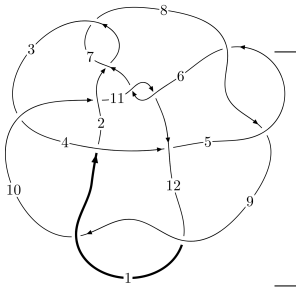
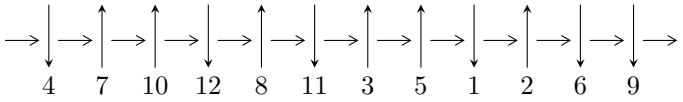
$12a_{1081}$ $(K12a_{1081})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.71552 \times 10^{713} u^{137} + 1.22208 \times 10^{714} u^{136} + \cdots + 1.77498 \times 10^{715} b - 8.44541 \times 10^{717}, \\ & 2.38801 \times 10^{718} u^{137} + 1.12887 \times 10^{718} u^{136} + \cdots + 2.83805 \times 10^{719} a - 1.43193 \times 10^{723}, \\ & u^{138} - u^{137} + \cdots - 38969u + 39973 \rangle \\ I_2^u = \langle & -1.96664 \times 10^{19} u^{29} + 4.76700 \times 10^{18} u^{28} + \cdots + 1.93126 \times 10^{18} b - 2.16039 \times 10^{19}, \\ & - 1.12071 \times 10^{18} u^{29} - 4.65424 \times 10^{18} u^{28} + \cdots + 7.72503 \times 10^{17} a + 1.15956 \times 10^{19}, \ u^{30} - 5u^{28} + \cdots + 3u + \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 168 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. $\boldsymbol{I_1^u = \langle -6.72 \times 10^{713} u^{137} + 1.22 \times 10^{714} u^{136} + \cdots + 1.77 \times 10^{715} b - 8.45 \times 10^{717},\ 2.39 \times 10^{718} u^{137} + 1.13 \times 10^{718} u^{136} + \cdots + 2.84 \times 10^{719} a - 1.43 \times 10^{723},\ u^{138} - u^{137} + \cdots - 38969u + 39973 \rangle}$

