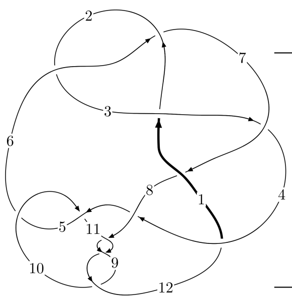
$12a_{0203}$ $(K12a_{0203})$



A knot diagram[1]

Linearized knot diagam

$$\rightarrow \underset{3}{\downarrow} \rightarrow \underset{6}{\uparrow} \rightarrow \underset{7}{\downarrow} \rightarrow \underset{8}{\uparrow} \rightarrow \underset{10}{\downarrow} \rightarrow \underset{2}{\uparrow} \rightarrow \underset{1}{\downarrow} \rightarrow \underset{11}{\uparrow} \rightarrow \underset{12}{\uparrow} \rightarrow \underset{5}{\downarrow} \rightarrow \underset{9}{\uparrow} \rightarrow \underset{4}{\uparrow} \rightarrow$$

Solving Sequence

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

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

$$I_1^u = \langle u^{99} + u^{98} + \cdots + b - u,\ -u^{99} + u^{98} + \cdots - 2u^2 + a,\ u^{101} - 2u^{100} + \cdots - 3u + 1 \rangle$$
$$I_2^u = \langle b + u,\ -u^3 + a - u + 1,\ u^4 + u^2 - u + 1 \rangle$$
$$I_3^u = \langle -u^5 - u^4 - 2u^3 - 2u^2 + b - 2u - 1,\ u^4 + u^2 + a,\ u^6 + u^5 + 2u^4 + 2u^3 + 2u^2 + 2u + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 111 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.

$$I_1^u = \langle u^{99}+u^{98}+\cdots+b-u,\ -u^{99}+u^{98}+\cdots-2u^2+a,\ u^{101}-2u^{100}+\cdots-3u+1\rangle$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^3 \\ u^3+u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5+u^3+u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^8+u^6+u^4+1 \\ u^{10}+2u^8+3u^6+2u^4+u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{99}-u^{98}+\cdots-4u^3+2u^2 \\ -u^{99}-u^{98}+\cdots-3u^2+u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{21}+4u^{19}+9u^{17}+12u^{15}+12u^{13}+10u^{11}+9u^9+6u^7+3u^5+u \\ u^{23}+5u^{21}+\cdots+2u^3+u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{99}+u^{98}+\cdots+2u-1 \\ u^{99}-u^{98}+\cdots+2u^3-2u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^{11}-2u^9-2u^7+u^3 \\ u^{11}+3u^9+4u^7+3u^5+u^3+u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{96}+u^{95}+\cdots-2u^3+u \\ -u^{98}+u^{97}+\cdots-2u^2+u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{100}+12u^{99}+\cdots-27u+14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{101} + 48u^{100} + \cdots + u - 1$
c_2, c_6	$u^{101} - 2u^{100} + \cdots - 3u + 1$
c_3	$u^{101} + 2u^{100} + \cdots + 12760u + 1480$
c_4	$u^{101} - 2u^{100} + \cdots - 86401u + 194329$
c_5, c_{10}	$u^{101} - u^{100} + \cdots - 1024u - 1024$
c_7	$u^{101} - 10u^{100} + \cdots - 42087u + 6643$
