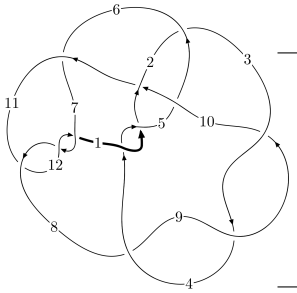
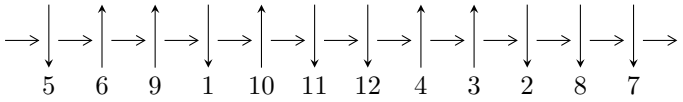
$12a_{1241}$ $(K12a_{1241})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 5.62020 \times 10^{506} u^{97} + 3.30268 \times 10^{507} u^{96} + \cdots + 1.26259 \times 10^{508} b - 1.88289 \times 10^{510}, \\ & 1.51364 \times 10^{508} u^{97} + 4.93052 \times 10^{508} u^{96} + \cdots + 3.04411 \times 10^{511} a - 6.63987 \times 10^{513}, \\ & u^{98} + 7u^{97} + \cdots + 6163u + 2411 \rangle \\ I_2^u = \langle & -35958023u^{20} - 5871878u^{19} + \cdots + 82788619b + 51534009, \\ & 28948786u^{20} - 9908114u^{19} + \cdots + 82788619a + 47650307,\ u^{21} + 3u^{19} + \cdots + 4u^3 - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 119 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. $\boldsymbol{I_1^u = \langle 5.62 \times 10^{506} u^{97} + 3.30 \times 10^{507} u^{96} + \cdots + 1.26 \times 10^{508} b - 1.88 \times 10^{510},\ 1.51 \times 10^{508} u^{97} + 4.93 \times 10^{508} u^{96} + \cdots + 3.04 \times 10^{511} a - 6.64 \times 10^{513},\ u^{98} + 7u^{97} + \cdots + 6163u + 2411 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.000497238u^{97} - 0.00161969u^{96} + \cdots + 444.575u + 218.122 \\ -0.0445132u^{97} - 0.261579u^{96} + \cdots + 164.459u + 149.129 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0435860u^{97} + 0.269441u^{96} + \cdots + 269.846u + 64.5064 \\ -0.0606907u^{97} - 0.356223u^{96} + \cdots + 289.418u + 239.593 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.230430u^{97} + 1.78272u^{96} + \cdots + 3320.78u + 1062.60 \\ -0.0866751u^{97} - 0.662088u^{96} + \cdots - 1338.01u - 353.286 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.299926u^{97} + 2.27131u^{96} + \cdots + 3812.28u + 1215.95 \\ -0.144750u^{97} - 1.03754u^{96} + \cdots - 1552.10u - 316.827 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.142659u^{97} - 1.24303u^{96} + \cdots - 3628.12u - 1358.82 \\ 0.0981813u^{97} + 0.780441u^{96} + \cdots + 1918.65u + 630.422 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0440160u^{97} + 0.259960u^{96} + \cdots + 280.116u + 68.9932 \\ -0.0445132u^{97} - 0.261579u^{96} + \cdots + 164.459u + 149.129 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.163505u^{97} + 0.986985u^{96} + \cdots - 1062.50u - 885.931 \\ -0.0320956u^{97} - 0.211873u^{96} + \cdots + 194.491u + 143.704 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0452535u^{97} - 0.318641u^{96} + \cdots - 510.276u - 346.848 \\ 0.0816803u^{97} + 0.517141u^{96} + \cdots + 179.363u - 83.0401 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0571524u^{97} + 0.334182u^{96} + \cdots + 137.694u - 213.754 \\ -0.0435898u^{97} - 0.259607u^{96} + \cdots + 177.399u + 261.550 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.161576u^{97} - 1.15515u^{96} + \cdots - 1184.37u - 255.285$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{98} - 2u^{97} + \cdots + 454u + 52$
