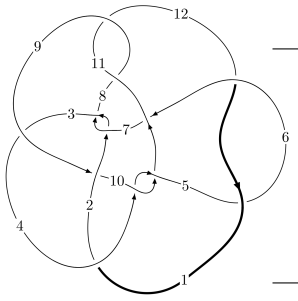
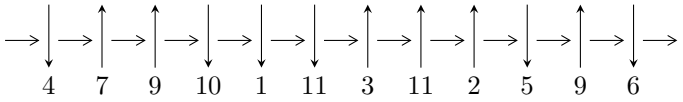
$12n_{0853}$ $(K12n_{0853})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 3.85914 \times 10^{218} u^{85} + 5.23238 \times 10^{218} u^{84} + \cdots + 1.12919 \times 10^{219} b - 4.30007 \times 10^{220}, \\ & - 5.00889 \times 10^{219} u^{85} - 3.83512 \times 10^{219} u^{84} + \cdots + 1.24211 \times 10^{220} a + 1.01514 \times 10^{222}, \\ & u^{86} - 26 u^{84} + \cdots + 352 u + 143 \rangle \\ I_2^u = \langle & -296859606 u^{23} - 672784784 u^{22} + \cdots + 1044681373 b - 15785274596, \\ & 642367601 u^{23} - 9005160835 u^{22} + \cdots + 9402132357 a + 67337415889,\ u^{24} + u^{23} + \cdots + 11 u + 9 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 110 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. $\boldsymbol{I_1^u = \langle 3.86 \times 10^{218} u^{85} + 5.23 \times 10^{218} u^{84} + \cdots + 1.13 \times 10^{219} b - 4.30 \times 10^{220},\ -5.01 \times 10^{219} u^{85} - 3.84 \times 10^{219} u^{84} + \cdots + 1.24 \times 10^{220} a + 1.02 \times 10^{222},\ u^{86} - 26 u^{84} + \cdots + 352 u + 143 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.403257u^{85} + 0.308758u^{84} + \cdots - 295.596u - 81.7270 \\ -0.341761u^{85} - 0.463375u^{84} + \cdots + 115.690u + 38.0810 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0614956u^{85} - 0.154617u^{84} + \cdots - 179.905u - 43.6459 \\ -0.341761u^{85} - 0.463375u^{84} + \cdots + 115.690u + 38.0810 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 3.44397u^{85} + 3.32938u^{84} + \cdots - 1720.90u - 500.050 \\ 1.55973u^{85} + 1.31239u^{84} + \cdots - 940.484u - 263.433 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.95617u^{85} + 2.18050u^{84} + \cdots - 673.241u - 213.966 \\ 1.26891u^{85} + 1.09399u^{84} + \cdots - 711.937u - 198.806 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 3.93599u^{85} + 3.76143u^{84} + \cdots - 1909.61u - 556.585 \\ -0.239645u^{85} - 0.0691656u^{84} + \cdots + 268.429u + 69.1359 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.998356u^{85} + 1.19873u^{84} + \cdots - 230.274u - 83.7492 \\ 1.25082u^{85} + 1.11752u^{84} + \cdots - 672.352u - 188.629 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1.64727u^{85} + 1.65507u^{84} + \cdots - 761.689u - 224.947 \\ 1.85993u^{85} + 1.66888u^{84} + \cdots - 1053.41u - 299.108 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1.44206u^{85} + 0.328546u^{84} + \cdots + 1873.41u + 470.130 \\ 0.373170u^{85} + 0.655436u^{84} + \cdots + 29.6065u - 8.46160 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -12.2613u^{85} - 19.5611u^{84} + \cdots + 770.668u + 597.207$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{86} - 3u^{85} + \cdots - 1090u + 331$
