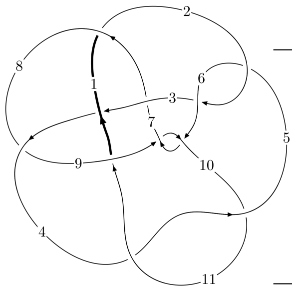
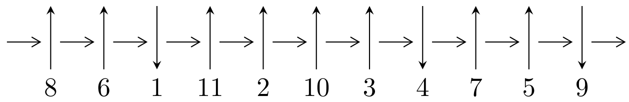
$11a_{273}$ ($K11a_{273}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 1.06666 \times 10^{485} u^{100} - 3.41235 \times 10^{486} u^{99} + \cdots + 2.42206 \times 10^{486} b + 4.73084 \times 10^{487}, \\
& - 3.39554 \times 10^{486} u^{100} + 9.74479 \times 10^{486} u^{99} + \cdots + 2.42206 \times 10^{486} a - 6.95932 \times 10^{487}, \\
& 2u^{101} - 3u^{100} + \cdots + 35u - 7 \rangle \\
I_2^u = \langle & 61808523107 u^{19} + 536394633246 u^{18} + \cdots + 299510947709 b + 100240238594, \\
& 68387457437 u^{19} + 547043741023 u^{18} + \cdots + 299510947709 a + 331101363754, \\
& u^{20} + 8u^{19} + \cdots + 2u^2 + 1 \rangle \\
I_3^u = \langle & b - 2u + 1,\ a,\ 2u^2 - u + 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 123 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. $\boldsymbol{I_1^u = \langle 1.07 \times 10^{485} u^{100} - 3.41 \times 10^{486} u^{99} + \cdots + 2.42 \times 10^{486} b + 4.73 \times 10^{487},\ -3.40 \times 10^{486} u^{100} + 9.74 \times 10^{486} u^{99} + \cdots + 2.42 \times 10^{486} a - 6.96 \times 10^{487},\ 2u^{101} - 3u^{100} + \cdots + 35u - 7\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1.40192u^{100} - 4.02334u^{99} + \cdots - 94.7128u + 28.7330 \\ -0.0440391u^{100} + 1.40886u^{99} + \cdots + 98.4076u - 19.5323 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1.35788u^{100} - 2.61448u^{99} + \cdots + 3.69486u + 9.20073 \\ -0.0440391u^{100} + 1.40886u^{99} + \cdots + 98.4076u - 19.5323 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 5.77692u^{100} - 6.87002u^{99} + \cdots - 77.9350u + 9.89514 \\ 1.01775u^{100} - 0.0986016u^{99} + \cdots + 65.2026u - 18.2878 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 3.21671u^{100} - 5.97036u^{99} + \cdots - 109.574u + 30.7548 \\ 0.231287u^{100} + 0.930191u^{99} + \cdots + 81.9680u - 17.5456 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 6.07414u^{100} - 8.70607u^{99} + \cdots - 188.680u + 36.7620 \\ -1.31496u^{100} + 1.93465u^{99} + \cdots + 47.5422u - 8.57902 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.431473u^{100} - 4.89396u^{99} + \cdots - 178.199u + 67.0158 \\ -0.485513u^{100} + 0.496210u^{99} + \cdots + 3.24494u - 3.96348 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -2.82245u^{100} + 0.822439u^{99} + \cdots - 125.329u + 46.6321 \\ -1.90585u^{100} + 1.04687u^{99} + \cdots - 48.8140u + 12.4729 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -6.76378u^{100} + 5.57659u^{99} + \cdots + 53.5301u + 1.49940 \\ -1.05903u^{100} + 1.81446u^{99} + \cdots + 31.6066u - 3.21755 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -6.76378u^{100} + 5.57659u^{99} + \cdots + 53.5301u + 1.49940 \\ -1.05903u^{100} + 1.81446u^{99} + \cdots + 31.6066u - 3.21755 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -8.98950u^{100} + 8.39126u^{99} + \cdots + 221.775u + 20.5080$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{101} - 3u^{100} + \cdots + 4162u + 679$