(i) Arc colorings

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

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

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

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

$$a_{11} = \begin{pmatrix} -0.0841427u^{137} - 0.0397762u^{136} + \cdots - 1556.39u + 5045.49 \\ 0.0378343u^{137} - 0.0688504u^{136} + \cdots - 2935.59u + 475.803 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.00948334u^{137} + 0.0136277u^{136} + \cdots + 823.451u + 2078.34 \\ -0.125302u^{137} + 0.0935960u^{136} + \cdots + 3676.61u + 1770.16 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.704121u^{137} - 0.0203105u^{136} + \cdots - 1419.49u - 28148.0 \\ -0.00997754u^{137} - 0.00245078u^{136} + \cdots - 58.2883u - 451.123 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.0611026u^{137} - 0.0773930u^{136} + \cdots - 2719.78u + 2720.21 \\ -0.122978u^{137} + 0.0948035u^{136} + \cdots + 3751.24u + 1595.19 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.121977u^{137} + 0.0290742u^{136} + \cdots + 1379.20u + 4569.68 \\ 0.0378343u^{137} - 0.0688504u^{136} + \cdots - 2935.59u + 475.803 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0294149u^{137} - 0.133869u^{136} + \cdots - 5251.86u + 4848.39 \\ 0.0378481u^{137} + 0.0929219u^{136} + \cdots + 3476.87u - 5619.06 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.232272u^{137} - 0.0507081u^{136} + \cdots - 1502.79u - 8678.55 \\ 0.0517901u^{137} - 0.0821151u^{136} + \cdots - 3701.95u + 2195.58 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.477195u^{137} + 0.0337432u^{136} + \cdots + 367.793u - 21597.4 \\ -0.0262764u^{137} + 0.0591113u^{136} + \cdots + 2863.72u - 1195.39 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.288478u^{137} + 0.0182579u^{136} + \cdots + 166.945u + 9522.21$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$5(5u^{138} - 70u^{137} + \cdots - 54u + 1)$
c_2, c_7	$u^{138} + u^{137} + \cdots + 38969u + 39973$
c_3	$u^{138} + u^{137} + \cdots + 11328u + 688$
c_4	$u^{138} + 3u^{137} + \cdots + 1824290u + 445340$
c_5, c_8	$5(5u^{138} + 20u^{137} + \cdots + 566u + 1601)$
c_6, c_{11}	$u^{138} - u^{137} + \cdots + 3352910u + 356879$
c_9, c_{12}	$u^{138} + 3u^{137} + \cdots + 35u + 293$
c_{10}	$5(5u^{138} - 15u^{137} + \cdots - 8.52426 \times 10^8 u + 2.04508 \times 10^8)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$25(25y^{138}+220y^{137}+\cdots-208y+1)$
c_2, c_7	$y^{138}-81y^{137}+\cdots-16606311865y+1597840729$
c_3	$y^{138}+21y^{137}+\cdots+88302848y+473344$
c_4	$y^{138}-45y^{137}+\cdots-10148860553420y+198327715600$
c_5, c_8	$25(25y^{138}+2770y^{137}+\cdots+9.04133\times10^{8}y+2563201)$
c_6, c_{11}	$y^{138}+103y^{137}+\cdots+1941665805688y+127362620641$
c_9, c_{12}	$y^{138}-109y^{137}+\cdots+451753y+85849$
c_{10}	$25(25y^{138}-1795y^{137}+\cdots-1.65727\times10^{18}y+4.18236\times10^{16})$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.996983+0.016036I$ $a=-0.196561+1.103920I$ $b=\ \ 2.82578+0.40806I$	$-0.433411-0.065140I$	0
$u=-0.996983-0.016036I$ $a=-0.196561-1.103920I$ $b=\ \ 2.82578-0.40806I$	$-0.433411+0.065140I$	0
$u=-1.022530+0.051510I$ $a=\ \ 0.080646-1.132090I$ $b=-0.76871-1.55789I$	$1.37724-0.93730I$	0
$u=-1.022530-0.051510I$ $a=\ \ 0.080646+1.132090I$ $b=-0.76871+1.55789I$	$1.37724+0.93730I$	0
$u=\ \ 1.017890+0.143350I$ $a=\ \ 0.238571-1.029880I$ $b=-0.02209-1.84159I$	$0.88004+4.56519I$	0
$u=\ \ 1.017890-0.143350I$ $a=\ \ 0.238571+1.029880I$ $b=-0.02209+1.84159I$	$0.88004-4.56519I$	0
$u=\ \ 0.965183+0.050981I$ $a=\ \ 1.65426+1.36327I$ $b=-0.558668-0.179049I$	$-2.92758+3.55181I$	0
$u=\ \ 0.965183-0.050981I$ $a=\ \ 1.65426-1.36327I$ $b=-0.558668+0.179049I$	$-2.92758-3.55181I$	0
$u=\ \ 1.018030+0.211721I$ $a=-0.081174+1.142740I$ $b=-0.19084+1.95944I$	$-4.44869+10.24780I$	0
$u=\ \ 1.018030-0.211721I$ $a=-0.081174-1.142740I$ $b=-0.19084-1.95944I$	$-4.44869-10.24780I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.504413 + 0.811235I$ $a = -0.062303 - 0.615407I$ $b = 0.296279 - 0.582273I$	$-3.47151 + 1.07041I$	0
$u = 0.504413 - 0.811235I$ $a = -0.062303 + 0.615407I$ $b = 0.296279 + 0.582273I$	$-3.47151 - 1.07041I$	0
$u = -0.793874 + 0.531232I$ $a = -0.518585 - 1.140980I$ $b = 1.104970 - 0.745819I$	$-6.65052 + 1.68021I$	0
$u = -0.793874 - 0.531232I$ $a = -0.518585 + 1.140980I$ $b = 1.104970 + 0.745819I$	$-6.65052 - 1.68021I$	0
