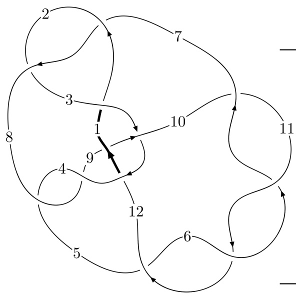
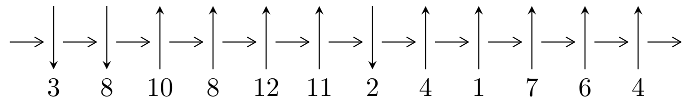
$12n_{0645}$ $(K12n_{0645})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 8.90809 \times 10^{47} u^{45} + 8.84240 \times 10^{47} u^{44} + \cdots + 2.05702 \times 10^{48} b - 2.45319 \times 10^{49}, \\ & - 6.59670 \times 10^{48} u^{45} + 1.83893 \times 10^{49} u^{44} + \cdots + 6.37677 \times 10^{49} a - 1.07007 \times 10^{51}, \\ & u^{46} - 10u^{44} + \cdots + 11u + 31 \rangle \\ I_2^u = \langle & -2u^{10} + u^9 + 6u^8 - 4u^7 - 16u^6 + 6u^5 + 19u^4 - 5u^3 - 15u^2 + b + u + 4, \\ & u^9 - 2u^8 - 2u^7 + 6u^6 + 4u^5 - 13u^4 - 3u^3 + 12u^2 + a + u - 6, \\ & u^{11} - u^{10} - 3u^9 + 4u^8 + 7u^7 - 8u^6 - 8u^5 + 9u^4 + 5u^3 - 5u^2 - u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 57 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. $I_1^u = \langle 8.91\times10^{47}u^{45} + 8.84\times10^{47}u^{44} + \cdots + 2.06\times10^{48}b - 2.45\times10^{49},\ -6.60\times10^{48}u^{45} + 1.84\times10^{49}u^{44} + \cdots + 6.38\times10^{49}a - 1.07\times10^{51},\ u^{46} - 10u^{44} + \cdots + 11u + 31\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.103449u^{45} - 0.288379u^{44} + \cdots - 0.284809u + 16.7807 \\ -0.433057u^{45} - 0.429864u^{44} + \cdots + 15.8856u + 11.9259 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.141416u^{45} + 0.395932u^{44} + \cdots - 9.32244u - 28.9599 \\ 0.366395u^{45} + 0.483053u^{44} + \cdots - 16.9943u - 16.7074 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.284534u^{45} + 0.603944u^{44} + \cdots - 26.3454u - 33.3933 \\ 0.611972u^{45} + 0.566589u^{44} + \cdots - 32.4869u - 23.1557 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.329608u^{45} - 0.718243u^{44} + \cdots + 15.6007u + 28.7066 \\ -0.433057u^{45} - 0.429864u^{44} + \cdots + 15.8856u + 11.9259 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.30358u^{45} + 0.927847u^{44} + \cdots - 65.6458u - 32.8545 \\ 0.264798u^{45} + 0.224989u^{44} + \cdots - 12.0873u - 7.10220 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.365076u^{45} - 0.0975018u^{44} + \cdots - 13.4315u + 10.4704 \\ -0.146690u^{45} - 0.269810u^{44} + \cdots + 2.05043u + 6.63521 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1.08634u^{45} + 0.507925u^{44} + \cdots - 43.7616u - 12.5340 \\ 1.02109u^{45} + 0.771426u^{44} + \cdots - 46.8793u - 30.5007 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.400585u^{45} - 0.275909u^{44} + \cdots - 48.1051u - 42.5676$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{46} + 20u^{45} + \cdots + 14009u + 961$
