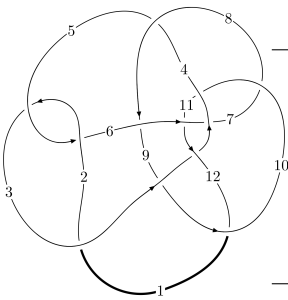
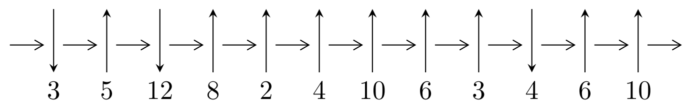
$12n_{0520}$ ($K12n_{0520}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -1.00773 \times 10^{215} u^{54} + 3.95891 \times 10^{215} u^{53} + \cdots + 5.25110 \times 10^{219} b - 1.48407 \times 10^{220}, \\
& -1.77810 \times 10^{217} u^{54} - 8.41460 \times 10^{217} u^{53} + \cdots + 1.78060 \times 10^{221} a + 4.35856 \times 10^{221}, \\
& u^{55} + 3u^{54} + \cdots + 4862u - 6341 \rangle \\
I_2^u = \langle & 9.41498 \times 10^{23} u^{19} + 2.05689 \times 10^{24} u^{18} + \cdots + 9.99999 \times 10^{23} b - 4.03582 \times 10^{24}, \\
& 3.23988 \times 10^{25} u^{19} + 7.09015 \times 10^{25} u^{18} + \cdots + 9.99999 \times 10^{23} a - 1.70850 \times 10^{26},\ u^{20} + 2u^{19} + \cdots - 14u +
\end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 75 representations.

[1] The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2] All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $\boldsymbol{I_1^u = \langle -1.01 \times 10^{215} u^{54} + 3.96 \times 10^{215} u^{53} + \cdots + 5.25 \times 10^{219} b - 1.48 \times 10^{220},\ -1.78 \times 10^{217} u^{54} - 8.41 \times 10^{217} u^{53} + \cdots + 1.78 \times 10^{221} a + 4.36 \times 10^{221},\ u^{55} + 3u^{54} + \cdots + 4862u - 6341 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.0000998597u^{54} + 0.000472571u^{53} + \cdots - 1.70493u - 2.44781 \\ 0.0000191908u^{54} - 0.0000753920u^{53} + \cdots + 2.51058u + 2.82621 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.000119051u^{54} + 0.000397179u^{53} + \cdots + 0.805651u + 0.378407 \\ 0.0000191908u^{54} - 0.0000753920u^{53} + \cdots + 2.51058u + 2.82621 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.000439453u^{54} + 0.00130155u^{53} + \cdots - 9.12833u + 2.22261 \\ 5.39110 \times 10^{-6}u^{54} - 0.0000762385u^{53} + \cdots + 0.556271u + 2.93121 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.0000998597u^{54} + 0.000472571u^{53} + \cdots - 1.70493u - 2.44781 \\ 0.0000160377u^{54} - 0.0000345076u^{53} + \cdots + 2.71846u + 1.72927 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.0000108886u^{54} - 0.0000519635u^{53} + \cdots - 1.50476u + 0.832419 \\ -0.000450416u^{54} - 0.00135705u^{53} + \cdots + 13.8133u - 1.51385 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 8.14406 \times 10^{-8}u^{54} - 0.000279970u^{53} + \cdots + 6.32497u + 7.75382 \\ -0.000125932u^{54} - 0.000589665u^{53} + \cdots + 3.03504u + 3.45260 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.0000620439u^{54} - 0.000144711u^{53} + \cdots + 3.04412u + 0.737987 \\ 0.000267626u^{54} + 0.000799507u^{53} + \cdots - 8.68003u + 0.274355 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.000100081u^{54} + 0.000476708u^{53} + \cdots - 2.36634u - 2.92983 \\ 0.000135989u^{54} + 0.000606267u^{53} + \cdots - 0.718613u - 4.76962 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.000461305u^{54} - 0.00140901u^{53} + \cdots + 12.3085u - 0.681429 \\ -0.000450416u^{54} - 0.00135705u^{53} + \cdots + 13.8133u - 1.51385 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.00197309u^{54} - 0.00651879u^{53} + \cdots + 43.1168u + 3.92550$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{55} + 34u^{54} + \cdots + 261u - 169$
c_2, c_5	$u^{55} + 17u^{53} + \cdots - u - 13$
c_3	$u^{55} - 4u^{54} + \cdots - 29u - 1$
c_4	$u^{55} - 3u^{54} + \cdots - 160u - 29$
c_6	$u^{55} + 3u^{54} + \cdots + 4862u - 6341$
c_7, c_{11}	$u^{55} + u^{54} + \cdots + 1301u - 319$
c_8	$u^{55} + 9u^{54} + \cdots - 23423u - 2897$
c_9	$u^{55} - 2u^{54} + \cdots - 8637u - 2059$
c_{10}	$u^{55} + 2u^{54} + \cdots + 31739u - 6187$
c_{12}	$u^{55} + 4u^{54} + \cdots + 5373u - 431$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{55} - 18y^{54} + \cdots + 2763333y - 28561$
c_2, c_5	$y^{55} + 34y^{54} + \cdots + 261y - 169$
c_3	$y^{55} - 6y^{54} + \cdots + 581y - 1$
c_4	$y^{55} - 5y^{54} + \cdots - 35184y - 841$
c_6	$y^{55} + 73y^{54} + \cdots - 1088711858y - 40208281$
c_7, c_{11}	$y^{55} + 63y^{54} + \cdots - 2658559y - 101761$
c_8	$y^{55} + 35y^{54} + \cdots - 164702969y - 8392609$
c_9	$y^{55} + 62y^{54} + \cdots - 51063001y - 4239481$
c_{10}	$y^{55} - 68y^{54} + \cdots + 631132651y - 38278969$
c_{12}	$y^{55} + 50y^{54} + \cdots + 5965789y - 185761$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.458700 + 0.836212I$ $a = 0.47157 + 1.49663I$ $b = 0.305132 - 0.747908I$	$0.11183 + 1.55303I$	$1.95072 - 2.89152I$
$u = 0.458700 - 0.836212I$ $a = 0.47157 - 1.49663I$ $b = 0.305132 + 0.747908I$	$0.11183 - 1.55303I$	$1.95072 + 2.89152I$
$u = 0.913175 + 0.260802I$ $a = -0.223977 - 0.423038I$ $b = -0.550856 - 0.738530I$	$3.80751 - 0.71144I$	$10.81195 - 1.56897I$
$u = 0.913175 - 0.260802I$ $a = -0.223977 + 0.423038I$ $b = -0.550856 + 0.738530I$	$3.80751 + 0.71144I$	$10.81195 + 1.56897I$
$u = -1.113670 + 0.091899I$ $a = -0.65683 + 1.51641I$ $b = 0.111069 - 0.811383I$	$-5.06254 + 5.92628I$	$0. - 4.32930I$
$u = -1.113670 - 0.091899I$ $a = -0.65683 - 1.51641I$ $b = 0.111069 + 0.811383I$	$-5.06254 - 5.92628I$	$0. + 4.32930I$
$u = 0.797854 + 0.338507I$ $a = 1.240170 + 0.296206I$ $b = -0.473741 + 0.512242I$	$0.29315 - 1.97385I$	$5.19969 + 3.03837I$
