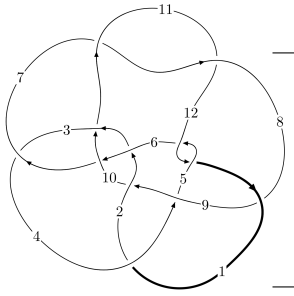
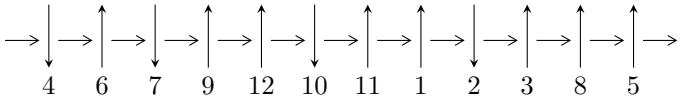
$12a_{0874}$ $(K12a_{0874})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -1.84886 \times 10^{1402} u^{190} + 3.70297 \times 10^{1402} u^{189} + \cdots + 1.63068 \times 10^{1404} b + 1.52642 \times 10^{1408}, \\ & - 2.20329 \times 10^{1408} u^{190} + 6.86665 \times 10^{1407} u^{189} + \cdots + 4.27740 \times 10^{1409} a + 4.99679 \times 10^{1413}, \\ & u^{191} + 65 u^{189} + \cdots - 7345527 u + 262307 \rangle \\ I_2^u = \langle & 2.77823 \times 10^{73} u^{49} + 1.70736 \times 10^{73} u^{48} + \cdots + 7.28128 \times 10^{73} b - 2.44122 \times 10^{74}, \\ & 1.03235 \times 10^{75} u^{49} + 1.05630 \times 10^{75} u^{48} + \cdots + 7.28128 \times 10^{73} a + 2.83270 \times 10^{75}, \ u^{50} + u^{49} + \cdots + 2u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 241 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. $\boldsymbol{I_1^u = \langle -1.85 \times 10^{1402} u^{190} + 3.70 \times 10^{1402} u^{189} + \cdots + 1.63 \times 10^{1404} b + 1.53 \times 10^{1408},\ -2.20 \times 10^{1408} u^{190} + 6.87 \times 10^{1407} u^{189} + \cdots + 4.28 \times 10^{1409} a + 5.00 \times 10^{1413},\ u^{191} + 65 u^{189} + \cdots - 7345527 u + 262307 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

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

$$a_9 = \begin{pmatrix} 0.0515100 u^{190} - 0.0160533 u^{189} + \cdots + 326321. u - 11681.9 \\ 0.0113379 u^{190} - 0.0227081 u^{189} + \cdots + 258745. u - 9360.63 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0586402 u^{190} + 0.144311 u^{189} + \cdots - 1.14998 \times 10^6 u + 42130.4 \\ 0.0514121 u^{190} + 0.0955835 u^{189} + \cdots - 729887. u + 26842.3 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0935137 u^{190} + 0.0724429 u^{189} + \cdots - 477887. u + 18316.9 \\ 0.0288888 u^{190} + 0.0540440 u^{189} + \cdots - 432033. u + 15860.7 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0640409 u^{190} + 0.0599123 u^{189} + \cdots - 402318. u + 15175.3 \\ 0.00513012 u^{190} + 0.0403217 u^{189} + \cdots - 347720. u + 12573.8 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0724069 u^{190} - 0.0906965 u^{189} + \cdots + 611737. u - 23521.2 \\ -0.0645735 u^{190} - 0.0493419 u^{189} + \cdots + 237286. u - 9472.89 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.0235649 u^{190} - 0.0269071 u^{189} + \cdots + 364666. u - 13427.4 \\ -0.0166072 u^{190} - 0.0335619 u^{189} + \cdots + 297090. u - 11106.2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.117562 u^{190} + 0.0353139 u^{189} + \cdots - 638817. u + 21444.7 \\ -0.0523487 u^{190} + 0.0300864 u^{189} + \cdots - 450943. u + 15665.9 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.161698 u^{190} - 0.0975729 u^{189} + \cdots + 566662. u - 23287.5 \\ -0.107800 u^{190} - 0.0856358 u^{189} + \cdots + 547467. u - 21437.9 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0664855 u^{190} + 0.106706 u^{189} + \cdots - 806183. u + 28495.4$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{191} + 8u^{190} + \cdots + 12090u - 521$
c_2	$u^{191} + 9u^{189} + \cdots + 26856u - 3123$
c_3	$u^{191} + 8u^{190} + \cdots - 40446u - 4563$
c_4	$u^{191} + 23u^{189} + \cdots - 6088215u - 1128983$
c_5, c_{12}	$u^{191} + 65u^{189} + \cdots - 7345527u - 262307$
c_6	$u^{191} + 2u^{190} + \cdots - 26u - 1$
c_7, c_{11}	$u^{191} - 4u^{190} + \cdots - 644237242u - 33057935$
c_8	$u^{191} + 4u^{190} + \cdots - 14u - 1$
c_9	$u^{191} + 3u^{190} + \cdots + 2081393442u - 208449613$
c_{10}	$u^{191} + 4u^{190} + \cdots - 517308u - 92933$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{191} + 18y^{190} + \cdots + 7672754y - 271441$
c_2	$y^{191} + 18y^{190} + \cdots - 1093867848y - 9753129$
c_3	$y^{191} + 48y^{190} + \cdots - 547954632y - 20820969$
c_4	$y^{191} + 46y^{190} + \cdots - 71896540462205y - 1274602614289$
c_5, c_{12}	$y^{191} + 130y^{190} + \cdots + 5931925730613y - 68804962249$
c_6	$y^{191} - 14y^{190} + \cdots + 150y - 1$
c_7, c_{11}	$y^{191} - 140y^{190} + \cdots + 148730603959730924y - 1092827066464225$
c_8	$y^{191} + 16y^{190} + \cdots - 1830y - 1$
c_9	$y^{191} - 55y^{190} + \cdots + 2565423313669011206y - 43451241159849769$
c_{10}	$y^{191} - 24y^{190} + \cdots + 682916036430y - 8636542489$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.512846 + 0.859954I$ $a = -0.993688 + 0.949455I$ $b = -0.962967 + 0.962306I$	$1.62279 - 0.11399I$	0
