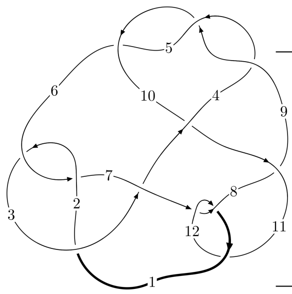
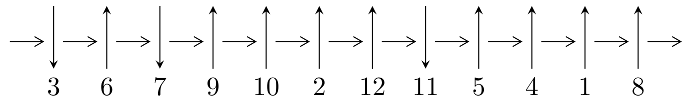
$12a_{0219}$ ($K12a_{0219}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$1,8 \xrightarrow[c_{12}]{} 12 \xrightarrow[c_{7}]{} 4,7 \xrightarrow[c_{3}]{} 3 \xrightarrow[c_{1}]{} 2 \xrightarrow[c_{6}]{} 6 \xrightarrow[c_{11}]{} 11 \xrightarrow[c_{8}]{} 9 \xrightarrow[c_{4}]{} 5 \xrightarrow[c_{10}]{} 10 \twoheadrightarrow c_2, c_5, c_9$$

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

$$\begin{aligned}
I_1^u = \langle & -3.29644 \times 10^{65} u^{95} + 8.39309 \times 10^{65} u^{94} + \cdots + 6.47380 \times 10^{64} b - 3.00158 \times 10^{66}, \\
& -3.21501 \times 10^{65} u^{95} + 4.26233 \times 10^{65} u^{94} + \cdots + 2.26583 \times 10^{65} a + 6.65379 \times 10^{65}, \\
& u^{96} - 3u^{95} + \cdots + 33u - 7 \rangle \\
I_2^u = \langle & b^2 - b + 1,\ a^2 - 2,\ u + 1 \rangle \\
I_3^u = \langle & b^2 - b + 1,\ a,\ u - 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 102 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. $\boldsymbol{I_1^u = \langle -3.30\times 10^{65}u^{95} + 8.39\times 10^{65}u^{94} + \cdots + 6.47\times 10^{64}b - 3.00\times 10^{66},\ -3.22\times 10^{65}u^{95} + 4.26\times 10^{65}u^{94} + \cdots + 2.27\times 10^{65}a + 6.65\times 10^{65},\ u^{96} - 3u^{95} + \cdots + 33u - 7\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1.41891u^{95} - 1.88113u^{94} + \cdots - 1.85504u - 2.93658\\5.09198u^{95} - 12.9647u^{94} + \cdots - 163.121u + 46.3650\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-u\\-u^3 + u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}2.25748u^{95} - 5.20460u^{94} + \cdots - 43.2293u + 11.0345\\2.44396u^{95} - 6.50914u^{94} + \cdots - 89.2208u + 26.7397\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-1.17179u^{95} + 3.07653u^{94} + \cdots + 25.4465u - 7.56802\\-0.189323u^{95} + 1.36509u^{94} + \cdots + 27.8824u - 10.2921\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-2.25210u^{95} + 5.51531u^{94} + \cdots + 73.2516u - 21.0352\\-1.99587u^{95} + 5.14903u^{94} + \cdots + 88.6507u - 24.4894\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-u^2 + 1\\u^2\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-u^5 + 2u^3 - u\\u^5 - u^3 + u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}1.21133u^{95} - 0.874118u^{94} + \cdots + 25.5221u - 12.9364\\3.51190u^{95} - 9.39402u^{94} + \cdots - 126.246u + 37.7277\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-0.362137u^{95} + 0.883926u^{94} + \cdots - 4.63087u + 1.81548\\-1.74806u^{95} + 3.53499u^{94} + \cdots + 51.1345u - 14.0192\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -3.60410u^{95} + 10.8203u^{94} + \cdots + 117.107u - 19.1541$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{96} + 44u^{95} + \cdots - 24u + 1$