c_8, c_9, c_{11}	$u^{101} + 11u^{100} + \cdots - 8u - 1$
c_{12}	$u^{101} + 12u^{100} + \cdots + 3723u + 277$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{101} + 12y^{100} + \cdots - 7y - 1$
c_2, c_6	$y^{101} + 48y^{100} + \cdots + y - 1$
c_3	$y^{101} - 24y^{100} + \cdots + 111920400y - 2190400$
c_4	$y^{101} - 48y^{100} + \cdots - 26966856735y - 37763760241$
c_5, c_{10}	$y^{101} + 63y^{100} + \cdots - 4718592y - 1048576$
c_7	$y^{101} + 24y^{100} + \cdots - 2017745343y - 44129449$
c_8, c_9, c_{11}	$y^{101} - 99y^{100} + \cdots - 132y^2 - 1$
c_{12}	$y^{101} + 12y^{100} + \cdots + 194657y - 76729$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.559286 + 0.752293I$ $a = -0.989959 + 0.356199I$ $b = -0.100806 + 0.217494I$	$5.04653 + 2.23098I$	0
$u = 0.559286 - 0.752293I$ $a = -0.989959 - 0.356199I$ $b = -0.100806 - 0.217494I$	$5.04653 - 2.23098I$	0
$u = 0.144841 + 1.062320I$ $a = -0.49301 + 1.46252I$ $b = -0.244757 - 0.364265I$	$6.80947 + 2.51778I$	0
$u = 0.144841 - 1.062320I$ $a = -0.49301 - 1.46252I$ $b = -0.244757 + 0.364265I$	$6.80947 - 2.51778I$	0
$u = -0.675241 + 0.627440I$ $a = 1.51592 - 1.43887I$ $b = -0.516038 + 0.020363I$	$10.7524 - 9.3652I$	0
$u = -0.675241 - 0.627440I$ $a = 1.51592 + 1.43887I$ $b = -0.516038 - 0.020363I$	$10.7524 + 9.3652I$	0
$u = 0.223863 + 1.080890I$ $a = -0.486349 - 0.383572I$ $b = 0.666393 - 0.872846I$	$-0.470150 + 0.026524I$	0
$u = 0.223863 - 1.080890I$ $a = -0.486349 + 0.383572I$ $b = 0.666393 + 0.872846I$	$-0.470150 - 0.026524I$	0
$u = -0.656822 + 0.605840I$ $a = -1.30126 + 1.72034I$ $b = 0.938922 - 0.038188I$	$4.32173 - 5.33553I$	0
$u = -0.656822 - 0.605840I$ $a = -1.30126 - 1.72034I$ $b = 0.938922 + 0.038188I$	$4.32173 + 5.33553I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.329615 + 1.062400I$ $a = 1.384260 + 0.126784I$ $b = -1.230950 + 0.038847I$	$-1.42344 + 0.99591I$	0
$u = 0.329615 - 1.062400I$ $a = 1.384260 - 0.126784I$ $b = -1.230950 - 0.038847I$	$-1.42344 - 0.99591I$	0
$u = -0.698021 + 0.546127I$ $a = -0.496542 + 1.163010I$ $b = 1.20205 - 0.87188I$	$12.26350 + 2.91510I$	$11.73744 + 0.I$
$u = -0.698021 - 0.546127I$ $a = -0.496542 - 1.163010I$ $b = 1.20205 + 0.87188I$	$12.26350 - 2.91510I$	$11.73744 + 0.I$
$u = 0.660879 + 0.588204I$ $a = -0.080340 + 0.833596I$ $b = 0.561946 + 0.166495I$	$6.75246 + 2.85123I$	$9.64304 + 0.I$
$u = 0.660879 - 0.588204I$ $a = -0.080340 - 0.833596I$ $b = 0.561946 - 0.166495I$	$6.75246 - 2.85123I$	$9.64304 + 0.I$