$u = 0.512846 - 0.859954I$ $a = -0.993688 - 0.949455I$ $b = -0.962967 - 0.962306I$	$1.62279 + 0.11399I$	0
$u = 0.978114 + 0.183462I$ $a = -0.473054 + 0.830311I$ $b = 0.619112 + 1.108490I$	$3.58690 + 5.22077I$	0
$u = 0.978114 - 0.183462I$ $a = -0.473054 - 0.830311I$ $b = 0.619112 - 1.108490I$	$3.58690 - 5.22077I$	0
$u = -0.102811 + 1.007920I$ $a = -3.34076 - 0.79703I$ $b = 0.387767 + 0.166638I$	$-1.76777 - 0.26711I$	0
$u = -0.102811 - 1.007920I$ $a = -3.34076 + 0.79703I$ $b = 0.387767 - 0.166638I$	$-1.76777 + 0.26711I$	0
$u = 0.652465 + 0.737354I$ $a = 0.11217 + 2.09971I$ $b = 0.66513 + 1.32327I$	$4.43750 - 0.16046I$	0
$u = 0.652465 - 0.737354I$ $a = 0.11217 - 2.09971I$ $b = 0.66513 - 1.32327I$	$4.43750 + 0.16046I$	0
$u = -0.063400 + 0.979157I$ $a = 1.66806 - 1.73143I$ $b = -0.255460 - 0.917578I$	$-3.41286 - 0.27827I$	0
$u = -0.063400 - 0.979157I$ $a = 1.66806 + 1.73143I$ $b = -0.255460 + 0.917578I$	$-3.41286 + 0.27827I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.334797 + 0.964987I$ $a = 0.360107 - 0.486954I$ $b = 0.727671 - 0.923644I$	$4.04608 - 4.03130I$	0
$u = 0.334797 - 0.964987I$ $a = 0.360107 + 0.486954I$ $b = 0.727671 + 0.923644I$	$4.04608 + 4.03130I$	0
$u = -0.245261 + 0.991590I$ $a = 1.08011 + 1.00475I$ $b = 1.22574 + 1.23155I$	$3.24219 - 4.65971I$	0
$u = -0.245261 - 0.991590I$ $a = 1.08011 - 1.00475I$ $b = 1.22574 - 1.23155I$	$3.24219 + 4.65971I$	0
$u = -0.923435 + 0.314359I$ $a = -0.093251 - 0.285405I$ $b = 0.862564 - 0.892525I$	$-0.56099 - 10.00740I$	0
$u = -0.923435 - 0.314359I$ $a = -0.093251 + 0.285405I$ $b = 0.862564 + 0.892525I$	$-0.56099 + 10.00740I$	0
$u = 0.067457 + 0.965865I$ $a = 0.324948 - 0.329435I$ $b = 0.745054 + 0.046203I$	$-1.96101 - 1.49328I$	0
$u = 0.067457 - 0.965865I$ $a = 0.324948 + 0.329435I$ $b = 0.745054 - 0.046203I$	$-1.96101 + 1.49328I$	0
$u = 0.763160 + 0.575586I$ $a = -0.02349 - 1.82947I$ $b = -0.900127 - 1.006580I$	$4.29389 - 8.15564I$	0
$u = 0.763160 - 0.575586I$ $a = -0.02349 + 1.82947I$ $b = -0.900127 + 1.006580I$	$4.29389 + 8.15564I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.351723 + 0.887873I$ $a = -0.176619 + 0.859935I$ $b = -0.802411 + 0.916053I$	$3.14538 + 1.39324I$	0
$u = 0.351723 - 0.887873I$ $a = -0.176619 - 0.859935I$ $b = -0.802411 - 0.916053I$	$3.14538 - 1.39324I$	0
$u = -0.420057 + 0.958849I$ $a = 0.961807 + 0.025499I$ $b = 1.38879 + 0.46497I$	$0.86595 - 4.74204I$	0
$u = -0.420057 - 0.958849I$ $a = 0.961807 - 0.025499I$ $b = 1.38879 - 0.46497I$	$0.86595 + 4.74204I$	0
$u = 0.196400 + 1.046200I$ $a = -1.57183 - 2.09208I$ $b = -0.046973 - 0.660831I$	$-0.23823 + 11.38630I$	0
$u = 0.196400 - 1.046200I$ $a = -1.57183 + 2.09208I$ $b = -0.046973 + 0.660831I$	$-0.23823 - 11.38630I$	0
$u = 1.053650 + 0.155311I$ $a = 0.007011 + 0.199597I$ $b = -0.767990 + 0.943186I$	$2.09784 - 6.73290I$	0
$u = 1.053650 - 0.155311I$ $a = 0.007011 - 0.199597I$ $b = -0.767990 - 0.943186I$	$2.09784 + 6.73290I$	0
$u = -0.636027 + 0.683004I$ $a = 0.423049 - 0.420854I$ $b = 0.670440 + 0.234980I$	$1.89166 - 2.30214I$	0
$u = -0.636027 - 0.683004I$ $a = 0.423049 + 0.420854I$ $b = 0.670440 - 0.234980I$	$1.89166 + 2.30214I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.203809 + 1.048740I$ $a = 1.19180 + 1.78538I$ $b = -0.145495 + 0.643514I$	$0.87699 + 3.92374I$	0
$u = 0.203809 - 1.048740I$ $a = 1.19180 - 1.78538I$ $b = -0.145495 - 0.643514I$	$0.87699 - 3.92374I$	0
$u = -0.149392 + 1.063000I$ $a = 1.03449 - 1.56066I$ $b = 0.068658 - 0.906663I$	$-1.78563 - 3.42046I$	0
$u = -0.149392 - 1.063000I$ $a = 1.03449 + 1.56066I$ $b = 0.068658 + 0.906663I$	$-1.78563 + 3.42046I$	0
$u = -0.125292 + 0.912031I$ $a = -1.01216 + 3.00472I$ $b = -0.208639 + 0.568525I$	$-0.797459 - 0.334339I$	0
$u = -0.125292 - 0.912031I$ $a = -1.01216 - 3.00472I$ $b = -0.208639 - 0.568525I$	$-0.797459 + 0.334339I$	0
$u = 0.537404 + 0.954621I$ $a = -1.153260 + 0.337003I$ $b = -1.55005 + 0.46691I$	$3.75061 + 4.90766I$	0
$u = 0.537404 - 0.954621I$ $a = -1.153260 - 0.337003I$ $b = -1.55005 - 0.46691I$	$3.75061 - 4.90766I$	0
$u = -0.004471 + 0.901983I$ $a = 0.42577 - 2.27412I$ $b = -0.73911 - 1.36029I$	$-0.81189 + 2.82019I$	0
$u = -0.004471 - 0.901983I$ $a = 0.42577 + 2.27412I$ $b = -0.73911 + 1.36029I$	$-0.81189 - 2.82019I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.094679 + 0.882420I$ $a = 0.08973 - 3.33527I$ $b = -0.16408 - 1.43641I$	$4.88992 + 5.75364I$	0