c_2, c_6	$u^{96} - 2u^{95} + \cdots - 10u + 1$
c_3	$u^{96} + 2u^{95} + \cdots + 170u + 29$
c_4, c_5, c_9	$u^{96} + u^{95} + \cdots + 12u - 4$
c_7, c_{12}	$u^{96} - 3u^{95} + \cdots + 33u - 7$
c_8	$u^{96} - 15u^{95} + \cdots - 17408u + 1792$
c_{10}	$u^{96} - 3u^{95} + \cdots + 4692u + 9292$
c_{11}	$u^{96} - 53u^{95} + \cdots - 417u + 49$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{96} + 20y^{95} + \cdots - 640y + 1$
c_2, c_6	$y^{96} + 44y^{95} + \cdots - 24y + 1$
c_3	$y^{96} - 4y^{95} + \cdots - 69036y + 841$
c_4, c_5, c_9	$y^{96} - 91y^{95} + \cdots + 240y + 16$
c_7, c_{12}	$y^{96} - 53y^{95} + \cdots - 417y + 49$
c_8	$y^{96} + 61y^{95} + \cdots - 128483328y + 3211264$
c_{10}	$y^{96} - 31y^{95} + \cdots - 573141968y + 86341264$
c_{11}	$y^{96} - 13y^{95} + \cdots - 80985y + 2401$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.833148 + 0.623345I$ $a = -0.031613 + 0.759344I$ $b = -0.078546 - 0.988047I$	$-1.40395 + 2.16811I$	0
$u = 0.833148 - 0.623345I$ $a = -0.031613 - 0.759344I$ $b = -0.078546 + 0.988047I$	$-1.40395 - 2.16811I$	0
$u = -1.013030 + 0.253365I$ $a = -1.17454 - 1.24265I$ $b = -0.353670 + 0.324350I$	$6.33381 + 0.37203I$	0
$u = -1.013030 - 0.253365I$ $a = -1.17454 + 1.24265I$ $b = -0.353670 - 0.324350I$	$6.33381 - 0.37203I$	0
$u = -0.847878 + 0.624079I$ $a = 0.820203 + 0.073555I$ $b = 0.173341 + 0.046759I$	$-4.59002 - 6.24024I$	0
$u = -0.847878 - 0.624079I$ $a = 0.820203 - 0.073555I$ $b = 0.173341 - 0.046759I$	$-4.59002 + 6.24024I$	0
$u = -0.689352 + 0.647691I$ $a = 0.429393 - 0.447615I$ $b = 0.126999 + 0.557750I$	$-5.04287 + 1.33222I$	0
$u = -0.689352 - 0.647691I$ $a = 0.429393 + 0.447615I$ $b = 0.126999 - 0.557750I$	$-5.04287 - 1.33222I$	0
$u = -0.778350 + 0.535879I$ $a = -0.416102 - 0.047250I$ $b = -0.407471 - 0.336585I$	$-1.74499 - 2.16540I$	0
$u = -0.778350 - 0.535879I$ $a = -0.416102 + 0.047250I$ $b = -0.407471 + 0.336585I$	$-1.74499 + 2.16540I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.916273 + 0.567375I$ $a = -0.091728 - 0.259844I$ $b = -0.228304 + 0.883380I$	$2.43863 + 5.37302I$	0
$u = 0.916273 - 0.567375I$ $a = -0.091728 + 0.259844I$ $b = -0.228304 - 0.883380I$	$2.43863 - 5.37302I$	0
$u = 0.677177 + 0.623662I$ $a = 1.081130 - 0.584442I$ $b = 0.047616 + 0.542990I$	$-1.82843 + 2.68030I$	0
