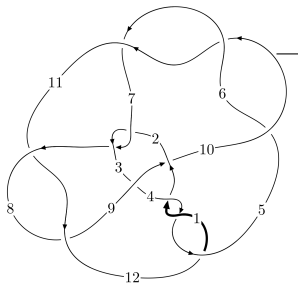
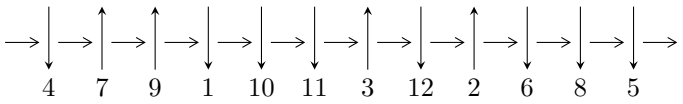
$12a_{1066}$ $(K12a_{1066})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.17416 \times 10^{167} u^{107} + 1.20918 \times 10^{168} u^{106} + \cdots + 4.51045 \times 10^{167} b + 1.01541 \times 10^{170}, \\ & - 1.07213 \times 10^{170} u^{107} + 1.67093 \times 10^{170} u^{106} + \cdots + 7.06637 \times 10^{168} a + 1.11521 \times 10^{172}, \\ & u^{108} - 2u^{107} + \cdots - 299u + 47 \rangle \\ I_2^u = \langle & -u^{26} - 3u^{25} + \cdots + b - 1,\ -4u^{26} - 10u^{25} + \cdots + a + 5,\ u^{27} + 3u^{26} + \cdots + 6u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 135 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. $\boldsymbol{I_1^u = \langle -6.17 \times 10^{167} u^{107} + 1.21 \times 10^{168} u^{106} + \cdots + 4.51 \times 10^{167} b + 1.02 \times 10^{170},\ -1.07 \times 10^{170} u^{107} + 1.67 \times 10^{170} u^{106} + \cdots + 7.07 \times 10^{168} a + 1.12 \times 10^{172},\ u^{108} - 2u^{107} + \cdots - 299u + 47 \rangle}$

(i) Arc colorings

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

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 15.1723u^{107} - 23.6463u^{106} + \cdots + 6660.78u - 1578.19 \\ 1.36886u^{107} - 2.68085u^{106} + \cdots + 921.712u - 225.124 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 20.0873u^{107} - 30.6623u^{106} + \cdots + 8396.19u - 2000.20 \\ -3.49659u^{107} + 5.45677u^{106} + \cdots - 1424.06u + 329.133 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 28.1414u^{107} - 43.5083u^{106} + \cdots + 11918.4u - 2851.74 \\ -8.48372u^{107} + 13.3771u^{106} + \cdots - 3599.41u + 861.349 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 6.47264u^{107} - 9.65167u^{106} + \cdots + 2937.00u - 738.000 \\ 5.66238u^{107} - 8.30970u^{106} + \cdots + 2515.37u - 615.722 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 12.6300u^{107} - 19.1931u^{106} + \cdots + 5323.74u - 1266.05 \\ -1.17347u^{107} + 1.77231u^{106} + \cdots - 415.326u + 87.0247 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.134410u^{107} + 1.57897u^{106} + \cdots - 199.017u + 71.6823 \\ -8.59288u^{107} + 13.8267u^{106} + \cdots - 3500.53u + 823.438 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -17.2692u^{107} + 25.8300u^{106} + \cdots - 7157.94u + 1718.79 \\ 11.0079u^{107} - 17.3057u^{106} + \cdots + 4803.68u - 1152.57 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 133.129u^{107} - 204.954u^{106} + \cdots + 56643.2u - 13565.8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_{12}	$u^{108} - 2u^{107} + \cdots - 299u + 47$
