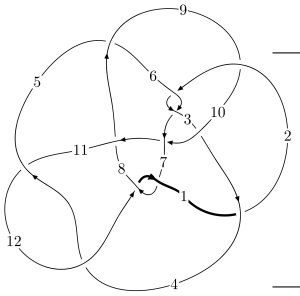
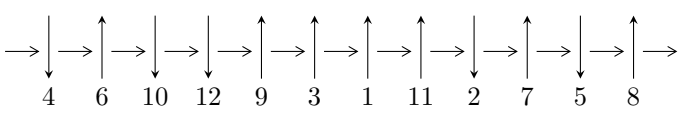
$12a_{0964}$ $(K12a_{0964})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -6.67140 \times 10^{1041} u^{172} + 3.09638 \times 10^{1041} u^{171} + \cdots + 4.13995 \times 10^{1042} b - 2.35617 \times 10^{1044},$$
$$- 1.43628 \times 10^{1045} u^{172} + 4.80688 \times 10^{1045} u^{171} + \cdots + 1.05606 \times 10^{1047} a - 1.79297 \times 10^{1049},$$
$$u^{173} + 56u^{171} + \cdots + 10670u - 773 \rangle$$
$$I_2^u = \langle 1.19997 \times 10^{42} u^{45} + 2.62403 \times 10^{42} u^{44} + \cdots + 5.23068 \times 10^{41} b + 2.29859 \times 10^{42},$$
$$- 1.94564 \times 10^{42} u^{45} - 3.70634 \times 10^{42} u^{44} + \cdots + 5.23068 \times 10^{41} a - 4.20375 \times 10^{42},\ u^{46} + u^{45} + \cdots + 7u^2 +$$

* 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. $\boldsymbol{I_1^u = \langle -6.67 \times 10^{1041} u^{172} + 3.10 \times 10^{1041} u^{171} + \cdots + 4.14 \times 10^{1042} b - 2.36 \times 10^{1044},\ -1.44 \times 10^{1045} u^{172} + 4.81 \times 10^{1045} u^{171} + \cdots + 1.06 \times 10^{1047} a - 1.79 \times 10^{1049},\ u^{173} + 56 u^{171} + \cdots + 10670 u - 773 \rangle}$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 0.0136004 u^{172} - 0.0455171 u^{171} + \cdots - 2485.94 u + 169.780 \\ 0.161147 u^{172} - 0.0747927 u^{171} + \cdots - 1077.27 u + 56.9130 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.174747 u^{172} - 0.120310 u^{171} + \cdots - 3563.20 u + 226.693 \\ 0.161147 u^{172} - 0.0747927 u^{171} + \cdots - 1077.27 u + 56.9130 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.303815 u^{172} + 0.326187 u^{171} + \cdots + 6959.17 u - 467.508 \\ 0.0438291 u^{172} - 0.100993 u^{171} + \cdots - 1973.22 u + 136.971 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.116379 u^{172} - 0.217688 u^{171} + \cdots - 4690.20 u + 326.071 \\ 0.0203251 u^{172} - 0.0330088 u^{171} + \cdots - 807.396 u + 56.8178 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.198840 u^{172} + 0.227474 u^{171} + \cdots + 4526.36 u - 349.016 \\ -0.0976959 u^{172} - 0.0685834 u^{171} + \cdots - 1497.85 u + 119.447 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0838203 u^{172} + 0.122068 u^{171} + \cdots + 2178.16 u - 151.864 \\ -0.000493639 u^{172} - 0.0509278 u^{171} + \cdots - 751.488 u + 53.5767 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.160851 u^{172} - 0.290478 u^{171} + \cdots - 6214.35 u + 431.481 \\ -0.00126672 u^{172} - 0.00132586 u^{171} + \cdots - 94.2923 u + 7.67446 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.178003 u^{172} - 0.100257 u^{171} + \cdots - 2553.46 u + 209.740 \\ 0.119152 u^{172} - 0.0509618 u^{171} + \cdots - 1079.46 u + 60.1908 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.859602 u^{172} - 0.0626764 u^{171} + \cdots + 1294.31 u - 186.370$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{173} - 16u^{172} + \cdots - 441583301u + 43116743$
c_2, c_6	$u^{173} - 60u^{171} + \cdots + 941u - 46$
c_3	$u^{173} + u^{172} + \cdots - 3987176u + 407744$
c_4, c_{11}	$u^{173} + 2u^{172} + \cdots - 87232u + 26609$
c_5	$u^{173} - 5u^{172} + \cdots - 8202271939895u + 2872546990775$
c_7, c_{12}	$u^{173} + 56u^{171} + \cdots + 10670u - 773$
c_8	$u^{173} - 7u^{172} + \cdots - 233712855u - 195784578$
c_9	$u^{173} - 3u^{172} + \cdots - 31113171u + 17614861$
c_{10}	$u^{173} + u^{172} + \cdots - 7778112u - 1549121$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{173} + 46y^{172} + \cdots - 190330317939755079y - 1859053526928049$
c_2, c_6	$y^{173} - 120y^{172} + \cdots + 29145y - 2116$
c_3	$y^{173} + 37y^{172} + \cdots - 6492833858112y - 166255169536$
c_4, c_{11}	$y^{173} + 108y^{172} + \cdots - 22481206172y - 708038881$
c_5	$y^{173} - 117y^{172} + \cdots + 4.33 \times 10^{26}y - 8.25 \times 10^{24}$
c_7, c_{12}	$y^{173} + 112y^{172} + \cdots - 5655354y - 597529$
c_8	$y^{173} - 49y^{172} + \cdots - 114284276837571771y - 38331600982638084$
c_9	$y^{173} + 75y^{172} + \cdots - 248969562329698517y - 310283328049321$