c_2, c_7	$u^{86} + 2u^{85} + \cdots + 98u + 47$
c_3	$u^{86} - u^{85} + \cdots - 18u + 4$
c_4, c_{10}	$u^{86} - 26u^{84} + \cdots - 352u + 143$
c_5, c_{12}	$u^{86} + u^{85} + \cdots - 2490u + 2156$
c_6	$u^{86} - 28u^{84} + \cdots - 145161863u + 33647749$
c_8, c_{11}	$u^{86} + 4u^{85} + \cdots + 460u + 221$
c_9	$u^{86} + 2u^{85} + \cdots + 7484u + 1411$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{86} - 7y^{85} + \cdots - 234820y + 109561$
c_2, c_7	$y^{86} - 26y^{85} + \cdots - 35642y + 2209$
c_3	$y^{86} + 31y^{85} + \cdots - 988y + 16$
c_4, c_{10}	$y^{86} - 52y^{85} + \cdots - 226292y + 20449$
c_5, c_{12}	$y^{86} + 59y^{85} + \cdots + 168629940y + 4648336$
c_6	$y^{86} - 56y^{85} + \cdots + 41812736405652607y + 1132171012767001$
c_8, c_{11}	$y^{86} + 80y^{85} + \cdots + 18613622y + 48841$
c_9	$y^{86} + 42y^{85} + \cdots + 83072014y + 1990921$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.013240 + 0.156600I$ $a = 0.061933 - 0.617773I$ $b = -1.73273 + 2.09017I$	$-3.77856 - 6.86337I$	0
$u = 1.013240 - 0.156600I$ $a = 0.061933 + 0.617773I$ $b = -1.73273 - 2.09017I$	$-3.77856 + 6.86337I$	0
$u = 0.946501 + 0.164076I$ $a = 0.65342 + 2.54858I$ $b = 0.082485 - 0.387385I$	$-0.028740 - 0.605068I$	0
$u = 0.946501 - 0.164076I$ $a = 0.65342 - 2.54858I$ $b = 0.082485 + 0.387385I$	$-0.028740 + 0.605068I$	0
$u = 0.935366 + 0.122426I$ $a = 0.81877 + 1.57708I$ $b = 0.594883 - 0.656114I$	$0.135026 - 0.962079I$	0
$u = 0.935366 - 0.122426I$ $a = 0.81877 - 1.57708I$ $b = 0.594883 + 0.656114I$	$0.135026 + 0.962079I$	0
$u = -0.727128 + 0.584765I$ $a = -0.227558 + 1.248560I$ $b = 1.340550 - 0.264504I$	$-4.35117 - 0.02788I$	0
$u = -0.727128 - 0.584765I$ $a = -0.227558 - 1.248560I$ $b = 1.340550 + 0.264504I$	$-4.35117 + 0.02788I$	0
$u = -0.924847 + 0.536642I$ $a = -0.347462 + 0.979449I$ $b = 0.054894 - 0.770968I$	$1.42029 + 4.02474I$	0
$u = -0.924847 - 0.536642I$ $a = -0.347462 - 0.979449I$ $b = 0.054894 + 0.770968I$	$1.42029 - 4.02474I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.019770 + 0.327343I$ $a = -1.53537 + 0.31678I$ $b = -0.358846 - 0.491803I$	$-3.49969 - 2.27160I$	0
$u = 1.019770 - 0.327343I$ $a = -1.53537 - 0.31678I$ $b = -0.358846 + 0.491803I$	$-3.49969 + 2.27160I$	0
$u = -1.001200 + 0.393657I$ $a = 1.62994 + 0.27952I$ $b = 0.449265 - 0.605829I$	$-2.03015 + 9.00043I$	0
$u = -1.001200 - 0.393657I$ $a = 1.62994 - 0.27952I$ $b = 0.449265 + 0.605829I$	$-2.03015 - 9.00043I$	0
