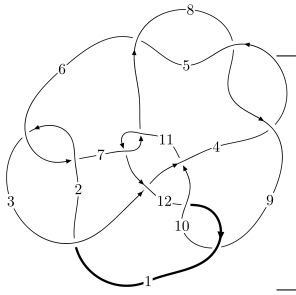
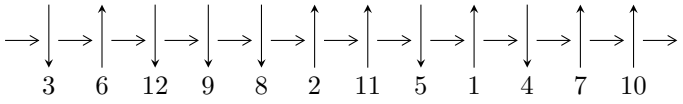
$12a_{0492}$ $(K12a_{0492})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 4.49532 \times 10^{457} u^{131} + 1.34440 \times 10^{459} u^{130} + \cdots + 7.49258 \times 10^{458} b - 7.19414 \times 10^{459}, \\ & 1.32939 \times 10^{460} u^{131} - 5.25151 \times 10^{460} u^{130} + \cdots + 5.24480 \times 10^{459} a - 8.37691 \times 10^{461}, \\ & u^{132} - 3u^{131} + \cdots - 163u + 7 \rangle \\ I_2^u = \langle & 1904483u^{33} + 10211296u^{32} + \cdots + 32131b - 1103768, \\ & 142988u^{33} + 2782382u^{32} + \cdots + 32131a + 2978401,\ u^{34} + 6u^{33} + \cdots + 6u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 166 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. $\boldsymbol{I_1^u = \langle 4.50 \times 10^{457} u^{131} + 1.34 \times 10^{459} u^{130} + \cdots + 7.49 \times 10^{458} b - 7.19 \times 10^{459},\ 1.33 \times 10^{460} u^{131} - 5.25 \times 10^{460} u^{130} + \cdots + 5.24 \times 10^{459} a - 8.38 \times 10^{461},\ u^{132} - 3u^{131} + \cdots - 163u + 7 \rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -2.53469u^{131} + 10.0128u^{130} + \cdots - 2944.38u + 159.718 \\ -0.0599970u^{131} - 1.79431u^{130} + \cdots - 93.1612u + 9.60169 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2.59468u^{131} + 8.21848u^{130} + \cdots - 3037.54u + 169.320 \\ -0.0599970u^{131} - 1.79431u^{130} + \cdots - 93.1612u + 9.60169 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2.43235u^{131} + 4.13228u^{130} + \cdots - 933.324u + 44.4441 \\ 1.61308u^{131} - 3.00750u^{130} + \cdots + 74.0594u - 6.86179 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 4.08367u^{131} - 9.26283u^{130} + \cdots + 689.628u - 30.4569 \\ -2.56390u^{131} + 5.88147u^{130} + \cdots - 255.427u + 15.1075 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -6.51879u^{131} + 19.3840u^{130} + \cdots - 5603.96u + 307.796 \\ -1.20351u^{131} + 6.16996u^{130} + \cdots - 939.632u + 43.8102 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 8.38214u^{131} - 20.0903u^{130} + \cdots + 3504.62u - 174.236 \\ -0.522846u^{131} - 0.996017u^{130} + \cdots + 146.734u - 3.59969 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -3.29886u^{131} + 11.0378u^{130} + \cdots - 3275.81u + 180.206 \\ 0.395435u^{131} - 3.87090u^{130} + \cdots + 24.9734u + 3.66305 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 7.10298u^{131} - 19.9316u^{130} + \cdots + 3764.18u - 177.090 \\ 0.709157u^{131} - 1.17970u^{130} + \cdots - 83.6983u + 6.23531 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.14347u^{131} - 7.73109u^{130} + \cdots + 1768.78u - 99.4316$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{132} + 58u^{131} + \cdots + 174793220u + 8300161$
c_2, c_6	$u^{132} + 29u^{130} + \cdots - 9092u + 2881$
c_3	$u^{132} - 3u^{131} + \cdots + 11521u + 305$
c_4, c_5, c_8	$u^{132} - 3u^{131} + \cdots - 323u + 29$
c_7, c_{11}	$u^{132} - 3u^{131} + \cdots - 1032u + 187$
c_9, c_{12}	$u^{132} + 3u^{131} + \cdots + 163u + 7$
c_{10}	$u^{132} + u^{131} + \cdots + 27596u + 6781$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{132} + 50y^{131} + \cdots + 932283187604884y + 68892672625921$
c_2, c_6	$y^{132} + 58y^{131} + \cdots + 174793220y + 8300161$