c_{10}	$y^{173} - 59y^{172} + \cdots + 217933860538318y - 2399775872641$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.101122+1.000200I$ $a=\ \ 0.799044-0.091903I$ $b=-0.228446+0.904398I$	$3.20434+4.19259I$	0
$u=-0.101122-1.000200I$ $a=\ \ 0.799044+0.091903I$ $b=-0.228446-0.904398I$	$3.20434-4.19259I$	0
$u=\ \ 0.479693+0.887297I$ $a=\ \ 0.583507-0.266915I$ $b=-0.171458+0.210995I$	$2.96684+3.72671I$	0
$u=\ \ 0.479693-0.887297I$ $a=\ \ 0.583507+0.266915I$ $b=-0.171458-0.210995I$	$2.96684-3.72671I$	0
$u=\ \ 0.684518+0.716218I$ $a=-1.15411-1.22058I$ $b=-0.677062+1.199530I$	$8.65635+8.35807I$	0
$u=\ \ 0.684518-0.716218I$ $a=-1.15411+1.22058I$ $b=-0.677062-1.199530I$	$8.65635-8.35807I$	0
$u=-0.245321+0.983911I$ $a=\ \ 0.103909+0.558063I$ $b=\ \ 0.551768-0.219856I$	$-1.04505+1.01441I$	0
$u=-0.245321-0.983911I$ $a=\ \ 0.103909-0.558063I$ $b=\ \ 0.551768+0.219856I$	$-1.04505-1.01441I$	0
$u=\ \ 0.247804+0.991903I$ $a=\ \ 0.313803+0.200311I$ $b=\ \ 1.58087+0.00415I$	$-2.15969+3.22516I$	0
$u=\ \ 0.247804-0.991903I$ $a=\ \ 0.313803-0.200311I$ $b=\ \ 1.58087-0.00415I$	$-2.15969-3.22516I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.452563+0.860241I$ $a=\ 1.81653-0.89243I$ $b=\ 0.026665+1.016820I$	$3.37257+0.03215I$	0
$u=-0.452563-0.860241I$ $a=\ 1.81653+0.89243I$ $b=\ 0.026665-1.016820I$	$3.37257-0.03215I$	0
$u=\ 0.502702+0.827109I$ $a=-1.26440-0.65185I$ $b=-0.72703+1.28142I$	$9.13038-3.72909I$	0
$u=\ 0.502702-0.827109I$ $a=-1.26440+0.65185I$ $b=-0.72703-1.28142I$	$9.13038+3.72909I$	0
$u=\ 1.051260+0.070820I$ $a=\ 0.197185+0.953230I$ $b=-0.140570-0.989697I$	$4.80380+0.08961I$	0
$u=\ 1.051260-0.070820I$ $a=\ 0.197185-0.953230I$ $b=-0.140570+0.989697I$	$4.80380-0.08961I$	0
$u=-0.888495+0.570057I$ $a=-0.68977+1.31626I$ $b=\ 0.457178-1.307230I$	$8.48181+4.86174I$	0
$u=-0.888495-0.570057I$ $a=-0.68977-1.31626I$ $b=\ 0.457178+1.307230I$	$8.48181-4.86174I$	0
$u=\ 0.623691+0.862271I$ $a=\ 1.064140+0.882356I$ $b=\ 0.67592-1.27062I$	$4.37248+2.06970I$	0
$u=\ 0.623691-0.862271I$ $a=\ 1.064140-0.882356I$ $b=\ 0.67592+1.27062I$	$4.37248-2.06970I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.478697 + 0.966168I$ $a = 0.031951 - 0.456162I$ $b = -1.216790 - 0.228920I$	$3.08104 + 4.01412I$	0
$u = 0.478697 - 0.966168I$ $a = 0.031951 + 0.456162I$ $b = -1.216790 + 0.228920I$	$3.08104 - 4.01412I$	0
$u = 0.194997 + 0.899230I$ $a = -0.544039 - 0.139825I$ $b = -1.65280 - 0.59175I$	$-1.73084 - 1.38533I$	0
$u = 0.194997 - 0.899230I$ $a = -0.544039 + 0.139825I$ $b = -1.65280 + 0.59175I$	$-1.73084 + 1.38533I$	0
$u = -0.357024 + 0.842769I$ $a = -2.10462 + 0.48586I$ $b = -0.072531 - 1.177410I$	$7.64728 + 0.79131I$	0
$u = -0.357024 - 0.842769I$ $a = -2.10462 - 0.48586I$ $b = -0.072531 + 1.177410I$	$7.64728 - 0.79131I$	0
$u = -0.442178 + 0.998072I$ $a = 1.54070 - 0.80320I$ $b = 0.547817 + 1.276240I$	$7.81986 - 5.31031I$	0
$u = -0.442178 - 0.998072I$ $a = 1.54070 + 0.80320I$ $b = 0.547817 - 1.276240I$	$7.81986 + 5.31031I$	0
$u = -0.269968 + 1.060710I$ $a = -0.879519 - 0.323573I$ $b = -0.815784 - 0.628932I$	$0.08698 - 4.07177I$	0
$u = -0.269968 - 1.060710I$ $a = -0.879519 + 0.323573I$ $b = -0.815784 + 0.628932I$	$0.08698 + 4.07177I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.314739 + 1.056770I$ $a = 2.52866 - 0.26316I$ $b = 0.073179 - 1.081650I$	$7.22069 + 8.60281I$	0
$u = 0.314739 - 1.056770I$ $a = 2.52866 + 0.26316I$ $b = 0.073179 + 1.081650I$	$7.22069 - 8.60281I$	0
$u = -0.833603 + 0.326148I$ $a = 0.42708 + 1.96386I$ $b = -0.244492 - 1.351940I$	$7.79715 - 5.79779I$	0
$u = -0.833603 - 0.326148I$ $a = 0.42708 - 1.96386I$ $b = -0.244492 + 1.351940I$	$7.79715 + 5.79779I$	0
$u = -0.301341 + 0.840893I$ $a = -0.53830 + 1.99359I$ $b = -0.06151 - 1.49244I$	$7.75387 - 3.72131I$	0
$u = -0.301341 - 0.840893I$ $a = -0.53830 - 1.99359I$ $b = -0.06151 + 1.49244I$	$7.75387 + 3.72131I$	0
$u = -0.453667 + 1.023740I$ $a = 0.44700 - 1.86965I$ $b = 0.170399 + 1.086770I$	$1.90394 - 5.42821I$	0
$u = -0.453667 - 1.023740I$ $a = 0.44700 + 1.86965I$ $b = 0.170399 - 1.086770I$	$1.90394 + 5.42821I$	0