$u = -1.075550 + 0.027859I$ $a = 0.168250 - 0.671082I$ $b = 1.99103 + 1.12349I$	$-6.51206 - 0.43126I$	0
$u = -1.075550 - 0.027859I$ $a = 0.168250 + 0.671082I$ $b = 1.99103 - 1.12349I$	$-6.51206 + 0.43126I$	0
$u = 0.899199 + 0.142670I$ $a = 0.61730 + 1.32859I$ $b = 0.657270 - 0.389408I$	$0.165768 - 0.366994I$	0
$u = 0.899199 - 0.142670I$ $a = 0.61730 - 1.32859I$ $b = 0.657270 + 0.389408I$	$0.165768 + 0.366994I$	0
$u = -0.015482 + 1.089660I$ $a = -0.915625 - 0.620168I$ $b = 0.775767 + 0.822352I$	$-2.38759 - 4.54755I$	0
$u = -0.015482 - 1.089660I$ $a = -0.915625 + 0.620168I$ $b = 0.775767 - 0.822352I$	$-2.38759 + 4.54755I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.455919+0.998858I$ $a=\ \ 0.337485+0.103051I$ $b=-0.571382-0.676993I$	$4.83318+0.07837I$	0
$u=-0.455919-0.998858I$ $a=\ \ 0.337485-0.103051I$ $b=-0.571382+0.676993I$	$4.83318-0.07837I$	0
$u=-1.069760+0.330003I$ $a=-0.395329+0.520215I$ $b=-0.654977-0.341910I$	$1.07982+3.82086I$	0
$u=-1.069760-0.330003I$ $a=-0.395329-0.520215I$ $b=-0.654977+0.341910I$	$1.07982-3.82086I$	0
$u=\ \ 0.279630+0.827400I$ $a=\ \ 0.723072+1.097880I$ $b=-1.033860-0.336513I$	$-4.18891-5.58599I$	0
$u=\ \ 0.279630-0.827400I$ $a=\ \ 0.723072-1.097880I$ $b=-1.033860+0.336513I$	$-4.18891+5.58599I$	0
$u=-0.862909+0.134585I$ $a=-0.72937-1.80432I$ $b=-0.642795+1.145470I$	$3.92961+2.85500I$	0
$u=-0.862909-0.134585I$ $a=-0.72937+1.80432I$ $b=-0.642795-1.145470I$	$3.92961-2.85500I$	0
$u=-0.782385+0.368272I$ $a=\ \ 1.43549-0.13900I$ $b=-0.314156-0.491568I$	$3.63471-0.52145I$	0
$u=-0.782385-0.368272I$ $a=\ \ 1.43549+0.13900I$ $b=-0.314156+0.491568I$	$3.63471+0.52145I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.014150+1.172740I$ $a=-0.544027+0.153648I$ $b=\ 0.320054-0.610257I$	$4.62544+0.94388I$	0
$u=-0.014150-1.172740I$ $a=-0.544027-0.153648I$ $b=\ 0.320054+0.610257I$	$4.62544-0.94388I$	0
$u=\ 0.140588+1.189710I$ $a=\ 0.908141-0.496246I$ $b=-0.831187+0.816196I$	$-1.25558+11.17520I$	0
$u=\ 0.140588-1.189710I$ $a=\ 0.908141+0.496246I$ $b=-0.831187-0.816196I$	$-1.25558-11.17520I$	0
$u=-0.359459+1.155750I$ $a=\ 0.585216+0.275949I$ $b=-0.633762-0.485525I$	$3.14464-2.91301I$	0
$u=-0.359459-1.155750I$ $a=\ 0.585216-0.275949I$ $b=-0.633762+0.485525I$	$3.14464+2.91301I$	0
$u=\ 0.741114+0.128033I$ $a=-1.219120-0.690485I$ $b=-1.57726-0.48897I$	$-2.91270+5.35630I$	$0.19430-2.58314I$
$u=\ 0.741114-0.128033I$ $a=-1.219120+0.690485I$ $b=-1.57726+0.48897I$	$-2.91270-5.35630I$	$0.19430+2.58314I$
$u=\ 1.224260+0.308586I$ $a=\ 0.37545-1.41933I$ $b=\ 1.007880+0.816912I$	$-8.64326-2.65098I$	0
