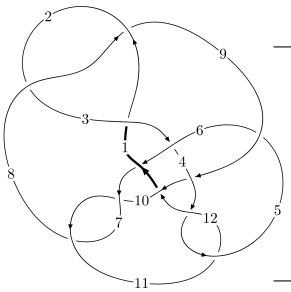
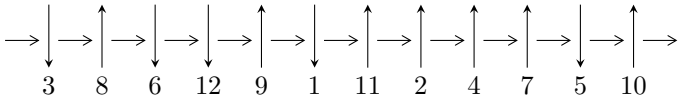
$12a_{0709}$ $(K12a_{0709})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -4.12238 \times 10^{643} u^{173} - 1.44902 \times 10^{644} u^{172} + \cdots + 5.70533 \times 10^{643} b + 4.68445 \times 10^{646}, \\ & - 4.22603 \times 10^{644} u^{173} - 1.65272 \times 10^{645} u^{172} + \cdots + 2.45329 \times 10^{645} a + 8.91828 \times 10^{647}, \\ & u^{174} + 4u^{173} + \cdots + 860u - 1849 \rangle \\ I_2^u = \langle & -5.49547 \times 10^{30} u^{44} + 1.24545 \times 10^{32} u^{43} + \cdots + 1.16778 \times 10^{31} b - 1.49742 \times 10^{32}, \\ & 8.02764 \times 10^{31} u^{44} - 2.04849 \times 10^{32} u^{43} + \cdots + 1.16778 \times 10^{31} a - 7.33963 \times 10^{31}, \ u^{45} - 3u^{44} + \cdots + 5u - 1 \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 219 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. $\boldsymbol{I_1^u = \langle -4.12 \times 10^{643} u^{173} - 1.45 \times 10^{644} u^{172} + \cdots + 5.71 \times 10^{643} b + 4.68 \times 10^{646},\ -4.23 \times 10^{644} u^{173} - 1.65 \times 10^{645} u^{172} + \cdots + 2.45 \times 10^{645} a + 8.92 \times 10^{647},\ u^{174} + 4u^{173} + \cdots + 860u - 1849 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.172259u^{173} + 0.673674u^{172} + \cdots + 253.690u - 363.523 \\ 0.722548u^{173} + 2.53976u^{172} + \cdots - 53.2667u - 821.065 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.422411u^{173} + 1.39381u^{172} + \cdots - 302.931u - 346.299 \\ 0.615721u^{173} + 2.61270u^{172} + \cdots + 1393.76u - 1631.60 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0184136u^{173} + 0.0945368u^{172} + \cdots + 652.785u - 378.198 \\ 0.202712u^{173} + 1.00516u^{172} + \cdots + 981.542u - 855.900 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.193671u^{173} + 0.530332u^{172} + \cdots - 488.877u - 18.5190 \\ 0.111537u^{173} + 0.537748u^{172} + \cdots + 289.103u - 383.316 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.307311u^{173} + 1.07846u^{172} + \cdots - 26.6558u - 386.220 \\ 0.566995u^{173} + 2.38261u^{172} + \cdots + 1178.68u - 1453.70 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.204957u^{173} - 0.619119u^{172} + \cdots + 448.630u - 11.9952 \\ 0.00105037u^{173} + 0.0260070u^{172} + \cdots + 66.3987u - 59.8984 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0524607u^{173} + 0.336201u^{172} + \cdots + 567.209u - 430.018 \\ 0.303407u^{173} + 1.43438u^{172} + \cdots + 1226.11u - 1130.46 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.188361u^{173} - 1.56403u^{172} + \cdots - 2713.89u + 2013.65$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{174} + 78u^{173} + \cdots + 38633006u + 3418801$
c_2, c_8	$u^{174} + 4u^{173} + \cdots + 860u - 1849$
c_3	$81(81u^{174} - 2520u^{173} + \cdots + 1289568u - 74248)$
c_4, c_{11}	$9(9u^{174} + 30u^{173} + \cdots + 188726u - 372821)$
c_5	$u^{174} - 5u^{173} + \cdots + 9544707u + 120123$
c_6	$u^{174} + 2u^{173} + \cdots + 4585039248u - 391773717$
c_7, c_{10}	$9(9u^{174} + 12u^{173} + \cdots - 2.70063 \times 10^7 u - 1.08127 \times 10^7)$
c_9	$u^{174} + u^{173} + \cdots - 62865261u + 31013523$
c_{12}	$u^{174} + 13u^{173} + \cdots + 3315627075u + 351801391$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{174} + 50y^{173} + \cdots - 1038422793520482y + 11688200277601$
c_2, c_8	$y^{174} + 78y^{173} + \cdots + 38633006y + 3418801$
c_3	$6561 \cdot (6561y^{174} - 457002y^{173} + \cdots + 161502458592y + 5512765504)$
c_4, c_{11}	$81(81y^{174} + 10620y^{173} + \cdots + 5.06180 \times 10^{12}y + 1.38995 \times 10^{11})$
c_5	$y^{174} - 21y^{173} + \cdots + 1241320767183y + 14429535129$
c_6	$y^{174} + 52y^{173} + \cdots + 2.28 \times 10^{19}y + 1.53 \times 10^{17}$
c_7, c_{10}	$81 \cdot (81y^{174} - 8172y^{173} + \cdots + 749524157872730y + 116915411184049)$
c_9	$y^{174} - 25y^{173} + \cdots - 29120310824125347y + 961838608871529$
c_{12}	$y^{174} - 57y^{173} + \cdots - 3.54 \times 10^{18}y + 1.24 \times 10^{17}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.788449+0.612244I$ $a=\ \ 1.01781+1.02674I$ $b=\ \ 2.04982-0.76639I$	$10.83900+1.99487I$	0
