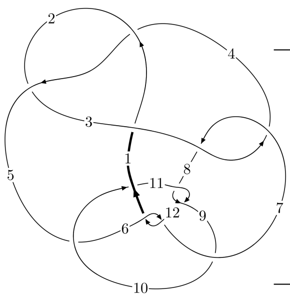
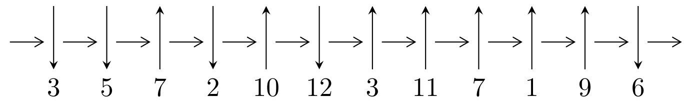
$12n_{0206}$ $(K12n_{0206})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle &-7.77675 \times 10^{197} u^{70} + 4.00240 \times 10^{198} u^{69} + \cdots + 3.80449 \times 10^{199} b - 8.85680 \times 10^{199},\\
&2.02424 \times 10^{200} u^{70} - 1.02963 \times 10^{201} u^{69} + \cdots + 1.09950 \times 10^{202} a + 1.24156 \times 10^{202},\\
&u^{71} - 7u^{70} + \cdots + 1199u - 289\rangle\\
I_2^u = \langle &b,\ -u^8 + 2u^7 + u^6 - 4u^5 + u^4 + 2u^3 - 2u^2 + a + 2u - 1,\ u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1\rangle\\
I_3^u = \langle &-171088a^4 + 309672a^3 + 100148a^2 + 704465b + 873471a + 152355,\\
&17a^5 - 38a^4 - 12a^3 - 9a^2 - 10a - 25,\ u + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 85 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. $\boldsymbol{I_1^u = \langle -7.78 \times 10^{197} u^{70} + 4.00 \times 10^{198} u^{69} + \cdots + 3.80 \times 10^{199} b - 8.86 \times 10^{199},\ 2.02 \times 10^{200} u^{70} - 1.03 \times 10^{201} u^{69} + \cdots + 1.10 \times 10^{202} a + 1.24 \times 10^{202},\ u^{71} - 7u^{70} + \cdots + 1199u - 289 \rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -0.0184106u^{70} + 0.0936457u^{69} + \cdots + 9.76637u - 1.12921 \\ 0.0204410u^{70} - 0.105202u^{69} + \cdots - 9.58566u + 2.32798 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0466645u^{70} + 0.293619u^{69} + \cdots + 48.3665u - 15.5876 \\ 0.00479198u^{70} - 0.0596147u^{69} + \cdots - 19.3624u + 7.08009 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.499170u^{70} + 2.77736u^{69} + \cdots + 345.003u - 99.7107 \\ 0.764567u^{70} - 4.26654u^{69} + \cdots - 532.480u + 154.683 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.00565571u^{70} + 0.0323636u^{69} + \cdots - 10.6763u + 2.61138 \\ -0.0117731u^{70} + 0.0884774u^{69} + \cdots + 12.9410u - 4.08451 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0204023u^{70} - 0.0946454u^{69} + \cdots - 5.82381u + 0.885137 \\ -0.0282610u^{70} + 0.125290u^{69} + \cdots + 4.42743u + 0.0851660 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0315678u^{70} - 0.179416u^{69} + \cdots - 15.1787u + 6.46648 \\ -0.0909233u^{70} + 0.522261u^{69} + \cdots + 72.4293u - 21.7615 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.0494570u^{70} + 0.305968u^{69} + \cdots + 35.8439u - 12.8556 \\ -0.0269343u^{70} + 0.100857u^{69} + \cdots - 6.16962u + 3.55182 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0104954u^{70} + 0.0542240u^{69} + \cdots + 21.5025u - 5.67968 \\ 0.00909595u^{70} - 0.0238410u^{69} + \cdots + 9.22630u - 2.63364 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0764562u^{70} - 0.447130u^{69} + \cdots - 71.2982u + 17.0357$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{71} + 27u^{70} + \cdots + 121u + 1$
