = 1.16557 + 1.81104I$ $b = -0.148287 + 1.207340I$	$3.41518 + 5.11949I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.800168+0.678778I$ $a=\ \ 0.317561-0.373237I$ $b=-0.813611+0.096392I$	$-2.63610-2.21131I$	0
$u=-0.800168-0.678778I$ $a=\ \ 0.317561+0.373237I$ $b=-0.813611-0.096392I$	$-2.63610+2.21131I$	0
$u=-0.441877+0.835711I$ $a=\ \ 0.839311-0.187778I$ $b=-0.072651+0.141814I$	$-0.04337-1.92145I$	0
$u=-0.441877-0.835711I$ $a=\ \ 0.839311+0.187778I$ $b=-0.072651-0.141814I$	$-0.04337+1.92145I$	0
$u=-0.222220+1.031650I$ $a=\ \ 1.60894-0.03527I$ $b=-0.676095+0.053290I$	$-1.10304-3.13220I$	0
$u=-0.222220-1.031650I$ $a=\ \ 1.60894+0.03527I$ $b=-0.676095-0.053290I$	$-1.10304+3.13220I$	0
$u=-0.178838+0.912880I$ $a=-1.84808+0.39642I$ $b=\ \ 0.906213-0.488177I$	$-2.49055+0.12903I$	0
$u=-0.178838-0.912880I$ $a=-1.84808-0.39642I$ $b=\ \ 0.906213+0.488177I$	$-2.49055-0.12903I$	0
$u=-1.064960+0.179466I$ $a=-0.172184+0.646048I$ $b=\ \ 0.951057+0.062605I$	$-0.33183+8.88694I$	0
$u=-1.064960-0.179466I$ $a=-0.172184-0.646048I$ $b=\ \ 0.951057-0.062605I$	$-0.33183-8.88694I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.512391 + 0.963034I$ $a = -1.53301 - 0.70205I$ $b = 0.603849 - 0.418419I$	$-3.18405 + 6.17630I$	0
$u = 0.512391 - 0.963034I$ $a = -1.53301 + 0.70205I$ $b = 0.603849 + 0.418419I$	$-3.18405 - 6.17630I$	0
$u = 0.519235 + 0.739624I$ $a = -0.314813 + 0.480447I$ $b = -0.36278 - 1.52314I$	$6.52346 + 2.40126I$	0
$u = 0.519235 - 0.739624I$ $a = -0.314813 - 0.480447I$ $b = -0.36278 + 1.52314I$	$6.52346 - 2.40126I$	0
$u = -0.241346 + 1.071480I$ $a = -0.995958 - 0.025369I$ $b = 0.919466 - 0.198745I$	$-3.20960 - 1.61993I$	0
$u = -0.241346 - 1.071480I$ $a = -0.995958 + 0.025369I$ $b = 0.919466 + 0.198745I$	$-3.20960 + 1.61993I$	0
$u = 0.274752 + 1.069880I$ $a = -1.29342 - 0.85396I$ $b = 1.184690 + 0.383992I$	$-5.28303 + 0.39347I$	0
$u = 0.274752 - 1.069880I$ $a = -1.29342 + 0.85396I$ $b = 1.184690 - 0.383992I$	$-5.28303 - 0.39347I$	0
$u = 0.000937 + 1.113790I$ $a = 0.551845 + 0.591997I$ $b = -0.12195 + 1.44938I$	$3.37739 + 0.05370I$	0
$u = 0.000937 - 1.113790I$ $a = 0.551845 - 0.591997I$ $b = -0.12195 - 1.44938I$	$3.37739 - 0.05370I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.044860 + 0.385777I$ $a = 0.080676 - 0.219129I$ $b = -0.433531 - 1.319580I$	$7.58545 - 8.67350I$	0
$u = 1.044860 - 0.385777I$ $a = 0.080676 + 0.219129I$ $b = -0.433531 + 1.319580I$	$7.58545 + 8.67350I$	0
$u = 0.880213 + 0.084755I$ $a = 0.661929 + 0.103970I$ $b = -0.218737 - 1.077910I$	$-0.40974 - 6.70785I$	0
$u = 0.880213 - 0.084755I$ $a = 0.661929 - 0.103970I$ $b = -0.218737 + 1.077910I$	$-0.40974 + 6.70785I$	0
$u = 0.344219 + 0.809766I$ $a = 0.630549 + 0.772802I$ $b = -0.247227 + 0.493087I$	$-0.30431 - 2.06669I$	0
$u = 0.344219 - 0.809766I$ $a = 0.630549 - 0.772802I$ $b = -0.247227 - 0.493087I$	$-0.30431 + 2.06669I$	0
$u = -1.118940 + 0.108725I$ $a = 0.183365 - 0.289602I$ $b = -0.178442 - 1.248700I$	$7.17662 - 2.58172I$	0
$u = -1.118940 - 0.108725I$ $a = 0.183365 + 0.289602I$ $b = -0.178442 + 1.248700I$	$7.17662 + 2.58172I$	0
$u = 0.233385 + 1.102620I$ $a = -1.070960 - 0.124060I$ $b = 0.144351 + 0.461703I$	$-1.09068 + 3.64692I$	0
$u = 0.233385 - 1.102620I$ $a = -1.070960 + 0.124060I$ $b = 0.144351 - 0.461703I$	$-1.09068 - 3.64692I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.446277+1.038550I$ $a=\ 0.050035+0.499135I$ $b=\ 0.48444-1.70775I$	$1.80645-7.56881I$	0
$u=-0.446277-1.038550I$ $a=\ 0.050035-0.499135I$ $b=\ 0.48444+1.70775I$	$1.80645+7.56881I$	0
$u=\ 1.115130+0.245711I$ $a=-0.182423-0.710528I$ $b=\ 0.809625-0.110733I$	$0.60913+3.47500I$	0