c_2	$u^{98} - 7u^{97} + \cdots - 6163u + 2411$
c_3, c_8, c_9	$u^{98} + u^{97} + \cdots - 625u + 77$
c_5	$u^{98} + 3u^{97} + \cdots + 18901u + 4059$
c_6	$u^{98} - 30u^{96} + \cdots + 455u + 97$
c_7, c_{11}, c_{12}	$u^{98} + 42u^{96} + \cdots + 17u + 1$
c_{10}	$u^{98} + 5u^{97} + \cdots + 7783u + 1015$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{98} - 86y^{97} + \cdots + 334372y + 2704$
c_2	$y^{98} + 29y^{97} + \cdots + 216614209y + 5812921$
c_3, c_8, c_9	$y^{98} + 107y^{97} + \cdots + 162543y + 5929$
c_5	$y^{98} + 33y^{97} + \cdots + 550117295y + 16475481$
c_6	$y^{98} - 60y^{97} + \cdots + 4415607y + 9409$
c_7, c_{11}, c_{12}	$y^{98} + 84y^{97} + \cdots + 511y + 1$
c_{10}	$y^{98} - 23y^{97} + \cdots - 47629779y + 1030225$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.253022 + 0.971744I$ $a = 1.228300 - 0.565343I$ $b = 0.22606 + 1.48582I$	$-4.47832 + 4.71335I$	0
$u = 0.253022 - 0.971744I$ $a = 1.228300 + 0.565343I$ $b = 0.22606 - 1.48582I$	$-4.47832 - 4.71335I$	0
$u = -0.361168 + 0.912422I$ $a = -0.938996 - 0.090557I$ $b = -1.102380 - 0.355055I$	$-1.31097 + 1.94718I$	0
$u = -0.361168 - 0.912422I$ $a = -0.938996 + 0.090557I$ $b = -1.102380 + 0.355055I$	$-1.31097 - 1.94718I$	0
$u = -0.953890 + 0.418609I$ $a = -0.897666 + 0.239337I$ $b = -0.676448 + 0.223462I$	$6.31069 - 0.36260I$	0
$u = -0.953890 - 0.418609I$ $a = -0.897666 - 0.239337I$ $b = -0.676448 - 0.223462I$	$6.31069 + 0.36260I$	0
$u = -0.086926 + 1.046640I$ $a = -0.855169 - 0.016414I$ $b = -0.41197 + 1.62733I$	$-7.82875 - 7.69575I$	0
$u = -0.086926 - 1.046640I$ $a = -0.855169 + 0.016414I$ $b = -0.41197 - 1.62733I$	$-7.82875 + 7.69575I$	0
$u = 0.732080 + 0.574872I$ $a = 1.35164 + 0.54134I$ $b = 0.527080 + 0.217054I$	$4.60166 + 4.95582I$	0
$u = 0.732080 - 0.574872I$ $a = 1.35164 - 0.54134I$ $b = 0.527080 - 0.217054I$	$4.60166 - 4.95582I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.151039+0.912026I$ $a=\ 0.965108-0.073747I$ $b=\ 0.34093-1.67994I$	$-12.49310-3.58757I$	0
$u=-0.151039-0.912026I$ $a=\ 0.965108+0.073747I$ $b=\ 0.34093+1.67994I$	$-12.49310+3.58757I$	0
$u=\ 0.719249+0.578215I$ $a=\ 0.510756+0.568805I$ $b=\ 0.319764-0.549263I$	$3.90783+4.05242I$	0
$u=\ 0.719249-0.578215I$ $a=\ 0.510756-0.568805I$ $b=\ 0.319764+0.549263I$	$3.90783-4.05242I$	0
$u=\ 0.011715+0.911513I$ $a=\ 0.751748+0.335932I$ $b=\ 0.598604-0.265419I$	$1.37687-1.50928I$	0