c_2, c_7	$u^{46} - 10u^{44} + \cdots - 11u + 31$
c_3	$u^{46} + u^{45} + \cdots + 2u - 1$
c_4, c_8	$u^{46} - 3u^{45} + \cdots - 2160u - 1621$
c_5, c_6, c_{10} c_{11}	$u^{46} - u^{45} + \cdots - 10u - 1$
c_9	$u^{46} - 24u^{44} + \cdots + 183u + 43$
c_{12}	$u^{46} + 7u^{45} + \cdots - 3420u - 343$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{46} + 32y^{45} + \cdots + 2013751y + 923521$
c_2, c_7	$y^{46} - 20y^{45} + \cdots - 14009y + 961$
c_3	$y^{46} + 7y^{45} + \cdots - 42y + 1$
c_4, c_8	$y^{46} - 41y^{45} + \cdots - 68296334y + 2627641$
c_5, c_6, c_{10} c_{11}	$y^{46} + 51y^{45} + \cdots - 60y + 1$
c_9	$y^{46} - 48y^{45} + \cdots - 93001y + 1849$
c_{12}	$y^{46} - 51y^{45} + \cdots - 4953020y + 117649$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.777171 + 0.612835I$ $a = 1.016300 - 0.099619I$ $b = -0.331933 + 0.632697I$	$-0.45486 - 2.22136I$	$5.56372 + 4.55995I$
$u = 0.777171 - 0.612835I$ $a = 1.016300 + 0.099619I$ $b = -0.331933 - 0.632697I$	$-0.45486 + 2.22136I$	$5.56372 - 4.55995I$
$u = -0.796260 + 0.581104I$ $a = 0.123978 - 0.214987I$ $b = -0.37211 + 1.50267I$	$-0.132688 - 0.463216I$	$4.30646 - 2.07954I$
$u = -0.796260 - 0.581104I$ $a = 0.123978 + 0.214987I$ $b = -0.37211 - 1.50267I$	$-0.132688 + 0.463216I$	$4.30646 + 2.07954I$
$u = 0.891195 + 0.365209I$ $a = 2.81275 + 0.31631I$ $b = 0.031259 + 1.382470I$	$-1.86336 + 0.58097I$	$3.38443 + 0.69263I$
$u = 0.891195 - 0.365209I$ $a = 2.81275 - 0.31631I$ $b = 0.031259 - 1.382470I$	$-1.86336 - 0.58097I$	$3.38443 - 0.69263I$
$u = 0.758477 + 0.770111I$ $a = -1.31515 - 0.65871I$ $b = 0.712311 - 0.622242I$	$6.85172 - 1.46852I$	$7.65009 + 3.31921I$
$u = 0.758477 - 0.770111I$ $a = -1.31515 + 0.65871I$ $b = 0.712311 + 0.622242I$	$6.85172 + 1.46852I$	$7.65009 - 3.31921I$
$u = -0.913123 + 0.579538I$ $a = -1.81688 + 0.86698I$ $b = 0.25012 + 1.59325I$	$-0.51224 + 5.07727I$	$3.91334 - 4.47739I$
$u = -0.913123 - 0.579538I$ $a = -1.81688 - 0.86698I$ $b = 0.25012 - 1.59325I$	$-0.51224 - 5.07727I$	$3.91334 + 4.47739I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.913895 + 0.666325I$ $a = -0.649069 + 0.227447I$ $b = 0.338025 - 0.053987I$	$-1.08476 - 2.74841I$	$8.58326 + 2.30981I$
$u = 0.913895 - 0.666325I$ $a = -0.649069 - 0.227447I$ $b = 0.338025 + 0.053987I$	$-1.08476 + 2.74841I$	$8.58326 - 2.30981I$