$u=\ 1.115130-0.245711I$ $a=-0.182423+0.710528I$ $b=\ 0.809625+0.110733I$	$0.60913-3.47500I$	0
$u=-0.592722+0.978809I$ $a=-0.127519+0.773384I$ $b=-0.12252+1.43050I$	$2.61438+1.30056I$	0
$u=-0.592722-0.978809I$ $a=-0.127519-0.773384I$ $b=-0.12252-1.43050I$	$2.61438-1.30056I$	0
$u=\ 0.390097+1.081100I$ $a=-0.64874-1.46046I$ $b=\ 0.119477-1.312790I$	$0.92326+9.92067I$	0
$u=\ 0.390097-1.081100I$ $a=-0.64874+1.46046I$ $b=\ 0.119477+1.312790I$	$0.92326-9.92067I$	0
$u=-0.471385+0.705543I$ $a=\ 3.38266-0.86554I$ $b=\ 0.007629-1.191340I$	$3.50830-5.62560I$	0
$u=-0.471385-0.705543I$ $a=\ 3.38266+0.86554I$ $b=\ 0.007629+1.191340I$	$3.50830+5.62560I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.408891 + 1.077710I$ $a = 1.34024 + 0.54291I$ $b = -0.754514 - 0.492258I$	$-5.42324 + 7.41959I$	0
$u = 0.408891 - 1.077710I$ $a = 1.34024 - 0.54291I$ $b = -0.754514 + 0.492258I$	$-5.42324 - 7.41959I$	0
$u = -0.381832 + 0.750348I$ $a = -3.21827 + 1.18751I$ $b = -0.040379 + 1.009940I$	$4.06792 + 1.50761I$	0
$u = -0.381832 - 0.750348I$ $a = -3.21827 - 1.18751I$ $b = -0.040379 - 1.009940I$	$4.06792 - 1.50761I$	0
$u = -0.354456 + 0.760501I$ $a = 0.696321 + 0.178152I$ $b = -0.085884 + 0.266995I$	$0.15883 - 1.69167I$	0
$u = -0.354456 - 0.760501I$ $a = 0.696321 - 0.178152I$ $b = -0.085884 - 0.266995I$	$0.15883 + 1.69167I$	0
$u = 0.765705 + 0.882418I$ $a = -1.074670 - 0.891398I$ $b = 0.247833 - 0.841024I$	$-2.95144 + 6.03869I$	0
$u = 0.765705 - 0.882418I$ $a = -1.074670 + 0.891398I$ $b = 0.247833 + 0.841024I$	$-2.95144 - 6.03869I$	0
$u = 0.617135 + 1.003760I$ $a = -1.069770 - 0.816316I$ $b = 1.306430 + 0.027422I$	$-1.15137 + 2.76544I$	0
$u = 0.617135 - 1.003760I$ $a = -1.069770 + 0.816316I$ $b = 1.306430 - 0.027422I$	$-1.15137 - 2.76544I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.522093+1.061040I$ $a=\ \ 1.314740+0.346065I$ $b=-0.241299-0.745231I$	$0.46504-2.65571I$	0
$u=-0.522093-1.061040I$ $a=\ \ 1.314740-0.346065I$ $b=-0.241299+0.745231I$	$0.46504+2.65571I$	0
$u=-0.383872+1.124090I$ $a=-1.65439-0.84100I$ $b=\ \ 0.477323+0.993956I$	$-0.87929-4.94706I$	0
$u=-0.383872-1.124090I$ $a=-1.65439+0.84100I$ $b=\ \ 0.477323-0.993956I$	$-0.87929+4.94706I$	0
$u=-0.580358+1.043430I$ $a=\ \ 1.94397-0.08820I$ $b=-0.118806-1.152000I$	$2.68465-3.07609I$	0
$u=-0.580358-1.043430I$ $a=\ \ 1.94397+0.08820I$ $b=-0.118806+1.152000I$	$2.68465+3.07609I$	0
$u=\ \ 0.156852+0.790567I$ $a=-3.36753+1.61930I$ $b=-0.011186-1.047930I$	$4.28093+1.14181I$	0
$u=\ \ 0.156852-0.790567I$ $a=-3.36753-1.61930I$ $b=-0.011186+1.047930I$	$4.28093-1.14181I$	0
$u=\ \ 0.679730+0.427112I$ $a=-0.067595+0.748744I$ $b=\ \ 0.28865+1.45093I$	$4.58859-5.52276I$	0
$u=\ \ 0.679730-0.427112I$ $a=-0.067595-0.748744I$ $b=\ \ 0.28865-1.45093I$	$4.58859+5.52276I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.716346+0.357965I$ $a=\ \ 0.660286+0.769140I$ $b=\ \ 0.035944+1.226680I$	$4.49713-1.77571I$	0
$u=-0.716346-0.357965I$ $a=\ \ 0.660286-0.769140I$ $b=\ \ 0.035944-1.226680I$	$4.49713+1.77571I$	0
$u=-0.493820+1.099010I$ $a=\ \ 1.77862+0.09146I$ $b=-0.64187-1.60029I$	$-1.31049-10.22440I$	0
$u=-0.493820-1.099010I$ $a=\ \ 1.77862-0.09146I$ $b=-0.64187+1.60029I$	$-1.31049+10.22440I$	0
$u=-0.352654+1.152340I$ $a=\ \ 0.257122-0.544690I$ $b=-0.725173+0.970993I$	$-2.05464+2.54881I$	0
$u=-0.352654-1.152340I$ $a=\ \ 0.257122+0.544690I$ $b=-0.725173-0.970993I$	$-2.05464-2.54881I$	0
$u=\ \ 0.512946+1.094040I$ $a=\ \ 1.30527+0.60900I$ $b=-1.225240-0.084845I$	$0.88755+8.48409I$	0
$u=\ \ 0.512946-1.094040I$ $a=\ \ 1.30527-0.60900I$ $b=-1.225240+0.084845I$	$0.88755-8.48409I$	0