$u=\ 0.011715-0.911513I$ $a=\ 0.751748-0.335932I$ $b=\ 0.598604+0.265419I$	$1.37687+1.50928I$	0
$u=-0.411815+0.812519I$ $a=\ 1.030430+0.031946I$ $b=\ 1.076620+0.516415I$	$-5.12526-1.90924I$	0
$u=-0.411815-0.812519I$ $a=\ 1.030430-0.031946I$ $b=\ 1.076620-0.516415I$	$-5.12526+1.90924I$	0
$u=-0.555460+0.700572I$ $a=-2.65690+0.21983I$ $b=-0.02164+1.53493I$	$-9.53244-4.05758I$	0
$u=-0.555460-0.700572I$ $a=-2.65690-0.21983I$ $b=-0.02164-1.53493I$	$-9.53244+4.05758I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.477299+0.724656I$ $a=-1.101160+0.068783I$ $b=-1.080780-0.663592I$	$-1.04793-5.79172I$	0
$u=-0.477299-0.724656I$ $a=-1.101160-0.068783I$ $b=-1.080780+0.663592I$	$-1.04793+5.79172I$	0
$u=0.234186+0.806850I$ $a=-1.68852+0.70590I$ $b=-0.096508-0.608610I$	$-2.46525+3.67993I$	0
$u=0.234186-0.806850I$ $a=-1.68852-0.70590I$ $b=-0.096508+0.608610I$	$-2.46525-3.67993I$	0
$u=0.293389+1.155010I$ $a=-1.051790+0.520303I$ $b=-0.091467-0.999276I$	$-2.63731+3.64297I$	0
$u=0.293389-1.155010I$ $a=-1.051790-0.520303I$ $b=-0.091467+0.999276I$	$-2.63731-3.64297I$	0
$u=-0.511481+0.622118I$ $a=0.941842+0.089696I$ $b=0.476021-0.247877I$	$0.762154-1.099890I$	0
$u=-0.511481-0.622118I$ $a=0.941842-0.089696I$ $b=0.476021+0.247877I$	$0.762154+1.099890I$	0
$u=0.140471+0.791468I$ $a=-1.43894+0.87695I$ $b=-0.10479-1.50633I$	$-7.69184+0.59503I$	0
$u=0.140471-0.791468I$ $a=-1.43894-0.87695I$ $b=-0.10479+1.50633I$	$-7.69184-0.59503I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.968387+0.758823I$ $a=-0.452375+0.502174I$ $b=-0.07400+1.60154I$	$-9.10905-0.25018I$	0
$u=-0.968387-0.758823I$ $a=-0.452375-0.502174I$ $b=-0.07400-1.60154I$	$-9.10905+0.25018I$	0
$u=-0.582839+0.494454I$ $a=0.59706+1.83322I$ $b=0.513909-0.332393I$	$0.10343-5.42157I$	$0.+9.49655I$
$u=-0.582839-0.494454I$ $a=0.59706-1.83322I$ $b=0.513909+0.332393I$	$0.10343+5.42157I$	$0.-9.49655I$
$u=0.642839+1.056130I$ $a=-1.109050+0.101431I$ $b=-0.664693-0.827070I$	$-3.13702+3.92759I$	0
$u=0.642839-1.056130I$ $a=-1.109050-0.101431I$ $b=-0.664693+0.827070I$	$-3.13702-3.92759I$	0
$u=-0.181205+1.275240I$ $a=0.589758+0.246208I$ $b=0.183271-0.218860I$	$1.51179-1.16300I$	0
$u=-0.181205-1.275240I$ $a=0.589758-0.246208I$ $b=0.183271+0.218860I$	$1.51179+1.16300I$	0
$u=-0.240973+0.664061I$ $a=-1.207900+0.353763I$ $b=-0.23164+1.74547I$	$-9.48090+0.46429I$	$-9.33722-0.88532I$
$u=-0.240973-0.664061I$ $a=-1.207900-0.353763I$ $b=-0.23164-1.74547I$	$-9.48090-0.46429I$	$-9.33722+0.88532I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.676028 + 1.106150I$ $a = 1.013210 - 0.107878I$ $b = 0.176915 + 1.347300I$	$-4.23006 + 3.45286I$	0