c_2, c_4	$u^{71} - 11u^{70} + \cdots + 17u - 1$
c_3, c_7	$u^{71} - 2u^{70} + \cdots - 3584u + 512$
c_5	$u^{71} - 2u^{70} + \cdots - 33184u - 9248$
c_6, c_{12}	$u^{71} - 3u^{70} + \cdots - 3u + 1$
c_8, c_{11}	$u^{71} + 7u^{70} + \cdots + 1199u + 289$
c_9	$17(17u^{71} + 58u^{70} + \cdots - 338322u - 76541)$
c_{10}	$17(17u^{71} - 28u^{70} + \cdots - 3303678u - 843836)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{71} + 45y^{70} + \cdots + 15729y - 1$
c_2, c_4	$y^{71} - 27y^{70} + \cdots + 121y - 1$
c_3, c_7	$y^{71} - 54y^{70} + \cdots + 10485760y - 262144$
c_5	$y^{71} - 30y^{70} + \cdots + 374507008y - 85525504$
c_6, c_{12}	$y^{71} + 49y^{70} + \cdots + 41y - 1$
c_8, c_{11}	$y^{71} - 63y^{70} + \cdots + 1811567y - 83521$
c_9	$289(289y^{71} - 11218y^{70} + \cdots + 5.96694 \times 10^{10}y - 5.85852 \times 10^{9})$
c_{10}	289 $\cdot (289y^{71} - 16424y^{70} + \cdots + 1192944884236y - 712059194896)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.756660 + 0.652760I$ $a = -0.194768 + 0.364860I$ $b = 0.637235 + 0.065847I$	$-2.82440 + 2.46359I$	0
$u = 0.756660 - 0.652760I$ $a = -0.194768 - 0.364860I$ $b = 0.637235 - 0.065847I$	$-2.82440 - 2.46359I$	0
$u = -0.101769 + 0.975404I$ $a = -0.013185 - 0.296664I$ $b = 1.37199 - 0.46590I$	$2.23860 - 6.33244I$	0
$u = -0.101769 - 0.975404I$ $a = -0.013185 + 0.296664I$ $b = 1.37199 + 0.46590I$	$2.23860 + 6.33244I$	0
$u = -1.039240 + 0.147728I$ $a = -1.149230 - 0.251566I$ $b = 0.004372 - 0.661805I$	$0.982639 - 0.712583I$	0
$u = -1.039240 - 0.147728I$ $a = -1.149230 + 0.251566I$ $b = 0.004372 + 0.661805I$	$0.982639 + 0.712583I$	0
$u = 0.927037 + 0.038295I$ $a = -0.447729 + 0.814840I$ $b = 0.487435 - 1.128170I$	$-4.36546 - 4.32846I$	$-23.3262 - 7.3531I$
$u = 0.927037 - 0.038295I$ $a = -0.447729 - 0.814840I$ $b = 0.487435 + 1.128170I$	$-4.36546 + 4.32846I$	$-23.3262 + 7.3531I$
$u = -0.927261$ $a = 5.50313$ $b = -0.310196$	-0.278739	56.4200
$u = -0.354625 + 0.849824I$ $a = -0.151243 + 0.119016I$ $b = -1.354200 + 0.058471I$	$3.26913 - 0.37177I$	$2.00000 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.354625 - 0.849824I$ $a = -0.151243 - 0.119016I$ $b = -1.354200 - 0.058471I$	$3.26913 + 0.37177I$	$2.00000 + 0.I$
$u = -0.376517 + 1.025830I$ $a = 0.315794 - 1.102330I$ $b = -0.076693 - 0.947370I$	$1.59411 - 4.42837I$	0
$u = -0.376517 - 1.025830I$ $a = 0.315794 + 1.102330I$ $b = -0.076693 + 0.947370I$	$1.59411 + 4.42837I$	0
$u = 0.347640 + 0.813125I$ $a = 0.005886 - 0.617262I$ $b = -0.641537 + 0.013263I$	$-0.01259 - 2.24943I$	$5.94216 + 1.24752I$
$u = 0.347640 - 0.813125I$ $a = 0.005886 + 0.617262I$ $b = -0.641537 - 0.013263I$	$-0.01259 + 2.24943I$	$5.94216 - 1.24752I$