$u = 0.517354 + 0.988210I$ $a = 0.364633 + 0.337762I$ $b = -0.0884803 + 0.0436767I$	$0.07186 + 2.63242I$	0
$u = 0.517354 - 0.988210I$ $a = 0.364633 - 0.337762I$ $b = -0.0884803 - 0.0436767I$	$0.07186 - 2.63242I$	0
$u = -0.591512 + 0.946011I$ $a = 0.292258 - 0.036431I$ $b = -0.782515 + 1.097640I$	$9.81181 + 4.46013I$	0
$u = -0.591512 - 0.946011I$ $a = 0.292258 + 0.036431I$ $b = -0.782515 - 1.097640I$	$9.81181 - 4.46013I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.570523 + 0.963388I$ $a = -0.350315 + 0.737669I$ $b = 1.32634 - 1.23936I$	$3.26846 + 0.54908I$	0
$u = -0.570523 - 0.963388I$ $a = -0.350315 - 0.737669I$ $b = 1.32634 + 1.23936I$	$3.26846 - 0.54908I$	0
$u = -0.216987 + 1.103730I$ $a = -2.37752 - 0.70582I$ $b = 1.28080 + 1.71958I$	$1.05599 + 2.54758I$	0
$u = -0.216987 - 1.103730I$ $a = -2.37752 + 0.70582I$ $b = 1.28080 - 1.71958I$	$1.05599 - 2.54758I$	0
$u = -0.657710 + 0.567007I$ $a = 0.71084 - 1.74178I$ $b = -1.275050 + 0.427296I$	$4.96120 - 0.22906I$	$9.98542 + 0.I$
$u = -0.657710 - 0.567007I$ $a = 0.71084 + 1.74178I$ $b = -1.275050 - 0.427296I$	$4.96120 + 0.22906I$	$9.98542 + 0.I$
$u = 0.573003 + 0.978593I$ $a = -0.711923 - 0.889848I$ $b = 0.225706 - 0.133500I$	$5.60153 + 1.95285I$	0
$u = 0.573003 - 0.978593I$ $a = -0.711923 + 0.889848I$ $b = 0.225706 + 0.133500I$	$5.60153 - 1.95285I$	0
$u = -0.262827 + 1.109140I$ $a = 1.37071 + 0.63527I$ $b = -0.589466 - 1.268910I$	$-4.24260 + 0.78323I$	0
$u = -0.262827 - 1.109140I$ $a = 1.37071 - 0.63527I$ $b = -0.589466 + 1.268910I$	$-4.24260 - 0.78323I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.221896 + 1.118480I$ $a = 1.56356 + 0.80568I$ $b = -1.85917 + 0.96230I$	$-1.53941 - 4.91431I$	0
$u = 0.221896 - 1.118480I$ $a = 1.56356 - 0.80568I$ $b = -1.85917 - 0.96230I$	$-1.53941 + 4.91431I$	0
$u = -0.369450 + 1.082930I$ $a = 2.49514 - 1.02643I$ $b = -2.47687 - 1.23020I$	$-0.42845 - 3.16967I$	0
$u = -0.369450 - 1.082930I$ $a = 2.49514 + 1.02643I$ $b = -2.47687 + 1.23020I$	$-0.42845 + 3.16967I$	0
$u = -0.569938 + 0.993899I$ $a = 1.09937 - 1.19180I$ $b = -1.97370 + 0.70903I$	$3.70280 - 4.55573I$	0
$u = -0.569938 - 0.993899I$ $a = 1.09937 + 1.19180I$ $b = -1.97370 - 0.70903I$	$3.70280 + 4.55573I$	0
$u = 0.748986 + 0.407820I$ $a = -0.480885 + 0.870943I$ $b = -0.37660 - 1.42830I$	$11.56620 + 0.45635I$	$11.06607 + 0.I$
$u = 0.748986 - 0.407820I$ $a = -0.480885 - 0.870943I$ $b = -0.37660 + 1.42830I$	$11.56620 - 0.45635I$	$11.06607 + 0.I$
$u = 0.778413 + 0.347104I$ $a = 1.53231 - 0.92520I$ $b = 1.88927 + 1.75371I$	$9.3131 - 11.7252I$	$8.57374 + 6.35355I$