$u = 0.797854 - 0.338507I$ $a = 1.240170 - 0.296206I$ $b = -0.473741 - 0.512242I$	$0.29315 + 1.97385I$	$5.19969 - 3.03837I$
$u = -0.591324 + 0.479194I$ $a = -0.793327 + 0.649542I$ $b = -0.407085 + 0.865255I$	$3.30919 - 4.09772I$	$10.16062 + 6.84746I$
$u = -0.591324 - 0.479194I$ $a = -0.793327 - 0.649542I$ $b = -0.407085 - 0.865255I$	$3.30919 + 4.09772I$	$10.16062 - 6.84746I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.708799 + 0.253071I$ $a = 0.831284 + 0.009450I$ $b = -0.209759 + 0.509237I$	$-1.81477 - 2.14360I$	$1.18374 + 4.80550I$
$u = -0.708799 - 0.253071I$ $a = 0.831284 - 0.009450I$ $b = -0.209759 - 0.509237I$	$-1.81477 + 2.14360I$	$1.18374 - 4.80550I$
$u = 0.138897 + 0.673640I$ $a = 0.011792 - 0.623544I$ $b = 0.910818 - 0.785919I$	$-7.26057 + 1.21645I$	$0.427980 + 0.554142I$
$u = 0.138897 - 0.673640I$ $a = 0.011792 + 0.623544I$ $b = 0.910818 + 0.785919I$	$-7.26057 - 1.21645I$	$0.427980 - 0.554142I$
$u = -0.409118 + 0.518801I$ $a = 1.81243 - 0.36306I$ $b = -0.368450 - 0.362485I$	$0.707490 + 1.043870I$	$2.63060 + 1.21674I$
$u = -0.409118 - 0.518801I$ $a = 1.81243 + 0.36306I$ $b = -0.368450 + 0.362485I$	$0.707490 - 1.043870I$	$2.63060 - 1.21674I$
$u = -0.467933 + 1.326800I$ $a = 0.355998 + 0.883423I$ $b = -0.520534 - 1.220730I$	$-2.57844 + 3.79796I$	0
$u = -0.467933 - 1.326800I$ $a = 0.355998 - 0.883423I$ $b = -0.520534 + 1.220730I$	$-2.57844 - 3.79796I$	0
$u = -0.177490 + 0.564262I$ $a = 0.264895 + 0.985043I$ $b = 1.079970 + 0.527227I$	$-2.81057 + 3.19886I$	$4.08250 - 3.76051I$
$u = -0.177490 - 0.564262I$ $a = 0.264895 - 0.985043I$ $b = 1.079970 - 0.527227I$	$-2.81057 - 3.19886I$	$4.08250 + 3.76051I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.122496 + 0.504032I$ $a = 0.083451 - 1.312890I$ $b = 1.280030 - 0.596135I$	$-6.14972 - 8.50203I$	$1.50480 + 6.85692I$
$u = 0.122496 - 0.504032I$ $a = 0.083451 + 1.312890I$ $b = 1.280030 + 0.596135I$	$-6.14972 + 8.50203I$	$1.50480 - 6.85692I$
$u = -0.038547 + 0.511598I$ $a = 1.50581 + 0.77163I$ $b = 0.185020 - 0.254061I$	$0.38570 + 1.60336I$	$2.33296 - 4.99216I$
$u = -0.038547 - 0.511598I$ $a = 1.50581 - 0.77163I$ $b = 0.185020 + 0.254061I$	$0.38570 - 1.60336I$	$2.33296 + 4.99216I$
$u = 0.454497$ $a = 0.867401$ $b = -0.487142$	0.882935	11.1550
$u = -0.35658 + 1.53590I$ $a = -0.006681 - 1.169070I$ $b = -0.22183 + 1.78303I$	$-7.14735 - 6.72459I$	0
$u = -0.35658 - 1.53590I$ $a = -0.006681 + 1.169070I$ $b = -0.22183 - 1.78303I$	$-7.14735 + 6.72459I$	0
$u = 1.32120 + 0.87148I$ $a = 0.072899 - 0.543533I$ $b = -0.362960 + 0.792328I$	$-0.103767 + 0.867284I$	0
