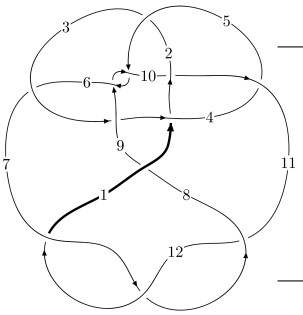
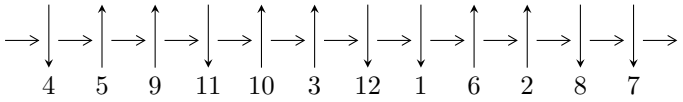
$12a_{0856}$ $(K12a_{0856})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 7.12526 \times 10^{207} u^{143} - 1.12084 \times 10^{208} u^{142} + \cdots + 7.50129 \times 10^{207} b - 1.99096 \times 10^{208},$$
$$1.56461 \times 10^{207} u^{143} + 2.57970 \times 10^{208} u^{142} + \cdots + 4.87584 \times 10^{208} a + 1.63063 \times 10^{210},$$
$$u^{144} - 2u^{143} + \cdots - 50u + 13\rangle$$
$$I_2^u = \langle -8u^{27} + 9u^{26} + \cdots + 2b - 5,\ -u^{27} + 5u^{26} + \cdots + a - 4,\ u^{28} - u^{27} + \cdots - 9u^2 + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 172 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. $\boldsymbol{I_1^u = \langle 7.13 \times 10^{207} u^{143} - 1.12 \times 10^{208} u^{142} + \cdots + 7.50 \times 10^{207} b - 1.99 \times 10^{208},\ 1.56 \times 10^{207} u^{143} + 2.58 \times 10^{208} u^{142} + \cdots + 4.88 \times 10^{208} a + 1.63 \times 10^{210},\ u^{144} - 2u^{143} + \cdots - 50u + 13 \rangle}$

(i) Arc colorings

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

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

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -0.0320891u^{143} - 0.529079u^{142} + \cdots + 51.8978u - 33.4430 \\ -0.949871u^{143} + 1.49419u^{142} + \cdots - 13.0610u + 2.65415 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2.41193u^{143} - 2.44986u^{142} + \cdots - 13.7788u + 6.73154 \\ -1.24040u^{143} - 0.492406u^{142} + \cdots + 58.6702u - 20.3479 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^4 - u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -1.94179u^{143} + 1.00024u^{142} + \cdots + 90.3581u - 53.3307 \\ -0.242149u^{143} + 2.97935u^{142} + \cdots - 70.3801u + 16.2721 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.318037u^{143} - 2.37361u^{142} + \cdots + 16.6646u + 5.50682 \\ 0.163273u^{143} + 1.25262u^{142} + \cdots - 39.6022u + 9.52014 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.61419u^{143} - 1.49529u^{142} + \cdots + 136.644u - 64.4507 \\ -0.655868u^{143} + 5.47078u^{142} + \cdots - 114.268u + 25.3417 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -5.68102u^{143} + 12.2495u^{142} + \cdots - 130.198u + 33.6185 \\ 3.80659u^{143} - 5.90248u^{142} + \cdots + 25.9029u - 3.68074 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.07962u^{143} + 1.78992u^{142} + \cdots + 20.9985u - 23.7397$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{144} + 12u^{143} + \cdots + 667809u + 245123$
c_2	$u^{144} - 6u^{143} + \cdots + 381u + 17$
c_3	$u^{144} - u^{143} + \cdots - 3086919u + 6171839$
c_4	$u^{144} - u^{143} + \cdots + 11u + 73$
c_5, c_9	$u^{144} - 4u^{143} + \cdots - 73u^2 + 1$
c_6	$u^{144} + 3u^{143} + \cdots + 10871u + 1351$
c_7, c_{11}, c_{12}	$u^{144} + 2u^{143} + \cdots + 50u + 13$
c_8	$u^{144} - 2u^{143} + \cdots + 1264438u + 100009$
c_{10}	$u^{144} - 8u^{143} + \cdots - 325788u + 55651$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{144} - 20y^{143} + \cdots + 504300454111y + 60085285129$
c_2	$y^{144} + 18y^{143} + \cdots + 23411y + 289$
c_3	$y^{144} + 35y^{143} + \cdots + 1367319658441467y + 38091596641921$
c_4	$y^{144} + 21y^{143} + \cdots + 762145y + 5329$
c_5, c_9	$y^{144} + 110y^{143} + \cdots - 146y + 1$
c_6	$y^{144} + 21y^{143} + \cdots + 108316509y + 1825201$
