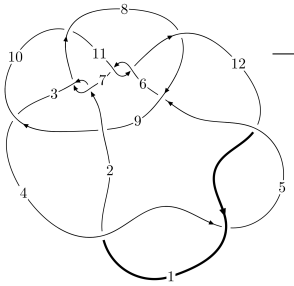
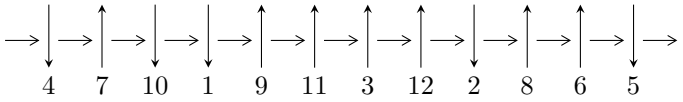
$12a_{1086}$ $(K12a_{1086})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 7.29262 \times 10^{443} u^{125} - 3.61065 \times 10^{443} u^{124} + \cdots + 4.91844 \times 10^{444} b - 2.41481 \times 10^{445}, \\ & 2.10816 \times 10^{445} u^{125} - 1.92271 \times 10^{446} u^{124} + \cdots + 2.30675 \times 10^{447} a + 1.44340 \times 10^{449}, \\ & u^{126} - 35 u^{124} + \cdots - 458 u + 469 \rangle \\ I_2^u = \langle & -296542176 u^{26} - 86696195 u^{25} + \cdots + 6531331 b - 615569144, \\ & 281791343 u^{26} + 29749729 u^{25} + \cdots + 6531331 a + 697900612,\ u^{27} + u^{26} + \cdots - 11 u^2 + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 153 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. $\boldsymbol{I_1^u = \langle 7.29 \times 10^{443} u^{125} - 3.61 \times 10^{443} u^{124} + \cdots + 4.92 \times 10^{444} b - 2.41 \times 10^{445},\ 2.11 \times 10^{445} u^{125} - 1.92 \times 10^{446} u^{124} + \cdots + 2.31 \times 10^{447} a + 1.44 \times 10^{449},\ u^{126} - 35 u^{124} + \cdots - 458 u + 469 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.00913910 u^{125} + 0.0833514 u^{124} + \cdots + 86.9145 u - 62.5728 \\ -0.148271 u^{125} + 0.0734106 u^{124} + \cdots + 45.8341 u + 4.90970 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.173676 u^{125} + 0.157828 u^{124} + \cdots + 114.206 u - 76.3215 \\ 0.269095 u^{125} - 0.211516 u^{124} + \cdots - 279.017 u + 118.949 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.119400 u^{125} - 0.0244234 u^{124} + \cdots - 84.3500 u + 77.2817 \\ -0.0890187 u^{125} + 0.0626953 u^{124} + \cdots + 97.8027 u - 54.2732 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.126665 u^{125} + 0.00735830 u^{124} + \cdots + 25.1865 u - 54.6294 \\ -0.145609 u^{125} + 0.105822 u^{124} + \cdots + 82.6032 u - 22.7877 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.123590 u^{125} + 0.0879692 u^{124} + \cdots + 96.7714 u - 28.0209 \\ -0.0488947 u^{125} + 0.0609753 u^{124} + \cdots - 37.4180 u + 8.66197 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.654817 u^{125} + 0.426479 u^{124} + \cdots + 717.830 u - 300.066 \\ 0.0260049 u^{125} - 0.0344322 u^{124} + \cdots - 33.4096 u + 18.5684 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0189436 u^{125} + 0.113181 u^{124} + \cdots + 107.790 u - 77.4171 \\ -0.145609 u^{125} + 0.105822 u^{124} + \cdots + 82.6032 u - 22.7877 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.144394 u^{125} + 0.183768 u^{124} + \cdots + 161.092 u - 116.204 \\ -0.159305 u^{125} + 0.168067 u^{124} + \cdots + 89.4490 u - 53.8466 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0165479 u^{125} - 0.311309 u^{124} + \cdots - 172.863 u + 172.842$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_{12}	$u^{126} - 5u^{125} + \cdots + 30u - 1$
c_2, c_7	$u^{126} - 35u^{124} + \cdots - 458u + 469$
c_3	$u^{126} + u^{125} + \cdots + 1130931u - 66457$
c_5	$u^{126} - 7u^{125} + \cdots + 106u - 7$
c_6, c_{11}	$u^{126} - u^{125} + \cdots - 68860u - 3292$
