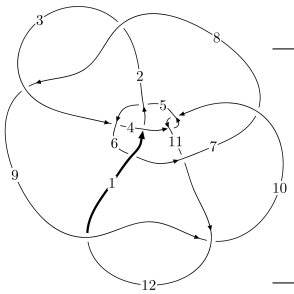
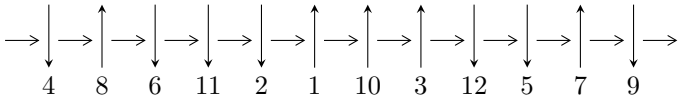
$12a_{1122}$ $(K12a_{1122})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 6.83028 \times 10^{1161} u^{193} + 3.53445 \times 10^{1162} u^{192} + \cdots + 2.95981 \times 10^{1162} b - 2.15705 \times 10^{1165}, \\ & - 4.50554 \times 10^{1164} u^{193} - 1.12219 \times 10^{1165} u^{192} + \cdots + 1.42367 \times 10^{1165} a + 5.78965 \times 10^{1166}, \\ & u^{194} + 2u^{193} + \cdots - 655u - 481 \rangle \\ I_2^u = \langle & -3.12959 \times 10^{52} u^{51} - 1.42487 \times 10^{53} u^{50} + \cdots + 2.34999 \times 10^{51} b + 1.26295 \times 10^{53}, \\ & - 2.98795 \times 10^{53} u^{51} - 7.64871 \times 10^{53} u^{50} + \cdots + 2.34999 \times 10^{51} a - 3.67199 \times 10^{53}, \ u^{52} + 3u^{51} + \cdots + 2u - \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 246 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. $\boldsymbol{I_1^u = \langle 6.83 \times 10^{1161} u^{193} + 3.53 \times 10^{1162} u^{192} + \cdots + 2.96 \times 10^{1162} b - 2.16 \times 10^{1165},\ -4.51 \times 10^{1164} u^{193} - 1.12 \times 10^{1165} u^{192} + \cdots + 1.42 \times 10^{1165} a + 5.79 \times 10^{1166},\ u^{194} + 2u^{193} + \cdots - 655u - 481 \rangle}$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.316474u^{193} + 0.788240u^{192} + \cdots - 9.52894u - 40.6671 \\ -0.230768u^{193} - 1.19415u^{192} + \cdots + 568.908u + 728.780 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -0.162671u^{193} + 0.448121u^{192} + \cdots - 776.891u - 100.653 \\ 0.475182u^{193} + 0.876579u^{192} + \cdots - 738.805u - 41.3730 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0857068u^{193} - 0.405910u^{192} + \cdots + 559.379u + 688.113 \\ -0.230768u^{193} - 1.19415u^{192} + \cdots + 568.908u + 728.780 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.150675u^{193} + 0.396798u^{192} + \cdots + 135.660u - 612.208 \\ -0.591702u^{193} - 1.82715u^{192} + \cdots + 908.617u + 439.357 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.474308u^{193} - 0.715475u^{192} + \cdots - 98.9571u - 404.517 \\ 0.0961734u^{193} + 0.932923u^{192} + \cdots - 498.590u - 649.306 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.112320u^{193} - 1.26756u^{192} + \cdots + 686.156u + 1013.43 \\ -0.100660u^{193} - 0.241166u^{192} + \cdots + 182.458u + 206.095 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.321414u^{193} + 1.89657u^{192} + \cdots - 640.002u - 1102.47 \\ -0.533946u^{193} - 1.41798u^{192} + \cdots + 723.942u + 216.338 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.459020u^{193} + 1.16878u^{192} + \cdots - 543.442u - 65.5094 \\ -1.08933u^{193} - 2.21471u^{192} + \cdots + 1271.97u + 134.816 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4.49255u^{193} + 7.09007u^{192} + \cdots - 1628.95u + 1786.25$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{194} - 22u^{193} + \cdots - 21u - 2$
c_2, c_8	$u^{194} + 7u^{193} + \cdots + 54430u + 211369$
c_3	$u^{194} - 23u^{193} + \cdots - 122u + 4$
c_4, c_{10}	$u^{194} - 2u^{193} + \cdots + 655u - 481$
c_5	$u^{194} + 2u^{193} + \cdots + 401163u - 24353$
c_6	$u^{194} + 4u^{193} + \cdots - 5730703u - 207001$
c_7	$u^{194} + 3u^{193} + \cdots + 15352307260u + 814469648$
c_9, c_{12}	$u^{194} - 7u^{193} + \cdots - 2210969u + 115748$
c_{11}	$u^{194} - 16u^{193} + \cdots - 988503u + 59801$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{194} - 12y^{193} + \cdots + 111y + 4$
c_2, c_8	$y^{194} - 131y^{193} + \cdots - 1961771990150y + 44676854161$
c_3	$y^{194} - 55y^{193} + \cdots - 2140y + 16$
c_4, c_{10}	$y^{194} + 110y^{193} + \cdots + 12580101y + 231361$
c_5	$y^{194} - 34y^{193} + \cdots + 42235244289y + 593068609$
c_6	$y^{194} + 26y^{193} + \cdots - 729590165583y + 42849414001$
c_7	$y^{194} - 17y^{193} + \cdots - 1.29 \times 10^{20}y + 6.63 \times 10^{17}$
c_9, c_{12}	$y^{194} + 117y^{193} + \cdots - 316216846553y + 13397599504$
c_{11}	$y^{194} + 52y^{193} + \cdots - 607267799989y + 3576159601$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.251757+1.005160I$ $a=\ 0.065670-0.814168I$ $b=\ 0.784624+0.726243I$	$4.03911-1.81200I$	0
$u=-0.251757-1.005160I$ $a=\ 0.065670+0.814168I$ $b=\ 0.784624-0.726243I$	$4.03911+1.81200I$	0
$u=\ 0.982645+0.329574I$ $a=-0.089178+0.212648I$ $b=-1.04301+0.95954I$	$-0.06974+8.80865I$	0
$u=\ 0.982645-0.329574I$ $a=-0.089178-0.212648I$ $b=-1.04301-0.95954I$	$-0.06974-8.80865I$	0