$u = -0.987445 + 0.354633I$ $a = -0.371369 + 1.118390I$ $b = 0.188524 + 1.020030I$	$-3.26198 - 2.34672I$	0
$u = -0.987445 - 0.354633I$ $a = -0.371369 - 1.118390I$ $b = 0.188524 - 1.020030I$	$-3.26198 + 2.34672I$	0
$u = -0.813351 + 0.666660I$ $a = 0.814371 + 0.121481I$ $b = 0.794972 + 1.078600I$	$-6.70110 - 6.41909I$	0
$u = -0.813351 - 0.666660I$ $a = 0.814371 - 0.121481I$ $b = 0.794972 - 1.078600I$	$-6.70110 + 6.41909I$	0
$u = 0.943808 + 0.082756I$ $a = -0.64334 + 1.61771I$ $b = -0.177110 + 1.140090I$	$-2.89503 - 2.86908I$	0
$u = 0.943808 - 0.082756I$ $a = -0.64334 - 1.61771I$ $b = -0.177110 - 1.140090I$	$-2.89503 + 2.86908I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.560468 + 0.902876I$ $a = -0.161331 + 0.567791I$ $b = -0.094337 + 0.818976I$	$-8.01191 + 0.19309I$	0
$u = 0.560468 - 0.902876I$ $a = -0.161331 - 0.567791I$ $b = -0.094337 - 0.818976I$	$-8.01191 - 0.19309I$	0
$u = -0.932670 + 0.024684I$ $a = 0.471310 + 0.914988I$ $b = -1.47605 - 0.30011I$	$0.853485 - 0.671174I$	0
$u = -0.932670 - 0.024684I$ $a = 0.471310 - 0.914988I$ $b = -1.47605 + 0.30011I$	$0.853485 + 0.671174I$	0
$u = -0.090994 + 0.922516I$ $a = 1.370980 - 0.008494I$ $b = 1.055260 + 0.459695I$	$4.73578 + 2.62567I$	0
$u = -0.090994 - 0.922516I$ $a = 1.370980 + 0.008494I$ $b = 1.055260 - 0.459695I$	$4.73578 - 2.62567I$	0
$u = -1.016830 + 0.343231I$ $a = 1.37765 + 0.82051I$ $b = -0.808601 + 0.742412I$	$-0.21336 - 6.06499I$	0
$u = -1.016830 - 0.343231I$ $a = 1.37765 - 0.82051I$ $b = -0.808601 - 0.742412I$	$-0.21336 + 6.06499I$	0
$u = 1.056910 + 0.219362I$ $a = -1.070860 + 0.250455I$ $b = 0.692913 - 0.169665I$	$-1.41103 + 3.57036I$	0
$u = 1.056910 - 0.219362I$ $a = -1.070860 - 0.250455I$ $b = 0.692913 + 0.169665I$	$-1.41103 - 3.57036I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.770956+0.423785I$ $a=-1.21398+1.30467I$ $b=-0.297099+0.525091I$	$-3.17629-1.83028I$	0
$u=-0.770956-0.423785I$ $a=-1.21398-1.30467I$ $b=-0.297099-0.525091I$	$-3.17629+1.83028I$	0
$u=\ \ 0.092480+1.116510I$ $a=\ \ 1.147840-0.296204I$ $b=\ \ 1.059000-0.502739I$	$1.41980-7.64753I$	0
$u=\ \ 0.092480-1.116510I$ $a=\ \ 1.147840+0.296204I$ $b=\ \ 1.059000+0.502739I$	$1.41980+7.64753I$	0
$u=\ \ 0.821386+0.299519I$ $a=-0.264749-0.106864I$ $b=\ \ 0.611123-1.044560I$	$-1.51452+2.60208I$	0
$u=\ \ 0.821386-0.299519I$ $a=-0.264749+0.106864I$ $b=\ \ 0.611123+1.044560I$	$-1.51452-2.60208I$	0
$u=-1.12788$ $a=-0.744748$ $b=\ \ 0.811316$	2.10767	0
$u=\ \ 1.060720+0.414310I$ $a=-0.723098+0.361918I$ $b=\ \ 0.820123+0.152530I$	$-1.66016+3.48939I$	0
$u=\ \ 1.060720-0.414310I$ $a=-0.723098-0.361918I$ $b=\ \ 0.820123-0.152530I$	$-1.66016-3.48939I$	0
$u=-1.14037$ $a=-0.768989$ $b=\ \ 0.831977$	2.10732	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.012209 + 1.140360I$ $a = -1.116910 - 0.163245I$ $b = -0.942393 - 0.532548I$	$0.46890 + 6.76628I$	0
$u = 0.012209 - 1.140360I$ $a = -1.116910 + 0.163245I$ $b = -0.942393 + 0.532548I$	$0.46890 - 6.76628I$	0
$u = -1.126750 + 0.187618I$ $a = 0.157445 - 0.322501I$ $b = 0.128589 + 0.959329I$	$-0.269172 + 0.879761I$	0
$u = -1.126750 - 0.187618I$ $a = 0.157445 + 0.322501I$ $b = 0.128589 - 0.959329I$	$-0.269172 - 0.879761I$	0
$u = -0.428505 + 0.738242I$ $a = 0.427428 + 0.902271I$ $b = 0.731836 + 1.029090I$	$-7.92339 + 8.13331I$	0
$u = -0.428505 - 0.738242I$ $a = 0.427428 - 0.902271I$ $b = 0.731836 - 1.029090I$	$-7.92339 - 8.13331I$	0
$u = 0.413343 + 1.070260I$ $a = 0.352637 + 0.478381I$ $b = -0.510469 + 0.482310I$	$-6.40023 + 2.19729I$	0
$u = 0.413343 - 1.070260I$ $a = 0.352637 - 0.478381I$ $b = -0.510469 - 0.482310I$	$-6.40023 - 2.19729I$	0
$u = -1.138890 + 0.216171I$ $a = 0.938274 - 0.427635I$ $b = -0.865069 + 0.151451I$	$0.60557 - 3.31488I$	0
$u = -1.138890 - 0.216171I$ $a = 0.938274 + 0.427635I$ $b = -0.865069 - 0.151451I$	$0.60557 + 3.31488I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.159580 + 0.202123I$ $a = 0.523686 - 0.267001I$ $b = -1.171280 - 0.588584I$	$3.49433 + 3.63749I$	0
$u = 1.159580 - 0.202123I$ $a = 0.523686 + 0.267001I$ $b = -1.171280 + 0.588584I$	$3.49433 - 3.63749I$	0
$u = 0.520480 + 0.634001I$ $a = 0.729739 + 1.000500I$ $b = 1.262870 - 0.523968I$	$-0.10072 + 2.23441I$	0
$u = 0.520480 - 0.634001I$ $a = 0.729739 - 1.000500I$ $b = 1.262870 + 0.523968I$	$-0.10072 - 2.23441I$	0
$u = -0.411925 + 0.705211I$ $a = -1.26847 + 0.66370I$ $b = -1.120090 - 0.278044I$	$1.50408 - 1.69310I$	0