$u = 0.094679 - 0.882420I$ $a = 0.08973 + 3.33527I$ $b = -0.16408 + 1.43641I$	$4.88992 - 5.75364I$	0
$u = 0.140999 + 0.865493I$ $a = -1.97414 - 0.68224I$ $b = -2.04877 - 0.50684I$	$-1.33549 + 5.07868I$	0
$u = 0.140999 - 0.865493I$ $a = -1.97414 + 0.68224I$ $b = -2.04877 + 0.50684I$	$-1.33549 - 5.07868I$	0
$u = 0.245291 + 1.100020I$ $a = -0.154490 - 1.035660I$ $b = -1.25904 - 0.73250I$	$-0.74677 + 5.69470I$	0
$u = 0.245291 - 1.100020I$ $a = -0.154490 + 1.035660I$ $b = -1.25904 + 0.73250I$	$-0.74677 - 5.69470I$	0
$u = 0.538302 + 0.993486I$ $a = 1.122900 - 0.150927I$ $b = 1.60951 - 0.43310I$	$2.99242 + 13.07300I$	0
$u = 0.538302 - 0.993486I$ $a = 1.122900 + 0.150927I$ $b = 1.60951 + 0.43310I$	$2.99242 - 13.07300I$	0
$u = 0.857824 + 0.132948I$ $a = 0.475836 - 0.301211I$ $b = -0.781613 + 0.549576I$	$7.73115 - 7.16300I$	0
$u = 0.857824 - 0.132948I$ $a = 0.475836 + 0.301211I$ $b = -0.781613 - 0.549576I$	$7.73115 + 7.16300I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.216038+0.828045I$ $a=\ \ 0.056967+0.244949I$ $b=\ \ 1.194940+0.498301I$	$-0.82493-1.48368I$	0
$u=-0.216038-0.828045I$ $a=\ \ 0.056967-0.244949I$ $b=\ \ 1.194940-0.498301I$	$-0.82493+1.48368I$	0
$u=-0.765012+0.361285I$ $a=\ \ 0.382919+0.555963I$ $b=-0.601198-0.692072I$	$6.87864-2.95599I$	0
$u=-0.765012-0.361285I$ $a=\ \ 0.382919-0.555963I$ $b=-0.601198+0.692072I$	$6.87864+2.95599I$	0
$u=-1.154930+0.023766I$ $a=-0.048559+0.137207I$ $b=\ \ 0.773974+0.296975I$	$6.21670+0.18236I$	0
$u=-1.154930-0.023766I$ $a=-0.048559-0.137207I$ $b=\ \ 0.773974-0.296975I$	$6.21670-0.18236I$	0
$u=\ \ 0.270166+0.790707I$ $a=\ \ 1.12593+1.26255I$ $b=\ \ 1.67917+0.94477I$	$-1.41533-2.76220I$	0
$u=\ \ 0.270166-0.790707I$ $a=\ \ 1.12593-1.26255I$ $b=\ \ 1.67917-0.94477I$	$-1.41533+2.76220I$	0
$u=-0.307718+1.137970I$ $a=\ \ 0.130836-1.390020I$ $b=\ \ 0.918476-0.802985I$	$-2.07824-2.61344I$	0
$u=-0.307718-1.137970I$ $a=\ \ 0.130836+1.390020I$ $b=\ \ 0.918476+0.802985I$	$-2.07824+2.61344I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.759204+0.904304I$ $a=-0.870024+0.176525I$ $b=-1.354370-0.038262I$	$3.82808-3.36796I$	0
$u=-0.759204-0.904304I$ $a=-0.870024-0.176525I$ $b=-1.354370+0.038262I$	$3.82808+3.36796I$	0
$u=0.215667+0.781332I$ $a=-0.09282+2.90289I$ $b=-0.065974+1.301720I$	$3.75123+1.22811I$	0
$u=0.215667-0.781332I$ $a=-0.09282-2.90289I$ $b=-0.065974-1.301720I$	$3.75123-1.22811I$	0
$u=-0.070495+0.800619I$ $a=-0.18103+3.27892I$ $b=-0.37119+1.90392I$	$4.33921+3.00466I$	0
$u=-0.070495-0.800619I$ $a=-0.18103-3.27892I$ $b=-0.37119-1.90392I$	$4.33921-3.00466I$	0
$u=0.379809+1.143710I$ $a=0.12608-1.96227I$ $b=-0.93069-1.46292I$	$-4.58008+7.62774I$	0
$u=0.379809-1.143710I$ $a=0.12608+1.96227I$ $b=-0.93069+1.46292I$	$-4.58008-7.62774I$	0
$u=-1.204200+0.051631I$ $a=-0.134195+0.224731I$ $b=-0.509548+0.711296I$	$-1.43643+1.06724I$	0
$u=-1.204200-0.051631I$ $a=-0.134195-0.224731I$ $b=-0.509548-0.711296I$	$-1.43643-1.06724I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.130357+1.206490I$ $a=\ 0.52079-2.00918I$ $b=\ 1.25295-1.50619I$	$-3.50446-5.10385I$	0
$u=-0.130357-1.206490I$ $a=\ 0.52079+2.00918I$ $b=\ 1.25295+1.50619I$	$-3.50446+5.10385I$	0
$u=-0.978809+0.720736I$ $a=\ 0.22600-1.40774I$ $b=\ 0.938598-0.949593I$	$4.45374-2.93608I$	0
$u=-0.978809-0.720736I$ $a=\ 0.22600+1.40774I$ $b=\ 0.938598+0.949593I$	$4.45374+2.93608I$	0
$u=\ 0.430559+1.148940I$ $a=\ 0.06746-1.85481I$ $b=-0.74802-1.46882I$	$-5.14020+4.43600I$	0
$u=\ 0.430559-1.148940I$ $a=\ 0.06746+1.85481I$ $b=-0.74802+1.46882I$	$-5.14020-4.43600I$	0
$u=\ 0.231567+1.210320I$ $a=-1.07254+1.32991I$ $b=\ 0.225923+0.791440I$	$-6.04240+2.26440I$	0
$u=\ 0.231567-1.210320I$ $a=-1.07254-1.32991I$ $b=\ 0.225923-0.791440I$	$-6.04240-2.26440I$	0
$u=\ 0.748825+0.134176I$ $a=-1.029500+0.659070I$ $b=\ 0.483999-0.212481I$	$5.78898-0.92272I$	0
$u=\ 0.748825-0.134176I$ $a=-1.029500-0.659070I$ $b=\ 0.483999+0.212481I$	$5.78898+0.92272I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.318924 + 1.197870I$ $a = -0.52440 + 1.92588I$ $b = 0.66140 + 1.27385I$	$-5.42410 + 6.89918I$	0
$u = 0.318924 - 1.197870I$ $a = -0.52440 - 1.92588I$ $b = 0.66140 - 1.27385I$	$-5.42410 - 6.89918I$	0
$u = 0.502605 + 1.133200I$ $a = 1.218780 - 0.256912I$ $b = -0.090194 - 0.635435I$	$-2.19176 + 1.79090I$	0
$u = 0.502605 - 1.133200I$ $a = 1.218780 + 0.256912I$ $b = -0.090194 + 0.635435I$	$-2.19176 - 1.79090I$	0