$u = 0.778413 - 0.347104I$ $a = 1.53231 + 0.92520I$ $b = 1.88927 - 1.75371I$	$9.3131 + 11.7252I$	$8.57374 - 6.35355I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.315560 + 1.106870I$ $a = -1.42389 + 1.07397I$ $b = 1.74345 + 0.21862I$	$-4.77116 - 0.94849I$	0
$u = -0.315560 - 1.106870I$ $a = -1.42389 - 1.07397I$ $b = 1.74345 - 0.21862I$	$-4.77116 + 0.94849I$	0
$u = 0.213591 + 1.138180I$ $a = -1.96700 - 1.45359I$ $b = 2.52993 - 0.48874I$	$4.60011 - 9.01545I$	0
$u = 0.213591 - 1.138180I$ $a = -1.96700 + 1.45359I$ $b = 2.52993 + 0.48874I$	$4.60011 + 9.01545I$	0
$u = 0.760256 + 0.350052I$ $a = -1.36106 + 1.24216I$ $b = -1.68581 - 1.35119I$	$3.04655 - 7.53533I$	$6.19828 + 6.38149I$
$u = 0.760256 - 0.350052I$ $a = -1.36106 - 1.24216I$ $b = -1.68581 + 1.35119I$	$3.04655 + 7.53533I$	$6.19828 - 6.38149I$
$u = -0.753467 + 0.360125I$ $a = 0.315596 + 0.812998I$ $b = 1.80023 + 0.41209I$	$5.62104 + 5.06307I$	$8.08124 - 3.45988I$
$u = -0.753467 - 0.360125I$ $a = 0.315596 - 0.812998I$ $b = 1.80023 - 0.41209I$	$5.62104 - 5.06307I$	$8.08124 + 3.45988I$
$u = 0.588886 + 0.589287I$ $a = 0.119119 - 0.479902I$ $b = -0.213662 - 0.077887I$	$1.24735 + 1.77929I$	$1.80719 - 3.90932I$
$u = 0.588886 - 0.589287I$ $a = 0.119119 + 0.479902I$ $b = -0.213662 + 0.077887I$	$1.24735 - 1.77929I$	$1.80719 + 3.90932I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.365943 + 1.110030I$ $a = -2.17570 + 0.77453I$ $b = 1.32158 - 1.60784I$	$-3.03399 + 5.10519I$	0
$u = 0.365943 - 1.110030I$ $a = -2.17570 - 0.77453I$ $b = 1.32158 + 1.60784I$	$-3.03399 - 5.10519I$	0
$u = -0.592518 + 1.012050I$ $a = -1.75490 + 0.87977I$ $b = 1.79457 + 0.04402I$	$10.88800 - 7.88085I$	0
$u = -0.592518 - 1.012050I$ $a = -1.75490 - 0.87977I$ $b = 1.79457 - 0.04402I$	$10.88800 + 7.88085I$	0
$u = 0.739620 + 0.367451I$ $a = 0.81565 - 1.38746I$ $b = 1.12462 + 1.01801I$	$3.99256 - 2.37735I$	$8.68126 + 0.82850I$
$u = 0.739620 - 0.367451I$ $a = 0.81565 + 1.38746I$ $b = 1.12462 - 1.01801I$	$3.99256 + 2.37735I$	$8.68126 - 0.82850I$
$u = -0.292606 + 1.147000I$ $a = 0.04570 - 2.16311I$ $b = -1.43780 + 1.64269I$	$-1.262360 + 0.354071I$	0
$u = -0.292606 - 1.147000I$ $a = 0.04570 + 2.16311I$ $b = -1.43780 - 1.64269I$	$-1.262360 - 0.354071I$	0
$u = -0.513022 + 1.078080I$ $a = 2.60896 - 1.03032I$ $b = -2.72963 - 1.51757I$	$0.51902 - 3.88340I$	0