$u = 0.676028 - 1.106150I$ $a = 1.013210 + 0.107878I$ $b = 0.176915 - 1.347300I$	$-4.23006 - 3.45286I$	0
$u = 0.386745 + 0.579689I$ $a = -0.643360 - 0.550780I$ $b = -0.363776 + 0.467216I$	$-1.20735 + 1.03467I$	$-4.78917 + 0.I$
$u = 0.386745 - 0.579689I$ $a = -0.643360 + 0.550780I$ $b = -0.363776 - 0.467216I$	$-1.20735 - 1.03467I$	$-4.78917 + 0.I$
$u = 0.787509 + 1.051300I$ $a = 1.034020 + 0.011995I$ $b = 0.842973 + 0.733535I$	$-5.98704 + 8.16987I$	0
$u = 0.787509 - 1.051300I$ $a = 1.034020 - 0.011995I$ $b = 0.842973 - 0.733535I$	$-5.98704 - 8.16987I$	0
$u = -1.070030 + 0.777663I$ $a = 1.23144 - 0.75638I$ $b = 0.12152 - 1.46773I$	$-1.04050 - 7.00303I$	0
$u = -1.070030 - 0.777663I$ $a = 1.23144 + 0.75638I$ $b = 0.12152 + 1.46773I$	$-1.04050 + 7.00303I$	0
$u = 0.012621 + 0.673624I$ $a = 1.43960 - 1.30487I$ $b = 0.00251 + 1.51873I$	$-3.19203 - 3.60931I$	$-3.60074 + 2.59640I$
$u = 0.012621 - 0.673624I$ $a = 1.43960 + 1.30487I$ $b = 0.00251 - 1.51873I$	$-3.19203 + 3.60931I$	$-3.60074 - 2.59640I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.669031 + 0.057218I$ $a = -0.882681 + 0.590887I$ $b = -0.355258 - 0.829069I$	$4.45227 + 3.37263I$	$2.57498 - 4.45245I$
$u = \ 0.669031 - 0.057218I$ $a = -0.882681 - 0.590887I$ $b = -0.355258 + 0.829069I$	$4.45227 - 3.37263I$	$2.57498 + 4.45245I$
$u = \ 0.070567 + 0.663650I$ $a = -0.965466 - 0.774419I$ $b = -0.401206 - 0.489636I$	$-1.70244 - 1.41603I$	$-3.82463 - 4.35155I$
$u = \ 0.070567 - 0.663650I$ $a = -0.965466 + 0.774419I$ $b = -0.401206 + 0.489636I$	$-1.70244 + 1.41603I$	$-3.82463 + 4.35155I$
$u = -0.274034 + 0.597207I$ $a = \ 0.58410 - 2.43839I$ $b = -0.306884 + 0.424273I$	$-4.73792 - 0.91594I$	$-14.1775 + 7.1751I$
$u = -0.274034 - 0.597207I$ $a = \ 0.58410 + 2.43839I$ $b = -0.306884 - 0.424273I$	$-4.73792 + 0.91594I$	$-14.1775 - 7.1751I$
$u = -0.782678 + 1.100260I$ $a = -0.674478 - 0.011090I$ $b = -0.426595 + 0.459532I$	$-1.08514 - 3.89925I$	0
$u = -0.782678 - 1.100260I$ $a = -0.674478 + 0.011090I$ $b = -0.426595 - 0.459532I$	$-1.08514 + 3.89925I$	0
$u = \ 0.872848 + 1.035340I$ $a = -0.992791 - 0.070139I$ $b = -0.933028 - 0.664235I$	$-1.25539 + 12.36790I$	0
$u = \ 0.872848 - 1.035340I$ $a = -0.992791 + 0.070139I$ $b = -0.933028 + 0.664235I$	$-1.25539 - 12.36790I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.179029+0.608657I$ $a=3.54093+2.48800I$ $b=-0.06719-1.51489I$	$-11.28210+2.12682I$	$-19.6517-0.8079I$
$u=-0.179029-0.608657I$ $a=3.54093-2.48800I$ $b=-0.06719+1.51489I$	$-11.28210-2.12682I$	$-19.6517+0.8079I$
$u=0.089926+0.598124I$ $a=-0.84393-3.85606I$ $b=0.14492+1.47331I$	$-5.84333+7.70252I$	$-9.7981-11.2309I$