c_2, c_5	$u^{101} + u^{100} + \cdots - 8u - 21$
c_3	$2(2u^{101} - 3u^{100} + \cdots + 35u - 7)$
c_4, c_{10}	$2(2u^{101} + 5u^{100} + \cdots - 157973u - 15557)$
c_6, c_9	$u^{101} - 5u^{100} + \cdots + 2016u + 189$
c_7	$2(2u^{101} - u^{100} + \cdots - 16872u - 3626)$
c_8	$u^{101} - 2u^{100} + \cdots + 4109u - 922$
c_{11}	$u^{101} - 7u^{100} + \cdots + 278u - 48$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{101} - 3y^{100} + \cdots - 13847930y - 461041$
c_2, c_5	$y^{101} - 47y^{100} + \cdots + 6868y - 441$
c_3	$4(4y^{101} - 25y^{100} + \cdots - 1127y - 49)$
c_4, c_{10}	$4(4y^{101} + 263y^{100} + \cdots - 2.53465 \times 10^9 y - 2.42020 \times 10^8)$
c_6, c_9	$y^{101} + 57y^{100} + \cdots + 1976562y - 35721$
c_7	$4(4y^{101} + 11y^{100} + \cdots + 6.41717 \times 10^8 y - 1.31479 \times 10^7)$
c_8	$y^{101} - 18y^{100} + \cdots + 29207333y - 850084$
c_{11}	$y^{101} - 27y^{100} + \cdots + 20068y - 2304$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.162573 + 0.974272I$ $a = -1.262170 + 0.010151I$ $b = 1.58037 - 0.37347I$	$-0.02059 + 5.96503I$	0
$u = -0.162573 - 0.974272I$ $a = -1.262170 - 0.010151I$ $b = 1.58037 + 0.37347I$	$-0.02059 - 5.96503I$	0
$u = 0.689567 + 0.698627I$ $a = -1.42173 + 0.34274I$ $b = 1.18445 + 1.07344I$	$-7.77259 - 4.99480I$	0
$u = 0.689567 - 0.698627I$ $a = -1.42173 - 0.34274I$ $b = 1.18445 - 1.07344I$	$-7.77259 + 4.99480I$	0
$u = -1.033140 + 0.186380I$ $a = 2.16423 - 0.57598I$ $b = -0.653951 + 0.332093I$	$-6.73436 - 0.42071I$	0
$u = -1.033140 - 0.186380I$ $a = 2.16423 + 0.57598I$ $b = -0.653951 - 0.332093I$	$-6.73436 + 0.42071I$	0
$u = 0.512645 + 0.798376I$ $a = -0.39113 - 1.52925I$ $b = -0.489031 - 0.050472I$	$-0.00702 - 3.32914I$	0
$u = 0.512645 - 0.798376I$ $a = -0.39113 + 1.52925I$ $b = -0.489031 + 0.050472I$	$-0.00702 + 3.32914I$	0
$u = -0.049526 + 0.945665I$ $a = 0.524331 - 0.133494I$ $b = -0.917642 + 0.871253I$	$1.30478 + 2.43791I$	0
$u = -0.049526 - 0.945665I$ $a = 0.524331 + 0.133494I$ $b = -0.917642 - 0.871253I$	$1.30478 - 2.43791I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.931942$ $a = -0.383437$ $b = 0.756687$	1.94160	0
$u = 0.804867 + 0.460999I$ $a = -1.39565 - 0.27413I$ $b = 1.30392 + 0.91751I$	$-8.17127 - 4.22535I$	0
$u = 0.804867 - 0.460999I$ $a = -1.39565 + 0.27413I$ $b = 1.30392 - 0.91751I$	$-8.17127 + 4.22535I$	0
$u = 0.850076 + 0.665971I$ $a = -0.494629 + 0.150494I$ $b = 0.917725 - 0.594205I$	$1.71389 - 0.48354I$	0
$u = 0.850076 - 0.665971I$ $a = -0.494629 - 0.150494I$ $b = 0.917725 + 0.594205I$	$1.71389 + 0.48354I$	0
$u = 0.736117 + 0.509772I$ $a = 1.23733 - 1.09341I$ $b = -0.699805 - 0.662314I$	$-1.20250 - 5.71658I$	0
$u = 0.736117 - 0.509772I$ $a = 1.23733 + 1.09341I$ $b = -0.699805 + 0.662314I$	$-1.20250 + 5.71658I$	0
$u = 0.453601 + 0.752795I$ $a = 1.337860 + 0.190525I$ $b = -1.59249 - 0.24289I$	$0.156931 - 0.687508I$	0
$u = 0.453601 - 0.752795I$ $a = 1.337860 - 0.190525I$ $b = -1.59249 + 0.24289I$	$0.156931 + 0.687508I$	0