c_8	$u^{126} - 9u^{124} + \cdots + 3761u + 521$
c_9	$u^{126} - 3u^{125} + \cdots + 15229088u - 1636828$
c_{10}	$u^{126} - 12u^{125} + \cdots - 1879129u + 1027873$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{126} + 137y^{125} + \cdots - 46y + 1$
c_2, c_7	$y^{126} - 70y^{125} + \cdots - 1412280y + 219961$
c_3	$y^{126} + 51y^{125} + \cdots + 129805452721y + 4416532849$
c_5	$y^{126} - 7y^{125} + \cdots + 5088y + 49$
c_6, c_{11}	$y^{126} + 93y^{125} + \cdots - 118823008y + 10837264$
c_8	$y^{126} - 18y^{125} + \cdots - 15152735y + 271441$
c_9	$y^{126} + 35y^{125} + \cdots - 24617509435312y + 2679205901584$
c_{10}	$y^{126} - 14y^{125} + \cdots - 60668343049755y + 1056522904129$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.970623+0.109965I$ $a=\ \ 0.36667-1.47144I$ $b=\ \ 1.76970+0.73739I$	$7.09581-0.46489I$	0
$u=-0.970623-0.109965I$ $a=\ \ 0.36667+1.47144I$ $b=\ \ 1.76970-0.73739I$	$7.09581+0.46489I$	0
$u=\ \ 0.942405+0.256456I$ $a=-0.96158-1.33084I$ $b=-1.57738+0.21976I$	$-1.55700+2.33827I$	0
$u=\ \ 0.942405-0.256456I$ $a=-0.96158+1.33084I$ $b=-1.57738-0.21976I$	$-1.55700-2.33827I$	0
$u=-0.966945+0.376641I$ $a=\ \ 1.000970-0.967740I$ $b=\ \ 1.71337+0.09779I$	$-2.75117-6.67930I$	0
$u=-0.966945-0.376641I$ $a=\ \ 1.000970+0.967740I$ $b=\ \ 1.71337-0.09779I$	$-2.75117+6.67930I$	0
$u=-0.857152+0.424347I$ $a=-0.517437+1.016120I$ $b=-2.03199-0.05964I$	$-3.04889-1.45471I$	0
$u=-0.857152-0.424347I$ $a=-0.517437-1.016120I$ $b=-2.03199+0.05964I$	$-3.04889+1.45471I$	0
$u=-0.908345+0.289800I$ $a=-0.241354+1.041250I$ $b=-2.21506+1.30506I$	$4.19848+4.73980I$	0
$u=-0.908345-0.289800I$ $a=-0.241354-1.041250I$ $b=-2.21506-1.30506I$	$4.19848-4.73980I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.092548+0.944929I$		
$a=$	$0.021337+0.949815I$	$0.62819+3.35726I$	0
$b=$	$0.490137+0.965918I$		
$u=$	$0.092548-0.944929I$		
$a=$	$0.021337-0.949815I$	$0.62819-3.35726I$	0
$b=$	$0.490137-0.965918I$		
$u=$	$0.010712+0.947670I$		
$a=$	$0.012888+0.991675I$	$8.18596-7.22783I$	0
$b=$	$-0.271624+0.781462I$		
$u=$	$0.010712-0.947670I$		
$a=$	$0.012888-0.991675I$	$8.18596+7.22783I$	0
$b=$	$-0.271624-0.781462I$		
$u=$	$0.882545+0.337456I$		
$a=$	$0.339882+1.040700I$	$-2.67573-2.21056I$	0
$b=$	$2.20785+0.63143I$		
$u=$	$0.882545-0.337456I$		
$a=$	$0.339882-1.040700I$	$-2.67573+2.21056I$	0
$b=$	$2.20785-0.63143I$		
$u=$	$0.617474+0.671103I$		
$a=$	$0.94348+1.23326I$	$4.05561+2.75690I$	0
$b=$	$2.56949-0.80314I$		
$u=$	$0.617474-0.671103I$		
$a=$	$0.94348-1.23326I$	$4.05561-2.75690I$	0
$b=$	$2.56949+0.80314I$		
$u=$	$0.218519+1.078790I$		
$a=$	$1.077550+0.243009I$	$-0.10267+2.30053I$	0
$b=$	$1.59592+0.06226I$		
$u=$	$0.218519-1.078790I$		
$a=$	$1.077550-0.243009I$	$-0.10267-2.30053I$	0
$b=$	$1.59592-0.06226I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.999786 + 0.467391I$ $a = -0.972717 - 0.763915I$ $b = -1.80531 + 0.04063I$	$3.05566 + 9.72046I$	0
$u = 0.999786 - 0.467391I$ $a = -0.972717 + 0.763915I$ $b = -1.80531 - 0.04063I$	$3.05566 - 9.72046I$	0
$u = 0.675343 + 0.874019I$ $a = 1.041160 + 0.664860I$ $b = 1.60190 - 0.42948I$	$1.65677 + 3.09355I$	0