c_3	$y^{132} - 23y^{131} + \cdots - 70481111y + 93025$
c_4, c_5, c_8	$y^{132} + 131y^{131} + \cdots + 113925y + 841$
c_7, c_{11}	$y^{132} + 71y^{131} + \cdots + 1799442y + 34969$
c_9, c_{12}	$y^{132} + 67y^{131} + \cdots - 389y + 49$
c_{10}	$y^{132} - 7y^{131} + \cdots - 1094662622y + 45981961$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.370817+0.926367I$ $a=\ 1.50187-0.28588I$ $b=\ 0.38326+1.41227I$	$4.23216-3.87399I$	0
$u=-0.370817-0.926367I$ $a=\ 1.50187+0.28588I$ $b=\ 0.38326-1.41227I$	$4.23216+3.87399I$	0
$u=\ 0.344045+0.943861I$ $a=\ 2.48062+1.76373I$ $b=\ 0.10034-1.56062I$	$6.12040+5.20187I$	0
$u=\ 0.344045-0.943861I$ $a=\ 2.48062-1.76373I$ $b=\ 0.10034+1.56062I$	$6.12040-5.20187I$	0
$u=-0.962184+0.220164I$ $a=\ 0.289983-1.349370I$ $b=-0.150340+1.292800I$	$3.50596-0.99520I$	0
$u=-0.962184-0.220164I$ $a=\ 0.289983+1.349370I$ $b=-0.150340-1.292800I$	$3.50596+0.99520I$	0
$u=\ 0.416078+0.888263I$ $a=\ 1.75395+1.31569I$ $b=\ 0.22266-1.56369I$	$6.47571+5.11976I$	0
$u=\ 0.416078-0.888263I$ $a=\ 1.75395-1.31569I$ $b=\ 0.22266+1.56369I$	$6.47571-5.11976I$	0
$u=\ 0.970123+0.130982I$ $a=\ 0.555404+0.165465I$ $b=-0.743931-0.374897I$	$-1.65423-8.36082I$	0
$u=\ 0.970123-0.130982I$ $a=\ 0.555404-0.165465I$ $b=-0.743931+0.374897I$	$-1.65423+8.36082I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.974043 + 0.095068I$ $a = -0.32008 - 1.85271I$ $b = -0.15740 + 1.42347I$	$0.68924 + 3.85014I$	0
$u = 0.974043 - 0.095068I$ $a = -0.32008 + 1.85271I$ $b = -0.15740 - 1.42347I$	$0.68924 - 3.85014I$	0
$u = -0.504211 + 0.901497I$ $a = -1.67010 + 0.83876I$ $b = -0.44639 - 1.40217I$	$3.53056 - 9.07003I$	0
$u = -0.504211 - 0.901497I$ $a = -1.67010 - 0.83876I$ $b = -0.44639 + 1.40217I$	$3.53056 + 9.07003I$	0
$u = -0.959269 + 0.403263I$ $a = 0.068548 - 0.438689I$ $b = -0.192204 + 0.443065I$	$2.15875 - 1.72089I$	0
$u = -0.959269 - 0.403263I$ $a = 0.068548 + 0.438689I$ $b = -0.192204 - 0.443065I$	$2.15875 + 1.72089I$	0
$u = 0.379667 + 0.860808I$ $a = -1.89049 - 0.86787I$ $b = -0.11520 + 1.51310I$	$6.41423 - 1.14240I$	0
$u = 0.379667 - 0.860808I$ $a = -1.89049 + 0.86787I$ $b = -0.11520 - 1.51310I$	$6.41423 + 1.14240I$	0
$u = -0.311526 + 0.881637I$ $a = 3.16485 - 0.52901I$ $b = -0.051219 + 1.322640I$	$2.26858 + 4.93928I$	0
$u = -0.311526 - 0.881637I$ $a = 3.16485 + 0.52901I$ $b = -0.051219 - 1.322640I$	$2.26858 - 4.93928I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.017040 + 0.321411I$ $a = -0.07086 - 2.07323I$ $b = 0.24340 + 1.49413I$	$6.43011 - 6.51564I$	0
$u = 1.017040 - 0.321411I$ $a = -0.07086 + 2.07323I$ $b = 0.24340 - 1.49413I$	$6.43011 + 6.51564I$	0
$u = 0.046784 + 1.072330I$ $a = 0.600327 + 0.798981I$ $b = 0.457102 - 0.830634I$	$-2.14015 + 2.45626I$	0
$u = 0.046784 - 1.072330I$ $a = 0.600327 - 0.798981I$ $b = 0.457102 + 0.830634I$	$-2.14015 - 2.45626I$	0
$u = -0.466196 + 0.970697I$ $a = -0.174387 + 0.148307I$ $b = -0.956308 + 0.302071I$	$-2.06603 + 0.25233I$	0
$u = -0.466196 - 0.970697I$ $a = -0.174387 - 0.148307I$ $b = -0.956308 - 0.302071I$	$-2.06603 - 0.25233I$	0
$u = 0.210864 + 1.073280I$ $a = -0.737180 + 0.323161I$ $b = -0.492645 - 1.002100I$	$-7.09613 + 0.83999I$	0
$u = 0.210864 - 1.073280I$ $a = -0.737180 - 0.323161I$ $b = -0.492645 + 1.002100I$	$-7.09613 - 0.83999I$	0