$u = 0.854412 + 0.074876I$ $a = -0.93971 - 1.27956I$ $b = 0.02815 - 1.72557I$	$-13.22450 - 0.32397I$	$-0.99400 - 2.11493I$
$u = 0.854412 - 0.074876I$ $a = -0.93971 + 1.27956I$ $b = 0.02815 + 1.72557I$	$-13.22450 + 0.32397I$	$-0.99400 + 2.11493I$
$u = 0.812024 + 0.266747I$ $a = 1.03314 - 1.16176I$ $b = -0.222226 + 1.219740I$	$-1.58775 - 3.40530I$	$2.42508 + 8.01994I$
$u = 0.812024 - 0.266747I$ $a = 1.03314 + 1.16176I$ $b = -0.222226 - 1.219740I$	$-1.58775 + 3.40530I$	$2.42508 - 8.01994I$
$u = -0.612129 + 0.975994I$ $a = -0.737727 + 0.580195I$ $b = 0.741768 - 0.448363I$	$7.36473 - 3.39333I$	$8.53065 + 3.23087I$
$u = -0.612129 - 0.975994I$ $a = -0.737727 - 0.580195I$ $b = 0.741768 + 0.448363I$	$7.36473 + 3.39333I$	$8.53065 - 3.23087I$
$u = 0.066989 + 0.834868I$ $a = 0.507773 + 0.449914I$ $b = -0.081495 - 1.363900I$	$-3.81447 + 2.16547I$	$3.03202 - 3.16202I$
$u = 0.066989 - 0.834868I$ $a = 0.507773 - 0.449914I$ $b = -0.081495 + 1.363900I$	$-3.81447 - 2.16547I$	$3.03202 + 3.16202I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.835340$ $a = 1.52762$ $b = -0.699978$	2.08624	3.59250
$u = 0.957184 + 0.700082I$ $a = 0.757512 + 0.366942I$ $b = -0.873917 - 0.486869I$	$6.22467 - 4.09819I$	$6.87161 + 2.72251I$
$u = 0.957184 - 0.700082I$ $a = 0.757512 - 0.366942I$ $b = -0.873917 + 0.486869I$	$6.22467 + 4.09819I$	$6.87161 - 2.72251I$
$u = -1.077260 + 0.505176I$ $a = -1.068580 + 0.594060I$ $b = 0.485546 + 0.365826I$	$-1.04957 + 4.66742I$	$5.56090 - 9.70253I$
$u = -1.077260 - 0.505176I$ $a = -1.068580 - 0.594060I$ $b = 0.485546 - 0.365826I$	$-1.04957 - 4.66742I$	$5.56090 + 9.70253I$
$u = 1.152890 + 0.432401I$ $a = -0.0608762 - 0.0298599I$ $b = 0.057001 + 0.488154I$	$-1.61761 - 2.37559I$	$0.879006 + 0.401607I$
$u = 1.152890 - 0.432401I$ $a = -0.0608762 + 0.0298599I$ $b = 0.057001 - 0.488154I$	$-1.61761 + 2.37559I$	$0.879006 - 0.401607I$
$u = -0.708951 + 0.204573I$ $a = -0.837428 - 0.839652I$ $b = 0.231335 - 0.896256I$	$-3.73770 + 0.61521I$	$-1.20649 + 1.42032I$
$u = -0.708951 - 0.204573I$ $a = -0.837428 + 0.839652I$ $b = 0.231335 + 0.896256I$	$-3.73770 - 0.61521I$	$-1.20649 - 1.42032I$
$u = 0.474202 + 1.186570I$ $a = -0.207177 - 0.587661I$ $b = 0.25018 + 1.48994I$	$1.08764 + 6.97219I$	$4.72387 - 4.64542I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.474202 - 1.186570I$ $a = -0.207177 + 0.587661I$ $b = 0.25018 - 1.48994I$	$1.08764 - 6.97219I$	$4.72387 + 4.64542I$