$u=\ 1.224260-0.308586I$ $a=\ 0.37545+1.41933I$ $b=\ 1.007880-0.816912I$	$-8.64326+2.65098I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.243050 + 0.241448I$ $a = -0.357460 + 0.539477I$ $b = -0.790416 - 0.344192I$	$-2.99529 - 0.68487I$	0
$u = 1.243050 - 0.241448I$ $a = -0.357460 - 0.539477I$ $b = -0.790416 + 0.344192I$	$-2.99529 + 0.68487I$	0
$u = 1.194790 + 0.422230I$ $a = -0.463621 + 0.994886I$ $b = -1.26517 - 1.42297I$	$2.82983 - 6.91529I$	0
$u = 1.194790 - 0.422230I$ $a = -0.463621 - 0.994886I$ $b = -1.26517 + 1.42297I$	$2.82983 + 6.91529I$	0
$u = -1.245920 + 0.275497I$ $a = 0.260591 + 0.811687I$ $b = 0.999528 - 0.947180I$	$-4.17702 + 3.64369I$	0
$u = -1.245920 - 0.275497I$ $a = 0.260591 - 0.811687I$ $b = 0.999528 + 0.947180I$	$-4.17702 - 3.64369I$	0
$u = -1.177240 + 0.541228I$ $a = -0.278209 - 0.658710I$ $b = -1.31264 + 0.74781I$	$2.32587 + 5.43706I$	0
$u = -1.177240 - 0.541228I$ $a = -0.278209 + 0.658710I$ $b = -1.31264 - 0.74781I$	$2.32587 - 5.43706I$	0
$u = 0.225617 + 0.639859I$ $a = 1.48458 - 0.79709I$ $b = -0.584963 + 1.170950I$	$5.82789 + 2.77163I$	$3.62621 - 5.12009I$
$u = 0.225617 - 0.639859I$ $a = 1.48458 + 0.79709I$ $b = -0.584963 - 1.170950I$	$5.82789 - 2.77163I$	$3.62621 + 5.12009I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.320110+0.173352I$ $a=\ 0.192094+0.541101I$ $b=\ 0.00408-1.94041I$	$-5.93895+3.63950I$	0
$u=-1.320110-0.173352I$ $a=\ 0.192094-0.541101I$ $b=\ 0.00408+1.94041I$	$-5.93895-3.63950I$	0
$u=-0.397923+0.534043I$ $a=\ 0.09432-1.75717I$ $b=\ 0.309084+1.191700I$	$-0.33732-5.25732I$	$3.19134+2.30399I$
$u=-0.397923-0.534043I$ $a=\ 0.09432+1.75717I$ $b=\ 0.309084-1.191700I$	$-0.33732+5.25732I$	$3.19134-2.30399I$
$u=-1.281140+0.379028I$ $a=-0.344880-1.318420I$ $b=-1.022710+0.788679I$	$-8.77560+9.65768I$	0
$u=-1.281140-0.379028I$ $a=-0.344880+1.318420I$ $b=-1.022710-0.788679I$	$-8.77560-9.65768I$	0
$u=\ 1.348360+0.054033I$ $a=-0.061038-0.473724I$ $b=\ 0.93523+2.02994I$	$-6.00193-4.32624I$	0
$u=\ 1.348360-0.054033I$ $a=-0.061038+0.473724I$ $b=\ 0.93523-2.02994I$	$-6.00193+4.32624I$	0
$u=\ 0.463929+1.273310I$ $a=-0.566675+0.091422I$ $b=\ 0.488847-0.410672I$	$2.63674-1.06753I$	0
$u=\ 0.463929-1.273310I$ $a=-0.566675-0.091422I$ $b=\ 0.488847+0.410672I$	$2.63674+1.06753I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.148330+0.759634I$ $a=-0.459012+0.592200I$ $b=\ \ 1.317320+0.103020I$	$-5.56625+5.77682I$	0
$u=-1.148330-0.759634I$ $a=-0.459012-0.592200I$ $b=\ \ 1.317320-0.103020I$	$-5.56625-5.77682I$	0
$u=\ \ 0.203161+0.556123I$ $a=-0.48221-1.79807I$ $b=-0.262667+1.008830I$	$-1.28788-1.11969I$	$2.17883+1.74771I$