c_7, c_{11}, c_{12}	$y^{144} + 130y^{143} + \cdots - 3852y + 169$
c_8	$y^{144} - 16y^{143} + \cdots + 335701233910y + 10001800081$
c_{10}	$y^{144} + 32y^{143} + \cdots + 173978927610y + 3097033801$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.484439+0.833652I$ $a=\ \ 0.92352-1.31726I$ $b=-0.944270+0.061747I$	$0.71833-4.95715I$	0
$u=-0.484439-0.833652I$ $a=\ \ 0.92352+1.31726I$ $b=-0.944270-0.061747I$	$0.71833+4.95715I$	0
$u=-0.205291+1.015960I$ $a=-1.12377+1.31874I$ $b=\ \ 0.820159-0.200524I$	$-0.427059-0.972579I$	0
$u=-0.205291-1.015960I$ $a=-1.12377-1.31874I$ $b=\ \ 0.820159+0.200524I$	$-0.427059+0.972579I$	0
$u=\ \ 0.476464+0.834498I$ $a=-1.07044-1.42369I$ $b=\ \ 1.023520-0.118162I$	$-4.27831+10.71680I$	0
$u=\ \ 0.476464-0.834498I$ $a=-1.07044+1.42369I$ $b=\ \ 1.023520+0.118162I$	$-4.27831-10.71680I$	0
$u=-0.046308+0.940124I$ $a=\ \ 0.66778+2.13397I$ $b=-0.012832-0.619127I$	$-4.39221+2.01851I$	0
$u=-0.046308-0.940124I$ $a=\ \ 0.66778-2.13397I$ $b=-0.012832+0.619127I$	$-4.39221-2.01851I$	0
$u=-0.428510+0.976666I$ $a=-0.870858+0.361395I$ $b=\ \ 0.481560+0.463855I$	$-0.93362-2.08054I$	0
$u=-0.428510-0.976666I$ $a=-0.870858-0.361395I$ $b=\ \ 0.481560-0.463855I$	$-0.93362+2.08054I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.302451+1.045920I$ $a=-0.13758-1.92205I$ $b=\ \ 0.048646+0.983005I$	$-4.65830-2.58703I$	0
$u=-0.302451-1.045920I$ $a=-0.13758+1.92205I$ $b=\ \ 0.048646-0.983005I$	$-4.65830+2.58703I$	0
$u=\ \ 0.835501+0.351858I$ $a=-0.336993-0.612412I$ $b=\ \ 1.64331+0.25059I$	$-4.67776-2.13375I$	0
$u=\ \ 0.835501-0.351858I$ $a=-0.336993+0.612412I$ $b=\ \ 1.64331-0.25059I$	$-4.67776+2.13375I$	0
$u=-0.424743+1.031960I$ $a=-0.30032-1.46736I$ $b=-0.309462+0.700857I$	$-5.06551+9.60123I$	0
$u=-0.424743-1.031960I$ $a=-0.30032+1.46736I$ $b=-0.309462-0.700857I$	$-5.06551-9.60123I$	0
$u=\ \ 0.532696+0.704877I$ $a=\ \ 0.123811+0.332686I$ $b=-0.270020+0.240025I$	$0.32838-1.44483I$	0
$u=\ \ 0.532696-0.704877I$ $a=\ \ 0.123811-0.332686I$ $b=-0.270020-0.240025I$	$0.32838+1.44483I$	0
$u=\ \ 0.402671+1.068910I$ $a=-0.02101-1.49837I$ $b=\ \ 0.381190+0.819710I$	$-0.25419-3.86423I$	0
$u=\ \ 0.402671-1.068910I$ $a=-0.02101+1.49837I$ $b=\ \ 0.381190-0.819710I$	$-0.25419+3.86423I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.838389+0.146060I$ $a=\ \ 0.019114+0.250127I$ $b=-1.012750-0.457845I$	$-7.80704-5.07775I$	0
$u=-0.838389-0.146060I$ $a=\ \ 0.019114-0.250127I$ $b=-1.012750+0.457845I$	$-7.80704+5.07775I$	0
$u=-0.802549+0.276471I$ $a=\ \ 0.056196-0.221665I$ $b=-1.70328+0.58339I$	$-1.07174+9.49563I$	0
$u=-0.802549-0.276471I$ $a=\ \ 0.056196+0.221665I$ $b=-1.70328-0.58339I$	$-1.07174-9.49563I$	0
$u=\ \ 0.801348+0.276890I$ $a=\ \ 0.084525-0.187889I$ $b=\ \ 1.85520+0.69466I$	$-6.0713-15.2379I$	0
$u=\ \ 0.801348-0.276890I$ $a=\ \ 0.084525+0.187889I$ $b=\ \ 1.85520-0.69466I$	$-6.0713+15.2379I$	0
$u=-0.817069+0.225836I$ $a=\ \ 0.232580-0.084623I$ $b=\ \ 0.954296-0.841047I$	$-3.23396+6.58116I$	0
$u=-0.817069-0.225836I$ $a=\ \ 0.232580+0.084623I$ $b=\ \ 0.954296+0.841047I$	$-3.23396-6.58116I$	0
$u=\ \ 0.770010+0.306600I$ $a=-0.225784+0.058170I$ $b=-0.881701-0.263466I$	$-1.02699-2.97737I$	0
$u=\ \ 0.770010-0.306600I$ $a=-0.225784-0.058170I$ $b=-0.881701+0.263466I$	$-1.02699+2.97737I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.324296 + 1.128410I$ $a = 1.63144 + 0.88501I$ $b = -1.38997 + 0.38453I$	$-3.37182 + 0.96266I$	0