$u=-0.788449-0.612244I$ $a=\ \ 1.01781-1.02674I$ $b=\ \ 2.04982+0.76639I$	$10.83900-1.99487I$	0
$u=\ \ 0.416392+0.912492I$ $a=-0.709660+0.446722I$ $b=-1.43573+0.63145I$	$-0.96633+2.24854I$	0
$u=\ \ 0.416392-0.912492I$ $a=-0.709660-0.446722I$ $b=-1.43573-0.63145I$	$-0.96633-2.24854I$	0
$u=\ \ 0.879645+0.469234I$ $a=-0.969777+1.013240I$ $b=-1.66320-0.81580I$	$5.45213-8.38927I$	0
$u=\ \ 0.879645-0.469234I$ $a=-0.969777-1.013240I$ $b=-1.66320+0.81580I$	$5.45213+8.38927I$	0
$u=-0.830633+0.547297I$ $a=\ \ 1.128490+0.494286I$ $b=\ \ 1.75016-0.96820I$	$5.98006-4.36530I$	0
$u=-0.830633-0.547297I$ $a=\ \ 1.128490-0.494286I$ $b=\ \ 1.75016+0.96820I$	$5.98006+4.36530I$	0
$u=-0.205645+0.985061I$ $a=-0.192720+1.021700I$ $b=-1.37963+0.31976I$	$-0.464505+1.123620I$	0
$u=-0.205645-0.985061I$ $a=-0.192720-1.021700I$ $b=-1.37963-0.31976I$	$-0.464505-1.123620I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.509642 + 0.868302I$ $a = -2.52058 - 1.09872I$ $b = -0.57422 - 2.65776I$	$1.66281 + 2.05945I$	0
$u = 0.509642 - 0.868302I$ $a = -2.52058 + 1.09872I$ $b = -0.57422 + 2.65776I$	$1.66281 - 2.05945I$	0
$u = 0.847140 + 0.550886I$ $a = -0.715555 - 1.063980I$ $b = -0.156423 - 0.621752I$	$5.23383 - 8.16565I$	0
$u = 0.847140 - 0.550886I$ $a = -0.715555 + 1.063980I$ $b = -0.156423 + 0.621752I$	$5.23383 + 8.16565I$	0
$u = -0.857862 + 0.488258I$ $a = -0.793497 - 1.022840I$ $b = -1.41627 + 0.86799I$	$4.48914 + 3.16789I$	0
$u = -0.857862 - 0.488258I$ $a = -0.793497 + 1.022840I$ $b = -1.41627 - 0.86799I$	$4.48914 - 3.16789I$	0
$u = -0.553950 + 0.811931I$ $a = 1.036070 + 0.516539I$ $b = 2.70747 - 0.97654I$	$4.71428 - 4.00424I$	0
$u = -0.553950 - 0.811931I$ $a = 1.036070 - 0.516539I$ $b = 2.70747 + 0.97654I$	$4.71428 + 4.00424I$	0
$u = 0.444757 + 0.876054I$ $a = 0.055749 - 1.041920I$ $b = -0.624114 + 0.797198I$	$-0.91368 + 1.26387I$	0
$u = 0.444757 - 0.876054I$ $a = 0.055749 + 1.041920I$ $b = -0.624114 - 0.797198I$	$-0.91368 - 1.26387I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.582917+0.786807I$ $a=\ 0.664644-0.051473I$ $b=\ 0.695866+0.908138I$	$2.79384+2.54567I$	0
$u=-0.582917-0.786807I$ $a=\ 0.664644+0.051473I$ $b=\ 0.695866-0.908138I$	$2.79384-2.54567I$	0
$u=\ 0.856148+0.442793I$ $a=\ 0.740460+0.113118I$ $b=\ 0.769940+0.388323I$	$3.66763-1.64101I$	0
$u=\ 0.856148-0.442793I$ $a=\ 0.740460-0.113118I$ $b=\ 0.769940-0.388323I$	$3.66763+1.64101I$	0
$u=\ 0.519628+0.898339I$ $a=\ 0.658729-0.895442I$ $b=\ 2.42535+1.86755I$	$-0.42494+3.13721I$	0
$u=\ 0.519628-0.898339I$ $a=\ 0.658729+0.895442I$ $b=\ 2.42535-1.86755I$	$-0.42494-3.13721I$	0
$u=\ 0.502439+0.820329I$ $a=-0.656678+0.899785I$ $b=-2.77196-0.97511I$	$-0.150778+1.016630I$	0
$u=\ 0.502439-0.820329I$ $a=-0.656678-0.899785I$ $b=-2.77196+0.97511I$	$-0.150778-1.016630I$	0
$u=-0.530533+0.801440I$ $a=-0.373337+0.942920I$ $b=-0.344420+1.232770I$	$4.56110+0.83538I$	0
$u=-0.530533-0.801440I$ $a=-0.373337-0.942920I$ $b=-0.344420-1.232770I$	$4.56110-0.83538I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.907540 + 0.309398I$ $a = -1.199770 + 0.493946I$ $b = -1.26792 - 0.85092I$	$8.98527 - 1.41087I$	0
$u = 0.907540 - 0.309398I$ $a = -1.199770 - 0.493946I$ $b = -1.26792 + 0.85092I$	$8.98527 + 1.41087I$	0
$u = 0.609436 + 0.738669I$ $a = 0.37175 - 1.45775I$ $b = 1.32690 + 0.89870I$	$7.20384 - 0.46140I$	0
$u = 0.609436 - 0.738669I$ $a = 0.37175 + 1.45775I$ $b = 1.32690 - 0.89870I$	$7.20384 + 0.46140I$	0
$u = -0.296938 + 1.003170I$ $a = 0.565307 - 0.171457I$ $b = 0.140666 - 1.099500I$	$-4.39226 - 0.92413I$	0
$u = -0.296938 - 1.003170I$ $a = 0.565307 + 0.171457I$ $b = 0.140666 + 1.099500I$	$-4.39226 + 0.92413I$	0
$u = -0.120585 + 0.942140I$ $a = 0.799507 + 0.275853I$ $b = 0.69259 - 1.47538I$	$-4.23234 - 0.72890I$	0
$u = -0.120585 - 0.942140I$ $a = 0.799507 - 0.275853I$ $b = 0.69259 + 1.47538I$	$-4.23234 + 0.72890I$	0
$u = -0.210708 + 0.925205I$ $a = 0.39737 - 1.36081I$ $b = -0.083189 - 0.618925I$	$3.48985 + 5.80165I$	0