$u=\ \ 0.203161-0.556123I$ $a=-0.48221+1.79807I$ $b=-0.262667-1.008830I$	$-1.28788+1.11969I$	$2.17883-1.74771I$
$u=-0.454810+0.375338I$ $a=-1.59503-0.91449I$ $b=-0.496780+0.231794I$	$2.81852-0.19677I$	$3.08966-3.01616I$
$u=-0.454810-0.375338I$ $a=-1.59503+0.91449I$ $b=-0.496780-0.231794I$	$2.81852+0.19677I$	$3.08966+3.01616I$
$u=\ \ 1.25089+0.68548I$ $a=\ \ 0.006593-0.938843I$ $b=\ \ 1.023550+0.815519I$	$-0.12254-5.71927I$	0
$u=\ \ 1.25089-0.68548I$ $a=\ \ 0.006593+0.938843I$ $b=\ \ 1.023550-0.815519I$	$-0.12254+5.71927I$	0
$u=-1.28080+0.63183I$ $a=-0.220888-0.959005I$ $b=-1.077160+0.774774I$	$0.04388+9.24471I$	0
$u=-1.28080-0.63183I$ $a=-0.220888+0.959005I$ $b=-1.077160-0.774774I$	$0.04388-9.24471I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.28042 + 0.65504I$ $a = 0.265807 + 0.510700I$ $b = -1.178570 + 0.010457I$	$-6.88725 - 0.19421I$	0
$u = 1.28042 - 0.65504I$ $a = 0.265807 - 0.510700I$ $b = -1.178570 - 0.010457I$	$-6.88725 + 0.19421I$	0
$u = -1.34096 + 0.53769I$ $a = 0.213817 + 1.052190I$ $b = 1.32707 - 1.16128I$	$-6.52492 + 10.27030I$	0
$u = -1.34096 - 0.53769I$ $a = 0.213817 - 1.052190I$ $b = 1.32707 + 1.16128I$	$-6.52492 - 10.27030I$	0
$u = 1.34112 + 0.60712I$ $a = -0.166632 + 1.083530I$ $b = -1.36056 - 1.11761I$	$-5.0587 - 17.4655I$	0
$u = 1.34112 - 0.60712I$ $a = -0.166632 - 1.083530I$ $b = -1.36056 + 1.11761I$	$-5.0587 + 17.4655I$	0
$u = 1.40203 + 0.59947I$ $a = 0.034030 - 0.722008I$ $b = 1.06930 + 0.97248I$	$0.13038 - 7.25479I$	0
$u = 1.40203 - 0.59947I$ $a = 0.034030 + 0.722008I$ $b = 1.06930 - 0.97248I$	$0.13038 + 7.25479I$	0
$u = 1.45765 + 0.48227I$ $a = -0.317056 - 0.548033I$ $b = 0.568832 + 0.060403I$	$-7.04915 - 1.30997I$	0
$u = 1.45765 - 0.48227I$ $a = -0.317056 + 0.548033I$ $b = 0.568832 - 0.060403I$	$-7.04915 + 1.30997I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.175247 + 0.400925I$ $a = -0.777483 - 1.083630I$ $b = 0.313669 + 0.457730I$	$-0.028154 - 1.020300I$	$-0.58024 + 6.60259I$
$u = 0.175247 - 0.400925I$ $a = -0.777483 + 1.083630I$ $b = 0.313669 - 0.457730I$	$-0.028154 + 1.020300I$	$-0.58024 - 6.60259I$
$u = -0.285471 + 0.308360I$ $a = -0.68087 + 2.61679I$ $b = 1.111320 - 0.014505I$	$-4.45448 - 0.17557I$	$-1.85939 + 1.38698I$
$u = -0.285471 - 0.308360I$ $a = -0.68087 - 2.61679I$ $b = 1.111320 + 0.014505I$	$-4.45448 + 0.17557I$	$-1.85939 - 1.38698I$
$u = -1.56445 + 0.30136I$ $a = 0.203232 - 0.547484I$ $b = -0.539303 + 0.124283I$	$-7.16487 - 5.31827I$	0
$u = -1.56445 - 0.30136I$ $a = 0.203232 + 0.547484I$ $b = -0.539303 - 0.124283I$	$-7.16487 + 5.31827I$	0

II.