$u = 0.324296 - 1.128410I$ $a = 1.63144 - 0.88501I$ $b = -1.38997 - 0.38453I$	$-3.37182 - 0.96266I$	0
$u = 0.508667 + 0.642306I$ $a = -0.45841 - 1.42683I$ $b = 1.277790 + 0.217856I$	$-3.58342 - 2.52909I$	0
$u = 0.508667 - 0.642306I$ $a = -0.45841 + 1.42683I$ $b = 1.277790 - 0.217856I$	$-3.58342 + 2.52909I$	0
$u = 0.793809 + 0.115009I$ $a = -0.274939 + 0.299235I$ $b = 1.197800 - 0.269573I$	$-3.20216 - 0.44713I$	0
$u = 0.793809 - 0.115009I$ $a = -0.274939 - 0.299235I$ $b = 1.197800 + 0.269573I$	$-3.20216 + 0.44713I$	0
$u = -0.752343 + 0.158889I$ $a = 0.172760 + 0.693918I$ $b = -1.281110 - 0.466597I$	$-7.34289 + 6.50010I$	$-8.52338 - 6.61702I$
$u = -0.752343 - 0.158889I$ $a = 0.172760 - 0.693918I$ $b = -1.281110 + 0.466597I$	$-7.34289 - 6.50010I$	$-8.52338 + 6.61702I$
$u = 0.756666 + 0.114702I$ $a = -0.408065 - 0.009841I$ $b = -1.69744 - 1.03990I$	$-6.44324 - 4.90939I$	$-9.19416 + 5.96295I$
$u = 0.756666 - 0.114702I$ $a = -0.408065 + 0.009841I$ $b = -1.69744 + 1.03990I$	$-6.44324 + 4.90939I$	$-9.19416 - 5.96295I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.705405 + 0.234610I$ $a = -0.402808 - 0.263173I$ $b = -1.89311 - 0.54996I$	$-6.23108 - 5.50341I$	$-9.63772 + 6.95338I$
$u = 0.705405 - 0.234610I$ $a = -0.402808 + 0.263173I$ $b = -1.89311 + 0.54996I$	$-6.23108 + 5.50341I$	$-9.63772 - 6.95338I$
$u = -0.713730 + 0.188903I$ $a = 0.264522 - 0.080185I$ $b = 1.63397 - 0.73844I$	$-2.84853 + 4.54527I$	$-3.19535 - 6.40503I$
$u = -0.713730 - 0.188903I$ $a = 0.264522 + 0.080185I$ $b = 1.63397 + 0.73844I$	$-2.84853 - 4.54527I$	$-3.19535 + 6.40503I$
$u = -0.101047 + 1.264280I$ $a = -2.22454 + 1.71769I$ $b = 1.92105 - 1.51333I$	$0.74795 - 4.42362I$	0
$u = -0.101047 - 1.264280I$ $a = -2.22454 - 1.71769I$ $b = 1.92105 + 1.51333I$	$0.74795 + 4.42362I$	0
$u = 0.144876 + 1.266000I$ $a = 1.29516 - 0.88440I$ $b = 0.30460 + 1.39970I$	$0.70441 + 3.55365I$	0
$u = 0.144876 - 1.266000I$ $a = 1.29516 + 0.88440I$ $b = 0.30460 - 1.39970I$	$0.70441 - 3.55365I$	0
$u = 0.164911 + 1.268170I$ $a = 2.36605 + 1.11555I$ $b = -2.46492 - 0.79841I$	$3.60072 - 0.38492I$	0
$u = 0.164911 - 1.268170I$ $a = 2.36605 - 1.11555I$ $b = -2.46492 + 0.79841I$	$3.60072 + 0.38492I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.309929 + 0.638475I$ $a = -0.713504 - 0.288683I$ $b = 0.128784 + 0.215144I$	$-0.08517 - 1.57799I$	$2.46043 + 2.86570I$
$u = 0.309929 - 0.638475I$ $a = -0.713504 + 0.288683I$ $b = 0.128784 - 0.215144I$	$-0.08517 + 1.57799I$	$2.46043 - 2.86570I$
$u = -0.541087 + 0.456832I$ $a = 0.950518 - 0.141228I$ $b = -0.153750 + 0.347778I$	$-1.48008 + 1.90896I$	$0.10782 - 4.30726I$
$u = -0.541087 - 0.456832I$ $a = 0.950518 + 0.141228I$ $b = -0.153750 - 0.347778I$	$-1.48008 - 1.90896I$	$0.10782 + 4.30726I$
$u = 0.134061 + 0.694229I$ $a = 0.76342 + 1.96295I$ $b = -0.187826 + 0.001987I$	$-4.38395 + 1.97525I$	$-5.75212 - 2.78062I$
$u = 0.134061 - 0.694229I$ $a = 0.76342 - 1.96295I$ $b = -0.187826 - 0.001987I$	$-4.38395 - 1.97525I$	$-5.75212 + 2.78062I$
$u = -0.231816 + 1.281020I$ $a = -1.54504 + 1.16058I$ $b = 2.17493 - 0.40699I$	$-2.05842 + 3.19123I$	0
$u = -0.231816 - 1.281020I$ $a = -1.54504 - 1.16058I$ $b = 2.17493 + 0.40699I$	$-2.05842 - 3.19123I$	0
$u = -0.647475 + 0.251166I$ $a = 0.509145 + 0.324038I$ $b = 1.41649 + 0.53128I$	$-6.31893 + 1.10986I$	$-9.87069 - 1.90455I$