$u = 0.532364 + 0.962045I$ $a = 1.18376 + 1.60298I$ $b = 0.330758 - 1.001060I$	$-1.53131 + 4.29764I$	0
$u = 0.532364 - 0.962045I$ $a = 1.18376 - 1.60298I$ $b = 0.330758 + 1.001060I$	$-1.53131 - 4.29764I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.266363+0.856894I$ $a=-0.73510+3.40492I$ $b=-0.11326-1.48966I$	$2.42468-7.53256I$	0
$u=-0.266363-0.856894I$ $a=-0.73510-3.40492I$ $b=-0.11326+1.48966I$	$2.42468+7.53256I$	0
$u=-0.533166+0.709917I$ $a=\ \ 0.241366-1.267940I$ $b=-0.30906+1.52943I$	$4.12541+4.86507I$	0
$u=-0.533166-0.709917I$ $a=\ \ 0.241366+1.267940I$ $b=-0.30906-1.52943I$	$4.12541-4.86507I$	0
$u=-0.420089+1.030940I$ $a=-2.34591+0.65057I$ $b=-0.004352-1.362610I$	$4.48174-1.59788I$	0
$u=-0.420089-1.030940I$ $a=-2.34591-0.65057I$ $b=-0.004352+1.362610I$	$4.48174+1.59788I$	0
$u=\ \ 0.439609+0.760044I$ $a=-1.15323-1.52672I$ $b=\ \ 0.08162+1.62896I$	$6.87032-1.52449I$	0
$u=\ \ 0.439609-0.760044I$ $a=-1.15323+1.52672I$ $b=\ \ 0.08162-1.62896I$	$6.87032+1.52449I$	0
$u=\ \ 0.314390+0.806526I$ $a=\ \ 0.77364+1.68635I$ $b=\ \ 0.01272-1.66822I$	$6.67591+4.24158I$	0
$u=\ \ 0.314390-0.806526I$ $a=\ \ 0.77364-1.68635I$ $b=\ \ 0.01272+1.66822I$	$6.67591-4.24158I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.399204 + 1.063130I$ $a = -0.0428257 + 0.0492380I$ $b = 0.899741 + 0.781640I$	$-2.27524 + 2.03511I$	0
$u = 0.399204 - 1.063130I$ $a = -0.0428257 - 0.0492380I$ $b = 0.899741 - 0.781640I$	$-2.27524 - 2.03511I$	0
$u = -0.245203 + 0.806401I$ $a = 0.048362 + 1.335930I$ $b = 0.23823 - 1.63168I$	$4.86393 + 1.11017I$	0
$u = -0.245203 - 0.806401I$ $a = 0.048362 - 1.335930I$ $b = 0.23823 + 1.63168I$	$4.86393 - 1.11017I$	0
$u = -0.268937 + 1.129230I$ $a = 0.146099 + 1.362100I$ $b = -0.230834 - 0.378040I$	$-3.85259 - 6.06823I$	0
$u = -0.268937 - 1.129230I$ $a = 0.146099 - 1.362100I$ $b = -0.230834 + 0.378040I$	$-3.85259 + 6.06823I$	0
$u = -0.339774 + 1.117450I$ $a = 0.187470 + 0.234928I$ $b = 0.875408 - 0.482875I$	$-2.41850 - 3.24410I$	0
$u = -0.339774 - 1.117450I$ $a = 0.187470 - 0.234928I$ $b = 0.875408 + 0.482875I$	$-2.41850 + 3.24410I$	0
$u = 0.811355 + 0.182204I$ $a = -0.497864 - 0.379251I$ $b = 0.677897 + 0.469186I$	$0.05251 - 3.13687I$	0
$u = 0.811355 - 0.182204I$ $a = -0.497864 + 0.379251I$ $b = 0.677897 - 0.469186I$	$0.05251 + 3.13687I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.344208 + 1.130570I$ $a = 0.233769 + 0.458826I$ $b = 0.700673 + 0.155840I$	$-4.06185 + 0.36405I$	0
$u = 0.344208 - 1.130570I$ $a = 0.233769 - 0.458826I$ $b = 0.700673 - 0.155840I$	$-4.06185 - 0.36405I$	0
$u = -0.236546 + 0.783085I$ $a = -0.843373 - 0.731008I$ $b = -0.040588 + 0.425144I$	$0.144723 - 1.347910I$	0
$u = -0.236546 - 0.783085I$ $a = -0.843373 + 0.731008I$ $b = -0.040588 - 0.425144I$	$0.144723 + 1.347910I$	0
$u = -1.165160 + 0.203134I$ $a = -0.307175 + 0.249764I$ $b = 0.379234 - 0.258204I$	$1.56141 + 2.33870I$	0
$u = -1.165160 - 0.203134I$ $a = -0.307175 - 0.249764I$ $b = 0.379234 + 0.258204I$	$1.56141 - 2.33870I$	0
$u = 0.411702 + 0.700934I$ $a = 0.423828 + 1.013190I$ $b = -0.027740 + 0.543911I$	$-5.25718 + 1.40383I$	0
$u = 0.411702 - 0.700934I$ $a = 0.423828 - 1.013190I$ $b = -0.027740 - 0.543911I$	$-5.25718 - 1.40383I$	0
$u = -0.254856 + 0.758387I$ $a = -1.71993 - 0.22808I$ $b = -0.0278006 + 0.1268810I$	$0.21514 - 1.51746I$	0