$u = -0.210708 - 0.925205I$ $a = 0.39737 + 1.36081I$ $b = -0.083189 + 0.618925I$	$3.48985 - 5.80165I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.570101+0.884212I$ $a=\ 0.015682-0.719462I$ $b=\ 1.28793+0.62148I$	$2.51288-7.14488I$	0
$u=-0.570101-0.884212I$ $a=\ 0.015682+0.719462I$ $b=\ 1.28793-0.62148I$	$2.51288+7.14488I$	0
$u=\ 0.575061+0.886207I$ $a=\ 0.430024+0.773580I$ $b=\ 0.255620+0.322750I$	$0.49719+2.39840I$	0
$u=\ 0.575061-0.886207I$ $a=\ 0.430024-0.773580I$ $b=\ 0.255620-0.322750I$	$0.49719-2.39840I$	0
$u=-0.921707+0.196650I$ $a=-1.016840-0.345457I$ $b=-0.955062+0.093842I$	$3.16769+2.04593I$	0
$u=-0.921707-0.196650I$ $a=-1.016840+0.345457I$ $b=-0.955062-0.093842I$	$3.16769-2.04593I$	0
$u=\ 0.310030+0.888107I$ $a=\ 0.208411+1.186460I$ $b=\ 0.24090+1.43456I$	$4.71271-0.49839I$	0
$u=\ 0.310030-0.888107I$ $a=\ 0.208411-1.186460I$ $b=\ 0.24090-1.43456I$	$4.71271+0.49839I$	0
$u=-0.574024+0.902802I$ $a=-0.801230+0.227269I$ $b=-0.029174+0.674347I$	$4.18267-5.28131I$	0
$u=-0.574024-0.902802I$ $a=-0.801230-0.227269I$ $b=-0.029174-0.674347I$	$4.18267+5.28131I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.451909+0.804149I$ $a=-0.439945-0.865803I$ $b=-2.43686+2.82591I$	$1.61089+3.44055I$	0
$u=-0.451909-0.804149I$ $a=-0.439945+0.865803I$ $b=-2.43686-2.82591I$	$1.61089-3.44055I$	0
$u=-0.896887+0.195389I$ $a=-0.994969+0.922661I$ $b=-0.473587-0.233835I$	$3.82562-4.47952I$	0
$u=-0.896887-0.195389I$ $a=-0.994969-0.922661I$ $b=-0.473587+0.233835I$	$3.82562+4.47952I$	0
$u=-0.613954+0.893993I$ $a=-0.307752-1.008490I$ $b=-1.56842+1.03840I$	$4.39810-0.61912I$	0
$u=-0.613954-0.893993I$ $a=-0.307752+1.008490I$ $b=-1.56842-1.03840I$	$4.39810+0.61912I$	0
$u=-0.502718+0.961665I$ $a=\ \ 0.646850+0.625919I$ $b=\ \ 3.47641-0.87747I$	$1.00657-7.31352I$	0
$u=-0.502718-0.961665I$ $a=\ \ 0.646850-0.625919I$ $b=\ \ 3.47641+0.87747I$	$1.00657+7.31352I$	0
$u=\ \ 0.950587+0.523389I$ $a=\ \ 0.901621-0.492910I$ $b=\ \ 1.79889+0.70489I$	$3.91175-1.20767I$	0
$u=\ \ 0.950587-0.523389I$ $a=\ \ 0.901621+0.492910I$ $b=\ \ 1.79889-0.70489I$	$3.91175+1.20767I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.975202+0.476395I$ $a=\ 0.932416+1.058510I$ $b=\ 1.55870-0.62570I$	$9.6819+14.6759I$	0
$u=-0.975202-0.476395I$ $a=\ 0.932416-1.058510I$ $b=\ 1.55870+0.62570I$	$9.6819-14.6759I$	0
$u=\ 0.779983+0.764641I$ $a=\ 0.584538-1.019180I$ $b=\ 2.14257+0.77812I$	$9.16649-3.94263I$	0
$u=\ 0.779983-0.764641I$ $a=\ 0.584538+1.019180I$ $b=\ 2.14257-0.77812I$	$9.16649+3.94263I$	0
$u=-0.144961+1.101830I$ $a=-0.658501-0.071678I$ $b=-1.054210+0.368660I$	$-3.69034+1.64460I$	0
$u=-0.144961-1.101830I$ $a=-0.658501+0.071678I$ $b=-1.054210-0.368660I$	$-3.69034-1.64460I$	0
$u=\ 0.594361+0.944090I$ $a=-1.131300+0.591256I$ $b=-2.76769-0.55383I$	$6.55577+5.22032I$	0
$u=\ 0.594361-0.944090I$ $a=-1.131300-0.591256I$ $b=-2.76769+0.55383I$	$6.55577-5.22032I$	0
$u=\ 0.321822+1.068880I$ $a=\ 0.226669-0.933314I$ $b=\ 0.18146-1.76395I$	$2.46802-3.60078I$	0
$u=\ 0.321822-1.068880I$ $a=\ 0.226669+0.933314I$ $b=\ 0.18146+1.76395I$	$2.46802+3.60078I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.591500+0.651600I$ $a=\ \ 0.71368+1.72135I$ $b=\ \ 1.75926-0.46653I$	$6.85976+6.40056I$	0
$u=-0.591500-0.651600I$ $a=\ \ 0.71368-1.72135I$ $b=\ \ 1.75926+0.46653I$	$6.85976-6.40056I$	0
$u=-0.013497+1.122500I$ $a=\ \ 0.730961-0.147448I$ $b=\ \ 1.44512+0.85124I$	$-0.91118-6.76727I$	0
$u=-0.013497-1.122500I$ $a=\ \ 0.730961+0.147448I$ $b=\ \ 1.44512-0.85124I$	$-0.91118+6.76727I$	0
$u=-0.428520+1.044480I$ $a=-0.382204-0.699174I$ $b=-0.71749-2.17704I$	$-2.04035-3.33168I$	0
$u=-0.428520-1.044480I$ $a=-0.382204+0.699174I$ $b=-0.71749+2.17704I$	$-2.04035+3.33168I$	0
$u=\ \ 0.133638+1.122340I$ $a=-0.706346+0.409998I$ $b=-1.36776-0.59980I$	$-3.24033+3.92881I$	0
$u=\ \ 0.133638-1.122340I$ $a=-0.706346-0.409998I$ $b=-1.36776+0.59980I$	$-3.24033-3.92881I$	0
$u=-0.755610+0.418520I$ $a=-0.761460-0.961494I$ $b=-0.876987+0.463630I$	$3.72376+2.25698I$	0