$u = 0.020802 + 1.240620I$ $a = -0.58472 - 1.95104I$ $b = 0.200347 - 0.949379I$	$-5.28743 - 2.75029I$	0
$u = 0.020802 - 1.240620I$ $a = -0.58472 + 1.95104I$ $b = 0.200347 + 0.949379I$	$-5.28743 + 2.75029I$	0
$u = 0.672281 + 1.044110I$ $a = -0.733412 + 0.389703I$ $b = 0.248286 + 0.924151I$	$-4.06067 + 2.71323I$	0
$u = 0.672281 - 1.044110I$ $a = -0.733412 - 0.389703I$ $b = 0.248286 - 0.924151I$	$-4.06067 - 2.71323I$	0
$u = 0.231618 + 1.220750I$ $a = -1.000350 + 0.801072I$ $b = 0.033968 + 0.735142I$	$-5.80675 - 1.12388I$	0
$u = 0.231618 - 1.220750I$ $a = -1.000350 - 0.801072I$ $b = 0.033968 - 0.735142I$	$-5.80675 + 1.12388I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.317189 + 1.204070I$ $a = 0.679256 - 1.103960I$ $b = -0.118615 - 1.053290I$	$-6.10196 - 0.31502I$	0
$u = 0.317189 - 1.204070I$ $a = 0.679256 + 1.103960I$ $b = -0.118615 + 1.053290I$	$-6.10196 + 0.31502I$	0
$u = -1.166340 + 0.471514I$ $a = 0.0734794 - 0.0496177I$ $b = 0.433930 + 0.651683I$	$5.48069 + 1.09842I$	0
$u = -1.166340 - 0.471514I$ $a = 0.0734794 + 0.0496177I$ $b = 0.433930 - 0.651683I$	$5.48069 - 1.09842I$	0
$u = -0.239978 + 1.235820I$ $a = 0.06085 + 2.17482I$ $b = -0.65613 + 1.57978I$	$-5.37230 + 2.31650I$	0
$u = -0.239978 - 1.235820I$ $a = 0.06085 - 2.17482I$ $b = -0.65613 - 1.57978I$	$-5.37230 - 2.31650I$	0
$u = -0.528628 + 0.516502I$ $a = 0.659172 + 0.622640I$ $b = -0.822489 + 0.761066I$	$2.08705 - 2.16220I$	0
$u = -0.528628 - 0.516502I$ $a = 0.659172 - 0.622640I$ $b = -0.822489 - 0.761066I$	$2.08705 + 2.16220I$	0
$u = -0.479429 + 1.167820I$ $a = -0.64119 - 1.40633I$ $b = 0.790701 - 0.847266I$	$4.29924 - 1.75183I$	0
$u = -0.479429 - 1.167820I$ $a = -0.64119 + 1.40633I$ $b = 0.790701 + 0.847266I$	$4.29924 + 1.75183I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.118950 + 0.720662I$ $a = -1.33090 - 1.40307I$ $b = 0.773448 - 0.834229I$	$0.95846 - 9.77269I$	0
$u = 0.118950 - 0.720662I$ $a = -1.33090 + 1.40307I$ $b = 0.773448 + 0.834229I$	$0.95846 + 9.77269I$	0
$u = -0.019304 + 1.281100I$ $a = 0.05764 - 2.36847I$ $b = 0.182088 - 0.538508I$	$-2.31866 - 0.62559I$	0
$u = -0.019304 - 1.281100I$ $a = 0.05764 + 2.36847I$ $b = 0.182088 + 0.538508I$	$-2.31866 + 0.62559I$	0
$u = -1.013200 + 0.788182I$ $a = 0.060747 - 0.364733I$ $b = 0.614701 - 0.812307I$	$0.68445 + 4.54297I$	0
$u = -1.013200 - 0.788182I$ $a = 0.060747 + 0.364733I$ $b = 0.614701 + 0.812307I$	$0.68445 - 4.54297I$	0
$u = 0.087917 + 1.296680I$ $a = 0.80335 + 1.70467I$ $b = 0.065222 + 0.592573I$	$-4.92652 + 6.63323I$	0
$u = 0.087917 - 1.296680I$ $a = 0.80335 - 1.70467I$ $b = 0.065222 - 0.592573I$	$-4.92652 - 6.63323I$	0
$u = 0.364530 + 1.248020I$ $a = 0.662740 - 0.933826I$ $b = -0.721146 - 0.416633I$	$2.25517 + 5.02163I$	0
$u = 0.364530 - 1.248020I$ $a = 0.662740 + 0.933826I$ $b = -0.721146 + 0.416633I$	$2.25517 - 5.02163I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.409295 + 1.244130I$ $a = -0.10947 + 2.20468I$ $b = \quad 0.72412 + 1.50675I$	$-2.64457 + 7.81616I$	0
$u = \quad 0.409295 - 1.244130I$ $a = -0.10947 - 2.20468I$ $b = \quad 0.72412 - 1.50675I$	$-2.64457 - 7.81616I$	0
$u = -0.633763 + 1.174030I$ $a = \quad 0.430698 + 1.130150I$ $b = -0.785327 + 0.927632I$	$3.03587 - 7.38409I$	0
$u = -0.633763 - 1.174030I$ $a = \quad 0.430698 - 1.130150I$ $b = -0.785327 - 0.927632I$	$3.03587 + 7.38409I$	0
$u = -1.340970 + 0.074381I$ $a = -0.211866 - 0.405795I$ $b = -0.845852 - 0.905238I$	$4.4685 + 14.6020I$	0
$u = -1.340970 - 0.074381I$ $a = -0.211866 + 0.405795I$ $b = -0.845852 + 0.905238I$	$4.4685 - 14.6020I$	0
$u = \quad 0.965373 + 0.935425I$ $a = -0.629096 - 0.730552I$ $b = -1.18811 - 0.79225I$	$2.14071 + 5.07875I$	0
$u = \quad 0.965373 - 0.935425I$ $a = -0.629096 + 0.730552I$ $b = -1.18811 + 0.79225I$	$2.14071 - 5.07875I$	0
$u = -0.420650 + 1.277450I$ $a = -0.1063630 + 0.0301120I$ $b = -0.581738 - 0.209769I$	$1.89645 - 5.49281I$	0
$u = -0.420650 - 1.277450I$ $a = -0.1063630 - 0.0301120I$ $b = -0.581738 + 0.209769I$	$1.89645 + 5.49281I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.242811+1.323580I$ $a=\ \ 0.20041-1.82739I$ $b=\ \ 1.02392-1.30427I$	$-3.20993-4.88215I$	0
$u=-0.242811-1.323580I$ $a=\ \ 0.20041+1.82739I$ $b=\ \ 1.02392+1.30427I$	$-3.20993+4.88215I$	0
$u=\ \ 0.471792+1.262920I$ $a=-0.268649+1.359460I$ $b=\ \ 0.947384+0.805087I$	$4.19933+12.03280I$	0