$u = -1.010540 + 0.516431I$ $a = 1.003550 - 0.239109I$ $b = -1.33198 + 1.03173I$	$-6.12003 + 8.35828I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.010540 - 0.516431I$ $a = 1.003550 + 0.239109I$ $b = -1.33198 - 1.03173I$	$-6.12003 - 8.35828I$	0
$u = -0.842576 + 0.782465I$ $a = 1.053510 + 0.288571I$ $b = -1.32128 + 1.04882I$	$-6.12272 + 1.23674I$	0
$u = -0.842576 - 0.782465I$ $a = 1.053510 - 0.288571I$ $b = -1.32128 - 1.04882I$	$-6.12272 - 1.23674I$	0
$u = -0.388183 + 0.738675I$ $a = 0.544652 + 0.291506I$ $b = -0.40370 - 1.42085I$	$-4.23278 + 3.89315I$	0
$u = -0.388183 - 0.738675I$ $a = 0.544652 - 0.291506I$ $b = -0.40370 + 1.42085I$	$-4.23278 - 3.89315I$	0
$u = -0.970357 + 0.645986I$ $a = -0.453336 - 0.828006I$ $b = 0.781821 + 0.053575I$	$-3.80282 - 0.02260I$	0
$u = -0.970357 - 0.645986I$ $a = -0.453336 + 0.828006I$ $b = 0.781821 - 0.053575I$	$-3.80282 + 0.02260I$	0
$u = -1.036610 + 0.545079I$ $a = -0.754419 - 0.527183I$ $b = 0.712667 - 0.382364I$	$-3.64603 + 1.09291I$	0
$u = -1.036610 - 0.545079I$ $a = -0.754419 + 0.527183I$ $b = 0.712667 + 0.382364I$	$-3.64603 - 1.09291I$	0
$u = 1.062250 + 0.531903I$ $a = 0.465709 - 0.781363I$ $b = -0.886908 + 0.325151I$	$-1.91279 + 4.66251I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.062250 - 0.531903I$ $a = 0.465709 + 0.781363I$ $b = -0.886908 - 0.325151I$	$-1.91279 - 4.66251I$	0
$u = -0.278205 + 0.756681I$ $a = -1.82131 - 0.30193I$ $b = 0.287945 - 0.496627I$	$2.28947 + 4.75466I$	0
$u = -0.278205 - 0.756681I$ $a = -1.82131 + 0.30193I$ $b = 0.287945 + 0.496627I$	$2.28947 - 4.75466I$	0
$u = 0.741803 + 0.272510I$ $a = -1.63354 + 2.53985I$ $b = 0.561613 - 0.050553I$	$-3.83195 - 8.38721I$	0
$u = 0.741803 - 0.272510I$ $a = -1.63354 - 2.53985I$ $b = 0.561613 + 0.050553I$	$-3.83195 + 8.38721I$	0
$u = 0.264658 + 1.197530I$ $a = 0.086215 + 0.385151I$ $b = 0.831981 - 0.485918I$	$-6.20705 + 0.67372I$	0
$u = 0.264658 - 1.197530I$ $a = 0.086215 - 0.385151I$ $b = 0.831981 + 0.485918I$	$-6.20705 - 0.67372I$	0
$u = 0.823796 + 0.924278I$ $a = 1.252680 - 0.079891I$ $b = -0.913444 - 0.834825I$	$1.31820 - 3.86141I$	0
$u = 0.823796 - 0.924278I$ $a = 1.252680 + 0.079891I$ $b = -0.913444 + 0.834825I$	$1.31820 + 3.86141I$	0
$u = -0.591881 + 1.108060I$ $a = 0.131032 + 0.424409I$ $b = -1.120630 - 0.145476I$	$-5.13070 + 4.43406I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.591881 - 1.108060I$ $a = 0.131032 - 0.424409I$ $b = -1.120630 + 0.145476I$	$-5.13070 - 4.43406I$	0
$u = 0.152994 + 0.699895I$ $a = 0.88671 + 1.33668I$ $b = 0.076379 + 0.751510I$	$4.76348 - 1.49515I$	$16.4972 + 0.I$
$u = 0.152994 - 0.699895I$ $a = 0.88671 - 1.33668I$ $b = 0.076379 - 0.751510I$	$4.76348 + 1.49515I$	$16.4972 + 0.I$
$u = 0.362267 + 0.609746I$ $a = -0.637141 + 0.294093I$ $b = 0.69740 - 1.83211I$	$-1.90244 - 9.55301I$	$0. + 11.89534I$
$u = 0.362267 - 0.609746I$ $a = -0.637141 - 0.294093I$ $b = 0.69740 + 1.83211I$	$-1.90244 + 9.55301I$	$0. - 11.89534I$
$u = -0.755106 + 1.046910I$ $a = 0.606568 + 0.069851I$ $b = -0.827102 + 0.693878I$	$0.18427 + 2.75704I$	0