$u=-0.755610-0.418520I$ $a=-0.761460+0.961494I$ $b=-0.876987-0.463630I$	$3.72376-2.25698I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.397925 + 0.758164I$ $a = 1.177970 + 0.654686I$ $b = 0.383299 + 0.715396I$	$1.13275 + 2.12141I$	0
$u = 0.397925 - 0.758164I$ $a = 1.177970 - 0.654686I$ $b = 0.383299 - 0.715396I$	$1.13275 - 2.12141I$	0
$u = -0.850217 + 0.765655I$ $a = -1.32988 - 0.68895I$ $b = -2.03213 + 0.62242I$	$10.80740 + 1.27452I$	0
$u = -0.850217 - 0.765655I$ $a = -1.32988 + 0.68895I$ $b = -2.03213 - 0.62242I$	$10.80740 - 1.27452I$	0
$u = -0.592114 + 0.981639I$ $a = -1.22265 - 0.80862I$ $b = -2.60126 + 0.93774I$	$5.85271 - 11.13600I$	0
$u = -0.592114 - 0.981639I$ $a = -1.22265 + 0.80862I$ $b = -2.60126 - 0.93774I$	$5.85271 + 11.13600I$	0
$u = -0.525066 + 1.022420I$ $a = -0.708241 + 0.034716I$ $b = -0.776199 + 0.013317I$	$-2.91050 - 5.36294I$	0
$u = -0.525066 - 1.022420I$ $a = -0.708241 - 0.034716I$ $b = -0.776199 - 0.013317I$	$-2.91050 + 5.36294I$	0
$u = 0.666681 + 0.527148I$ $a = 0.696683 + 0.479398I$ $b = 0.005850 + 0.189052I$	$1.75089 + 1.44266I$	0
$u = 0.666681 - 0.527148I$ $a = 0.696683 - 0.479398I$ $b = 0.005850 - 0.189052I$	$1.75089 - 1.44266I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.736885+0.420620I$ $a=\ \ 0.420931-0.886731I$ $b=-0.106217-0.358832I$	$1.13423+3.72015I$	0
$u=-0.736885-0.420620I$ $a=\ \ 0.420931+0.886731I$ $b=-0.106217+0.358832I$	$1.13423-3.72015I$	0
$u=\ \ 0.516331+1.039110I$ $a=\ \ 0.641289-0.653561I$ $b=\ \ 1.84017-1.48225I$	$3.66935+10.30690I$	0
$u=\ \ 0.516331-1.039110I$ $a=\ \ 0.641289+0.653561I$ $b=\ \ 1.84017+1.48225I$	$3.66935-10.30690I$	0
$u=-1.000990+0.603899I$ $a=-0.601010-0.668841I$ $b=-1.67708+0.85608I$	$4.81828+4.72800I$	0
$u=-1.000990-0.603899I$ $a=-0.601010+0.668841I$ $b=-1.67708-0.85608I$	$4.81828-4.72800I$	0
$u=\ \ 0.696877+0.948342I$ $a=-0.920906+0.662677I$ $b=-2.60161-1.41450I$	$8.57887+9.52339I$	0
$u=\ \ 0.696877-0.948342I$ $a=-0.920906-0.662677I$ $b=-2.60161+1.41450I$	$8.57887-9.52339I$	0
$u=-0.618056+0.540937I$ $a=-0.064462+0.196398I$ $b=\ \ 0.459494+0.978463I$	$5.11024+1.07610I$	0
$u=-0.618056-0.540937I$ $a=-0.064462-0.196398I$ $b=\ \ 0.459494-0.978463I$	$5.11024-1.07610I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.553879+1.045560I$		
$a=$	$0.348358+0.593036I$	$0.20800+3.32564I$	0
$b=$	$0.382471+0.881411I$		
$u=$	$0.553879-1.045560I$		
$a=$	$0.348358-0.593036I$	$0.20800-3.32564I$	0
$b=$	$0.382471-0.881411I$		
$u=$	$-0.517823+1.075050I$		
$a=$	$-0.136147-0.338123I$	$3.47537-5.55026I$	0
$b=$	$0.553162+0.638887I$		
$u=$	$-0.517823-1.075050I$		
$a=$	$-0.136147+0.338123I$	$3.47537+5.55026I$	0
$b=$	$0.553162-0.638887I$		
$u=$	$1.094820+0.490508I$		
$a=$	$1.02968-0.98754I$	$7.20004-4.96464I$	0
$b=$	$1.47764+0.39277I$		
$u=$	$1.094820-0.490508I$		
$a=$	$1.02968+0.98754I$	$7.20004+4.96464I$	0
$b=$	$1.47764-0.39277I$		
$u=$	$-0.583287+1.059650I$		
$a=$	$0.744253+0.476700I$	$1.87572-7.24751I$	0
$b=$	$2.17689-0.19697I$		
$u=$	$-0.583287-1.059650I$		
$a=$	$0.744253-0.476700I$	$1.87572+7.24751I$	0
$b=$	$2.17689+0.19697I$		
$u=$	$-0.747423+0.952057I$		
$a=$	$0.68870+1.24621I$	$10.20790-7.19940I$	0
$b=$	$1.83589-0.27612I$		
$u=$	$-0.747423-0.952057I$		
$a=$	$0.68870-1.24621I$	$10.20790+7.19940I$	0
$b=$	$1.83589+0.27612I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.053577 + 1.211040I$ $a = -0.466601 + 0.687550I$ $b = -0.816297 + 0.034218I$	$-2.23129 + 0.70905I$	0
$u = 0.053577 - 1.211040I$ $a = -0.466601 - 0.687550I$ $b = -0.816297 - 0.034218I$	$-2.23129 - 0.70905I$	0
$u = 1.027180 + 0.644653I$ $a = -1.140880 + 0.413605I$ $b = -1.78484 - 0.63991I$	$10.57080 + 8.80357I$	0
$u = 1.027180 - 0.644653I$ $a = -1.140880 - 0.413605I$ $b = -1.78484 + 0.63991I$	$10.57080 - 8.80357I$	0
$u = 0.311904 + 1.178150I$ $a = 0.289554 - 0.815097I$ $b = -0.0451810 - 0.0670340I$	$4.14078 + 2.11359I$	0
$u = 0.311904 - 1.178150I$ $a = 0.289554 + 0.815097I$ $b = -0.0451810 + 0.0670340I$	$4.14078 - 2.11359I$	0
$u = -0.665783 + 1.025060I$ $a = -0.847652 - 0.882125I$ $b = -2.52750 + 0.97821I$	$9.58913 - 7.47469I$	0
$u = -0.665783 - 1.025060I$ $a = -0.847652 + 0.882125I$ $b = -2.52750 - 0.97821I$	$9.58913 + 7.47469I$	0