$u=\ \ 1.217460+0.149329I$ $a=-0.510262+0.513572I$ $b=-0.025895+1.015500I$	$4.82411+0.12862I$	0
$u=\ \ 1.217460-0.149329I$ $a=-0.510262-0.513572I$ $b=-0.025895-1.015500I$	$4.82411-0.12862I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.432266+1.148690I$ $a=\ \ 0.007625-0.552867I$ $b=-0.0840058-0.0007714I$	$-0.01218-3.75481I$	0
$u=-0.432266-1.148690I$ $a=\ \ 0.007625+0.552867I$ $b=-0.0840058+0.0007714I$	$-0.01218+3.75481I$	0
$u=\ \ 0.576994+1.088980I$ $a=-2.01481+0.00072I$ $b=\ \ 0.40800-1.45334I$	$2.63633+10.42350I$	0
$u=\ \ 0.576994-1.088980I$ $a=-2.01481-0.00072I$ $b=\ \ 0.40800+1.45334I$	$2.63633-10.42350I$	0
$u=-0.076030+1.236970I$ $a=\ \ 1.396020-0.078850I$ $b=-0.892554-0.514801I$	$-8.87914-3.86366I$	0
$u=-0.076030-1.236970I$ $a=\ \ 1.396020+0.078850I$ $b=-0.892554+0.514801I$	$-8.87914+3.86366I$	0
$u=\ \ 0.258678+1.229290I$ $a=\ \ 0.180358-0.797563I$ $b=\ \ 0.102146+1.087260I$	$0.45441-2.90483I$	0
$u=\ \ 0.258678-1.229290I$ $a=\ \ 0.180358+0.797563I$ $b=\ \ 0.102146-1.087260I$	$0.45441+2.90483I$	0
$u=\ \ 0.672787+0.309542I$ $a=\ \ 0.263570+0.645799I$ $b=\ \ 0.317339+0.771337I$	$-0.61250-1.94201I$	0
$u=\ \ 0.672787-0.309542I$ $a=\ \ 0.263570-0.645799I$ $b=\ \ 0.317339-0.771337I$	$-0.61250+1.94201I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.441217+1.182520I$ $a=\ \ 1.71510+0.52130I$ $b=-0.395486-1.312000I$	$2.93433-7.19351I$	0
$u=-0.441217-1.182520I$ $a=\ \ 1.71510-0.52130I$ $b=-0.395486+1.312000I$	$2.93433+7.19351I$	0
$u=-0.722100+0.139284I$ $a=\ \ 0.216267+0.787891I$ $b=-0.442679-0.213941I$	$2.91455-0.44704I$	0
$u=-0.722100-0.139284I$ $a=\ \ 0.216267-0.787891I$ $b=-0.442679+0.213941I$	$2.91455+0.44704I$	0
$u=\ \ 0.569076+1.130950I$ $a=-1.48674-0.31305I$ $b=\ \ 0.648890-1.097580I$	$-3.00359+6.86673I$	0
$u=\ \ 0.569076-1.130950I$ $a=-1.48674+0.31305I$ $b=\ \ 0.648890+1.097580I$	$-3.00359-6.86673I$	0
$u=\ \ 0.655347+0.309483I$ $a=\ \ 0.413478+1.052100I$ $b=-0.882636-0.151125I$	$3.12881-3.97775I$	0
$u=\ \ 0.655347-0.309483I$ $a=\ \ 0.413478-1.052100I$ $b=-0.882636+0.151125I$	$3.12881+3.97775I$	0
$u=-0.693295+1.076160I$ $a=\ \ 1.212590-0.146757I$ $b=-0.065535-1.034750I$	$1.82503-2.62563I$	0
$u=-0.693295-1.076160I$ $a=\ \ 1.212590+0.146757I$ $b=-0.065535+1.034750I$	$1.82503+2.62563I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.608820 + 1.129940I$ $a = 0.982819 + 0.606534I$ $b = -0.194681 + 1.006450I$	$-4.10244 - 0.46469I$	0
$u = 0.608820 - 1.129940I$ $a = 0.982819 - 0.606534I$ $b = -0.194681 - 1.006450I$	$-4.10244 + 0.46469I$	0
$u = -0.737424 + 1.056050I$ $a = 0.969367 - 0.664757I$ $b = -1.047580 - 0.520281I$	$-3.68053 - 3.71422I$	0
$u = -0.737424 - 1.056050I$ $a = 0.969367 + 0.664757I$ $b = -1.047580 + 0.520281I$	$-3.68053 + 3.71422I$	0
$u = -0.091255 + 0.706063I$ $a = -1.59937 - 0.41719I$ $b = 0.336292 - 1.296860I$	$1.36934 + 2.64236I$	0
$u = -0.091255 - 0.706063I$ $a = -1.59937 + 0.41719I$ $b = 0.336292 + 1.296860I$	$1.36934 - 2.64236I$	0
$u = -0.384288 + 0.593663I$ $a = -3.52724 - 0.48755I$ $b = 0.62491 + 1.28264I$	$3.31040 + 3.95615I$	0
$u = -0.384288 - 0.593663I$ $a = -3.52724 + 0.48755I$ $b = 0.62491 - 1.28264I$	$3.31040 - 3.95615I$	0
$u = -0.369249 + 0.588410I$ $a = 2.95522 + 0.82669I$ $b = -0.638871 - 1.005640I$	$4.31988 - 3.35233I$	0
$u = -0.369249 - 0.588410I$ $a = 2.95522 - 0.82669I$ $b = -0.638871 + 1.005640I$	$4.31988 + 3.35233I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.643352+0.255879I$ $a=\ \ 0.215868-0.127431I$ $b=\ \ 0.078573+1.100240I$	$2.69451-1.80792I$	0
$u=-0.643352-0.255879I$ $a=\ \ 0.215868+0.127431I$ $b=\ \ 0.078573-1.100240I$	$2.69451+1.80792I$	0