$u = -0.513022 - 1.078080I$ $a = 2.60896 + 1.03032I$ $b = -2.72963 + 1.51757I$	$0.51902 + 3.88340I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.378007 + 1.137450I$ $a = 2.54195 - 1.50040I$ $b = -1.07175 + 2.63458I$	$2.75696 + 8.75209I$	0
$u = 0.378007 - 1.137450I$ $a = 2.54195 + 1.50040I$ $b = -1.07175 - 2.63458I$	$2.75696 - 8.75209I$	0
$u = -0.726884 + 0.327055I$ $a = -0.175604 - 0.552864I$ $b = -0.963217 - 0.358705I$	$0.03213 + 3.48727I$	$0.09979 - 3.51807I$
$u = -0.726884 - 0.327055I$ $a = -0.175604 + 0.552864I$ $b = -0.963217 + 0.358705I$	$0.03213 - 3.48727I$	$0.09979 + 3.51807I$
$u = 0.492912 + 1.098740I$ $a = -0.276756 - 1.149500I$ $b = 1.057510 - 0.086412I$	$-2.19619 + 2.34413I$	0
$u = 0.492912 - 1.098740I$ $a = -0.276756 + 1.149500I$ $b = 1.057510 + 0.086412I$	$-2.19619 - 2.34413I$	0
$u = -0.740692 + 0.260753I$ $a = -0.682792 + 0.699061I$ $b = -0.17383 + 1.62028I$	$2.94737 + 3.48509I$	$7.97157 - 3.26658I$
$u = -0.740692 - 0.260753I$ $a = -0.682792 - 0.699061I$ $b = -0.17383 - 1.62028I$	$2.94737 - 3.48509I$	$7.97157 + 3.26658I$
$u = 0.533025 + 1.091700I$ $a = 0.231274 + 0.125966I$ $b = 0.088154 + 0.910822I$	$0.00591 + 6.09039I$	0
$u = 0.533025 - 1.091700I$ $a = 0.231274 - 0.125966I$ $b = 0.088154 - 0.910822I$	$0.00591 - 6.09039I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.471451 + 1.127850I$ $a = 0.06424 + 2.13769I$ $b = -1.84014 - 0.92549I$	$3.38462 - 0.90680I$	0
$u = 0.471451 - 1.127850I$ $a = 0.06424 - 2.13769I$ $b = -1.84014 + 0.92549I$	$3.38462 + 0.90680I$	0
$u = -0.529411 + 1.112630I$ $a = -1.94763 + 0.22116I$ $b = 1.51267 + 1.55593I$	$-3.31999 - 6.57687I$	0
$u = -0.529411 - 1.112630I$ $a = -1.94763 - 0.22116I$ $b = 1.51267 - 1.55593I$	$-3.31999 + 6.57687I$	0
$u = 0.584215 + 1.095890I$ $a = 1.80943 - 0.62472I$ $b = -1.07548 + 1.36552I$	$9.53744 + 4.60201I$	0
$u = 0.584215 - 1.095890I$ $a = 1.80943 + 0.62472I$ $b = -1.07548 - 1.36552I$	$9.53744 - 4.60201I$	0
$u = 0.570247 + 1.109490I$ $a = -2.04471 - 0.48819I$ $b = 2.40512 - 0.98669I$	$1.81489 + 7.35611I$	0
$u = 0.570247 - 1.109490I$ $a = -2.04471 + 0.48819I$ $b = 2.40512 + 0.98669I$	$1.81489 - 7.35611I$	0
$u = -0.556363 + 1.118210I$ $a = 0.53625 - 1.33820I$ $b = -1.51557 + 0.38281I$	$-2.27116 - 8.37309I$	0
$u = -0.556363 - 1.118210I$ $a = 0.53625 + 1.33820I$ $b = -1.51557 - 0.38281I$	$-2.27116 + 8.37309I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.573094 + 1.115450I$ $a = -1.05265 + 2.20004I$ $b = 2.54641 - 0.41856I$	$3.40071 - 10.08470I$	0
$u = -0.573094 - 1.115450I$ $a = -1.05265 - 2.20004I$ $b = 2.54641 + 0.41856I$	$3.40071 + 10.08470I$	0