$u = -0.647475 - 0.251166I$ $a = 0.509145 - 0.324038I$ $b = 1.41649 - 0.53128I$	$-6.31893 - 1.10986I$	$-9.87069 + 1.90455I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.221526+1.305960I$ $a=-1.13191+2.27772I$ $b=1.079640-0.911924I$	$-1.94231+2.79339I$	0
$u=-0.221526-1.305960I$ $a=-1.13191-2.27772I$ $b=1.079640+0.911924I$	$-1.94231-2.79339I$	0
$u=-0.106764+1.325040I$ $a=-0.307376-0.711918I$ $b=-0.698393+1.054510I$	$4.71585-1.20350I$	0
$u=-0.106764-1.325040I$ $a=-0.307376+0.711918I$ $b=-0.698393-1.054510I$	$4.71585+1.20350I$	0
$u=0.589839+0.261665I$ $a=-0.401754-0.186107I$ $b=0.685375+0.364783I$	$-1.27712-1.62704I$	$-2.28050+4.53291I$
$u=0.589839-0.261665I$ $a=-0.401754+0.186107I$ $b=0.685375-0.364783I$	$-1.27712+1.62704I$	$-2.28050-4.53291I$
$u=0.190785+1.342210I$ $a=-0.351655+0.822770I$ $b=0.987081-0.239466I$	$5.18886-1.57086I$	0
$u=0.190785-1.342210I$ $a=-0.351655-0.822770I$ $b=0.987081+0.239466I$	$5.18886+1.57086I$	0
$u=0.165800+1.350050I$ $a=0.356470-0.324730I$ $b=-1.053360+0.262016I$	$4.89504-2.81295I$	0
$u=0.165800-1.350050I$ $a=0.356470+0.324730I$ $b=-1.053360-0.262016I$	$4.89504+2.81295I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.228352 + 1.344160I$ $a = 0.80109 + 2.98491I$ $b = -1.18838 - 2.38027I$	$4.67725 - 5.07024I$	0
$u = 0.228352 - 1.344160I$ $a = 0.80109 - 2.98491I$ $b = -1.18838 + 2.38027I$	$4.67725 + 5.07024I$	0
$u = 0.317730 + 1.327340I$ $a = -1.31560 - 1.11094I$ $b = 1.63846 + 0.75108I$	$1.31056 - 4.43134I$	0
$u = 0.317730 - 1.327340I$ $a = -1.31560 + 1.11094I$ $b = 1.63846 - 0.75108I$	$1.31056 + 4.43134I$	0
$u = 0.307215 + 1.334540I$ $a = 0.53668 + 2.61820I$ $b = -1.73587 - 1.73168I$	$-1.88662 - 8.74253I$	0
$u = 0.307215 - 1.334540I$ $a = 0.53668 - 2.61820I$ $b = -1.73587 + 1.73168I$	$-1.88662 + 8.74253I$	0
$u = 0.175548 + 1.361170I$ $a = -0.27232 - 2.95553I$ $b = 1.45745 + 2.33061I$	$2.88913 + 1.81023I$	0
$u = 0.175548 - 1.361170I$ $a = -0.27232 + 2.95553I$ $b = 1.45745 - 2.33061I$	$2.88913 - 1.81023I$	0
$u = 0.232817 + 1.356480I$ $a = -1.27934 + 1.11479I$ $b = -0.28186 - 1.77532I$	$2.12685 - 8.88426I$	0
$u = 0.232817 - 1.356480I$ $a = -1.27934 - 1.11479I$ $b = -0.28186 + 1.77532I$	$2.12685 + 8.88426I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.179507+1.367480I$ $a=\ \ 0.98913-2.22312I$ $b=-1.58512+1.41348I$	$6.97020+1.82589I$	0
$u=-0.179507-1.367480I$ $a=\ \ 0.98913+2.22312I$ $b=-1.58512-1.41348I$	$6.97020-1.82589I$	0
$u=-0.585665+0.195889I$ $a=-0.396337-0.192331I$ $b=\ \ 1.76159-0.82420I$	$-2.18899+6.55721I$	$-2.36367-10.53063I$
$u=-0.585665-0.195889I$ $a=-0.396337+0.192331I$ $b=\ \ 1.76159+0.82420I$	$-2.18899-6.55721I$	$-2.36367+10.53063I$
$u=-0.369732+1.334160I$ $a=\ \ 0.999324-0.544758I$ $b=-1.238170+0.137634I$	$-3.16954-0.73650I$	0
$u=-0.369732-1.334160I$ $a=\ \ 0.999324+0.544758I$ $b=-1.238170-0.137634I$	$-3.16954+0.73650I$	0
$u=\ \ 0.092976+1.382550I$ $a=-0.131750-1.086330I$ $b=\ \ 0.76682+1.56149I$	$1.51994+1.13170I$	0
$u=\ \ 0.092976-1.382550I$ $a=-0.131750+1.086330I$ $b=\ \ 0.76682-1.56149I$	$1.51994-1.13170I$	0
$u=-0.159123+1.378050I$ $a=\ \ 0.562680-0.319107I$ $b=-1.42351+0.79058I$	$3.89720-2.08976I$	0
$u=-0.159123-1.378050I$ $a=\ \ 0.562680+0.319107I$ $b=-1.42351-0.79058I$	$3.89720+2.08976I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.220760+1.371420I$ $a=\ \ 1.011790+0.131945I$ $b=-0.072638-0.789139I$	$6.40995+5.60012I$	0