$u = 0.677177 - 0.623662I$ $a = 1.081130 + 0.584442I$ $b = 0.047616 - 0.542990I$	$-1.82843 - 2.68030I$	0
$u = 0.829088 + 0.385457I$ $a = 0.683999 - 0.152464I$ $b = 0.17609 + 1.90497I$	$5.09287 + 4.15151I$	$10.22388 - 7.48444I$
$u = 0.829088 - 0.385457I$ $a = 0.683999 + 0.152464I$ $b = 0.17609 - 1.90497I$	$5.09287 - 4.15151I$	$10.22388 + 7.48444I$
$u = 0.169868 + 0.894100I$ $a = 1.78018 - 1.18389I$ $b = -1.50343 + 1.33301I$	$4.56609 - 11.26670I$	$6.00000 + 7.26947I$
$u = 0.169868 - 0.894100I$ $a = 1.78018 + 1.18389I$ $b = -1.50343 - 1.33301I$	$4.56609 + 11.26670I$	$6.00000 - 7.26947I$
$u = -1.09363$ $a = -1.01722$ $b = -0.00371003$	6.50487	0
$u = 0.544581 + 0.708967I$ $a = 0.845405 - 0.041621I$ $b = 0.142315 - 0.016053I$	$-1.40901 - 4.80978I$	$3.29593 + 4.34029I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.544581 - 0.708967I$ $a = 0.845405 + 0.041621I$ $b = 0.142315 + 0.016053I$	$-1.40901 + 4.80978I$	$3.29593 - 4.34029I$
$u = 1.025840 + 0.457928I$ $a = -0.401083 + 1.281920I$ $b = -0.818475 - 0.717111I$	$-0.179654 + 1.344070I$	0
$u = 1.025840 - 0.457928I$ $a = -0.401083 - 1.281920I$ $b = -0.818475 + 0.717111I$	$-0.179654 - 1.344070I$	0
$u = 0.151562 + 0.857368I$ $a = -1.84928 + 0.82401I$ $b = 1.56139 - 1.12610I$	$6.64562 - 6.08638I$	$10.39988 + 3.13837I$
$u = 0.151562 - 0.857368I$ $a = -1.84928 - 0.82401I$ $b = 1.56139 + 1.12610I$	$6.64562 + 6.08638I$	$10.39988 - 3.13837I$
$u = 0.952434 + 0.625237I$ $a = 0.483461 + 0.314958I$ $b = 0.068470 - 0.575431I$	$-0.24974 + 9.86654I$	0
$u = 0.952434 - 0.625237I$ $a = 0.483461 - 0.314958I$ $b = 0.068470 + 0.575431I$	$-0.24974 - 9.86654I$	0
$u = -0.208680 + 0.830969I$ $a = 1.72886 + 0.97902I$ $b = -1.16298 - 0.97853I$	$-1.15634 + 7.77416I$	$3.13699 - 7.30330I$
$u = -0.208680 - 0.830969I$ $a = 1.72886 - 0.97902I$ $b = -1.16298 + 0.97853I$	$-1.15634 - 7.77416I$	$3.13699 + 7.30330I$
$u = 1.141790 + 0.090770I$ $a = 0.066259 + 0.276876I$ $b = -0.385873 + 0.580683I$	$1.11225 + 1.53245I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.141790 - 0.090770I$ $a = 0.066259 - 0.276876I$ $b = -0.385873 - 0.580683I$	$1.11225 - 1.53245I$	0
$u = 0.235538 + 0.804768I$ $a = 1.066780 - 0.567870I$ $b = -1.14823 + 0.91773I$	$1.68291 - 3.82528I$	$4.02618 + 2.15723I$
$u = 0.235538 - 0.804768I$ $a = 1.066780 + 0.567870I$ $b = -1.14823 - 0.91773I$	$1.68291 + 3.82528I$	$4.02618 - 2.15723I$
$u = 0.743530 + 0.335556I$ $a = -0.888754 + 0.289225I$ $b = -0.90209 - 1.75209I$	$4.78693 - 0.88146I$	$8.78250 - 0.86023I$
$u = 0.743530 - 0.335556I$ $a = -0.888754 - 0.289225I$ $b = -0.90209 + 1.75209I$	$4.78693 + 0.88146I$	$8.78250 + 0.86023I$