$u = -0.755106 - 1.046910I$ $a = 0.606568 - 0.069851I$ $b = -0.827102 - 0.693878I$	$0.18427 - 2.75704I$	0
$u = 0.030974 + 0.678963I$ $a = 0.118398 - 0.303762I$ $b = -0.37765 + 2.05714I$	$2.09103 - 1.79734I$	$11.98843 + 5.51665I$
$u = 0.030974 - 0.678963I$ $a = 0.118398 + 0.303762I$ $b = -0.37765 - 2.05714I$	$2.09103 + 1.79734I$	$11.98843 - 5.51665I$
$u = 0.986583 + 0.962275I$ $a = -1.280250 + 0.378636I$ $b = 0.865841 + 0.792537I$	$2.00350 - 6.10245I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.986583 - 0.962275I$ $a = -1.280250 - 0.378636I$ $b = 0.865841 - 0.792537I$	$2.00350 + 6.10245I$	0
$u = 0.844430 + 1.098440I$ $a = 1.085600 - 0.187387I$ $b = -1.32152 - 1.01795I$	$-0.40633 - 11.38170I$	0
$u = 0.844430 - 1.098440I$ $a = 1.085600 + 0.187387I$ $b = -1.32152 + 1.01795I$	$-0.40633 + 11.38170I$	0
$u = -0.150116 + 0.591112I$ $a = 2.46575 + 2.34386I$ $b = -0.416339 + 0.820109I$	$-1.84072 + 8.55312I$	$10.2259 - 9.9993I$
$u = -0.150116 - 0.591112I$ $a = 2.46575 - 2.34386I$ $b = -0.416339 - 0.820109I$	$-1.84072 - 8.55312I$	$10.2259 + 9.9993I$
$u = 0.113545 + 0.578556I$ $a = 0.30291 - 2.53823I$ $b = -0.113123 - 1.202480I$	$1.62429 + 1.14001I$	$13.19922 + 4.57286I$
$u = 0.113545 - 0.578556I$ $a = 0.30291 + 2.53823I$ $b = -0.113123 + 1.202480I$	$1.62429 - 1.14001I$	$13.19922 - 4.57286I$
$u = -0.88435 + 1.10752I$ $a = -1.021890 - 0.115945I$ $b = 1.33203 - 0.81239I$	$-2.53838 + 6.84507I$	0
$u = -0.88435 - 1.10752I$ $a = -1.021890 + 0.115945I$ $b = 1.33203 + 0.81239I$	$-2.53838 - 6.84507I$	0
$u = 0.86527 + 1.13799I$ $a = -0.717474 + 0.108416I$ $b = 0.852678 + 0.917963I$	$4.60191 - 6.62398I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.86527 - 1.13799I$ $a = -0.717474 - 0.108416I$ $b = 0.852678 - 0.917963I$	$4.60191 + 6.62398I$	0
$u = 0.313290 + 0.474462I$ $a = 1.86363 - 0.00342I$ $b = -0.773568 - 0.600658I$	$0.18393 - 2.19511I$	$5.16572 + 4.08072I$
$u = 0.313290 - 0.474462I$ $a = 1.86363 + 0.00342I$ $b = -0.773568 + 0.600658I$	$0.18393 + 2.19511I$	$5.16572 - 4.08072I$
$u = 0.66443 + 1.28692I$ $a = -0.647899 - 0.034062I$ $b = 0.564316 + 0.620522I$	$2.72612 + 2.16280I$	0
$u = 0.66443 - 1.28692I$ $a = -0.647899 + 0.034062I$ $b = 0.564316 - 0.620522I$	$2.72612 - 2.16280I$	0
$u = -0.94117 + 1.10267I$ $a = -0.985931 + 0.005215I$ $b = 1.28476 - 0.75233I$	$-2.27749 + 6.83721I$	0
$u = -0.94117 - 1.10267I$ $a = -0.985931 - 0.005215I$ $b = 1.28476 + 0.75233I$	$-2.27749 - 6.83721I$	0
$u = 0.336896 + 0.417853I$ $a = 1.64379 + 0.50942I$ $b = -1.30051 + 0.79781I$	$0.50891 - 4.92178I$	$4.79399 + 10.08944I$
$u = 0.336896 - 0.417853I$ $a = 1.64379 - 0.50942I$ $b = -1.30051 - 0.79781I$	$0.50891 + 4.92178I$	$4.79399 - 10.08944I$
$u = 0.039695 + 0.535056I$ $a = -0.945138 + 0.047564I$ $b = 0.224044 + 0.767405I$	$0.846080 + 0.799596I$	$7.63536 - 5.31715I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.039695 - 0.535056I$ $a = -0.945138 - 0.047564I$ $b = 0.224044 - 0.767405I$	$0.846080 - 0.799596I$	$7.63536 + 5.31715I$
$u = -0.94438 + 1.12757I$ $a = 0.144992 - 0.533370I$ $b = 0.468535 - 0.023839I$	$-2.80969 + 0.46563I$	0