$u=-0.220760-1.371420I$ $a=\ \ 1.011790-0.131945I$ $b=-0.072638+0.789139I$	$6.40995-5.60012I$	0
$u=-0.306548+1.356810I$ $a=\ \ 1.75731-0.75002I$ $b=-2.17546+0.38223I$	$-2.55834+10.32380I$	0
$u=-0.306548-1.356810I$ $a=\ \ 1.75731+0.75002I$ $b=-2.17546-0.38223I$	$-2.55834-10.32380I$	0
$u=-0.240311+1.371620I$ $a=-1.16970+2.81995I$ $b=\ \ 1.93538-2.36385I$	$2.79316+9.61542I$	0
$u=-0.240311-1.371620I$ $a=-1.16970-2.81995I$ $b=\ \ 1.93538+2.36385I$	$2.79316-9.61542I$	0
$u=-0.602648+0.001439I$ $a=\ \ 0.701435+1.004830I$ $b=\ \ 1.67927-0.31381I$	$-6.06172-0.14986I$	$-9.25778-0.03321I$
$u=-0.602648-0.001439I$ $a=\ \ 0.701435-1.004830I$ $b=\ \ 1.67927+0.31381I$	$-6.06172+0.14986I$	$-9.25778+0.03321I$
$u=\ \ 0.228462+1.383360I$ $a=-0.56451-1.55194I$ $b=\ \ 0.79056+1.26756I$	$3.92636-4.61687I$	0
$u=\ \ 0.228462-1.383360I$ $a=-0.56451+1.55194I$ $b=\ \ 0.79056-1.26756I$	$3.92636+4.61687I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.286293+1.372560I$ $a=-0.95214+2.32907I$ $b=\ \ 1.95151-1.62338I$	$2.10234+8.17022I$	0
$u=-0.286293-1.372560I$ $a=-0.95214-2.32907I$ $b=\ \ 1.95151+1.62338I$	$2.10234-8.17022I$	0
$u=\ \ 0.567282+0.144042I$ $a=-0.66302-2.00906I$ $b=\ \ 0.14990-1.48278I$	$-2.65212-5.92150I$	$-2.74444+9.65224I$
$u=\ \ 0.567282-0.144042I$ $a=-0.66302+2.00906I$ $b=\ \ 0.14990+1.48278I$	$-2.65212+5.92150I$	$-2.74444-9.65224I$
$u=\ \ 0.28143+1.39271I$ $a=\ \ 1.43917+2.22031I$ $b=-2.55489-1.43964I$	$-1.05444-9.09052I$	0
$u=\ \ 0.28143-1.39271I$ $a=\ \ 1.43917-2.22031I$ $b=-2.55489+1.43964I$	$-1.05444+9.09052I$	0
$u=\ \ 0.568132+0.106349I$ $a=\ \ 0.514869+0.655359I$ $b=-1.70229-0.91754I$	$0.05998-2.14156I$	$-4.51495+6.00689I$
$u=\ \ 0.568132-0.106349I$ $a=\ \ 0.514869-0.655359I$ $b=-1.70229+0.91754I$	$0.05998+2.14156I$	$-4.51495-6.00689I$
$u=-0.531513+0.208071I$ $a=\ \ 0.60732-1.50151I$ $b=-0.529477-0.696871I$	$1.39825+2.78179I$	$3.69223-9.04451I$
$u=-0.531513-0.208071I$ $a=\ \ 0.60732+1.50151I$ $b=-0.529477+0.696871I$	$1.39825-2.78179I$	$3.69223+9.04451I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.18854+1.42138I$ $a=\ \ 0.009374-1.074320I$ $b=\ \ 0.325992+1.109340I$	$4.43837+4.46586I$	0
$u=-0.18854-1.42138I$ $a=\ \ 0.009374+1.074320I$ $b=\ \ 0.325992-1.109340I$	$4.43837-4.46586I$	0
$u=\ \ 0.16719+1.42754I$ $a=-1.51427-1.01186I$ $b=\ \ 1.383820+0.057721I$	$2.78477-4.71286I$	0
$u=\ \ 0.16719-1.42754I$ $a=-1.51427+1.01186I$ $b=\ \ 1.383820-0.057721I$	$2.78477+4.71286I$	0
$u=-0.25271+1.41636I$ $a=-1.61198+0.75568I$ $b=\ \ 1.87013+0.21638I$	$-0.95147+4.39167I$	0
$u=-0.25271-1.41636I$ $a=-1.61198-0.75568I$ $b=\ \ 1.87013-0.21638I$	$-0.95147-4.39167I$	0
$u=-0.33554+1.40137I$ $a=-0.25792+1.67396I$ $b=\ \ 1.21247-1.35645I$	$1.93529+10.74000I$	0
$u=-0.33554-1.40137I$ $a=-0.25792-1.67396I$ $b=\ \ 1.21247+1.35645I$	$1.93529-10.74000I$	0
$u=-0.00046+1.44947I$ $a=-0.029667-0.573407I$ $b=-0.631891+0.524517I$	$6.69763-2.08158I$	0
$u=-0.00046-1.44947I$ $a=-0.029667+0.573407I$ $b=-0.631891-0.524517I$	$6.69763+2.08158I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.244572 + 0.485586I$ $a = -1.184440 + 0.321444I$ $b = 0.0439713 + 0.0995129I$	$-0.135288 - 1.318830I$	$-1.57525 + 3.19258I$
$u = 0.244572 - 0.485586I$ $a = -1.184440 - 0.321444I$ $b = 0.0439713 - 0.0995129I$	$-0.135288 + 1.318830I$	$-1.57525 - 3.19258I$
$u = -0.32476 + 1.42122I$ $a = 1.12371 - 2.10405I$ $b = -1.91087 + 1.38536I$	$4.3345 + 13.5756I$	0