$u = 0.675343 - 0.874019I$ $a = 1.041160 - 0.664860I$ $b = 1.60190 + 0.42948I$	$1.65677 - 3.09355I$	0
$u = -0.871890 + 0.187558I$ $a = -0.43147 + 1.41778I$ $b = -0.38719 - 2.93184I$	$3.86186 - 6.91825I$	0
$u = -0.871890 - 0.187558I$ $a = -0.43147 - 1.41778I$ $b = -0.38719 + 2.93184I$	$3.86186 + 6.91825I$	0
$u = 0.940987 + 0.588632I$ $a = -0.580842 - 0.647536I$ $b = -2.56386 + 1.38056I$	$9.05513 + 2.33946I$	0
$u = 0.940987 - 0.588632I$ $a = -0.580842 + 0.647536I$ $b = -2.56386 - 1.38056I$	$9.05513 - 2.33946I$	0
$u = -0.523619 + 0.706080I$ $a = -1.26923 + 0.78134I$ $b = -1.36490 - 0.45951I$	$-3.46638 - 2.61366I$	0
$u = -0.523619 - 0.706080I$ $a = -1.26923 - 0.78134I$ $b = -1.36490 + 0.45951I$	$-3.46638 + 2.61366I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.874411$ $a = -1.57669$ $b = -1.03320$	1.00232	0
$u = -0.782261 + 0.389760I$ $a = -0.929740 - 0.461657I$ $b = -0.319925 - 0.025276I$	$5.84549 + 0.81290I$	0
$u = -0.782261 - 0.389760I$ $a = -0.929740 + 0.461657I$ $b = -0.319925 + 0.025276I$	$5.84549 - 0.81290I$	0
$u = \ 1.064840 + 0.379693I$ $a = -0.413111 + 0.625058I$ $b = -0.667151 - 0.003480I$	$3.51763 + 2.87060I$	0
$u = \ 1.064840 - 0.379693I$ $a = -0.413111 - 0.625058I$ $b = -0.667151 + 0.003480I$	$3.51763 - 2.87060I$	0
$u = \ 0.695932 + 0.894230I$ $a = \ 0.284549 + 0.534176I$ $b = \ 1.134390 + 0.080449I$	$1.15236 + 2.75670I$	0
$u = \ 0.695932 - 0.894230I$ $a = \ 0.284549 - 0.534176I$ $b = \ 1.134390 - 0.080449I$	$1.15236 - 2.75670I$	0
$u = -1.119180 + 0.212654I$ $a = \ 0.588831 + 0.276461I$ $b = \ 0.916814 - 0.171103I$	$4.74385 - 2.28444I$	0
$u = -1.119180 - 0.212654I$ $a = \ 0.588831 - 0.276461I$ $b = \ 0.916814 + 0.171103I$	$4.74385 + 2.28444I$	0
$u = -0.258454 + 1.109840I$ $a = -1.044390 + 0.667910I$ $b = -2.10351 - 0.15975I$	$3.95892 + 12.30210I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.258454-1.109840I$ $a=-1.044390-0.667910I$ $b=-2.10351+0.15975I$	$3.95892-12.30210I$	0
$u=-0.719200+0.466600I$ $a=-0.95049+1.22827I$ $b=-1.49059-1.17047I$	$-3.53434-2.31998I$	0
$u=-0.719200-0.466600I$ $a=-0.95049-1.22827I$ $b=-1.49059+1.17047I$	$-3.53434+2.31998I$	0
$u=0.311379+1.111650I$ $a=0.978705+0.700895I$ $b=2.13343-0.09626I$	$-3.24325-8.35925I$	0
$u=0.311379-1.111650I$ $a=0.978705-0.700895I$ $b=2.13343+0.09626I$	$-3.24325+8.35925I$	0
$u=1.008620+0.569134I$ $a=0.693571+0.714935I$ $b=1.48552-0.55280I$	$2.19627+3.26013I$	0
$u=1.008620-0.569134I$ $a=0.693571-0.714935I$ $b=1.48552+0.55280I$	$2.19627-3.26013I$	0
$u=-1.073730+0.450599I$ $a=0.356133+0.729758I$ $b=0.648328+0.072797I$	$9.49428-3.56556I$	0
$u=-1.073730-0.450599I$ $a=0.356133-0.729758I$ $b=0.648328-0.072797I$	$9.49428+3.56556I$	0
$u=0.797029+0.238822I$ $a=0.60456+1.49514I$ $b=0.70268-2.17049I$	$-3.12454+4.92510I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.797029 - 0.238822I$ $a = 0.60456 - 1.49514I$ $b = 0.70268 + 2.17049I$	$-3.12454 - 4.92510I$	0
$u = -0.394117 + 1.111950I$ $a = -0.853379 + 0.777888I$ $b = -2.20792 + 0.06848I$	$-3.78607 + 2.75727I$	0
$u = -0.394117 - 1.111950I$ $a = -0.853379 - 0.777888I$ $b = -2.20792 - 0.06848I$	$-3.78607 - 2.75727I$	0