$u = -1.056180 + 0.373954I$ $a = 0.51904 - 1.38830I$ $b = -0.308342 + 1.252450I$	$5.54377 + 3.23971I$	0
$u = -1.056180 - 0.373954I$ $a = 0.51904 + 1.38830I$ $b = -0.308342 - 1.252450I$	$5.54377 - 3.23971I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.419219 + 0.760453I$ $a = -0.316292 - 0.686285I$ $b = 0.37575 + 1.67854I$	$9.39747 + 7.61757I$	0
$u = 0.419219 - 0.760453I$ $a = -0.316292 + 0.686285I$ $b = 0.37575 - 1.67854I$	$9.39747 - 7.61757I$	0
$u = -0.673352 + 0.910436I$ $a = -1.47287 + 1.23929I$ $b = 0.100422 - 1.020290I$	$6.32263 + 0.35700I$	0
$u = -0.673352 - 0.910436I$ $a = -1.47287 - 1.23929I$ $b = 0.100422 + 1.020290I$	$6.32263 - 0.35700I$	0
$u = 0.822136 + 0.256646I$ $a = -0.573448 + 0.085165I$ $b = 0.250609 - 0.323257I$	$4.85632 + 1.10140I$	0
$u = 0.822136 - 0.256646I$ $a = -0.573448 - 0.085165I$ $b = 0.250609 + 0.323257I$	$4.85632 - 1.10140I$	0
$u = -0.182357 + 1.127920I$ $a = 0.217010 + 0.393443I$ $b = 0.994598 - 0.362888I$	$-1.094690 + 0.310966I$	0
$u = -0.182357 - 1.127920I$ $a = 0.217010 - 0.393443I$ $b = 0.994598 + 0.362888I$	$-1.094690 - 0.310966I$	0
$u = -0.077324 + 1.142040I$ $a = -0.311616 - 0.580340I$ $b = -0.944312 + 0.611570I$	$-0.116407 + 0.368331I$	0
$u = -0.077324 - 1.142040I$ $a = -0.311616 + 0.580340I$ $b = -0.944312 - 0.611570I$	$-0.116407 - 0.368331I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.083575+0.850499I$ $a=\ \ 1.39030-1.52020I$ $b=\ \ 0.46371+1.34921I$	$4.09134-5.22104I$	0
$u=-0.083575-0.850499I$ $a=\ \ 1.39030+1.52020I$ $b=\ \ 0.46371-1.34921I$	$4.09134+5.22104I$	0
$u=\ \ 0.769016+0.353210I$ $a=-0.05821-1.77201I$ $b=-0.550009+0.498730I$	$2.44169-1.57451I$	0
$u=\ \ 0.769016-0.353210I$ $a=-0.05821+1.77201I$ $b=-0.550009-0.498730I$	$2.44169+1.57451I$	0
$u=\ \ 0.803869+0.834560I$ $a=-0.294533-0.810299I$ $b=\ \ 0.402990+1.333650I$	$8.37340-2.83841I$	0
$u=\ \ 0.803869-0.834560I$ $a=-0.294533+0.810299I$ $b=\ \ 0.402990-1.333650I$	$8.37340+2.83841I$	0
$u=\ \ 0.350478+1.116430I$ $a=\ \ 0.159795+0.173354I$ $b=\ \ 1.061900-0.080481I$	$-1.55951+3.54758I$	0
$u=\ \ 0.350478-1.116430I$ $a=\ \ 0.159795-0.173354I$ $b=\ \ 1.061900+0.080481I$	$-1.55951-3.54758I$	0
$u=-0.784036+0.264248I$ $a=\ \ 0.137549+0.326940I$ $b=-0.867617+0.266489I$	$6.14304-2.73929I$	0
$u=-0.784036-0.264248I$ $a=\ \ 0.137549-0.326940I$ $b=-0.867617-0.266489I$	$6.14304+2.73929I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.380310 + 1.114780I$ $a = 0.82861 + 1.22582I$ $b = 0.544396 - 1.092110I$	$-1.26590 + 1.32865I$	0
$u = 0.380310 - 1.114780I$ $a = 0.82861 - 1.22582I$ $b = 0.544396 + 1.092110I$	$-1.26590 - 1.32865I$	0
$u = 0.574595 + 0.579784I$ $a = 0.451754 + 0.769556I$ $b = -0.23718 - 1.49440I$	$5.13086 + 2.67413I$	0
$u = 0.574595 - 0.579784I$ $a = 0.451754 - 0.769556I$ $b = -0.23718 + 1.49440I$	$5.13086 - 2.67413I$	0
$u = -0.514281 + 0.606847I$ $a = 0.55480 - 1.36906I$ $b = -0.33910 + 1.46356I$	$9.04624 + 1.39230I$	0
$u = -0.514281 - 0.606847I$ $a = 0.55480 + 1.36906I$ $b = -0.33910 - 1.46356I$	$9.04624 - 1.39230I$	0
$u = 0.281435 + 1.176560I$ $a = 1.92469 + 1.53472I$ $b = 0.371658 - 1.151570I$	$3.77356 + 9.85712I$	0
$u = 0.281435 - 1.176560I$ $a = 1.92469 - 1.53472I$ $b = 0.371658 + 1.151570I$	$3.77356 - 9.85712I$	0
$u = 1.213890 + 0.126123I$ $a = 0.00479 + 1.46473I$ $b = -0.329084 - 1.322340I$	$11.12880 - 1.34041I$	0
$u = 1.213890 - 0.126123I$ $a = 0.00479 - 1.46473I$ $b = -0.329084 + 1.322340I$	$11.12880 + 1.34041I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.052159+1.229410I$ $a=\ \ 0.171856-0.044206I$ $b=\ \ 0.909588-0.423999I$	$-3.44423+3.90866I$	0
$u=-0.052159-1.229410I$ $a=\ \ 0.171856+0.044206I$ $b=\ \ 0.909588+0.423999I$	$-3.44423-3.90866I$	0
$u=-0.589271+0.483308I$ $a=\ \ 1.88704-2.09536I$ $b=\ \ 0.020647+0.698886I$	$3.47875+1.29962I$	0
$u=-0.589271-0.483308I$ $a=\ \ 1.88704+2.09536I$ $b=\ \ 0.020647-0.698886I$	$3.47875-1.29962I$	0
$u=-0.171680+1.232600I$ $a=-0.326208+0.159588I$ $b=-0.825707+0.375320I$	$-5.72699-0.58473I$	0
$u=-0.171680-1.232600I$ $a=-0.326208-0.159588I$ $b=-0.825707-0.375320I$	$-5.72699+0.58473I$	0
