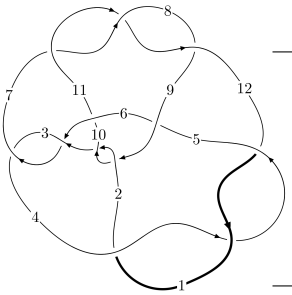
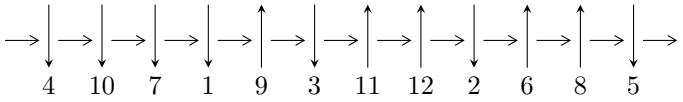
$12a_{1174}$ $(K12a_{1174})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.79172 \times 10^{293} u^{92} + 5.18538 \times 10^{293} u^{91} + \cdots + 5.07764 \times 10^{292} b + 2.25779 \times 10^{296},$$
$$- 2.37870 \times 10^{296} u^{92} + 7.02532 \times 10^{296} u^{91} + \cdots + 5.48893 \times 10^{295} a + 2.78497 \times 10^{299},$$
$$u^{93} - 2u^{92} + \cdots + 2191u - 1081 \rangle$$
$$I_2^u = \langle -32320u^{20} + 116817u^{19} + \cdots + 14919b - 48202,\ 12963u^{20} + 67496u^{19} + \cdots + 14919a - 214943,$$
$$u^{21} - 3u^{20} + \cdots - u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 114 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. $\boldsymbol{I_1^u = \langle -1.79 \times 10^{293} u^{92} + 5.19 \times 10^{293} u^{91} + \cdots + 5.08 \times 10^{292} b + 2.26 \times 10^{296},\ -2.38 \times 10^{296} u^{92} + 7.03 \times 10^{296} u^{91} + \cdots + 5.49 \times 10^{295} a + 2.78 \times 10^{299},\ u^{93} - 2u^{92} + \cdots + 2191u - 1081 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 4.33363u^{92} - 12.7991u^{91} + \cdots + 15938.8u - 5073.80 \\ 3.52865u^{92} - 10.2122u^{91} + \cdots + 14118.3u - 4446.54 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.294962u^{92} + 0.652560u^{91} + \cdots - 3271.15u + 901.397 \\ -2.28531u^{92} + 6.61498u^{91} + \cdots - 9727.95u + 3065.58 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1.38877u^{92} - 3.49286u^{91} + \cdots + 5890.99u - 1513.44 \\ -1.10004u^{92} + 3.10829u^{91} + \cdots - 5830.00u + 1865.50 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.804989u^{92} - 2.58688u^{91} + \cdots + 1820.44u - 627.253 \\ 3.52865u^{92} - 10.2122u^{91} + \cdots + 14118.3u - 4446.54 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.54792u^{92} + 4.79711u^{91} + \cdots - 4518.22u + 1695.55 \\ 0.788795u^{92} - 2.14540u^{91} + \cdots + 3223.00u - 926.289 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.06239u^{92} + 3.58010u^{91} + \cdots - 2164.67u + 1046.92 \\ 0.454016u^{92} - 1.20759u^{91} + \cdots + 1933.22u - 543.550 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.40660u^{92} - 3.76007u^{91} + \cdots + 7861.74u - 2444.89 \\ 1.43867u^{92} - 4.20929u^{91} + \cdots + 5481.94u - 1756.79 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.81351u^{92} + 5.12931u^{91} + \cdots - 6832.74u + 2194.88 \\ 2.31351u^{92} - 6.77939u^{91} + \cdots + 8527.69u - 2737.03 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.43488u^{92} - 3.65079u^{91} + \cdots + 6204.45u - 1887.76$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_{12}	$u^{93} - 3u^{92} + \cdots + 12u - 1$