$u = -0.592318 + 1.080490I$ $a = 0.694939 - 0.340214I$ $b = 0.685767 - 0.869695I$	$-0.78986 - 8.76955I$	0
$u = -0.592318 - 1.080490I$ $a = 0.694939 + 0.340214I$ $b = 0.685767 + 0.869695I$	$-0.78986 + 8.76955I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.048736 + 1.241430I$ $a = -0.311504 - 0.956796I$ $b = -0.618095 + 0.192942I$	$-0.67077 - 5.96925I$	0
$u = 0.048736 - 1.241430I$ $a = -0.311504 + 0.956796I$ $b = -0.618095 - 0.192942I$	$-0.67077 + 5.96925I$	0
$u = -0.114625 + 0.746785I$ $a = -0.450192 + 0.952040I$ $b = -0.641456 + 0.416697I$	$-1.14640 + 1.46119I$	0
$u = -0.114625 - 0.746785I$ $a = -0.450192 - 0.952040I$ $b = -0.641456 - 0.416697I$	$-1.14640 - 1.46119I$	0
$u = 0.047921 + 0.748944I$ $a = 0.67851 - 1.54364I$ $b = 0.114790 + 0.475167I$	$5.09394 + 2.42686I$	0
$u = 0.047921 - 0.748944I$ $a = 0.67851 + 1.54364I$ $b = 0.114790 - 0.475167I$	$5.09394 - 2.42686I$	0
$u = -0.635866 + 1.076000I$ $a = -0.414926 - 0.781734I$ $b = -2.08830 + 0.71509I$	$4.37960 - 1.11749I$	0
$u = -0.635866 - 1.076000I$ $a = -0.414926 + 0.781734I$ $b = -2.08830 - 0.71509I$	$4.37960 + 1.11749I$	0
$u = 0.675275 + 1.080570I$ $a = -0.823186 - 0.665682I$ $b = -0.607956 - 1.054570I$	$3.6231 + 13.8410I$	0
$u = 0.675275 - 1.080570I$ $a = -0.823186 + 0.665682I$ $b = -0.607956 + 1.054570I$	$3.6231 - 13.8410I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.638899 + 1.112080I$ $a = 0.171956 + 0.581692I$ $b = -0.301501 + 0.341530I$	$1.65893 + 7.16858I$	0
$u = 0.638899 - 1.112080I$ $a = 0.171956 - 0.581692I$ $b = -0.301501 - 0.341530I$	$1.65893 - 7.16858I$	0
$u = -0.667643 + 1.112210I$ $a = 0.862610 + 0.571711I$ $b = 2.68054 - 0.69797I$	$2.60607 - 8.84890I$	0
$u = -0.667643 - 1.112210I$ $a = 0.862610 - 0.571711I$ $b = 2.68054 + 0.69797I$	$2.60607 + 8.84890I$	0
$u = 0.660260 + 1.119840I$ $a = 0.860704 - 0.694694I$ $b = 2.77747 + 0.75425I$	$3.4845 + 14.0804I$	0
$u = 0.660260 - 1.119840I$ $a = 0.860704 + 0.694694I$ $b = 2.77747 - 0.75425I$	$3.4845 - 14.0804I$	0
$u = -0.530601 + 1.190690I$ $a = 0.370038 + 0.543490I$ $b = 0.897562 + 0.057083I$	$0.06054 - 7.22713I$	0
$u = -0.530601 - 1.190690I$ $a = 0.370038 - 0.543490I$ $b = 0.897562 - 0.057083I$	$0.06054 + 7.22713I$	0
$u = 0.308884 + 0.619234I$ $a = -0.19636 + 1.77403I$ $b = 1.006330 - 0.541638I$	$5.29236 - 6.37968I$	0
$u = 0.308884 - 0.619234I$ $a = -0.19636 - 1.77403I$ $b = 1.006330 + 0.541638I$	$5.29236 + 6.37968I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.673942 + 1.123630I$ $a = 0.533615 + 0.856778I$ $b = 0.444715 + 0.790421I$	$0.15125 + 3.00625I$	0
$u = 0.673942 - 1.123630I$ $a = 0.533615 - 0.856778I$ $b = 0.444715 - 0.790421I$	$0.15125 - 3.00625I$	0
$u = 0.708306 + 1.109020I$ $a = -0.565270 + 0.685659I$ $b = -2.04538 - 0.90332I$	$2.12544 + 7.24295I$	0
$u = 0.708306 - 1.109020I$ $a = -0.565270 - 0.685659I$ $b = -2.04538 + 0.90332I$	$2.12544 - 7.24295I$	0
$u = -0.242655 + 1.306060I$ $a = 0.246545 + 0.777376I$ $b = 0.531308 + 0.281897I$	$-1.88680 - 1.96129I$	0
$u = -0.242655 - 1.306060I$ $a = 0.246545 - 0.777376I$ $b = 0.531308 - 0.281897I$	$-1.88680 + 1.96129I$	0
$u = -0.857647 + 1.028040I$ $a = -0.838168 + 0.983286I$ $b = -0.603259 + 0.885731I$	$0.63437 - 3.41769I$	0
$u = -0.857647 - 1.028040I$ $a = -0.838168 - 0.983286I$ $b = -0.603259 - 0.885731I$	$0.63437 + 3.41769I$	0
$u = -0.746821 + 1.116740I$ $a = 0.686670 + 0.470964I$ $b = 2.36868 - 1.00580I$	$3.18957 - 11.07640I$	0
$u = -0.746821 - 1.116740I$ $a = 0.686670 - 0.470964I$ $b = 2.36868 + 1.00580I$	$3.18957 + 11.07640I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.695007+1.153870I$ $a=-0.950851-0.637660I$ $b=-2.73027+0.62676I$	$7.5919-20.7503I$	0
$u=-0.695007-1.153870I$ $a=-0.950851+0.637660I$ $b=-2.73027-0.62676I$	$7.5919+20.7503I$	0
$u=0.446765+0.467700I$ $a=1.15748+0.86583I$ $b=0.450314+0.484270I$	$1.19301+2.15799I$	0
$u=0.446765-0.467700I$ $a=1.15748-0.86583I$ $b=0.450314-0.484270I$	$1.19301-2.15799I$	0
$u=-0.004668+1.367980I$ $a=0.349363-0.946580I$ $b=0.701760-0.034141I$	$2.73865+11.67240I$	0
$u=-0.004668-1.367980I$ $a=0.349363+0.946580I$ $b=0.701760+0.034141I$	$2.73865-11.67240I$	0