$u=\ 0.214125+0.931248I$ $a=\ 0.17891+2.39952I$ $b=-1.214160-0.313275I$	$1.36282-0.88962I$	0
$u=\ 0.214125-0.931248I$ $a=\ 0.17891-2.39952I$ $b=-1.214160+0.313275I$	$1.36282+0.88962I$	0
$u=\ 1.016210+0.324273I$ $a=\ 0.627073+0.384093I$ $b=\ 0.032360+0.930651I$	$-1.06555-1.00391I$	0
$u=\ 1.016210-0.324273I$ $a=\ 0.627073-0.384093I$ $b=\ 0.032360-0.930651I$	$-1.06555+1.00391I$	0
$u=-0.466839+0.962731I$ $a=\ 0.010936+0.805791I$ $b=\ 0.626339-0.682521I$	$1.85805-0.72164I$	0
$u=-0.466839-0.962731I$ $a=\ 0.010936-0.805791I$ $b=\ 0.626339+0.682521I$	$1.85805+0.72164I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.142704 + 1.060990I$ $a = 1.249840 - 0.221762I$ $b = -0.141575 + 0.260256I$	$3.36336 + 0.09849I$	0
$u = 0.142704 - 1.060990I$ $a = 1.249840 + 0.221762I$ $b = -0.141575 - 0.260256I$	$3.36336 - 0.09849I$	0
$u = -1.011830 + 0.360670I$ $a = -0.367858 + 0.687191I$ $b = -0.076766 + 0.307025I$	$-0.62929 + 4.73327I$	0
$u = -1.011830 - 0.360670I$ $a = -0.367858 - 0.687191I$ $b = -0.076766 - 0.307025I$	$-0.62929 - 4.73327I$	0
$u = 0.695188 + 0.607820I$ $a = 0.804761 - 0.198197I$ $b = 0.416918 + 0.116699I$	$-1.45350 - 1.59800I$	0
$u = 0.695188 - 0.607820I$ $a = 0.804761 + 0.198197I$ $b = 0.416918 - 0.116699I$	$-1.45350 + 1.59800I$	0
$u = -0.205871 + 1.064520I$ $a = 0.571788 + 1.131920I$ $b = 0.003233 - 1.157660I$	$1.92174 - 1.25353I$	0
$u = -0.205871 - 1.064520I$ $a = 0.571788 - 1.131920I$ $b = 0.003233 + 1.157660I$	$1.92174 + 1.25353I$	0
$u = -1.000960 + 0.429068I$ $a = 0.098914 - 0.204224I$ $b = -0.993434 - 0.939438I$	$-3.87014 - 3.52468I$	0
$u = -1.000960 - 0.429068I$ $a = 0.098914 + 0.204224I$ $b = -0.993434 + 0.939438I$	$-3.87014 + 3.52468I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.581094 + 0.682495I$ $a = -0.03382 + 1.58535I$ $b = -1.41985 + 0.32895I$	$-0.14014 - 2.35529I$	0
$u = 0.581094 - 0.682495I$ $a = -0.03382 - 1.58535I$ $b = -1.41985 - 0.32895I$	$-0.14014 + 2.35529I$	0
$u = -0.035267 + 0.886965I$ $a = -3.33799 - 1.21350I$ $b = -1.060060 + 0.000013I$	$1.318930 + 0.093399I$	0
$u = -0.035267 - 0.886965I$ $a = -3.33799 + 1.21350I$ $b = -1.060060 - 0.000013I$	$1.318930 - 0.093399I$	0
$u = 0.675575 + 0.563993I$ $a = 0.480160 - 0.101867I$ $b = 0.858190 + 0.463965I$	$-1.07794 - 4.33467I$	0
$u = 0.675575 - 0.563993I$ $a = 0.480160 + 0.101867I$ $b = 0.858190 - 0.463965I$	$-1.07794 + 4.33467I$	0
$u = -0.437100 + 0.757607I$ $a = 0.394151 - 1.144180I$ $b = -1.395330 + 0.216322I$	$-1.70778 + 1.90491I$	0
$u = -0.437100 - 0.757607I$ $a = 0.394151 + 1.144180I$ $b = -1.395330 - 0.216322I$	$-1.70778 - 1.90491I$	0
$u = -0.358107 + 0.793890I$ $a = -0.23246 - 2.99667I$ $b = -1.07614 + 1.32262I$	$-2.91397 + 3.60701I$	0
$u = -0.358107 - 0.793890I$ $a = -0.23246 + 2.99667I$ $b = -1.07614 - 1.32262I$	$-2.91397 - 3.60701I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.813563+0.301681I$ $a=\ \ 0.901564+0.426122I$ $b=\ \ 0.922462-0.846918I$	$6.20018+4.65473I$	0
$u=-0.813563-0.301681I$ $a=\ \ 0.901564-0.426122I$ $b=\ \ 0.922462+0.846918I$	$6.20018-4.65473I$	0
$u=\ \ 0.460993+1.036090I$ $a=-1.02603+1.24171I$ $b=\ \ 0.172390-0.889229I$	$6.88693-5.93163I$	0
$u=\ \ 0.460993-1.036090I$ $a=-1.02603-1.24171I$ $b=\ \ 0.172390+0.889229I$	$6.88693+5.93163I$	0
$u=-0.391002+0.769934I$ $a=\ \ 0.735209-0.288979I$ $b=-1.47650-0.63202I$	$-2.93391-0.21259I$	0
$u=-0.391002-0.769934I$ $a=\ \ 0.735209+0.288979I$ $b=-1.47650+0.63202I$	$-2.93391+0.21259I$	0
$u=-0.926219+0.668024I$ $a=\ \ 0.275549-0.081834I$ $b=\ \ 1.025130+0.828927I$	$5.94711-1.70630I$	0
$u=-0.926219-0.668024I$ $a=\ \ 0.275549+0.081834I$ $b=\ \ 1.025130-0.828927I$	$5.94711+1.70630I$	0
$u=\ \ 0.348413+1.088770I$ $a=\ \ 0.21746+1.82743I$ $b=-0.445118-0.732955I$	$1.70078-3.28764I$	0
$u=\ \ 0.348413-1.088770I$ $a=\ \ 0.21746-1.82743I$ $b=-0.445118+0.732955I$	$1.70078+3.28764I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.532150 + 1.013340I$ $a = 1.235190 - 0.307355I$ $b = 0.702682 + 0.002432I$	$-0.58052 - 2.49187I$	0
$u = 0.532150 - 1.013340I$ $a = 1.235190 + 0.307355I$ $b = 0.702682 - 0.002432I$	$-0.58052 + 2.49187I$	0
$u = 0.655997 + 0.539418I$ $a = -1.54703 + 2.38776I$ $b = -0.636474 - 0.980063I$	$1.92121 - 7.90604I$	0
$u = 0.655997 - 0.539418I$ $a = -1.54703 - 2.38776I$ $b = -0.636474 + 0.980063I$	$1.92121 + 7.90604I$	0
$u = -0.455534 + 1.059860I$ $a = 0.831829 + 0.882654I$ $b = 0.318891 - 0.567994I$	$4.56429 + 1.17523I$	0