$u = 0.572512 + 1.120620I$ $a = 2.84572 + 0.67318I$ $b = -3.08287 + 1.82619I$	$0.78058 + 12.56920I$	0
$u = 0.572512 - 1.120620I$ $a = 2.84572 - 0.67318I$ $b = -3.08287 - 1.82619I$	$0.78058 - 12.56920I$	0
$u = -0.539813 + 1.137000I$ $a = 1.67664 + 1.34204I$ $b = 0.10446 - 2.41080I$	$0.40620 - 8.31043I$	0
$u = -0.539813 - 1.137000I$ $a = 1.67664 - 1.34204I$ $b = 0.10446 + 2.41080I$	$0.40620 + 8.31043I$	0
$u = 0.577402 + 1.127000I$ $a = -3.33632 - 0.48264I$ $b = 3.09505 - 2.51845I$	$7.0114 + 16.8219I$	0
$u = 0.577402 - 1.127000I$ $a = -3.33632 + 0.48264I$ $b = 3.09505 + 2.51845I$	$7.0114 - 16.8219I$	0
$u = -0.662305 + 0.275534I$ $a = 0.939373 + 0.065618I$ $b = 0.922265 - 0.830172I$	$-0.94991 + 1.96351I$	$-0.70822 - 3.53700I$
$u = -0.662305 - 0.275534I$ $a = 0.939373 - 0.065618I$ $b = 0.922265 + 0.830172I$	$-0.94991 - 1.96351I$	$-0.70822 + 3.53700I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.623195 + 0.345378I$ $a = -0.746323 - 1.172680I$ $b = -0.1202310 + 0.0270876I$	$2.14060 - 1.51973I$	$7.99267 + 0.24534I$
$u = 0.623195 - 0.345378I$ $a = -0.746323 + 1.172680I$ $b = -0.1202310 - 0.0270876I$	$2.14060 + 1.51973I$	$7.99267 - 0.24534I$
$u = 0.674211 + 0.096747I$ $a = -0.774201 + 0.504331I$ $b = -0.92810 + 1.42121I$	$6.25590 + 5.13644I$	$6.36962 - 3.22236I$
$u = 0.674211 - 0.096747I$ $a = -0.774201 - 0.504331I$ $b = -0.92810 - 1.42121I$	$6.25590 - 5.13644I$	$6.36962 + 3.22236I$
$u = 0.345648 + 0.580502I$ $a = 0.922401 + 0.248417I$ $b = 0.013474 - 0.285135I$	$0.099541 + 1.296110I$	$1.20042 - 5.96166I$
$u = 0.345648 - 0.580502I$ $a = 0.922401 - 0.248417I$ $b = 0.013474 + 0.285135I$	$0.099541 - 1.296110I$	$1.20042 + 5.96166I$
$u = -0.521577 + 0.412128I$ $a = -1.55675 - 1.07315I$ $b = -1.19110 + 0.98238I$	$2.50079 - 0.40687I$	$6.49172 - 2.07727I$
$u = -0.521577 - 0.412128I$ $a = -1.55675 + 1.07315I$ $b = -1.19110 - 0.98238I$	$2.50079 + 0.40687I$	$6.49172 + 2.07727I$
$u = 0.583943 + 0.129243I$ $a = 0.692839 + 0.144322I$ $b = 0.557460 - 0.795599I$	$0.30851 + 1.80358I$	$2.83929 - 3.75868I$
$u = 0.583943 - 0.129243I$ $a = 0.692839 - 0.144322I$ $b = 0.557460 + 0.795599I$	$0.30851 - 1.80358I$	$2.83929 + 3.75868I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.493714$ $a = -1.89949$ $b = -1.32964$	2.48657	3.95840