c_2, c_7	$u^{108} + u^{107} + \cdots + u + 1$
c_3	$u^{108} - u^{107} + \cdots - 28281u + 2677$
c_5, c_6, c_{10}	$u^{108} - u^{107} + \cdots + 575u - 103$
c_8, c_{11}	$u^{108} - 38u^{106} + \cdots - 2046u + 89$
c_9	$u^{108} + 3u^{107} + \cdots - 492579u + 108211$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{108} + 102y^{107} + \cdots - 95417y + 2209$
c_2, c_7	$y^{108} - 55y^{107} + \cdots - 31y + 1$
c_3	$y^{108} - 17y^{107} + \cdots - 304371863y + 7166329$
c_5, c_6, c_{10}	$y^{108} - 109y^{107} + \cdots - 159233y + 10609$
c_8, c_{11}	$y^{108} - 76y^{107} + \cdots - 3384048y + 7921$
c_9	$y^{108} - 13y^{107} + \cdots + 118667308219y + 11709620521$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.960885+0.291199I$ $a=-0.249799+0.319511I$ $b=\ \ 1.048870+0.325112I$	$-9.01540+5.66019I$	0
$u=-0.960885-0.291199I$ $a=-0.249799-0.319511I$ $b=\ \ 1.048870-0.325112I$	$-9.01540-5.66019I$	0
$u=\ \ 0.879867+0.356835I$ $a=\ \ 0.463996+0.497326I$ $b=-1.100970+0.398607I$	$-6.4421-12.9182I$	0
$u=\ \ 0.879867-0.356835I$ $a=\ \ 0.463996-0.497326I$ $b=-1.100970-0.398607I$	$-6.4421+12.9182I$	0
$u=\ \ 0.915261$ $a=-0.232583$ $b=-1.24242$	-0.201236	0
$u=-0.756019+0.477784I$ $a=\ \ 0.290448-0.199196I$ $b=\ \ 0.079001-0.498921I$	$-4.52075+2.63427I$	0
$u=-0.756019-0.477784I$ $a=\ \ 0.290448+0.199196I$ $b=\ \ 0.079001+0.498921I$	$-4.52075-2.63427I$	0
$u=\ \ 0.607423+0.651574I$ $a=-0.371400+0.981234I$ $b=\ \ 0.129075-0.255913I$	$0.66299+4.02428I$	0
$u=\ \ 0.607423-0.651574I$ $a=-0.371400-0.981234I$ $b=\ \ 0.129075+0.255913I$	$0.66299-4.02428I$	0
$u=-0.629163+0.913726I$ $a=\ \ 0.046330+0.624056I$ $b=-0.360205-0.065003I$	$-1.34592+1.86587I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.629163-0.913726I$ $a=\ \ 0.046330-0.624056I$ $b=-0.360205+0.065003I$	$-1.34592-1.86587I$	0
$u=-0.799233+0.384923I$ $a=\ \ 0.393026-0.191895I$ $b=-0.780162-0.402902I$	$-2.75619+3.19878I$	0
$u=-0.799233-0.384923I$ $a=\ \ 0.393026+0.191895I$ $b=-0.780162+0.402902I$	$-2.75619-3.19878I$	0
$u=\ \ 0.680217+0.881835I$ $a=\ \ 0.110805-0.836202I$ $b=-0.113620+0.333723I$	$-4.89449+7.56548I$	0
$u=\ \ 0.680217-0.881835I$ $a=\ \ 0.110805+0.836202I$ $b=-0.113620-0.333723I$	$-4.89449-7.56548I$	0
$u=-0.713702+0.467724I$ $a=\ \ 0.685472-0.609005I$ $b=-0.214722-0.196909I$	$-4.55568+2.15661I$	0
$u=-0.713702-0.467724I$ $a=\ \ 0.685472+0.609005I$ $b=-0.214722+0.196909I$	$-4.55568-2.15661I$	0
$u=\ \ 0.741551+0.400490I$ $a=-0.532830-0.358069I$ $b=\ \ 1.077380-0.535396I$	$-0.12708-8.61802I$	0
$u=\ \ 0.741551-0.400490I$ $a=-0.532830+0.358069I$ $b=\ \ 1.077380+0.535396I$	$-0.12708+8.61802I$	0