c_2, c_9	$u^{93} - 34u^{91} + \cdots - 4634u + 2071$
c_3, c_6	$u^{93} - 2u^{92} + \cdots + 2191u - 1081$
c_5	$u^{93} - 7u^{92} + \cdots + 245345u + 714407$
c_7, c_8, c_{11}	$u^{93} - 7u^{92} + \cdots - 14u - 4$
c_{10}	$u^{93} + 7u^{91} + \cdots + 21184u - 3499$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{93} + 95y^{92} + \cdots + 230y - 1$
c_2, c_9	$y^{93} - 68y^{92} + \cdots + 77411666y - 4289041$
c_3, c_6	$y^{93} - 58y^{92} + \cdots + 28900295y - 1168561$
c_5	$y^{93} - 35y^{92} + \cdots + 27772503205947y - 510377361649$
c_7, c_8, c_{11}	$y^{93} - 103y^{92} + \cdots + 1372y - 16$
c_{10}	$y^{93} + 14y^{92} + \cdots - 580713924y - 12243001$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.493220+0.865157I$ $a=\ 0.381752-0.204747I$ $b=\ 1.229960-0.447001I$	$14.4991-4.6980I$	0
$u=-0.493220-0.865157I$ $a=\ 0.381752+0.204747I$ $b=\ 1.229960+0.447001I$	$14.4991+4.6980I$	0
$u=-0.999193+0.206178I$ $a=-0.81805+1.25971I$ $b=\ 0.60869+1.28232I$	$-3.17135+0.93926I$	0
$u=-0.999193-0.206178I$ $a=-0.81805-1.25971I$ $b=\ 0.60869-1.28232I$	$-3.17135-0.93926I$	0
$u=-0.957998+0.358983I$ $a=-0.20807+1.83442I$ $b=\ 0.482838+0.488493I$	$5.24104+4.96610I$	0
$u=-0.957998-0.358983I$ $a=-0.20807-1.83442I$ $b=\ 0.482838-0.488493I$	$5.24104-4.96610I$	0
$u=\ 0.941539+0.247200I$ $a=\ 0.70673-1.39465I$ $b=-0.101345-0.424981I$	$1.74388-1.76077I$	0
$u=\ 0.941539-0.247200I$ $a=\ 0.70673+1.39465I$ $b=-0.101345+0.424981I$	$1.74388+1.76077I$	0
$u=\ 1.004200+0.244501I$ $a=\ 0.06367-1.54106I$ $b=\ 0.462032-0.656917I$	$-1.04854-3.13751I$	0
$u=\ 1.004200-0.244501I$ $a=\ 0.06367+1.54106I$ $b=\ 0.462032+0.656917I$	$-1.04854+3.13751I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.931604 + 0.243587I$ $a = -1.48753 + 2.26052I$ $b = -0.76730 + 1.22144I$	$10.18600 + 4.17288I$	0
$u = 0.931604 - 0.243587I$ $a = -1.48753 - 2.26052I$ $b = -0.76730 - 1.22144I$	$10.18600 - 4.17288I$	0
$u = -0.945716 + 0.448641I$ $a = -0.18841 + 1.50162I$ $b = -0.126174 + 1.037660I$	$2.23609 + 2.02110I$	0
$u = -0.945716 - 0.448641I$ $a = -0.18841 - 1.50162I$ $b = -0.126174 - 1.037660I$	$2.23609 - 2.02110I$	0
$u = -0.927769 + 0.198246I$ $a = 0.760639 + 0.112021I$ $b = -1.157820 + 0.065675I$	$8.08998 - 0.30173I$	0
$u = -0.927769 - 0.198246I$ $a = 0.760639 - 0.112021I$ $b = -1.157820 - 0.065675I$	$8.08998 + 0.30173I$	0