$u = -0.455534 - 1.059860I$ $a = 0.831829 - 0.882654I$ $b = 0.318891 + 0.567994I$	$4.56429 - 1.17523I$	0
$u = 0.275915 + 1.128450I$ $a = 1.07197 - 1.90078I$ $b = -0.22836 + 2.54503I$	$4.41088 - 3.93533I$	0
$u = 0.275915 - 1.128450I$ $a = 1.07197 + 1.90078I$ $b = -0.22836 - 2.54503I$	$4.41088 + 3.93533I$	0
$u = 0.533836 + 1.032400I$ $a = -0.21871 + 2.01027I$ $b = -0.86923 - 1.23646I$	$1.27643 - 6.55006I$	0
$u = 0.533836 - 1.032400I$ $a = -0.21871 - 2.01027I$ $b = -0.86923 + 1.23646I$	$1.27643 + 6.55006I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.036235 + 0.828297I$ $a = -1.96273 + 3.19554I$ $b = 1.13058 - 1.96038I$	$2.63815 + 2.68431I$	0
$u = 0.036235 - 0.828297I$ $a = -1.96273 - 3.19554I$ $b = 1.13058 + 1.96038I$	$2.63815 - 2.68431I$	0
$u = -0.470313 + 0.682009I$ $a = 0.566573 - 0.297380I$ $b = 0.894658 - 0.369987I$	$0.54606 + 8.15873I$	0
$u = -0.470313 - 0.682009I$ $a = 0.566573 + 0.297380I$ $b = 0.894658 + 0.369987I$	$0.54606 - 8.15873I$	0
$u = -0.341596 + 1.143730I$ $a = 0.09640 - 1.62274I$ $b = -0.259770 + 1.095630I$	$5.14834 + 6.58962I$	0
$u = -0.341596 - 1.143730I$ $a = 0.09640 + 1.62274I$ $b = -0.259770 - 1.095630I$	$5.14834 - 6.58962I$	0
$u = -0.406600 + 1.126390I$ $a = -0.10381 + 2.06162I$ $b = 0.86777 - 1.26956I$	$3.47689 + 10.61870I$	0
$u = -0.406600 - 1.126390I$ $a = -0.10381 - 2.06162I$ $b = 0.86777 + 1.26956I$	$3.47689 - 10.61870I$	0
$u = -0.561963 + 1.059780I$ $a = -0.07886 - 1.86346I$ $b = -1.00344 + 1.26714I$	$0.25235 + 6.31362I$	0
$u = -0.561963 - 1.059780I$ $a = -0.07886 + 1.86346I$ $b = -1.00344 - 1.26714I$	$0.25235 - 6.31362I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.660346+0.442981I$ $a=\ \ 0.752524-0.156516I$ $b=-1.155490-0.678625I$	$-1.53901-1.54155I$	0
$u=-0.660346-0.442981I$ $a=\ \ 0.752524+0.156516I$ $b=-1.155490+0.678625I$	$-1.53901+1.54155I$	0
$u=\ \ 0.402563+1.136740I$ $a=-1.54278+0.22746I$ $b=-0.730058-0.174551I$	$5.39371-10.74820I$	0
$u=\ \ 0.402563-1.136740I$ $a=-1.54278-0.22746I$ $b=-0.730058+0.174551I$	$5.39371+10.74820I$	0
$u=\ \ 0.479135+1.109900I$ $a=-1.28307+0.66570I$ $b=-0.177953-0.323546I$	$8.29510+2.72233I$	0
$u=\ \ 0.479135-1.109900I$ $a=-1.28307-0.66570I$ $b=-0.177953+0.323546I$	$8.29510-2.72233I$	0
$u=\ \ 0.422627+1.136010I$ $a=\ \ 0.68700-1.80083I$ $b=\ \ 0.514403+1.028580I$	$7.17178-1.49381I$	0
$u=\ \ 0.422627-1.136010I$ $a=\ \ 0.68700+1.80083I$ $b=\ \ 0.514403-1.028580I$	$7.17178+1.49381I$	0
$u=-0.101135+0.777690I$ $a=-0.67397+2.30455I$ $b=-0.638774-0.859690I$	$3.29137-4.87853I$	0
$u=-0.101135-0.777690I$ $a=-0.67397-2.30455I$ $b=-0.638774+0.859690I$	$3.29137+4.87853I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.483201 + 1.115950I$ $a = 0.17849 - 2.05038I$ $b = 0.238144 + 0.980695I$	$8.15546 - 10.17690I$	0
$u = 0.483201 - 1.115950I$ $a = 0.17849 + 2.05038I$ $b = 0.238144 - 0.980695I$	$8.15546 + 10.17690I$	0
$u = 0.383884 + 1.160880I$ $a = -0.18599 - 1.91854I$ $b = 1.12618 + 1.17427I$	$2.83127 - 7.17967I$	0
$u = 0.383884 - 1.160880I$ $a = -0.18599 + 1.91854I$ $b = 1.12618 - 1.17427I$	$2.83127 + 7.17967I$	0
$u = 0.172112 + 1.211690I$ $a = 0.755991 - 1.051400I$ $b = -0.449115 + 1.251620I$	$5.69232 + 5.44735I$	0
$u = 0.172112 - 1.211690I$ $a = 0.755991 + 1.051400I$ $b = -0.449115 - 1.251620I$	$5.69232 - 5.44735I$	0
$u = -0.570904 + 0.515951I$ $a = 0.792513 + 1.150750I$ $b = 0.238179 + 0.297075I$	$0.25463 - 3.43709I$	0
$u = -0.570904 - 0.515951I$ $a = 0.792513 - 1.150750I$ $b = 0.238179 - 0.297075I$	$0.25463 + 3.43709I$	0
$u = 0.249545 + 0.726358I$ $a = 0.79812 + 1.71675I$ $b = -0.710597 - 0.173236I$	$-0.16323 - 2.68133I$	0
$u = 0.249545 - 0.726358I$ $a = 0.79812 - 1.71675I$ $b = -0.710597 + 0.173236I$	$-0.16323 + 2.68133I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.348831+1.186080I$ $a=\ \ 0.30683+1.61592I$ $b=\ \ 0.557400-0.988723I$	$5.76630+2.12507I$	0
$u=-0.348831-1.186080I$ $a=\ \ 0.30683-1.61592I$ $b=\ \ 0.557400+0.988723I$	$5.76630-2.12507I$	0
$u=-0.097341+0.757181I$ $a=-2.06523-1.15859I$ $b=\ \ 1.54580+0.48323I$	$0.78761+3.26692I$	0
$u=-0.097341-0.757181I$ $a=-2.06523+1.15859I$ $b=\ \ 1.54580-0.48323I$	$0.78761-3.26692I$	0
$u=-0.203585+1.222570I$ $a=\ \ 0.867811-0.804950I$ $b=-0.405179+0.098559I$	$3.04210+0.35319I$	0
$u=-0.203585-1.222570I$ $a=\ \ 0.867811+0.804950I$ $b=-0.405179-0.098559I$	$3.04210-0.35319I$	0
$u=\ \ 0.634954+1.069320I$ $a=\ \ 0.488721-0.743619I$ $b=\ \ 0.505751+0.360321I$	$-0.15354-3.57414I$	0