$u = -0.254856 - 0.758387I$ $a = -1.71993 + 0.22808I$ $b = -0.0278006 - 0.1268810I$	$0.21514 + 1.51746I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.412188 + 1.130090I$ $a = 0.096781 + 0.236929I$ $b = -0.894869 - 0.943707I$	$-3.72686 + 7.41483I$	0
$u = 0.412188 - 1.130090I$ $a = 0.096781 - 0.236929I$ $b = -0.894869 + 0.943707I$	$-3.72686 - 7.41483I$	0
$u = 1.175370 + 0.334323I$ $a = 0.13748 + 1.93967I$ $b = -0.28744 - 1.46407I$	$4.26312 - 12.13300I$	0
$u = 1.175370 - 0.334323I$ $a = 0.13748 - 1.93967I$ $b = -0.28744 + 1.46407I$	$4.26312 + 12.13300I$	0
$u = -0.527344 + 1.124350I$ $a = -0.646752 + 0.552732I$ $b = -0.483961 - 0.416641I$	$-0.16035 - 3.48082I$	0
$u = -0.527344 - 1.124350I$ $a = -0.646752 - 0.552732I$ $b = -0.483961 + 0.416641I$	$-0.16035 + 3.48082I$	0
$u = -1.128800 + 0.540127I$ $a = 0.13499 - 2.03439I$ $b = -0.09200 + 1.45514I$	$8.32483 - 0.51045I$	0
$u = -1.128800 - 0.540127I$ $a = 0.13499 + 2.03439I$ $b = -0.09200 - 1.45514I$	$8.32483 + 0.51045I$	0
$u = -0.244743 + 1.239620I$ $a = 0.370949 - 0.130965I$ $b = 0.760360 + 0.165226I$	$-4.29259 - 1.70900I$	0
$u = -0.244743 - 1.239620I$ $a = 0.370949 + 0.130965I$ $b = 0.760360 - 0.165226I$	$-4.29259 + 1.70900I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.348117 + 1.217520I$ $a = -0.827413 - 0.316744I$ $b = -0.724190 + 0.288497I$	$-9.15517 + 5.15283I$	0
$u = 0.348117 - 1.217520I$ $a = -0.827413 + 0.316744I$ $b = -0.724190 - 0.288497I$	$-9.15517 - 5.15283I$	0
$u = 0.868367 + 0.938437I$ $a = 0.97693 + 2.16001I$ $b = 0.008279 - 1.301660I$	$-2.19114 + 1.39042I$	0
$u = 0.868367 - 0.938437I$ $a = 0.97693 - 2.16001I$ $b = 0.008279 + 1.301660I$	$-2.19114 - 1.39042I$	0
$u = 0.602090 + 1.138050I$ $a = -0.81084 - 1.71587I$ $b = -0.338944 + 1.258290I$	$-2.58776 + 0.25553I$	0
$u = 0.602090 - 1.138050I$ $a = -0.81084 + 1.71587I$ $b = -0.338944 - 1.258290I$	$-2.58776 - 0.25553I$	0
$u = 0.509896 + 1.183450I$ $a = 0.560844 + 0.802147I$ $b = 0.895128 - 0.497014I$	$-2.94885 + 7.98550I$	0
$u = 0.509896 - 1.183450I$ $a = 0.560844 - 0.802147I$ $b = 0.895128 + 0.497014I$	$-2.94885 - 7.98550I$	0
$u = 0.242473 + 0.667232I$ $a = 2.51695 + 1.65154I$ $b = -0.065445 - 0.501593I$	$-1.09286 + 4.24065I$	0
$u = 0.242473 - 0.667232I$ $a = 2.51695 - 1.65154I$ $b = -0.065445 + 0.501593I$	$-1.09286 - 4.24065I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.287477 + 0.639928I$ $a = -1.13401 - 3.23222I$ $b = 0.06227 + 1.56276I$	$7.07292 - 2.20872I$	0
$u = 0.287477 - 0.639928I$ $a = -1.13401 + 3.23222I$ $b = 0.06227 - 1.56276I$	$7.07292 + 2.20872I$	0
$u = 0.134761 + 1.295480I$ $a = -0.112400 - 0.468219I$ $b = 0.191497 + 1.293050I$	$0.37223 - 2.81175I$	0
$u = 0.134761 - 1.295480I$ $a = -0.112400 + 0.468219I$ $b = 0.191497 - 1.293050I$	$0.37223 + 2.81175I$	0
$u = 0.647030 + 0.225620I$ $a = -0.285309 + 0.090142I$ $b = -0.455136 + 0.390042I$	$-5.02742 + 1.60710I$	0
$u = 0.647030 - 0.225620I$ $a = -0.285309 - 0.090142I$ $b = -0.455136 - 0.390042I$	$-5.02742 - 1.60710I$	0
$u = -0.635641 + 1.156710I$ $a = -0.914412 + 1.021010I$ $b = -0.416547 - 1.207240I$	$0.78836 - 4.71066I$	0
$u = -0.635641 - 1.156710I$ $a = -0.914412 - 1.021010I$ $b = -0.416547 + 1.207240I$	$0.78836 + 4.71066I$	0