$u=\ \ 0.396014+1.182590I$ $a=-1.09594-1.19748I$ $b=-0.481544+1.140530I$	$-3.27361+5.40598I$	0
$u=\ \ 0.396014-1.182590I$ $a=-1.09594+1.19748I$ $b=-0.481544-1.140530I$	$-3.27361-5.40598I$	0
$u=-0.424132+1.174470I$ $a=-0.881798+0.783265I$ $b=-0.71988-1.40371I$	$1.59980-6.78467I$	0
$u=-0.424132-1.174470I$ $a=-0.881798-0.783265I$ $b=-0.71988+1.40371I$	$1.59980+6.78467I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.521137+1.134840I$ $a=\ 0.405916-0.375908I$ $b=\ 1.033130-0.120641I$	$3.58510-2.09421I$	0
$u=-0.521137-1.134840I$ $a=\ 0.405916+0.375908I$ $b=\ 1.033130+0.120641I$	$3.58510+2.09421I$	0
$u=-0.504770+1.155220I$ $a=-0.247017+0.273555I$ $b=-1.201970+0.134151I$	$-0.91971-8.37196I$	0
$u=-0.504770-1.155220I$ $a=-0.247017-0.273555I$ $b=-1.201970-0.134151I$	$-0.91971+8.37196I$	0
$u=-0.725301+0.136755I$ $a=\ 0.255738+0.982537I$ $b=-0.811956+0.228409I$	$6.63462+9.54258I$	0
$u=-0.725301-0.136755I$ $a=\ 0.255738-0.982537I$ $b=-0.811956-0.228409I$	$6.63462-9.54258I$	0
$u=\ 1.027090+0.737459I$ $a=\ 0.347696+1.306130I$ $b=\ 0.268093-0.925353I$	$0.74259+2.02916I$	0
$u=\ 1.027090-0.737459I$ $a=\ 0.347696-1.306130I$ $b=\ 0.268093+0.925353I$	$0.74259-2.02916I$	0
$u=-0.690650+0.241656I$ $a=\ 0.110854-0.756190I$ $b=\ 0.837488-0.296594I$	$1.78419+3.78416I$	0
$u=-0.690650-0.241656I$ $a=\ 0.110854+0.756190I$ $b=\ 0.837488+0.296594I$	$1.78419-3.78416I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.125408+0.719449I$ $a=-2.29165-1.41579I$ $b=-0.153666+0.817661I$	$0.26561-3.42195I$	0
$u=-0.125408-0.719449I$ $a=-2.29165+1.41579I$ $b=-0.153666-0.817661I$	$0.26561+3.42195I$	0
$u=\ \ 0.535645+1.151560I$ $a=-0.177824-0.053922I$ $b=\ \ 0.941387+0.494862I$	$-0.06375+6.49667I$	0
$u=\ \ 0.535645-1.151560I$ $a=-0.177824+0.053922I$ $b=\ \ 0.941387-0.494862I$	$-0.06375-6.49667I$	0
$u=\ \ 0.482560+0.544397I$ $a=\ \ 0.29701+1.65693I$ $b=\ \ 0.905575+0.065453I$	$4.29599+0.02655I$	0
$u=\ \ 0.482560-0.544397I$ $a=\ \ 0.29701-1.65693I$ $b=\ \ 0.905575-0.065453I$	$4.29599-0.02655I$	0
$u=-0.848307+0.951378I$ $a=\ \ 0.308959-0.869786I$ $b=-0.307100+0.701940I$	$3.11406+5.21395I$	0
$u=-0.848307-0.951378I$ $a=\ \ 0.308959+0.869786I$ $b=-0.307100-0.701940I$	$3.11406-5.21395I$	0
$u=-0.330596+1.231200I$ $a=-0.736971+1.170870I$ $b=-0.107708-0.927874I$	$-1.391970-0.044694I$	0
$u=-0.330596-1.231200I$ $a=-0.736971-1.170870I$ $b=-0.107708+0.927874I$	$-1.391970+0.044694I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.025378+0.723224I$ $a=-2.08400+0.40584I$ $b=-0.611959-0.931876I$	$0.99583-1.47021I$	0
$u=-0.025378-0.723224I$ $a=-2.08400-0.40584I$ $b=-0.611959+0.931876I$	$0.99583+1.47021I$	0
$u=-0.242510+0.673674I$ $a=\ \ 0.47929-2.61405I$ $b=\ \ 0.158422+1.350830I$	$4.21950-3.49762I$	0
$u=-0.242510-0.673674I$ $a=\ \ 0.47929+2.61405I$ $b=\ \ 0.158422-1.350830I$	$4.21950+3.49762I$	0
$u=-0.508088+1.182210I$ $a=\ \ 0.152661-0.311853I$ $b=\ \ 1.250220-0.077158I$	$3.6201-14.2101I$	0
$u=-0.508088-1.182210I$ $a=\ \ 0.152661+0.311853I$ $b=\ \ 1.250220+0.077158I$	$3.6201+14.2101I$	0
$u=-0.656144+1.107620I$ $a=-0.96155+1.39055I$ $b=-0.63695-1.36216I$	$6.75134-10.60420I$	0
$u=-0.656144-1.107620I$ $a=-0.96155-1.39055I$ $b=-0.63695+1.36216I$	$6.75134+10.60420I$	0
$u=\ \ 0.617653+0.351928I$ $a=\ \ 0.53298+1.67637I$ $b=\ \ 0.267895-0.931217I$	$0.65662+1.85083I$	0
$u=\ \ 0.617653-0.351928I$ $a=\ \ 0.53298-1.67637I$ $b=\ \ 0.267895+0.931217I$	$0.65662-1.85083I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.207550+0.667038I$ $a=\ 0.844346+0.934657I$ $b=\ 0.546829-1.049050I$	$1.40969+1.79374I$	0
$u=-0.207550-0.667038I$ $a=\ 0.844346-0.934657I$ $b=\ 0.546829+1.049050I$	$1.40969-1.79374I$	0
$u=\ 1.285430+0.238167I$ $a=\ 0.24213+1.40895I$ $b=-0.398300-1.308610I$	$11.2060-13.8387I$	0
$u=\ 1.285430-0.238167I$ $a=\ 0.24213-1.40895I$ $b=-0.398300+1.308610I$	$11.2060+13.8387I$	0
$u=-0.002861+0.691839I$ $a=\ 3.90834+1.56696I$ $b=-0.048909-0.855926I$	$6.17054-8.30689I$	0
$u=-0.002861-0.691839I$ $a=\ 3.90834-1.56696I$ $b=-0.048909+0.855926I$	$6.17054+8.30689I$	0