$u = -0.922638 + 0.013782I$ $a = 0.607351 - 1.268960I$ $b = 0.418728 - 0.759155I$	$-1.47830 + 0.09644I$	0
$u = -0.922638 - 0.013782I$ $a = 0.607351 + 1.268960I$ $b = 0.418728 + 0.759155I$	$-1.47830 - 0.09644I$	0
$u = 0.900637 + 0.166565I$ $a = 1.094280 + 0.849188I$ $b = 2.22704 + 0.89576I$	$10.45250 - 5.98256I$	0
$u = 0.900637 - 0.166565I$ $a = 1.094280 - 0.849188I$ $b = 2.22704 - 0.89576I$	$10.45250 + 5.98256I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.797331 + 0.740231I$ $a = -1.108150 - 0.676986I$ $b = -0.87426 - 1.30671I$	$11.46630 - 3.61096I$	0
$u = 0.797331 - 0.740231I$ $a = -1.108150 + 0.676986I$ $b = -0.87426 + 1.30671I$	$11.46630 + 3.61096I$	0
$u = -0.055022 + 0.905084I$ $a = 0.025792 - 0.394822I$ $b = 0.370767 + 0.799825I$	$-1.60208 + 3.45125I$	0
$u = -0.055022 - 0.905084I$ $a = 0.025792 + 0.394822I$ $b = 0.370767 - 0.799825I$	$-1.60208 - 3.45125I$	0
$u = -0.857480 + 0.183860I$ $a = 1.55300 + 1.77791I$ $b = 0.021598 + 0.223081I$	$8.33093 + 2.12160I$	0
$u = -0.857480 - 0.183860I$ $a = 1.55300 - 1.77791I$ $b = 0.021598 - 0.223081I$	$8.33093 - 2.12160I$	0
$u = -1.113040 + 0.284847I$ $a = -1.29160 - 1.55734I$ $b = -1.051500 - 0.915350I$	$3.59625 + 1.07886I$	0
$u = -1.113040 - 0.284847I$ $a = -1.29160 + 1.55734I$ $b = -1.051500 + 0.915350I$	$3.59625 - 1.07886I$	0
$u = 0.966274 + 0.629500I$ $a = -0.41670 - 1.77249I$ $b = 0.44013 - 1.49164I$	$10.87060 - 1.71491I$	0
$u = 0.966274 - 0.629500I$ $a = -0.41670 + 1.77249I$ $b = 0.44013 + 1.49164I$	$10.87060 + 1.71491I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.15328$ $a=-0.528664$ $b=-1.46093$	-2.43023	0
$u=-0.839487$ $a=1.65103$ $b=2.74988$	5.42501	-3.13060
$u=0.883008+0.754425I$ $a=0.449816+0.330996I$ $b=0.242674+0.604013I$	$3.94725-2.93006I$	0
$u=0.883008-0.754425I$ $a=0.449816-0.330996I$ $b=0.242674-0.604013I$	$3.94725+2.93006I$	0
$u=0.144101+1.157950I$ $a=-0.603621+0.290732I$ $b=-0.777671-0.730996I$	$4.63046+5.69476I$	0
$u=0.144101-1.157950I$ $a=-0.603621-0.290732I$ $b=-0.777671+0.730996I$	$4.63046-5.69476I$	0
$u=0.210658+0.801457I$ $a=0.430928+0.084530I$ $b=1.225280+0.183772I$	$7.81659+1.96154I$	$6.74178+0.I$
$u=0.210658-0.801457I$ $a=0.430928-0.084530I$ $b=1.225280-0.183772I$	$7.81659-1.96154I$	$6.74178+0.I$
$u=0.010973+1.171930I$ $a=0.0279016+0.1302840I$ $b=0.444660-0.805741I$	$4.72768-6.23749I$	0