$\boldsymbol{I_2^u = \langle -2.97\times 10^{8}u^{23} - 6.73\times 10^{8}u^{22} + \cdots + 1.04\times 10^{9}b - 1.58\times 10^{10},\ 6.42\times 10^{8}u^{23} - 9.01\times 10^{9}u^{22} + \cdots + 9.40\times 10^{9}a + 6.73\times 10^{10},\ u^{24} + u^{23} + \cdots + 11u + 9\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0683215u^{23} + 0.957779u^{22} + \cdots - 12.5163u - 7.16193 \\ 0.284163u^{23} + 0.644010u^{22} + \cdots - 4.87488u + 15.1101 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.215841u^{23} + 1.60179u^{22} + \cdots - 17.3912u + 7.94820 \\ 0.284163u^{23} + 0.644010u^{22} + \cdots - 4.87488u + 15.1101 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 3.23542u^{23} - 1.25211u^{22} + \cdots + 40.0876u + 50.1277 \\ 1.02610u^{23} + 0.164052u^{22} + \cdots + 4.58961u + 8.61489 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -3.26278u^{23} - 2.30081u^{22} + \cdots + 25.5811u - 8.57595 \\ 2.43206u^{23} + 0.487842u^{22} + \cdots + 3.07086u + 28.7240 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -3.25988u^{23} - 0.801721u^{22} + \cdots - 7.72825u - 31.1982 \\ 2.75440u^{23} - 0.528177u^{22} + \cdots + 19.1185u + 17.5731 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -3.09380u^{23} - 1.76139u^{22} + \cdots + 19.0783u - 24.4526 \\ 3.53147u^{23} + 0.759929u^{22} + \cdots + 3.97813u + 41.2668 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1.18809u^{23} - 0.634541u^{22} + \cdots + 21.0603u + 21.8155 \\ 1.76957u^{23} - 0.340698u^{22} + \cdots + 12.7290u + 12.9430 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -7.44088u^{23} - 7.91373u^{22} + \cdots + 54.5822u + 4.86864 \\ -1.49142u^{23} - 0.0977790u^{22} + \cdots - 5.81025u - 11.7070 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= -\frac{19642376118}{1044681373}u^{23} - \frac{39745603928}{1044681373}u^{22} + \cdots + \frac{416986178422}{1044681373}u + \frac{161826406806}{1044681373}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{24}+2u^{22}+\cdots-3u+1$
c_2	$u^{24}+u^{23}+\cdots+u+1$
c_3	$u^{24}+3u^{22}+\cdots+101u+11$
c_4	$u^{24}+u^{23}+\cdots+11u+9$
c_5	$u^{24}+17u^{22}+\cdots-2u+5$
c_6	$u^{24}-u^{23}+\cdots-10u+1$
c_7	$u^{24}-u^{23}+\cdots-u+1$
c_8	$u^{24}+u^{23}+\cdots+u+1$
c_9	$u^{24}+u^{23}+\cdots+u+1$
c_{10}	$u^{24}-u^{23}+\cdots-11u+9$
c_{11}	$u^{24}-u^{23}+\cdots-u+1$
c_{12}	$u^{24}+17u^{22}+\cdots+2u+5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{24} + 4y^{23} + \cdots + 21y + 1$