$u=\ 0.485237+1.220200I$ $a=-0.034838+0.213459I$ $b=-0.624199-0.483733I$	$-2.47717+3.45164I$	0
$u=\ 0.485237-1.220200I$ $a=-0.034838-0.213459I$ $b=-0.624199+0.483733I$	$-2.47717-3.45164I$	0
$u=\ 1.299990+0.203519I$ $a=-0.155139-1.358570I$ $b=\ 0.366661+1.297910I$	$6.53257-7.84871I$	0
$u=\ 1.299990-0.203519I$ $a=-0.155139+1.358570I$ $b=\ 0.366661-1.297910I$	$6.53257+7.84871I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.271212 + 1.287750I$ $a = -0.697853 + 0.474134I$ $b = -0.094004 + 0.903640I$	$0.36759 + 4.96418I$	0
$u = 0.271212 - 1.287750I$ $a = -0.697853 - 0.474134I$ $b = -0.094004 - 0.903640I$	$0.36759 - 4.96418I$	0
$u = -1.331630 + 0.061914I$ $a = -0.27099 + 1.55672I$ $b = 0.168055 - 1.300090I$	$9.75420 + 2.66468I$	0
$u = -1.331630 - 0.061914I$ $a = -0.27099 - 1.55672I$ $b = 0.168055 + 1.300090I$	$9.75420 - 2.66468I$	0
$u = 0.390668 + 1.278560I$ $a = -0.294824 - 0.240184I$ $b = -0.695195 + 0.474297I$	$0.21026 + 5.29132I$	0
$u = 0.390668 - 1.278560I$ $a = -0.294824 + 0.240184I$ $b = -0.695195 - 0.474297I$	$0.21026 - 5.29132I$	0
$u = -0.243991 + 1.314890I$ $a = 0.386945 - 0.735804I$ $b = 0.548844 - 0.279565I$	$1.14158 - 6.15699I$	0
$u = -0.243991 - 1.314890I$ $a = 0.386945 + 0.735804I$ $b = 0.548844 + 0.279565I$	$1.14158 + 6.15699I$	0
$u = 0.403289 + 1.285530I$ $a = -0.736792 - 0.142216I$ $b = -0.287812 + 0.815495I$	$0.22229 + 5.06354I$	0
$u = 0.403289 - 1.285530I$ $a = -0.736792 + 0.142216I$ $b = -0.287812 - 0.815495I$	$0.22229 - 5.06354I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.522771 + 1.277770I$ $a = 0.607382 + 0.762819I$ $b = 0.587909 - 1.051250I$	$0.94512 + 5.40887I$	0
$u = 0.522771 - 1.277770I$ $a = 0.607382 - 0.762819I$ $b = 0.587909 + 1.051250I$	$0.94512 - 5.40887I$	0
$u = -0.645823 + 1.222900I$ $a = 0.78660 - 1.24446I$ $b = 0.55188 + 1.36417I$	$2.83877 - 9.34355I$	0
$u = -0.645823 - 1.222900I$ $a = 0.78660 + 1.24446I$ $b = 0.55188 - 1.36417I$	$2.83877 + 9.34355I$	0
$u = 0.212116 + 0.572279I$ $a = -0.48770 + 3.48325I$ $b = -0.067452 - 1.370420I$	$8.89366 - 5.97611I$	0
$u = 0.212116 - 0.572279I$ $a = -0.48770 - 3.48325I$ $b = -0.067452 + 1.370420I$	$8.89366 + 5.97611I$	0
$u = -0.492122 + 1.307810I$ $a = 0.650949 - 1.013900I$ $b = 0.60083 + 1.51261I$	$3.13023 - 10.48500I$	0
$u = -0.492122 - 1.307810I$ $a = 0.650949 + 1.013900I$ $b = 0.60083 - 1.51261I$	$3.13023 + 10.48500I$	0
$u = -0.586454 + 1.284770I$ $a = 0.165549 - 0.990884I$ $b = 0.092816 + 0.612008I$	$3.16035 + 5.32118I$	0
$u = -0.586454 - 1.284770I$ $a = 0.165549 + 0.990884I$ $b = 0.092816 - 0.612008I$	$3.16035 - 5.32118I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.79194+1.17609I$ $a=\ \ 0.62921-1.35332I$ $b=\ \ 0.595779+1.101820I$	$1.91793-12.10660I$	0
$u=-0.79194-1.17609I$ $a=\ \ 0.62921+1.35332I$ $b=\ \ 0.595779-1.101820I$	$1.91793+12.10660I$	0
$u=-0.01021+1.42695I$ $a=-1.39231+0.25394I$ $b=-0.544976+0.821253I$	$-3.72730+2.20545I$	0
$u=-0.01021-1.42695I$ $a=-1.39231-0.25394I$ $b=-0.544976-0.821253I$	$-3.72730-2.20545I$	0
$u=-0.219555+0.524484I$ $a=-0.080926+0.708550I$ $b=\ \ 0.444398-0.292439I$	$-0.875682+1.084970I$	0
$u=-0.219555-0.524484I$ $a=-0.080926-0.708550I$ $b=\ \ 0.444398+0.292439I$	$-0.875682-1.084970I$	0
$u=-0.84341+1.22839I$ $a=-0.625994+1.264740I$ $b=-0.435201-1.035560I$	$-0.77790-7.62134I$	0
$u=-0.84341-1.22839I$ $a=-0.625994-1.264740I$ $b=-0.435201+1.035560I$	$-0.77790+7.62134I$	0
$u=\ \ 0.62468+1.35339I$ $a=\ \ 1.04057+1.01859I$ $b=\ \ 0.55197-1.30264I$	$7.28669+7.75576I$	0
$u=\ \ 0.62468-1.35339I$ $a=\ \ 1.04057-1.01859I$ $b=\ \ 0.55197+1.30264I$	$7.28669-7.75576I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.68325 + 1.32923I$ $a = 0.87670 + 1.20165I$ $b = 0.60291 - 1.38009I$	$7.7516 + 20.6501I$	0
$u = 0.68325 - 1.32923I$ $a = 0.87670 - 1.20165I$ $b = 0.60291 + 1.38009I$	$7.7516 - 20.6501I$	0
$u = 0.499083 + 0.049771I$ $a = 1.29540 + 0.92520I$ $b = -0.300751 + 0.123542I$	$1.46945 + 0.50697I$	$6.57080 + 1.54372I$
$u = 0.499083 - 0.049771I$ $a = 1.29540 - 0.92520I$ $b = -0.300751 - 0.123542I$	$1.46945 - 0.50697I$	$6.57080 - 1.54372I$