$u = 1.32120 - 0.87148I$ $a = 0.072899 + 0.543533I$ $b = -0.362960 - 0.792328I$	$-0.103767 - 0.867284I$	0
$u = 0.150297 + 0.353433I$ $a = 1.088790 - 0.154193I$ $b = -1.184760 + 0.246323I$	$1.04688 - 1.12802I$	$-3.55524 - 3.81322I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.150297 - 0.353433I$ $a = 1.088790 + 0.154193I$ $b = -1.184760 - 0.246323I$	$1.04688 + 1.12802I$	$-3.55524 + 3.81322I$
$u = 0.19519 + 1.66111I$ $a = 0.124385 + 1.042830I$ $b = -0.23067 - 1.60897I$	$-4.50056 + 3.53769I$	0
$u = 0.19519 - 1.66111I$ $a = 0.124385 - 1.042830I$ $b = -0.23067 + 1.60897I$	$-4.50056 - 3.53769I$	0
$u = -0.17081 + 1.69824I$ $a = 0.260758 - 1.042020I$ $b = 0.445170 + 1.129250I$	$-1.68388 + 4.70781I$	0
$u = -0.17081 - 1.69824I$ $a = 0.260758 + 1.042020I$ $b = 0.445170 - 1.129250I$	$-1.68388 - 4.70781I$	0
$u = -0.37546 + 1.72257I$ $a = -0.042439 - 0.816658I$ $b = -0.01000 + 1.66318I$	$-6.17568 - 1.37212I$	0
$u = -0.37546 - 1.72257I$ $a = -0.042439 + 0.816658I$ $b = -0.01000 - 1.66318I$	$-6.17568 + 1.37212I$	0
$u = -0.47575 + 1.78827I$ $a = -0.437619 - 0.836026I$ $b = -0.01817 + 1.74737I$	$-10.05530 - 0.59545I$	0
$u = -0.47575 - 1.78827I$ $a = -0.437619 + 0.836026I$ $b = -0.01817 - 1.74737I$	$-10.05530 + 0.59545I$	0
$u = 0.50496 + 1.78171I$ $a = -0.451915 + 0.949040I$ $b = 0.01078 - 1.76502I$	$-14.8051 + 5.1933I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.50496 - 1.78171I$ $a = -0.451915 - 0.949040I$ $b = 0.01078 + 1.76502I$	$-14.8051 - 5.1933I$	0
$u = 0.47150 + 1.79275I$ $a = -0.520806 + 0.790076I$ $b = -0.02767 - 1.71161I$	$-13.3198 - 4.9860I$	0
$u = 0.47150 - 1.79275I$ $a = -0.520806 - 0.790076I$ $b = -0.02767 + 1.71161I$	$-13.3198 + 4.9860I$	0
$u = 0.48338 + 1.81853I$ $a = 0.197047 + 0.819227I$ $b = -0.06259 - 1.51621I$	$-6.21422 + 3.83703I$	0
$u = 0.48338 - 1.81853I$ $a = 0.197047 - 0.819227I$ $b = -0.06259 + 1.51621I$	$-6.21422 - 3.83703I$	0
$u = -1.78497 + 0.62407I$ $a = -0.272598 + 0.574120I$ $b = -0.141685 - 0.657394I$	$-4.48898 - 5.80054I$	0
$u = -1.78497 - 0.62407I$ $a = -0.272598 - 0.574120I$ $b = -0.141685 + 0.657394I$	$-4.48898 + 5.80054I$	0
$u = 0.40813 + 2.08970I$ $a = 0.007416 - 0.968701I$ $b = 0.45117 + 1.67641I$	$-9.89971 + 9.10784I$	0
$u = 0.40813 - 2.08970I$ $a = 0.007416 + 0.968701I$ $b = 0.45117 - 1.67641I$	$-9.89971 - 9.10784I$	0
$u = -0.21276 + 2.13416I$ $a = 0.217139 - 0.984595I$ $b = -0.08489 + 1.49140I$	$-8.29738 - 3.26193I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.21276 - 2.13416I$ $a = 0.217139 + 0.984595I$ $b = -0.08489 - 1.49140I$	$-8.29738 + 3.26193I$	0
$u = -0.47216 + 2.09522I$ $a = -0.031964 + 0.982080I$ $b = 0.44713 - 1.72011I$	$-13.6692 - 14.9575I$	0