$u=\ \ 0.634954-1.069320I$ $a=\ \ 0.488721+0.743619I$ $b=\ \ 0.505751-0.360321I$	$-0.15354+3.57414I$	0
$u=-1.206010+0.331830I$ $a=\ \ 0.0558816-0.0711270I$ $b=\ \ 0.990725+0.978209I$	$3.0478-14.9833I$	0
$u=-1.206010-0.331830I$ $a=\ \ 0.0558816+0.0711270I$ $b=\ \ 0.990725-0.978209I$	$3.0478+14.9833I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.058524 + 0.744824I$ $a = -1.43585 - 0.89582I$ $b = -0.869890 + 0.351887I$	$-0.301261 + 1.229510I$	0
$u = 0.058524 - 0.744824I$ $a = -1.43585 + 0.89582I$ $b = -0.869890 - 0.351887I$	$-0.301261 - 1.229510I$	0
$u = -0.601500 + 1.099960I$ $a = 0.681507 + 0.857407I$ $b = 0.654376 - 0.371350I$	$1.76952 + 8.45386I$	0
$u = -0.601500 - 1.099960I$ $a = 0.681507 - 0.857407I$ $b = 0.654376 + 0.371350I$	$1.76952 - 8.45386I$	0
$u = -0.381684 + 1.195890I$ $a = -0.905709 + 0.110638I$ $b = -0.965455 - 0.074361I$	$0.25910 + 4.80069I$	0
$u = -0.381684 - 1.195890I$ $a = -0.905709 - 0.110638I$ $b = -0.965455 + 0.074361I$	$0.25910 - 4.80069I$	0
$u = 0.336457 + 1.211920I$ $a = -0.26744 - 1.68898I$ $b = 1.75890 + 1.32414I$	$3.90256 - 4.52846I$	0
$u = 0.336457 - 1.211920I$ $a = -0.26744 + 1.68898I$ $b = 1.75890 - 1.32414I$	$3.90256 + 4.52846I$	0
$u = 0.254664 + 0.696847I$ $a = -1.19758 + 1.89859I$ $b = 0.715320 - 0.093330I$	$6.54350 - 6.39010I$	0
$u = 0.254664 - 0.696847I$ $a = -1.19758 - 1.89859I$ $b = 0.715320 + 0.093330I$	$6.54350 + 6.39010I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.379306+1.200280I$ $a=\ \ 0.01465+1.76699I$ $b=\ \ 1.41277-0.88199I$	$10.40300+8.29257I$	0
$u=-0.379306-1.200280I$ $a=\ \ 0.01465-1.76699I$ $b=\ \ 1.41277+0.88199I$	$10.40300-8.29257I$	0
$u=-0.460542+1.172540I$ $a=\ \ 0.02031+1.82437I$ $b=\ \ 0.786554-0.803209I$	$2.93823+8.94478I$	0
$u=-0.460542-1.172540I$ $a=\ \ 0.02031-1.82437I$ $b=\ \ 0.786554+0.803209I$	$2.93823-8.94478I$	0
$u=-0.668369+0.308879I$ $a=\ \ 0.904485-0.802623I$ $b=\ \ 0.619706+0.194305I$	$-0.71131-3.61406I$	0
$u=-0.668369-0.308879I$ $a=\ \ 0.904485+0.802623I$ $b=\ \ 0.619706-0.194305I$	$-0.71131+3.61406I$	0
$u=-0.561222+1.141330I$ $a=\ \ 0.506369+1.259790I$ $b=\ \ 0.600453-0.407068I$	$1.70699+8.42036I$	0
$u=-0.561222-1.141330I$ $a=\ \ 0.506369-1.259790I$ $b=\ \ 0.600453+0.407068I$	$1.70699-8.42036I$	0
$u=-0.461896+1.193020I$ $a=-1.102830-0.682736I$ $b=\ \ 1.34479+1.53713I$	$6.46586+12.35360I$	0
$u=-0.461896-1.193020I$ $a=-1.102830+0.682736I$ $b=\ \ 1.34479-1.53713I$	$6.46586-12.35360I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.427541 + 1.209660I$ $a = -0.14767 - 1.85223I$ $b = 1.049110 + 0.764170I$	$5.26407 - 11.34850I$	0
$u = 0.427541 - 1.209660I$ $a = -0.14767 + 1.85223I$ $b = 1.049110 - 0.764170I$	$5.26407 + 11.34850I$	0
$u = -0.384409 + 1.225120I$ $a = -0.048322 - 1.019570I$ $b = -0.245105 + 0.263229I$	$2.95337 + 0.06268I$	0
$u = -0.384409 - 1.225120I$ $a = -0.048322 + 1.019570I$ $b = -0.245105 - 0.263229I$	$2.95337 - 0.06268I$	0
$u = -0.482985 + 1.191520I$ $a = -0.39402 - 1.43019I$ $b = -0.274572 + 1.119850I$	$4.75760 + 6.84873I$	0
$u = -0.482985 - 1.191520I$ $a = -0.39402 + 1.43019I$ $b = -0.274572 - 1.119850I$	$4.75760 - 6.84873I$	0
$u = 0.595999 + 0.374862I$ $a = 2.26074 - 0.98691I$ $b = 0.582855 - 0.320738I$	$-2.23241 - 1.98329I$	0
$u = 0.595999 - 0.374862I$ $a = 2.26074 + 0.98691I$ $b = 0.582855 + 0.320738I$	$-2.23241 + 1.98329I$	0
$u = -0.077628 + 0.696061I$ $a = 0.114180 - 0.632150I$ $b = -1.286750 + 0.351882I$	$-1.29674 + 2.30192I$	0
$u = -0.077628 - 0.696061I$ $a = 0.114180 + 0.632150I$ $b = -1.286750 - 0.351882I$	$-1.29674 - 2.30192I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.671990 + 0.189802I$ $a = 0.176074 - 0.617831I$ $b = 1.108730 + 0.473883I$	$1.50982 - 7.39147I$	0
$u = 0.671990 - 0.189802I$ $a = 0.176074 + 0.617831I$ $b = 1.108730 - 0.473883I$	$1.50982 + 7.39147I$	0
$u = 0.709676 + 1.097620I$ $a = -0.389280 - 0.368650I$ $b = 0.741607 + 0.097967I$	$3.87531 + 2.29819I$	0
$u = 0.709676 - 1.097620I$ $a = -0.389280 + 0.368650I$ $b = 0.741607 - 0.097967I$	$3.87531 - 2.29819I$	0
$u = -0.672374 + 0.089529I$ $a = 0.564762 + 0.248856I$ $b = -0.284104 - 0.642924I$	$1.57728 - 2.45922I$	0
$u = -0.672374 - 0.089529I$ $a = 0.564762 - 0.248856I$ $b = -0.284104 + 0.642924I$	$1.57728 + 2.45922I$	0
$u = 0.581454 + 1.193070I$ $a = -0.40917 + 1.44514I$ $b = -0.94969 - 1.56508I$	$1.84181 - 4.55391I$	0
$u = 0.581454 - 1.193070I$ $a = -0.40917 - 1.44514I$ $b = -0.94969 + 1.56508I$	$1.84181 + 4.55391I$	0