$u=0.010973-1.171930I$ $a=0.0279016-0.1302840I$ $b=0.444660+0.805741I$	$4.72768+6.23749I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.521607 + 0.638309I$ $a = 1.021990 + 0.648190I$ $b = -0.193682 + 0.955385I$	$4.63896 - 2.60617I$	0
$u = 0.521607 - 0.638309I$ $a = 1.021990 - 0.648190I$ $b = -0.193682 - 0.955385I$	$4.63896 + 2.60617I$	0
$u = 0.808996$ $a = 0.890695$ $b = -1.13803$	3.01362	19.9250
$u = -1.152100 + 0.402465I$ $a = 0.23414 - 1.55231I$ $b = -0.79506 - 1.59274I$	$-4.53697 + 3.39634I$	0
$u = -1.152100 - 0.402465I$ $a = 0.23414 + 1.55231I$ $b = -0.79506 + 1.59274I$	$-4.53697 - 3.39634I$	0
$u = 1.188090 + 0.303700I$ $a = -0.446730 - 1.057390I$ $b = 0.775271 - 0.984324I$	$-5.44087 - 3.46543I$	0
$u = 1.188090 - 0.303700I$ $a = -0.446730 + 1.057390I$ $b = 0.775271 + 0.984324I$	$-5.44087 + 3.46543I$	0
$u = -1.095180 + 0.568287I$ $a = -0.29331 - 1.74923I$ $b = -0.828115 - 0.843797I$	$12.5498 + 9.9708I$	0
$u = -1.095180 - 0.568287I$ $a = -0.29331 + 1.74923I$ $b = -0.828115 + 0.843797I$	$12.5498 - 9.9708I$	0
$u = 1.232980 + 0.122197I$ $a = -0.336685 - 0.619050I$ $b = -1.196950 - 0.645650I$	$2.00637 - 4.23616I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.232980 - 0.122197I$ $a = -0.336685 + 0.619050I$ $b = -1.196950 + 0.645650I$	$2.00637 + 4.23616I$	0
$u = 1.159470 + 0.468713I$ $a = -0.59929 + 1.51495I$ $b = -0.850517 + 0.823859I$	$4.89220 - 6.62233I$	0
$u = 1.159470 - 0.468713I$ $a = -0.59929 - 1.51495I$ $b = -0.850517 - 0.823859I$	$4.89220 + 6.62233I$	0
$u = -0.388822 + 0.606017I$ $a = 0.653073 + 0.206751I$ $b = -0.780994 + 0.330700I$	$6.79433 - 1.25102I$	$5.03730 + 1.40597I$
$u = -0.388822 - 0.606017I$ $a = 0.653073 - 0.206751I$ $b = -0.780994 - 0.330700I$	$6.79433 + 1.25102I$	$5.03730 - 1.40597I$
$u = -0.268356 + 0.661606I$ $a = -1.43984 - 0.64695I$ $b = -1.19354 + 0.78355I$	$4.40669 - 0.72719I$	$0.950513 + 0.183278I$
$u = -0.268356 - 0.661606I$ $a = -1.43984 + 0.64695I$ $b = -1.19354 - 0.78355I$	$4.40669 + 0.72719I$	$0.950513 - 0.183278I$
$u = -1.250230 + 0.328637I$ $a = -0.411455 + 1.094640I$ $b = 0.860122 + 0.847553I$	$-0.01907 + 5.71711I$	0
$u = -1.250230 - 0.328637I$ $a = -0.411455 - 1.094640I$ $b = 0.860122 - 0.847553I$	$-0.01907 - 5.71711I$	0
$u = -1.183020 + 0.523529I$ $a = 0.07747 + 1.93133I$ $b = 0.99024 + 1.94367I$	$1.66900 + 5.42826I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.183020-0.523529I$ $a=\ 0.07747-1.93133I$ $b=\ 0.99024-1.94367I$	$1.66900-5.42826I$	0
$u=\ 1.286270+0.468225I$ $a=\ 0.124109+1.336630I$ $b=-0.92387+1.34449I$	$-5.65977-8.34050I$	0