$u=-0.871367+0.785491I$ $a=-0.015895-0.166669I$ $b=\ \ 0.471406-0.061492I$	$-4.51827+3.11099I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.871367-0.785491I$ $a=-0.015895+0.166669I$ $b=\ \ 0.471406+0.061492I$	$-4.51827-3.11099I$	0
$u=\ \ 0.628602+0.514592I$ $a=\ \ 0.140119+0.038698I$ $b=-0.942555-0.441495I$	$-2.52085+2.11298I$	0
$u=\ \ 0.628602-0.514592I$ $a=\ \ 0.140119-0.038698I$ $b=-0.942555+0.441495I$	$-2.52085-2.11298I$	0
$u=\ \ 0.658355+0.427540I$ $a=-0.50852-1.37677I$ $b=\ \ 0.167600+0.058679I$	$-2.76561-6.36964I$	0
$u=\ \ 0.658355-0.427540I$ $a=-0.50852+1.37677I$ $b=\ \ 0.167600-0.058679I$	$-2.76561+6.36964I$	0
$u=-0.015750+1.241230I$ $a=-0.55862-1.97146I$ $b=-0.452918-0.930203I$	$1.21460+1.83268I$	0
$u=-0.015750-1.241230I$ $a=-0.55862+1.97146I$ $b=-0.452918+0.930203I$	$1.21460-1.83268I$	0
$u=-0.000500+1.271320I$ $a=-0.490111-0.034234I$ $b=-0.735300+1.164510I$	$1.49298-1.58324I$	0
$u=-0.000500-1.271320I$ $a=-0.490111+0.034234I$ $b=-0.735300-1.164510I$	$1.49298+1.58324I$	0
$u=-0.139816+1.267230I$ $a=-2.81942-0.52924I$ $b=-2.80141-1.17487I$	$-3.26505-2.41999I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.139816-1.267230I$ $a=-2.81942+0.52924I$ $b=-2.80141+1.17487I$	$-3.26505+2.41999I$	0
$u=-0.668451+1.095630I$ $a=\ \ 0.175348-0.759921I$ $b=\ \ 0.397156+0.121065I$	$-6.66351+0.05480I$	0
$u=-0.668451-1.095630I$ $a=\ \ 0.175348+0.759921I$ $b=\ \ 0.397156-0.121065I$	$-6.66351-0.05480I$	0
$u=-0.114982+1.283170I$ $a=-2.17584-0.88097I$ $b=-3.09042-1.67081I$	$-2.89688+5.98499I$	0
$u=-0.114982-1.283170I$ $a=-2.17584+0.88097I$ $b=-3.09042+1.67081I$	$-2.89688-5.98499I$	0
$u=\ \ 0.145553+1.285280I$ $a=\ \ 2.14352-0.14424I$ $b=\ \ 2.38908-1.20652I$	$-5.82754-2.11330I$	0
$u=\ \ 0.145553-1.285280I$ $a=\ \ 2.14352+0.14424I$ $b=\ \ 2.38908+1.20652I$	$-5.82754+2.11330I$	0
$u=\ \ 0.139891+1.303940I$ $a=\ \ 1.46519-0.44271I$ $b=\ \ 1.84127-1.77249I$	$-5.64315-2.18598I$	0
$u=\ \ 0.139891-1.303940I$ $a=\ \ 1.46519+0.44271I$ $b=\ \ 1.84127+1.77249I$	$-5.64315+2.18598I$	0
$u=\ \ 0.165819+1.311960I$ $a=\ \ 0.827554+0.648288I$ $b=\ \ 0.961060-0.559226I$	$-5.48555-2.56883I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.165819 - 1.311960I$ $a = 0.827554 - 0.648288I$ $b = 0.961060 + 0.559226I$	$-5.48555 + 2.56883I$	0
$u = -0.184266 + 1.314620I$ $a = -0.45129 + 1.65609I$ $b = -0.726779 + 0.686118I$	$-2.60615 + 7.32685I$	0
$u = -0.184266 - 1.314620I$ $a = -0.45129 - 1.65609I$ $b = -0.726779 - 0.686118I$	$-2.60615 - 7.32685I$	0
$u = 0.520457 + 0.421420I$ $a = 0.333578 + 1.304730I$ $b = -0.406578 + 0.125920I$	$3.42972 - 3.43786I$	$0. + 7.18170I$