$u = -0.32476 - 1.42122I$ $a = 1.12371 + 2.10405I$ $b = -1.91087 - 1.38536I$	$4.3345 - 13.5756I$	0
$u = 0.32397 + 1.42211I$ $a = -1.20536 - 2.24800I$ $b = 2.15419 + 1.44324I$	$-0.6588 - 19.3116I$	0
$u = 0.32397 - 1.42211I$ $a = -1.20536 + 2.24800I$ $b = 2.15419 - 1.44324I$	$-0.6588 + 19.3116I$	0
$u = 0.30949 + 1.42881I$ $a = 0.624801 + 1.200760I$ $b = -1.24453 - 0.75924I$	$4.50553 - 6.90107I$	0
$u = 0.30949 - 1.42881I$ $a = 0.624801 - 1.200760I$ $b = -1.24453 + 0.75924I$	$4.50553 + 6.90107I$	0
$u = 0.35052 + 1.43914I$ $a = -1.09741 - 1.76425I$ $b = 1.51589 + 1.03394I$	$0.99349 - 6.47416I$	0
$u = 0.35052 - 1.43914I$ $a = -1.09741 + 1.76425I$ $b = 1.51589 - 1.03394I$	$0.99349 + 6.47416I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.03620 + 1.50860I$ $a = -0.384417 + 0.022533I$ $b = -0.193441 - 0.605626I$	$3.50452 + 9.51879I$	0
$u = 0.03620 - 1.50860I$ $a = -0.384417 - 0.022533I$ $b = -0.193441 + 0.605626I$	$3.50452 - 9.51879I$	0
$u = -0.02565 + 1.52405I$ $a = 0.296150 - 0.271480I$ $b = 0.173095 - 0.135422I$	$8.63364 - 3.71580I$	0
$u = -0.02565 - 1.52405I$ $a = 0.296150 + 0.271480I$ $b = 0.173095 + 0.135422I$	$8.63364 + 3.71580I$	0
$u = -0.350300 + 0.294411I$ $a = -0.65494 + 2.60181I$ $b = -0.182405 + 0.001264I$	$-1.34287 - 4.09073I$	$1.361715 + 0.328480I$
$u = -0.350300 - 0.294411I$ $a = -0.65494 - 2.60181I$ $b = -0.182405 - 0.001264I$	$-1.34287 + 4.09073I$	$1.361715 - 0.328480I$
$u = -0.372086 + 0.263740I$ $a = -0.800631 - 0.608295I$ $b = -1.039790 + 0.668624I$	$1.90228 - 0.36788I$	$5.99436 - 2.51246I$
$u = -0.372086 - 0.263740I$ $a = -0.800631 + 0.608295I$ $b = -1.039790 - 0.668624I$	$1.90228 + 0.36788I$	$5.99436 + 2.51246I$
$u = 0.445296 + 0.083565I$ $a = -0.36578 + 2.33238I$ $b = -0.157428 - 0.332375I$	$0.613113 + 0.851866I$	$-1.28476 + 3.07098I$
$u = 0.445296 - 0.083565I$ $a = -0.36578 - 2.33238I$ $b = -0.157428 + 0.332375I$	$0.613113 - 0.851866I$	$-1.28476 - 3.07098I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.400414+0.191882I$		
$a=$	$1.39127+0.43374I$	$-2.03134+4.03831I$	$-0.05256+2.68093I$
$b=$	$1.08997+1.50293I$		
$u=$	$0.400414-0.191882I$		
$a=$	$1.39127-0.43374I$	$-2.03134-4.03831I$	$-0.05256-2.68093I$
$b=$	$1.08997-1.50293I$		
$u=$	$0.11235+1.57442I$		
$a=$	$0.298238-0.257865I$	$7.96522-3.66725I$	0
$b=$	$-0.113632+0.303865I$		
$u=$	$0.11235-1.57442I$		
$a=$	$0.298238+0.257865I$	$7.96522+3.66725I$	0
$b=$	$-0.113632-0.303865I$		

II. $I_2^u =$
$\langle -8u^{27}+9u^{26}+\cdots+2b-5,\ -u^{27}+5u^{26}+\cdots+a-4,\ u^{28}-u^{27}+\cdots-9u^2+1\rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^{27}-5u^{26}+\cdots-19u+4 \\ 4u^{27}-\frac{9}{2}u^{26}+\cdots-\frac{5}{2}u+\frac{5}{2} \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{2}u^{27}+\frac{11}{2}u^{26}+\cdots+4u+\frac{7}{2} \\ -2u^{27}-4u^{26}+\cdots+12u-8 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^4-u^2+1 \\ u^4+2u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^{27}-5u^{26}+\cdots-21u+4 \\ 3u^{27}-\frac{7}{2}u^{26}+\cdots-\frac{5}{2}u+\frac{5}{2} \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{5}{2}u^{27}-u^{26}+\cdots+\frac{11}{2}u-1 \\ -\frac{9}{2}u^{27}+3u^{26}+\cdots+\frac{17}{2}u-4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{5}{2}u^{27}-\frac{21}{2}u^{26}+\cdots-20u+\frac{5}{2} \\ 3u^{27}-u^{26}+\cdots-5u+5 