$u=\ \ 0.471792-1.262920I$ $a=-0.268649-1.359460I$ $b=\ \ 0.947384-0.805087I$	$4.19933-12.03280I$	0
$u=-0.541056+0.337442I$ $a=\ \ 0.89469+1.65882I$ $b=-0.769951+0.776699I$	$2.52783+0.91774I$	0
$u=-0.541056-0.337442I$ $a=\ \ 0.89469-1.65882I$ $b=-0.769951-0.776699I$	$2.52783-0.91774I$	0
$u=\ \ 0.010062+1.362780I$ $a=-0.163586-1.138370I$ $b=\ \ 0.200935-0.495770I$	$-2.56970-1.27507I$	0
$u=\ \ 0.010062-1.362780I$ $a=-0.163586+1.138370I$ $b=\ \ 0.200935+0.495770I$	$-2.56970+1.27507I$	0
$u=\ \ 0.051317+0.627084I$ $a=\ \ 1.26642+1.61076I$ $b=-0.701203+0.785413I$	$2.34994-2.26170I$	0
$u=\ \ 0.051317-0.627084I$ $a=\ \ 1.26642-1.61076I$ $b=-0.701203-0.785413I$	$2.34994+2.26170I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.600889 + 0.145198I$ $a = 0.457882 + 0.551784I$ $b = 0.757713 - 0.833049I$	$-1.69106 - 3.91075I$	0
$u = 0.600889 - 0.145198I$ $a = 0.457882 - 0.551784I$ $b = 0.757713 + 0.833049I$	$-1.69106 + 3.91075I$	0
$u = 0.599172 + 0.108712I$ $a = 0.158480 - 0.435292I$ $b = -0.439765 + 0.937930I$	$-2.19679 - 3.54459I$	0
$u = 0.599172 - 0.108712I$ $a = 0.158480 + 0.435292I$ $b = -0.439765 - 0.937930I$	$-2.19679 + 3.54459I$	0
$u = 0.034939 + 1.391420I$ $a = 0.394732 - 1.214730I$ $b = 0.446270 - 1.084400I$	$-3.10295 - 2.45282I$	0
$u = 0.034939 - 1.391420I$ $a = 0.394732 + 1.214730I$ $b = 0.446270 + 1.084400I$	$-3.10295 + 2.45282I$	0
$u = 0.585017 + 0.130141I$ $a = 0.821773 + 0.201357I$ $b = 0.433511 - 0.668420I$	$-2.25750 - 0.47262I$	0
$u = 0.585017 - 0.130141I$ $a = 0.821773 - 0.201357I$ $b = 0.433511 + 0.668420I$	$-2.25750 + 0.47262I$	0
$u = -0.417811 + 1.337290I$ $a = -0.02501 + 1.87044I$ $b = -0.97168 + 1.40325I$	$-5.4826 - 14.5916I$	0
$u = -0.417811 - 1.337290I$ $a = -0.02501 - 1.87044I$ $b = -0.97168 - 1.40325I$	$-5.4826 + 14.5916I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.401640+0.025007I$ $a=\ 0.260519+0.358606I$ $b=\ 0.847934+0.744420I$	$5.88744+6.12768I$	0
$u=-1.401640-0.025007I$ $a=\ 0.260519-0.358606I$ $b=\ 0.847934-0.744420I$	$5.88744-6.12768I$	0
$u=\ 0.709023+1.210860I$ $a=-0.229361+1.316210I$ $b=\ 0.80780+1.22940I$	$-3.20320+8.67885I$	0
$u=\ 0.709023-1.210860I$ $a=-0.229361-1.316210I$ $b=\ 0.80780-1.22940I$	$-3.20320-8.67885I$	0
$u=-0.981375+1.006190I$ $a=-0.257461+0.736246I$ $b=-0.894192+0.764677I$	$2.97232-2.94893I$	0
$u=-0.981375-1.006190I$ $a=-0.257461-0.736246I$ $b=-0.894192-0.764677I$	$2.97232+2.94893I$	0
$u=\ 0.57461+1.29268I$ $a=-0.30786+1.69479I$ $b=\ 0.88552+1.25518I$	$-1.45971+12.53020I$	0
$u=\ 0.57461-1.29268I$ $a=-0.30786-1.69479I$ $b=\ 0.88552-1.25518I$	$-1.45971-12.53020I$	0
$u=\ 1.45070+0.05722I$ $a=\ 0.349185+0.629194I$ $b=\ 0.928339+0.874071I$	$4.66391+3.84603I$	0
$u=\ 1.45070-0.05722I$ $a=\ 0.349185-0.629194I$ $b=\ 0.928339-0.874071I$	$4.66391-3.84603I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.50383+1.37168I$ $a=-0.08920-1.62084I$ $b=\ \ 0.80347-1.25971I$	$-6.01699-4.72778I$	0
$u=-0.50383-1.37168I$ $a=-0.08920+1.62084I$ $b=\ \ 0.80347+1.25971I$	$-6.01699+4.72778I$	0
$u=-0.62267+1.34491I$ $a=-0.031335+1.142560I$ $b=-0.829767+0.776852I$	$2.16361-6.46245I$	0
$u=-0.62267-1.34491I$ $a=-0.031335-1.142560I$ $b=-0.829767-0.776852I$	$2.16361+6.46245I$	0
$u=\ \ 0.47760+1.40469I$ $a=\ \ 0.523642-0.737459I$ $b=\ \ 0.326855-0.684462I$	$-2.93539-1.76763I$	0
$u=\ \ 0.47760-1.40469I$ $a=\ \ 0.523642+0.737459I$ $b=\ \ 0.326855+0.684462I$	$-2.93539+1.76763I$	0
$u=\ \ 0.52697+1.39412I$ $a=\ \ 0.42958-1.84167I$ $b=-0.66193-1.25010I$	$-1.21726+10.72700I$	0
$u=\ \ 0.52697-1.39412I$ $a=\ \ 0.42958+1.84167I$ $b=-0.66193+1.25010I$	$-1.21726-10.72700I$	0
$u=-0.43429+1.43705I$ $a=\ \ 0.453948+1.026310I$ $b=-0.177050+0.917103I$	$-6.42064-7.10901I$	0
$u=-0.43429-1.43705I$ $a=\ \ 0.453948-1.026310I$ $b=-0.177050-0.917103I$	$-6.42064+7.10901I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.471516 + 0.162372I$ $a = 0.09652 + 1.69270I$ $b = 0.683837 - 0.148416I$	$1.79757 - 2.90164I$	0
$u = 0.471516 - 0.162372I$ $a = 0.09652 - 1.69270I$ $b = 0.683837 + 0.148416I$	$1.79757 + 2.90164I$	0
$u = 0.493235 + 0.030430I$ $a = 0.057781 + 0.239450I$ $b = -0.875825 + 1.045790I$	$1.09136 - 4.08112I$	0
$u = 0.493235 - 0.030430I$ $a = 0.057781 - 0.239450I$ $b = -0.875825 - 1.045790I$	$1.09136 + 4.08112I$	0
$u = -0.76251 + 1.30293I$ $a = -0.668876 - 0.646738I$ $b = 0.133876 - 0.887021I$	$-1.23023 - 11.74560I$	0
$u = -0.76251 - 1.30293I$ $a = -0.668876 + 0.646738I$ $b = 0.133876 + 0.887021I$	$-1.23023 + 11.74560I$	0