$u=0.627012+1.216180I$ $a=0.528168-0.707533I$ $b=2.20444+0.19957I$	$6.25035+7.07033I$	0
$u=0.627012-1.216180I$ $a=0.528168+0.707533I$ $b=2.20444-0.19957I$	$6.25035-7.07033I$	0
$u=0.869067+1.077500I$ $a=0.550700-0.887131I$ $b=1.65518+0.37623I$	$9.27706-2.03382I$	0
$u=0.869067-1.077500I$ $a=0.550700+0.887131I$ $b=1.65518-0.37623I$	$9.27706+2.03382I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.733883 + 1.180060I$ $a = -0.974651 + 0.663904I$ $b = -2.48146 - 0.42011I$	$5.02765 + 11.47050I$	0
$u = 0.733883 - 1.180060I$ $a = -0.974651 - 0.663904I$ $b = -2.48146 + 0.42011I$	$5.02765 - 11.47050I$	0
$u = 0.585270 + 0.067798I$ $a = 1.39984 + 0.64670I$ $b = 1.169810 + 0.571543I$	$3.22912 + 0.25064I$	$5.80861 + 0.20603I$
$u = 0.585270 - 0.067798I$ $a = 1.39984 - 0.64670I$ $b = 1.169810 - 0.571543I$	$3.22912 - 0.25064I$	$5.80861 - 0.20603I$
$u = -0.415126 + 0.303546I$ $a = 0.109225 + 1.163050I$ $b = -0.293527 + 0.363796I$	$-1.21459 + 1.26814I$	$-2.15978 - 3.69059I$
$u = -0.415126 - 0.303546I$ $a = 0.109225 - 1.163050I$ $b = -0.293527 - 0.363796I$	$-1.21459 - 1.26814I$	$-2.15978 + 3.69059I$
$u = 0.04209 + 1.49794I$ $a = -0.087924 + 0.598148I$ $b = -0.378400 - 0.993460I$	$-3.51694 + 1.95817I$	0
$u = 0.04209 - 1.49794I$ $a = -0.087924 - 0.598148I$ $b = -0.378400 + 0.993460I$	$-3.51694 - 1.95817I$	0
$u = -0.429146$ $a = 2.51913$ $b = -0.484635$	0.404418	12.8710
$u = 0.410568$ $a = 1.88993$ $b = 0.424521$	1.02841	11.3140

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.376333 + 0.064902I$ $a = -3.08692 + 1.33935I$ $b = \quad 0.269702 + 0.127451I$	$5.51352 - 6.43959I$	$7.12907 + 6.64873I$
$u = \quad 0.376333 - 0.064902I$ $a = -3.08692 - 1.33935I$ $b = \quad 0.269702 - 0.127451I$	$5.51352 + 6.43959I$	$7.12907 - 6.64873I$
$u = -0.15135 + 1.64585I$ $a = -0.085353 + 0.951308I$ $b = -0.193252 + 0.190615I$	$-1.50834 - 0.71822I$	0
$u = -0.15135 - 1.64585I$ $a = -0.085353 - 0.951308I$ $b = -0.193252 - 0.190615I$	$-1.50834 + 0.71822I$	0

II.

$\boldsymbol{I_2^u = \langle -5.50\times 10^{30}u^{44}+1.25\times 10^{32}u^{43}+\cdots+1.17\times 10^{31}b-1.50\times 10^{32},\ 8.03\times 10^{31}u^{44}-2.05\times 10^{32}u^{43}+\cdots+1.17\times 10^{31}a-7.34\times 10^{31},\ u^{45}-3u^{44}+\cdots+5u-1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2+1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -6.87427u^{44}+17.5418u^{43}+\cdots-15.9166u+6.28511 \\ 0.470591u^{44}-10.6651u^{43}+\cdots-58.4300u+12.8227 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.474709u^{44}-2.36017u^{43}+\cdots+20.6410u-7.40124 \\ 0.115692u^{44}+5.23944u^{43}+\cdots+35.2367u-7.84686 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.818060u^{44}-8.37831u^{43}+\cdots+12.9990u-5.52306 \\ -3.74760u^{44}+14.3352u^{43}+\cdots+38.6217u-7.49263 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 14.1766u^{44}-35.1101u^{43}+\cdots-62.3938u+3.17226 \\ 0.713159u^{44}-0.509756u^{43}+\cdots+6.59948u-2.20822 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -2.72558u^{44}+5.84663u^{43}+\cdots+42.9764u-11.5021 \\ -2.42891u^{44}+14.1740u^{43}+\cdots+47.0853u-9.87764 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 4.61964u^{44}-5.66033u^{43}+\cdots+17.3196u-11.4330 \\ 1.77609u^{44}-10.2215u^{43}+\cdots-24.3487u+4.54119 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.202893u^{44}-4.79320u^{43}+\cdots-24.9818u+15.2661 \\ 0.537241u^{44}-4.67239u^{43}+\cdots-24.4568u+4.79949 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -18.1755u^{44}+9.35956u^{43}+\cdots-210.360u+64.5647$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{45} - 27u^{44} + \cdots - 31u + 1$
c_2	$u^{45} - 3u^{44} + \cdots + 5u - 1$
c_3	$81(81u^{45} - 99u^{44} + \cdots + 3u - 1)$
c_4	$9(9u^{45} + 3u^{44} + \cdots - 33u + 13)$
c_5	$u^{45} - 2u^{43} + \cdots - 1314u + 81$
c_6	$u^{45} - u^{44} + \cdots - 1551u + 153$
c_7	$9(9u^{45} - 15u^{44} + \cdots - 3u + 1)$
c_8	$u^{45} + 3u^{44} + \cdots + 5u + 1$
c_9	$u^{45} + 10u^{43} + \cdots + 24u - 9$
c_{10}	$9(9u^{45} + 15u^{44} + \cdots - 3u - 1)$