$u = 0.553648 + 0.598382I$ $a = -0.746834 + 0.434809I$ $b = -0.417163 - 0.310845I$	$1.43855 - 0.78309I$	$7.25184 + 0.14491I$
$u = 0.553648 - 0.598382I$ $a = -0.746834 - 0.434809I$ $b = -0.417163 + 0.310845I$	$1.43855 + 0.78309I$	$7.25184 - 0.14491I$
$u = -1.136260 + 0.381382I$ $a = 0.142180 - 1.031870I$ $b = -2.00804 + 0.36080I$	$3.39912 + 0.40632I$	0
$u = -1.136260 - 0.381382I$ $a = 0.142180 + 1.031870I$ $b = -2.00804 - 0.36080I$	$3.39912 - 0.40632I$	0
$u = -0.169433 + 0.771054I$ $a = -1.68605 - 0.64191I$ $b = 1.102480 + 0.759939I$	$0.90397 + 2.82486I$	$6.31873 - 3.40690I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.169433 - 0.771054I$ $a = -1.68605 + 0.64191I$ $b = \ \ 1.102480 - 0.759939I$	$0.90397 - 2.82486I$	$6.31873 + 3.40690I$
$u = -1.183880 + 0.262794I$ $a = -0.211510 - 0.942755I$ $b = -0.773464 - 0.301090I$	$6.17767 + 0.42669I$	0
$u = -1.183880 - 0.262794I$ $a = -0.211510 + 0.942755I$ $b = -0.773464 + 0.301090I$	$6.17767 - 0.42669I$	0
$u = -0.332091 + 0.705976I$ $a = \ \ 0.954112 + 0.762646I$ $b = -0.681852 - 0.899696I$	$-3.49407 + 0.59180I$	$-1.16788 - 1.13897I$
$u = -0.332091 - 0.705976I$ $a = \ \ 0.954112 - 0.762646I$ $b = -0.681852 + 0.899696I$	$-3.49407 - 0.59180I$	$-1.16788 + 1.13897I$
$u = -1.107690 + 0.529396I$ $a = -0.498342 - 1.265020I$ $b = -1.25300 + 0.94720I$	$-1.22305 - 5.30620I$	0
$u = -1.107690 - 0.529396I$ $a = -0.498342 + 1.265020I$ $b = -1.25300 - 0.94720I$	$-1.22305 + 5.30620I$	0
$u = -1.152600 + 0.431449I$ $a = -0.027714 + 1.227330I$ $b = \ \ 1.91070 - 0.67274I$	$4.71563 - 4.76508I$	0
$u = -1.152600 - 0.431449I$ $a = -0.027714 - 1.227330I$ $b = \ \ 1.91070 + 0.67274I$	$4.71563 + 4.76508I$	0
$u = -0.758438 + 0.093448I$ $a = \ \ 0.022205 - 0.320943I$ $b = -0.39857 - 1.36361I$	$1.01410 - 2.32335I$	$0.25395 + 5.97647I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.758438 - 0.093448I$ $a = 0.022205 + 0.320943I$ $b = -0.39857 + 1.36361I$	$1.01410 + 2.32335I$	$0.25395 - 5.97647I$
$u = 0.532506 + 0.546720I$ $a = 1.18685 - 0.89970I$ $b = -0.268310 + 0.658554I$	$-1.65174 + 2.71583I$	$3.09718 - 5.37796I$
$u = 0.532506 - 0.546720I$ $a = 1.18685 + 0.89970I$ $b = -0.268310 - 0.658554I$	$-1.65174 - 2.71583I$	$3.09718 + 5.37796I$
$u = 1.149740 + 0.466998I$ $a = -0.08653 - 1.56454I$ $b = 1.41799 + 0.75095I$	$4.46471 + 3.33536I$	0
$u = 1.149740 - 0.466998I$ $a = -0.08653 + 1.56454I$ $b = 1.41799 - 0.75095I$	$4.46471 - 3.33536I$	0
$u = -1.160400 + 0.445571I$ $a = 0.19152 - 2.26758I$ $b = -1.68333 + 0.56518I$	$9.35943 - 5.74731I$	0
$u = -1.160400 - 0.445571I$ $a = 0.19152 + 2.26758I$ $b = -1.68333 - 0.56518I$	$9.35943 + 5.74731I$	0