$u = 0.792927 + 0.198436I$ $a = -0.24880 - 1.94336I$ $b = -0.860975 + 0.809139I$	$-2.15309 - 0.12831I$	0
$u = 0.792927 - 0.198436I$ $a = -0.24880 + 1.94336I$ $b = -0.860975 - 0.809139I$	$-2.15309 + 0.12831I$	0
$u = -0.781562 + 0.186528I$ $a = 1.10944 + 0.92626I$ $b = 0.946496 + 0.148654I$	$5.50194 - 3.75805I$	$0. + 7.30757I$
$u = -0.781562 - 0.186528I$ $a = 1.10944 - 0.92626I$ $b = 0.946496 - 0.148654I$	$5.50194 + 3.75805I$	$0. - 7.30757I$
$u = -1.143410 + 0.368152I$ $a = 0.084839 + 0.695642I$ $b = 0.292187 + 0.317180I$	$9.32845 - 0.15577I$	0
$u = -1.143410 - 0.368152I$ $a = 0.084839 - 0.695642I$ $b = 0.292187 - 0.317180I$	$9.32845 + 0.15577I$	0
$u = 1.189610 + 0.190263I$ $a = 0.689839 - 0.825068I$ $b = -0.208873 + 0.261682I$	$2.55795 + 0.40515I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.189610 - 0.190263I$ $a = 0.689839 + 0.825068I$ $b = -0.208873 - 0.261682I$	$2.55795 - 0.40515I$	0
$u = -1.171720 + 0.297261I$ $a = -0.501837 - 1.292290I$ $b = 0.541604 + 0.368665I$	$8.53747 - 5.00328I$	0
$u = -1.171720 - 0.297261I$ $a = -0.501837 + 1.292290I$ $b = 0.541604 - 0.368665I$	$8.53747 + 5.00328I$	0
$u = 1.149020 + 0.400504I$ $a = -0.044347 + 0.511764I$ $b = -0.106887 - 0.111151I$	$2.52008 + 1.33074I$	0
$u = 1.149020 - 0.400504I$ $a = -0.044347 - 0.511764I$ $b = -0.106887 + 0.111151I$	$2.52008 - 1.33074I$	0
$u = -0.138999 + 0.759366I$ $a = 1.312110 - 0.461227I$ $b = 1.001010 + 0.503429I$	$-1.25264 + 2.36149I$	$3.02337 - 5.11352I$
$u = -0.138999 - 0.759366I$ $a = 1.312110 + 0.461227I$ $b = 1.001010 - 0.503429I$	$-1.25264 - 2.36149I$	$3.02337 + 5.11352I$
$u = 1.217620 + 0.167615I$ $a = -0.569466 + 0.104589I$ $b = -1.103690 - 0.232877I$	$11.79450 + 2.63794I$	0
$u = 1.217620 - 0.167615I$ $a = -0.569466 - 0.104589I$ $b = -1.103690 + 0.232877I$	$11.79450 - 2.63794I$	0
$u = 0.300849 + 1.192090I$ $a = -0.836379 - 0.186369I$ $b = -1.74416 + 0.66811I$	$-3.64149 + 0.33300I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.300849 - 1.192090I$ $a = -0.836379 + 0.186369I$ $b = -1.74416 - 0.66811I$	$-3.64149 - 0.33300I$	0
$u = 0.165351 + 0.728645I$ $a = -1.097140 - 0.705621I$ $b = -0.704111 + 0.585780I$	$5.54492 - 3.39623I$	$4.79113 + 3.93438I$
$u = 0.165351 - 0.728645I$ $a = -1.097140 + 0.705621I$ $b = -0.704111 - 0.585780I$	$5.54492 + 3.39623I$	$4.79113 - 3.93438I$
$u = 0.492316 + 0.552431I$ $a = -0.96762 - 1.61134I$ $b = -0.641552 + 0.503324I$	$1.55800 - 5.60766I$	$1.12260 + 2.03980I$
$u = 0.492316 - 0.552431I$ $a = -0.96762 + 1.61134I$ $b = -0.641552 - 0.503324I$	$1.55800 + 5.60766I$	$1.12260 - 2.03980I$
$u = 1.159920 + 0.503454I$ $a = -0.616467 - 0.571341I$ $b = -2.26723 + 0.12128I$	$8.41120 + 8.01034I$	0
$u = 1.159920 - 0.503454I$ $a = -0.616467 + 0.571341I$ $b = -2.26723 - 0.12128I$	$8.41120 - 8.01034I$	0
$u = -1.212680 + 0.371564I$ $a = 0.078212 + 0.267912I$ $b = 0.291183 - 0.611037I$	$2.06132 - 4.33077I$	0
$u = -1.212680 - 0.371564I$ $a = 0.078212 - 0.267912I$ $b = 0.291183 + 0.611037I$	$2.06132 + 4.33077I$	0