II. $\boldsymbol{I_2^u = \langle b + u,\ -u^3 + a - u + 1,\ u^4 + u^2 - u + 1 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^3 + u^2 - u + 1 \\ -u^2 + u - 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^3 + u - 1 \\ -u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 + u - 1 \\ -u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^3 - u^2 + u - 1 \\ u^2 - u + 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^2 \\ -u^2 - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -5u^3 - 4u^2 - u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^4 - 2u^3 + 3u^2 - u + 1$
c_2, c_4, c_{12}	$u^4 + u^2 + u + 1$
c_3	$u^4 + 3u^3 + 4u^2 + 3u + 2$
c_5, c_{10}	u^4
c_6	$u^4 + u^2 - u + 1$
c_7	$u^4 + 2u^3 + 3u^2 + u + 1$
c_8, c_9	$(u + 1)^4$
c_{11}	$(u - 1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^4 + 2y^3 + 7y^2 + 5y + 1$
c_2, c_4, c_6 c_{12}	$y^4 + 2y^3 + 3y^2 + y + 1$
c_3	$y^4 - y^3 + 2y^2 + 7y + 4$
c_5, c_{10}	y^4
c_8, c_9, c_{11}	$(y - 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.547424 + 0.585652I$ $a = -0.851808 + 0.911292I$ $b = -0.547424 - 0.585652I$	$2.62503 + 1.39709I$	$7.62200 - 4.77865I$
$u = 0.547424 - 0.585652I$ $a = -0.851808 - 0.911292I$ $b = -0.547424 + 0.585652I$	$2.62503 - 1.39709I$	$7.62200 + 4.77865I$
$u = -0.547424 + 1.120870I$ $a = 0.351808 + 0.720342I$ $b = 0.547424 - 1.120870I$	$-0.98010 - 7.64338I$	$0.87800 + 5.79053I$
$u = -0.547424 - 1.120870I$ $a = 0.351808 - 0.720342I$ $b = 0.547424 + 1.120870I$	$-0.98010 + 7.64338I$	$0.87800 - 5.79053I$

III. $\boldsymbol{I_3^u =}$
$\boldsymbol{\langle -u^5-u^4-2u^3-2u^2+b-2u-1,\ u^4+u^2+a,\ u^6+u^5+2u^4+2u^3+2u^2+2u+1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^3 \\ u^3+u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5+u^3+u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^4+u^2+u+1 \\ -2u^5-u^4-3u^3-2u^2-3u-2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^4-u^2 \\ u^5+u^4+2u^3+2u^2+2u+1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^4-u^2 \\ u^5+u^4+2u^3+2u^2+2u+1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^4-u^2-u-1 \\ 2u^5+u^4+3u^3+2u^2+3u+2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u+1 \\ -u^5-u^3-u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -u^4-5u^3-u^2-4u+1$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^6 - 3u^5 + 4u^4 - 2u^3 + 1$
c_2, c_4, c_{12}	$u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1$
c_3	$(u^3 - u^2 + 1)^2$
c_5, c_{10}	u^6
c_6	$u^6 + u^5 + 2u^4 + 2u^3 + 2u^2 + 2u + 1$
c_7	$u^6 + 3u^5 + 4u^4 + 2u^3 + 1$
c_8, c_9	$(u + 1)^6$
c_{11}	$(u - 1)^6$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^6 - y^5 + 4y^4 - 2y^3 + 8y^2 + 1$
c_2, c_4, c_6 c_{12}	$y^6 + 3y^5 + 4y^4 + 2y^3 + 1$