$u=\ 1.286270-0.468225I$ $a=\ 0.124109-1.336630I$ $b=-0.92387-1.34449I$	$-5.65977+8.34050I$	0
$u=-0.142049+0.574380I$ $a=\ 0.794922+0.815026I$ $b=\ 0.262591-0.776350I$	$-1.68799+0.40666I$	$-4.08766+0.57840I$
$u=-0.142049-0.574380I$ $a=\ 0.794922-0.815026I$ $b=\ 0.262591+0.776350I$	$-1.68799-0.40666I$	$-4.08766-0.57840I$
$u=-0.584513$ $a=\ 1.44672$ $b=\ 0.616268$	-1.06007	-13.2570
$u=-0.30460+1.38334I$ $a=-0.520117-0.087341I$ $b=-0.643508+0.824625I$	$11.3051-9.4157I$	0
$u=-0.30460-1.38334I$ $a=-0.520117+0.087341I$ $b=-0.643508-0.824625I$	$11.3051+9.4157I$	0
$u=\ 1.30757+0.60332I$ $a=\ 0.15218-1.54858I$ $b=\ 1.12343-1.60621I$	$0.99513-11.82820I$	0
$u=\ 1.30757-0.60332I$ $a=\ 0.15218+1.54858I$ $b=\ 1.12343+1.60621I$	$0.99513+11.82820I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.35464+0.50483I$ $a=-0.208649+0.708455I$ $b=\ \ 0.612881+0.904430I$	$-5.34351+1.98352I$	0
$u=-1.35464-0.50483I$ $a=-0.208649-0.708455I$ $b=\ \ 0.612881-0.904430I$	$-5.34351-1.98352I$	0
$u=-1.34636+0.53316I$ $a=\ \ 0.131831-1.266200I$ $b=-0.95023-1.22871I$	$0.44368+12.08020I$	0
$u=-1.34636-0.53316I$ $a=\ \ 0.131831+1.266200I$ $b=-0.95023+1.22871I$	$0.44368-12.08020I$	0
$u=-1.34826+0.69353I$ $a=\ \ 0.043561+1.394630I$ $b=\ \ 1.06566+1.47988I$	$7.8476+16.5231I$	0
$u=-1.34826-0.69353I$ $a=\ \ 0.043561-1.394630I$ $b=\ \ 1.06566-1.47988I$	$7.8476-16.5231I$	0
$u=\ \ 1.49310+0.30944I$ $a=-0.035631-0.798458I$ $b=\ \ 0.590963-0.949456I$	$-0.727333+0.157658I$	0
$u=\ \ 1.49310-0.30944I$ $a=-0.035631+0.798458I$ $b=\ \ 0.590963+0.949456I$	$-0.727333-0.157658I$	0
$u=\ \ 1.29993+0.86389I$ $a=-0.236875-0.413569I$ $b=\ \ 0.544137-0.825950I$	$-1.67635-4.00277I$	0
$u=\ \ 1.29993-0.86389I$ $a=-0.236875+0.413569I$ $b=\ \ 0.544137+0.825950I$	$-1.67635+4.00277I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.417218 + 0.008728I$ $a = \quad 2.36201 - 2.71549I$ $b = \quad 0.318240 - 0.856868I$	$4.68957 + 2.88584I$	$0.97095 + 1.99776I$
$u = \quad 0.417218 - 0.008728I$ $a = \quad 2.36201 + 2.71549I$ $b = \quad 0.318240 + 0.856868I$	$4.68957 - 2.88584I$	$0.97095 - 1.99776I$
$u = -1.58461$ $a = \quad 0.315412$ $b = -0.467132$	-1.98786	0
$u = \quad 0.173797 + 0.361664I$ $a = \quad 0.701705 - 0.109675I$ $b = -0.592919 - 0.173738I$	$1.059400 + 0.567180I$	$6.46224 - 2.40973I$
$u = \quad 0.173797 - 0.361664I$ $a = \quad 0.701705 + 0.109675I$ $b = -0.592919 + 0.173738I$	$1.059400 - 0.567180I$	$6.46224 + 2.40973I$
$u = \quad 1.51072 + 0.54787I$ $a = \quad 0.220888 - 0.180105I$ $b = -0.508833 + 0.053803I$	$1.82375 - 3.68778I$	0