$u = -0.668247 + 0.043825I$ $a = 2.58490 - 0.03570I$ $b = 0.830519 + 0.803623I$	$3.09049 + 8.10047I$	0
$u = -0.668247 - 0.043825I$ $a = 2.58490 + 0.03570I$ $b = 0.830519 - 0.803623I$	$3.09049 - 8.10047I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.335160+0.160823I$ $a=\ 0.1326790+0.0274867I$ $b=\ 0.168704-0.500417I$	$0.51464-1.80604I$	0
$u=-1.335160-0.160823I$ $a=\ 0.1326790-0.0274867I$ $b=\ 0.168704+0.500417I$	$0.51464+1.80604I$	0
$u=\ 0.558722+0.329640I$ $a=\ 0.671529-0.109887I$ $b=-0.973920+0.702818I$	$-0.56697+2.21245I$	0
$u=\ 0.558722-0.329640I$ $a=\ 0.671529+0.109887I$ $b=-0.973920-0.702818I$	$-0.56697-2.21245I$	0
$u=-0.634573+1.194770I$ $a=-0.32823-1.62918I$ $b=-1.21595+1.21119I$	$-1.38896+9.45415I$	0
$u=-0.634573-1.194770I$ $a=-0.32823+1.62918I$ $b=-1.21595-1.21119I$	$-1.38896-9.45415I$	0
$u=\ 0.435164+1.286900I$ $a=-1.185310+0.722579I$ $b=\ 1.56806-2.05717I$	$2.50698-5.67361I$	0
$u=\ 0.435164-1.286900I$ $a=-1.185310-0.722579I$ $b=\ 1.56806+2.05717I$	$2.50698+5.67361I$	0
$u=\ 0.613178+1.213040I$ $a=-0.31498+1.69616I$ $b=-1.28502-1.17213I$	$2.6972-14.5862I$	0
$u=\ 0.613178-1.213040I$ $a=-0.31498-1.69616I$ $b=-1.28502+1.17213I$	$2.6972+14.5862I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.296170 + 0.411745I$ $a = 0.0903180 + 0.0414172I$ $b = 0.967479 - 1.030600I$	$-1.04258 + 8.25362I$	0
$u = 1.296170 - 0.411745I$ $a = 0.0903180 - 0.0414172I$ $b = 0.967479 + 1.030600I$	$-1.04258 - 8.25362I$	0
$u = -0.508097 + 1.262730I$ $a = 0.152128 + 0.828474I$ $b = 1.76030 - 0.18925I$	$6.25351 - 3.39193I$	0
$u = -0.508097 - 1.262730I$ $a = 0.152128 - 0.828474I$ $b = 1.76030 + 0.18925I$	$6.25351 + 3.39193I$	0
$u = -0.563662 + 1.241960I$ $a = -0.798915 - 0.502119I$ $b = 0.719469 + 1.155640I$	$9.06739 + 0.72792I$	0
$u = -0.563662 - 1.241960I$ $a = -0.798915 + 0.502119I$ $b = 0.719469 - 1.155640I$	$9.06739 - 0.72792I$	0
$u = 0.589614 + 1.235560I$ $a = -0.125625 - 0.641015I$ $b = -1.043920 + 0.723909I$	$4.07073 + 2.49659I$	0
$u = 0.589614 - 1.235560I$ $a = -0.125625 + 0.641015I$ $b = -1.043920 - 0.723909I$	$4.07073 - 2.49659I$	0
$u = -0.058364 + 1.377480I$ $a = -0.582349 - 1.241030I$ $b = 0.586573 + 1.113770I$	$13.04130 + 1.00945I$	0
$u = -0.058364 - 1.377480I$ $a = -0.582349 + 1.241030I$ $b = 0.586573 - 1.113770I$	$13.04130 - 1.00945I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.446385+0.425227I$ $a=\ 0.296899+0.399004I$ $b=\ 0.338504-0.582756I$	$1.52104-0.87498I$	$4.25529+0.I$
$u=-0.446385-0.425227I$ $a=\ 0.296899-0.399004I$ $b=\ 0.338504+0.582756I$	$1.52104+0.87498I$	$4.25529+0.I$
$u=\ 0.598460+0.035071I$ $a=\ 0.366068+0.380865I$ $b=\ 0.336761-0.886839I$	$4.13568-2.35246I$	$2.84519+1.09735I$
$u=\ 0.598460-0.035071I$ $a=\ 0.366068-0.380865I$ $b=\ 0.336761+0.886839I$	$4.13568+2.35246I$	$2.84519-1.09735I$
$u=\ 0.509454+0.314678I$ $a=-0.33608+1.90488I$ $b=\ 0.561022-0.718574I$	$5.78863+6.01635I$	$4.57629-7.18754I$
$u=\ 0.509454-0.314678I$ $a=-0.33608-1.90488I$ $b=\ 0.561022+0.718574I$	$5.78863-6.01635I$	$4.57629+7.18754I$
$u=\ 0.466570+0.367452I$ $a=\ 0.620325+0.482046I$ $b=-1.089140+0.052882I$	$-1.49043-0.14573I$	$-5.49169+1.16747I$
$u=\ 0.466570-0.367452I$ $a=\ 0.620325-0.482046I$ $b=-1.089140-0.052882I$	$-1.49043+0.14573I$	$-5.49169-1.16747I$
$u=\ 0.572089+0.131415I$ $a=\ 0.684429+0.373560I$ $b=-0.680899+0.012113I$	$-1.44903-0.38660I$	$-7.17109+0.I$
$u=\ 0.572089-0.131415I$ $a=\ 0.684429-0.373560I$ $b=-0.680899-0.012113I$	$-1.44903+0.38660I$	$-7.17109+0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.540648+0.017482I$ $a=\ \ 0.009628-0.775056I$ $b=\ \ 0.959140+0.432346I$	$-0.19218-4.86093I$	$-1.80376+1.93698I$
$u=-0.540648-0.017482I$ $a=\ \ 0.009628+0.775056I$ $b=\ \ 0.959140-0.432346I$	$-0.19218+4.86093I$	$-1.80376-1.93698I$
$u=-0.68803+1.29203I$ $a=\ \ 0.31971+1.58043I$ $b=\ \ 1.18747-1.13646I$	$6.1236+21.6470I$	0
$u=-0.68803-1.29203I$ $a=\ \ 0.31971-1.58043I$ $b=\ \ 1.18747+1.13646I$	$6.1236-21.6470I$	0
$u=-0.83795+1.22455I$ $a=\ \ 0.64462+1.39769I$ $b=\ \ 1.23399-1.02054I$	$7.41100+8.58787I$	0
$u=-0.83795-1.22455I$ $a=\ \ 0.64462-1.39769I$ $b=\ \ 1.23399+1.02054I$	$7.41100-8.58787I$	0
$u=-0.059096+0.509810I$ $a=-1.078660+0.088711I$ $b=\ \ 1.318520-0.412218I$	$-0.10715+4.59962I$	$-4.68881+4.17350I$
$u=-0.059096-0.509810I$ $a=-1.078660-0.088711I$ $b=\ \ 1.318520+0.412218I$	$-0.10715-4.59962I$	$-4.68881-4.17350I$