$u = -0.290942 + 0.737764I$ $a = 1.65291 - 0.96848I$ $b = -0.738712 - 0.025801I$	$0.03593 - 2.58057I$	$5.84465 + 3.57644I$
$u = -0.290942 - 0.737764I$ $a = 1.65291 + 0.96848I$ $b = -0.738712 + 0.025801I$	$0.03593 + 2.58057I$	$5.84465 - 3.57644I$
$u = -1.100310 + 0.531566I$ $a = 0.207077 + 0.459025I$ $b = 0.420831 + 0.275485I$	$4.35121 - 1.59493I$	0
$u = -1.100310 - 0.531566I$ $a = 0.207077 - 0.459025I$ $b = 0.420831 - 0.275485I$	$4.35121 + 1.59493I$	0
$u = -0.755086$ $a = -0.418947$ $b = -0.297760$	1.11352	9.05470

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.125800 + 0.537275I$ $a = 0.138588 - 0.169296I$ $b = -0.557977 - 0.073436I$	$2.38069 + 7.27157I$	0
$u = 1.125800 - 0.537275I$ $a = 0.138588 + 0.169296I$ $b = -0.557977 + 0.073436I$	$2.38069 - 7.27157I$	0
$u = -1.249910 + 0.134392I$ $a = -1.18206 + 2.72482I$ $b = 0.426783 + 0.400297I$	$2.71880 - 0.77171I$	0
$u = -1.249910 - 0.134392I$ $a = -1.18206 - 2.72482I$ $b = 0.426783 - 0.400297I$	$2.71880 + 0.77171I$	0
$u = -0.700057 + 0.193777I$ $a = 1.12505 - 2.53259I$ $b = 1.323750 + 0.085283I$	$5.87495 + 2.45786I$	$9.24495 - 6.42737I$
$u = -0.700057 - 0.193777I$ $a = 1.12505 + 2.53259I$ $b = 1.323750 - 0.085283I$	$5.87495 - 2.45786I$	$9.24495 + 6.42737I$
$u = 1.29944$ $a = -1.95041$ $b = 1.51898$	0.852763	0
$u = -1.255160 + 0.377546I$ $a = 1.66912 + 1.11095I$ $b = -1.44190 + 0.27798I$	$5.97359 - 4.40312I$	0
$u = -1.255160 - 0.377546I$ $a = 1.66912 - 1.11095I$ $b = -1.44190 - 0.27798I$	$5.97359 + 4.40312I$	0
$u = -1.300740 + 0.229793I$ $a = -1.82719 - 0.88893I$ $b = 1.43718 + 0.15590I$	$6.20644 + 1.78085I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.300740 - 0.229793I$ $a = -1.82719 + 0.88893I$ $b = 1.43718 - 0.15590I$	$6.20644 - 1.78085I$	0
$u = 1.337460 + 0.125412I$ $a = 0.027859 + 0.614143I$ $b = 0.18896 - 1.55398I$	$2.79580 + 3.31170I$	0
$u = 1.337460 - 0.125412I$ $a = 0.027859 - 0.614143I$ $b = 0.18896 + 1.55398I$	$2.79580 - 3.31170I$	0
$u = -0.427079 + 0.399427I$ $a = -1.92353 + 1.90314I$ $b = -0.145194 + 0.788536I$	$1.32199 - 0.86803I$	$2.81463 - 0.68879I$
$u = -0.427079 - 0.399427I$ $a = -1.92353 - 1.90314I$ $b = -0.145194 - 0.788536I$	$1.32199 + 0.86803I$	$2.81463 + 0.68879I$
$u = 1.41886 + 0.15846I$ $a = 1.53895 - 0.23615I$ $b = -1.52848 - 0.82309I$	$11.07870 + 5.15354I$	0
$u = 1.41886 - 0.15846I$ $a = 1.53895 + 0.23615I$ $b = -1.52848 + 0.82309I$	$11.07870 - 5.15354I$	0
$u = 1.44104 + 0.16578I$ $a = 0.297052 + 0.397374I$ $b = -0.30543 - 1.48272I$	$7.30098 + 3.05381I$	0
$u = 1.44104 - 0.16578I$ $a = 0.297052 - 0.397374I$ $b = -0.30543 + 1.48272I$	$7.30098 - 3.05381I$	0
$u = 1.43488 + 0.27968I$ $a = 1.78842 - 0.17343I$ $b = -1.392010 + 0.087028I$	$5.60335 + 6.26016I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.43488 - 0.27968I$ $a = 1.78842 + 0.17343I$ $b = -1.392010 - 0.087028I$	$5.60335 - 6.26016I$	0
