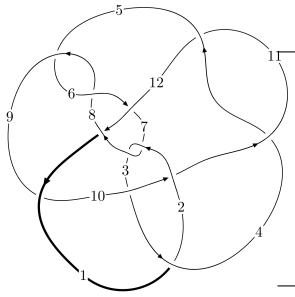
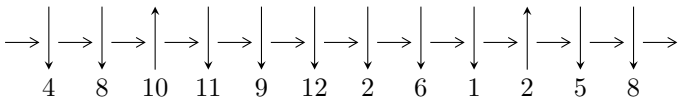
$12n_{0863}$ $(K12n_{0863})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.48412 \times 10^{552} u^{104} + 1.20399 \times 10^{552} u^{103} + \cdots + 1.12741 \times 10^{553} b - 4.63442 \times 10^{554}, \\ & 3.55029 \times 10^{554} u^{104} + 2.93066 \times 10^{554} u^{103} + \cdots + 6.42625 \times 10^{554} a - 1.17419 \times 10^{557}, \\ & u^{105} + u^{104} + \cdots - 170u - 57 \rangle \\ I_2^u = \langle & 1.77671 \times 10^{24} u^{32} + 1.53488 \times 10^{24} u^{31} + \cdots + 1.44503 \times 10^{24} b - 5.63759 \times 10^{24}, \\ & 8.36483 \times 10^{24} u^{32} + 5.76140 \times 10^{24} u^{31} + \cdots + 1.44503 \times 10^{24} a - 2.52600 \times 10^{25}, \ u^{33} + 5u^{31} + \cdots - 2u + 1 \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 138 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. $\boldsymbol{I_1^u = \langle 1.48 \times 10^{552} u^{104} + 1.20 \times 10^{552} u^{103} + \cdots + 1.13 \times 10^{553} b - 4.63 \times 10^{554},\ 3.55 \times 10^{554} u^{104} + 2.93 \times 10^{554} u^{103} + \cdots + 6.43 \times 10^{554} a - 1.17 \times 10^{557},\ u^{105} + u^{104} + \cdots - 170u - 57 \rangle}$