$u=-0.78855+1.26275I$ $a=-0.252200-0.684541I$ $b=-0.428645+0.566653I$	$2.61750+7.35292I$	0
$u=-0.78855-1.26275I$ $a=-0.252200+0.684541I$ $b=-0.428645-0.566653I$	$2.61750-7.35292I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.72050 + 1.30890I$ $a = 0.36372 - 1.48117I$ $b = 1.19416 + 1.12045I$	$1.9532 - 15.3047I$	0
$u = 0.72050 - 1.30890I$ $a = 0.36372 + 1.48117I$ $b = 1.19416 - 1.12045I$	$1.9532 + 15.3047I$	0
$u = -1.49584$ $a = -1.63582$ $b = -1.40925$	-5.15163	0
$u = 1.48758 + 0.23844I$ $a = 0.0814152 - 0.0209093I$ $b = -0.421732 + 0.531278I$	$1.60057 - 3.70470I$	0
$u = 1.48758 - 0.23844I$ $a = 0.0814152 + 0.0209093I$ $b = -0.421732 - 0.531278I$	$1.60057 + 3.70470I$	0
$u = 0.64638 + 1.38863I$ $a = -0.147084 + 1.042020I$ $b = -0.659697 - 0.969720I$	$5.48816 - 3.54710I$	0
$u = 0.64638 - 1.38863I$ $a = -0.147084 - 1.042020I$ $b = -0.659697 + 0.969720I$	$5.48816 + 3.54710I$	0
$u = 0.080308 + 0.448297I$ $a = 0.68979 + 7.13848I$ $b = 0.034056 + 0.300601I$	$2.75535 + 7.78765I$	$-13.14931 - 4.55401I$
$u = 0.080308 - 0.448297I$ $a = 0.68979 - 7.13848I$ $b = 0.034056 - 0.300601I$	$2.75535 - 7.78765I$	$-13.14931 + 4.55401I$
$u = -0.120326 + 0.435231I$ $a = 1.95422 - 5.33601I$ $b = -0.209535 - 0.275499I$	$-2.54429 - 2.22103I$	$-9.24580 - 5.84735I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.120326-0.435231I$ $a=\ \ 1.95422+5.33601I$ $b=-0.209535+0.275499I$	$-2.54429+2.22103I$	$-9.24580+5.84735I$
$u=-0.07282+1.54747I$ $a=-0.269660+1.068680I$ $b=\ \ 0.555465-1.165150I$	$7.34760+3.32828I$	0
$u=-0.07282-1.54747I$ $a=-0.269660-1.068680I$ $b=\ \ 0.555465+1.165150I$	$7.34760-3.32828I$	0
$u=-0.181312+0.408468I$ $a=-1.012080-0.822870I$ $b=\ \ 1.20306+0.75387I$	$1.01415-7.46215I$	$-8.89761+6.52180I$
$u=-0.181312-0.408468I$ $a=-1.012080+0.822870I$ $b=\ \ 1.20306-0.75387I$	$1.01415+7.46215I$	$-8.89761-6.52180I$
$u=\ \ 0.77669+1.37912I$ $a=-0.002777+0.696829I$ $b=-0.630604-0.478093I$	$5.87152-12.02900I$	0
$u=\ \ 0.77669-1.37912I$ $a=-0.002777-0.696829I$ $b=-0.630604+0.478093I$	$5.87152+12.02900I$	0
$u=\ \ 1.60920$ $a=\ \ 1.45093$ $b=\ \ 2.63032$	-3.00658	0
$u=\ \ 0.37375+1.57459I$ $a=\ \ 0.107308+0.277988I$ $b=-0.254024-0.346282I$	$1.06582-2.09893I$	0
$u=\ \ 0.37375-1.57459I$ $a=\ \ 0.107308-0.277988I$ $b=-0.254024+0.346282I$	$1.06582+2.09893I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.07693+1.61837I$ $a=-0.377509-0.851985I$ $b=\ \ 0.466238+1.078860I$	$10.3676-9.7400I$	0
$u=-0.07693-1.61837I$ $a=-0.377509+0.851985I$ $b=\ \ 0.466238-1.078860I$	$10.3676+9.7400I$	0
$u=-0.76199+2.28654I$ $a=\ \ 0.0049471-0.0411928I$ $b=-0.0729500+0.0709115I$	$1.22621-2.11352I$	0
$u=-0.76199-2.28654I$ $a=\ \ 0.0049471+0.0411928I$ $b=-0.0729500-0.0709115I$	$1.22621+2.11352I$	0

II.

$\boldsymbol{I_2^u = \langle -3.13\times 10^{52}u^{51}-1.42\times 10^{53}u^{50}+\cdots+2.35\times 10^{51}b+1.26\times 10^{53},\ -2.99\times 10^{53}u^{51}-7.65\times 10^{53}u^{50}+\cdots+2.35\times 10^{51}a-3.67\times 10^{53},\ u^{52}+3u^{51}+\cdots+2u-1\rangle}$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 127.147u^{51} + 325.478u^{50} + \cdots - 617.051u + 156.255 \\ 13.3174u^{51} + 60.6329u^{50} + \cdots + 73.7637u - 53.7427 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -24.8725u^{51} + 62.5103u^{50} + \cdots + 890.018u - 440.467 \\ 33.9913u^{51} + 74.9708u^{50} + \cdots - 234.169u + 64.9728 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 140.465u^{51} + 386.111u^{50} + \cdots - 543.287u + 102.513 \\ 13.3174u^{51} + 60.6329u^{50} + \cdots + 73.7637u - 53.7427 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 7.24351u^{51} - 25.1264u^{50} + \cdots - 327.441u + 142.932 \\ -12.6999u^{51} - 104.989u^{50} + \cdots - 387.484u + 171.985 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -60.8549u^{51} - 263.855u^{50} + \cdots + 2.06746u + 124.455 \\ 1.15973u^{51} + 22.8231u^{50} + \cdots + 158.606u - 75.4640 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 5.68045u^{51} - 30.3946u^{50} + \cdots - 421.907u + 201.362 \\ -2.90637u^{51} + 48.6113u^{50} + \cdots + 367.363u - 151.952 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 22.3159u^{51} + 33.9207u^{50} + \cdots - 277.983u + 108.199 \\ -5.44823u^{51} - 74.8445u^{50} + \cdots - 350.614u + 151.081 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -164.883u^{51} - 423.314u^{50} + \cdots + 612.479u - 191.125 \\ -55.3309u^{51} - 177.276u^{50} + \cdots + 23.5373u + 47.3617 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 354.327u^{51} + 718.875u^{50} + \cdots - 2587.44u + 925.930$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{52}+u^{51}+\cdots-16u-1$