$u = 1.41280 + 0.42540I$ $a = -1.61762 + 0.54713I$ $b = 1.53644 + 0.75409I$	$7.10450 + 11.36750I$	0
$u = 1.41280 - 0.42540I$ $a = -1.61762 - 0.54713I$ $b = 1.53644 - 0.75409I$	$7.10450 - 11.36750I$	0
$u = 1.46463 + 0.27475I$ $a = 1.65909 - 0.33682I$ $b = -1.71694 - 0.49452I$	$9.22845 + 4.28954I$	0
$u = 1.46463 - 0.27475I$ $a = 1.65909 + 0.33682I$ $b = -1.71694 + 0.49452I$	$9.22845 - 4.28954I$	0
$u = -0.395946 + 0.275565I$ $a = -1.84509 + 2.03931I$ $b = -1.334450 + 0.351523I$	$5.32732 - 3.31503I$	$6.14838 + 0.98366I$
$u = -0.395946 - 0.275565I$ $a = -1.84509 - 2.03931I$ $b = -1.334450 - 0.351523I$	$5.32732 + 3.31503I$	$6.14838 - 0.98366I$
$u = 1.52370 + 0.00055I$ $a = -1.52959 + 0.07213I$ $b = 1.68752 + 0.56968I$	$13.45460 - 1.92659I$	0
$u = 1.52370 - 0.00055I$ $a = -1.52959 - 0.07213I$ $b = 1.68752 - 0.56968I$	$13.45460 + 1.92659I$	0
$u = -1.48783 + 0.35921I$ $a = 0.217215 + 0.589103I$ $b = -0.182323 + 0.721295I$	$4.92838 - 1.62527I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.48783 - 0.35921I$ $a = 0.217215 - 0.589103I$ $b = -0.182323 - 0.721295I$	$4.92838 + 1.62527I$	0
$u = 1.49034 + 0.37047I$ $a = -0.216937 - 0.362488I$ $b = -0.16002 + 1.45030I$	$7.57456 + 9.33161I$	0
$u = 1.49034 - 0.37047I$ $a = -0.216937 + 0.362488I$ $b = -0.16002 - 1.45030I$	$7.57456 - 9.33161I$	0
$u = -0.51104 + 1.45521I$ $a = -0.384185 - 0.141170I$ $b = 1.47168 - 0.09988I$	$7.18645 - 3.56652I$	0
$u = -0.51104 - 1.45521I$ $a = -0.384185 + 0.141170I$ $b = 1.47168 + 0.09988I$	$7.18645 + 3.56652I$	0
$u = -0.24999 + 1.52906I$ $a = 0.386137 + 0.398616I$ $b = -1.45011 + 0.48802I$	$6.09358 - 9.90312I$	0
$u = -0.24999 - 1.52906I$ $a = 0.386137 - 0.398616I$ $b = -1.45011 - 0.48802I$	$6.09358 + 9.90312I$	0
$u = -0.061861 + 0.437709I$ $a = -1.22584 + 1.97505I$ $b = 0.220480 + 0.816559I$	$-1.56511 - 1.33089I$	$-4.35474 + 3.35992I$
$u = -0.061861 - 0.437709I$ $a = -1.22584 - 1.97505I$ $b = 0.220480 - 0.816559I$	$-1.56511 + 1.33089I$	$-4.35474 - 3.35992I$
$u = 1.55314 + 0.57823I$ $a = 1.46222 - 0.67858I$ $b = -1.50255 - 0.73985I$	$11.7776 + 17.0387I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.55314 - 0.57823I$ $a = 1.46222 + 0.67858I$ $b = -1.50255 + 0.73985I$	$11.7776 - 17.0387I$	0
$u = 1.59834 + 0.47097I$ $a = -1.50458 + 0.49579I$ $b = 1.66767 + 0.47111I$	$13.8741 + 10.1106I$	0
$u = 1.59834 - 0.47097I$ $a = -1.50458 - 0.49579I$ $b = 1.66767 - 0.47111I$	$13.8741 - 10.1106I$	0
$u = 0.322877 + 0.075455I$ $a = 1.04784 - 1.90673I$ $b = -0.439418 + 0.621478I$	$0.12984 - 1.53500I$	$0.43134 + 4.26020I$
$u = 0.322877 - 0.075455I$ $a = 1.04784 + 1.90673I$ $b = -0.439418 - 0.621478I$	$0.12984 + 1.53500I$	$0.43134 - 4.26020I$