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -\frac{7}{2}u^{27}+2u^{26}+\cdots+\frac{33}{2}u-7 \\ 2u^{27}-2u^{26}+\cdots-23u^3+5u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 19u^{27}-17u^{26}+258u^{25}-213u^{24}+1527u^{23}-1170u^{22}+5136u^{21}-3646u^{20}+10675u^{19}-6888u^{18}+13817u^{17}-7548u^{16}+10302u^{15}-3377u^{14}+2936u^{13}+2003u^{12}-1295u^{11}+3190u^{10}-789u^9+971u^8+654u^7-416u^6+752u^5-304u^4+217u^3-49u^2-19u+15$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 13u^{27} + \cdots - 13u + 1$
c_2	$u^{28} + 15u^{27} + \cdots + u + 1$
c_3	$u^{28} - u^{26} + \cdots + u + 1$
c_4	$u^{28} + 6u^{26} + \cdots + u + 1$
c_5	$u^{28} - u^{27} + \cdots + 6u^2 + 1$
c_6	$u^{28} + 2u^{27} + \cdots - 3u + 1$
c_7	$u^{28} - u^{27} + \cdots - 9u^2 + 1$
c_8	$u^{28} + u^{27} + \cdots + 4u + 1$
c_9	$u^{28} + u^{27} + \cdots + 6u^2 + 1$
c_{10}	$u^{28} + u^{27} + \cdots + 6u^2 + 1$
c_{11}, c_{12}	$u^{28} + u^{27} + \cdots - 9u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} + 11y^{27} + \cdots + 9y + 1$
c_2	$y^{28} + 9y^{27} + \cdots - 15y + 1$
c_3	$y^{28} - 2y^{27} + \cdots + 25y + 1$
c_4	$y^{28} + 12y^{27} + \cdots + 3y + 1$
c_5, c_9	$y^{28} + 25y^{27} + \cdots + 12y + 1$
c_6	$y^{28} + 8y^{27} + \cdots + 3y + 1$
c_7, c_{11}, c_{12}	$y^{28} + 29y^{27} + \cdots - 18y + 1$
c_8	$y^{28} + 7y^{27} + \cdots - 20y + 1$
c_{10}	$y^{28} + 3y^{27} + \cdots + 12y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.099019 + 1.101070I$ $a = 1.09218 + 1.78998I$ $b = -1.243180 - 0.474928I$	$-2.93576 - 0.63480I$	$-2.85306 + 0.30472I$
$u = 0.099019 - 1.101070I$ $a = 1.09218 - 1.78998I$ $b = -1.243180 + 0.474928I$	$-2.93576 + 0.63480I$	$-2.85306 - 0.30472I$
$u = -0.336272 + 1.093480I$ $a = -1.123310 + 0.561111I$ $b = 0.621514 + 0.246840I$	$-1.65636 - 2.14204I$	$-4.42633 + 4.91075I$
$u = -0.336272 - 1.093480I$ $a = -1.123310 - 0.561111I$ $b = 0.621514 - 0.246840I$	$-1.65636 + 2.14204I$	$-4.42633 - 4.91075I$
$u = 0.752638 + 0.348149I$ $a = 0.131722 + 0.706381I$ $b = -1.64552 - 0.23588I$	$-4.47474 - 2.19313I$	$3.30608 + 10.22120I$
$u = 0.752638 - 0.348149I$ $a = 0.131722 - 0.706381I$ $b = -1.64552 + 0.23588I$	$-4.47474 + 2.19313I$	$3.30608 - 10.22120I$
$u = 0.516440 + 0.572964I$ $a = -0.640847 + 0.091888I$ $b = 0.176016 + 0.024021I$	$0.49329 - 1.96254I$	$6.42403 + 9.07010I$
$u = 0.516440 - 0.572964I$ $a = -0.640847 - 0.091888I$ $b = 0.176016 - 0.024021I$	$0.49329 + 1.96254I$	$6.42403 - 9.07010I$
$u = -0.725668 + 0.154435I$ $a = 0.172636 - 0.451167I$ $b = 1.22815 - 0.99461I$	$-4.48882 + 6.00140I$	$-6.33820 - 7.52590I$
$u = -0.725668 - 0.154435I$ $a = 0.172636 + 0.451167I$ $b = 1.22815 + 0.99461I$	$-4.48882 - 6.00140I$	$-6.33820 + 7.52590I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.123269 + 1.312800I$ $a = -1.073130 - 0.268729I$ $b = 1.74512 + 0.52286I$	$4.68792 - 0.06393I$	$5.57659 - 0.87734I$
$u = 0.123269 - 1.312800I$ $a = -1.073130 + 0.268729I$ $b = 1.74512 - 0.52286I$	$4.68792 + 0.06393I$	$5.57659 + 0.87734I$
$u = -0.151948 + 1.349290I$ $a = 0.05319 - 2.07601I$ $b = -1.34938 + 2.23483I$	$2.26093 - 2.79566I$	$1.40081 + 5.15144I$
$u = -0.151948 - 1.349290I$ $a = 0.05319 + 2.07601I$ $b = -1.34938 - 2.23483I$	$2.26093 + 2.79566I$	$1.40081 - 5.15144I$
$u = -0.127067 + 1.358790I$ $a = 1.89517 - 0.10846I$ $b = -1.041370 - 0.241963I$	$2.15334 + 6.44676I$	$1.18886 - 7.26984I$