$u=\ \ 0.730727+1.084910I$ $a=-1.75951-0.24757I$ $b=\ \ 0.54865-1.41013I$	$3.42042+9.10061I$	0
$u=\ \ 0.730727-1.084910I$ $a=-1.75951+0.24757I$ $b=\ \ 0.54865+1.41013I$	$3.42042-9.10061I$	0
$u=\ \ 0.505679+1.208570I$ $a=-1.76259+0.06068I$ $b=\ \ 0.178992-1.132550I$	$1.07343+5.25271I$	0
$u=\ \ 0.505679-1.208570I$ $a=-1.76259-0.06068I$ $b=\ \ 0.178992+1.132550I$	$1.07343-5.25271I$	0
$u=-1.284040+0.266390I$ $a=\ \ 0.302786-0.263434I$ $b=\ \ 0.327306-1.027510I$	$3.41150+1.29969I$	0
$u=-1.284040-0.266390I$ $a=\ \ 0.302786+0.263434I$ $b=\ \ 0.327306+1.027510I$	$3.41150-1.29969I$	0
$u=\ \ 0.554587+1.191530I$ $a=-0.498696-0.301605I$ $b=\ \ 0.671956+0.459612I$	$-3.89674+2.00708I$	0
$u=\ \ 0.554587-1.191530I$ $a=-0.498696+0.301605I$ $b=\ \ 0.671956-0.459612I$	$-3.89674-2.00708I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.268575 + 0.629923I$ $a = 5.08122 - 0.37331I$ $b = 0.123893 + 1.026060I$	$2.63860 - 6.93401I$	0
$u = 0.268575 - 0.629923I$ $a = 5.08122 + 0.37331I$ $b = 0.123893 - 1.026060I$	$2.63860 + 6.93401I$	0
$u = -0.463069 + 1.233500I$ $a = -1.40411 - 0.42836I$ $b = 0.65767 + 1.34438I$	$-0.72991 - 7.65659I$	0
$u = -0.463069 - 1.233500I$ $a = -1.40411 + 0.42836I$ $b = 0.65767 - 1.34438I$	$-0.72991 + 7.65659I$	0
$u = 0.532497 + 1.209700I$ $a = 1.87562 - 0.38555I$ $b = -0.398682 + 1.054470I$	$-3.67796 + 11.75010I$	0
$u = 0.532497 - 1.209700I$ $a = 1.87562 + 0.38555I$ $b = -0.398682 - 1.054470I$	$-3.67796 - 11.75010I$	0
$u = -0.074654 + 0.660263I$ $a = -0.248672 + 0.959306I$ $b = -0.17057 + 1.47829I$	$5.76126 + 4.77365I$	0
$u = -0.074654 - 0.660263I$ $a = -0.248672 - 0.959306I$ $b = -0.17057 - 1.47829I$	$5.76126 - 4.77365I$	0
$u = -1.259640 + 0.464351I$ $a = -0.116615 - 0.297780I$ $b = 0.509769 - 1.307060I$	$3.5415 + 14.1773I$	0
$u = -1.259640 - 0.464351I$ $a = -0.116615 + 0.297780I$ $b = 0.509769 + 1.307060I$	$3.5415 - 14.1773I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.546779 + 0.319380I$ $a = 0.163842 + 0.122860I$ $b = 0.682547 + 0.440816I$	$-1.53356 - 1.95289I$	0
$u = 0.546779 - 0.319380I$ $a = 0.163842 - 0.122860I$ $b = 0.682547 - 0.440816I$	$-1.53356 + 1.95289I$	0
$u = 0.089516 + 0.625740I$ $a = -0.383413 + 0.642993I$ $b = 0.18268 - 1.61150I$	$3.15914 + 5.21994I$	0
$u = 0.089516 - 0.625740I$ $a = -0.383413 - 0.642993I$ $b = 0.18268 + 1.61150I$	$3.15914 - 5.21994I$	0
$u = -0.543527 + 0.304729I$ $a = 0.76298 - 2.01736I$ $b = -0.357184 - 1.283810I$	$1.11652 - 6.49918I$	0
$u = -0.543527 - 0.304729I$ $a = 0.76298 + 2.01736I$ $b = -0.357184 + 1.283810I$	$1.11652 + 6.49918I$	0
$u = -0.594099 + 1.244810I$ $a = -1.184210 - 0.122213I$ $b = 0.63437 + 1.28829I$	$-0.02836 - 7.44115I$	0
$u = -0.594099 - 1.244810I$ $a = -1.184210 + 0.122213I$ $b = 0.63437 - 1.28829I$	$-0.02836 + 7.44115I$	0
$u = 0.666467 + 1.208450I$ $a = 1.63594 - 0.01900I$ $b = -0.58978 + 1.37576I$	$5.0058 + 14.8149I$	0
$u = 0.666467 - 1.208450I$ $a = 1.63594 + 0.01900I$ $b = -0.58978 - 1.37576I$	$5.0058 - 14.8149I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.304087 + 1.346180I$ $a = 0.285202 + 0.695032I$ $b = -0.127004 - 0.738114I$	$-5.10275 - 2.09676I$	0
$u = 0.304087 - 1.346180I$ $a = 0.285202 - 0.695032I$ $b = -0.127004 + 0.738114I$	$-5.10275 + 2.09676I$	0
$u = -0.598124 + 1.247530I$ $a = -1.137420 + 0.512824I$ $b = 1.293650 - 0.002394I$	$-3.6107 - 14.7049I$	0
$u = -0.598124 - 1.247530I$ $a = -1.137420 - 0.512824I$ $b = 1.293650 + 0.002394I$	$-3.6107 + 14.7049I$	0
$u = 0.170765 + 1.378010I$ $a = 1.041270 - 0.517440I$ $b = -0.524879 + 0.996016I$	$-7.31690 + 1.23252I$	0