c_2	$u^{52}-6u^{51}+\cdots-3u+1$
c_3	$u^{52}+4u^{51}+\cdots-3u+1$
c_4	$u^{52}+3u^{51}+\cdots+2u-1$
c_5	$u^{52}+7u^{51}+\cdots+12u-1$
c_6	$u^{52}-u^{51}+\cdots-5u^2-1$
c_7	$u^{52}+16u^{51}+\cdots+20u+1$
c_8	$u^{52}+6u^{51}+\cdots+3u+1$
c_9	$u^{52}-6u^{51}+\cdots-221u+29$
c_{10}	$u^{52}-3u^{51}+\cdots-2u-1$
c_{11}	$u^{52}+11u^{51}+\cdots+4u-1$
c_{12}	$u^{52}+6u^{51}+\cdots+221u+29$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{52} - 9y^{51} + \cdots - 294y + 1$
c_2, c_8	$y^{52} - 48y^{51} + \cdots - 45y + 1$
c_3	$y^{52} - 60y^{51} + \cdots + 41y + 1$
c_4, c_{10}	$y^{52} + 33y^{51} + \cdots + 30y + 1$
c_5	$y^{52} - 51y^{51} + \cdots - 26y + 1$
c_6	$y^{52} + 13y^{51} + \cdots + 10y + 1$
c_7	$y^{52} + 18y^{51} + \cdots - 152y + 1$
c_9, c_{12}	$y^{52} + 24y^{51} + \cdots + 21629y + 841$
c_{11}	$y^{52} + 75y^{51} + \cdots - 96y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.579661+0.849227I$ $a=-0.56713-2.23369I$ $b=-0.730254+1.184520I$	$2.30906+6.97098I$	0
$u=-0.579661-0.849227I$ $a=-0.56713+2.23369I$ $b=-0.730254-1.184520I$	$2.30906-6.97098I$	0
$u=\ \ 0.474504+0.921857I$ $a=-1.220690-0.134607I$ $b=-0.658607-0.106208I$	$-0.42828-2.90162I$	0
$u=\ \ 0.474504-0.921857I$ $a=-1.220690+0.134607I$ $b=-0.658607+0.106208I$	$-0.42828+2.90162I$	0
$u=-1.018410+0.226049I$ $a=\ \ 0.0245646+0.1116650I$ $b=\ \ 0.737367-0.548866I$	$-0.52916+6.11063I$	0
$u=-1.018410-0.226049I$ $a=\ \ 0.0245646-0.1116650I$ $b=\ \ 0.737367+0.548866I$	$-0.52916-6.11063I$	0
$u=\ \ 0.537408+0.708857I$ $a=-0.218950+0.866255I$ $b=-1.098910-0.188769I$	$-2.64127-2.17989I$	$-10.14166+4.66337I$
$u=\ \ 0.537408-0.708857I$ $a=-0.218950-0.866255I$ $b=-1.098910+0.188769I$	$-2.64127+2.17989I$	$-10.14166-4.66337I$
$u=\ \ 0.029211+0.866576I$ $a=-3.09930+0.94923I$ $b=-1.049370+0.002255I$	$1.289370-0.084237I$	$-77.1002-28.7874I$
$u=\ \ 0.029211-0.866576I$ $a=-3.09930-0.94923I$ $b=-1.049370-0.002255I$	$1.289370+0.084237I$	$-77.1002+28.7874I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.820964+0.276756I$ $a=-0.130109-0.736876I$ $b=-0.879895-0.688889I$	$-0.55517+1.71903I$	$-6.21620-3.01184I$
$u=-0.820964-0.276756I$ $a=-0.130109+0.736876I$ $b=-0.879895+0.688889I$	$-0.55517-1.71903I$	$-6.21620+3.01184I$
$u=-0.223914+1.131690I$ $a=-0.576144+0.058231I$ $b=\ \ 0.710069+0.001159I$	$1.41597-2.02298I$	0
$u=-0.223914-1.131690I$ $a=-0.576144-0.058231I$ $b=\ \ 0.710069-0.001159I$	$1.41597+2.02298I$	0
$u=-0.445127+1.079250I$ $a=-0.132092+0.966754I$ $b=-0.845439-0.710992I$	$3.27814-2.53474I$	0
$u=-0.445127-1.079250I$ $a=-0.132092-0.966754I$ $b=-0.845439+0.710992I$	$3.27814+2.53474I$	0
$u=\ \ 0.599002+1.021230I$ $a=\ \ 0.64374-2.01348I$ $b=\ \ 0.949869+0.781298I$	$6.25971-8.25449I$	0
$u=\ \ 0.599002-1.021230I$ $a=\ \ 0.64374+2.01348I$ $b=\ \ 0.949869-0.781298I$	$6.25971+8.25449I$	0
$u=-0.296370+1.146410I$ $a=\ \ 0.46818+2.13110I$ $b=\ \ 0.64289-2.37983I$	$4.38954+4.20449I$	0
$u=-0.296370-1.146410I$ $a=\ \ 0.46818-2.13110I$ $b=\ \ 0.64289+2.37983I$	$4.38954-4.20449I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.531394 + 1.081660I$ $a = -0.04279 + 1.85349I$ $b = -1.02065 - 1.27609I$	$-0.21787 - 6.19658I$	0
$u = 0.531394 - 1.081660I$ $a = -0.04279 - 1.85349I$ $b = -1.02065 + 1.27609I$	$-0.21787 + 6.19658I$	0
$u = -0.610098 + 1.061560I$ $a = -0.941640 - 0.734262I$ $b = -0.562002 + 0.398964I$	$2.08533 + 8.58957I$	0
$u = -0.610098 - 1.061560I$ $a = -0.941640 + 0.734262I$ $b = -0.562002 - 0.398964I$	$2.08533 - 8.58957I$	0
$u = -0.384267 + 1.181540I$ $a = -0.20873 + 1.86172I$ $b = 0.805500 - 1.008240I$	$4.09432 + 9.80119I$	0
$u = -0.384267 - 1.181540I$ $a = -0.20873 - 1.86172I$ $b = 0.805500 + 1.008240I$	$4.09432 - 9.80119I$	0
$u = -0.047383 + 0.733551I$ $a = -1.39542 - 2.79203I$ $b = 0.92076 + 1.52638I$	$2.37030 - 2.58925I$	$-7.84854 - 1.56847I$
$u = -0.047383 - 0.733551I$ $a = -1.39542 + 2.79203I$ $b = 0.92076 - 1.52638I$	$2.37030 + 2.58925I$	$-7.84854 + 1.56847I$
$u = 0.477675 + 1.203030I$ $a = 0.311871 + 0.581738I$ $b = 0.430792 - 0.487366I$	$6.44172 - 10.35310I$	0
$u = 0.477675 - 1.203030I$ $a = 0.311871 - 0.581738I$ $b = 0.430792 + 0.487366I$	$6.44172 + 10.35310I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.622619 + 1.140100I$ $a = 0.429944 - 0.416763I$ $b = 1.354680 - 0.261402I$	$6.56048 + 2.88697I$	0