(i) Arc colorings

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

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

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

$$a_{10} = \begin{pmatrix} -0.552466u^{104} - 0.456045u^{103} + \cdots - 517.092u + 182.718 \\ -0.131639u^{104} - 0.106792u^{103} + \cdots - 106.123u + 41.1066 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.561311u^{104} + 0.459171u^{103} + \cdots + 482.206u - 177.562 \\ -0.00726235u^{104} - 0.00463571u^{103} + \cdots + 7.36074u + 2.13346 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.684105u^{104} - 0.562837u^{103} + \cdots - 623.216u + 223.824 \\ -0.131639u^{104} - 0.106792u^{103} + \cdots - 106.123u + 41.1066 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.436986u^{104} - 0.362545u^{103} + \cdots - 426.067u + 147.107 \\ -0.204326u^{104} - 0.164531u^{103} + \cdots - 152.977u + 63.6197 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0563406u^{104} - 0.0414995u^{103} + \cdots - 13.6473u + 14.1812 \\ 0.199358u^{104} + 0.160284u^{103} + \cdots + 145.605u - 61.6449 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} -0.642845u^{104} - 0.522829u^{103} + \cdots - 541.471u + 206.336 \\ 0.232514u^{104} + 0.186815u^{103} + \cdots + 159.915u - 71.2101 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.0563406u^{104} - 0.0414995u^{103} + \cdots - 13.6473u + 14.1812 \\ 0.202183u^{104} + 0.162480u^{103} + \cdots + 146.294u - 62.4908 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.00569159u^{104} + 0.00768304u^{103} + \cdots + 48.7098u - 14.8581 \\ -0.0142608u^{104} - 0.0142884u^{103} + \cdots - 13.3992u + 6.38063 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0298050u^{104} + 0.0240412u^{103} + \cdots - 80.5730u + 3.74527$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{105} - 6u^{104} + \cdots - 1036u - 76$
c_2, c_7	$u^{105} + u^{104} + \cdots - 170u - 57$
c_3	$u^{105} - 3u^{104} + \cdots - 79493u + 29383$
c_4, c_{11}	$u^{105} - 5u^{104} + \cdots + 1974185u + 408799$
c_5, c_8	$u^{105} - 4u^{104} + \cdots - 703u + 103$
c_6	$u^{105} + u^{104} + \cdots + 52772864u + 12173312$
c_9	$u^{105} + 4u^{104} + \cdots - 34152u - 90143$
c_{10}	$u^{105} + 4u^{103} + \cdots - 15298u - 4321$
c_{12}	$u^{105} + 15u^{103} + \cdots - 9777498u - 803449$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{105} - 38y^{104} + \cdots + 1131816y - 5776$
c_2, c_7	$y^{105} + 71y^{104} + \cdots + 115084y - 3249$
c_3	$y^{105} - 25y^{104} + \cdots + 61420019161y - 863360689$
c_4, c_{11}	$y^{105} - 67y^{104} + \cdots + 5174846874963y - 167116622401$
c_5, c_8	$y^{105} + 58y^{104} + \cdots + 102603y - 10609$
c_6	$y^{105} + 7y^{104} + \cdots - 4512411558084608y - 148189525049344$
c_9	$y^{105} + 28y^{104} + \cdots - 370452665546y - 8125760449$
c_{10}	$y^{105} + 8y^{104} + \cdots + 2003573366y - 18671041$
c_{12}	$y^{105} + 30y^{104} + \cdots - 43751002199554y - 645530295601$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.00885$ $a = -1.06197$ $b = -0.898102$	-5.78725	0
$u = 0.348195 + 0.965456I$ $a = -0.662421 - 1.025780I$ $b = 0.710406 - 0.058573I$	$2.72409 - 1.77279I$	0
$u = 0.348195 - 0.965456I$ $a = -0.662421 + 1.025780I$ $b = 0.710406 + 0.058573I$	$2.72409 + 1.77279I$	0
$u = -0.882405 + 0.553989I$ $a = -0.074437 - 1.234280I$ $b = -0.803484 - 0.350969I$	$-3.02144 + 4.95106I$	0
$u = -0.882405 - 0.553989I$ $a = -0.074437 + 1.234280I$ $b = -0.803484 + 0.350969I$	$-3.02144 - 4.95106I$	0
$u = -1.048450 + 0.016990I$ $a = 0.150121 + 0.243755I$ $b = 0.887919 + 0.754009I$	$2.85999 + 1.67647I$	0