$u = 0.520457 - 0.421420I$ $a = 0.333578 - 1.304730I$ $b = -0.406578 - 0.125920I$	$3.42972 + 3.43786I$	$0. - 7.18170I$
$u = -0.163049 + 1.336820I$ $a = 0.379416 + 0.145811I$ $b = 0.674270 - 1.070430I$	$-2.12910 - 1.69175I$	0
$u = -0.163049 - 1.336820I$ $a = 0.379416 - 0.145811I$ $b = 0.674270 + 1.070430I$	$-2.12910 + 1.69175I$	0
$u = 0.009254 + 1.382140I$ $a = -1.375880 + 0.064550I$ $b = -1.80279 + 0.63837I$	$3.07345 - 0.98640I$	0
$u = 0.009254 - 1.382140I$ $a = -1.375880 - 0.064550I$ $b = -1.80279 - 0.63837I$	$3.07345 + 0.98640I$	0
$u = 0.112915 + 1.384630I$ $a = 2.07144 + 0.39362I$ $b = 2.45982 + 0.63773I$	$8.06931 - 1.78241I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.112915 - 1.384630I$ $a = 2.07144 - 0.39362I$ $b = 2.45982 - 0.63773I$	$8.06931 + 1.78241I$	0
$u = 0.513028 + 0.316851I$ $a = 0.791650 + 0.093355I$ $b = -1.25958 + 0.75068I$	$-0.92372 - 3.05623I$	$-6.12777 + 7.79662I$
$u = 0.513028 - 0.316851I$ $a = 0.791650 - 0.093355I$ $b = -1.25958 - 0.75068I$	$-0.92372 + 3.05623I$	$-6.12777 - 7.79662I$
$u = 0.556846 + 0.210177I$ $a = 1.38483 - 0.74285I$ $b = -0.254810 + 0.168021I$	$-1.199540 + 0.252286I$	$-7.51222 + 1.35320I$
$u = 0.556846 - 0.210177I$ $a = 1.38483 + 0.74285I$ $b = -0.254810 - 0.168021I$	$-1.199540 - 0.252286I$	$-7.51222 - 1.35320I$
$u = 0.526995 + 0.270176I$ $a = 0.196728 - 0.611934I$ $b = 0.898486 + 0.021517I$	$3.10533 + 0.11149I$	$1.82107 + 0.90182I$
$u = 0.526995 - 0.270176I$ $a = 0.196728 + 0.611934I$ $b = 0.898486 - 0.021517I$	$3.10533 - 0.11149I$	$1.82107 - 0.90182I$
$u = 0.409524 + 1.347340I$ $a = -1.31749 - 0.89229I$ $b = -1.61711 - 0.28044I$	$4.06832 - 4.76863I$	0
$u = 0.409524 - 1.347340I$ $a = -1.31749 + 0.89229I$ $b = -1.61711 + 0.28044I$	$4.06832 + 4.76863I$	0
$u = -0.18631 + 1.40377I$ $a = 2.01754 + 0.72985I$ $b = 2.19802 + 1.28966I$	$3.95477 + 2.14843I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.18631-1.40377I$ $a=\ 2.01754-0.72985I$ $b=\ 2.19802-1.28966I$	$3.95477-2.14843I$	0
$u=-0.15134+1.41016I$ $a=\ 1.53834+0.42907I$ $b=\ 2.28622+1.00208I$	$4.08170+4.86816I$	0
$u=-0.15134-1.41016I$ $a=\ 1.53834-0.42907I$ $b=\ 2.28622-1.00208I$	$4.08170-4.86816I$	0
$u=\ 0.26018+1.40612I$ $a=\ 0.312189+0.489836I$ $b=\ 0.422413+1.152420I$	$3.95143-2.93911I$	0
$u=\ 0.26018-1.40612I$ $a=\ 0.312189-0.489836I$ $b=\ 0.422413-1.152420I$	$3.95143+2.93911I$	0
$u=\ 0.27858+1.40857I$ $a=\ 1.50777+0.66400I$ $b=\ 2.00793+0.23819I$	$8.27314-3.13426I$	0
$u=\ 0.27858-1.40857I$ $a=\ 1.50777-0.66400I$ $b=\ 2.00793-0.23819I$	$8.27314+3.13426I$	0
$u=\ 0.20327+1.42244I$ $a=-2.42805+0.22092I$ $b=-2.84613+1.06570I$	$4.66794-5.74198I$	0
$u=\ 0.20327-1.42244I$ $a=-2.42805-0.22092I$ $b=-2.84613-1.06570I$	$4.66794+5.74198I$	0