$u = 0.631785 + 1.188410I$ $a = -0.200530 - 0.588653I$ $b = -0.375356 + 0.039068I$	$-7.26458 + 3.54385I$	0
$u = 0.631785 - 1.188410I$ $a = -0.200530 + 0.588653I$ $b = -0.375356 - 0.039068I$	$-7.26458 - 3.54385I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.446500 + 1.272000I$ $a = -1.49797 - 0.86717I$ $b = -0.25571 + 1.44710I$	$-3.52954 + 8.66075I$	0
$u = 0.446500 - 1.272000I$ $a = -1.49797 + 0.86717I$ $b = -0.25571 - 1.44710I$	$-3.52954 - 8.66075I$	0
$u = 0.546002 + 1.245620I$ $a = -0.361163 - 0.733779I$ $b = -0.989649 + 0.441015I$	$-5.0627 + 13.7509I$	0
$u = 0.546002 - 1.245620I$ $a = -0.361163 + 0.733779I$ $b = -0.989649 - 0.441015I$	$-5.0627 - 13.7509I$	0
$u = 0.853423 + 1.072990I$ $a = -0.83962 - 2.07885I$ $b = -0.121449 + 1.374000I$	$-2.59393 + 5.26648I$	0
$u = 0.853423 - 1.072990I$ $a = -0.83962 + 2.07885I$ $b = -0.121449 - 1.374000I$	$-2.59393 - 5.26648I$	0
$u = 0.622262 + 1.225570I$ $a = 1.38647 + 1.41342I$ $b = 0.32453 - 1.52896I$	$3.59048 + 12.41450I$	0
$u = 0.622262 - 1.225570I$ $a = 1.38647 - 1.41342I$ $b = 0.32453 + 1.52896I$	$3.59048 - 12.41450I$	0
$u = -0.556172 + 1.269430I$ $a = 0.397371 - 0.636257I$ $b = 0.684632 + 0.523584I$	$-2.00142 - 8.18530I$	0
$u = -0.556172 - 1.269430I$ $a = 0.397371 + 0.636257I$ $b = 0.684632 - 0.523584I$	$-2.00142 + 8.18530I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.310484 + 1.355700I$ $a = -0.115157 - 0.413051I$ $b = -0.746091 + 0.046900I$	$-6.63575 - 3.68967I$	0
$u = 0.310484 - 1.355700I$ $a = -0.115157 + 0.413051I$ $b = -0.746091 - 0.046900I$	$-6.63575 + 3.68967I$	0
$u = -0.350052 + 0.494480I$ $a = -1.07883 + 1.17867I$ $b = -0.846587 + 0.117901I$	$-0.70132 - 4.02934I$	0
$u = -0.350052 - 0.494480I$ $a = -1.07883 - 1.17867I$ $b = -0.846587 - 0.117901I$	$-0.70132 + 4.02934I$	0
$u = -0.705908 + 1.210450I$ $a = -1.24528 + 1.48390I$ $b = -0.19299 - 1.47343I$	$6.02818 - 6.06205I$	0
$u = -0.705908 - 1.210450I$ $a = -1.24528 - 1.48390I$ $b = -0.19299 + 1.47343I$	$6.02818 + 6.06205I$	0
$u = -0.453833 + 1.330620I$ $a = 1.085290 - 0.410245I$ $b = 0.061545 + 1.251680I$	$-1.24372 - 5.89195I$	0
$u = -0.453833 - 1.330620I$ $a = 1.085290 + 0.410245I$ $b = 0.061545 - 1.251680I$	$-1.24372 + 5.89195I$	0
$u = -1.286520 + 0.568163I$ $a = -0.25298 + 1.94885I$ $b = 0.16209 - 1.42109I$	$7.05256 + 4.45083I$	0
$u = -1.286520 - 0.568163I$ $a = -0.25298 - 1.94885I$ $b = 0.16209 + 1.42109I$	$7.05256 - 4.45083I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.002695 + 0.586507I$ $a = 1.70094 + 0.40332I$ $b = 0.893310 - 0.191618I$	$-0.101307 + 0.882084I$	0
$u = 0.002695 - 0.586507I$ $a = 1.70094 - 0.40332I$ $b = 0.893310 + 0.191618I$	$-0.101307 - 0.882084I$	0
$u = -0.466730 + 0.327581I$ $a = -0.83263 - 2.51334I$ $b = 0.07787 + 1.48106I$	$6.40321 - 2.07101I$	$7.59070 + 4.24172I$
$u = -0.466730 - 0.327581I$ $a = -0.83263 + 2.51334I$ $b = 0.07787 - 1.48106I$	$6.40321 + 2.07101I$	$7.59070 - 4.24172I$
$u = 0.45072 + 1.36256I$ $a = 0.310364 + 0.741127I$ $b = -0.122916 - 1.257050I$	$-3.38920 + 1.62851I$	0
$u = 0.45072 - 1.36256I$ $a = 0.310364 - 0.741127I$ $b = -0.122916 + 1.257050I$	$-3.38920 - 1.62851I$	0
$u = -0.53433 + 1.33818I$ $a = 0.730601 - 1.048370I$ $b = 0.337975 + 1.329780I$	$0.34351 - 5.68135I$	0
$u = -0.53433 - 1.33818I$ $a = 0.730601 + 1.048370I$ $b = 0.337975 - 1.329780I$	$0.34351 + 5.68135I$	0