c_{11}	$9(9u^{45} - 3u^{44} + \cdots - 33u - 13)$
c_{12}	$u^{45} - 8u^{44} + \cdots - 8u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{45} - 5y^{44} + \cdots + 137y - 1$
c_2, c_8	$y^{45} + 27y^{44} + \cdots - 31y - 1$
c_3	$6561(6561y^{45} + 5427y^{44} + \cdots - 19y - 1)$
c_4, c_{11}	$81(81y^{45} + 2493y^{44} + \cdots - 5671y - 169)$
c_5	$y^{45} - 4y^{44} + \cdots + 987228y - 6561$
c_6	$y^{45} - 3y^{44} + \cdots - 20367y - 23409$
c_7, c_{10}	$81(81y^{45} - 2043y^{44} + \cdots + 45y - 1)$
c_9	$y^{45} + 20y^{44} + \cdots + 2934y - 81$
c_{12}	$y^{45} + 4y^{44} + \cdots + 18y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.811967+0.587525I$ $a=-0.485549-0.570539I$ $b=-0.631242+1.040740I$	$4.39701+3.42973I$	$9.31675-4.56118I$
$u=-0.811967-0.587525I$ $a=-0.485549+0.570539I$ $b=-0.631242-1.040740I$	$4.39701-3.42973I$	$9.31675+4.56118I$
$u=-0.309514+0.929522I$ $a=-0.194893-0.566006I$ $b=\ \ 2.29640+0.34594I$	$0.72842-6.16656I$	$1.79233+4.55157I$
$u=-0.309514-0.929522I$ $a=-0.194893+0.566006I$ $b=\ \ 2.29640-0.34594I$	$0.72842+6.16656I$	$1.79233-4.55157I$
$u=\ \ 0.933177+0.270134I$ $a=\ \ 0.680687-0.191588I$ $b=\ \ 1.135390+0.112558I$	$2.28676-1.50243I$	$-1.20527+1.63991I$
$u=\ \ 0.933177-0.270134I$ $a=\ \ 0.680687+0.191588I$ $b=\ \ 1.135390-0.112558I$	$2.28676+1.50243I$	$-1.20527-1.63991I$
$u=-0.335868+0.907694I$ $a=\ \ 0.127948+0.573319I$ $b=-1.15952+2.63117I$	$0.75847+3.48141I$	$-2.81180-4.04929I$
$u=-0.335868-0.907694I$ $a=\ \ 0.127948-0.573319I$ $b=-1.15952-2.63117I$	$0.75847-3.48141I$	$-2.81180+4.04929I$
$u=\ \ 0.258330+0.922748I$ $a=-0.777253-0.042499I$ $b=-0.11745-1.51207I$	$-3.98857+1.10625I$	$7.56890-9.75124I$
$u=\ \ 0.258330-0.922748I$ $a=-0.777253+0.042499I$ $b=-0.11745+1.51207I$	$-3.98857-1.10625I$	$7.56890+9.75124I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.948027+0.477909I$ $a=-0.751961-0.876023I$ $b=-1.40637+0.83259I$	$5.34823+3.64956I$	$12.00215-3.78154I$
$u=-0.948027-0.477909I$ $a=-0.751961+0.876023I$ $b=-1.40637-0.83259I$	$5.34823-3.64956I$	$12.00215+3.78154I$
$u=-0.506404+0.946373I$ $a=-1.296240+0.122527I$ $b=-0.98189+1.31998I$	$1.57614-2.18609I$	$0.+3.45049I$
$u=-0.506404-0.946373I$ $a=-1.296240-0.122527I$ $b=-0.98189-1.31998I$	$1.57614+2.18609I$	$0.-3.45049I$
$u=0.439127+1.022880I$ $a=-0.321190+0.593109I$ $b=-0.57400+2.27954I$	$-2.42797+3.18142I$	$-10.08161+0.I$
$u=0.439127-1.022880I$ $a=-0.321190-0.593109I$ $b=-0.57400-2.27954I$	$-2.42797-3.18142I$	$-10.08161+0.I$
$u=0.383094+1.052830I$ $a=0.712405-0.827628I$ $b=1.63665-0.50353I$	$4.03133+8.67969I$	$6.07869-7.99133I$
$u=0.383094-1.052830I$ $a=0.712405+0.827628I$ $b=1.63665+0.50353I$	$4.03133-8.67969I$	$6.07869+7.99133I$
$u=0.846047+0.759410I$ $a=0.742044-1.012220I$ $b=1.85959+0.53761I$	$8.06564-3.35955I$	$8.15723+0.I$
$u=0.846047-0.759410I$ $a=0.742044+1.012220I$ $b=1.85959-0.53761I$	$8.06564+3.35955I$	$8.15723+0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.336979 + 0.778549I$ $a = -0.03075 + 1.58795I$ $b = 0.201212 - 0.629805I$	$5.07417 - 5.68346I$	$4.95145 + 0.17109I$
$u = 0.336979 - 0.778549I$ $a = -0.03075 - 1.58795I$ $b = 0.201212 + 0.629805I$	$5.07417 + 5.68346I$	$4.95145 - 0.17109I$
$u = 0.141847 + 1.150600I$ $a = -0.350102 + 0.638161I$ $b = -0.330072 - 0.108030I$	$-3.32514 + 1.54689I$	$-4.11921 + 0.I$
$u = 0.141847 - 1.150600I$ $a = -0.350102 - 0.638161I$ $b = -0.330072 + 0.108030I$	$-3.32514 - 1.54689I$	$-4.11921 + 0.I$
$u = 0.700262 + 0.935864I$ $a = -0.981391 + 0.775102I$ $b = -2.25764 - 1.14853I$	$7.51252 + 9.10440I$	$0. - 7.33875I$
$u = 0.700262 - 0.935864I$ $a = -0.981391 - 0.775102I$ $b = -2.25764 + 1.14853I$	$7.51252 - 9.10440I$	$0. + 7.33875I$
$u = 0.231393 + 0.763152I$ $a = 0.090033 - 1.021570I$ $b = -1.84983 - 0.08678I$	$-1.063630 - 0.141180I$	$-1.32991 - 1.00606I$
$u = 0.231393 - 0.763152I$ $a = 0.090033 + 1.021570I$ $b = -1.84983 + 0.08678I$	$-1.063630 + 0.141180I$	$-1.32991 + 1.00606I$
$u = -0.619286 + 1.032600I$ $a = 0.414937 + 0.366288I$ $b = 2.02703 + 0.57044I$	$3.01255 - 8.75626I$	0