$u=-0.14687+1.43811I$ $a=\ 1.169270+0.044649I$ $b=\ 1.60540-0.16218I$	$5.57039+2.71636I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.14687-1.43811I$ $a=\ 1.169270-0.044649I$ $b=\ 1.60540+0.16218I$	$5.57039-2.71636I$	0
$u=-0.492215+0.249012I$ $a=-0.824121+0.198501I$ $b=\ 0.688523+1.133750I$	$-1.356930-0.364886I$	$-7.63760-1.14677I$
$u=-0.492215-0.249012I$ $a=-0.824121-0.198501I$ $b=\ 0.688523-1.133750I$	$-1.356930+0.364886I$	$-7.63760+1.14677I$
$u=\ 0.18750+1.45044I$ $a=-1.63241-0.36166I$ $b=-2.40745-0.61245I$	$9.45327-6.03947I$	0
$u=\ 0.18750-1.45044I$ $a=-1.63241+0.36166I$ $b=-2.40745+0.61245I$	$9.45327+6.03947I$	0
$u=-0.523236+0.062547I$ $a=\ 0.837529+0.934705I$ $b=-1.33607+1.11209I$	$-6.94722+4.75131I$	$-11.69397-4.35447I$
$u=-0.523236-0.062547I$ $a=\ 0.837529-0.934705I$ $b=-1.33607-1.11209I$	$-6.94722-4.75131I$	$-11.69397+4.35447I$
$u=\ 0.24247+1.46432I$ $a=\ 1.42620+0.45731I$ $b=\ 2.42437+0.79189I$	$3.32012-9.65966I$	0
$u=\ 0.24247-1.46432I$ $a=\ 1.42620-0.45731I$ $b=\ 2.42437-0.79189I$	$3.32012+9.65966I$	0
$u=-0.444548+0.248062I$ $a=-2.07093+0.35714I$ $b=\ 0.334505+0.408255I$	$-1.23188+2.67764I$	$-8.00090-10.68725I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.444548-0.248062I$ $a=-2.07093-0.35714I$ $b=\ \ 0.334505-0.408255I$	$-1.23188-2.67764I$	$-8.00090+10.68725I$
$u=-0.28802+1.46360I$ $a=-1.63445-0.11403I$ $b=-2.09049-0.75480I$	$3.18901+7.09486I$	0
$u=-0.28802-1.46360I$ $a=-1.63445+0.11403I$ $b=-2.09049+0.75480I$	$3.18901-7.09486I$	0
$u=\ \ 0.27537+1.46680I$ $a=\ \ 2.08401-0.14935I$ $b=\ \ 2.65186-0.94698I$	$5.88295-12.31150I$	0
$u=\ \ 0.27537-1.46680I$ $a=\ \ 2.08401+0.14935I$ $b=\ \ 2.65186+0.94698I$	$5.88295+12.31150I$	0
$u=-0.28845+1.46832I$ $a=-0.844057-0.322078I$ $b=-1.006910-0.429078I$	$1.66920+6.47731I$	0
$u=-0.28845-1.46832I$ $a=-0.844057+0.322078I$ $b=-1.006910+0.429078I$	$1.66920-6.47731I$	0
$u=\ \ 0.18394+1.48641I$ $a=-1.45002-0.36108I$ $b=-2.13938+0.17582I$	$4.06961-0.77391I$	0
$u=\ \ 0.18394-1.48641I$ $a=-1.45002+0.36108I$ $b=-2.13938-0.17582I$	$4.06961+0.77391I$	0
$u=\ \ 0.498781+0.031813I$ $a=-1.83780+0.78218I$ $b=\ \ 1.200940+0.443882I$	$-9.72324-0.17260I$	$-14.6955-1.6811I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.498781 - 0.031813I$ $a = -1.83780 - 0.78218I$ $b = 1.200940 - 0.443882I$	$-9.72324 + 0.17260I$	$-14.6955 + 1.6811I$
$u = -0.26046 + 1.47949I$ $a = -1.350680 - 0.064524I$ $b = -2.13964 - 0.22084I$	$1.70234 + 5.70571I$	0
$u = -0.26046 - 1.47949I$ $a = -1.350680 + 0.064524I$ $b = -2.13964 + 0.22084I$	$1.70234 - 5.70571I$	0