c_3	$(y^3 - y^2 + 2y - 1)^2$
c_5, c_{10}	y^6
c_8, c_9, c_{11}	$(y-1)^6$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.498832 + 1.001300I$ $a = 1.183530 + 0.507021I$ $b = -1.39861 + 0.80012I$	$1.37919 + 2.82812I$	$7.06955 - 2.21599I$
$u = 0.498832 - 1.001300I$ $a = 1.183530 - 0.507021I$ $b = -1.39861 - 0.80012I$	$1.37919 - 2.82812I$	$7.06955 + 2.21599I$
$u = -0.284920 + 1.115140I$ $a = 0.215080 - 0.841795I$ $b = -0.784920 + 0.841795I$	-2.75839	$-2.84423 + 0.27335I$
$u = -0.284920 - 1.115140I$ $a = 0.215080 + 0.841795I$ $b = -0.784920 - 0.841795I$	-2.75839	$-2.84423 - 0.27335I$
$u = -0.713912 + 0.305839I$ $a = -0.398606 + 0.800120I$ $b = 0.183526 + 0.507021I$	$1.37919 + 2.82812I$	$4.27468 - 2.61835I$
$u = -0.713912 - 0.305839I$ $a = -0.398606 - 0.800120I$ $b = 0.183526 - 0.507021I$	$1.37919 - 2.82812I$	$4.27468 + 2.61835I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^4-2u^3+3u^2-u+1)(u^6-3u^5+4u^4-2u^3+1)$ $\cdot(u^{101}+48u^{100}+\cdots+u-1)$
c_2	$(u^4+u^2+u+1)(u^6-u^5+2u^4-2u^3+2u^2-2u+1)$ $\cdot(u^{101}-2u^{100}+\cdots-3u+1)$
c_3	$(u^3-u^2+1)^2(u^4+3u^3+4u^2+3u+2)$ $\cdot(u^{101}+2u^{100}+\cdots+12760u+1480)$
c_4	$(u^4+u^2+u+1)(u^6-u^5+2u^4-2u^3+2u^2-2u+1)$ $\cdot(u^{101}-2u^{100}+\cdots-86401u+194329)$
c_5, c_{10}	$u^{10}(u^{101}-u^{100}+\cdots-1024u-1024)$
c_6	$(u^4+u^2-u+1)(u^6+u^5+2u^4+2u^3+2u^2+2u+1)$ $\cdot(u^{101}-2u^{100}+\cdots-3u+1)$
c_7	$(u^4+2u^3+3u^2+u+1)(u^6+3u^5+4u^4+2u^3+1)$ $\cdot(u^{101}-10u^{100}+\cdots-42087u+6643)$
c_8, c_9	$((u+1)^{10})(u^{101}+11u^{100}+\cdots-8u-1)$
c_{11}	$((u-1)^{10})(u^{101}+11u^{100}+\cdots-8u-1)$
c_{12}	$(u^4+u^2+u+1)(u^6-u^5+2u^4-2u^3+2u^2-2u+1)$ $\cdot(u^{101}+12u^{100}+\cdots+3723u+277)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^4+2y^3+7y^2+5y+1)(y^6-y^5+4y^4-2y^3+8y^2+1)$ $\cdot\,(y^{101}+12y^{100}+\cdots-7y-1)$
c_2, c_6	$(y^4+2y^3+3y^2+y+1)(y^6+3y^5+4y^4+2y^3+1)$ $\cdot\,(y^{101}+48y^{100}+\cdots+y-1)$
c_3	$(y^3-y^2+2y-1)^2(y^4-y^3+2y^2+7y+4)$ $\cdot\,(y^{101}-24y^{100}+\cdots+111920400y-2190400)$
c_4	$(y^4+2y^3+3y^2+y+1)(y^6+3y^5+4y^4+2y^3+1)$ $\cdot\,(y^{101}-48y^{100}+\cdots-26966856735y-37763760241)$
c_5, c_{10}	$y^{10}(y^{101}+63y^{100}+\cdots-4718592y-1048576)$
c_7	$(y^4+2y^3+7y^2+5y+1)(y^6-y^5+4y^4-2y^3+8y^2+1)$ $\cdot\,(y^{101}+24y^{100}+\cdots-2017745343y-44129449)$
c_8, c_9, c_{11}	$((y-1)^{10})(y^{101}-99y^{100}+\cdots-132y^2-1)$
c_{12}	$(y^4+2y^3+3y^2+y+1)(y^6+3y^5+4y^4+2y^3+1)$ $\cdot\,(y^{101}+12y^{100}+\cdots+194657y-76729)$