$u = 1.189600 + 0.361483I$ $a = -0.379797 - 1.089120I$ $b = 1.48015 + 0.10596I$	$4.92234 + 0.91841I$	0
$u = 1.189600 - 0.361483I$ $a = -0.379797 + 1.089120I$ $b = 1.48015 - 0.10596I$	$4.92234 - 0.91841I$	0
$u = 1.162430 + 0.455623I$ $a = 0.141375 + 1.343700I$ $b = -2.62084 - 0.26113I$	$9.28641 + 2.49542I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.162430 - 0.455623I$ $a = \ \ 0.141375 - 1.343700I$ $b = -2.62084 + 0.26113I$	$9.28641 - 2.49542I$	0
$u = -1.248650 + 0.054886I$ $a = \ \ 0.566268 + 0.055471I$ $b = -0.378813 + 0.353408I$	$4.46285 + 3.16912I$	0
$u = -1.248650 - 0.054886I$ $a = \ \ 0.566268 - 0.055471I$ $b = -0.378813 - 0.353408I$	$4.46285 - 3.16912I$	0
$u = \ \ 0.076061 + 0.746002I$ $a = -2.12820 - 0.24592I$ $b = \ \ 1.72448 - 0.58053I$	$7.47114 - 3.38666I$	$11.17915 + 3.06622I$
$u = \ \ 0.076061 - 0.746002I$ $a = -2.12820 + 0.24592I$ $b = \ \ 1.72448 + 0.58053I$	$7.47114 + 3.38666I$	$11.17915 - 3.06622I$
$u = -0.710618 + 0.222937I$ $a = \ \ 2.84990 + 1.22868I$ $b = -0.486988 - 0.496637I$	$5.29177 - 2.78792I$	$5.68134 + 6.43519I$
$u = -0.710618 - 0.222937I$ $a = \ \ 2.84990 - 1.22868I$ $b = -0.486988 + 0.496637I$	$5.29177 + 2.78792I$	$5.68134 - 6.43519I$
$u = \ \ 1.147800 + 0.509147I$ $a = -0.01264 + 1.77308I$ $b = -1.41262 - 1.00296I$	$2.47708 + 8.39381I$	0
$u = \ \ 1.147800 - 0.509147I$ $a = -0.01264 - 1.77308I$ $b = -1.41262 + 1.00296I$	$2.47708 - 8.39381I$	0
$u = -1.186860 + 0.415943I$ $a = -0.31953 + 1.94554I$ $b = \ \ 1.67441 - 0.24564I$	$11.10360 - 0.67190I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.186860 - 0.415943I$ $a = -0.31953 - 1.94554I$ $b = 1.67441 + 0.24564I$	$11.10360 + 0.67190I$	0
$u = 1.224250 + 0.315936I$ $a = 0.527394 + 0.867241I$ $b = -1.52114 + 0.23127I$	$3.32134 - 4.02982I$	0
$u = 1.224250 - 0.315936I$ $a = 0.527394 - 0.867241I$ $b = -1.52114 - 0.23127I$	$3.32134 + 4.02982I$	0
$u = 1.181230 + 0.479601I$ $a = 0.03534 - 1.49444I$ $b = 2.48059 + 0.68389I$	$10.65330 + 7.89324I$	0
$u = 1.181230 - 0.479601I$ $a = 0.03534 + 1.49444I$ $b = 2.48059 - 0.68389I$	$10.65330 - 7.89324I$	0
$u = 0.205507 + 0.689673I$ $a = 1.94053 - 0.63363I$ $b = -1.040730 + 0.293972I$	$-0.23085 - 3.80697I$	$4.88666 + 1.57735I$
$u = 0.205507 - 0.689673I$ $a = 1.94053 + 0.63363I$ $b = -1.040730 - 0.293972I$	$-0.23085 + 3.80697I$	$4.88666 - 1.57735I$
$u = -1.174460 + 0.516668I$ $a = 0.27953 + 1.57255I$ $b = 1.64809 - 1.22675I$	$3.83716 - 7.60793I$	0
$u = -1.174460 - 0.516668I$ $a = 0.27953 - 1.57255I$ $b = 1.64809 + 1.22675I$	$3.83716 + 7.60793I$	0