$u = -0.47216 - 2.09522I$ $a = -0.031964 - 0.982080I$ $b = 0.44713 + 1.72011I$	$-13.6692 + 14.9575I$	0
$u = -0.33765 + 2.15781I$ $a = 0.049776 + 1.003920I$ $b = 0.39293 - 1.63470I$	$-14.8380 - 3.7469I$	0
$u = -0.33765 - 2.15781I$ $a = 0.049776 - 1.003920I$ $b = 0.39293 + 1.63470I$	$-14.8380 + 3.7469I$	0

II. $\boldsymbol{I_2^u =}$
$\boldsymbol{\langle 9.41\times 10^{23}u^{19}+2.06\times 10^{24}u^{18}+\cdots+1.00\times 10^{24}b-4.04\times 10^{24},\ 3.24\times 10^{25}u^{19}+ 7.09\times 10^{25}u^{18}+\cdots+1.00\times 10^{24}a-1.71\times 10^{26},\ u^{20}+2u^{19}+\cdots-14u+1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-32.3988u^{19}-70.9016u^{18}+\cdots-1491.77u+170.850\\-0.941499u^{19}-2.05689u^{18}+\cdots-43.9860u+4.03582\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-33.3403u^{19}-72.9585u^{18}+\cdots-1535.76u+174.886\\-0.941499u^{19}-2.05689u^{18}+\cdots-43.9860u+4.03582\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-16.8236u^{19}-36.8452u^{18}+\cdots-771.199u+85.2522\\5.36412u^{19}+11.7183u^{18}+\cdots+248.289u-28.2108\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-32.3988u^{19}-70.9016u^{18}+\cdots-1491.77u+170.850\\0.168831u^{19}+0.351278u^{18}+\cdots+9.07021u-2.06811\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-26.5155u^{19}-58.0667u^{18}+\cdots-1216.85u+140.767\\-0.753809u^{19}-1.66202u^{18}+\cdots-33.7724u+2.85889\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-13.0882u^{19}-28.5954u^{18}+\cdots-607.666u+65.7562\\4.56802u^{19}+9.98468u^{18}+\cdots+210.998u-23.7432\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-13.1542u^{19}-28.7857u^{18}+\cdots-606.496u+64.0210\\7.11259u^{19}+15.5565u^{18}+\cdots+326.928u-36.6149\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-32.6380u^{19}-71.5392u^{18}+\cdots-1489.53u+168.175\\3.97446u^{19}+8.71120u^{18}+\cdots+182.668u-21.0322\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-27.2693u^{19}-59.7288u^{18}+\cdots-1250.62u+143.626\\-0.753809u^{19}-1.66202u^{18}+\cdots-33.7724u+2.85889\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{626416224213307312181726 03}{99999853625464631124466 9}u^{19}-\frac{1371245168464036707773265 13}{9999985362546463112446 69}u^{18}+\cdots-\frac{287815275772200657982125 5122}{99999853625464631124466 9}u+\frac{33804662281547424322479 6674}{99999853625464631124466 9}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} - 11u^{19} + \cdots - 13u + 1$
c_2	$u^{20} + 3u^{19} + \cdots + 3u + 1$
c_3	$u^{20} + 3u^{19} + \cdots + u + 1$
c_4	$u^{20} - 2u^{19} + \cdots - 7u^2 + 1$