$u = -0.37688 + 1.45966I$ $a = 1.65237 - 0.15351I$ $b = 2.15867 + 0.62908I$	$-3.41289 + 10.44450I$	0
$u = -0.37688 - 1.45966I$ $a = 1.65237 + 0.15351I$ $b = 2.15867 - 0.62908I$	$-3.41289 - 10.44450I$	0
$u = 0.13345 + 1.50197I$ $a = -0.651574 - 0.494247I$ $b = -1.00228 - 1.08760I$	$7.84173 + 1.60885I$	0
$u = 0.13345 - 1.50197I$ $a = -0.651574 + 0.494247I$ $b = -1.00228 + 1.08760I$	$7.84173 - 1.60885I$	0
$u = 0.34024 + 1.47130I$ $a = -1.95397 - 0.02823I$ $b = -2.63237 + 0.78593I$	$-0.5823 - 17.3216I$	0
$u = 0.34024 - 1.47130I$ $a = -1.95397 + 0.02823I$ $b = -2.63237 - 0.78593I$	$-0.5823 + 17.3216I$	0
$u = 0.474941$ $a = -2.72071$ $b = 0.983847$	-9.72586	-24.9570

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.465572+0.075078I$ $a=\ \ 1.94842+2.59870I$ $b=-0.579859+0.622820I$	$-6.63078-3.98358I$	$-12.51677+2.81229I$
$u=-0.465572-0.075078I$ $a=\ \ 1.94842-2.59870I$ $b=-0.579859-0.622820I$	$-6.63078+3.98358I$	$-12.51677-2.81229I$
$u=-0.326714+0.306052I$ $a=-0.490568+0.740050I$ $b=\ \ 0.055279+0.356898I$	$-0.167562+0.876730I$	$-3.96855-7.53814I$
$u=-0.326714-0.306052I$ $a=-0.490568-0.740050I$ $b=\ \ 0.055279-0.356898I$	$-0.167562-0.876730I$	$-3.96855+7.53814I$
$u=\ \ 0.441030$ $a=\ \ 1.00462$ $b=\ \ 1.11644$	3.20630	6.32680
$u=-0.01728+1.56600I$ $a=\ \ 0.999723+0.344621I$ $b=\ \ 1.54938+0.87919I$	$4.21990+5.75104I$	0
$u=-0.01728-1.56600I$ $a=\ \ 0.999723-0.344621I$ $b=\ \ 1.54938-0.87919I$	$4.21990-5.75104I$	0
$u=\ \ 0.338766$ $a=\ \ 1.91535$ $b=-0.532834$	-1.44061	-6.16230

II. $I_2^u =$
$\langle -u^{26}-3u^{25}+\cdots+b-1,\ -4u^{26}-10u^{25}+\cdots+a+5,\ u^{27}+3u^{26}+\cdots+6u+1\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u \\ u^3+u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 4u^{26}+10u^{25}+\cdots-19u-5 \\ u^{26}+3u^{25}+\cdots+7u+1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 7u^{26}+17u^{25}+\cdots-19u-5 \\ 4u^{26}+10u^{25}+\cdots-2u-1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -2u^{26}-6u^{25}+\cdots-39u-7 \\ 2u^{26}+12u^{25}+\cdots+24u+4 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -3u^{26}-12u^{25}+\cdots-40u-6 \\ -3u^{25}-7u^{24}+\cdots+4u^2+3u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 10u^{26}+26u^{25}+\cdots-28u-7 \\ 7u^{26}+19u^{25}+\cdots-2u-1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 4u^{26}+16u^{25}+\cdots+22u^2-3u \\ 2u^{26}+6u^{25}+\cdots+9u^2+4u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -4u^{26}-12u^{25}+\cdots-18u-6 \\ -3u^{26}-7u^{25}+\cdots+13u+4 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 8u^{26}+14u^{25}+108u^{24}+159u^{23}+627u^{22}+764u^{21}+2034u^{20}+1955u^{19}+3971u^{18}+2638u^{17}+4608u^{16}+1110u^{15}+2804u^{14}-1918u^{13}+482u^{12}-3380u^{11}-123u^{10}-2436u^9+250u^8-1025u^7+301u^6-248u^5+147u^4-6u^3+29u^2-u-5$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$u^{27} - 3u^{26} + \cdots + 6u - 1$