$u = 0.622619 - 1.140100I$ $a = 0.429944 + 0.416763I$ $b = 1.354680 + 0.261402I$	$6.56048 - 2.88697I$	0
$u = -0.201843 + 0.659900I$ $a = -0.298436 + 0.459515I$ $b = 1.300010 - 0.408362I$	$0.07327 + 4.98293I$	$3.94449 - 12.32140I$
$u = -0.201843 - 0.659900I$ $a = -0.298436 - 0.459515I$ $b = 1.300010 + 0.408362I$	$0.07327 - 4.98293I$	$3.94449 + 12.32140I$
$u = -0.472515 + 1.234580I$ $a = -0.748309 - 0.768992I$ $b = 0.84485 + 1.49920I$	$2.42547 + 5.42025I$	0
$u = -0.472515 - 1.234580I$ $a = -0.748309 + 0.768992I$ $b = 0.84485 - 1.49920I$	$2.42547 - 5.42025I$	0
$u = 0.609761 + 0.122261I$ $a = -0.168359 - 0.572535I$ $b = -0.890703 - 0.384729I$	$-2.29696 - 2.01531I$	$-9.41881 + 3.80610I$
$u = 0.609761 - 0.122261I$ $a = -0.168359 + 0.572535I$ $b = -0.890703 + 0.384729I$	$-2.29696 + 2.01531I$	$-9.41881 - 3.80610I$
$u = -0.091974 + 0.614988I$ $a = 0.099981 - 0.754323I$ $b = 1.185400 + 0.690406I$	$1.43167 - 7.45116I$	$10.14342 + 5.53273I$
$u = -0.091974 - 0.614988I$ $a = 0.099981 + 0.754323I$ $b = 1.185400 - 0.690406I$	$1.43167 + 7.45116I$	$10.14342 - 5.53273I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.453240 + 0.394790I$ $a = 1.026270 + 0.475581I$ $b = -1.209500 + 0.543702I$	$-2.25094 + 1.84871I$	$-10.19554 - 3.58711I$
$u = 0.453240 - 0.394790I$ $a = 1.026270 - 0.475581I$ $b = -1.209500 - 0.543702I$	$-2.25094 - 1.84871I$	$-10.19554 + 3.58711I$
$u = -0.128932 + 1.400900I$ $a = 0.625907 - 0.507345I$ $b = -0.453740 + 0.267587I$	$2.94790 + 0.76482I$	0
$u = -0.128932 - 1.400900I$ $a = 0.625907 + 0.507345I$ $b = -0.453740 - 0.267587I$	$2.94790 - 0.76482I$	0
$u = 0.030060 + 0.587408I$ $a = -1.47425 - 6.02281I$ $b = -0.079298 + 0.633002I$	$3.02865 + 7.83881I$	$15.2567 - 9.4978I$
$u = 0.030060 - 0.587408I$ $a = -1.47425 + 6.02281I$ $b = -0.079298 - 0.633002I$	$3.02865 - 7.83881I$	$15.2567 + 9.4978I$
$u = 1.46303$ $a = -1.68153$ $b = -1.39069$	-5.19335	0
$u = 0.146196 + 0.479561I$ $a = -3.28391 + 2.86555I$ $b = -0.588663 - 0.491566I$	$-2.42203 - 2.62854I$	$-4.98112 + 10.65715I$
$u = 0.146196 - 0.479561I$ $a = -3.28391 - 2.86555I$ $b = -0.588663 + 0.491566I$	$-2.42203 + 2.62854I$	$-4.98112 - 10.65715I$
$u = -1.61428$ $a = 1.43801$ $b = 2.60541$	-2.99564	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.61399+2.24429I$ $a=-0.00243411-0.01017270I$ $b=\ \ 0.0774751-0.0192640I$	$1.22381-2.12155I$	0
$u=-0.61399-2.24429I$ $a=-0.00243411+0.01017270I$ $b=\ \ 0.0774751+0.0192640I$	$1.22381+2.12155I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{52}+u^{51}+\cdots-16u-1)(u^{194}-22u^{193}+\cdots-21u-2)$
c_2	$(u^{52}-6u^{51}+\cdots-3u+1)(u^{194}+7u^{193}+\cdots+54430u+211369)$
c_3	$(u^{52}+4u^{51}+\cdots-3u+1)(u^{194}-23u^{193}+\cdots-122u+4)$
c_4	$(u^{52}+3u^{51}+\cdots+2u-1)(u^{194}-2u^{193}+\cdots+655u-481)$
c_5	$(u^{52}+7u^{51}+\cdots+12u-1)(u^{194}+2u^{193}+\cdots+401163u-24353)$
c_6	$(u^{52}-u^{51}+\cdots-5u^2-1)(u^{194}+4u^{193}+\cdots-5730703u-207001)$
c_7	$(u^{52}+16u^{51}+\cdots+20u+1)$ $\cdot(u^{194}+3u^{193}+\cdots+15352307260u+814469648)$
c_8	$(u^{52}+6u^{51}+\cdots+3u+1)(u^{194}+7u^{193}+\cdots+54430u+211369)$
c_9	$(u^{52}-6u^{51}+\cdots-221u+29)$ $\cdot(u^{194}-7u^{193}+\cdots-2210969u+115748)$
c_{10}	$(u^{52}-3u^{51}+\cdots-2u-1)(u^{194}-2u^{193}+\cdots+655u-481)$
c_{11}	$(u^{52}+11u^{51}+\cdots+4u-1)(u^{194}-16u^{193}+\cdots-988503u+59801)$
c_{12}	$(u^{52}+6u^{51}+\cdots+221u+29)$ $\cdot(u^{194}-7u^{193}+\cdots-2210969u+115748)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{52}-9y^{51}+\cdots-294y+1)(y^{194}-12y^{193}+\cdots+111y+4)$
c_2, c_8	$(y^{52}-48y^{51}+\cdots-45y+1)$ $\cdot(y^{194}-131y^{193}+\cdots-1961771990150y+44676854161)$
c_3	$(y^{52}-60y^{51}+\cdots+41y+1)(y^{194}-55y^{193}+\cdots-2140y+16)$
c_4, c_{10}	$(y^{52}+33y^{51}+\cdots+30y+1)$ $\cdot(y^{194}+110y^{193}+\cdots+12580101y+231361)$
c_5	$(y^{52}-51y^{51}+\cdots-26y+1)$ $\cdot(y^{194}-34y^{193}+\cdots+42235244289y+593068609)$
c_6	$(y^{52}+13y^{51}+\cdots+10y+1)$ $\cdot(y^{194}+26y^{193}+\cdots-729590165583y+42849414001)$
c_7	$(y^{52}+18y^{51}+\cdots-152y+1)$ $\cdot(y^{194}-17y^{193}+\cdots-1.29\times10^{20}y+6.63\times10^{17})$
c_9, c_{12}	$(y^{52}+24y^{51}+\cdots+21629y+841)$ $\cdot(y^{194}+117y^{193}+\cdots-316216846553y+13397599504)$
c_{11}	$(y^{52}+75y^{51}+\cdots-96y+1)$ $\cdot(y^{194}+52y^{193}+\cdots-607267799989y+3576159601)$