$u = 1.16332 + 0.96986I$ $a = -0.510220 + 0.252414I$ $b = -0.288801 + 0.766018I$	$-1.53306 - 1.74866I$	0
$u = 1.16332 - 0.96986I$ $a = -0.510220 - 0.252414I$ $b = -0.288801 - 0.766018I$	$-1.53306 + 1.74866I$	0
$u = -0.63886 + 1.38954I$ $a = -0.14475 - 1.70636I$ $b = 0.90619 - 1.31128I$	$0.3358 - 21.3830I$	0
$u = -0.63886 - 1.38954I$ $a = -0.14475 + 1.70636I$ $b = 0.90619 + 1.31128I$	$0.3358 + 21.3830I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.63627+1.40843I$ $a=\ \ 0.05708+1.61775I$ $b=-0.91733+1.23690I$	$1.56115-13.02230I$	0
$u=-0.63627-1.40843I$ $a=\ \ 0.05708-1.61775I$ $b=-0.91733-1.23690I$	$1.56115+13.02230I$	0
$u=-0.10308+1.54733I$ $a=\ \ 0.17816+2.03259I$ $b=-0.130030+0.934174I$	$-3.93380-6.41017I$	0
$u=-0.10308-1.54733I$ $a=\ \ 0.17816-2.03259I$ $b=-0.130030-0.934174I$	$-3.93380+6.41017I$	0
$u=-0.430443$ $a=\ \ 0.729458$ $b=-0.587222$	0.891162	11.3580
$u=\ \ 0.67597+1.42812I$ $a=\ \ 0.05800-1.83179I$ $b=-0.83814-1.38166I$	$0.13213+11.03980I$	0
$u=\ \ 0.67597-1.42812I$ $a=\ \ 0.05800+1.83179I$ $b=-0.83814+1.38166I$	$0.13213-11.03980I$	0
$u=\ \ 0.60066+1.54835I$ $a=\ \ 0.492161-0.830434I$ $b=-0.094862-0.601382I$	$-0.36264+3.62125I$	0
$u=\ \ 0.60066-1.54835I$ $a=\ \ 0.492161+0.830434I$ $b=-0.094862+0.601382I$	$-0.36264-3.62125I$	0
$u=-0.69986+1.50828I$ $a=\ \ 0.311683+0.494677I$ $b=-0.195142+0.476333I$	$1.41700-5.68141I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.69986-1.50828I$ $a=\ \ 0.311683-0.494677I$ $b=-0.195142-0.476333I$	$1.41700+5.68141I$	0
$u=\ \ 0.305378+0.141468I$ $a=-0.58697-3.19652I$ $b=-0.850298-0.538195I$	$-0.58924+5.03512I$	$4.75419-8.45098I$
$u=\ \ 0.305378-0.141468I$ $a=-0.58697+3.19652I$ $b=-0.850298+0.538195I$	$-0.58924-5.03512I$	$4.75419+8.45098I$
$u=-0.285913+0.176709I$ $a=\ \ 1.09796+1.97435I$ $b=-0.846664+0.081916I$	$0.619579-0.110739I$	$11.54104+2.72025I$
$u=-0.285913-0.176709I$ $a=\ \ 1.09796-1.97435I$ $b=-0.846664-0.081916I$	$0.619579+0.110739I$	$11.54104-2.72025I$
$u=\ \ 0.146492+0.002381I$ $a=-1.27865+4.48811I$ $b=\ \ 0.601020+1.183220I$	$-1.29385-3.59246I$	$-0.92876+12.74754I$
$u=\ \ 0.146492-0.002381I$ $a=-1.27865-4.48811I$ $b=\ \ 0.601020-1.183220I$	$-1.29385+3.59246I$	$-0.92876-12.74754I$
$u=-0.93942+1.64495I$ $a=-0.442953-0.361325I$ $b=-0.194015-0.515103I$	$-3.11311+2.95246I$	0
$u=-0.93942-1.64495I$ $a=-0.442953+0.361325I$ $b=-0.194015+0.515103I$	$-3.11311-2.95246I$	0
$u=-0.23786+2.42759I$ $a=\ \ 0.125212+0.533693I$ $b=\ \ 0.092313+0.524760I$	$-2.04730+6.29582I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.23786-2.42759I$		
$a=\ 0.125212-0.533693I$	$-2.04730-6.29582I$	0
$b=\ 0.092313-0.524760I$		

II.

$\boldsymbol{I_2^u = \langle 2.78\times 10^{73}u^{49}+1.71\times 10^{73}u^{48}+\cdots+7.28\times 10^{73}b-2.44\times 10^{74},\ 1.03\times 10^{75}u^{49}+1.06\times 10^{75}u^{48}+\cdots+7.28\times 10^{73}a+2.83\times 10^{75},\ u^{50}+u^{49}+\cdots+2u+1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

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

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

$$a_9 = \begin{pmatrix}-14.1781u^{49}-14.5071u^{48}+\cdots-333.047u-38.9039\\-0.381558u^{49}-0.234486u^{48}+\cdots-36.6884u+3.35273\end{pmatrix}$$

$$a_4 = \begin{pmatrix}5.44613u^{49}-0.720475u^{48}+\cdots+146.134u-89.7317\\-4.57949u^{49}-6.48764u^{48}+\cdots-43.0276u-19.0639\end{pmatrix}$$

$$a_2 = \begin{pmatrix}-13.6635u^{49}-13.7424u^{48}+\cdots-325.119u-62.7536\\-5.13283u^{49}-3.63850u^{48}+\cdots-87.2480u-11.3657\end{pmatrix}$$

$$a_3 = \begin{pmatrix}-17.3532u^{49}-17.8199u^{48}+\cdots-398.545u-74.0403\\-5.61853u^{49}-4.14179u^{48}+\cdots-91.7133u-11.7535\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}2.55967u^{49}-1.84775u^{48}+\cdots+25.0574u-42.6084\\2.44359u^{49}-0.0586217u^{48}+\cdots+13.4012u-13.3197\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-12.6100u^{49}-13.3642u^{48}+\cdots-318.299u-38.4279\\1.18661u^{49}+0.908347u^{48}+\cdots-21.9398u+3.82873\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}19.3264u^{49}+20.0355u^{48}+\cdots+404.021u+87.5153\\6.51464u^{49}+3.67721u^{48}+\cdots+77.6126u+1.47558\end{pmatrix}$$

$$a_7 = \begin{pmatrix}6.48982u^{49}+13.1489u^{48}+\cdots+185.901u+94.3675\\5.23467u^{49}+8.40995u^{48}+\cdots+93.4483u+21.1482\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0.398560u^{49}+2.60237u^{48}+\cdots+206.783u+112.904$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{50} - 15u^{49} + \cdots + 5u + 1$