$u = -0.411925 - 0.705211I$ $a = -1.26847 - 0.66370I$ $b = -1.120090 + 0.278044I$	$1.50408 + 1.69310I$	0
$u = 0.990132 + 0.648203I$ $a = 0.469879 - 0.516106I$ $b = -0.548868 - 0.577042I$	$-6.59865 + 5.38342I$	0
$u = 0.990132 - 0.648203I$ $a = 0.469879 + 0.516106I$ $b = -0.548868 + 0.577042I$	$-6.59865 - 5.38342I$	0
$u = -0.695626 + 0.415796I$ $a = -0.609051 + 0.662260I$ $b = -0.589397 - 0.434291I$	$1.15888 - 1.45618I$	0
$u = -0.695626 - 0.415796I$ $a = -0.609051 - 0.662260I$ $b = -0.589397 + 0.434291I$	$1.15888 + 1.45618I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.081540+0.505394I$ $a=-0.180712+1.318090I$ $b=-1.80488+0.54914I$	$3.38089-2.95458I$	0
$u=-1.081540-0.505394I$ $a=-0.180712-1.318090I$ $b=-1.80488-0.54914I$	$3.38089+2.95458I$	0
$u=1.162870+0.276034I$ $a=0.096834+1.367440I$ $b=0.980530+0.470691I$	$8.55444+1.64656I$	0
$u=1.162870-0.276034I$ $a=0.096834-1.367440I$ $b=0.980530-0.470691I$	$8.55444-1.64656I$	0
$u=-1.113260+0.456514I$ $a=-0.982564-0.655815I$ $b=1.038310-0.681708I$	$-5.74217-12.64610I$	0
$u=-1.113260-0.456514I$ $a=-0.982564+0.655815I$ $b=1.038310+0.681708I$	$-5.74217+12.64610I$	0
$u=0.008076+0.790874I$ $a=0.260982-0.671054I$ $b=0.478744-0.871301I$	$-4.04280-4.31437I$	0
$u=0.008076-0.790874I$ $a=0.260982+0.671054I$ $b=0.478744+0.871301I$	$-4.04280+4.31437I$	0
$u=1.166460+0.431597I$ $a=0.29623-1.39948I$ $b=-1.44889-1.13303I$	$3.17025+5.90259I$	0
$u=1.166460-0.431597I$ $a=0.29623+1.39948I$ $b=-1.44889+1.13303I$	$3.17025-5.90259I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.209910 + 0.311574I$ $a = 0.088859 + 0.869332I$ $b = 1.83190 + 1.37499I$	$1.38856 + 0.65407I$	0
$u = 1.209910 - 0.311574I$ $a = 0.088859 - 0.869332I$ $b = 1.83190 - 1.37499I$	$1.38856 - 0.65407I$	0
$u = 1.146150 + 0.539747I$ $a = 0.606393 - 0.247136I$ $b = -1.127740 - 0.159710I$	$-4.00738 + 3.41898I$	0
$u = 1.146150 - 0.539747I$ $a = 0.606393 + 0.247136I$ $b = -1.127740 + 0.159710I$	$-4.00738 - 3.41898I$	0
$u = -1.129130 + 0.582961I$ $a = -0.445496 + 0.901056I$ $b = -1.285570 + 0.184924I$	$2.40065 - 2.15460I$	0
$u = -1.129130 - 0.582961I$ $a = -0.445496 - 0.901056I$ $b = -1.285570 - 0.184924I$	$2.40065 + 2.15460I$	0
$u = 1.030820 + 0.753682I$ $a = -0.756733 - 1.147380I$ $b = -1.43686 - 0.31488I$	$2.14575 + 3.01232I$	0
$u = 1.030820 - 0.753682I$ $a = -0.756733 + 1.147380I$ $b = -1.43686 + 0.31488I$	$2.14575 - 3.01232I$	0
$u = 0.634624 + 0.312550I$ $a = 1.59810 + 0.77415I$ $b = -0.579748 - 0.769653I$	$-5.55250 - 7.98043I$	0
$u = 0.634624 - 0.312550I$ $a = 1.59810 - 0.77415I$ $b = -0.579748 + 0.769653I$	$-5.55250 + 7.98043I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.256390 + 0.320487I$ $a = -0.513825 + 0.288479I$ $b = 1.080400 + 0.615837I$	$-0.04047 + 8.34936I$	0
$u = 1.256390 - 0.320487I$ $a = -0.513825 - 0.288479I$ $b = 1.080400 - 0.615837I$	$-0.04047 - 8.34936I$	0
$u = 0.189025 + 1.313350I$ $a = -1.009440 + 0.156140I$ $b = -1.072560 + 0.500228I$	$-4.01940 - 12.59110I$	0
$u = 0.189025 - 1.313350I$ $a = -1.009440 - 0.156140I$ $b = -1.072560 - 0.500228I$	$-4.01940 + 12.59110I$	0
$u = 1.237780 + 0.542430I$ $a = 0.373747 + 1.064420I$ $b = 0.982098 + 0.406502I$	$8.60909 + 2.05167I$	0
$u = 1.237780 - 0.542430I$ $a = 0.373747 - 1.064420I$ $b = 0.982098 - 0.406502I$	$8.60909 - 2.05167I$	0
$u = -1.324450 + 0.269204I$ $a = -0.188429 - 1.262470I$ $b = 0.787991 - 0.440040I$	$5.38983 - 5.08115I$	0
$u = -1.324450 - 0.269204I$ $a = -0.188429 + 1.262470I$ $b = 0.787991 + 0.440040I$	$5.38983 + 5.08115I$	0
$u = -0.197399 + 1.343800I$ $a = -0.857178 - 0.030179I$ $b = -0.781340 - 0.073537I$	$-1.13873 + 1.54484I$	0
$u = -0.197399 - 1.343800I$ $a = -0.857178 + 0.030179I$ $b = -0.781340 + 0.073537I$	$-1.13873 - 1.54484I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.430877+0.462874I$ $a=-0.74939-1.49100I$ $b=-0.525108-0.989918I$	$-1.87250+2.69080I$	$-2.88096-3.36538I$
$u=-0.430877-0.462874I$ $a=-0.74939+1.49100I$ $b=-0.525108+0.989918I$	$-1.87250-2.69080I$	$-2.88096+3.36538I$
$u=1.358020+0.265113I$ $a=0.084193-1.061350I$ $b=-1.129230-0.560877I$	$7.00962+4.90136I$	0
$u=1.358020-0.265113I$ $a=0.084193+1.061350I$ $b=-1.129230+0.560877I$	$7.00962-4.90136I$	0
$u=-1.287330+0.522829I$ $a=0.101630-1.029570I$ $b=1.68143-0.76937I$	$8.40357-7.89822I$	0
$u=-1.287330-0.522829I$ $a=0.101630+1.029570I$ $b=1.68143+0.76937I$	$8.40357+7.89822I$	0