$u = 0.170765 - 1.378010I$ $a = 1.041270 + 0.517440I$ $b = -0.524879 - 0.996016I$	$-7.31690 - 1.23252I$	0
$u = 1.199070 + 0.729359I$ $a = 0.308121 + 0.263960I$ $b = -0.112177 + 0.845158I$	$-0.59534 - 2.47602I$	0
$u = 1.199070 - 0.729359I$ $a = 0.308121 - 0.263960I$ $b = -0.112177 - 0.845158I$	$-0.59534 + 2.47602I$	0
$u = 0.410087 + 0.394016I$ $a = 1.67616 - 0.59559I$ $b = -0.545543 + 0.089929I$	$-3.34447 - 3.95397I$	$-11.06995 + 0.I$
$u = 0.410087 - 0.394016I$ $a = 1.67616 + 0.59559I$ $b = -0.545543 - 0.089929I$	$-3.34447 + 3.95397I$	$-11.06995 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.59144 + 1.30473I$ $a = 0.325611 - 0.172992I$ $b = -0.223741 - 0.222098I$	$-3.95372 + 9.46114I$	0
$u = 0.59144 - 1.30473I$ $a = 0.325611 + 0.172992I$ $b = -0.223741 + 0.222098I$	$-3.95372 - 9.46114I$	0
$u = -0.341283 + 0.397827I$ $a = -2.04319 + 0.01918I$ $b = -0.31236 + 1.47736I$	$0.92157 + 6.25113I$	$-5.54308 - 8.39226I$
$u = -0.341283 - 0.397827I$ $a = -2.04319 - 0.01918I$ $b = -0.31236 - 1.47736I$	$0.92157 - 6.25113I$	$-5.54308 + 8.39226I$
$u = -0.74925 + 1.27490I$ $a = -1.51824 + 0.13674I$ $b = 0.59232 + 1.41717I$	$0.8696 - 21.2287I$	0
$u = -0.74925 - 1.27490I$ $a = -1.51824 - 0.13674I$ $b = 0.59232 - 1.41717I$	$0.8696 + 21.2287I$	0
$u = 0.92643 + 1.23491I$ $a = 0.832579 + 0.243343I$ $b = -0.233954 + 1.158840I$	$-1.14055 + 11.63660I$	0
$u = 0.92643 - 1.23491I$ $a = 0.832579 - 0.243343I$ $b = -0.233954 - 1.158840I$	$-1.14055 - 11.63660I$	0
$u = -0.93166 + 1.24849I$ $a = -0.647534 + 0.134353I$ $b = 0.190708 + 1.127450I$	$3.01132 - 4.99324I$	0
$u = -0.93166 - 1.24849I$ $a = -0.647534 - 0.134353I$ $b = 0.190708 - 1.127450I$	$3.01132 + 4.99324I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.14861+1.55848I$ $a=-0.940014+0.111541I$ $b=\ \ 0.944160+0.623775I$	$-6.48528+3.73784I$	0
$u=-0.14861-1.55848I$ $a=-0.940014-0.111541I$ $b=\ \ 0.944160-0.623775I$	$-6.48528-3.73784I$	0
$u=-0.83961+1.34375I$ $a=\ \ 1.344730-0.243353I$ $b=-0.59233-1.38147I$	$1.14317-11.82000I$	0
$u=-0.83961-1.34375I$ $a=\ \ 1.344730+0.243353I$ $b=-0.59233+1.38147I$	$1.14317+11.82000I$	0
$u=-0.70196+1.44092I$ $a=\ \ 0.880797-0.358496I$ $b=-1.277420+0.135052I$	$-2.95321-5.34008I$	0
$u=-0.70196-1.44092I$ $a=\ \ 0.880797+0.358496I$ $b=-1.277420-0.135052I$	$-2.95321+5.34008I$	0
$u=\ \ 1.23713+1.04145I$ $a=-0.121376+0.265207I$ $b=\ \ 0.57750+1.44345I$	$4.13978-2.41673I$	0
$u=\ \ 1.23713-1.04145I$ $a=-0.121376-0.265207I$ $b=\ \ 0.57750-1.44345I$	$4.13978+2.41673I$	0
$u=\ \ 0.20235+1.60745I$ $a=-0.720910+0.210760I$ $b=\ \ 0.601547-0.924626I$	$-5.39656+9.35262I$	0
$u=\ \ 0.20235-1.60745I$ $a=-0.720910-0.210760I$ $b=\ \ 0.601547+0.924626I$	$-5.39656-9.35262I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.005337+0.367901I$ $a=\ \ 1.35404+3.56782I$ $b=\ \ 0.004365+1.310150I$	$4.90673-1.88142I$	$4.63865+4.45543I$
$u=-0.005337-0.367901I$ $a=\ \ 1.35404-3.56782I$ $b=\ \ 0.004365-1.310150I$	$4.90673+1.88142I$	$4.63865-4.45543I$
$u=-0.08575+1.63203I$ $a=\ \ 0.227392+0.442174I$ $b=-0.197741-0.897607I$	$0.48220-4.54431I$	0
$u=-0.08575-1.63203I$ $a=\ \ 0.227392-0.442174I$ $b=-0.197741+0.897607I$	$0.48220+4.54431I$	0
$u=\ \ 1.10378+1.25858I$ $a=-0.407731-0.167740I$ $b=-0.052639-0.988975I$	$-0.38201-3.33060I$	0
$u=\ \ 1.10378-1.25858I$ $a=-0.407731+0.167740I$ $b=-0.052639+0.988975I$	$-0.38201+3.33060I$	0
$u=\ \ 0.197348$ $a=\ \ 1.86702$ $b=\ \ 0.561537$	-1.04829	-8.95010
$u=-1.68563+0.67836I$ $a=\ \ 0.129465+0.333325I$ $b=-0.73155+1.22155I$	$3.75142+3.40795I$	0
$u=-1.68563-0.67836I$ $a=\ \ 0.129465-0.333325I$ $b=-0.73155-1.22155I$	$3.75142-3.40795I$	0

II.