c_5	$u^{20} - 3u^{19} + \cdots - 3u + 1$
c_6	$u^{20} + 2u^{19} + \cdots - 14u + 1$
c_7	$u^{20} + 4u^{19} + \cdots + 5u + 1$
c_8	$u^{20} + 2u^{18} + \cdots + u + 1$
c_9	$u^{20} - u^{19} + \cdots + 11u + 1$
c_{10}	$u^{20} + u^{19} + \cdots - 103u + 73$
c_{11}	$u^{20} - 4u^{19} + \cdots - 5u + 1$
c_{12}	$u^{20} - 3u^{19} + \cdots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{20} + 3y^{19} + \cdots - 11y + 1$
c_2, c_5	$y^{20} + 11y^{19} + \cdots + 13y + 1$
c_3	$y^{20} + 11y^{19} + \cdots + 9y + 1$
c_4	$y^{20} - 16y^{19} + \cdots - 14y + 1$
c_6	$y^{20} + 10y^{19} + \cdots - 64y + 1$
c_7, c_{11}	$y^{20} + 16y^{19} + \cdots + 9y + 1$
c_8	$y^{20} + 4y^{19} + \cdots - 25y + 1$
c_9	$y^{20} + 11y^{19} + \cdots - 21y + 1$
c_{10}	$y^{20} - 7y^{19} + \cdots + 8663y + 5329$
c_{12}	$y^{20} + 11y^{19} + \cdots + 13y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.940992 + 0.620229I$ $a = 0.773568 + 0.165278I$ $b = 0.231111 + 0.786500I$	$3.34471 - 1.65498I$	$6.43907 + 4.20509I$
$u = 0.940992 - 0.620229I$ $a = 0.773568 - 0.165278I$ $b = 0.231111 - 0.786500I$	$3.34471 + 1.65498I$	$6.43907 - 4.20509I$
$u = -0.842075 + 0.871841I$ $a = 0.793322 + 0.085027I$ $b = 0.226922 - 1.109400I$	$2.16792 - 3.50657I$	$3.05923 + 2.59992I$
$u = -0.842075 - 0.871841I$ $a = 0.793322 - 0.085027I$ $b = 0.226922 + 1.109400I$	$2.16792 + 3.50657I$	$3.05923 - 2.59992I$
$u = -0.402447 + 0.588078I$ $a = 1.56479 + 0.11995I$ $b = -0.468313 - 1.079950I$	$-0.64497 + 2.98534I$	$3.61521 - 5.29378I$
$u = -0.402447 - 0.588078I$ $a = 1.56479 - 0.11995I$ $b = -0.468313 + 1.079950I$	$-0.64497 - 2.98534I$	$3.61521 + 5.29378I$
$u = 1.134020 + 0.818765I$ $a = 0.079337 - 1.103920I$ $b = -0.220466 + 0.561392I$	$0.85761 + 1.50900I$	$14.5318 - 3.4126I$
$u = 1.134020 - 0.818765I$ $a = 0.079337 + 1.103920I$ $b = -0.220466 - 0.561392I$	$0.85761 - 1.50900I$	$14.5318 + 3.4126I$
$u = 0.339290 + 0.111161I$ $a = 1.95398 + 1.57017I$ $b = -0.748209 + 0.283121I$	$1.42125 - 1.38443I$	$14.3541 + 3.8433I$
$u = 0.339290 - 0.111161I$ $a = 1.95398 - 1.57017I$ $b = -0.748209 - 0.283121I$	$1.42125 + 1.38443I$	$14.3541 - 3.8433I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.57084+1.62511I$ $a=\ \ 0.163422-1.039380I$ $b=\ \ 0.07015+1.53272I$	$-7.72375-4.56543I$	$-0.60389+5.70350I$
$u=-0.57084-1.62511I$ $a=\ \ 0.163422+1.039380I$ $b=\ \ 0.07015-1.53272I$	$-7.72375+4.56543I$	$-0.60389-5.70350I$
$u=-1.74775+0.15837I$ $a=-0.006275-0.902457I$ $b=\ \ 0.323711+0.686202I$	$-3.96953+6.70083I$	$6.00000-9.43611I$
$u=-1.74775-0.15837I$ $a=-0.006275+0.902457I$ $b=\ \ 0.323711-0.686202I$	$-3.96953-6.70083I$	$6.00000+9.43611I$