$u = 1.166830 + 0.541752I$ $a = -0.53799 + 1.34809I$ $b = -1.62687 - 0.92797I$	$4.44082 + 8.81310I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.166830 - 0.541752I$ $a = -0.53799 - 1.34809I$ $b = -1.62687 + 0.92797I$	$4.44082 - 8.81310I$	0
$u = -1.184600 + 0.543438I$ $a = -0.39453 - 1.70602I$ $b = -1.56068 + 1.42955I$	$1.74398 - 12.83170I$	0
$u = -1.184600 - 0.543438I$ $a = -0.39453 + 1.70602I$ $b = -1.56068 - 1.42955I$	$1.74398 + 12.83170I$	0
$u = -1.253330 + 0.364907I$ $a = -0.61750 + 1.29425I$ $b = 1.65687 + 0.45442I$	$10.99980 + 1.93342I$	0
$u = -1.253330 - 0.364907I$ $a = -0.61750 - 1.29425I$ $b = 1.65687 - 0.45442I$	$10.99980 - 1.93342I$	0
$u = 1.209640 + 0.530526I$ $a = 0.47272 - 1.73333I$ $b = 2.02520 + 1.40057I$	$9.8052 + 11.1431I$	0
$u = 1.209640 - 0.530526I$ $a = 0.47272 + 1.73333I$ $b = 2.02520 - 1.40057I$	$9.8052 - 11.1431I$	0
$u = -1.283030 + 0.349613I$ $a = 0.745627 - 1.039810I$ $b = -1.65372 - 0.75490I$	$9.16807 + 7.02990I$	0
$u = -1.283030 - 0.349613I$ $a = 0.745627 + 1.039810I$ $b = -1.65372 + 0.75490I$	$9.16807 - 7.02990I$	0
$u = 0.020929 + 0.667902I$ $a = 2.28885 + 0.95053I$ $b = -1.75702 + 0.28266I$	$6.12891 + 1.67907I$	$8.89545 - 2.29940I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.020929 - 0.667902I$ $a = 2.28885 - 0.95053I$ $b = -1.75702 - 0.28266I$	$6.12891 - 1.67907I$	$8.89545 + 2.29940I$
$u = 1.219260 + 0.547288I$ $a = -0.63482 + 1.81504I$ $b = -1.85826 - 1.62972I$	$7.7267 + 16.4978I$	0
$u = 1.219260 - 0.547288I$ $a = -0.63482 - 1.81504I$ $b = -1.85826 + 1.62972I$	$7.7267 - 16.4978I$	0
$u = 0.048425 + 0.646342I$ $a = -1.78755 + 0.22856I$ $b = 0.989489 + 0.119732I$	$1.46256 + 0.85039I$	$7.75527 - 3.74261I$
$u = 0.048425 - 0.646342I$ $a = -1.78755 - 0.22856I$ $b = 0.989489 - 0.119732I$	$1.46256 - 0.85039I$	$7.75527 + 3.74261I$
$u = 0.635537$ $a = -0.940489$ $b = -0.0286910$	0.861519	12.0130

II. $I_2^u = \langle b^2 - b + 1,\ a^2 - 2,\ u + 1 \rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} a \\ b \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} b + a \\ b \end{pmatrix}$$
$$a_2 = \begin{pmatrix} ba + b \\ b - 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -a \\ -b \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} a \\ b - a \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -2 \\ -ba + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4b + 12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u^2 - u + 1)^2$
c_3, c_6	$(u^2 + u + 1)^2$
c_4, c_5, c_9 c_{10}	$(u^2 - 2)^2$
c_7	$(u - 1)^4$
c_8	u^4
c_{11}, c_{12}	$(u + 1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_6	$(y^2+y+1)^2$