$u=0.089926-0.598124I$ $a=-0.84393+3.85606I$ $b=0.14492-1.47331I$	$-5.84333-7.70252I$	$-9.7981+11.2309I$
$u=1.271310+0.611048I$ $a=0.001508-0.596122I$ $b=0.359510-0.682661I$	$-1.01263+2.26697I$	0
$u=1.271310-0.611048I$ $a=0.001508+0.596122I$ $b=0.359510+0.682661I$	$-1.01263-2.26697I$	0
$u=1.090940+0.897595I$ $a=0.118660+0.563108I$ $b=-0.330387+0.507102I$	$-4.98910-1.42208I$	0
$u=1.090940-0.897595I$ $a=0.118660-0.563108I$ $b=-0.330387-0.507102I$	$-4.98910+1.42208I$	0
$u=1.15829+0.86848I$ $a=-0.794019-0.292135I$ $b=-0.259473-1.347090I$	$1.36352+3.73435I$	0
$u=1.15829-0.86848I$ $a=-0.794019+0.292135I$ $b=-0.259473+1.347090I$	$1.36352-3.73435I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.509418 + 0.015335I$ $a = 0.685640 - 0.008444I$ $b = 0.110118 - 0.780072I$	$-0.661179 - 1.248990I$	$-2.42504 + 5.87685I$
$u = 0.509418 - 0.015335I$ $a = 0.685640 + 0.008444I$ $b = 0.110118 + 0.780072I$	$-0.661179 + 1.248990I$	$-2.42504 - 5.87685I$
$u = -1.02084 + 1.09369I$ $a = 0.652315 - 0.066750I$ $b = 0.521275 - 0.555138I$	$3.74698 - 7.24813I$	0
$u = -1.02084 - 1.09369I$ $a = 0.652315 + 0.066750I$ $b = 0.521275 + 0.555138I$	$3.74698 + 7.24813I$	0
$u = -0.88831 + 1.22196I$ $a = -1.164150 + 0.057315I$ $b = -0.20453 + 1.60891I$	$-11.15240 - 7.16359I$	0
$u = -0.88831 - 1.22196I$ $a = -1.164150 - 0.057315I$ $b = -0.20453 - 1.60891I$	$-11.15240 + 7.16359I$	0
$u = 0.98697 + 1.19362I$ $a = -0.193337 - 0.484475I$ $b = 0.352727 - 0.338516I$	$-1.04985 - 5.14578I$	0
$u = 0.98697 - 1.19362I$ $a = -0.193337 + 0.484475I$ $b = 0.352727 + 0.338516I$	$-1.04985 + 5.14578I$	0
$u = -0.76861 + 1.42402I$ $a = 0.487964 - 0.188076I$ $b = 0.13072 - 1.43122I$	$-2.88616 - 0.46954I$	0
$u = -0.76861 - 1.42402I$ $a = 0.487964 + 0.188076I$ $b = 0.13072 + 1.43122I$	$-2.88616 + 0.46954I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.96362+1.33021I$ $a=1.024180-0.042463I$ $b=0.26543-1.61976I$	$-13.7565-12.2933I$	0
$u=-0.96362-1.33021I$ $a=1.024180+0.042463I$ $b=0.26543+1.61976I$	$-13.7565+12.2933I$	0
$u=-0.211165+0.255277I$ $a=2.83520-0.04950I$ $b=0.551289+0.974623I$	$2.41153-1.09819I$	$-0.23981+2.82127I$
$u=-0.211165-0.255277I$ $a=2.83520+0.04950I$ $b=0.551289-0.974623I$	$2.41153+1.09819I$	$-0.23981-2.82127I$
$u=-1.03724+1.37921I$ $a=-0.946320+0.059889I$ $b=-0.31087+1.60890I$	$-8.6855-16.9635I$	0
$u=-1.03724-1.37921I$ $a=-0.946320-0.059889I$ $b=-0.31087-1.60890I$	$-8.6855+16.9635I$	0
$u=0.79524+1.66544I$ $a=0.652174-0.180397I$ $b=0.04078+1.48538I$	$-4.40204+1.83496I$	0
$u=0.79524-1.66544I$ $a=0.652174+0.180397I$ $b=0.04078-1.48538I$	$-4.40204-1.83496I$	0
$u=1.00328+1.64054I$ $a=-0.628453+0.097365I$ $b=-0.11468-1.52643I$	$-7.75971+5.78094I$	0