$u = 0.198166 + 0.231942I$ $a = -2.13178 + 1.10932I$ $b = 0.642897 - 0.339317I$	$-2.40004 + 0.50009I$	$-3.16242 + 1.54853I$
$u = 0.198166 - 0.231942I$ $a = -2.13178 - 1.10932I$ $b = 0.642897 + 0.339317I$	$-2.40004 - 0.50009I$	$-3.16242 - 1.54853I$
$u = -1.81641 + 0.86766I$ $a = -1.012930 - 0.492741I$ $b = 1.53761 - 0.31028I$	$10.80380 - 5.89219I$	0
$u = -1.81641 - 0.86766I$ $a = -1.012930 + 0.492741I$ $b = 1.53761 + 0.31028I$	$10.80380 + 5.89219I$	0
$u = -1.94249 + 0.64316I$ $a = 1.023020 + 0.236973I$ $b = -1.55039 - 0.12499I$	$11.13970 + 0.68264I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.94249 - 0.64316I$ $a = \ \ 1.023020 - 0.236973I$ $b = -1.55039 + 0.12499I$	$11.13970 - 0.68264I$	0

II.

$\boldsymbol{I_2^u = \langle b,\ -u^8+2u^7+\cdots+a-1,\ u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^8-2u^7-u^6+4u^5-u^4-2u^3+2u^2-2u+1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ -u^3+u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^8-2u^7-u^6+4u^5-u^4-2u^3+2u^2-2u+1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2+1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^4-u^2+1 \\ -u^6+2u^4-u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^7-2u^5+2u^3 \\ -u^8+u^7+3u^6-2u^5-3u^4+2u^3+1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^7+2u^5-2u^3 \\ u^8-u^7-3u^6+2u^5+3u^4-2u^3-1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^8-u^7-u^6+2u^5-u^4+2u^2-2u+1 \\ -u^8+u^7+3u^6-2u^5-3u^4+2u^3+1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -u^8+u^7-2u^6+u^5+3u^4-5u^3-2u^2+3u-7$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^9$
c_3, c_7	u^9
c_4	$(u+1)^9$
c_5, c_{10}	$u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1$
c_6	$u^9 - 3u^8 + 8u^7 - 13u^6 + 17u^5 - 17u^4 + 12u^3 - 6u^2 + u + 1$
c_8	$u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1$
c_9	$u^9 - 5u^8 + 12u^7 - 15u^6 + 9u^5 + u^4 - 4u^3 + 2u^2 + u - 1$
c_{11}	$u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1$
c_{12}	$u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^9$
c_3, c_7	y^9
c_5, c_{10}	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_6, c_{12}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_8, c_{11}	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$
c_9	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.772920 + 0.510351I$ $a = -0.483566 - 0.305056I$ $b = 0$	$-3.42837 + 2.09337I$	$-5.97316 - 1.69698I$
$u = 0.772920 - 0.510351I$ $a = -0.483566 + 0.305056I$ $b = 0$	$-3.42837 - 2.09337I$	$-5.97316 + 1.69698I$
$u = -0.825933$ $a = 3.56378$ $b = 0$	-0.446489	-8.12690
$u = -1.173910 + 0.391555I$ $a = -1.23246 + 1.62704I$ $b = 0$	$2.72642 - 1.33617I$	$4.47739 + 4.48124I$
$u = -1.173910 - 0.391555I$ $a = -1.23246 - 1.62704I$ $b = 0$	$2.72642 + 1.33617I$	$4.47739 - 4.48124I$