$u = \quad 1.51072 - 0.54787I$ $a = \quad 0.220888 + 0.180105I$ $b = -0.508833 - 0.053803I$	$1.82375 + 3.68778I$	0
$u = -1.30165 + 0.95853I$ $a = \quad 0.274672 - 0.772887I$ $b = -0.400158 - 1.144420I$	$-1.18766 + 4.19203I$	0
$u = -1.30165 - 0.95853I$ $a = \quad 0.274672 + 0.772887I$ $b = -0.400158 + 1.144420I$	$-1.18766 - 4.19203I$	0
$u = \quad 1.40617 + 0.81755I$ $a = \quad 0.150305 + 0.770760I$ $b = -0.349946 + 1.025780I$	$3.25425 - 3.89917I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$1.40617-0.81755I$		
$a=$	$0.150305-0.770760I$	$3.25425+3.89917I$	0
$b=$	$-0.349946-1.025780I$		
$u=$	$1.29654+1.08535I$		
$a=$	$0.308610+0.717193I$	$3.93308-4.47908I$	0
$b=$	$-0.403588+1.194610I$		
$u=$	$1.29654-1.08535I$		
$a=$	$0.308610-0.717193I$	$3.93308+4.47908I$	0
$b=$	$-0.403588-1.194610I$		

II. $I_2^u = \langle -3.23\times 10^4 u^{20} + 1.17\times 10^5 u^{19} + \cdots + 1.49\times 10^4 b - 4.82\times 10^4,\ 12963u^{20} + 67496u^{19} + \cdots + 14919a - 214943,\ u^{21} - 3u^{20} + \cdots - u + 1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.868892u^{20} - 4.52416u^{19} + \cdots - 24.9788u + 14.4073 \\ 2.16637u^{20} - 7.83008u^{19} + \cdots - 15.3797u + 3.23091 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -14.7261u^{20} + 36.2327u^{19} + \cdots + 23.6956u + 10.3162 \\ -3.16637u^{20} + 10.8301u^{19} + \cdots + 16.3797u - 4.23091 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 8.64193u^{20} - 15.7334u^{19} + \cdots + 7.53536u - 15.3984 \\ -3.90777u^{20} + 9.82077u^{19} + \cdots + 8.86634u + 3.35472 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -3.03526u^{20} + 3.30592u^{19} + \cdots - 9.59910u + 11.1764 \\ 2.16637u^{20} - 7.83008u^{19} + \cdots - 15.3797u + 3.23091 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -10.6472u^{20} + 25.0120u^{19} + \cdots + 7.88404u + 8.84536 \\ 2.33099u^{20} - 6.78953u^{19} + \cdots + 0.602721u - 4.83363 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -13.0975u^{20} + 29.4578u^{19} + \cdots + 6.55305u + 11.0922 \\ 2.59863u^{20} - 6.89637u^{19} + \cdots + 1.47892u - 4.17541 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 12.1546u^{20} - 26.1111u^{19} + \cdots - 5.03271u - 12.2706 \\ -0.774851u^{20} - 0.722904u^{19} + \cdots - 6.83451u + 5.37657 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.915879u^{20} + 0.499229u^{19} + \cdots + 5.23091u + 4.91776 \\ 0.534419u^{20} - 1.94504u^{19} + \cdots - 1.89993u + 2.83538 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{61671}{4973}u^{20} + \frac{561805}{14919}u^{19} + \cdots + \frac{170057}{14919}u - \frac{107689}{14919}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$u^{21} - 2u^{20} + \cdots + 3u^2 + 1$