$u = 0.67563 + 1.34001I$ $a = -0.88764 - 1.11376I$ $b = -0.59889 + 1.34655I$	$2.9459 + 14.6578I$	0
$u = 0.67563 - 1.34001I$ $a = -0.88764 + 1.11376I$ $b = -0.59889 - 1.34655I$	$2.9459 - 14.6578I$	0
$u = -0.69220 + 1.34211I$ $a = -0.67017 + 1.27799I$ $b = -0.40901 - 1.42749I$	$5.89032 - 9.61287I$	0
$u = -0.69220 - 1.34211I$ $a = -0.67017 - 1.27799I$ $b = -0.40901 + 1.42749I$	$5.89032 + 9.61287I$	0
$u = -0.74615 + 1.32928I$ $a = 0.790597 - 1.130670I$ $b = 0.172136 + 1.122760I$	$5.55928 - 4.66278I$	0
$u = -0.74615 - 1.32928I$ $a = 0.790597 + 1.130670I$ $b = 0.172136 - 1.122760I$	$5.55928 + 4.66278I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.08985+1.55973I$ $a=-0.467008+0.204551I$ $b=-0.064473-0.940951I$	$-1.51405-0.87156I$	0
$u=-0.08985-1.55973I$ $a=-0.467008-0.204551I$ $b=-0.064473+0.940951I$	$-1.51405+0.87156I$	0
$u=-0.350693+0.147460I$ $a=-1.52957+1.23271I$ $b=\ \ 0.25110-1.43853I$	$4.58378+3.20504I$	$5.96790+0.24493I$
$u=-0.350693-0.147460I$ $a=-1.52957-1.23271I$ $b=\ \ 0.25110+1.43853I$	$4.58378-3.20504I$	$5.96790-0.24493I$
$u=\ \ 0.87900+1.52385I$ $a=-0.322269-0.951989I$ $b=-0.143113+1.183330I$	$5.75815+5.90303I$	0
$u=\ \ 0.87900-1.52385I$ $a=-0.322269+0.951989I$ $b=-0.143113-1.183330I$	$5.75815-5.90303I$	0
$u=\ \ 0.134219$ $a=-15.2494$ $b=\ \ 0.482881$	3.80016	-59.6010
$u=\ \ 0.0787167+0.0960303I$ $a=\ \ 0.89835-8.11189I$ $b=-0.432958+0.354840I$	$1.88656-1.17805I$	$1.01508-2.08819I$
$u=\ \ 0.0787167-0.0960303I$ $a=\ \ 0.89835+8.11189I$ $b=-0.432958-0.354840I$	$1.88656+1.17805I$	$1.01508+2.08819I$
$u=-0.39126+2.01703I$ $a=-0.233474+0.818761I$ $b=-0.090906-0.914574I$	$-1.165250-0.555401I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.39126-2.01703I$ $a=-0.233474-0.818761I$ $b=-0.090906+0.914574I$	$-1.165250+0.555401I$	0
$u=\ \ 0.14743+2.19021I$ $a=-0.026240-0.676884I$ $b=\ \ 0.112895+0.984772I$	$3.92081-6.75553I$	0
$u=\ \ 0.14743-2.19021I$ $a=-0.026240+0.676884I$ $b=\ \ 0.112895-0.984772I$	$3.92081+6.75553I$	0

II.

$\boldsymbol{I_2^u = \langle 1.20\times 10^{42}u^{45}+2.62\times 10^{42}u^{44}+\cdots+5.23\times 10^{41}b+2.30\times 10^{42},\ -1.95\times 10^{42}u^{45}-3.71\times 10^{42}u^{44}+\cdots+5.23\times 10^{41}a-4.20\times 10^{42},\ u^{46}+u^{45}+\cdots+7u^2+1\rangle}$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 3.71966u^{45} + 7.08577u^{44} + \cdots + 5.04323u + 8.03672 \\ -2.29411u^{45} - 5.01661u^{44} + \cdots - 0.280576u - 4.39444 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.42556u^{45} + 2.06917u^{44} + \cdots + 4.76266u + 3.64227 \\ -2.29411u^{45} - 5.01661u^{44} + \cdots - 0.280576u - 4.39444 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -3.56500u^{45} - 5.94848u^{44} + \cdots + 0.975571u - 4.27241 \\ 2.18651u^{45} + 1.11562u^{44} + \cdots + 3.71938u - 2.20683 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 2.17768u^{45} + 2.28587u^{44} + \cdots - 1.72377u - 0.182148 \\ 0.573992u^{45} + 3.02698u^{44} + \cdots - 0.967706u + 4.76800 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -5.08544u^{45} + 1.42640u^{44} + \cdots - 13.3756u + 6.02272 \\ -0.970512u^{45} - 3.53949u^{44} + \cdots - 2.28070u - 2.88735 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 5.83854u^{45} + 1.39013u^{44} + \cdots + 13.3063u - 2.97035 \\ -1.71416u^{45} + 1.95358u^{44} + \cdots - 3.11568u + 6.76348 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 3.47526u^{45} + 5.51932u^{44} + \cdots - 1.07108u + 2.74083 \\ 0.491736u^{45} + 2.18311u^{44} + \cdots - 0.322818u + 3.78089 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 6.56539u^{45} + 2.59037u^{44} + \cdots + 16.3698u - 3.40869 \\ -2.84634u^{45} + 1.54077u^{44} + \cdots - 4.87723u + 6.26763 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -6.51815u^{45} + 4.89643u^{44} + \cdots - 1.59728u + 21.8573$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{46} - 3u^{45} + \cdots - 13u + 1$
c_2	$u^{46} - u^{45} + \cdots + 55u + 11$
c_3	$u^{46} + u^{44} + \cdots - 4u + 1$
c_4	$u^{46} - u^{45} + \cdots - 4u + 1$
c_5	$u^{46} - 2u^{45} + \cdots + 7u + 1$