$u = -0.94438 - 1.12757I$ $a = 0.144992 + 0.533370I$ $b = 0.468535 + 0.023839I$	$-2.80969 - 0.46563I$	0
$u = -1.47547 + 0.13114I$ $a = -1.181040 - 0.332446I$ $b = 0.739068 + 0.234419I$	$-4.69490 - 0.90727I$	0
$u = -1.47547 - 0.13114I$ $a = -1.181040 + 0.332446I$ $b = 0.739068 - 0.234419I$	$-4.69490 + 0.90727I$	0
$u = 1.53599 + 0.04816I$ $a = 0.345398 - 0.277352I$ $b = -0.486062 + 0.642808I$	$-0.75196 - 1.66188I$	0
$u = 1.53599 - 0.04816I$ $a = 0.345398 + 0.277352I$ $b = -0.486062 - 0.642808I$	$-0.75196 + 1.66188I$	0
$u = 0.032794 + 0.447104I$ $a = -1.202960 - 0.612421I$ $b = 1.30013 - 1.27083I$	$3.61554 + 0.53392I$	$18.1773 - 6.5335I$
$u = 0.032794 - 0.447104I$ $a = -1.202960 + 0.612421I$ $b = 1.30013 + 1.27083I$	$3.61554 - 0.53392I$	$18.1773 + 6.5335I$
$u = -0.200562 + 0.389808I$ $a = -1.85019 + 0.44369I$ $b = 0.626986 + 1.026020I$	$-0.051694 + 0.795294I$	$5.51068 - 2.54673I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.200562 - 0.389808I$ $a = -1.85019 - 0.44369I$ $b = 0.626986 - 1.026020I$	$-0.051694 - 0.795294I$	$5.51068 + 2.54673I$
$u = 1.03319 + 1.17112I$ $a = -1.079930 + 0.107234I$ $b = 1.27350 + 0.97368I$	$-3.9285 - 18.4008I$	0
$u = 1.03319 - 1.17112I$ $a = -1.079930 - 0.107234I$ $b = 1.27350 - 0.97368I$	$-3.9285 + 18.4008I$	0
$u = -1.06049 + 1.15726I$ $a = 1.124610 + 0.128893I$ $b = -1.21439 + 0.85227I$	$-6.55585 + 11.40730I$	0
$u = -1.06049 - 1.15726I$ $a = 1.124610 - 0.128893I$ $b = -1.21439 - 0.85227I$	$-6.55585 - 11.40730I$	0
$u = 0.295302 + 0.298106I$ $a = -4.66627 - 0.82032I$ $b = 0.782808 + 0.366825I$	$-6.36070 - 3.12946I$	$-1.98397 + 7.58733I$
$u = 0.295302 - 0.298106I$ $a = -4.66627 + 0.82032I$ $b = 0.782808 - 0.366825I$	$-6.36070 + 3.12946I$	$-1.98397 - 7.58733I$
$u = -1.02852 + 1.23233I$ $a = -0.768313 - 0.023319I$ $b = 0.990970 - 0.663016I$	$-1.49835 + 6.68804I$	0
$u = -1.02852 - 1.23233I$ $a = -0.768313 + 0.023319I$ $b = 0.990970 + 0.663016I$	$-1.49835 - 6.68804I$	0
$u = 1.12047 + 1.20692I$ $a = 0.712384 + 0.088678I$ $b = -0.850565 - 0.913669I$	$1.48534 - 11.59500I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.12047 - 1.20692I$ $a = 0.712384 - 0.088678I$ $b = -0.850565 + 0.913669I$	$1.48534 + 11.59500I$	0
$u = 1.03544 + 1.31080I$ $a = 0.574512 - 0.148868I$ $b = -0.573136 - 0.410363I$	$3.20074 - 2.34746I$	0
$u = 1.03544 - 1.31080I$ $a = 0.574512 + 0.148868I$ $b = -0.573136 + 0.410363I$	$3.20074 + 2.34746I$	0
$u = 1.44306 + 0.92377I$ $a = -0.407283 + 0.499562I$ $b = 0.829235 - 0.288737I$	$-4.91117 + 9.93167I$	0
$u = 1.44306 - 0.92377I$ $a = -0.407283 - 0.499562I$ $b = 0.829235 + 0.288737I$	$-4.91117 - 9.93167I$	0
$u = -0.237713 + 0.081822I$ $a = 2.43369 - 5.95278I$ $b = -0.865423 - 0.291521I$	$-3.94300 - 3.16462I$	$-1.25002 + 4.22395I$
$u = -0.237713 - 0.081822I$ $a = 2.43369 + 5.95278I$ $b = -0.865423 + 0.291521I$	$-3.94300 + 3.16462I$	$-1.25002 - 4.22395I$
$u = -1.47071 + 0.97844I$ $a = 0.550029 + 0.402324I$ $b = -0.797336 - 0.240875I$	$-7.34821 - 2.77790I$	0
$u = -1.47071 - 0.97844I$ $a = 0.550029 - 0.402324I$ $b = -0.797336 + 0.240875I$	$-7.34821 + 2.77790I$	0