$u = -1.048450 - 0.016990I$ $a = 0.150121 - 0.243755I$ $b = 0.887919 - 0.754009I$	$2.85999 - 1.67647I$	0
$u = -0.039793 + 0.949685I$ $a = -0.94004 + 2.15880I$ $b = 0.325952 + 0.295385I$	$1.139280 + 0.028861I$	0
$u = -0.039793 - 0.949685I$ $a = -0.94004 - 2.15880I$ $b = 0.325952 - 0.295385I$	$1.139280 - 0.028861I$	0
$u = 0.154833 + 1.061630I$ $a = -0.189881 - 0.985439I$ $b = 0.219686 - 0.887030I$	$3.52843 + 0.34309I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.154833 - 1.061630I$ $a = -0.189881 + 0.985439I$ $b = 0.219686 + 0.887030I$	$3.52843 - 0.34309I$	0
$u = -0.103126 + 1.071570I$ $a = 2.55043 - 0.88486I$ $b = -0.460766 - 0.226733I$	$1.67730 - 0.43540I$	0
$u = -0.103126 - 1.071570I$ $a = 2.55043 + 0.88486I$ $b = -0.460766 + 0.226733I$	$1.67730 + 0.43540I$	0
$u = 0.280394 + 1.046660I$ $a = -0.855336 - 0.998668I$ $b = 0.279498 + 0.422370I$	$3.38541 + 4.37298I$	0
$u = 0.280394 - 1.046660I$ $a = -0.855336 + 0.998668I$ $b = 0.279498 - 0.422370I$	$3.38541 - 4.37298I$	0
$u = 0.865149 + 0.289940I$ $a = 0.448533 - 0.229635I$ $b = -0.572847 + 0.285068I$	$3.17390 + 3.61321I$	0
$u = 0.865149 - 0.289940I$ $a = 0.448533 + 0.229635I$ $b = -0.572847 - 0.285068I$	$3.17390 - 3.61321I$	0
$u = -0.192554 + 1.080830I$ $a = -1.13241 + 0.91785I$ $b = 0.369316 - 0.142754I$	$0.364601 - 1.008040I$	0
$u = -0.192554 - 1.080830I$ $a = -1.13241 - 0.91785I$ $b = 0.369316 + 0.142754I$	$0.364601 + 1.008040I$	0
$u = -1.106130 + 0.022263I$ $a = 0.304230 + 0.064905I$ $b = -0.620472 - 0.284639I$	$-0.842858 + 0.577647I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.106130-0.022263I$ $a=\ \ 0.304230-0.064905I$ $b=-0.620472+0.284639I$	$-0.842858-0.577647I$	0
$u=-0.147308+1.132450I$ $a=\ \ 0.680847+0.558761I$ $b=-0.08074-1.91420I$	$4.01128-4.49825I$	0
$u=-0.147308-1.132450I$ $a=\ \ 0.680847-0.558761I$ $b=-0.08074+1.91420I$	$4.01128+4.49825I$	0
$u=-0.083055+1.237500I$ $a=-1.164870+0.253601I$ $b=\ \ 0.174375-0.050687I$	$-0.66575-1.62690I$	0
$u=-0.083055-1.237500I$ $a=-1.164870-0.253601I$ $b=\ \ 0.174375+0.050687I$	$-0.66575+1.62690I$	0
$u=\ \ 1.236050+0.239157I$ $a=\ \ 0.227848-0.167445I$ $b=-0.572645+0.208358I$	$2.51261-5.54800I$	0
$u=\ \ 1.236050-0.239157I$ $a=\ \ 0.227848+0.167445I$ $b=-0.572645-0.208358I$	$2.51261+5.54800I$	0
$u=\ \ 1.226200+0.357895I$ $a=-0.53776-1.86174I$ $b=\ \ 0.72445-1.71790I$	$-5.08876-5.11598I$	0
$u=\ \ 1.226200-0.357895I$ $a=-0.53776+1.86174I$ $b=\ \ 0.72445+1.71790I$	$-5.08876+5.11598I$	0
$u=\ \ 0.063832+1.295060I$ $a=\ \ 1.65525-0.34732I$ $b=-2.26657+0.80603I$	$-0.57254-2.89314I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.063832 - 1.295060I$ $a = 1.65525 + 0.34732I$ $b = -2.26657 - 0.80603I$	$-0.57254 + 2.89314I$	0
$u = -1.238160 + 0.463453I$ $a = 0.79304 - 1.45662I$ $b = 0.03881 - 1.52223I$	$-4.93497 + 2.84907I$	0
$u = -1.238160 - 0.463453I$ $a = 0.79304 + 1.45662I$ $b = 0.03881 + 1.52223I$	$-4.93497 - 2.84907I$	0
$u = -0.399911 + 1.275490I$ $a = -0.172192 + 0.478716I$ $b = 0.058675 + 1.256580I$	$-1.54838 + 3.08573I$	0
$u = -0.399911 - 1.275490I$ $a = -0.172192 - 0.478716I$ $b = 0.058675 - 1.256580I$	$-1.54838 - 3.08573I$	0
$u = 0.229126 + 1.346680I$ $a = -0.376831 - 0.495639I$ $b = 0.296690 - 1.284650I$	$1.23760 - 8.74933I$	0
$u = 0.229126 - 1.346680I$ $a = -0.376831 + 0.495639I$ $b = 0.296690 + 1.284650I$	$1.23760 + 8.74933I$	0
$u = -0.041520 + 1.372500I$ $a = 1.164370 + 0.676393I$ $b = -1.24873 - 1.66615I$	$4.91419 + 6.34054I$	0
$u = -0.041520 - 1.372500I$ $a = 1.164370 - 0.676393I$ $b = -1.24873 + 1.66615I$	$4.91419 - 6.34054I$	0