c_2	$u^{21} + u^{20} + \cdots + 2u + 1$
c_3	$u^{21} + 3u^{20} + \cdots - u - 1$
c_4	$u^{21} + 2u^{20} + \cdots - 3u^2 - 1$
c_5	$u^{21} + 4u^{19} + \cdots + 5u + 1$
c_6	$u^{21} - 3u^{20} + \cdots - u + 1$
c_7, c_8	$u^{21} - 14u^{19} + \cdots + u - 1$
c_9	$u^{21} - u^{20} + \cdots + 2u - 1$
c_{10}	$u^{21} + u^{20} + \cdots - 4u + 1$
c_{11}	$u^{21} - 14u^{19} + \cdots + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{21} + 22y^{20} + \cdots - 6y - 1$
c_2, c_9	$y^{21} - 21y^{20} + \cdots + 10y - 1$
c_3, c_6	$y^{21} - 15y^{20} + \cdots + 19y - 1$
c_5	$y^{21} + 8y^{20} + \cdots + 11y - 1$
c_7, c_8, c_{11}	$y^{21} - 28y^{20} + \cdots + 9y - 1$
c_{10}	$y^{21} - 3y^{20} + \cdots - 20y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.993975+0.256264I$ $a=\ \ 0.52588+1.47733I$ $b=-0.036527+0.847504I$	$1.19169+1.35193I$	$-5.28800+1.11369I$
$u=-0.993975-0.256264I$ $a=\ \ 0.52588-1.47733I$ $b=-0.036527-0.847504I$	$1.19169-1.35193I$	$-5.28800-1.11369I$
$u=-0.852337$ $a=\ \ 0.407214$ $b=-1.37095$	2.76419	-13.7230
$u=-1.123130+0.385031I$ $a=-0.394107+1.032940I$ $b=\ \ 0.665275+1.168610I$	$-4.43426+2.01026I$	$-3.84315-1.41009I$
$u=-1.123130-0.385031I$ $a=-0.394107-1.032940I$ $b=\ \ 0.665275-1.168610I$	$-4.43426-2.01026I$	$-3.84315+1.41009I$
$u=\ \ 0.704180+0.366426I$ $a=-1.41812-1.13657I$ $b=-0.419901-0.650984I$	$4.56727-3.68956I$	$0.48270+7.21520I$
$u=\ \ 0.704180-0.366426I$ $a=-1.41812+1.13657I$ $b=-0.419901+0.650984I$	$4.56727+3.68956I$	$0.48270-7.21520I$
$u=\ \ 0.785290+0.108148I$ $a=\ \ 1.26531-1.60821I$ $b=-0.722409-0.420929I$	$8.62553-1.55127I$	$6.74187-0.39361I$
$u=\ \ 0.785290-0.108148I$ $a=\ \ 1.26531+1.60821I$ $b=-0.722409+0.420929I$	$8.62553+1.55127I$	$6.74187+0.39361I$
$u=\ \ 1.029560+0.687392I$ $a=-0.071373-0.699939I$ $b=-0.064352-0.329319I$	$4.59193-3.18711I$	$7.00885+2.74110I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.029560 - 0.687392I$ $a = -0.071373 + 0.699939I$ $b = -0.064352 + 0.329319I$	$4.59193 + 3.18711I$	$7.00885 - 2.74110I$
$u = -0.593681$ $a = -1.91921$ $b = -1.09140$	-0.667031	9.43560
$u = \quad 0.409546 + 0.386676I$ $a = \quad 2.90773 + 0.46724I$ $b = \quad 1.47022 + 0.81755I$	$11.62230 - 5.60544I$	$5.46888 + 4.11805I$