$u = 0.67579 + 1.27518I$ $a = -1.20108 - 1.47064I$ $b = -0.37030 + 1.52551I$	$1.2518 + 18.6552I$	0
$u = 0.67579 - 1.27518I$ $a = -1.20108 + 1.47064I$ $b = -0.37030 - 1.52551I$	$1.2518 - 18.6552I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.75136+1.27192I$ $a=\ \ 1.04383-1.58428I$ $b=\ \ 0.25222+1.50413I$	$4.54428-11.64450I$	0
$u=-0.75136-1.27192I$ $a=\ \ 1.04383+1.58428I$ $b=\ \ 0.25222-1.50413I$	$4.54428+11.64450I$	0
$u=-1.52281+0.21917I$ $a=-0.09966+1.67154I$ $b=\ \ 0.060516-1.270250I$	$4.72695-1.13928I$	0
$u=-1.52281-0.21917I$ $a=-0.09966-1.67154I$ $b=\ \ 0.060516+1.270250I$	$4.72695+1.13928I$	0
$u=-0.00203+1.56629I$ $a=-0.043704+0.732008I$ $b=-0.235183-1.216960I$	$-3.13224-7.24941I$	0
$u=-0.00203-1.56629I$ $a=-0.043704-0.732008I$ $b=-0.235183+1.216960I$	$-3.13224+7.24941I$	0
$u=\ \ 0.147871+0.246599I$ $a=-1.67452-0.95756I$ $b=\ \ 0.296245+0.445939I$	$-0.004818-1.052880I$	$0.23128+5.60614I$
$u=\ \ 0.147871-0.246599I$ $a=-1.67452+0.95756I$ $b=\ \ 0.296245-0.445939I$	$-0.004818+1.052880I$	$0.23128-5.60614I$
$u=\ \ 0.224593+0.080422I$ $a=-3.34387-4.39417I$ $b=-0.595058+0.464601I$	$-0.92749-4.04590I$	$1.93954+2.79306I$
$u=\ \ 0.224593-0.080422I$ $a=-3.34387+4.39417I$ $b=-0.595058-0.464601I$	$-0.92749+4.04590I$	$1.93954-2.79306I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.219187 + 0.050600I$		
$a = -1.43415 - 3.66365I$	$0.084207 - 1.025790I$	$0.33492 + 2.06199I$
$b = \quad 0.497576 + 0.381384I$		
$u = \quad 0.219187 - 0.050600I$		
$a = -1.43415 + 3.66365I$	$0.084207 + 1.025790I$	$0.33492 - 2.06199I$
$b = \quad 0.497576 - 0.381384I$		

II. $\boldsymbol{I_2^u = \langle 1.90\times 10^6 u^{33} + 1.02\times 10^7 u^{32} + \cdots + 3.21\times 10^4 b - 1.10\times 10^6,\ 1.43\times 10^5 u^{33} + 2.78\times 10^6 u^{32} + \cdots + 3.21\times 10^4 a + 2.98\times 10^6,\ u^{34} + 6u^{33} + \cdots + 6u + 1\rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -4.45016u^{33} - 86.5949u^{32} + \cdots - 408.274u - 92.6956 \\ -59.2724u^{33} - 317.802u^{32} + \cdots + 76.0232u + 34.3521 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -63.7226u^{33} - 404.397u^{32} + \cdots - 332.250u - 58.3434 \\ -59.2724u^{33} - 317.802u^{32} + \cdots + 76.0232u + 34.3521 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -178.405u^{33} - 1011.99u^{32} + \cdots - 601.234u - 55.9930 \\ 106.867u^{33} + 668.485u^{32} + \cdots + 816.439u + 116.428 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 130.490u^{33} + 820.328u^{32} + \cdots + 1022.76u + 153.992 \\ -85.0449u^{33} - 598.534u^{32} + \cdots - 1076.26u - 167.305 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -17.3658u^{33} - 62.2334u^{32} + \cdots + 288.340u + 67.6224 \\ 41.4639u^{33} + 141.885u^{32} + \cdots - 699.710u - 144.941 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 136.592u^{33} + 840.946u^{32} + \cdots + 810.642u + 122.982 \\ -15.8130u^{33} - 254.092u^{32} + \cdots - 1398.11u - 251.276 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -23.6342u^{33} - 172.767u^{32} + \cdots - 283.340u - 58.6224 \\ -74.3360u^{33} - 409.846u^{32} + \cdots + 13.8024u + 25.7312 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 46.9395u^{33} + 349.553u^{32} + \cdots + 974.208u + 170.196 \\ -25.8721u^{33} - 225.961u^{32} + \cdots - 607.908u - 110.209 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{6008925}{32131}u^{33} + \frac{27961822}{32131}u^{32} + \cdots - \frac{49690749}{32131}u - \frac{9989565}{32131}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{34} - 17u^{33} + \cdots - 19u + 1$