$u = 0.228098 + 1.362980I$ $a = 1.294570 - 0.291387I$ $b = -1.35669 + 0.81998I$	$-1.00864 - 4.56909I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.228098 - 1.362980I$ $a = 1.294570 + 0.291387I$ $b = -1.35669 - 0.81998I$	$-1.00864 + 4.56909I$	0
$u = 0.312196 + 0.497800I$ $a = 0.639712 - 1.158230I$ $b = 0.469719 - 0.217151I$	$2.47650 - 1.66847I$	$-3.45154 + 5.02678I$
$u = 0.312196 - 0.497800I$ $a = 0.639712 + 1.158230I$ $b = 0.469719 + 0.217151I$	$2.47650 + 1.66847I$	$-3.45154 - 5.02678I$
$u = 0.003272 + 0.582488I$ $a = 1.79426 - 0.05896I$ $b = -0.357439 + 1.134590I$	$-2.68145 + 2.02181I$	$-11.81133 - 2.88487I$
$u = 0.003272 - 0.582488I$ $a = 1.79426 + 0.05896I$ $b = -0.357439 - 1.134590I$	$-2.68145 - 2.02181I$	$-11.81133 + 2.88487I$
$u = -0.31220 + 1.39758I$ $a = 1.285580 + 0.215743I$ $b = -1.23383 - 0.73383I$	$0.27047 + 8.38475I$	0
$u = -0.31220 - 1.39758I$ $a = 1.285580 - 0.215743I$ $b = -1.23383 + 0.73383I$	$0.27047 - 8.38475I$	0
$u = 0.29460 + 1.40974I$ $a = 0.092946 - 0.660471I$ $b = 0.59127 + 2.41827I$	$-0.673280 - 0.650624I$	0
$u = 0.29460 - 1.40974I$ $a = 0.092946 + 0.660471I$ $b = 0.59127 - 2.41827I$	$-0.673280 + 0.650624I$	0
$u = -0.07668 + 1.46399I$ $a = -1.206110 + 0.360721I$ $b = 1.60191 - 0.64461I$	$8.68127 - 2.24594I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.07668-1.46399I$ $a=-1.206110-0.360721I$ $b=\ \ 1.60191+0.64461I$	$8.68127+2.24594I$	0
$u=-0.70994+1.28783I$ $a=-1.47288+0.37777I$ $b=\ \ 1.19730+1.36513I$	$6.25218+7.58348I$	0
$u=-0.70994-1.28783I$ $a=-1.47288-0.37777I$ $b=\ \ 1.19730-1.36513I$	$6.25218-7.58348I$	0
$u=\ \ 0.33058+1.44175I$ $a=-0.938226-0.413350I$ $b=\ \ 1.360830+0.106838I$	$4.89114-0.64461I$	0
$u=\ \ 0.33058-1.44175I$ $a=-0.938226+0.413350I$ $b=\ \ 1.360830-0.106838I$	$4.89114+0.64461I$	0
$u=-0.75671+1.27175I$ $a=\ \ 0.736155-0.455360I$ $b=-0.623160-0.429076I$	$2.18463+5.33911I$	0
$u=-0.75671-1.27175I$ $a=\ \ 0.736155+0.455360I$ $b=-0.623160+0.429076I$	$2.18463-5.33911I$	0
$u=\ \ 1.47880+0.12223I$ $a=-0.185930+0.149991I$ $b=-0.651144+0.052905I$	$-6.81012-0.61547I$	0
$u=\ \ 1.47880-0.12223I$ $a=-0.185930-0.149991I$ $b=-0.651144-0.052905I$	$-6.81012+0.61547I$	0
$u=\ \ 0.62230+1.35537I$ $a=\ \ 0.840369+0.344336I$ $b=-0.643401+0.428845I$	$6.34667-1.10144I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.62230 - 1.35537I$ $a = 0.840369 - 0.344336I$ $b = -0.643401 - 0.428845I$	$6.34667 + 1.10144I$	0
$u = -0.482486$ $a = 0.684884$ $b = -0.314458$	-0.781350	-12.3030
$u = 0.42555 + 1.45991I$ $a = 1.361490 + 0.007867I$ $b = -1.090170 + 0.618422I$	$8.14844 - 11.14900I$	0
$u = 0.42555 - 1.45991I$ $a = 1.361490 - 0.007867I$ $b = -1.090170 - 0.618422I$	$8.14844 + 11.14900I$	0
$u = -0.13865 + 1.51969I$ $a = -0.551295 + 0.819686I$ $b = 1.31421 - 2.57294I$	$3.05959 + 7.01100I$	0
$u = -0.13865 - 1.51969I$ $a = -0.551295 - 0.819686I$ $b = 1.31421 + 2.57294I$	$3.05959 - 7.01100I$	0
$u = 0.13338 + 1.52215I$ $a = 1.077670 - 0.365529I$ $b = -1.04700 + 1.06147I$	$0.81638 - 5.91781I$	0
$u = 0.13338 - 1.52215I$ $a = 1.077670 + 0.365529I$ $b = -1.04700 - 1.06147I$	$0.81638 + 5.91781I$	0
$u = 0.46963 + 1.46115I$ $a = 1.318810 + 0.145274I$ $b = -1.025160 + 0.640165I$	$8.22409 - 1.50078I$	0
$u = 0.46963 - 1.46115I$ $a = 1.318810 - 0.145274I$ $b = -1.025160 - 0.640165I$	$8.22409 + 1.50078I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.43091+1.47947I$ $a=\ \ 1.296670-0.036495I$ $b=-1.071350-0.646164I$	$4.39410+6.33235I$	0
$u=-0.43091-1.47947I$ $a=\ \ 1.296670+0.036495I$ $b=-1.071350+0.646164I$	$4.39410-6.33235I$	0