c_2	$u^{27} - 9u^{25} + \cdots - 9u^2 + 1$
c_3	$u^{27} - 2u^{24} + \cdots - 9u^2 - 1$
c_4	$u^{27} + 3u^{26} + \cdots + 6u + 1$
c_5, c_6	$u^{27} - 16u^{25} + \cdots - 6u + 1$
c_7	$u^{27} - 9u^{25} + \cdots + 9u^2 - 1$
c_8	$u^{27} + 5u^{26} + \cdots - 5u - 1$
c_9	$u^{27} + 7u^{24} + \cdots + 6u - 1$
c_{10}	$u^{27} - 16u^{25} + \cdots - 6u - 1$
c_{11}	$u^{27} - 5u^{26} + \cdots - 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{27} + 27y^{26} + \cdots - 8y - 1$
c_2, c_7	$y^{27} - 18y^{26} + \cdots + 18y - 1$
c_3	$y^{27} - 14y^{25} + \cdots - 18y - 1$
c_5, c_6, c_{10}	$y^{27} - 32y^{26} + \cdots + 16y - 1$
c_8, c_{11}	$y^{27} - 27y^{26} + \cdots + 23y - 1$
c_9	$y^{27} + 4y^{25} + \cdots - 32y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.349187+0.950871I$ $a=-0.807587+0.771242I$ $b=-1.121300-0.478024I$	$-7.80198+1.43571I$	$-9.19532-2.58353I$
$u=-0.349187-0.950871I$ $a=-0.807587-0.771242I$ $b=-1.121300+0.478024I$	$-7.80198-1.43571I$	$-9.19532+2.58353I$
$u=-0.524782+0.805011I$ $a=-0.191943-0.585590I$ $b=\ \ 0.429680+0.206238I$	$-1.56889+2.18949I$	$-7.93685-8.86415I$
$u=-0.524782-0.805011I$ $a=-0.191943+0.585590I$ $b=\ \ 0.429680-0.206238I$	$-1.56889-2.18949I$	$-7.93685+8.86415I$
$u=\ \ 0.865146$ $a=\ \ 0.399939$ $b=\ \ 0.830267$	0.961761	-1.58940
$u=-0.894303+0.699265I$ $a=\ \ 0.343752+0.029060I$ $b=-0.168841-0.129023I$	$-4.88580+3.15924I$	$-20.5341-9.3982I$
$u=-0.894303-0.699265I$ $a=\ \ 0.343752-0.029060I$ $b=-0.168841+0.129023I$	$-4.88580-3.15924I$	$-20.5341+9.3982I$
$u=\ \ 0.029596+1.250160I$ $a=\ \ 2.13970+0.39451I$ $b=\ \ 2.65297-0.60411I$	$-2.85769-4.49481I$	$-3.90049+2.81559I$
$u=\ \ 0.029596-1.250160I$ $a=\ \ 2.13970-0.39451I$ $b=\ \ 2.65297+0.60411I$	$-2.85769+4.49481I$	$-3.90049-2.81559I$
$u=-0.032871+1.304030I$ $a=-0.160820-0.814359I$ $b=-0.329944+0.286174I$	$2.29000-1.19742I$	$2.58030-0.47093I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.032871-1.304030I$ $a=-0.160820+0.814359I$ $b=-0.329944-0.286174I$	$2.29000+1.19742I$	$2.58030+0.47093I$
$u=-0.122293+1.328560I$ $a=-1.64806-0.35102I$ $b=-1.96596-1.71147I$	$-5.28712+1.88129I$	$3.03676+4.91413I$
$u=-0.122293-1.328560I$ $a=-1.64806+0.35102I$ $b=-1.96596+1.71147I$	$-5.28712-1.88129I$	$3.03676-4.91413I$
$u=0.207564+1.370530I$ $a=-1.96759-0.60435I$ $b=-2.31426-0.20194I$	$7.35928-2.72940I$	$-3.54297+2.72914I$
$u=0.207564-1.370530I$ $a=-1.96759+0.60435I$ $b=-2.31426+0.20194I$	$7.35928+2.72940I$	$-3.54297-2.72914I$