c_2	$u^{34} - 3u^{33} + \cdots - u + 1$
c_3	$u^{34} + 6u^{33} + \cdots + 6u + 1$
c_4, c_5	$u^{34} - 2u^{33} + \cdots - 4u + 1$
c_6	$u^{34} + 3u^{33} + \cdots + u + 1$
c_7	$u^{34} - 2u^{33} + \cdots - u + 1$
c_8	$u^{34} + 2u^{33} + \cdots + 4u + 1$
c_9	$u^{34} + 6u^{33} + \cdots + 6u + 1$
c_{10}	$u^{34} - 8u^{31} + \cdots - 9u + 1$
c_{11}	$u^{34} + 2u^{33} + \cdots + u + 1$
c_{12}	$u^{34} - 6u^{33} + \cdots - 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{34} + 17y^{33} + \cdots + 11y + 1$
c_2, c_6	$y^{34} + 17y^{33} + \cdots + 19y + 1$
c_3	$y^{34} - 4y^{33} + \cdots + 12y + 1$
c_4, c_5, c_8	$y^{34} + 38y^{33} + \cdots + 24y + 1$
c_7, c_{11}	$y^{34} + 22y^{33} + \cdots + 21y + 1$
c_9, c_{12}	$y^{34} + 14y^{33} + \cdots + 22y + 1$
c_{10}	$y^{34} - 52y^{31} + \cdots + 65y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.305113+0.948801I$ $a=-2.13285+1.48214I$ $b=-0.15018-1.60015I$	$5.81660-4.91386I$	$-7.61106-1.27838I$
$u=-0.305113-0.948801I$ $a=-2.13285-1.48214I$ $b=-0.15018+1.60015I$	$5.81660+4.91386I$	$-7.61106+1.27838I$
$u=-0.338986+0.975548I$ $a=-0.171310-0.076935I$ $b=-0.815884+0.411911I$	$-1.41372-0.80336I$	$-0.34450+1.58550I$
$u=-0.338986-0.975548I$ $a=-0.171310+0.076935I$ $b=-0.815884-0.411911I$	$-1.41372+0.80336I$	$-0.34450-1.58550I$
$u=-1.032140+0.062759I$ $a=\ 0.281610+0.565689I$ $b=-0.133826-0.226933I$	$1.58148-1.91347I$	$-3.86448-2.86106I$
$u=-1.032140-0.062759I$ $a=\ 0.281610-0.565689I$ $b=-0.133826+0.226933I$	$1.58148+1.91347I$	$-3.86448+2.86106I$
$u=\ 0.456014+0.806044I$ $a=\ 0.133868+0.813453I$ $b=\ 0.301341+0.661804I$	$-5.11226+0.71628I$	$-2.57750+4.24171I$
$u=\ 0.456014-0.806044I$ $a=\ 0.133868-0.813453I$ $b=\ 0.301341-0.661804I$	$-5.11226-0.71628I$	$-2.57750-4.24171I$
$u=-0.199117+0.816736I$ $a=-1.52929+0.09902I$ $b=-0.715288-0.052872I$	$-0.60958-1.63182I$	$-4.87414+4.20691I$
$u=-0.199117-0.816736I$ $a=-1.52929-0.09902I$ $b=-0.715288+0.052872I$	$-0.60958+1.63182I$	$-4.87414-4.20691I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.458382 + 1.102250I$ $a = -0.322166 + 0.063076I$ $b = -0.142231 - 0.652634I$	$-6.25539 + 3.20448I$	$-3.06950 - 3.95856I$
$u = 0.458382 - 1.102250I$ $a = -0.322166 - 0.063076I$ $b = -0.142231 + 0.652634I$	$-6.25539 - 3.20448I$	$-3.06950 + 3.95856I$
$u = -0.244087 + 0.758464I$ $a = 1.34246 - 2.02313I$ $b = -0.06167 + 1.62778I$	$6.55190 + 2.30412I$	$-4.70346 - 4.62528I$
$u = -0.244087 - 0.758464I$ $a = 1.34246 + 2.02313I$ $b = -0.06167 - 1.62778I$	$6.55190 - 2.30412I$	$-4.70346 + 4.62528I$
$u = -0.771498 + 0.134185I$ $a = 0.51013 - 2.63421I$ $b = -0.05480 + 1.49953I$	$7.63061 + 2.64374I$	$5.24927 - 2.78778I$
$u = -0.771498 - 0.134185I$ $a = 0.51013 + 2.63421I$ $b = -0.05480 - 1.49953I$	$7.63061 - 2.64374I$	$5.24927 + 2.78778I$
$u = 0.841191 + 0.879565I$ $a = 0.72369 + 2.13001I$ $b = 0.143152 - 1.192720I$	$-3.11346 + 2.35095I$	$-4.07368 - 3.72454I$
$u = 0.841191 - 0.879565I$ $a = 0.72369 - 2.13001I$ $b = 0.143152 + 1.192720I$	$-3.11346 - 2.35095I$	$-4.07368 + 3.72454I$