$u=\ \ 0.083730+0.451200I$ $a=\ \ 0.677120+0.311089I$ $b=\ \ 0.201882+0.955068I$	$-0.74473+1.44413I$	$-5.53724-4.67783I$
$u=\ \ 0.083730-0.451200I$ $a=\ \ 0.677120-0.311089I$ $b=\ \ 0.201882-0.955068I$	$-0.74473-1.44413I$	$-5.53724+4.67783I$
$u=\ \ 0.203831+0.380233I$ $a=\ \ 2.08834-2.27611I$ $b=-0.371039+1.241660I$	$0.89739-6.76404I$	$-11.19086+8.43539I$
$u=\ \ 0.203831-0.380233I$ $a=\ \ 2.08834+2.27611I$ $b=-0.371039-1.241660I$	$0.89739+6.76404I$	$-11.19086-8.43539I$
$u=-0.23577+1.55425I$ $a=\ \ 1.078230+0.233013I$ $b=-1.025230-0.881236I$	$1.29794+3.70302I$	0
$u=-0.23577-1.55425I$ $a=\ \ 1.078230-0.233013I$ $b=-1.025230+0.881236I$	$1.29794-3.70302I$	0
$u=-1.57917+0.03103I$ $a=-0.0533625-0.0982304I$ $b=-0.605868-0.018490I$	$-5.66849-2.55661I$	0
$u=-1.57917-0.03103I$ $a=-0.0533625+0.0982304I$ $b=-0.605868+0.018490I$	$-5.66849+2.55661I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.83022 + 1.34537I$ $a = 0.663527 + 0.396428I$ $b = -0.613004 + 0.434990I$	$5.49972 - 10.30020I$	0
$u = 0.83022 - 1.34537I$ $a = 0.663527 - 0.396428I$ $b = -0.613004 - 0.434990I$	$5.49972 + 10.30020I$	0
$u = 1.50373 + 0.50545I$ $a = 0.1123280 + 0.0511668I$ $b = 1.32773 + 1.01370I$	$-2.78390 + 4.27025I$	0
$u = 1.50373 - 0.50545I$ $a = 0.1123280 - 0.0511668I$ $b = 1.32773 - 1.01370I$	$-2.78390 - 4.27025I$	0
$u = -0.066939 + 0.405666I$ $a = 2.50737 + 0.82756I$ $b = -0.466976 - 1.200310I$	$-4.16732 + 2.73517I$	$-15.0758 - 4.3982I$
$u = -0.066939 - 0.405666I$ $a = 2.50737 - 0.82756I$ $b = -0.466976 + 1.200310I$	$-4.16732 - 2.73517I$	$-15.0758 + 4.3982I$
$u = -0.183913 + 0.325454I$ $a = 0.843966 + 0.063812I$ $b = -0.815559 - 0.074780I$	$-2.02226 - 1.47858I$	$-7.39555 + 0.13809I$
$u = -0.183913 - 0.325454I$ $a = 0.843966 - 0.063812I$ $b = -0.815559 + 0.074780I$	$-2.02226 + 1.47858I$	$-7.39555 - 0.13809I$
$u = -0.49895 + 1.55034I$ $a = -0.809382 + 0.317619I$ $b = 1.396580 + 0.161121I$	$7.73256 + 4.65172I$	0
$u = -0.49895 - 1.55034I$ $a = -0.809382 - 0.317619I$ $b = 1.396580 - 0.161121I$	$7.73256 - 4.65172I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.65042+0.25808I$ $a=\ 0.0663876-0.0767783I$ $b=\ 1.35004-0.76460I$	$-0.42589-10.17330I$	0
$u=-1.65042-0.25808I$ $a=\ 0.0663876+0.0767783I$ $b=\ 1.35004+0.76460I$	$-0.42589+10.17330I$	0
$u=\ 0.80656+1.46898I$ $a=-1.234740-0.340385I$ $b=\ 1.31985-1.36023I$	$0.52720-12.47360I$	0
$u=\ 0.80656-1.46898I$ $a=-1.234740+0.340385I$ $b=\ 1.31985+1.36023I$	$0.52720+12.47360I$	0
$u=-0.74976+1.53505I$ $a=-1.214490+0.255160I$ $b=\ 1.33025+1.30767I$	$3.8245+18.4525I$	0
$u=-0.74976-1.53505I$ $a=-1.214490-0.255160I$ $b=\ 1.33025-1.30767I$	$3.8245-18.4525I$	0
$u=\ 0.175097+0.107376I$ $a=\ 14.0391-4.2371I$ $b=\ 1.063330+0.199075I$	$-3.38412+6.82740I$	$-0.24680+3.56619I$
$u=\ 0.175097-0.107376I$ $a=\ 14.0391+4.2371I$ $b=\ 1.063330-0.199075I$	$-3.38412-6.82740I$	$-0.24680-3.56619I$
$u=\ 0.104744+0.156467I$ $a=\ 1.77469+1.12513I$ $b=-0.457202-1.206330I$	$-5.79468+3.08478I$	$-2.30309-8.24854I$
$u=\ 0.104744-0.156467I$ $a=\ 1.77469-1.12513I$ $b=-0.457202+1.206330I$	$-5.79468-3.08478I$	$-2.30309+8.24854I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.187201+0.005049I$ $a=\ \ 1.69866+1.23487I$ $b=-0.461309-1.195210I$	$-5.26068+6.07686I$	$-7.33125+6.40979I$
$u=-0.187201-0.005049I$ $a=\ \ 1.69866-1.23487I$ $b=-0.461309+1.195210I$	$-5.26068-6.07686I$	$-7.33125-6.40979I$
$u=-0.174967$ $a=\ \ 19.9870$ $b=\ \ 1.20826$	-7.48184	4.23660
$u=-0.22616+1.94445I$ $a=-0.865159+0.094520I$ $b=\ \ 1.93324+0.15107I$	$7.42005-2.11875I$	0
$u=-0.22616-1.94445I$ $a=-0.865159-0.094520I$ $b=\ \ 1.93324-0.15107I$	$7.42005+2.11875I$	0