$u=\ \ 0.193733+0.009969I$ $a=\ \ 2.07668-3.17071I$ $b=-0.874447-0.085240I$	$1.40571+1.37087I$	$13.2500-6.0434I$
$u=\ \ 0.193733-0.009969I$ $a=\ \ 2.07668+3.17071I$ $b=-0.874447+0.085240I$	$1.40571-1.37087I$	$13.2500+6.0434I$
$u=\ \ 0.24584+1.80696I$ $a=\ \ 0.179807+0.867154I$ $b=-0.12456-1.62181I$	$-5.72982+2.73889I$	$4.19668-0.49415I$
$u=\ \ 0.24584-1.80696I$ $a=\ \ 0.179807-0.867154I$ $b=-0.12456+1.62181I$	$-5.72982-2.73889I$	$4.19668+0.49415I$
$u=-0.29077+1.90159I$ $a=-0.078632+0.972344I$ $b=-0.415898-1.061560I$	$-0.99873+4.79549I$	$12.00812-6.11844I$
$u=-0.29077-1.90159I$ $a=-0.078632-0.972344I$ $b=-0.415898+1.061560I$	$-0.99873-4.79549I$	$12.00812+6.11844I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{20} - 11u^{19} + \cdots - 13u + 1)(u^{55} + 34u^{54} + \cdots + 261u - 169)$
c_2	$(u^{20} + 3u^{19} + \cdots + 3u + 1)(u^{55} + 17u^{53} + \cdots - u - 13)$
c_3	$(u^{20} + 3u^{19} + \cdots + u + 1)(u^{55} - 4u^{54} + \cdots - 29u - 1)$
c_4	$(u^{20} - 2u^{19} + \cdots - 7u^2 + 1)(u^{55} - 3u^{54} + \cdots - 160u - 29)$
c_5	$(u^{20} - 3u^{19} + \cdots - 3u + 1)(u^{55} + 17u^{53} + \cdots - u - 13)$
c_6	$(u^{20} + 2u^{19} + \cdots - 14u + 1)(u^{55} + 3u^{54} + \cdots + 4862u - 6341)$
c_7	$(u^{20} + 4u^{19} + \cdots + 5u + 1)(u^{55} + u^{54} + \cdots + 1301u - 319)$
c_8	$(u^{20} + 2u^{18} + \cdots + u + 1)(u^{55} + 9u^{54} + \cdots - 23423u - 2897)$
c_9	$(u^{20} - u^{19} + \cdots + 11u + 1)(u^{55} - 2u^{54} + \cdots - 8637u - 2059)$
c_{10}	$(u^{20} + u^{19} + \cdots - 103u + 73)(u^{55} + 2u^{54} + \cdots + 31739u - 6187)$
c_{11}	$(u^{20} - 4u^{19} + \cdots - 5u + 1)(u^{55} + u^{54} + \cdots + 1301u - 319)$
c_{12}	$(u^{20} - 3u^{19} + \cdots - u + 1)(u^{55} + 4u^{54} + \cdots + 5373u - 431)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{20}+3y^{19}+\cdots-11y+1)(y^{55}-18y^{54}+\cdots+2763333y-28561)$
c_2, c_5	$(y^{20}+11y^{19}+\cdots+13y+1)(y^{55}+34y^{54}+\cdots+261y-169)$
c_3	$(y^{20}+11y^{19}+\cdots+9y+1)(y^{55}-6y^{54}+\cdots+581y-1)$
c_4	$(y^{20}-16y^{19}+\cdots-14y+1)(y^{55}-5y^{54}+\cdots-35184y-841)$
c_6	$(y^{20}+10y^{19}+\cdots-64y+1)$ $\cdot(y^{55}+73y^{54}+\cdots-1088711858y-40208281)$
c_7, c_{11}	$(y^{20}+16y^{19}+\cdots+9y+1)(y^{55}+63y^{54}+\cdots-2658559y-101761)$
c_8	$(y^{20}+4y^{19}+\cdots-25y+1)$ $\cdot(y^{55}+35y^{54}+\cdots-164702969y-8392609)$
c_9	$(y^{20}+11y^{19}+\cdots-21y+1)$ $\cdot(y^{55}+62y^{54}+\cdots-51063001y-4239481)$
c_{10}	$(y^{20}-7y^{19}+\cdots+8663y+5329)$ $\cdot(y^{55}-68y^{54}+\cdots+631132651y-38278969)$
c_{12}	$(y^{20}+11y^{19}+\cdots+13y+1)$ $\cdot(y^{55}+50y^{54}+\cdots+5965789y-185761)$