$u = -0.248605 + 1.206960I$ $a = -0.130990 + 0.769520I$ $b = 0.406791 - 0.573632I$	$-3.95291 - 4.99961I$	$-5.58621 + 0.I$
$u = -0.248605 - 1.206960I$ $a = -0.130990 - 0.769520I$ $b = 0.406791 + 0.573632I$	$-3.95291 + 4.99961I$	$-5.58621 + 0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.004352+0.746837I$ $a=2.39136+0.71354I$ $b=0.542656+0.300152I$	$-1.70557+3.93746I$	$-9.02486-1.52225I$
$u=-0.004352-0.746837I$ $a=2.39136-0.71354I$ $b=0.542656-0.300152I$	$-1.70557-3.93746I$	$-9.02486+1.52225I$
$u=0.134530+0.644552I$ $a=2.49152+3.01641I$ $b=0.18421-1.44263I$	$2.71179+6.62421I$	$0.42958-3.80297I$
$u=0.134530-0.644552I$ $a=2.49152-3.01641I$ $b=0.18421+1.44263I$	$2.71179-6.62421I$	$0.42958+3.80297I$
$u=-0.605513+1.197300I$ $a=-0.777958+0.995958I$ $b=-0.385151-1.232150I$	$1.39357-5.24505I$	0
$u=-0.605513-1.197300I$ $a=-0.777958-0.995958I$ $b=-0.385151+1.232150I$	$1.39357+5.24505I$	0
$u=0.741390+1.195020I$ $a=-0.96542-1.49515I$ $b=-0.081217+1.201990I$	$-4.17683+4.05681I$	0
$u=0.741390-1.195020I$ $a=-0.96542+1.49515I$ $b=-0.081217-1.201990I$	$-4.17683-4.05681I$	0
$u=-0.35335+1.39959I$ $a=0.619491-0.319711I$ $b=0.199313+1.259680I$	$-1.35608-7.23948I$	0
$u=-0.35335-1.39959I$ $a=0.619491+0.319711I$ $b=0.199313-1.259680I$	$-1.35608+7.23948I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.072376+0.543867I$ $a=-1.099020-0.753940I$ $b=-0.19145+1.56025I$	$5.14892+1.81053I$	$1.75848-3.89471I$
$u=-0.072376-0.543867I$ $a=-1.099020+0.753940I$ $b=-0.19145-1.56025I$	$5.14892-1.81053I$	$1.75848+3.89471I$
$u=-1.45638+0.20016I$ $a=\ \ 0.13486-1.55868I$ $b=-0.045750+1.276600I$	$5.08562-1.27399I$	0
$u=-1.45638-0.20016I$ $a=\ \ 0.13486+1.55868I$ $b=-0.045750-1.276600I$	$5.08562+1.27399I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{34}-17u^{33}+\cdots-19u+1)$ $\cdot(u^{132}+58u^{131}+\cdots+174793220u+8300161)$
c_2	$(u^{34}-3u^{33}+\cdots-u+1)(u^{132}+29u^{130}+\cdots-9092u+2881)$
c_3	$(u^{34}+6u^{33}+\cdots+6u+1)(u^{132}-3u^{131}+\cdots+11521u+305)$
c_4, c_5	$(u^{34}-2u^{33}+\cdots-4u+1)(u^{132}-3u^{131}+\cdots-323u+29)$
c_6	$(u^{34}+3u^{33}+\cdots+u+1)(u^{132}+29u^{130}+\cdots-9092u+2881)$
c_7	$(u^{34}-2u^{33}+\cdots-u+1)(u^{132}-3u^{131}+\cdots-1032u+187)$
c_8	$(u^{34}+2u^{33}+\cdots+4u+1)(u^{132}-3u^{131}+\cdots-323u+29)$
c_9	$(u^{34}+6u^{33}+\cdots+6u+1)(u^{132}+3u^{131}+\cdots+163u+7)$
c_{10}	$(u^{34}-8u^{31}+\cdots-9u+1)(u^{132}+u^{131}+\cdots+27596u+6781)$
c_{11}	$(u^{34}+2u^{33}+\cdots+u+1)(u^{132}-3u^{131}+\cdots-1032u+187)$
c_{12}	$(u^{34}-6u^{33}+\cdots-6u+1)(u^{132}+3u^{131}+\cdots+163u+7)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{34}+17y^{33}+\cdots+11y+1)$ $\cdot(y^{132}+50y^{131}+\cdots+932283187604884y+68892672625921)$
c_2, c_6	$(y^{34}+17y^{33}+\cdots+19y+1)$ $\cdot(y^{132}+58y^{131}+\cdots+174793220y+8300161)$
c_3	$(y^{34}-4y^{33}+\cdots+12y+1)$ $\cdot(y^{132}-23y^{131}+\cdots-70481111y+93025)$
c_4, c_5, c_8	$(y^{34}+38y^{33}+\cdots+24y+1)(y^{132}+131y^{131}+\cdots+113925y+841)$
c_7, c_{11}	$(y^{34}+22y^{33}+\cdots+21y+1)$ $\cdot(y^{132}+71y^{131}+\cdots+1799442y+34969)$
c_9, c_{12}	$(y^{34}+14y^{33}+\cdots+22y+1)(y^{132}+67y^{131}+\cdots-389y+49)$
c_{10}	$(y^{34}-52y^{31}+\cdots+65y+1)$ $\cdot(y^{132}-7y^{131}+\cdots-1094662622y+45981961)$