II.

$\boldsymbol{I_2^u = \langle 1.78\times 10^{24}u^{32}+1.53\times 10^{24}u^{31}+\cdots+1.45\times 10^{24}b-5.64\times 10^{24},\ 8.36\times 10^{24}u^{32}+5.76\times 10^{24}u^{31}+\cdots+1.45\times 10^{24}a-2.53\times 10^{25},\ u^{33}+5u^{31}+\cdots-2u+1\rangle}$

(i) Arc colorings

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

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

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

$$a_{10} = \begin{pmatrix}-5.78870u^{32}-3.98705u^{31}+\cdots-15.7855u+17.4806\\-1.22953u^{32}-1.06218u^{31}+\cdots-5.12342u+3.90137\end{pmatrix}$$

$$a_4 = \begin{pmatrix}-2.05054u^{32}-1.27865u^{31}+\cdots-5.29197u+9.20252\\0.0977018u^{32}-0.0773857u^{31}+\cdots-1.42043u-0.000334547\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-7.01823u^{32}-5.04923u^{31}+\cdots-20.9089u+21.3820\\-1.22953u^{32}-1.06218u^{31}+\cdots-5.12342u+3.90137\end{pmatrix}$$

$$a_5 = \begin{pmatrix}5.48485u^{32}+3.51532u^{31}+\cdots+12.8475u-17.5663\\0.394815u^{32}-0.230944u^{31}+\cdots-3.46786u-2.71207\end{pmatrix}$$

$$a_1 = \begin{pmatrix}0.801376u^{32}+0.605521u^{31}+\cdots+3.98219u-4.91088\\0.703336u^{32}+0.732456u^{31}+\cdots+5.87035u-1.03419\end{pmatrix}$$

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

$$a_9 = \begin{pmatrix}-4.35415u^{32}-2.88013u^{31}+\cdots-8.98329u+10.2597\\0.206916u^{32}+0.511697u^{31}+\cdots+4.54051u+1.95656\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}0.801376u^{32}+0.605521u^{31}+\cdots+3.98219u-4.91088\\0.919580u^{32}+0.973673u^{31}+\cdots+5.46069u-0.428667\end{pmatrix}$$