$u = -2.34981 + 1.07326I$ $a = 0.0512416 - 0.0723653I$ $b = -0.201906 + 0.465625I$	$-1.92376 - 0.50897I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -2.34981 - 1.07326I$ $a = \quad 0.0512416 + 0.0723653I$ $b = -0.201906 - 0.465625I$	$-1.92376 + 0.50897I$	0

II. $I_2^u =$ $\langle 6.18\times 10^{10}u^{19}+5.36\times 10^{11}u^{18}+\cdots+3.00\times 10^{11}b+1.00\times 10^{11},\ 6.84\times 10^{10}u^{19}+5.47\times 10^{11}u^{18}+\cdots+3.00\times 10^{11}a+3.31\times 10^{11},\ u^{20}+8u^{19}+\cdots+2u^2+1\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.228330u^{19} - 1.82646u^{18} + \cdots - 4.77533u - 1.10547 \\ -0.206365u^{19} - 1.79090u^{18} + \cdots - 1.76463u - 0.334680 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.434695u^{19} - 3.61736u^{18} + \cdots - 6.53996u - 1.44015 \\ -0.206365u^{19} - 1.79090u^{18} + \cdots - 1.76463u - 0.334680 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2.47993u^{19} - 20.3939u^{18} + \cdots - 6.79019u + 0.0292059 \\ -0.655089u^{19} - 5.31536u^{18} + \cdots - 2.67607u + 0.186776 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.628556u^{19} - 5.05437u^{18} + \cdots - 5.21002u - 1.24527 \\ 0.000881400u^{19} - 0.141553u^{18} + \cdots - 1.95849u - 0.220810 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.00431u^{19} - 8.67050u^{18} + \cdots - 0.997356u - 0.0782033 \\ -0.820531u^{19} - 6.40799u^{18} + \cdots - 1.11677u - 0.0793664 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.600870u^{19} - 3.40028u^{18} + \cdots - 3.29482u + 1.14602 \\ 0.106413u^{19} + 1.03970u^{18} + \cdots - 0.128315u + 1.34635 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -2.82197u^{19} - 22.3877u^{18} + \cdots - 7.89214u - 0.0209057 \\ -0.499388u^{19} - 3.86656u^{18} + \cdots - 2.97954u + 1.01286 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.542089u^{19} + 4.52268u^{18} + \cdots + 2.56849u + 0.0758445 \\ 0.772119u^{19} + 5.83775u^{18} + \cdots + 0.105099u - 0.0205853 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.542089u^{19} + 4.52268u^{18} + \cdots + 2.56849u + 0.0758445 \\ 0.772119u^{19} + 5.83775u^{18} + \cdots + 0.105099u - 0.0205853 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= \frac{833637008495}{299510947709}u^{19} + \frac{7138907008988}{299510947709}u^{18} + \cdots + \frac{1695401428871}{299510947709}u + \frac{730310901784}{299510947709}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} + 2u^{19} + \cdots - 10u^2 + 1$
c_2	$u^{20} - 4u^{19} + \cdots - 6u + 1$
c_3	$u^{20} + 8u^{19} + \cdots + 2u^2 + 1$
c_4	$u^{20} + 4u^{19} + \cdots - 8u + 1$
c_5	$u^{20} + 4u^{19} + \cdots + 6u + 1$
c_6	$u^{20} + 6u^{19} + \cdots + 2u + 1$
c_7	$u^{20} + 6u^{18} + \cdots + 7u + 5$
c_8	$u^{20} - 2u^{18} + \cdots - u^3 + 1$
c_9	$u^{20} - 6u^{19} + \cdots - 2u + 1$
c_{10}	$u^{20} - 4u^{19} + \cdots + 8u + 1$
c_{11}	$u^{20} + 4u^{19} + \cdots + 71u + 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{20} - 12y^{19} + \cdots - 20y + 1$