$u = -1.174140 + 0.498983I$ $a = 0.609389 - 0.649320I$ $b = 2.11404 + 0.29591I$	$1.75505 - 7.01207I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.174140-0.498983I$ $a=\ \ 0.609389+0.649320I$ $b=\ \ 2.11404-0.29591I$	$1.75505+7.01207I$	0
$u=\ \ 1.241500+0.339354I$ $a=-0.118974+0.101131I$ $b=-0.526832-0.911895I$	$8.32979+6.48068I$	0
$u=\ \ 1.241500-0.339354I$ $a=-0.118974-0.101131I$ $b=-0.526832+0.911895I$	$8.32979-6.48068I$	0
$u=-1.084230+0.744299I$ $a=\ \ 0.547218-0.574475I$ $b=\ \ 2.16145+1.04357I$	$1.30001-3.27173I$	0
$u=-1.084230-0.744299I$ $a=\ \ 0.547218+0.574475I$ $b=\ \ 2.16145-1.04357I$	$1.30001+3.27173I$	0
$u=\ \ 1.270760+0.391807I$ $a=-0.521070-0.795438I$ $b=-1.80150+0.36154I$	$1.49681+6.23106I$	0
$u=\ \ 1.270760-0.391807I$ $a=-0.521070+0.795438I$ $b=-1.80150-0.36154I$	$1.49681-6.23106I$	0
$u=\ \ 0.652264$ $a=\ \ 1.03101$ $b=\ \ 0.281959$	1.20245	10.9940
$u=-1.275040+0.456056I$ $a=-0.941604-0.198837I$ $b=-0.263074-0.821531I$	$4.76593-8.17743I$	0
$u=-1.275040-0.456056I$ $a=-0.941604+0.198837I$ $b=-0.263074+0.821531I$	$4.76593+8.17743I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.292246+0.575557I$ $a=-0.917370-0.714132I$ $b=-0.371520+0.235817I$	$7.30107-0.46604I$	$6.73871+1.91848I$
$u=-0.292246-0.575557I$ $a=-0.917370+0.714132I$ $b=-0.371520-0.235817I$	$7.30107+0.46604I$	$6.73871-1.91848I$
$u=-0.543087+0.333468I$ $a=0.72839-2.13501I$ $b=0.558413+0.604662I$	$-4.01535+3.41959I$	$-2.30368+0.21144I$
$u=-0.543087-0.333468I$ $a=0.72839+2.13501I$ $b=0.558413-0.604662I$	$-4.01535-3.41959I$	$-2.30368-0.21144I$
$u=1.274810+0.491288I$ $a=0.864555-0.230360I$ $b=0.399460-0.761795I$	$12.0565+12.3113I$	0
$u=1.274810-0.491288I$ $a=0.864555+0.230360I$ $b=0.399460+0.761795I$	$12.0565-12.3113I$	0
$u=-1.361730+0.113588I$ $a=-0.385697-0.716871I$ $b=0.129086+0.630162I$	$3.29705+4.11928I$	0
$u=-1.361730-0.113588I$ $a=-0.385697+0.716871I$ $b=0.129086-0.630162I$	$3.29705-4.11928I$	0
$u=-1.339720+0.301551I$ $a=0.442442-0.841602I$ $b=1.67849+0.32054I$	$7.97095-6.50583I$	0
$u=-1.339720-0.301551I$ $a=0.442442+0.841602I$ $b=1.67849-0.32054I$	$7.97095+6.50583I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.321170+0.454924I$ $a=-0.733337+0.018294I$ $b=-0.536120-1.077190I$	$12.34460+2.14848I$	0
$u=-1.321170-0.454924I$ $a=-0.733337-0.018294I$ $b=-0.536120+1.077190I$	$12.34460-2.14848I$	0
$u=1.326030+0.458330I$ $a=0.972372+0.065808I$ $b=0.327609-1.238650I$	$4.63085+2.01487I$	0
$u=1.326030-0.458330I$ $a=0.972372-0.065808I$ $b=0.327609+1.238650I$	$4.63085-2.01487I$	0
$u=-1.255250+0.645885I$ $a=-0.858593+0.715882I$ $b=-2.09645-1.45278I$	$-0.92940-9.04679I$	0
$u=-1.255250-0.645885I$ $a=-0.858593-0.715882I$ $b=-2.09645+1.45278I$	$-0.92940+9.04679I$	0
$u=1.26771+0.64097I$ $a=0.814774+0.723594I$ $b=2.23099-1.29420I$	$-0.1859+14.5941I$	0
$u=1.26771-0.64097I$ $a=0.814774-0.723594I$ $b=2.23099+1.29420I$	$-0.1859-14.5941I$	0
$u=-1.28092+0.63273I$ $a=-0.791136+0.729120I$ $b=-2.32305-1.22310I$	$7.1819-18.4916I$	0
$u=-1.28092-0.63273I$ $a=-0.791136-0.729120I$ $b=-2.32305+1.22310I$	$7.1819+18.4916I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.24104 + 0.75808I$ $a = 1.051530 + 0.875991I$ $b = 2.52316 - 2.32345I$	$5.34160 + 3.32403I$	0