$u=0.35746+1.38079I$ $a=1.120110+0.669009I$ $b=1.45233+0.47462I$	$5.42748-4.43200I$	$0.67537+3.40706I$
$u=0.35746-1.38079I$ $a=1.120110-0.669009I$ $b=1.45233-0.47462I$	$5.42748+4.43200I$	$0.67537-3.40706I$
$u=-0.027004+0.563292I$ $a=1.91164+1.44067I$ $b=0.941661-0.329293I$	$-5.44454+4.33420I$	$-5.60921-3.77384I$
$u=-0.027004-0.563292I$ $a=1.91164-1.44067I$ $b=0.941661+0.329293I$	$-5.44454-4.33420I$	$-5.60921+3.77384I$
$u=-0.15542+1.44244I$ $a=1.73021+0.57101I$ $b=2.28253+1.18196I$	$4.64936+3.70031I$	$0.96546-2.09491I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.15542-1.44244I$ $a=\ \ 1.73021-0.57101I$ $b=\ \ 2.28253-1.18196I$	$4.64936-3.70031I$	$0.96546+2.09491I$
$u=\ \ 0.542990$ $a=-0.340066$ $b=-1.35539$	2.82244	-15.1650
$u=-0.24899+1.51498I$ $a=-0.915730-0.316585I$ $b=-1.44310-0.51838I$	$2.29278+6.93609I$	$-0.88072-10.03541I$
$u=-0.24899-1.51498I$ $a=-0.915730+0.316585I$ $b=-1.44310+0.51838I$	$2.29278-6.93609I$	$-0.88072+10.03541I$
$u=-0.415767$ $a=\ \ 3.11726$ $b=-1.16114$	-9.51393	13.4630
$u=-0.235946+0.296409I$ $a=-2.14224-1.06325I$ $b=\ \ 0.427373+0.736804I$	$-1.17761+1.87746I$	$-7.51263-1.01338I$
$u=-0.235946-0.296409I$ $a=-2.14224+1.06325I$ $b=\ \ 0.427373-0.736804I$	$-1.17761-1.87746I$	$-7.51263+1.01338I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$(u^{27}-3u^{26}+\cdots+6u-1)(u^{108}-2u^{107}+\cdots-299u+47)$
c_2	$(u^{27}-9u^{25}+\cdots-9u^2+1)(u^{108}+u^{107}+\cdots+u+1)$
c_3	$(u^{27}-2u^{24}+\cdots-9u^2-1)(u^{108}-u^{107}+\cdots-28281u+2677)$
c_4	$(u^{27}+3u^{26}+\cdots+6u+1)(u^{108}-2u^{107}+\cdots-299u+47)$
c_5, c_6	$(u^{27}-16u^{25}+\cdots-6u+1)(u^{108}-u^{107}+\cdots+575u-103)$
c_7	$(u^{27}-9u^{25}+\cdots+9u^2-1)(u^{108}+u^{107}+\cdots+u+1)$
c_8	$(u^{27}+5u^{26}+\cdots-5u-1)(u^{108}-38u^{106}+\cdots-2046u+89)$
c_9	$(u^{27}+7u^{24}+\cdots+6u-1)(u^{108}+3u^{107}+\cdots-492579u+108211)$
c_{10}	$(u^{27}-16u^{25}+\cdots-6u-1)(u^{108}-u^{107}+\cdots+575u-103)$
c_{11}	$(u^{27}-5u^{26}+\cdots-5u+1)(u^{108}-38u^{106}+\cdots-2046u+89)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$(y^{27}+27y^{26}+\cdots-8y-1)(y^{108}+102y^{107}+\cdots-95417y+2209)$
c_2, c_7	$(y^{27}-18y^{26}+\cdots+18y-1)(y^{108}-55y^{107}+\cdots-31y+1)$
c_3	$(y^{27}-14y^{25}+\cdots-18y-1)$ $\cdot(y^{108}-17y^{107}+\cdots-304371863y+7166329)$
c_5, c_6, c_{10}	$(y^{27}-32y^{26}+\cdots+16y-1)$ $\cdot(y^{108}-109y^{107}+\cdots-159233y+10609)$
c_8, c_{11}	$(y^{27}-27y^{26}+\cdots+23y-1)(y^{108}-76y^{107}+\cdots-3384048y+7921)$
c_9	$(y^{27}+4y^{25}+\cdots-32y-1)$ $\cdot(y^{108}-13y^{107}+\cdots+118667308219y+11709620521)$