c_2, c_5	$y^{20} - 8y^{19} + \cdots - 18y + 1$
c_3	$y^{20} - 14y^{19} + \cdots + 4y + 1$
c_4, c_{10}	$y^{20} + 6y^{19} + \cdots - 10y + 1$
c_6, c_9	$y^{20} + 12y^{19} + \cdots + 20y + 1$
c_7	$y^{20} + 12y^{19} + \cdots + 11y + 25$
c_8	$y^{20} - 4y^{19} + \cdots - 12y^2 + 1$
c_{11}	$y^{20} - 18y^{19} + \cdots - 435y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.894288 + 0.542203I$ $a = 1.04503 + 1.19699I$ $b = -0.536692 - 0.309160I$	$-6.55589 - 1.90355I$	$-0.93873 + 1.80301I$
$u = -0.894288 - 0.542203I$ $a = 1.04503 - 1.19699I$ $b = -0.536692 + 0.309160I$	$-6.55589 + 1.90355I$	$-0.93873 - 1.80301I$
$u = 0.713833 + 0.549585I$ $a = 0.719380 + 0.294874I$ $b = -1.068900 + 0.026577I$	$2.56410 - 0.84466I$	$9.03889 + 5.09380I$
$u = 0.713833 - 0.549585I$ $a = 0.719380 - 0.294874I$ $b = -1.068900 - 0.026577I$	$2.56410 + 0.84466I$	$9.03889 - 5.09380I$
$u = -0.659841 + 0.575976I$ $a = 1.53242 + 0.11537I$ $b = -1.22898 + 1.04681I$	$-7.55275 + 4.43078I$	$7.56186 - 0.93053I$
$u = -0.659841 - 0.575976I$ $a = 1.53242 - 0.11537I$ $b = -1.22898 - 1.04681I$	$-7.55275 - 4.43078I$	$7.56186 + 0.93053I$
$u = -0.079411 + 0.757058I$ $a = -1.255640 - 0.527563I$ $b = 1.079970 - 0.086486I$	$1.12249 + 4.07831I$	$8.09612 - 4.25313I$
$u = -0.079411 - 0.757058I$ $a = -1.255640 + 0.527563I$ $b = 1.079970 + 0.086486I$	$1.12249 - 4.07831I$	$8.09612 + 4.25313I$
$u = 0.974774 + 0.960736I$ $a = 1.150600 - 0.336814I$ $b = -0.860791 - 0.761793I$	$2.78821 - 5.63151I$	$8.69462 + 3.84058I$
$u = 0.974774 - 0.960736I$ $a = 1.150600 + 0.336814I$ $b = -0.860791 + 0.761793I$	$2.78821 + 5.63151I$	$8.69462 - 3.84058I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.87068 + 1.14719I$ $a = -0.972677 + 0.015519I$ $b = 1.36435 - 0.70579I$	$-2.09736 + 7.25746I$	$5.4336 - 16.3698I$
$u = -0.87068 - 1.14719I$ $a = -0.972677 - 0.015519I$ $b = 1.36435 + 0.70579I$	$-2.09736 - 7.25746I$	$5.4336 + 16.3698I$
$u = 0.525686 + 0.103428I$ $a = -2.74019 + 0.51080I$ $b = 0.107814 + 0.870985I$	$-2.81189 - 8.50342I$	$2.16622 + 7.62575I$
$u = 0.525686 - 0.103428I$ $a = -2.74019 - 0.51080I$ $b = 0.107814 - 0.870985I$	$-2.81189 + 8.50342I$	$2.16622 - 7.62575I$
$u = -1.46576 + 0.20896I$ $a = -1.113590 - 0.541485I$ $b = 0.712386 + 0.149903I$	$-4.80980 - 0.48058I$	$-2.92255 - 5.81288I$
$u = -1.46576 - 0.20896I$ $a = -1.113590 + 0.541485I$ $b = 0.712386 - 0.149903I$	$-4.80980 + 0.48058I$	$-2.92255 + 5.81288I$
$u = 0.022244 + 0.447467I$ $a = -0.28160 - 2.48134I$ $b = 0.34534 - 1.42522I$	$1.29205 - 1.53764I$	$1.05852 + 6.01902I$
$u = 0.022244 - 0.447467I$ $a = -0.28160 + 2.48134I$ $b = 0.34534 + 1.42522I$	$1.29205 + 1.53764I$	$1.05852 - 6.01902I$
$u = -2.26656 + 0.16524I$ $a = -0.0837337 + 0.0578754I$ $b = 0.085509 - 0.514806I$	$-2.03342 - 0.46303I$	$-9.6886 - 23.5396I$
$u = -2.26656 - 0.16524I$ $a = -0.0837337 - 0.0578754I$ $b = 0.085509 + 0.514806I$	$-2.03342 + 0.46303I$	$-9.6886 + 23.5396I$