c_2	$u^{50} - u^{49} + \cdots + u + 1$
c_3	$u^{50} - 5u^{49} + \cdots + u + 1$
c_4	$u^{50} + u^{49} + \cdots + 10u^2 + 1$
c_5	$u^{50} + u^{49} + \cdots + 2u + 1$
c_6	$u^{50} + u^{49} + \cdots - 5u + 1$
c_7	$u^{50} + 3u^{49} + \cdots + 319u + 67$
c_8	$u^{50} - 3u^{49} + \cdots - 5u + 1$
c_9	$u^{50} - 4u^{49} + \cdots + 11u + 1$
c_{10}	$u^{50} - 3u^{49} + \cdots - u + 1$
c_{11}	$u^{50} - 3u^{49} + \cdots - 319u + 67$
c_{12}	$u^{50} - u^{49} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{50} + 7y^{49} + \cdots - 11y + 1$
c_2	$y^{50} + 27y^{49} + \cdots + 11y + 1$
c_3	$y^{50} + 33y^{49} + \cdots + 43y + 1$
c_4	$y^{50} + 11y^{49} + \cdots + 20y + 1$
c_5, c_{12}	$y^{50} + 43y^{49} + \cdots + 102y + 1$
c_6	$y^{50} + 3y^{49} + \cdots - 27y + 1$
c_7, c_{11}	$y^{50} - 35y^{49} + \cdots - 57541y + 4489$
c_8	$y^{50} + 13y^{49} + \cdots - 31y + 1$
c_9	$y^{50} - 10y^{49} + \cdots - 39y + 1$
c_{10}	$y^{50} + 5y^{49} + \cdots + y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.175737 + 0.978826I$ $a = -0.89388 - 1.14763I$ $b = -1.69851 - 0.96426I$	$-1.89447 + 5.40487I$	$-2.21458 - 11.17990I$
$u = \quad 0.175737 - 0.978826I$ $a = -0.89388 + 1.14763I$ $b = -1.69851 + 0.96426I$	$-1.89447 - 5.40487I$	$-2.21458 + 11.17990I$
$u = \quad 0.108986 + 0.986743I$ $a = \quad 2.79072 + 0.09309I$ $b = -0.428963 + 0.304140I$	$-1.74289 + 0.34031I$	$19.8563 - 25.9702I$
$u = \quad 0.108986 - 0.986743I$ $a = \quad 2.79072 - 0.09309I$ $b = -0.428963 - 0.304140I$	$-1.74289 - 0.34031I$	$19.8563 + 25.9702I$
$u = \quad 0.962506 + 0.119363I$ $a = -0.572983 + 0.108865I$ $b = \quad 0.356369 - 0.254342I$	$5.41808 - 0.09137I$	$7.57607 - 2.30673I$
$u = \quad 0.962506 - 0.119363I$ $a = -0.572983 - 0.108865I$ $b = \quad 0.356369 + 0.254342I$	$5.41808 + 0.09137I$	$7.57607 + 2.30673I$
$u = -0.166851 + 1.042870I$ $a = -1.06937 - 1.21207I$ $b = \quad 0.247813 - 0.938110I$	$-5.46671 - 0.71937I$	$-4.35638 + 1.65522I$
$u = -0.166851 - 1.042870I$ $a = -1.06937 + 1.21207I$ $b = \quad 0.247813 + 0.938110I$	$-5.46671 + 0.71937I$	$-4.35638 - 1.65522I$
$u = \quad 0.477774 + 0.950628I$ $a = -0.455343 - 0.176831I$ $b = \quad 0.793618 + 0.429913I$	$1.18633 + 11.73570I$	$4.00000 - 9.86856I$
$u = \quad 0.477774 - 0.950628I$ $a = -0.455343 + 0.176831I$ $b = \quad 0.793618 - 0.429913I$	$1.18633 - 11.73570I$	$4.00000 + 9.86856I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.024119 + 0.821510I$ $a = 0.20511 + 3.20283I$ $b = 0.47639 + 1.77707I$	$4.21889 - 3.22105I$	$0.7320 + 16.6879I$
$u = 0.024119 - 0.821510I$ $a = 0.20511 - 3.20283I$ $b = 0.47639 - 1.77707I$	$4.21889 + 3.22105I$	$0.7320 - 16.6879I$
$u = 0.406557 + 1.109500I$ $a = -0.715786 + 0.328159I$ $b = -0.990557 + 0.560139I$	$2.20924 + 4.53761I$	0
$u = 0.406557 - 1.109500I$ $a = -0.715786 - 0.328159I$ $b = -0.990557 - 0.560139I$	$2.20924 - 4.53761I$	0
$u = 0.531480 + 0.606910I$ $a = -0.39707 + 2.27300I$ $b = 0.296037 + 1.262530I$	$4.56234 + 0.24521I$	$13.8127 - 5.2792I$
$u = 0.531480 - 0.606910I$ $a = -0.39707 - 2.27300I$ $b = 0.296037 - 1.262530I$	$4.56234 - 0.24521I$	$13.8127 + 5.2792I$
$u = -0.415231 + 1.126350I$ $a = -0.36728 - 1.77634I$ $b = 0.76736 - 1.31532I$	$-4.57790 - 6.44467I$	0
$u = -0.415231 - 1.126350I$ $a = -0.36728 + 1.77634I$ $b = 0.76736 + 1.31532I$	$-4.57790 + 6.44467I$	0
$u = -0.569596 + 1.072160I$ $a = 1.104740 + 0.288422I$ $b = -0.179330 + 0.800716I$	$-2.61505 - 2.29576I$	0
$u = -0.569596 - 1.072160I$ $a = 1.104740 - 0.288422I$ $b = -0.179330 - 0.800716I$	$-2.61505 + 2.29576I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.063025+1.236740I$ $a=-1.06506-2.23569I$ $b=-0.040736-0.411376I$	$-2.33411-0.19277I$	0
$u=-0.063025-1.236740I$ $a=-1.06506+2.23569I$ $b=-0.040736+0.411376I$	$-2.33411+0.19277I$	0
$u=0.290391+0.696624I$ $a=0.920345+0.820110I$ $b=1.34566+0.93386I$	$-1.65988-3.02171I$	$-6.89482+8.29972I$
$u=0.290391-0.696624I$ $a=0.920345-0.820110I$ $b=1.34566-0.93386I$	$-1.65988+3.02171I$	$-6.89482-8.29972I$
$u=-1.250260+0.224519I$ $a=0.066986-0.800490I$ $b=0.835020-0.988481I$	$4.35201-4.83110I$	0
$u=-1.250260-0.224519I$ $a=0.066986+0.800490I$ $b=0.835020+0.988481I$	$4.35201+4.83110I$	0
$u=-0.995042+0.791707I$ $a=-0.493755+0.560747I$ $b=-1.119910+0.723627I$	$2.60132-3.78645I$	0
$u=-0.995042-0.791707I$ $a=-0.493755-0.560747I$ $b=-1.119910-0.723627I$	$2.60132+3.78645I$	0