$u = -0.713380$ $a = 3.04004$ $b = 0.136531$	2.80045	-4.62300
$u = 1.195490 + 0.523779I$ $a = -1.69838 - 0.65171I$ $b = 0.16723 - 1.46549I$	$-7.05077 - 7.05212I$	$1.18080 + 6.79998I$
$u = 1.195490 - 0.523779I$ $a = -1.69838 + 0.65171I$ $b = 0.16723 + 1.46549I$	$-7.05077 + 7.05212I$	$1.18080 - 6.79998I$
$u = -1.097350 + 0.743718I$ $a = 1.174780 - 0.336310I$ $b = -0.817170 - 0.613699I$	$5.83564 + 9.64943I$	$6.00000 - 7.00268I$
$u = -1.097350 - 0.743718I$ $a = 1.174780 + 0.336310I$ $b = -0.817170 + 0.613699I$	$5.83564 - 9.64943I$	$6.00000 + 7.00268I$
$u = -0.378903 + 0.518753I$ $a = 1.067570 - 0.111522I$ $b = -0.441328 + 0.176398I$	$0.963425 - 0.418051I$	$9.96672 + 3.30631I$
$u = -0.378903 - 0.518753I$ $a = 1.067570 + 0.111522I$ $b = -0.441328 - 0.176398I$	$0.963425 + 0.418051I$	$9.96672 - 3.30631I$
$u = -1.130590 + 0.839549I$ $a = 0.972367 + 0.073701I$ $b = -0.09034 - 1.57331I$	$-7.92848 + 3.74029I$	0
$u = -1.130590 - 0.839549I$ $a = 0.972367 - 0.073701I$ $b = -0.09034 + 1.57331I$	$-7.92848 - 3.74029I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.22337 + 0.74620I$ $a = 1.47635 + 0.22540I$ $b = -0.28946 + 1.57516I$	$-1.32243 - 13.76490I$	0
$u = 1.22337 - 0.74620I$ $a = 1.47635 - 0.22540I$ $b = -0.28946 - 1.57516I$	$-1.32243 + 13.76490I$	0
$u = -1.12014 + 0.96904I$ $a = -0.842997 - 0.382179I$ $b = 0.060969 + 1.402580I$	$-5.91695 + 3.87147I$	0
$u = -1.12014 - 0.96904I$ $a = -0.842997 + 0.382179I$ $b = 0.060969 - 1.402580I$	$-5.91695 - 3.87147I$	0
$u = -1.46824 + 0.34467I$ $a = 0.350849 - 0.635636I$ $b = -0.05218 - 1.50558I$	$-8.25938 + 2.77632I$	0
$u = -1.46824 - 0.34467I$ $a = 0.350849 + 0.635636I$ $b = -0.05218 + 1.50558I$	$-8.25938 - 2.77632I$	0

II.
$\boldsymbol{I_2^u = \langle -2u^{10} + u^9 + \cdots + b + 4,\ u^9 - 2u^8 + \cdots + a - 6,\ u^{11} - u^{10} + \cdots - u + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^9 + 2u^8 + 2u^7 - 6u^6 - 4u^5 + 13u^4 + 3u^3 - 12u^2 - u + 6 \\ 2u^{10} - u^9 - 6u^8 + 4u^7 + 16u^6 - 6u^5 - 19u^4 + 5u^3 + 15u^2 - u - 4 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{10} + 4u^9 - 11u^7 + 3u^6 + 24u^5 - 9u^4 - 22u^3 + 10u^2 + 9u - 3 \\ u^{10} + u^9 - 5u^8 - u^7 + 14u^6 + 3u^5 - 20u^4 - 2u^3 + 16u^2 - 4 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 3u^9 - 3u^8 - 7u^7 + 10u^6 + 16u^5 - 17u^4 - 13u^3 + 15u^2 + 5u - 4 \\ u^{10} + u^9 - 5u^8 - u^7 + 14u^6 + 3u^5 - 20u^4 - u^3 + 16u^2 - u - 4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 2u^{10} - 