$\boldsymbol{I_2^u = \langle -9.00\times 10^{53}u^{53} - 7.39\times 10^{53}u^{52} + \cdots + 4.95\times 10^{51}b + 7.83\times 10^{53},\ 8.76\times 10^{53}u^{53} + 3.67\times 10^{53}u^{52} + \cdots + 4.95\times 10^{51}a - 2.11\times 10^{54},\ u^{54} + u^{53} + \cdots - 3u + 1\rangle}$

(i) Arc colorings

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

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

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

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

$$a_{12} = \begin{pmatrix} -176.925u^{53} - 74.1161u^{52} + \cdots - 1471.44u + 425.939 \\ 181.910u^{53} + 149.266u^{52} + \cdots + 952.845u - 158.119 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 340.882u^{53} + 542.188u^{52} + \cdots + 594.246u + 140.424 \\ -77.8357u^{53} + 6.46662u^{52} + \cdots - 715.196u + 180.268 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 4.98511u^{53} + 75.1504u^{52} + \cdots - 518.598u + 267.820 \\ 181.910u^{53} + 149.266u^{52} + \cdots + 952.845u - 158.119 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 180.265u^{53} + 172.769u^{52} + \cdots - 336.189u + 341.070 \\ 13.7958u^{53} - 53.3612u^{52} + \cdots + 727.708u - 239.928 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -216.663u^{53} - 384.677u^{52} + \cdots + 275.906u - 381.801 \\ -319.853u^{53} - 183.119u^{52} + \cdots - 2530.21u + 521.691 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -39.1985u^{53} + 36.3596u^{52} + \cdots - 84.7194u + 185.377 \\ -61.6820u^{53} - 193.852u^{52} + \cdots + 1189.73u - 415.792 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 12.8076u^{53} - 65.5447u^{52} + \cdots + 934.875u - 361.239 \\ -71.5435u^{53} - 196.930u^{52} + \cdots + 1021.45u - 438.735 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -8.73417u^{53} - 109.461u^{52} + \cdots + 1080.41u - 430.945 \\ -87.2386u^{53} - 230.709u^{52} + \cdots + 1121.40u - 486.066 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -316.344u^{53} - 71.5666u^{52} + \cdots - 1580.12u + 253.055$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{54} - 12u^{53} + \cdots - 6u + 7$
c_2	$u^{54} - u^{53} + \cdots + 3u + 1$
c_3	$u^{54} + 24u^{52} + \cdots + 2u + 1$
c_4	$u^{54} + u^{53} + \cdots + 48u + 19$
c_5	$u^{54} + 2u^{53} + \cdots + 60u + 7$
c_6	$u^{54} + u^{53} + \cdots - 3u + 1$
c_7	$u^{54} + 18u^{52} + \cdots - 6u + 13$
c_8	$u^{54} + 2u^{53} + \cdots + 6u + 1$
c_9	$u^{54} + 24u^{52} + \cdots - 2u + 1$
c_{10}	$u^{54} + 5u^{52} + \cdots - 4u + 1$
c_{11}	$u^{54} + 18u^{52} + \cdots + 6u + 13$
c_{12}	$u^{54} + 6u^{53} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{54} + 10y^{53} + \cdots - 316y + 49$
c_2, c_6	$y^{54} + 27y^{53} + \cdots + 53y + 1$
c_3, c_9	$y^{54} + 48y^{53} + \cdots + 36y + 1$
c_4	$y^{54} + 45y^{53} + \cdots + 13314y + 361$
c_5	$y^{54} + 10y^{53} + \cdots + 3204y + 49$
c_7, c_{11}	$y^{54} + 36y^{53} + \cdots + 302y + 169$
c_8	$y^{54} + 82y^{52} + \cdots - 212y^2 + 1$
c_{10}	$y^{54} + 10y^{53} + \cdots + 20y + 1$
c_{12}	$y^{54} - 18y^{53} + \cdots + 30y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.212066 + 0.984819I$ $a = -1.68777 - 0.41452I$ $b = 1.385430 + 0.275284I$	$-4.20305 + 0.80819I$	0
$u = 0.212066 - 0.984819I$ $a = -1.68777 + 0.41452I$ $b = 1.385430 - 0.275284I$	$-4.20305 - 0.80819I$	0
$u = 1.007590 + 0.070381I$ $a = -0.792452 + 0.592822I$ $b = -0.119217 + 1.054380I$	$5.87397 + 0.54493I$	0
$u = 1.007590 - 0.070381I$ $a = -0.792452 - 0.592822I$ $b = -0.119217 - 1.054380I$	$5.87397 - 0.54493I$	0
$u = -0.293771 + 0.921725I$ $a = 2.01760 - 1.39472I$ $b = -1.98361 + 0.15089I$	$-7.00534 - 1.22869I$	0
$u = -0.293771 - 0.921725I$ $a = 2.01760 + 1.39472I$ $b = -1.98361 - 0.15089I$	$-7.00534 + 1.22869I$	0