$u=-0.285947+0.538897I$ $a=-1.53356-0.32358I$ $b=0.659564-0.112720I$	$-5.11736-1.24300I$	$-1.70455+2.55035I$
$u=-0.285947-0.538897I$ $a=-1.53356+0.32358I$ $b=0.659564+0.112720I$	$-5.11736+1.24300I$	$-1.70455-2.55035I$
$u=-0.362457+1.343170I$ $a=0.865960-0.059347I$ $b=0.532963+0.185245I$	$-5.04634+2.90316I$	0
$u=-0.362457-1.343170I$ $a=0.865960+0.059347I$ $b=0.532963-0.185245I$	$-5.04634-2.90316I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.010838 + 0.579003I$ $a = -1.76510 + 0.96046I$ $b = -0.838793 + 0.502080I$	$-0.01717 - 1.98636I$	$2.78651 + 4.49302I$
$u = 0.010838 - 0.579003I$ $a = -1.76510 - 0.96046I$ $b = -0.838793 - 0.502080I$	$-0.01717 + 1.98636I$	$2.78651 - 4.49302I$
$u = 0.566220 + 0.086865I$ $a = -0.978966 + 0.126970I$ $b = 0.981078 + 0.088750I$	$-2.00025 - 0.00344I$	$-6.94218 - 0.61335I$
$u = 0.566220 - 0.086865I$ $a = -0.978966 - 0.126970I$ $b = 0.981078 - 0.088750I$	$-2.00025 + 0.00344I$	$-6.94218 + 0.61335I$
$u = 1.38859 + 0.38666I$ $a = -0.012945 - 0.765406I$ $b = -1.31049 - 0.76680I$	$4.68075 + 3.92363I$	0
$u = 1.38859 - 0.38666I$ $a = -0.012945 + 0.765406I$ $b = -1.31049 + 0.76680I$	$4.68075 - 3.92363I$	0
$u = 0.525541 + 0.164085I$ $a = -1.69473 - 0.88728I$ $b = 0.295736 + 0.960287I$	$-0.45907 - 2.93054I$	$0. - 1.91622I$
$u = 0.525541 - 0.164085I$ $a = -1.69473 + 0.88728I$ $b = 0.295736 - 0.960287I$	$-0.45907 + 2.93054I$	$0. + 1.91622I$
$u = 1.33594 + 0.57325I$ $a = 0.019626 + 1.132410I$ $b = 1.51970 + 0.86519I$	$5.3209 + 13.6138I$	0
$u = 1.33594 - 0.57325I$ $a = 0.019626 - 1.132410I$ $b = 1.51970 - 0.86519I$	$5.3209 - 13.6138I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.36480+0.54080I$ $a=-0.094028+0.965375I$ $b=-1.62793+0.90934I$	$4.78648-12.63490I$	0
$u=-1.36480-0.54080I$ $a=-0.094028-0.965375I$ $b=-1.62793-0.90934I$	$4.78648+12.63490I$	0
$u=-1.34700+0.61996I$ $a=\ \ 0.171636-0.968001I$ $b=\ \ 1.06851-1.00429I$	$-1.46014-9.68701I$	0
$u=-1.34700-0.61996I$ $a=\ \ 0.171636+0.968001I$ $b=\ \ 1.06851+1.00429I$	$-1.46014+9.68701I$	0
$u=-1.45806+0.40964I$ $a=\ \ 0.201591-0.773749I$ $b=\ \ 1.042010-0.296088I$	$6.55050+2.02054I$	0
$u=-1.45806-0.40964I$ $a=\ \ 0.201591+0.773749I$ $b=\ \ 1.042010+0.296088I$	$6.55050-2.02054I$	0
$u=\ \ 0.82795+1.27576I$ $a=-0.495265-0.477064I$ $b=-1.166930-0.026150I$	$-4.59262+4.27321I$	0
$u=\ \ 0.82795-1.27576I$ $a=-0.495265+0.477064I$ $b=-1.166930+0.026150I$	$-4.59262-4.27321I$	0
$u=\ \ 1.38279+0.64774I$ $a=-0.086681-1.060280I$ $b=-1.54040-0.84654I$	$-0.1511+19.4140I$	0
$u=\ \ 1.38279-0.64774I$ $a=-0.086681+1.060280I$ $b=-1.54040+0.84654I$	$-0.1511-19.4140I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.42623+0.59463I$ $a=-0.096708+0.938802I$ $b=-1.174820+0.735466I$	$3.13111-8.34888I$	0
$u=-1.42623-0.59463I$ $a=-0.096708-0.938802I$ $b=-1.174820-0.735466I$	$3.13111+8.34888I$	0
$u=-0.066144+0.444811I$ $a=-0.735825+0.869045I$ $b=-0.384960+0.628250I$	$-0.131886-1.180470I$	$-1.41889+5.75274I$
$u=-0.066144-0.444811I$ $a=-0.735825-0.869045I$ $b=-0.384960-0.628250I$	$-0.131886+1.180470I$	$-1.41889-5.75274I$
$u=-1.53238+0.36627I$ $a=\ 0.131082+0.957577I$ $b=-1.035590+0.465784I$	$3.13151-9.72521I$	0
$u=-1.53238-0.36627I$ $a=\ 0.131082-0.957577I$ $b=-1.035590-0.465784I$	$3.13151+9.72521I$	0
$u=\ 1.51131+0.47546I$ $a=-0.213994-0.849356I$ $b=-0.710119-0.431194I$	$5.27507-0.55882I$	0
$u=\ 1.51131-0.47546I$ $a=-0.213994+0.849356I$ $b=-0.710119+0.431194I$	$5.27507+0.55882I$	0
$u=\ 1.55411+0.52753I$ $a=\ 0.044115+0.616806I$ $b=\ 1.257950+0.547846I$	$1.03904+7.82712I$	0
$u=\ 1.55411-0.52753I$ $a=\ 0.044115-0.616806I$ $b=\ 1.257950-0.547846I$	$1.03904-7.82712I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.62989+0.23691I$ $a=-0.085618+0.720439I$ $b=-0.903124+0.325023I$	$2.62833+6.36462I$	0
$u=-1.62989-0.23691I$ $a=-0.085618-0.720439I$ $b=-0.903124-0.325023I$	$2.62833-6.36462I$	0
$u=-0.07786+1.68194I$ $a=0.661690+0.070230I$ $b=0.923050+0.073229I$	$-4.80730-0.10343I$	0
$u=-0.07786-1.68194I$ $a=0.661690-0.070230I$ $b=0.923050-0.073229I$	$-4.80730+0.10343I$	0
$u=-1.54875+0.71855I$ $a=0.098530-0.817622I$ $b=1.276700-0.587261I$	$0.08562-8.14481I$	0
$u=-1.54875-0.71855I$ $a=0.098530+0.817622I$ $b=1.276700+0.587261I$	$0.08562+8.14481I$	0
$u=-0.115504+0.256129I$ $a=2.36631-2.30608I$ $b=-0.286364-1.026140I$	$-2.22352+1.22343I$	$-2.79696+0.76631I$
$u=-0.115504-0.256129I$ $a=2.36631+2.30608I$ $b=-0.286364+1.026140I$	$-2.22352-1.22343I$	$-2.79696-0.76631I$