$u = \quad 0.409546 - 0.386676I$ $a = \quad 2.90773 - 0.46724I$ $b = \quad 1.47022 - 0.81755I$	$11.62230 + 5.60544I$	$5.46888 - 4.11805I$
$u = -1.20544 + 0.79163I$ $a = \quad 0.345951 - 1.061940I$ $b = -0.40954 - 1.40792I$	$-0.53899 + 3.58293I$	$0.204406 - 0.830422I$
$u = -1.20544 - 0.79163I$ $a = \quad 0.345951 + 1.061940I$ $b = -0.40954 + 1.40792I$	$-0.53899 - 3.58293I$	$0.204406 + 0.830422I$
$u = \quad 1.29520 + 0.63974I$ $a = -0.344878 - 0.357812I$ $b = \quad 0.591845 - 0.668863I$	$-1.56010 - 3.41588I$	$-1.70053 - 1.96092I$
$u = \quad 1.29520 - 0.63974I$ $a = -0.344878 + 0.357812I$ $b = \quad 0.591845 + 0.668863I$	$-1.56010 + 3.41588I$	$-1.70053 + 1.96092I$
$u = -0.442244$ $a = \quad 3.66401$ $b = \quad 2.26536$	6.17929	8.39950
$u = \quad 1.54290 + 1.10466I$ $a = \quad 0.107599 + 0.547407I$ $b = -0.476118 + 0.873161I$	$1.40523 - 5.05089I$	$-2.63101 + 6.73141I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.54290 - 1.10466I$		
$a = 0.107599 - 0.547407I$	$1.40523 + 5.05089I$	$-2.63101 - 6.73141I$
$b = -0.476118 - 0.873161I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$(u^{21} - 2u^{20} + \cdots + 3u^2 + 1)(u^{93} - 3u^{92} + \cdots + 12u - 1)$
c_2	$(u^{21} + u^{20} + \cdots + 2u + 1)(u^{93} - 34u^{91} + \cdots - 4634u + 2071)$
c_3	$(u^{21} + 3u^{20} + \cdots - u - 1)(u^{93} - 2u^{92} + \cdots + 2191u - 1081)$
c_4	$(u^{21} + 2u^{20} + \cdots - 3u^2 - 1)(u^{93} - 3u^{92} + \cdots + 12u - 1)$
c_5	$(u^{21} + 4u^{19} + \cdots + 5u + 1)(u^{93} - 7u^{92} + \cdots + 245345u + 714407)$
c_6	$(u^{21} - 3u^{20} + \cdots - u + 1)(u^{93} - 2u^{92} + \cdots + 2191u - 1081)$
c_7, c_8	$(u^{21} - 14u^{19} + \cdots + u - 1)(u^{93} - 7u^{92} + \cdots - 14u - 4)$
c_9	$(u^{21} - u^{20} + \cdots + 2u - 1)(u^{93} - 34u^{91} + \cdots - 4634u + 2071)$
c_{10}	$(u^{21} + u^{20} + \cdots - 4u + 1)(u^{93} + 7u^{91} + \cdots + 21184u - 3499)$
c_{11}	$(u^{21} - 14u^{19} + \cdots + u + 1)(u^{93} - 7u^{92} + \cdots - 14u - 4)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$(y^{21}+22y^{20}+\cdots-6y-1)(y^{93}+95y^{92}+\cdots+230y-1)$
c_2, c_9	$(y^{21}-21y^{20}+\cdots+10y-1)$ $\cdot(y^{93}-68y^{92}+\cdots+77411666y-4289041)$
c_3, c_6	$(y^{21}-15y^{20}+\cdots+19y-1)$ $\cdot(y^{93}-58y^{92}+\cdots+28900295y-1168561)$
c_5	$(y^{21}+8y^{20}+\cdots+11y-1)$ $\cdot(y^{93}-35y^{92}+\cdots+27772503205947y-510377361649)$
c_7, c_8, c_{11}	$(y^{21}-28y^{20}+\cdots+9y-1)(y^{93}-103y^{92}+\cdots+1372y-16)$
c_{10}	$(y^{21}-3y^{20}+\cdots-20y-1)$ $\cdot(y^{93}+14y^{92}+\cdots-580713924y-12243001)$