$u = 1.24104 - 0.75808I$ $a = 1.051530 - 0.875991I$ $b = 2.52316 + 2.32345I$	$5.34160 - 3.32403I$	0
$u = 1.30681 + 0.67419I$ $a = -0.471067 - 0.616995I$ $b = -1.92205 + 0.81411I$	$-0.36548 + 6.26801I$	0
$u = 1.30681 - 0.67419I$ $a = -0.471067 + 0.616995I$ $b = -1.92205 - 0.81411I$	$-0.36548 - 6.26801I$	0
$u = -0.78348 + 1.24630I$ $a = 0.619511 - 0.336925I$ $b = 1.99279 + 1.01793I$	$0.25002 - 3.81753I$	0
$u = -0.78348 - 1.24630I$ $a = 0.619511 + 0.336925I$ $b = 1.99279 - 1.01793I$	$0.25002 + 3.81753I$	0
$u = -0.131389 + 0.501912I$ $a = 0.463018 + 0.506197I$ $b = -0.420529 + 0.601464I$	$-1.13493 + 0.94147I$	$-4.21874 - 2.34500I$
$u = -0.131389 - 0.501912I$ $a = 0.463018 - 0.506197I$ $b = -0.420529 - 0.601464I$	$-1.13493 - 0.94147I$	$-4.21874 + 2.34500I$
$u = 1.46722 + 0.20354I$ $a = 0.255174 - 0.756956I$ $b = -0.275869 + 0.759974I$	$10.15790 - 7.45001I$	0
$u = 1.46722 - 0.20354I$ $a = 0.255174 + 0.756956I$ $b = -0.275869 - 0.759974I$	$10.15790 + 7.45001I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.44185+0.59051I$ $a=0.413659-0.665951I$ $b=1.70652+0.73088I$	$4.95027-8.38558I$	0
$u=-1.44185-0.59051I$ $a=0.413659+0.665951I$ $b=1.70652-0.73088I$	$4.95027+8.38558I$	0
$u=0.195119+0.364133I$ $a=0.971260-1.008830I$ $b=0.199389+0.215350I$	$1.319960+0.350002I$	$7.97653-0.58766I$
$u=0.195119-0.364133I$ $a=0.971260+1.008830I$ $b=0.199389-0.215350I$	$1.319960-0.350002I$	$7.97653+0.58766I$
$u=0.098074+0.341468I$ $a=-1.85528+0.39319I$ $b=0.493075+1.077430I$	$4.88741-3.42237I$	$1.82670+2.65734I$
$u=0.098074-0.341468I$ $a=-1.85528-0.39319I$ $b=0.493075-1.077430I$	$4.88741+3.42237I$	$1.82670-2.65734I$

II.

$\boldsymbol{I_2^u = \langle -2.97\times 10^8 u^{26} - 8.67\times 10^7 u^{25} + \cdots + 6.53\times 10^6 b - 6.16\times 10^8,\ 2.82\times 10^8 u^{26} + 2.97\times 10^7 u^{25} + \cdots + 6.53\times 10^6 a + 6.98\times 10^8,\ u^{27} + u^{26} + \cdots - 11u^2 + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -43.1446u^{26} - 4.55493u^{25} + \cdots + 102.918u - 106.854 \\ 45.4030u^{26} + 13.2739u^{25} + \cdots - 113.510u + 94.2487 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 47.8248u^{26} + 11.8549u^{25} + \cdots - 86.5156u + 82.6503 \\ -18.7731u^{26} - 15.4500u^{25} + \cdots + 20.9914u + 5.23085 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -25.5393u^{26} - 10.8391u^{25} + \cdots + 37.5220u - 9.95058 \\ -15.9395u^{26} + 0.796616u^{25} + \cdots + 45.6064u - 44.5238 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -71.3659u^{26} - 13.7069u^{25} + \cdots + 174.284u - 163.513 \\ 28.2213u^{26} + 9.15194u^{25} + \cdots - 70.3659u + 56.6590 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 91.3252u^{26} + 45.1086u^{25} + \cdots - 254.838u + 118.583 \\ -26.6662u^{26} - 8.67088u^{25} + \cdots + 83.3252u - 46.2166 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 66.4791u^{26} + 6.15932u^{25} + \cdots - 155.922u + 137.571 \\ -20.6035u^{26} - 9.70298u^{25} + \cdots + 26.1497u - 17.9912 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -43.1446u^{26} - 4.55493u^{25} + \cdots + 103.918u - 106.854 \\ 28.2213u^{26} + 9.15194u^{25} + \cdots - 70.3659u + 56.6590 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -15.7937u^{26} + 6.39736u^{25} + \cdots + 74.3803u - 94.9944 \\ 52.4256u^{26} + 15.2951u^{25} + \cdots - 132.016u + 92.8970 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{1237736833}{6531331}u^{26} - \frac{715022714}{6531331}u^{25} + \cdots + \frac{3021932240}{6531331}u - \frac{1104068601}{6531331}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$u^{27} - 2u^{26} + \cdots + 2u^2 - 1$
c_2	$u^{27} + u^{26} + \cdots - 11u^2 + 1$
c_3	$u^{27} + 4u^{25} + \cdots - u + 1$
c_4	$u^{27} + 2u^{26} + \cdots - 2u^2 + 1$
c_5	$u^{27} - u^{25} + \cdots + 6u + 1$
c_6	$u^{27} + 13u^{25} + \cdots - 8u + 4$
c_7	$u^{27} - u^{26} + \cdots + 11u^2 - 1$
c_8	$u^{27} - 5u^{26} + \cdots + u + 1$
c_9	$u^{27} + 6u^{25} + \cdots + 12u - 4$
c_{10}	$u^{27} - 13u^{26} + \cdots + 19u + 1$
c_{11}	$u^{27} + 13u^{25} + \cdots - 8u - 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{27} + 34y^{26} + \cdots + 4y - 1$
c_2, c_7	$y^{27} - 13y^{26} + \cdots + 22y - 1$
c_3	$y^{27} + 8y^{26} + \cdots - 19y - 1$
c_5	$y^{27} - 2y^{26} + \cdots - 10y - 1$
c_6, c_{11}	$y^{27} + 26y^{26} + \cdots - 208y - 16$
c_8	$y^{27} - 5y^{26} + \cdots + 9y - 1$
c_9	$y^{27} + 12y^{26} + \cdots - 160y - 16$
c_{10}	$y^{27} + 11y^{26} + \cdots + 689y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.971273 + 0.329789I$ $a = -0.039348 + 0.429423I$ $b = -1.39425 + 0.40639I$	$10.14670 + 1.35183I$	$11.95149 - 0.58123I$
$u = \quad 0.971273 - 0.329789I$ $a = -0.039348 - 0.429423I$ $b = -1.39425 - 0.40639I$	$10.14670 - 1.35183I$	$11.95149 + 0.58123I$
$u = -0.007210 + 0.931229I$ $a = -1.311520 - 0.254754I$ $b = -1.74023 - 0.09478I$	$-3.62095 - 1.65076I$	$-1.69799 + 0.37639I$
$u = -0.007210 - 0.931229I$ $a = -1.311520 + 0.254754I$ $b = -1.74023 + 0.09478I$	$-3.62095 + 1.65076I$	$-1.69799 - 0.37639I$
$u = \quad 1.114300 + 0.297118I$ $a = -0.375167 + 0.913483I$ $b = -0.036363 - 0.688894I$	$7.43683 + 4.71624I$	$6.20012 - 3.80289I$
$u = \quad 1.114300 - 0.297118I$ $a = -0.375167 - 0.913483I$ $b = -0.036363 + 0.688894I$	$7.43683 - 4.71624I$	$6.20012 + 3.80289I$
$u = -1.087590 + 0.397346I$ $a = \quad 0.414365 + 0.350998I$ $b = \quad 0.715942 + 0.225536I$	$3.34115 - 2.17604I$	$7.00627 - 0.59512I$
$u = -1.087590 - 0.397346I$ $a = \quad 0.414365 - 0.350998I$ $b = \quad 0.715942 - 0.225536I$	$3.34115 + 2.17604I$	$7.00627 + 0.59512I$
$u = -0.768781 + 0.327917I$ $a = -0.91672 + 1.58259I$ $b = -1.30052 - 0.61055I$	$-2.57062 - 1.73072I$	$2.14902 + 1.71181I$
$u = -0.768781 - 0.327917I$ $a = -0.91672 - 1.58259I$ $b = -1.30052 + 0.61055I$	$-2.57062 + 1.73072I$	$2.14902 - 1.71181I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.626241+1.021610I$ $a=\ 0.265079-0.511718I$ $b=\ 1.333060-0.037198I$	$1.54372-2.85725I$	$14.6474+4.0629I$
$u=-0.626241-1.021610I$ $a=\ 0.265079+0.511718I$ $b=\ 1.333060+0.037198I$	$1.54372+2.85725I$	$14.6474-4.0629I$
$u=\ 0.765000+0.120038I$ $a=\ 1.064230+0.676285I$ $b=\ 1.080250+0.785672I$	$5.81807-2.90160I$	$9.35027-1.09952I$
$u=\ 0.765000-0.120038I$ $a=\ 1.064230-0.676285I$ $b=\ 1.080250-0.785672I$	$5.81807+2.90160I$	$9.35027+1.09952I$