II.

$\boldsymbol{I_2^u = \langle -1.97\times10^{19}u^{29}+4.77\times10^{18}u^{28}+\cdots+1.93\times10^{18}b-2.16\times10^{19},\ -1.12\times10^{18}u^{29}-4.65\times10^{18}u^{28}+\cdots+7.73\times10^{17}a+1.16\times10^{19},\ u^{30}-5u^{28}+\cdots+3u+1\rangle}$

(i) Arc colorings

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

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

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

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

$$a_{11} = \begin{pmatrix}1.45075u^{29}+6.02489u^{28}+\cdots-40.5117u-15.0104\\10.1832u^{29}-2.46834u^{28}+\cdots+2.35971u+11.1864\end{pmatrix}$$

$$a_6 = \begin{pmatrix}21.4770u^{29}+7.08737u^{28}+\cdots-85.5345u-12.9536\\-2.05857u^{29}+5.35184u^{28}+\cdots-32.9400u-14.6400\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}12.5193u^{29}+23.9450u^{28}+\cdots-190.390u-58.0777\\15.3254u^{29}-1.21118u^{28}+\cdots-13.6164u+10.6001\end{pmatrix}$$

$$a_5 = \begin{pmatrix}27.2689u^{29}+6.92862u^{28}+\cdots-91.9989u-10.6800\\1.30925u^{29}+4.88824u^{28}+\cdots-34.0887u-12.5251\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-8.73246u^{29}+8.49323u^{28}+\cdots-42.8714u-26.1969\\10.1832u^{29}-2.46834u^{28}+\cdots+2.35971u+11.1864\end{pmatrix}$$

$$a_4 = \begin{pmatrix}-10.5836u^{29}-8.70196u^{28}+\cdots+78.4154u+15.8292\\-5.79193u^{29}+0.158751u^{28}+\cdots+6.46435u-1.27361\end{pmatrix}$$

$$a_1 = \begin{pmatrix}5.61843u^{29}+6.98725u^{28}+\cdots-52.6134u-9.52046\\4.75041u^{29}+0.290080u^{28}+\cdots-6.18947u-0.0702685\end{pmatrix}$$