$u = 0.498860 + 0.821024I$ $a = -0.943462 - 0.234729I$ $b = 0.660803 - 0.050195I$	$-1.22644 + 2.10474I$	0
$u = 0.498860 - 0.821024I$ $a = -0.943462 + 0.234729I$ $b = 0.660803 + 0.050195I$	$-1.22644 - 2.10474I$	0
$u = -0.551411 + 0.760486I$ $a = 1.21793 - 1.28380I$ $b = -0.352612 - 0.075012I$	$-3.69019 - 5.62343I$	0
$u = -0.551411 - 0.760486I$ $a = 1.21793 + 1.28380I$ $b = -0.352612 + 0.075012I$	$-3.69019 + 5.62343I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.542604 + 0.912298I$ $a = -1.115780 - 0.741315I$ $b = 0.949536 - 0.158234I$	$-1.55978 + 2.24613I$	0
$u = 0.542604 - 0.912298I$ $a = -1.115780 + 0.741315I$ $b = 0.949536 + 0.158234I$	$-1.55978 - 2.24613I$	0
$u = 0.302942 + 1.071260I$ $a = -0.125029 + 0.766389I$ $b = 0.09806 + 1.44180I$	$3.65987 - 1.06638I$	0
$u = 0.302942 - 1.071260I$ $a = -0.125029 - 0.766389I$ $b = 0.09806 - 1.44180I$	$3.65987 + 1.06638I$	0
$u = -0.471165 + 1.021130I$ $a = 0.761175 - 0.346237I$ $b = -0.11579 - 1.47011I$	$0.14574 - 8.68346I$	0
$u = -0.471165 - 1.021130I$ $a = 0.761175 + 0.346237I$ $b = -0.11579 + 1.47011I$	$0.14574 + 8.68346I$	0
$u = 0.487038 + 1.054620I$ $a = -1.88197 + 0.20086I$ $b = 0.119064 - 1.147600I$	$2.95045 + 3.75396I$	0
$u = 0.487038 - 1.054620I$ $a = -1.88197 - 0.20086I$ $b = 0.119064 + 1.147600I$	$2.95045 - 3.75396I$	0
$u = 0.676864 + 0.953552I$ $a = -0.869444 - 0.678177I$ $b = 0.146080 - 1.190100I$	$3.07407 + 4.22048I$	0
$u = 0.676864 - 0.953552I$ $a = -0.869444 + 0.678177I$ $b = 0.146080 + 1.190100I$	$3.07407 - 4.22048I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.118636 + 0.771233I$ $a = -1.181710 + 0.340098I$ $b = -0.139294 + 0.306118I$	$0.26205 + 3.08041I$	$1.66312 - 6.66147I$
$u = 0.118636 - 0.771233I$ $a = -1.181710 - 0.340098I$ $b = -0.139294 - 0.306118I$	$0.26205 - 3.08041I$	$1.66312 + 6.66147I$
$u = 1.160580 + 0.422854I$ $a = -0.009721 + 0.182840I$ $b = 0.425927 + 1.203530I$	$3.26324 - 2.26013I$	0
$u = 1.160580 - 0.422854I$ $a = -0.009721 - 0.182840I$ $b = 0.425927 - 1.203530I$	$3.26324 + 2.26013I$	0
$u = -0.670303 + 1.091120I$ $a = 1.88708 - 0.19530I$ $b = -0.45643 - 1.43832I$	$2.18596 - 9.95277I$	0
$u = -0.670303 - 1.091120I$ $a = 1.88708 + 0.19530I$ $b = -0.45643 + 1.43832I$	$2.18596 + 9.95277I$	0
$u = -0.315721 + 1.260170I$ $a = -0.770951 + 0.479199I$ $b = 0.417440 + 0.025330I$	$-6.03806 + 1.53157I$	0
$u = -0.315721 - 1.260170I$ $a = -0.770951 - 0.479199I$ $b = 0.417440 - 0.025330I$	$-6.03806 - 1.53157I$	0
$u = 0.038767 + 0.689203I$ $a = 3.76355 + 1.09615I$ $b = -0.354949 - 1.000510I$	$3.47185 - 2.45755I$	$-3.73289 + 4.72260I$
$u = 0.038767 - 0.689203I$ $a = 3.76355 - 1.09615I$ $b = -0.354949 + 1.000510I$	$3.47185 + 2.45755I$	$-3.73289 - 4.72260I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.287248 + 0.620968I$ $a = 1.78099 + 2.15128I$ $b = -0.126688 + 1.259680I$	$4.96558 - 0.01952I$	$3.80289 - 1.66173I$
$u = 0.287248 - 0.620968I$ $a = 1.78099 - 2.15128I$ $b = -0.126688 - 1.259680I$	$4.96558 + 0.01952I$	$3.80289 + 1.66173I$
$u = 0.503087 + 1.238850I$ $a = -1.352320 + 0.308790I$ $b = 0.63958 - 1.35469I$	$-0.45892 + 7.70695I$	0
$u = 0.503087 - 1.238850I$ $a = -1.352320 - 0.308790I$ $b = 0.63958 + 1.35469I$	$-0.45892 - 7.70695I$	0
$u = -0.408674 + 1.285060I$ $a = -0.278047 - 0.551464I$ $b = -0.224800 + 1.024060I$	$0.12541 + 3.99272I$	0
$u = -0.408674 - 1.285060I$ $a = -0.278047 + 0.551464I$ $b = -0.224800 - 1.024060I$	$0.12541 - 3.99272I$	0
$u = 0.349442 + 1.303570I$ $a = 0.336508 - 0.686652I$ $b = -0.161274 + 0.773277I$	$0.72622 + 4.04359I$	0
$u = 0.349442 - 1.303570I$ $a = 0.336508 + 0.686652I$ $b = -0.161274 - 0.773277I$	$0.72622 - 4.04359I$	0
$u = -0.597839 + 1.265310I$ $a = 1.078000 - 0.392131I$ $b = -1.060660 - 0.089594I$	$-3.05365 - 4.69754I$	0