c_2, c_7	$y^{24} - 15y^{23} + \cdots - 9y + 1$
c_3	$y^{24} + 6y^{23} + \cdots - 1577y + 121$
c_4, c_{10}	$y^{24} - 13y^{23} + \cdots - 679y + 81$
c_5, c_{12}	$y^{24} + 34y^{23} + \cdots + 446y + 25$
c_6	$y^{24} + 3y^{23} + \cdots + 180y + 1$
c_8, c_{11}	$y^{24} + 19y^{23} + \cdots - 13y + 1$
c_9	$y^{24} + 21y^{23} + \cdots + 11y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.952348 + 0.136908I$ $a = 0.72993 + 2.89697I$ $b = 0.131126 - 0.384738I$	$-0.000597 - 0.548184I$	$24.3042 - 84.4549I$
$u = 0.952348 - 0.136908I$ $a = 0.72993 - 2.89697I$ $b = 0.131126 + 0.384738I$	$-0.000597 + 0.548184I$	$24.3042 + 84.4549I$
$u = 0.988311 + 0.370395I$ $a = -0.337958 + 0.880219I$ $b = -1.277510 + 0.015717I$	$-5.14631 - 0.87736I$	$-4.28774 + 2.87316I$
$u = 0.988311 - 0.370395I$ $a = -0.337958 - 0.880219I$ $b = -1.277510 - 0.015717I$	$-5.14631 + 0.87736I$	$-4.28774 - 2.87316I$
$u = 0.219364 + 1.039820I$ $a = 0.392367 - 0.200232I$ $b = -0.221572 - 0.274980I$	$2.62740 - 1.82881I$	$0.54296 + 5.92489I$
$u = 0.219364 - 1.039820I$ $a = 0.392367 + 0.200232I$ $b = -0.221572 + 0.274980I$	$2.62740 + 1.82881I$	$0.54296 - 5.92489I$
$u = -0.898687 + 0.258451I$ $a = 0.41561 + 1.84019I$ $b = 0.391206 - 1.205940I$	$3.96928 + 3.45621I$	$4.14366 - 9.44746I$
$u = -0.898687 - 0.258451I$ $a = 0.41561 - 1.84019I$ $b = 0.391206 + 1.205940I$	$3.96928 - 3.45621I$	$4.14366 + 9.44746I$
$u = 0.429227 + 0.822759I$ $a = -0.974193 + 0.323868I$ $b = 0.705339 - 1.048650I$	$6.57769 + 1.81596I$	$7.75965 - 0.93777I$
$u = 0.429227 - 0.822759I$ $a = -0.974193 - 0.323868I$ $b = 0.705339 + 1.048650I$	$6.57769 - 1.81596I$	$7.75965 + 0.93777I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.817220+0.285785I$ $a=\ 0.651291+0.552479I$ $b=\ 1.39435+0.98498I$	$-2.81443+6.68649I$	$1.88039-6.74067I$
$u=-0.817220-0.285785I$ $a=\ 0.651291-0.552479I$ $b=\ 1.39435-0.98498I$	$-2.81443-6.68649I$	$1.88039+6.74067I$
$u=-0.730770+0.407807I$ $a=-1.63357+0.06524I$ $b=\ 0.145468+0.419939I$	$4.24301-0.62693I$	$9.92775-0.77775I$
$u=-0.730770-0.407807I$ $a=-1.63357-0.06524I$ $b=\ 0.145468-0.419939I$	$4.24301+0.62693I$	$9.92775+0.77775I$
$u=-0.337191+1.210150I$ $a=\ 0.534317-0.012768I$ $b=-0.560439-0.512766I$	$4.19449-0.09855I$	$-1.53360+1.03207I$
$u=-0.337191-1.210150I$ $a=\ 0.534317+0.012768I$ $b=-0.560439+0.512766I$	$4.19449+0.09855I$	$-1.53360-1.03207I$
$u=\ 1.247280+0.319144I$ $a=\ 0.182048+0.516564I$ $b=-1.05708-1.01392I$	$-6.16858-2.32052I$	$-3.20526+1.59481I$