$u = 0.141484 + 0.739668I$ $a = 1.022450 + 0.246780I$ $b = 0$	$-1.02799 - 2.45442I$	$-3.46097 + 2.82066I$
$u = 0.141484 - 0.739668I$ $a = 1.022450 - 0.246780I$ $b = 0$	$-1.02799 + 2.45442I$	$-3.46097 - 2.82066I$
$u = 1.172470 + 0.500383I$ $a = 0.411691 + 0.129409I$ $b = 0$	$1.95319 + 7.08493I$	$-2.97979 - 2.94778I$
$u = 1.172470 - 0.500383I$ $a = 0.411691 - 0.129409I$ $b = 0$	$1.95319 - 7.08493I$	$-2.97979 + 2.94778I$

III. $I_3^u = \langle 7.04 \times 10^5 b - 1.71 \times 10^5 a^4 + \cdots + 8.73 \times 10^5 a + 1.52 \times 10^5,\ 17a^5 - 38a^4 - 12a^3 - 9a^2 - 10a - 25,\ u + 1\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} a \\ 0.242862a^4 - 0.439585a^3 + \cdots - 1.23991a - 0.216271 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.103284a^4 + 0.0292704a^3 + \cdots - 0.0734103a + 1.35715 \\ -0.224715a^4 + 0.190522a^3 + \cdots + 0.193364a - 0.749015 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.0689204a^4 + 0.584206a^3 + \cdots - 1.12111a - 0.546734 \\ 0.493929a^4 - 1.35348a^3 + \cdots + 0.201270a + 0.418261 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.0439681a^4 - 0.241745a^3 + \cdots - 0.314896a + 0.124002 \\ 0.0819998a^4 - 0.0403129a^3 + \cdots + 0.183306a - 0.473459 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.121431a^4 + 0.219792a^3 + \cdots + 0.119953a + 0.608135 \\ -0.224715a^4 + 0.190522a^3 + \cdots + 0.193364a - 0.749015 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.0819998a^4 - 0.0403129a^3 + \cdots + 0.183306a - 0.473459 \\ -0.495401a^4 + 0.288576a^3 + \cdots + 1.15889a + 0.146743 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.121431a^4 + 0.219792a^3 + \cdots + 0.119953a + 0.608135 \\ -0.224715a^4 + 0.190522a^3 + \cdots + 0.193364a - 0.749015 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.236323a^4 - 0.711531a^3 + \cdots + 1.22899a + 0.293826 \\ -0.521753a^4 + 1.01195a^3 + \cdots - 0.475653a - 0.738773 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{3736209}{704465}a^4 - \frac{5667821}{704465}a^3 - \frac{11426549}{704465}a^2 - \frac{1784683}{704465}a + \frac{1739879}{140893}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^5-5u^4+8u^3-3u^2-u-1$
c_2	$u^5+u^4-2u^3-u^2+u-1$
c_3	$u^5-u^4+2u^3-u^2+u-1$
c_4	$u^5-u^4-2u^3+u^2+u+1$
c_5	u^5
c_6	$u^5+3u^4+4u^3+u^2-u-1$
c_7	$u^5+u^4+2u^3+u^2+u+1$
c_8	$(u+1)^5$
c_9	$17(17u^5-32u^4+18u^3+u^2-4u+1)$
c_{10}	$17(17u^5+42u^4+43u^3+22u^2+6u+1)$
c_{11}	$(u-1)^5$
c_{12}	$u^5-3u^4+4u^3-u^2-u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^5 - 9y^4 + 32y^3 - 35y^2 - 5y - 1$
c_2, c_4	$y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1$
c_3, c_7	$y^5 + 3y^4 + 4y^3 + y^2 - y - 1$
c_5	y^5
c_6, c_{12}	$y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1$
c_8, c_{11}	$(y-1)^5$
c_9	$289(289y^5 - 412y^4 + 252y^3 - 81y^2 + 14y - 1)$