$u = -0.597839 - 1.265310I$ $a = 1.078000 + 0.392131I$ $b = -1.060660 + 0.089594I$	$-3.05365 + 4.69754I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.036261 + 0.568924I$ $a = 0.176591 - 0.753124I$ $b = 0.20108 + 1.57931I$	$3.19607 - 4.96057I$	$-2.73077 - 7.57221I$
$u = 0.036261 - 0.568924I$ $a = 0.176591 + 0.753124I$ $b = 0.20108 - 1.57931I$	$3.19607 + 4.96057I$	$-2.73077 + 7.57221I$
$u = -0.63690 + 1.29979I$ $a = -0.998868 - 0.262555I$ $b = 0.293653 + 0.793681I$	$-3.17975 - 10.34600I$	0
$u = -0.63690 - 1.29979I$ $a = -0.998868 + 0.262555I$ $b = 0.293653 - 0.793681I$	$-3.17975 + 10.34600I$	0
$u = -0.090395 + 0.510174I$ $a = -4.76565 - 0.68322I$ $b = 0.335970 + 1.280550I$	$2.86684 + 4.53888I$	$-5.01467 - 4.86881I$
$u = -0.090395 - 0.510174I$ $a = -4.76565 + 0.68322I$ $b = 0.335970 - 1.280550I$	$2.86684 - 4.53888I$	$-5.01467 + 4.86881I$
$u = 0.123695 + 0.469922I$ $a = -5.74643 - 3.00751I$ $b = 0.282603 - 1.113330I$	$2.63150 + 7.66725I$	$-2.26546 - 12.29980I$
$u = 0.123695 - 0.469922I$ $a = -5.74643 + 3.00751I$ $b = 0.282603 + 1.113330I$	$2.63150 - 7.66725I$	$-2.26546 + 12.29980I$
$u = -0.091348 + 0.405350I$ $a = -0.34785 + 2.01372I$ $b = -0.17850 + 1.43806I$	$6.12098 + 4.84972I$	$11.86436 - 6.55135I$
$u = -0.091348 - 0.405350I$ $a = -0.34785 - 2.01372I$ $b = -0.17850 - 1.43806I$	$6.12098 - 4.84972I$	$11.86436 + 6.55135I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.47915+0.76556I$ $a=\quad 0.113879+0.349278I$ $b=-0.61780+1.32696I$	$3.88191+3.09943I$	0
$u=-1.47915-0.76556I$ $a=\quad 0.113879-0.349278I$ $b=-0.61780-1.32696I$	$3.88191-3.09943I$	0
$u=-1.23900+1.13740I$ $a=\quad 0.234143-0.231464I$ $b=-0.063598-0.850962I$	$-0.89227+2.76929I$	0
$u=-1.23900-1.13740I$ $a=\quad 0.234143+0.231464I$ $b=-0.063598+0.850962I$	$-0.89227-2.76929I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{54}-12u^{53}+\cdots-6u+7)(u^{189}-3u^{188}+\cdots+477364u-16517)$
c_2	$(u^{54}-u^{53}+\cdots+3u+1)(u^{189}-2u^{188}+\cdots+118941u+58405)$
c_3	$(u^{54}+24u^{52}+\cdots+2u+1)(u^{189}+u^{188}+\cdots+1777914u+1267391)$
c_4	$(u^{54}+u^{53}+\cdots+48u+19)$ $\cdot(u^{189}+4u^{188}+\cdots-64079539000u+4971467125)$
c_5	$(u^{54}+2u^{53}+\cdots+60u+7)(u^{189}+u^{188}+\cdots+6444964u+558157)$
c_6	$(u^{54}+u^{53}+\cdots-3u+1)(u^{189}-2u^{188}+\cdots+118941u+58405)$
c_7	$(u^{54}+18u^{52}+\cdots-6u+13)(u^{189}+5u^{188}+\cdots-572070u+16507)$
c_8	$(u^{54}+2u^{53}+\cdots+6u+1)(u^{189}+3u^{188}+\cdots-14u+1)$
c_9	$(u^{54}+24u^{52}+\cdots-2u+1)(u^{189}+u^{188}+\cdots+1777914u+1267391)$
c_{10}	$(u^{54}+5u^{52}+\cdots-4u+1)(u^{189}+u^{188}+\cdots+5.08979\times10^{7}u+7370057)$
c_{11}	$(u^{54}+18u^{52}+\cdots+6u+13)(u^{189}+5u^{188}+\cdots-572070u+16507)$
c_{12}	$(u^{54}+6u^{53}+\cdots+2u+1)$ $\cdot(u^{189}-15u^{188}+\cdots\frac{}{35}30374880u+1807073)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{54}+10y^{53}+\cdots-316y+49)$ $\cdot(y^{189}+y^{188}+\cdots+49971649360y-272811289)$
c_2, c_6	$(y^{54}+27y^{53}+\cdots+53y+1)$ $\cdot(y^{189}+94y^{188}+\cdots-130612517649y-3411144025)$
c_3, c_9	$(y^{54}+48y^{53}+\cdots+36y+1)$ $\cdot(y^{189}+135y^{188}+\cdots-81751009774592y-1606279946881)$
c_4	$(y^{54}+45y^{53}+\cdots+13314y+361)$ $\cdot(y^{189}+104y^{188}+\cdots-1.76\times10^{21}y-2.47\times10^{19})$
c_5	$(y^{54}+10y^{53}+\cdots+3204y+49)$ $\cdot(y^{189}+25y^{188}+\cdots-24262094234224y-311539236649)$
c_7, c_{11}	$(y^{54}+36y^{53}+\cdots+302y+169)$ $\cdot(y^{189}+127y^{188}+\cdots+48428270082y-272481049)$
c_8	$(y^{54}+82y^{52}+\cdots-212y^2+1)(y^{189}-5y^{188}+\cdots+44y-1)$
c_{10}	$(y^{54}+10y^{53}+\cdots+20y+1)$ $\cdot(y^{189}+53y^{188}+\cdots-329523948949056y-54317740183249)$
c_{12}	$(y^{54}-18y^{53}+\cdots+30y+1)$ $\cdot(y^{189}+5y^{188}+\cdots-213376445564522y-3265512827329)$