$u = -0.127067 - 1.358790I$ $a = 1.89517 + 0.10846I$ $b = -1.041370 + 0.241963I$	$2.15334 - 6.44676I$	$1.18886 + 7.26984I$
$u = -0.285243 + 1.363630I$ $a = -0.50422 + 2.26249I$ $b = 1.73224 - 1.89992I$	$0.32680 + 9.64196I$	$-0.45509 - 9.13798I$
$u = -0.285243 - 1.363630I$ $a = -0.50422 - 2.26249I$ $b = 1.73224 + 1.89992I$	$0.32680 - 9.64196I$	$-0.45509 + 9.13798I$
$u = 0.197285 + 1.384240I$ $a = -0.349569 - 1.311340I$ $b = 0.054279 + 1.054640I$	$5.95686 - 3.99802I$	$9.05109 + 2.94774I$
$u = 0.197285 - 1.384240I$ $a = -0.349569 + 1.311340I$ $b = 0.054279 - 1.054640I$	$5.95686 + 3.99802I$	$9.05109 - 2.94774I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.32397 + 1.41144I$ $a = \ 1.14490 + 1.82924I$ $b = -1.64005 - 1.07586I$	$1.05898 - 6.19051I$	$0.78900 - 1.99119I$
$u = \ 0.32397 - 1.41144I$ $a = \ 1.14490 - 1.82924I$ $b = -1.64005 + 1.07586I$	$1.05898 + 6.19051I$	$0.78900 + 1.99119I$
$u = \ 0.09033 + 1.57682I$ $a = -0.275364 + 0.128203I$ $b = \ 0.0747519 + 0.0072307I$	$7.90451 - 3.82235I$	$-8.8605 + 23.2380I$
$u = \ 0.09033 - 1.57682I$ $a = -0.275364 - 0.128203I$ $b = \ 0.0747519 - 0.0072307I$	$7.90451 + 3.82235I$	$-8.8605 - 23.2380I$
$u = \ 0.387082 + 0.161628I$ $a = -1.49791 - 1.39659I$ $b = \ 0.763880 + 0.206504I$	$0.85198 - 1.62979I$	$3.11094 + 3.88931I$
$u = \ 0.387082 - 0.161628I$ $a = -1.49791 + 1.39659I$ $b = \ 0.763880 - 0.206504I$	$0.85198 + 1.62979I$	$3.11094 - 3.88931I$
$u = -0.363834 + 0.027436I$ $a = \ 0.47456 + 2.75962I$ $b = -0.97644 + 1.13359I$	$-2.26930 - 4.73450I$	$-5.41423 + 6.58008I$
$u = -0.363834 - 0.027436I$ $a = \ 0.47456 - 2.75962I$ $b = -0.97644 - 1.13359I$	$-2.26930 + 4.73450I$	$-5.41423 - 6.58008I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{28}-13u^{27}+\cdots-13u+1)$ $\cdot(u^{144}+12u^{143}+\cdots+667809u+245123)$
c_2	$(u^{28}+15u^{27}+\cdots+u+1)(u^{144}-6u^{143}+\cdots+381u+17)$
c_3	$(u^{28}-u^{26}+\cdots+u+1)(u^{144}-u^{143}+\cdots-3086919u+6171839)$
c_4	$(u^{28}+6u^{26}+\cdots+u+1)(u^{144}-u^{143}+\cdots+11u+73)$
c_5	$(u^{28}-u^{27}+\cdots+6u^2+1)(u^{144}-4u^{143}+\cdots-73u^2+1)$
c_6	$(u^{28}+2u^{27}+\cdots-3u+1)(u^{144}+3u^{143}+\cdots+10871u+1351)$
c_7	$(u^{28}-u^{27}+\cdots-9u^2+1)(u^{144}+2u^{143}+\cdots+50u+13)$
c_8	$(u^{28}+u^{27}+\cdots+4u+1)(u^{144}-2u^{143}+\cdots+1264438u+100009)$
c_9	$(u^{28}+u^{27}+\cdots+6u^2+1)(u^{144}-4u^{143}+\cdots-73u^2+1)$
c_{10}	$(u^{28}+u^{27}+\cdots+6u^2+1)(u^{144}-8u^{143}+\cdots-325788u+55651)$
c_{11}, c_{12}	$(u^{28}+u^{27}+\cdots-9u^2+1)(u^{144}+2u^{143}+\cdots+50u+13)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{28}+11y^{27}+\cdots+9y+1)$ $\cdot(y^{144}-20y^{143}+\cdots+504300454111y+60085285129)$
c_2	$(y^{28}+9y^{27}+\cdots-15y+1)(y^{144}+18y^{143}+\cdots+23411y+289)$
c_3	$(y^{28}-2y^{27}+\cdots+25y+1)$ $\cdot(y^{144}+35y^{143}+\cdots+1367319658441467y+38091596641921)$
c_4	$(y^{28}+12y^{27}+\cdots+3y+1)(y^{144}+21y^{143}+\cdots+762145y+5329)$
c_5, c_9	$(y^{28}+25y^{27}+\cdots+12y+1)(y^{144}+110y^{143}+\cdots-146y+1)$
c_6	$(y^{28}+8y^{27}+\cdots+3y+1)$ $\cdot(y^{144}+21y^{143}+\cdots+108316509y+1825201)$
c_7, c_{11}, c_{12}	$(y^{28}+29y^{27}+\cdots-18y+1)(y^{144}+130y^{143}+\cdots-3852y+169)$
c_8	$(y^{28}+7y^{27}+\cdots-20y+1)$ $\cdot(y^{144}-16y^{143}+\cdots+335701233910y+10001800081)$
c_{10}	$(y^{28}+3y^{27}+\cdots+12y+1)$ $\cdot(y^{144}+32y^{143}+\cdots+173978927610y+3097033801)$