c_6	$u^{46} + u^{45} + \cdots - 55u + 11$
c_7	$u^{46} - u^{45} + \cdots + 7u^2 + 1$
c_8	$u^{46} + 16u^{45} + \cdots + 780u + 61$
c_9	$u^{46} + 14u^{44} + \cdots + 5u + 1$
c_{10}	$u^{46} + 6u^{45} + \cdots - 174u + 67$
c_{11}	$u^{46} + u^{45} + \cdots + 4u + 1$
c_{12}	$u^{46} + u^{45} + \cdots + 7u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{46} - y^{45} + \cdots - 9y + 1$
c_2, c_6	$y^{46} - 27y^{45} + \cdots - 693y + 121$
c_3	$y^{46} + 2y^{45} + \cdots + 44y + 1$
c_4, c_{11}	$y^{46} + 25y^{45} + \cdots - 4y + 1$
c_5	$y^{46} - 40y^{45} + \cdots - 39y + 1$
c_7, c_{12}	$y^{46} + 45y^{45} + \cdots + 14y + 1$
c_8	$y^{46} - 16y^{45} + \cdots - 5598y + 3721$
c_9	$y^{46} + 28y^{45} + \cdots - 3y + 1$
c_{10}	$y^{46} - 6y^{45} + \cdots - 105450y + 4489$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.149400+0.998778I$ $a=-0.322917-0.257133I$ $b=-1.50187+0.60781I$	$-2.22184+1.53557I$	$-6.64104-3.34325I$
$u=-0.149400-0.998778I$ $a=-0.322917+0.257133I$ $b=-1.50187-0.60781I$	$-2.22184-1.53557I$	$-6.64104+3.34325I$
$u=-0.892628+0.415199I$ $a=-0.655199+1.198260I$ $b=\ \ 0.349631-1.318440I$	$6.72385+4.23064I$	$8.68005-3.42014I$
$u=-0.892628-0.415199I$ $a=-0.655199-1.198260I$ $b=\ \ 0.349631+1.318440I$	$6.72385-4.23064I$	$8.68005+3.42014I$
$u=-0.122868+0.954380I$ $a=\ \ 0.560768+0.180779I$ $b=\ \ 1.54369+0.21232I$	$-2.01310-2.64566I$	$2.56486-0.38034I$
$u=-0.122868-0.954380I$ $a=\ \ 0.560768-0.180779I$ $b=\ \ 1.54369-0.21232I$	$-2.01310+2.64566I$	$2.56486+0.38034I$
$u=\ \ 0.265649+0.894152I$ $a=\ \ 3.11975+0.36975I$ $b=\ \ 0.337502-0.873368I$	$5.83334+9.22299I$	$4.26611-10.98264I$
$u=\ \ 0.265649-0.894152I$ $a=\ \ 3.11975-0.36975I$ $b=\ \ 0.337502+0.873368I$	$5.83334-9.22299I$	$4.26611+10.98264I$
$u=\ \ 0.413478+1.077210I$ $a=\ \ 0.109640+0.430017I$ $b=\ \ 0.793990+0.174737I$	$1.65746+3.60243I$	0
$u=\ \ 0.413478-1.077210I$ $a=\ \ 0.109640-0.430017I$ $b=\ \ 0.793990-0.174737I$	$1.65746-3.60243I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.795254+0.142637I$ $a=\ \ 0.55873-1.99761I$ $b=-0.235946+1.326940I$	$8.63413+2.80128I$	$10.19793-2.55468I$
$u=-0.795254-0.142637I$ $a=\ \ 0.55873+1.99761I$ $b=-0.235946-1.326940I$	$8.63413-2.80128I$	$10.19793+2.55468I$
$u=\ \ 0.306541+1.164720I$ $a=-0.677269+0.487512I$ $b=-0.425121+0.454530I$	$-0.70814+4.95578I$	0
$u=\ \ 0.306541-1.164720I$ $a=-0.677269-0.487512I$ $b=-0.425121-0.454530I$	$-0.70814-4.95578I$	0
$u=-0.082005+0.762922I$ $a=\ \ 1.16376+2.01554I$ $b=\ \ 0.11799-1.45131I$	$8.25360-6.69844I$	$5.53639+5.83477I$
$u=-0.082005-0.762922I$ $a=\ \ 1.16376-2.01554I$ $b=\ \ 0.11799+1.45131I$	$8.25360+6.69844I$	$5.53639-5.83477I$
$u=\ \ 0.425430+1.190990I$ $a=-0.892907-0.419260I$ $b=-0.517020+0.887268I$	$-0.64223+5.19168I$	0
$u=\ \ 0.425430-1.190990I$ $a=-0.892907+0.419260I$ $b=-0.517020-0.887268I$	$-0.64223-5.19168I$	0
$u=-0.160757+0.701273I$ $a=\ \ 0.37794-2.09644I$ $b=\ \ 0.16007+1.43958I$	$3.88816-3.46295I$	$-7.68533+4.35377I$
$u=-0.160757-0.701273I$ $a=\ \ 0.37794+2.09644I$ $b=\ \ 0.16007-1.43958I$	$3.88816+3.46295I$	$-7.68533-4.35377I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.381045 + 1.226310I$ $a = -0.144950 + 0.226249I$ $b = -0.568981 + 0.045631I$	$-0.75498 + 4.86056I$	0
$u = 0.381045 - 1.226310I$ $a = -0.144950 - 0.226249I$ $b = -0.568981 - 0.045631I$	$-0.75498 - 4.86056I$	0
$u = -0.022918 + 1.338870I$ $a = -0.251010 - 0.591413I$ $b = -0.422631 + 0.408971I$	$-3.01942 - 0.09554I$	0
$u = -0.022918 - 1.338870I$ $a = -0.251010 + 0.591413I$ $b = -0.422631 - 0.408971I$	$-3.01942 + 0.09554I$	0
$u = -0.580645 + 1.214600I$ $a = 1.00762 - 1.35788I$ $b = 0.458704 + 1.324260I$	$5.59173 - 8.28162I$	0
$u = -0.580645 - 1.214600I$ $a = 1.00762 + 1.35788I$ $b = 0.458704 - 1.324260I$	$5.59173 + 8.28162I$	0
$u = -0.437975 + 0.463050I$ $a = -0.95547 + 2.57848I$ $b = -0.167227 - 1.349300I$	$8.40073 - 2.79415I$	$11.52069 + 1.74604I$
$u = -0.437975 - 0.463050I$ $a = -0.95547 - 2.57848I$ $b = -0.167227 + 1.349300I$	$8.40073 + 2.79415I$	$11.52069 - 1.74604I$
$u = 0.594284 + 0.205640I$ $a = -0.27816 + 2.40557I$ $b = 0.363807 - 0.187449I$	$2.66589 - 1.04907I$	$9.64625 - 7.31285I$