$u=1.00328-1.64054I$ $a=-0.628453-0.097365I$ $b=-0.11468+1.52643I$	$-7.75971-5.78094I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.16084 + 1.63108I$ $a = 0.598586 - 0.046585I$ $b = 0.16721 + 1.55416I$	$-3.32821 + 9.79518I$	0
$u = 1.16084 - 1.63108I$ $a = 0.598586 + 0.046585I$ $b = 0.16721 - 1.55416I$	$-3.32821 - 9.79518I$	0
$u = -1.89459 + 0.85168I$ $a = -0.175177 + 0.324024I$ $b = 0.05072 + 1.60993I$	$-8.94260 - 0.96211I$	0
$u = -1.89459 - 0.85168I$ $a = -0.175177 - 0.324024I$ $b = 0.05072 - 1.60993I$	$-8.94260 + 0.96211I$	0
$u = -1.77035 + 1.31272I$ $a = 0.239271 - 0.254991I$ $b = -0.08249 - 1.54381I$	$-11.94420 + 2.84627I$	0
$u = -1.77035 - 1.31272I$ $a = 0.239271 + 0.254991I$ $b = -0.08249 + 1.54381I$	$-11.94420 - 2.84627I$	0
$u = -1.72554 + 1.57449I$ $a = -0.254697 + 0.210266I$ $b = 0.11181 + 1.49815I$	$-7.26258 + 6.81165I$	0
$u = -1.72554 - 1.57449I$ $a = -0.254697 - 0.210266I$ $b = 0.11181 - 1.49815I$	$-7.26258 - 6.81165I$	0

II.

$\boldsymbol{I_2^u = \langle -3.60\times 10^7 u^{20} - 5.87\times 10^6 u^{19} + \cdots + 8.28\times 10^7 b + 5.15\times 10^7,\ 2.89\times 10^7 u^{20} - 9.91\times 10^6 u^{19} + \cdots + 8.28\times 10^7 a + 4.77\times 10^7,\ u^{21} + 3u^{19} + \cdots + 4u^3 - 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.349671u^{20} + 0.119680u^{19} + \cdots - 0.328416u - 0.575566 \\ 0.434335u^{20} + 0.0709261u^{19} + \cdots + 0.538125u - 0.622477 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.425572u^{20} - 0.583010u^{19} + \cdots - 1.21621u + 0.166591 \\ 0.840659u^{20} + 0.126118u^{19} + \cdots + 0.462224u - 1.32517 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.07577u^{20} + 0.626412u^{19} + \cdots - 0.347425u - 1.24751 \\ -0.0441834u^{20} - 0.193456u^{19} + \cdots - 0.554242u + 1.16960 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.221566u^{20} + 0.0501958u^{19} + \cdots - 1.68495u + 0.104535 \\ 0.191143u^{20} - 0.380578u^{19} + \cdots - 0.0806184u + 0.859053 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.08062u^{20} + 0.859053u^{19} + \cdots + 1.12989u + 2.18515 \\ 0.456808u^{20} - 0.473624u^{19} + \cdots - 1.88948u - 0.521525 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.784006u^{20} + 0.0487535u^{19} + \cdots - 0.866541u + 0.0469111 \\ 0.434335u^{20} + 0.0709261u^{19} + \cdots + 0.538125u - 0.622477 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.23963u^{20} - 0.0745222u^{19} + \cdots + 1.32610u - 0.271762 \\ -0.380578u^{20} + 0.265665u^{19} + \cdots - 0.140947u + 0.191143 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.684952u^{20} + 0.104535u^{19} + \cdots - 0.833063u - 0.210797 \\ -0.287508u^{20} + 