2u^9 - 4u^8 + 6u^7 + 10u^6 - 10u^5 - 6u^4 + 8u^3 + 3u^2 - 2u + 2 \\ 2u^{10} - u^9 - 6u^8 + 4u^7 + 16u^6 - 6u^5 - 19u^4 + 5u^3 + 15u^2 - u - 4 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 7u^{10} - 5u^9 + \cdots - 7u - 8 \\ -2u^9 + 2u^8 + 5u^7 - 7u^6 - 11u^5 + 12u^4 + 10u^3 - 11u^2 - 4u + 2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^9 + 2u^8 + 2u^7 - 6u^6 - 4u^5 + 13u^4 + 3u^3 - 11u^2 - u + 6 \\ 2u^{10} - u^9 - 6u^8 + 4u^7 + 16u^6 - 6u^5 - 18u^4 + 5u^3 + 14u^2 - u - 3 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -2u^9 + u^8 + 7u^7 - 6u^6 - 16u^5 + 10u^4 + 19u^3 - 12u^2 - 9u + 4 \\ -2u^{10} + 2u^9 + \cdots + 3u + 3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 8u^{10} - 13u^9 - 14u^8 + 40u^7 + 26u^6 - 77u^5 - 2u^4 + 70u^3 - 13u^2 - 28u + 15$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{11} - 7u^{10} + \cdots + 11u - 1$
c_2	$u^{11} + u^{10} - 3u^9 - 4u^8 + 7u^7 + 8u^6 - 8u^5 - 9u^4 + 5u^3 + 5u^2 - u - 1$
c_3	$u^{11} + 4u^9 + u^8 + 3u^7 - u^5 - 3u^4 - u^3 - 2u^2 - 1$
c_4	$u^{11} + 2u^9 - u^8 + 3u^7 - u^6 + 3u^4 - u^3 + 4u^2 + 1$
c_5, c_6	$u^{11} + 8u^9 + 23u^7 + 28u^5 + u^4 + 12u^3 + 3u^2 + 1$
c_7	$u^{11} - u^{10} - 3u^9 + 4u^8 + 7u^7 - 8u^6 - 8u^5 + 9u^4 + 5u^3 - 5u^2 - u + 1$
c_8	$u^{11} + 2u^9 + u^8 + 3u^7 + u^6 - 3u^4 - u^3 - 4u^2 - 1$
c_9	$u^{11} - u^{10} - 5u^9 + 5u^8 + 9u^7 - 8u^6 - 8u^5 + 7u^4 + 4u^3 - 3u^2 - u + 1$
c_{10}, c_{11}	$u^{11} + 8u^9 + 23u^7 + 28u^5 - u^4 + 12u^3 - 3u^2 - 1$
c_{12}	$u^{11} + 3u^9 + 8u^8 + 3u^7 + 10u^6 + 12u^5 + u^4 + 9u^3 + 5u^2 - 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{11} + 13y^{10} + \cdots + 15y - 1$
c_2, c_7	$y^{11} - 7y^{10} + \cdots + 11y - 1$
c_3	$y^{11} + 8y^{10} + \cdots - 4y - 1$
c_4, c_8	$y^{11} + 4y^{10} + \cdots - 8y - 1$
c_5, c_6, c_{10} c_{11}	$y^{11} + 16y^{10} + \cdots - 6y - 1$
c_9	$y^{11} - 11y^{10} + \cdots + 7y - 1$
c_{12}	$y^{11} + 6y^{10} + \cdots + 6y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.926350 + 0.275446I$ $a = 0.604065 - 1.072750I$ $b = 0.02836 - 1.73242I$	$-13.09290 + 1.15540I$	$1.12930 - 6.75991I$
$u = -0.926350 - 0.275446I$ $a = 0.604065 + 1.072750I$ $b = 0.02836 + 1.73242I$	$-13.09290 - 1.15540I$	$1.12930 + 6.75991I$
$u = 0.931716 + 0.451527I$ $a = -0.012829 + 0.293025I$ $b = 0.166908 + 0.916041I$	$-3.41093 - 1.89765I$	$0.48715 + 3.11270I$
$u = 0.931716 - 0.451527I$ $a = -0.012829 - 0.293025I$ $b = 0.166908 - 0.916041I$	$-3.41093 + 1.89765I$	$0.48715 - 3.11270I$