III. $I_3^u = \langle b - 2u + 1,\ a,\ 2u^2 - u + 1 \rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -\frac{1}{2}u + \frac{1}{2} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ 2u - 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 2u - 1 \\ 2u - 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -2u + 1 \\ -u + 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ \frac{5}{4}u - \frac{3}{4} \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -\frac{1}{2}u + \frac{1}{2} \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 2u \\ \frac{1}{2}u - \frac{1}{2} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ \frac{3}{4}u - \frac{1}{4} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ \frac{3}{4}u - \frac{1}{4} \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{45}{8}u + \frac{73}{8}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5, c_9	$(u-1)^2$
c_2, c_6	$(u+1)^2$
c_3, c_4	$2(2u^2-u+1)$
c_7	$2(2u^2-3u+2)$
c_8	u^2-u+2
c_{10}	$2(2u^2+u+1)$
c_{11}	u^2

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_6, c_9	$(y-1)^2$
c_3, c_4, c_{10}	$4(4y^2+3y+1)$
c_7	$4(4y^2-y+4)$
c_8	y^2+3y+4
c_{11}	y^2

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.250000 + 0.661438I$ $a = 0$ $b = -0.50000 + 1.32288I$	3.28987	$10.53125 + 3.72059I$
$u = 0.250000 - 0.661438I$ $a = 0$ $b = -0.50000 - 1.32288I$	3.28987	$10.53125 - 3.72059I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^2)(u^{20}+2u^{19}+\cdots-10u^2+1)(u^{101}-3u^{100}+\cdots+4162u+679)$
c_2	$((u+1)^2)(u^{20}-4u^{19}+\cdots-6u+1)(u^{101}+u^{100}+\cdots-8u-21)$
c_3	$4(2u^2-u+1)(u^{20}+8u^{19}+\cdots+2u^2+1)(2u^{101}-3u^{100}+\cdots+35u-7)$
c_4	$4(2u^2-u+1)(u^{20}+4u^{19}+\cdots-8u+1)$ $\cdot(2u^{101}+5u^{100}+\cdots-157973u-15557)$
c_5	$((u-1)^2)(u^{20}+4u^{19}+\cdots+6u+1)(u^{101}+u^{100}+\cdots-8u-21)$
c_6	$((u+1)^2)(u^{20}+6u^{19}+\cdots+2u+1)(u^{101}-5u^{100}+\cdots+2016u+189)$
c_7	$4(2u^2-3u+2)(u^{20}+6u^{18}+\cdots+7u+5)$ $\cdot(2u^{101}-u^{100}+\cdots-16872u-3626)$
c_8	$(u^2-u+2)(u^{20}-2u^{18}+\cdots-u^3+1)(u^{101}-2u^{100}+\cdots+4109u-922)$
c_9	$((u-1)^2)(u^{20}-6u^{19}+\cdots-2u+1)(u^{101}-5u^{100}+\cdots+2016u+189)$
c_{10}	$4(2u^2+u+1)(u^{20}-4u^{19}+\cdots+8u+1)$ $\cdot(2u^{101}+5u^{100}+\cdots-157973u-15557)$
c_{11}	$u^2(u^{20}+4u^{19}+\cdots+71u+7)(u^{101}-7u^{100}+\cdots+278u-48)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^2)(y^{20}-12y^{19}+\cdots-20y+1)$ $\cdot(y^{101}-3y^{100}+\cdots-13847930y-461041)$
c_2, c_5	$((y-1)^2)(y^{20}-8y^{19}+\cdots-18y+1)$ $\cdot(y^{101}-47y^{100}+\cdots+6868y-441)$
c_3	$16(4y^2+3y+1)(y^{20}-14y^{19}+\cdots+4y+1)$ $\cdot(4y^{101}-25y^{100}+\cdots-1127y-49)$
c_4, c_{10}	$16(4y^2+3y+1)(y^{20}+6y^{19}+\cdots-10y+1)$ $\cdot(4y^{101}+263y^{100}+\cdots-2534652577y-242020249)$
c_6, c_9	$((y-1)^2)(y^{20}+12y^{19}+\cdots+20y+1)$ $\cdot(y^{101}+57y^{100}+\cdots+1976562y-35721)$
c_7	$16(4y^2-y+4)(y^{20}+12y^{19}+\cdots+11y+25)$ $\cdot(4y^{101}+11y^{100}+\cdots+641716604y-13147876)$
c_8	$(y^2+3y+4)(y^{20}-4y^{19}+\cdots-12y^2+1)$ $\cdot(y^{101}-18y^{100}+\cdots+29207333y-850084)$
c_{11}	$y^2(y^{20}-18y^{19}+\cdots-435y+49)$ $\cdot(y^{101}-27y^{100}+\cdots+20068y-2304)$