0.447015u^{19} + \cdots - 0.272806u + 0.314656 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.185703u^{20} + 0.0640186u^{19} + \cdots - 0.305374u + 0.258156 \\ 0.0746521u^{20} - 0.109910u^{19} + \cdots - 0.342353u - 0.510214 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{367253532}{82788619}u^{20} + \frac{83600533}{82788619}u^{19} + \cdots + \frac{462458306}{82788619}u - \frac{448782682}{82788619}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{21}+3u^{20}+\cdots-3u-1$
c_2	$u^{21}+3u^{19}+\cdots+4u^3-1$
c_3	$u^{21}+12u^{19}+\cdots-3u^2-1$
c_4	$u^{21}-3u^{20}+\cdots-3u+1$
c_5	$u^{21}+3u^{19}+\cdots-3u^2-1$
c_6	$u^{21}-u^{20}+\cdots+3u^2-1$
c_7	$u^{21}+u^{20}+\cdots-2u-1$
c_8, c_9	$u^{21}+12u^{19}+\cdots+3u^2+1$
c_{10}	$u^{21}+2u^{20}+\cdots-4u^3+1$
c_{11}, c_{12}	$u^{21}-u^{20}+\cdots-2u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{21} - 21y^{20} + \cdots + 15y - 1$
c_2	$y^{21} + 6y^{20} + \cdots + 4y^2 - 1$
c_3, c_8, c_9	$y^{21} + 24y^{20} + \cdots - 6y - 1$
c_5	$y^{21} + 6y^{20} + \cdots - 6y - 1$
c_6	$y^{21} - 7y^{20} + \cdots + 6y - 1$
c_7, c_{11}, c_{12}	$y^{21} + 21y^{20} + \cdots + 6y - 1$
c_{10}	$y^{21} - 6y^{20} + \cdots - 8y^2 - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.407597+0.870717I$ $a=\ \ 0.680319+1.087480I$ $b=-0.18046-1.47117I$	$-5.51707+6.87921I$	$-4.74851-2.86739I$
$u=-0.407597-0.870717I$ $a=\ \ 0.680319-1.087480I$ $b=-0.18046+1.47117I$	$-5.51707-6.87921I$	$-4.74851+2.86739I$
$u=\ \ 0.094729+1.047450I$ $a=\ \ 0.561172+0.309540I$ $b=\ \ 0.480951+0.574674I$	$1.329940-0.100531I$	$-4.48837-1.47261I$
$u=\ \ 0.094729-1.047450I$ $a=\ \ 0.561172-0.309540I$ $b=\ \ 0.480951-0.574674I$	$1.329940+0.100531I$	$-4.48837+1.47261I$
$u=-0.580685+0.636837I$ $a=\ \ 0.947436-0.573177I$ $b=\ \ 0.195506+0.576897I$	$3.38035-4.48387I$	$-6.73945+6.02054I$
$u=-0.580685-0.636837I$ $a=\ \ 0.947436+0.573177I$ $b=\ \ 0.195506-0.576897I$	$3.38035+4.48387I$	$-6.73945-6.02054I$
$u=-0.673019+0.436808I$ $a=-1.65014+0.46045I$ $b=\ \ 0.09381+1.54272I$	$-10.54320+2.25396I$	$-7.32485-1.89994I$
$u=-0.673019-0.436808I$ $a=-1.65014-0.46045I$ $b=\ \ 0.09381-1.54272I$	$-10.54320-2.25396I$	$-7.32485+1.89994I$
$u=-0.172176+0.734347I$ $a=-1.150890-0.189980I$ $b=-0.327687-0.508652I$	$-1.96242-1.97147I$	$-10.38839+7.19935I$
$u=-0.172176-0.734347I$ $a=-1.150890+0.189980I$ $b=-0.327687+0.508652I$	$-1.96242+1.97147I$	$-10.38839-7.19935I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.599944 + 0.405600I$ $a = 0.457584 - 0.789305I$ $b = -0.609912 - 0.214868I$	$-0.67685 - 4.01014I$	$-3.90329 + 2.87470I$
$u = 0.599944 - 0.405600I$ $a = 0.457584 + 0.789305I$ $b = -0.609912 + 0.214868I$	$-0.67685 + 4.01014I$	$-3.90329 - 2.87470I$