$u = 0.594284 - 0.205640I$ $a = -0.27816 - 2.40557I$ $b = 0.363807 + 0.187449I$	$2.66589 + 1.04907I$	$9.64625 + 7.31285I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.516492+0.316855I$ $a=1.63027-2.19234I$ $b=0.351636+0.885247I$	$1.97252-1.64305I$	$8.20268+2.22628I$
$u=-0.516492-0.316855I$ $a=1.63027+2.19234I$ $b=0.351636-0.885247I$	$1.97252+1.64305I$	$8.20268-2.22628I$
$u=-0.008375+1.412830I$ $a=-1.42977-0.25210I$ $b=-0.525862-0.830716I$	$-3.80940-2.14587I$	0
$u=-0.008375-1.412830I$ $a=-1.42977+0.25210I$ $b=-0.525862+0.830716I$	$-3.80940+2.14587I$	0
$u=-0.64317+1.26364I$ $a=-0.663411+1.183030I$ $b=-0.55147-1.41028I$	$3.90654-9.99635I$	0
$u=-0.64317-1.26364I$ $a=-0.663411-1.183030I$ $b=-0.55147+1.41028I$	$3.90654+9.99635I$	0
$u=0.352201+0.307769I$ $a=0.82840-3.08173I$ $b=-0.585739-0.074450I$	$3.91788+0.09898I$	$-2.0635-14.7013I$
$u=0.352201-0.307769I$ $a=0.82840+3.08173I$ $b=-0.585739+0.074450I$	$3.91788-0.09898I$	$-2.0635+14.7013I$
$u=0.252724+0.362297I$ $a=1.47803+0.50334I$ $b=0.544095+0.842037I$	$1.88661-2.19378I$	$9.13558+4.41629I$
$u=0.252724-0.362297I$ $a=1.47803-0.50334I$ $b=0.544095-0.842037I$	$1.88661+2.19378I$	$9.13558-4.41629I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.36466 + 1.66656I$ $a = 0.416704 + 0.754925I$ $b = 0.107959 - 1.123330I$	$4.81559 + 6.35209I$	0
$u = 0.36466 - 1.66656I$ $a = 0.416704 - 0.754925I$ $b = 0.107959 + 1.123330I$	$4.81559 - 6.35209I$	0
$u = 0.23371 + 1.80388I$ $a = 0.342643 + 0.724395I$ $b = -0.046343 - 0.891201I$	$3.61008 - 6.21409I$	0
$u = 0.23371 - 1.80388I$ $a = 0.342643 - 0.724395I$ $b = -0.046343 + 0.891201I$	$3.61008 + 6.21409I$	0
$u = 0.32276 + 1.95316I$ $a = -0.323182 - 0.802503I$ $b = -0.080875 + 0.945400I$	$-1.016310 + 0.429480I$	0
$u = 0.32276 - 1.95316I$ $a = -0.323182 + 0.802503I$ $b = -0.080875 - 0.945400I$	$-1.016310 - 0.429480I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{46}-3u^{45}+\cdots-13u+1)$ $\cdot(u^{173}-16u^{172}+\cdots-441583301u+43116743)$
c_2	$(u^{46}-u^{45}+\cdots+55u+11)(u^{173}-60u^{171}+\cdots+941u-46)$
c_3	$(u^{46}+u^{44}+\cdots-4u+1)(u^{173}+u^{172}+\cdots-3987176u+407744)$
c_4	$(u^{46}-u^{45}+\cdots-4u+1)(u^{173}+2u^{172}+\cdots-87232u+26609)$
c_5	$(u^{46}-2u^{45}+\cdots+7u+1)$ $\cdot(u^{173}-5u^{172}+\cdots-8202271939895u+2872546990775)$
c_6	$(u^{46}+u^{45}+\cdots-55u+11)(u^{173}-60u^{171}+\cdots+941u-46)$
c_7	$(u^{46}-u^{45}+\cdots+7u^2+1)(u^{173}+56u^{171}+\cdots+10670u-773)$
c_8	$(u^{46}+16u^{45}+\cdots+780u+61)$ $\cdot(u^{173}-7u^{172}+\cdots-233712855u-195784578)$
c_9	$(u^{46}+14u^{44}+\cdots+5u+1)$ $\cdot(u^{173}-3u^{172}+\cdots-31113171u+17614861)$
c_{10}	$(u^{46}+6u^{45}+\cdots-174u+67)$ $\cdot(u^{173}+u^{172}+\cdots-7778112u-1549121)$
c_{11}	$(u^{46}+u^{45}+\cdots+4u+1)(u^{173}+2u^{172}+\cdots-87232u+26609)$
c_{12}	$(u^{46}+u^{45}+\cdots+7u^2+1)(u^{173}+56u^{171}+\cdots+10670u-773)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{46} - y^{45} + \cdots - 9y + 1)$ $\cdot (y^{173} + 46y^{172} + \cdots - 190330317939755079y - 1859053526928049)$
c_2, c_6	$(y^{46} - 27y^{45} + \cdots - 693y + 121)$ $\cdot (y^{173} - 120y^{172} + \cdots + 29145y - 2116)$
c_3	$(y^{46} + 2y^{45} + \cdots + 44y + 1)$ $\cdot (y^{173} + 37y^{172} + \cdots - 6492833858112y - 166255169536)$
c_4, c_{11}	$(y^{46} + 25y^{45} + \cdots - 4y + 1)$ $\cdot (y^{173} + 108y^{172} + \cdots - 22481206172y - 708038881)$
c_5	$(y^{46} - 40y^{45} + \cdots - 39y + 1)$ $\cdot (y^{173} - 117y^{172} + \cdots + 4.33 \times 10^{26}y - 8.25 \times 10^{24})$
c_7, c_{12}	$(y^{46} + 45y^{45} + \cdots + 14y + 1)$ $\cdot (y^{173} + 112y^{172} + \cdots - 5655354y - 597529)$
c_8	$(y^{46} - 16y^{45} + \cdots - 5598y + 3721)$ $\cdot (y^{173} - 49y^{172} + \cdots - 114284276837571771y - 38331600982638084)$
c_9	$(y^{46} + 28y^{45} + \cdots - 3y + 1)$ $\cdot (y^{173} + 75y^{172} + \cdots - 248969562329698517y - 310283328049321)$
c_{10}	$(y^{46} - 6y^{45} + \cdots - 105450y + 4489)$ $\cdot (y^{173} - 59y^{172} + \cdots + 217933860538318y - 2399775872641)$