$u = -1.092600 + 0.709214I$ $a = -0.636248 - 0.082249I$ $b = 0.193075 + 0.390923I$	$-1.63003 + 3.19570I$	$-1.52279 - 9.85073I$
$u = -1.092600 - 0.709214I$ $a = -0.636248 + 0.082249I$ $b = 0.193075 - 0.390923I$	$-1.63003 - 3.19570I$	$-1.52279 + 9.85073I$
$u = 0.605049 + 0.142384I$ $a = 2.74610 - 0.77777I$ $b = -0.233007 + 1.358440I$	$-1.39419 - 2.51034I$	$3.76451 + 0.24190I$
$u = 0.605049 - 0.142384I$ $a = 2.74610 + 0.77777I$ $b = -0.233007 - 1.358440I$	$-1.39419 + 2.51034I$	$3.76451 - 0.24190I$
$u = -0.612040$ $a = 3.26852$ $b = -0.445195$	3.18891	17.5710
$u = 1.28821 + 0.91096I$ $a = -0.835352 + 0.045091I$ $b = 0.06726 - 1.54442I$	$-8.38532 - 4.16451I$	$-4.14359 + 8.28004I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.28821 - 0.91096I$		
$a = -0.835352 - 0.045091I$	$-8.38532 + 4.16451I$	$-4.14359 - 8.28004I$
$b = 0.06726 + 1.54442I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{11}-7u^{10}+\cdots+11u-1)(u^{46}+20u^{45}+\cdots+14009u+961)$
c_2	$(u^{11}+u^{10}-3u^9-4u^8+7u^7+8u^6-8u^5-9u^4+5u^3+5u^2-u-1)$ $\cdot(u^{46}-10u^{44}+\cdots-11u+31)$
c_3	$(u^{11}+4u^9+\cdots-2u^2-1)(u^{46}+u^{45}+\cdots+2u-1)$
c_4	$(u^{11}+2u^9-u^8+3u^7-u^6+3u^4-u^3+4u^2+1)$ $\cdot(u^{46}-3u^{45}+\cdots-2160u-1621)$
c_5, c_6	$(u^{11}+8u^9+23u^7+28u^5+u^4+12u^3+3u^2+1)$ $\cdot(u^{46}-u^{45}+\cdots-10u-1)$
c_7	$(u^{11}-u^{10}-3u^9+4u^8+7u^7-8u^6-8u^5+9u^4+5u^3-5u^2-u+1)$ $\cdot(u^{46}-10u^{44}+\cdots-11u+31)$
c_8	$(u^{11}+2u^9+u^8+3u^7+u^6-3u^4-u^3-4u^2-1)$ $\cdot(u^{46}-3u^{45}+\cdots-2160u-1621)$
c_9	$(u^{11}-u^{10}-5u^9+5u^8+9u^7-8u^6-8u^5+7u^4+4u^3-3u^2-u+1)$ $\cdot(u^{46}-24u^{44}+\cdots+183u+43)$
c_{10}, c_{11}	$(u^{11}+8u^9+23u^7+28u^5-u^4+12u^3-3u^2-1)$ $\cdot(u^{46}-u^{45}+\cdots-10u-1)$
c_{12}	$(u^{11}+3u^9+8u^8+3u^7+10u^6+12u^5+u^4+9u^3+5u^2-4u+1)$ $\cdot(u^{46}+7u^{45}+\cdots-3420u-343)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{11}+13y^{10}+\cdots+15y-1)$ $\cdot(y^{46}+32y^{45}+\cdots+2013751y+923521)$
c_2, c_7	$(y^{11}-7y^{10}+\cdots+11y-1)(y^{46}-20y^{45}+\cdots-14009y+961)$
c_3	$(y^{11}+8y^{10}+\cdots-4y-1)(y^{46}+7y^{45}+\cdots-42y+1)$
c_4, c_8	$(y^{11}+4y^{10}+\cdots-8y-1)$ $\cdot(y^{46}-41y^{45}+\cdots-68296334y+2627641)$
c_5, c_6, c_{10} c_{11}	$(y^{11}+16y^{10}+\cdots-6y-1)(y^{46}+51y^{45}+\cdots-60y+1)$
c_9	$(y^{11}-11y^{10}+\cdots+7y-1)(y^{46}-48y^{45}+\cdots-93001y+1849)$
c_{12}	$(y^{11}+6y^{10}+\cdots+6y-1)(y^{46}-51y^{45}+\cdots-4953020y+117649)$