$u=-0.720460$ $a=-1.47279$ $b=-0.760802$	0.526085	-6.19000
$u=-1.289450+0.379005I$ $a=\ 0.415545-0.736733I$ $b=\ 1.60178-0.23758I$	$6.55299-7.89053I$	$5.86094+7.19827I$
$u=-1.289450-0.379005I$ $a=\ 0.415545+0.736733I$ $b=\ 1.60178+0.23758I$	$6.55299+7.89053I$	$5.86094-7.19827I$
$u=\ 1.275740+0.466384I$ $a=-0.522773-0.688434I$ $b=-1.71040+0.39088I$	$0.84492+6.50332I$	$0.-8.66026I$
$u=\ 1.275740-0.466384I$ $a=-0.522773+0.688434I$ $b=-1.71040-0.39088I$	$0.84492-6.50332I$	$0.+8.66026I$
$u=-0.618623+0.046280I$ $a=-0.20343-2.04084I$ $b=-0.93110+2.37134I$	$3.38778+6.02846I$	$2.85390-3.46172I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.618623-0.046280I$ $a=-0.20343+2.04084I$ $b=-0.93110-2.37134I$	$3.38778-6.02846I$	$2.85390+3.46172I$
$u=-1.188080+0.716248I$ $a=\ 0.968479-0.885296I$ $b=\ 2.52460+1.96029I$	$5.22860-3.29819I$	$-16.9841+2.0112I$
$u=-1.188080-0.716248I$ $a=\ 0.968479+0.885296I$ $b=\ 2.52460-1.96029I$	$5.22860+3.29819I$	$-16.9841-2.0112I$
$u=\ 0.79526+1.19126I$ $a=\ 0.705062+0.415880I$ $b=\ 1.79591-0.79265I$	$-0.51548+3.95169I$	$-4.85236-6.04248I$
$u=\ 0.79526-1.19126I$ $a=\ 0.705062-0.415880I$ $b=\ 1.79591+0.79265I$	$-0.51548-3.95169I$	$-4.85236+6.04248I$
$u=\ 0.524629+0.069763I$ $a=\ 0.77260+2.36896I$ $b=\ 0.94171-1.32673I$	$-3.31317+4.12928I$	$1.60685-4.77342I$
$u=\ 0.524629-0.069763I$ $a=\ 0.77260-2.36896I$ $b=\ 0.94171+1.32673I$	$-3.31317-4.12928I$	$1.60685+4.77342I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$(u^{27}-2u^{26}+\cdots+2u^2-1)(u^{126}-5u^{125}+\cdots+30u-1)$
c_2	$(u^{27}+u^{26}+\cdots-11u^2+1)(u^{126}-35u^{124}+\cdots-458u+469)$
c_3	$(u^{27}+4u^{25}+\cdots-u+1)(u^{126}+u^{125}+\cdots+1130931u-66457)$
c_4	$(u^{27}+2u^{26}+\cdots-2u^2+1)(u^{126}-5u^{125}+\cdots+30u-1)$
c_5	$(u^{27}-u^{25}+\cdots+6u+1)(u^{126}-7u^{125}+\cdots+106u-7)$
c_6	$(u^{27}+13u^{25}+\cdots-8u+4)(u^{126}-u^{125}+\cdots-68860u-3292)$
c_7	$(u^{27}-u^{26}+\cdots+11u^2-1)(u^{126}-35u^{124}+\cdots-458u+469)$
c_8	$(u^{27}-5u^{26}+\cdots+u+1)(u^{126}-9u^{124}+\cdots+3761u+521)$
c_9	$(u^{27}+6u^{25}+\cdots+12u-4)$ $\cdot(u^{126}-3u^{125}+\cdots+15229088u-1636828)$
c_{10}	$(u^{27}-13u^{26}+\cdots+19u+1)$ $\cdot(u^{126}-12u^{125}+\cdots-1879129u+1027873)$
c_{11}	$(u^{27}+13u^{25}+\cdots-8u-4)(u^{126}-u^{125}+\cdots-68860u-3292)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$(y^{27}+34y^{26}+\cdots+4y-1)(y^{126}+137y^{125}+\cdots-46y+1)$
c_2, c_7	$(y^{27}-13y^{26}+\cdots+22y-1)$ $\cdot(y^{126}-70y^{125}+\cdots-1412280y+219961)$
c_3	$(y^{27}+8y^{26}+\cdots-19y-1)$ $\cdot(y^{126}+51y^{125}+\cdots+129805452721y+4416532849)$
c_5	$(y^{27}-2y^{26}+\cdots-10y-1)(y^{126}-7y^{125}+\cdots+5088y+49)$
c_6, c_{11}	$(y^{27}+26y^{26}+\cdots-208y-16)$ $\cdot(y^{126}+93y^{125}+\cdots-118823008y+10837264)$
c_8	$(y^{27}-5y^{26}+\cdots+9y-1)$ $\cdot(y^{126}-18y^{125}+\cdots-15152735y+271441)$
c_9	$(y^{27}+12y^{26}+\cdots-160y-16)$ $\cdot(y^{126}+35y^{125}+\cdots-24617509435312y+2679205901584)$
c_{10}	$(y^{27}+11y^{26}+\cdots+689y-1)$ $\cdot(y^{126}-14y^{125}+\cdots-60668343049755y+1056522904129)$