$u=\ 1.247280-0.319144I$ $a=\ 0.182048-0.516564I$ $b=-1.05708+1.01392I$	$-6.16858+2.32052I$	$-3.20526-1.59481I$
$u=\ 1.196510+0.496467I$ $a=\ 0.379212-0.918724I$ $b=\ 1.26364+1.26277I$	$3.99034-6.75234I$	$5.94192+5.73378I$
$u=\ 1.196510-0.496467I$ $a=\ 0.379212+0.918724I$ $b=\ 1.26364-1.26277I$	$3.99034+6.75234I$	$5.94192-5.73378I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.380020+0.011732I$ $a=-0.219844+0.402694I$ $b=\ \ 0.11794-1.72450I$	$-5.51750-5.03534I$	$-0.41653+8.31154I$
$u=-1.380020-0.011732I$ $a=-0.219844-0.402694I$ $b=\ \ 0.11794+1.72450I$	$-5.51750+5.03534I$	$-0.41653-8.31154I$
$u=-1.36915+0.68109I$ $a=-0.008103-0.744150I$ $b=-1.032460+0.799143I$	$0.62495+6.93129I$	$6.44261-5.40646I$
$u=-1.36915-0.68109I$ $a=-0.008103+0.744150I$ $b=-1.032460-0.799143I$	$0.62495-6.93129I$	$6.44261+5.40646I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{24}+2u^{22}+\cdots-3u+1)(u^{86}-3u^{85}+\cdots-1090u+331)$
c_2	$(u^{24}+u^{23}+\cdots+u+1)(u^{86}+2u^{85}+\cdots+98u+47)$
c_3	$(u^{24}+3u^{22}+\cdots+101u+11)(u^{86}-u^{85}+\cdots-18u+4)$
c_4	$(u^{24}+u^{23}+\cdots+11u+9)(u^{86}-26u^{84}+\cdots-352u+143)$
c_5	$(u^{24}+17u^{22}+\cdots-2u+5)(u^{86}+u^{85}+\cdots-2490u+2156)$
c_6	$(u^{24}-u^{23}+\cdots-10u+1)$ $\cdot(u^{86}-28u^{84}+\cdots-145161863u+33647749)$
c_7	$(u^{24}-u^{23}+\cdots-u+1)(u^{86}+2u^{85}+\cdots+98u+47)$
c_8	$(u^{24}+u^{23}+\cdots+u+1)(u^{86}+4u^{85}+\cdots+460u+221)$
c_9	$(u^{24}+u^{23}+\cdots+u+1)(u^{86}+2u^{85}+\cdots+7484u+1411)$
c_{10}	$(u^{24}-u^{23}+\cdots-11u+9)(u^{86}-26u^{84}+\cdots-352u+143)$
c_{11}	$(u^{24}-u^{23}+\cdots-u+1)(u^{86}+4u^{85}+\cdots+460u+221)$
c_{12}	$(u^{24}+17u^{22}+\cdots+2u+5)(u^{86}+u^{85}+\cdots-2490u+2156)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{24}+4y^{23}+\cdots+21y+1)(y^{86}-7y^{85}+\cdots-234820y+109561)$
c_2, c_7	$(y^{24}-15y^{23}+\cdots-9y+1)(y^{86}-26y^{85}+\cdots-35642y+2209)$
c_3	$(y^{24}+6y^{23}+\cdots-1577y+121)(y^{86}+31y^{85}+\cdots-988y+16)$
c_4, c_{10}	$(y^{24}-13y^{23}+\cdots-679y+81)$ $\cdot(y^{86}-52y^{85}+\cdots-226292y+20449)$
c_5, c_{12}	$(y^{24}+34y^{23}+\cdots+446y+25)$ $\cdot(y^{86}+59y^{85}+\cdots+168629940y+4648336)$
c_6	$(y^{24}+3y^{23}+\cdots+180y+1)$ $\cdot(y^{86}-56y^{85}+\cdots+41812736405652607y+1132171012767001)$
c_8, c_{11}	$(y^{24}+19y^{23}+\cdots-13y+1)$ $\cdot(y^{86}+80y^{85}+\cdots+18613622y+48841)$
c_9	$(y^{24}+21y^{23}+\cdots+11y+1)$ $\cdot(y^{86}+42y^{85}+\cdots+83072014y+1990921)$