c_{10}	$289(289y^5 - 302y^4 + 205y^3 - 52y^2 - 8y - 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = 0.440339 + 0.784105I$ $b = -0.455697 - 1.200150I$	$-4.22763 + 4.40083I$	$22.3190 - 16.0614I$
$u = -1.00000$ $a = 0.440339 - 0.784105I$ $b = -0.455697 + 1.200150I$	$-4.22763 - 4.40083I$	$22.3190 + 16.0614I$
$u = -1.00000$ $a = -0.643046 + 0.524501I$ $b = 0.339110 - 0.822375I$	$1.31583 - 1.53058I$	$7.29086 + 4.54835I$
$u = -1.00000$ $a = -0.643046 - 0.524501I$ $b = 0.339110 + 0.822375I$	$1.31583 + 1.53058I$	$7.29086 - 4.54835I$
$u = -1.00000$ $a = 2.64071$ $b = -0.766826$	-0.756147	2.29580

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^5-5u^4+\cdots-u-1)(u^{71}+27u^{70}+\cdots+121u+1)$
c_2	$((u-1)^9)(u^5+u^4+\cdots+u-1)(u^{71}-11u^{70}+\cdots+17u-1)$
c_3	$u^9(u^5-u^4+\cdots+u-1)(u^{71}-2u^{70}+\cdots-3584u+512)$
c_4	$((u+1)^9)(u^5-u^4+\cdots+u+1)(u^{71}-11u^{70}+\cdots+17u-1)$
c_5	$u^5(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot(u^{71}-2u^{70}+\cdots-33184u-9248)$
c_6	$(u^5+3u^4+4u^3+u^2-u-1)$ $\cdot(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^{71}-3u^{70}+\cdots-3u+1)$
c_7	$u^9(u^5+u^4+\cdots+u+1)(u^{71}-2u^{70}+\cdots-3584u+512)$
c_8	$(u+1)^5(u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1)$ $\cdot(u^{71}+7u^{70}+\cdots+1199u+289)$
c_9	$289(17u^5-32u^4+18u^3+u^2-4u+1)$ $\cdot(u^9-5u^8+12u^7-15u^6+9u^5+u^4-4u^3+2u^2+u-1)$ $\cdot(17u^{71}+58u^{70}+\cdots-338322u-76541)$
c_{10}	$289(17u^5+42u^4+43u^3+22u^2+6u+1)$ $\cdot(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot(17u^{71}-28u^{70}+\cdots-3303678u-843836)$
c_{11}	$(u-1)^5(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{71}+7u^{70}+\cdots+1199u+289)$
c_{12}	$(u^5-3u^4+4u^3-u^2-u+1)$ $\cdot(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{71}-3u^{70}+\cdots-3u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^9(y^5-9y^4+32y^3-35y^2-5y-1)$ $\cdot(y^{71}+45y^{70}+\cdots+15729y-1)$
c_2, c_4	$((y-1)^9)(y^5-5y^4+\cdots-y-1)(y^{71}-27y^{70}+\cdots+121y-1)$
c_3, c_7	$y^9(y^5+3y^4+4y^3+y^2-y-1)$ $\cdot(y^{71}-54y^{70}+\cdots+10485760y-262144)$
c_5	$y^5(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{71}-30y^{70}+\cdots+374507008y-85525504)$
c_6, c_{12}	$(y^5-y^4+8y^3-3y^2+3y-1)$ $\cdot(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot(y^{71}+49y^{70}+\cdots+41y-1)$
c_8, c_{11}	$(y-1)^5(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{71}-63y^{70}+\cdots+1811567y-83521)$
c_9	$83521(289y^5-412y^4+252y^3-81y^2+14y-1)$ $\cdot(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(289y^{71}-11218y^{70}+\cdots+59669441588y-5858524681)$
c_{10}	$83521(289y^5-302y^4+205y^3-52y^2-8y-1)$ $\cdot(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(289y^{71}-16424y^{70}+\cdots+1192944884236y-712059194896)$