c_4, c_5, c_9 c_{10}	$(y-2)^4$
c_7, c_{11}, c_{12}	$(y-1)^4$
c_8	y^4

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = 1.41421$ $b = 0.500000 + 0.866025I$	$6.57974 - 2.02988I$	$14.0000 + 3.4641I$
$u = -1.00000$ $a = 1.41421$ $b = 0.500000 - 0.866025I$	$6.57974 + 2.02988I$	$14.0000 - 3.4641I$
$u = -1.00000$ $a = -1.41421$ $b = 0.500000 + 0.866025I$	$6.57974 - 2.02988I$	$14.0000 + 3.4641I$
$u = -1.00000$ $a = -1.41421$ $b = 0.500000 - 0.866025I$	$6.57974 + 2.02988I$	$14.0000 - 3.4641I$

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

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0 \\ b \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} b \\ b \end{pmatrix}$$
$$a_2 = \begin{pmatrix} b \\ b-1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ b \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ b \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4b + 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_6	$u^2 - u + 1$
c_2	$u^2 + u + 1$
c_4, c_5, c_8 c_9, c_{10}	u^2
c_7, c_{11}	$(u+1)^2$
c_{12}	$(u-1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_6	$y^2 + y + 1$
c_4, c_5, c_8 c_9, c_{10}	y^2
c_7, c_{11}, c_{12}	$(y-1)^2$

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	1.00000		
$a =$	0	$1.64493 - 2.02988I$	$12.00000 + 3.46410I$
$b =$	$0.500000 + 0.866025I$		
$u =$	1.00000		
$a =$	0	$1.64493 + 2.02988I$	$12.00000 - 3.46410I$
$b =$	$0.500000 - 0.866025I$		

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^3)(u^{96}+44u^{95}+\cdots-24u+1)$
c_2	$((u^2-u+1)^2)(u^2+u+1)(u^{96}-2u^{95}+\cdots-10u+1)$
c_3	$(u^2-u+1)(u^2+u+1)^2(u^{96}+2u^{95}+\cdots+170u+29)$
c_4, c_5, c_9	$u^2(u^2-2)^2(u^{96}+u^{95}+\cdots+12u-4)$
c_6	$(u^2-u+1)(u^2+u+1)^2(u^{96}-2u^{95}+\cdots-10u+1)$
c_7	$((u-1)^4)(u+1)^2(u^{96}-3u^{95}+\cdots+33u-7)$
c_8	$u^6(u^{96}-15u^{95}+\cdots-17408u+1792)$
c_{10}	$u^2(u^2-2)^2(u^{96}-3u^{95}+\cdots+4692u+9292)$
c_{11}	$((u+1)^6)(u^{96}-53u^{95}+\cdots-417u+49)$
c_{12}	$((u-1)^2)(u+1)^4(u^{96}-3u^{95}+\cdots+33u-7)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^3)(y^{96}+20y^{95}+\cdots-640y+1)$
c_2, c_6	$((y^2+y+1)^3)(y^{96}+44y^{95}+\cdots-24y+1)$
c_3	$((y^2+y+1)^3)(y^{96}-4y^{95}+\cdots-69036y+841)$
c_4, c_5, c_9	$y^2(y-2)^4(y^{96}-91y^{95}+\cdots+240y+16)$
c_7, c_{12}	$((y-1)^6)(y^{96}-53y^{95}+\cdots-417y+49)$
c_8	$y^6(y^{96}+61y^{95}+\cdots-1.28483\times 10^8 y+3211264)$
c_{10}	$y^2(y-2)^4(y^{96}-31y^{95}+\cdots-5.73142\times 10^8 y+8.63413\times 10^7)$
c_{11}	$((y-1)^6)(y^{96}-13y^{95}+\cdots-80985y+2401)$