$u=0.402699+1.208040I$ $a=0.622160-0.744990I$ $b=-0.704162-0.436292I$	$1.97452+5.01029I$	0
$u=0.402699-1.208040I$ $a=0.622160+0.744990I$ $b=-0.704162+0.436292I$	$1.97452-5.01029I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.171298+1.285580I$ $a=\ \ 0.32399-1.87950I$ $b=\ \ 1.12071-1.35619I$	$-3.17536-5.17301I$	0
$u=-0.171298-1.285580I$ $a=\ \ 0.32399+1.87950I$ $b=\ \ 1.12071+1.35619I$	$-3.17536+5.17301I$	0
$u=\ \ 0.762062+1.050190I$ $a=-0.578620-0.487556I$ $b=-1.172650-0.454079I$	$2.75994+5.15340I$	0
$u=\ \ 0.762062-1.050190I$ $a=-0.578620+0.487556I$ $b=-1.172650+0.454079I$	$2.75994-5.15340I$	0
$u=\ \ 0.16304+1.41124I$ $a=-0.12655+1.81902I$ $b=\ \ 0.002005+1.024370I$	$-5.37637+5.32887I$	0
$u=\ \ 0.16304-1.41124I$ $a=-0.12655-1.81902I$ $b=\ \ 0.002005-1.024370I$	$-5.37637-5.32887I$	0
$u=-0.89404+1.21003I$ $a=-0.557881-0.374025I$ $b=-0.241545-0.666236I$	$-3.54696+1.59294I$	0
$u=-0.89404-1.21003I$ $a=-0.557881+0.374025I$ $b=-0.241545+0.666236I$	$-3.54696-1.59294I$	0
$u=-0.58393+1.39791I$ $a=\ \ 0.23196+1.83674I$ $b=-0.77434+1.30822I$	$-0.53509-11.05320I$	0
$u=-0.58393-1.39791I$ $a=\ \ 0.23196-1.83674I$ $b=-0.77434-1.30822I$	$-0.53509+11.05320I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.37698 + 1.47846I$ $a = 0.545028 - 0.729281I$ $b = 0.540239 - 0.589042I$	$-2.52583 - 3.06203I$	0
$u = 0.37698 - 1.47846I$ $a = 0.545028 + 0.729281I$ $b = 0.540239 + 0.589042I$	$-2.52583 + 3.06203I$	0
$u = -0.113848 + 0.451309I$ $a = 0.40620 + 2.43150I$ $b = 0.679433 - 0.072502I$	$-0.065225 + 0.242878I$	$0.89688 - 5.51398I$
$u = -0.113848 - 0.451309I$ $a = 0.40620 - 2.43150I$ $b = 0.679433 + 0.072502I$	$-0.065225 - 0.242878I$	$0.89688 + 5.51398I$
$u = -0.055408 + 0.221738I$ $a = -2.77675 + 0.79467I$ $b = -0.741522 - 0.825969I$	$0.50329 + 3.74601I$	$2.65104 - 4.84551I$
$u = -0.055408 - 0.221738I$ $a = -2.77675 - 0.79467I$ $b = -0.741522 + 0.825969I$	$0.50329 - 3.74601I$	$2.65104 + 4.84551I$
$u = -0.034909 + 0.210918I$ $a = -1.52241 - 7.20450I$ $b = 0.219587 - 1.195520I$	$5.93553 - 5.39947I$	$10.71798 + 5.04274I$
$u = -0.034909 - 0.210918I$ $a = -1.52241 + 7.20450I$ $b = 0.219587 + 1.195520I$	$5.93553 + 5.39947I$	$10.71798 - 5.04274I$
$u = 0.13110 + 2.23560I$ $a = -0.124499 + 0.643416I$ $b = -0.088031 + 0.420848I$	$-1.85059 - 6.24758I$	0
$u = 0.13110 - 2.23560I$ $a = -0.124499 - 0.643416I$ $b = -0.088031 - 0.420848I$	$-1.85059 + 6.24758I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{50}-15u^{49}+\cdots+5u+1)(u^{191}+8u^{190}+\cdots+12090u-521)$
c_2	$(u^{50}-u^{49}+\cdots+u+1)(u^{191}+9u^{189}+\cdots+26856u-3123)$
c_3	$(u^{50}-5u^{49}+\cdots+u+1)(u^{191}+8u^{190}+\cdots-40446u-4563)$
c_4	$(u^{50}+u^{49}+\cdots+10u^2+1)$ $\cdot(u^{191}+23u^{189}+\cdots-6088215u-1128983)$
c_5	$(u^{50}+u^{49}+\cdots+2u+1)(u^{191}+65u^{189}+\cdots-7345527u-262307)$
c_6	$(u^{50}+u^{49}+\cdots-5u+1)(u^{191}+2u^{190}+\cdots-26u-1)$
c_7	$(u^{50}+3u^{49}+\cdots+319u+67)$ $\cdot(u^{191}-4u^{190}+\cdots-644237242u-33057935)$
c_8	$(u^{50}-3u^{49}+\cdots-5u+1)(u^{191}+4u^{190}+\cdots-14u-1)$
c_9	$(u^{50}-4u^{49}+\cdots+11u+1)$ $\cdot(u^{191}+3u^{190}+\cdots+2081393442u-208449613)$
c_{10}	$(u^{50}-3u^{49}+\cdots-u+1)(u^{191}+4u^{190}+\cdots-517308u-92933)$
c_{11}	$(u^{50}-3u^{49}+\cdots-319u+67)$ $\cdot(u^{191}-4u^{190}+\cdots-644237242u-33057935)$
c_{12}	$(u^{50}-u^{49}+\cdots-2u+1)(u^{191}+65u^{189}+\cdots-7345527u-262307)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{50}+7y^{49}+\cdots-11y+1)$ $\cdot(y^{191}+18y^{190}+\cdots+7672754y-271441)$
c_2	$(y^{50}+27y^{49}+\cdots+11y+1)$ $\cdot(y^{191}+18y^{190}+\cdots-1093867848y-9753129)$
c_3	$(y^{50}+33y^{49}+\cdots+43y+1)$ $\cdot(y^{191}+48y^{190}+\cdots-547954632y-20820969)$
c_4	$(y^{50}+11y^{49}+\cdots+20y+1)$ $\cdot(y^{191}+46y^{190}+\cdots-71896540462205y-1274602614289)$
c_5, c_{12}	$(y^{50}+43y^{49}+\cdots+102y+1)$ $\cdot(y^{191}+130y^{190}+\cdots+5931925730613y-68804962249)$
c_6	$(y^{50}+3y^{49}+\cdots-27y+1)(y^{191}-14y^{190}+\cdots+150y-1)$
c_7, c_{11}	$(y^{50}-35y^{49}+\cdots-57541y+4489)$ $\cdot(y^{191}-140y^{190}+\cdots+148730603959730924y-1092827066464225)$
c_8	$(y^{50}+13y^{49}+\cdots-31y+1)(y^{191}+16y^{190}+\cdots-1830y-1)$
c_9	$(y^{50}-10y^{49}+\cdots-39y+1)$ $\cdot(y^{191}-55y^{190}+\cdots+2565423313669011206y-43451241159849769)$
c_{10}	$(y^{50}+5y^{49}+\cdots+y+1)$ $\cdot(y^{191}-24y^{190}+\cdots+682916036430y-8636542489)$