$u = -1.255920 + 0.286813I$ $a = 0.281896 - 0.479640I$ $b = -0.06568 - 1.67537I$	$-8.29699 - 1.29880I$	$-1.40444 + 6.09499I$
$u = -1.255920 - 0.286813I$ $a = 0.281896 + 0.479640I$ $b = -0.06568 + 1.67537I$	$-8.29699 + 1.29880I$	$-1.40444 - 6.09499I$
$u = 0.635071 + 1.167840I$ $a = -1.037320 + 0.119056I$ $b = -0.148982 - 1.265150I$	$-4.77902 + 3.72263I$	$-12.7993 - 6.1964I$
$u = 0.635071 - 1.167840I$ $a = -1.037320 - 0.119056I$ $b = -0.148982 + 1.265150I$	$-4.77902 - 3.72263I$	$-12.7993 + 6.1964I$
$u = 0.994776 + 0.915498I$ $a = 1.050060 + 0.469010I$ $b = 0.095962 + 1.246490I$	$0.84337 + 5.57019I$	$-2.71521 - 5.54678I$
$u = 0.994776 - 0.915498I$ $a = 1.050060 - 0.469010I$ $b = 0.095962 - 1.246490I$	$0.84337 - 5.57019I$	$-2.71521 + 5.54678I$
$u = 0.503863$ $a = -1.63350$ $b = 0.532145$	-4.47496	-8.88530
$u = 0.51294 + 1.50845I$ $a = 0.676633 - 0.200309I$ $b = 0.200421 + 1.238650I$	$-1.14943 + 2.54928I$	$-2.54552 - 2.42691I$

	Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.51294-1.50845I$		
$a=$	$0.676633+0.200309I$	$-1.14943-2.54928I$	$-2.54552+2.42691I$
$b=$	$0.200421-1.238650I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{21}+3u^{20}+\cdots-3u-1)(u^{98}-2u^{97}+\cdots+454u+52)$
c_2	$(u^{21}+3u^{19}+\cdots+4u^3-1)(u^{98}-7u^{97}+\cdots-6163u+2411)$
c_3	$(u^{21}+12u^{19}+\cdots-3u^2-1)(u^{98}+u^{97}+\cdots-625u+77)$
c_4	$(u^{21}-3u^{20}+\cdots-3u+1)(u^{98}-2u^{97}+\cdots+454u+52)$
c_5	$(u^{21}+3u^{19}+\cdots-3u^2-1)(u^{98}+3u^{97}+\cdots+18901u+4059)$
c_6	$(u^{21}-u^{20}+\cdots+3u^2-1)(u^{98}-30u^{96}+\cdots+455u+97)$
c_7	$(u^{21}+u^{20}+\cdots-2u-1)(u^{98}+42u^{96}+\cdots+17u+1)$
c_8, c_9	$(u^{21}+12u^{19}+\cdots+3u^2+1)(u^{98}+u^{97}+\cdots-625u+77)$
c_{10}	$(u^{21}+2u^{20}+\cdots-4u^3+1)(u^{98}+5u^{97}+\cdots+7783u+1015)$
c_{11}, c_{12}	$(u^{21}-u^{20}+\cdots-2u+1)(u^{98}+42u^{96}+\cdots+17u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{21} - 21y^{20} + \cdots + 15y - 1)(y^{98} - 86y^{97} + \cdots + 334372y + 2704)$
c_2	$(y^{21} + 6y^{20} + \cdots + 4y^2 - 1)$ $\cdot (y^{98} + 29y^{97} + \cdots + 216614209y + 5812921)$
c_3, c_8, c_9	$(y^{21} + 24y^{20} + \cdots - 6y - 1)(y^{98} + 107y^{97} + \cdots + 162543y + 5929)$
c_5	$(y^{21} + 6y^{20} + \cdots - 6y - 1)$ $\cdot (y^{98} + 33y^{97} + \cdots + 550117295y + 16475481)$
c_6	$(y^{21} - 7y^{20} + \cdots + 6y - 1)(y^{98} - 60y^{97} + \cdots + 4415607y + 9409)$
c_7, c_{11}, c_{12}	$(y^{21} + 21y^{20} + \cdots + 6y - 1)(y^{98} + 84y^{97} + \cdots + 511y + 1)$
c_{10}	$(y^{21} - 6y^{20} + \cdots - 8y^2 - 1)$ $\cdot (y^{98} - 23y^{97} + \cdots - 47629779y + 1030225)$