$$a_6 = \begin{pmatrix}0.831163u^{32}+1.07641u^{31}+\cdots+7.83590u-1.47642\\1.94806u^{32}+0.0176490u^{31}+\cdots-0.375834u-3.02459\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{28268463093251392453974 91}{240838052377061530641356}u^{32}+\frac{36602225777028399066461 33}{48167610475412306128 2712}u^{31}+\cdots+\frac{95010604981273863173044 19}{240838052377061530641356}u-\frac{27385233709203628237045931}{48167610475412306128 2712}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{33} - 11u^{32} + \cdots + 5u - 1$
c_2	$u^{33} + 5u^{31} + \cdots - 2u + 1$
c_3	$u^{33} + 4u^{32} + \cdots + 3u + 1$
c_4	$u^{33} + 4u^{32} + \cdots + 5u + 1$
c_5	$u^{33} - 7u^{32} + \cdots + 39u - 9$
c_6	$u^{33} - 11u^{31} + \cdots - 31u + 11$
c_7	$u^{33} + 5u^{31} + \cdots - 2u - 1$
c_8	$u^{33} + 7u^{32} + \cdots + 39u + 9$
c_9	$u^{33} + 3u^{32} + \cdots - 532u + 71$
c_{10}	$u^{33} - 3u^{32} + \cdots + 28u + 11$
c_{11}	$u^{33} - 4u^{32} + \cdots + 5u - 1$
c_{12}	$u^{33} + 3u^{32} + \cdots + 2u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{33} - 23y^{32} + \cdots + 13y - 1$
c_2, c_7	$y^{33} + 10y^{32} + \cdots + 16y - 1$
c_3	$y^{33} + 6y^{32} + \cdots - 7y - 1$
c_4, c_{11}	$y^{33} - 28y^{32} + \cdots - y - 1$
c_5, c_8	$y^{33} + 17y^{32} + \cdots - 945y - 81$
c_6	$y^{33} - 22y^{32} + \cdots - 535y - 121$
c_9	$y^{33} + 7y^{32} + \cdots + 2290y - 5041$
c_{10}	$y^{33} + 19y^{32} + \cdots + 1774y - 121$
c_{12}	$y^{33} - 11y^{32} + \cdots + 22y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.047398+1.067740I$ $a=-1.94243+1.63642I$ $b=\ \ 0.287384+0.108869I$	$1.38560+0.28953I$	$10.35319+8.61332I$
$u=-0.047398-1.067740I$ $a=-1.94243-1.63642I$ $b=\ \ 0.287384-0.108869I$	$1.38560-0.28953I$	$10.35319-8.61332I$
$u=\ \ 1.076700+0.385375I$ $a=-0.92843-1.73329I$ $b=-0.241219-1.334150I$	$-5.30370-3.00443I$	$-22.1299+5.0938I$
$u=\ \ 1.076700-0.385375I$ $a=-0.92843+1.73329I$ $b=-0.241219+1.334150I$	$-5.30370+3.00443I$	$-22.1299-5.0938I$
$u=\ \ 0.177500+0.772032I$ $a=-0.32686-2.17301I$ $b=\ \ 0.346860-0.435015I$	$2.24094+0.64439I$	$-5.29105+3.68105I$
$u=\ \ 0.177500-0.772032I$ $a=-0.32686+2.17301I$ $b=\ \ 0.346860+0.435015I$	$2.24094-0.64439I$	$-5.29105-3.68105I$
$u=-1.097380+0.526178I$ $a=\ \ 0.98574-1.81257I$ $b=-0.95771-1.65709I$	$-5.34522+4.74467I$	$-18.5790-0.1903I$
$u=-1.097380-0.526178I$ $a=\ \ 0.98574+1.81257I$ $b=-0.95771+1.65709I$	$-5.34522-4.74467I$	$-18.5790+0.1903I$
$u=-0.003420+1.252360I$ $a=\ \ 1.20585-0.78434I$ $b=-0.923516+1.039520I$	$2.72807-6.22195I$	$-5.47248+6.71175I$
$u=-0.003420-1.252360I$ $a=\ \ 1.20585+0.78434I$ $b=-0.923516-1.039520I$	$2.72807+6.22195I$	$-5.47248-6.71175I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.691568+0.281104I$ $a=-1.152140-0.330539I$ $b=\ 0.035133+0.816711I$	$1.43897+5.29484I$	$-10.19832-3.82720I$
$u=-0.691568-0.281104I$ $a=-1.152140+0.330539I$ $b=\ 0.035133-0.816711I$	$1.43897-5.29484I$	$-10.19832+3.82720I$
$u=\ 0.651366+0.292883I$ $a=-0.676182+0.606150I$ $b=\ 0.292305+0.774176I$	$-1.72184+1.07497I$	$-15.5907-2.0601I$
$u=\ 0.651366-0.292883I$ $a=-0.676182-0.606150I$ $b=\ 0.292305-0.774176I$	$-1.72184-1.07497I$	$-15.5907+2.0601I$
$u=\ 0.181633+1.352750I$ $a=\ 0.804492-0.237698I$ $b=-0.74270+1.80154I$	$-0.73421-1.70992I$	$-11.70848+2.24821I$
$u=\ 0.181633-1.352750I$ $a=\ 0.804492+0.237698I$ $b=-0.74270-1.80154I$	$-0.73421+1.70992I$	$-11.70848-2.24821I$
$u=-0.127975+1.389140I$ $a=-0.058961+0.785637I$ $b=\ 0.22988-2.34679I$	$3.64188+7.23533I$	$-3.46590-9.12142I$
$u=-0.127975-1.389140I$ $a=-0.058961-0.785637I$ $b=\ 0.22988+2.34679I$	$3.64188-7.23533I$	$-3.46590+9.12142I$