$$a_9 = \begin{pmatrix}-1.14518u^{29}+2.00028u^{28}+\cdots-21.8170u-2.60160\\7.22275u^{29}-4.29895u^{28}+\cdots+15.4686u+10.4007\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{812989079024551444058}{965628997466858747 5}u^{29}+\frac{583091651501789816809}{19312579949337174950}u^{28}+\cdots-\frac{754014162184226002028}{9656289974668587475}u-\frac{191224317971511756 1229}{19312579949337174950}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$5(5u^{30} - 25u^{29} + \cdots - 2u + 1)$
c_2	$u^{30} - 5u^{28} + \cdots + 3u + 1$
c_3	$u^{30} + 2u^{28} + \cdots + 8u + 4$
c_4	$u^{30} - 2u^{29} + \cdots + 50u + 20$
c_5	$5(5u^{30} + 35u^{29} + \cdots - 12u + 1)$
c_6	$u^{30} + 11u^{28} + \cdots - 2u + 1$
c_7	$u^{30} - 5u^{28} + \cdots - 3u + 1$
c_8	$5(5u^{30} - 35u^{29} + \cdots + 12u + 1)$
c_9	$u^{30} - 13u^{28} + \cdots + 59u + 7$
c_{10}	$5(5u^{30} + 20u^{29} + \cdots + 12u + 1)$
c_{11}	$u^{30} + 11u^{28} + \cdots + 2u + 1$
c_{12}	$u^{30} - 13u^{28} + \cdots - 59u + 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$25(25y^{30} - 285y^{29} + \cdots + 18y + 1)$
c_2, c_7	$y^{30} - 10y^{29} + \cdots - 19y + 1$
c_3	$y^{30} + 4y^{29} + \cdots + 128y + 16$
c_4	$y^{30} - 18y^{29} + \cdots - 1260y + 400$
c_5, c_8	$25(25y^{30} + 465y^{29} + \cdots + 48y + 1)$
c_6, c_{11}	$y^{30} + 22y^{29} + \cdots + 50y + 1$
c_9, c_{12}	$y^{30} - 26y^{29} + \cdots - 1129y + 49$
c_{10}	$25(25y^{30} - 40y^{29} + \cdots - 70y + 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.038440+0.086994I$ $a=-0.006233-0.561359I$ $b=\ \ 0.009243+1.246340I$	$-0.137606+0.577838I$	$3.60094+10.09804I$
$u=-1.038440-0.086994I$ $a=-0.006233+0.561359I$ $b=\ \ 0.009243-1.246340I$	$-0.137606-0.577838I$	$3.60094-10.09804I$
$u=-0.058619+1.041750I$ $a=\ \ 1.011210+0.210339I$ $b=\ \ 0.604712-0.044034I$	$-1.64156+1.21048I$	$-4.65835+0.93429I$
$u=-0.058619-1.041750I$ $a=\ \ 1.011210-0.210339I$ $b=\ \ 0.604712+0.044034I$	$-1.64156-1.21048I$	$-4.65835-0.93429I$
$u=-0.804050+0.309012I$ $a=\ \ 0.614185-0.530918I$ $b=-0.262953-0.875664I$	$-1.04080-2.28652I$	$3.84381+0.62186I$
$u=-0.804050-0.309012I$ $a=\ \ 0.614185+0.530918I$ $b=-0.262953+0.875664I$	$-1.04080+2.28652I$	$3.84381-0.62186I$
$u=\ \ 0.037142+1.141930I$ $a=-0.624241-0.266305I$ $b=\ \ 0.172749+0.023131I$	$-6.08778-0.51937I$	$-8.26764-0.60398I$
$u=\ \ 0.037142-1.141930I$ $a=-0.624241+0.266305I$ $b=\ \ 0.172749-0.023131I$	$-6.08778+0.51937I$	$-8.26764+0.60398I$
$u=\ \ 1.031060+0.553226I$ $a=\ \ 0.521597+1.281310I$ $b=\ \ 1.63956+0.31351I$	$3.52797+2.32196I$	$9.63228+2.66947I$
$u=\ \ 1.031060-0.553226I$ $a=\ \ 0.521597-1.281310I$ $b=\ \ 1.63956-0.31351I$	$3.52797-2.32196I$	$9.63228-2.66947I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.132580 + 0.433372I$ $a = -0.351000 - 1.287120I$ $b = -0.937170 - 0.455634I$	$8.16172 + 1.94892I$	$-6.48394 - 4.05910I$
$u = 1.132580 - 0.433372I$ $a = -0.351000 + 1.287120I$ $b = -0.937170 + 0.455634I$	$8.16172 - 1.94892I$	$-6.48394 + 4.05910I$
$u = 1.190290 + 0.287703I$ $a = -1.092900 - 0.078542I$ $b = 0.766835 + 0.186620I$	$-1.20250 + 4.51634I$	$1.10088 - 8.64099I$
$u = 1.190290 - 0.287703I$ $a = -1.092900 + 0.078542I$ $b = 0.766835 - 0.186620I$	$-1.20250 - 4.51634I$	$1.10088 + 8.64099I$
$u = 0.651568 + 0.345268I$ $a = 0.451434 + 0.990608I$ $b = 1.25390 - 1.29041I$	$-0.35004 + 1.45842I$	$-0.30403 + 2.53979I$
$u = 0.651568 - 0.345268I$ $a = 0.451434 - 0.990608I$ $b = 1.25390 + 1.29041I$	$-0.35004 - 1.45842I$	$-0.30403 - 2.53979I$
$u = 0.903556 + 0.918690I$ $a = 0.133890 + 0.140174I$ $b = -0.737154 + 0.223538I$	$-5.92952 + 3.36777I$	$-7.06092 - 4.63947I$