$u = -0.619286 - 1.032600I$ $a = 0.414937 - 0.366288I$ $b = 2.02703 - 0.57044I$	$3.01255 + 8.75626I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.565674 + 1.166380I$ $a = -0.177867 + 0.371021I$ $b = -0.583657 - 0.348014I$	$-0.48445 + 6.82399I$	0
$u = 0.565674 - 1.166380I$ $a = -0.177867 - 0.371021I$ $b = -0.583657 + 0.348014I$	$-0.48445 - 6.82399I$	0
$u = -0.706785 + 1.144000I$ $a = 0.783773 + 0.554705I$ $b = 2.50596 - 0.68425I$	$3.33384 - 9.72057I$	0
$u = -0.706785 - 1.144000I$ $a = 0.783773 - 0.554705I$ $b = 2.50596 + 0.68425I$	$3.33384 + 9.72057I$	0
$u = 0.844129 + 1.089590I$ $a = 0.683518 + 0.924699I$ $b = 0.563650 + 0.709749I$	$0.10334 + 3.53220I$	0
$u = 0.844129 - 1.089590I$ $a = 0.683518 - 0.924699I$ $b = 0.563650 - 0.709749I$	$0.10334 - 3.53220I$	0
$u = 0.06966 + 1.43448I$ $a = -0.101552 + 0.556141I$ $b = -0.391557 - 0.864961I$	$-3.76821 + 1.91608I$	0
$u = 0.06966 - 1.43448I$ $a = -0.101552 - 0.556141I$ $b = -0.391557 + 0.864961I$	$-3.76821 - 1.91608I$	0
$u = -0.144798 + 0.482362I$ $a = -1.34392 - 0.86515I$ $b = 0.937807 - 0.856480I$	$4.04044 - 2.54503I$	$6.38563 + 2.73143I$
$u = -0.144798 - 0.482362I$ $a = -1.34392 + 0.86515I$ $b = 0.937807 + 0.856480I$	$4.04044 + 2.54503I$	$6.38563 - 2.73143I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.411883$ $a = \ 2.23443$ $b = -0.355358$	-0.200837	-1.12310
$u = -0.14955 + 1.64984I$ $a = -0.072646 + 0.923181I$ $b = -0.169049 + 0.097728I$	$-1.41455 - 0.67993I$	0
$u = -0.14955 - 1.64984I$ $a = -0.072646 - 0.923181I$ $b = -0.169049 - 0.097728I$	$-1.41455 + 0.67993I$	0
$u = \ 0.076531 + 0.334412I$ $a = \ 2.19943 - 2.78346I$ $b = -0.200412 - 0.502367I$	$5.78250 + 1.96052I$	$11.31719 - 0.45408I$
$u = \ 0.076531 - 0.334412I$ $a = \ 2.19943 + 2.78346I$ $b = -0.200412 + 0.502367I$	$5.78250 - 1.96052I$	$11.31719 + 0.45408I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{45}-27u^{44}+\cdots-31u+1)$ $\cdot(u^{174}+78u^{173}+\cdots+38633006u+3418801)$
c_2	$(u^{45}-3u^{44}+\cdots+5u-1)(u^{174}+4u^{173}+\cdots+860u-1849)$
c_3	$6561(81u^{45}-99u^{44}+\cdots+3u-1)$ $\cdot(81u^{174}-2520u^{173}+\cdots+1289568u-74248)$
c_4	$81(9u^{45}+3u^{44}+\cdots-33u+13)$ $\cdot(9u^{174}+30u^{173}+\cdots+188726u-372821)$
c_5	$(u^{45}-2u^{43}+\cdots-1314u+81)$ $\cdot(u^{174}-5u^{173}+\cdots+9544707u+120123)$
c_6	$(u^{45}-u^{44}+\cdots-1551u+153)$ $\cdot(u^{174}+2u^{173}+\cdots+4585039248u-391773717)$
c_7	$81(9u^{45}-15u^{44}+\cdots-3u+1)$ $\cdot(9u^{174}+12u^{173}+\cdots-27006326u-10812743)$
c_8	$(u^{45}+3u^{44}+\cdots+5u+1)(u^{174}+4u^{173}+\cdots+860u-1849)$
c_9	$(u^{45}+10u^{43}+\cdots+24u-9)$ $\cdot(u^{174}+u^{173}+\cdots-62865261u+31013523)$
c_{10}	$81(9u^{45}+15u^{44}+\cdots-3u-1)$ $\cdot(9u^{174}+12u^{173}+\cdots-27006326u-10812743)$
c_{11}	$81(9u^{45}-3u^{44}+\cdots-33u-13)$ $\cdot(9u^{174}+30u^{173}+\cdots+188726u-372821)$
c_{12}	$(u^{45}-8u^{44}+\cdots-8u-1)$ $\cdot(u^{174}+13u^{173}+\cdots+3315627075u+351801391)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{45} - 5y^{44} + \cdots + 137y - 1)$ $\cdot (y^{174} + 50y^{173} + \cdots - 1038422793520482y + 11688200277601)$
c_2, c_8	$(y^{45} + 27y^{44} + \cdots - 31y - 1)$ $\cdot (y^{174} + 78y^{173} + \cdots + 38633006y + 3418801)$
c_3	$43046721(6561y^{45} + 5427y^{44} + \cdots - 19y - 1)$ $\cdot (6561y^{174} - 457002y^{173} + \cdots + 161502458592y + 5512765504)$
c_4, c_{11}	$6561(81y^{45} + 2493y^{44} + \cdots - 5671y - 169)$ $\cdot (81y^{174} + 10620y^{173} + \cdots + 5061796260474y + 138995498041)$
c_5	$(y^{45} - 4y^{44} + \cdots + 987228y - 6561)$ $\cdot (y^{174} - 21y^{173} + \cdots + 1241320767183y + 14429535129)$
c_6	$(y^{45} - 3y^{44} + \cdots - 20367y - 23409)$ $\cdot (y^{174} + 52y^{173} + \cdots + 2.28 \times 10^{19}y + 1.53 \times 10^{17})$
c_7, c_{10}	$6561(81y^{45} - 2043y^{44} + \cdots + 45y - 1)$ $\cdot (81y^{174} - 8172y^{173} + \cdots + 749524157872730y + 116915411184049)$
c_9	$(y^{45} + 20y^{44} + \cdots + 2934y - 81)$ $\cdot (y^{174} - 25y^{173} + \cdots - 29120310824125347y + 961838608871529)$
c_{12}	$(y^{45} + 4y^{44} + \cdots + 18y - 1)$ $\cdot (y^{174} - 57y^{173} + \cdots - 3.54 \times 10^{18}y + 1.24 \times 10^{17})$