$u=\ 1.405720+0.063134I$ $a=-0.266871+0.071226I$ $b=-0.400752-0.246696I$	$-5.96998-2.38480I$	$-19.5712-0.9458I$
$u=\ 1.405720-0.063134I$ $a=-0.266871-0.071226I$ $b=-0.400752+0.246696I$	$-5.96998+2.38480I$	$-19.5712+0.9458I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.547361+0.222088I$ $a=-0.120353-0.165309I$ $b=-0.559102+1.160890I$	$-6.09791-2.87460I$	$-20.4082-3.6083I$
$u=-0.547361-0.222088I$ $a=-0.120353+0.165309I$ $b=-0.559102-1.160890I$	$-6.09791+2.87460I$	$-20.4082+3.6083I$
$u=-1.44264+0.06161I$ $a=-0.197023-0.055770I$ $b=-0.686253+0.296705I$	$-6.88348-0.94537I$	$-15.1445+12.6167I$
$u=-1.44264-0.06161I$ $a=-0.197023+0.055770I$ $b=-0.686253-0.296705I$	$-6.88348+0.94537I$	$-15.1445-12.6167I$
$u=\ \ 0.451578+0.323925I$ $a=-0.145044-0.182534I$ $b=-0.389567+1.131660I$	$-5.33852-6.40157I$	$-13.5033+16.6702I$
$u=\ \ 0.451578-0.323925I$ $a=-0.145044+0.182534I$ $b=-0.389567-1.131660I$	$-5.33852+6.40157I$	$-13.5033-16.6702I$
$u=\ \ 0.496243+0.165983I$ $a=\ \ 4.28178-3.61836I$ $b=\ \ 1.076050-0.325202I$	$-3.59142-7.04557I$	$-18.8887+15.9871I$
$u=\ \ 0.496243-0.165983I$ $a=\ \ 4.28178+3.61836I$ $b=\ \ 1.076050+0.325202I$	$-3.59142+7.04557I$	$-18.8887-15.9871I$
$u=-0.488148$ $a=\ \ 7.01137$ $b=\ \ 1.23162$	-7.69362	-34.2900
$u=-0.14439+1.58533I$ $a=\ \ 1.026680+0.290568I$ $b=-1.18784-0.89736I$	$0.77314+4.98555I$	$-8.00000+0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.14439-1.58533I$ $a=\ \ 1.026680-0.290568I$ $b=-1.18784+0.89736I$	$0.77314-4.98555I$	$-8.00000+0.I$
$u=-0.09453+1.71697I$ $a=-0.995925+0.082753I$ $b=\ \ 1.70523-0.19536I$	$7.95049-1.46186I$	0
$u=-0.09453-1.71697I$ $a=-0.995925-0.082753I$ $b=\ \ 1.70523+0.19536I$	$7.95049+1.46186I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{33}-11u^{32}+\cdots+5u-1)(u^{105}-6u^{104}+\cdots-1036u-76)$
c_2	$(u^{33}+5u^{31}+\cdots-2u+1)(u^{105}+u^{104}+\cdots-170u-57)$
c_3	$(u^{33}+4u^{32}+\cdots+3u+1)(u^{105}-3u^{104}+\cdots-79493u+29383)$
c_4	$(u^{33}+4u^{32}+\cdots+5u+1)(u^{105}-5u^{104}+\cdots+1974185u+408799)$
c_5	$(u^{33}-7u^{32}+\cdots+39u-9)(u^{105}-4u^{104}+\cdots-703u+103)$
c_6	$(u^{33}-11u^{31}+\cdots-31u+11)$ $\cdot(u^{105}+u^{104}+\cdots+52772864u+12173312)$
c_7	$(u^{33}+5u^{31}+\cdots-2u-1)(u^{105}+u^{104}+\cdots-170u-57)$
c_8	$(u^{33}+7u^{32}+\cdots+39u+9)(u^{105}-4u^{104}+\cdots-703u+103)$
c_9	$(u^{33}+3u^{32}+\cdots-532u+71)(u^{105}+4u^{104}+\cdots-34152u-90143)$
c_{10}	$(u^{33}-3u^{32}+\cdots+28u+11)(u^{105}+4u^{103}+\cdots-15298u-4321)$
c_{11}	$(u^{33}-4u^{32}+\cdots+5u-1)(u^{105}-5u^{104}+\cdots+1974185u+408799)$
c_{12}	$(u^{33}+3u^{32}+\cdots+2u-1)(u^{105}+15u^{103}+\cdots-9777498u-803449)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{33}-23y^{32}+\cdots+13y-1)(y^{105}-38y^{104}+\cdots+1131816y-5776)$
c_2, c_7	$(y^{33}+10y^{32}+\cdots+16y-1)(y^{105}+71y^{104}+\cdots+115084y-3249)$
c_3	$(y^{33}+6y^{32}+\cdots-7y-1)$ $\cdot(y^{105}-25y^{104}+\cdots+61420019161y-863360689)$
c_4, c_{11}	$(y^{33}-28y^{32}+\cdots-y-1)$ $\cdot(y^{105}-67y^{104}+\cdots+5174846874963y-167116622401)$
c_5, c_8	$(y^{33}+17y^{32}+\cdots-945y-81)$ $\cdot(y^{105}+58y^{104}+\cdots+102603y-10609)$
c_6	$(y^{33}-22y^{32}+\cdots-535y-121)$ $\cdot(y^{105}+7y^{104}+\cdots-4512411558084608y-148189525049344)$
c_9	$(y^{33}+7y^{32}+\cdots+2290y-5041)$ $\cdot(y^{105}+28y^{104}+\cdots-370452665546y-8125760449)$
c_{10}	$(y^{33}+19y^{32}+\cdots+1774y-121)$ $\cdot(y^{105}+8y^{104}+\cdots+2003573366y-18671041)$
c_{12}	$(y^{33}-11y^{32}+\cdots+22y-1)$ $\cdot(y^{105}+30y^{104}+\cdots-43751002199554y-645530295601)$