$u = 0.903556 - 0.918690I$ $a = 0.133890 - 0.140174I$ $b = -0.737154 - 0.223538I$	$-5.92952 - 3.36777I$	$-7.06092 + 4.63947I$
$u = -1.224650 + 0.411509I$ $a = -0.244223 - 1.222500I$ $b = 1.25788 - 1.04548I$	$2.85308 - 5.73028I$	$-5.21981 + 3.10172I$
$u = -1.224650 - 0.411509I$ $a = -0.244223 + 1.222500I$ $b = 1.25788 + 1.04548I$	$2.85308 + 5.73028I$	$-5.21981 - 3.10172I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.706557 + 0.027268I$ $a = 1.88379 + 2.03206I$ $b = 0.091158 + 0.734308I$	$-3.77992 + 3.28664I$	$-10.70122 - 5.75697I$
$u = 0.706557 - 0.027268I$ $a = 1.88379 - 2.03206I$ $b = 0.091158 - 0.734308I$	$-3.77992 - 3.28664I$	$-10.70122 + 5.75697I$
$u = -0.565179 + 0.036789I$ $a = 1.39085 - 0.74467I$ $b = 0.042033 + 1.273390I$	$-0.41343 + 3.46874I$	$1.40033 - 12.33534I$
$u = -0.565179 - 0.036789I$ $a = 1.39085 + 0.74467I$ $b = 0.042033 - 1.273390I$	$-0.41343 - 3.46874I$	$1.40033 + 12.33534I$
$u = 0.00052 + 1.50689I$ $a = -0.767316 - 0.102364I$ $b = -0.859874 + 0.140663I$	$-4.43610 + 2.14473I$	0
$u = 0.00052 - 1.50689I$ $a = -0.767316 + 0.102364I$ $b = -0.859874 - 0.140663I$	$-4.43610 - 2.14473I$	0
$u = -0.334932 + 0.261625I$ $a = 0.07649 - 2.21765I$ $b = 0.031293 + 1.154740I$	$-5.91856 - 9.19911I$	$-3.19756 + 7.31318I$
$u = -0.334932 - 0.261625I$ $a = 0.07649 + 2.21765I$ $b = 0.031293 - 1.154740I$	$-5.91856 + 9.19911I$	$-3.19756 - 7.31318I$
$u = -1.62740 + 0.51917I$ $a = 0.002467 + 0.783515I$ $b = -1.072220 + 0.657131I$	$1.59062 - 9.80549I$	0
$u = -1.62740 - 0.51917I$ $a = 0.002467 - 0.783515I$ $b = -1.072220 - 0.657131I$	$1.59062 + 9.80549I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$25(5u^{30}-25u^{29}+\cdots-2u+1)(5u^{138}-70u^{137}+\cdots-54u+1)$
c_2	$(u^{30}-5u^{28}+\cdots+3u+1)(u^{138}+u^{137}+\cdots+38969u+39973)$
c_3	$(u^{30}+2u^{28}+\cdots+8u+4)(u^{138}+u^{137}+\cdots+11328u+688)$
c_4	$(u^{30}-2u^{29}+\cdots+50u+20)$ $\cdot(u^{138}+3u^{137}+\cdots+1824290u+445340)$
c_5	$25(5u^{30}+35u^{29}+\cdots-12u+1)(5u^{138}+20u^{137}+\cdots+566u+1601)$
c_6	$(u^{30}+11u^{28}+\cdots-2u+1)(u^{138}-u^{137}+\cdots+3352910u+356879)$
c_7	$(u^{30}-5u^{28}+\cdots-3u+1)(u^{138}+u^{137}+\cdots+38969u+39973)$
c_8	$25(5u^{30}-35u^{29}+\cdots+12u+1)(5u^{138}+20u^{137}+\cdots+566u+1601)$
c_9	$(u^{30}-13u^{28}+\cdots+59u+7)(u^{138}+3u^{137}+\cdots+35u+293)$
c_{10}	$25(5u^{30}+20u^{29}+\cdots+12u+1)$ $\cdot(5u^{138}-15u^{137}+\cdots-852426176u+204508079)$
c_{11}	$(u^{30}+11u^{28}+\cdots+2u+1)(u^{138}-u^{137}+\cdots+3352910u+356879)$
c_{12}	$(u^{30}-13u^{28}+\cdots-59u+7)(u^{138}+3u^{137}+\cdots+35u+293)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$625(25y^{30} - 285y^{29} + \cdots + 18y + 1)$ $\cdot (25y^{138} + 220y^{137} + \cdots - 208y + 1)$
c_2, c_7	$(y^{30} - 10y^{29} + \cdots - 19y + 1)$ $\cdot (y^{138} - 81y^{137} + \cdots - 16606311865y + 1597840729)$
c_3	$(y^{30} + 4y^{29} + \cdots + 128y + 16)$ $\cdot (y^{138} + 21y^{137} + \cdots + 88302848y + 473344)$
c_4	$(y^{30} - 18y^{29} + \cdots - 1260y + 400)$ $\cdot (y^{138} - 45y^{137} + \cdots - 10148860553420y + 198327715600)$
c_5, c_8	$625(25y^{30} + 465y^{29} + \cdots + 48y + 1)$ $\cdot (25y^{138} + 2770y^{137} + \cdots + 904132574y + 2563201)$
c_6, c_{11}	$(y^{30} + 22y^{29} + \cdots + 50y + 1)$ $\cdot (y^{138} + 103y^{137} + \cdots + 1941665805688y + 127362620641)$
c_9, c_{12}	$(y^{30} - 26y^{29} + \cdots - 1129y + 49)$ $\cdot (y^{138} - 109y^{137} + \cdots + 451753y + 85849)$
c_{10}	$625(25y^{30} - 40y^{29} + \cdots - 70y + 1)$ $\cdot (25y^{138} - 1795y^{137} + \cdots - 1.66 \times 10^{18}y + 4.18 \times 10^{16})$