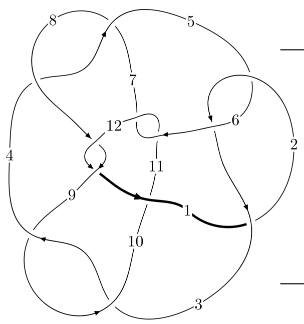
$12n_{0515}$ ($K12n_{0515}$)



A knot diagram[1]

Linearized knot diagam

$$\to\downarrow\to\downarrow\to\downarrow\to\downarrow\to\downarrow\to\uparrow\to\downarrow\to\downarrow\to\downarrow\to\downarrow\to\uparrow\to\downarrow\to$$

$$3 \quad 6 \quad 10 \quad 8 \quad 2 \quad 12 \quad 5 \quad 12 \quad 4 \quad 1 \quad 6 \quad 9$$

Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 8.22266 \times 10^{274} u^{59} - 2.15506 \times 10^{275} u^{58} + \cdots + 2.34069 \times 10^{278} b - 6.04308 \times 10^{278}, \\
& 1.35060 \times 10^{279} u^{59} - 3.78638 \times 10^{279} u^{58} + \cdots + 8.33051 \times 10^{281} a - 1.96121 \times 10^{283}, \\
& u^{60} - 3u^{59} + \cdots - 11482u + 3559 \rangle \\
I_2^u = \langle & -14967763u^{15} - 2907851u^{14} + \cdots + 25980989b + 31360586, \\
& 50615010u^{15} + 19279984u^{14} + \cdots + 25980989a - 107875259, \\
& u^{16} + 2u^{14} - 4u^{13} - 6u^{12} - 4u^{11} + 5u^{10} + 8u^9 + 28u^8 - 32u^7 + 25u^6 - 51u^5 + 36u^4 - 15u^3 + 13u^2 - 6u + 1
\end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 76 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. $\boldsymbol{I_1^u = \langle 8.22\times10^{274}u^{59} - 2.16\times10^{275}u^{58} + \cdots + 2.34\times10^{278}b - 6.04\times10^{278},\ 1.35\times10^{279}u^{59} - 3.79\times10^{279}u^{58} + \cdots + 8.33\times10^{281}a - 1.96\times10^{283},\ u^{60} - 3u^{59} + \cdots - 11482u + 3559\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -0.00162127u^{59} + 0.00454519u^{58} + \cdots + 14.3091u + 23.5425 \\ -0.000351292u^{59} + 0.000920694u^{58} + \cdots - 5.50751u + 2.58176 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.00197256u^{59} + 0.00546589u^{58} + \cdots + 8.80155u + 26.1243 \\ -0.000351292u^{59} + 0.000920694u^{58} + \cdots - 5.50751u + 2.58176 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.000985855u^{59} + 0.00264770u^{58} + \cdots - 12.7756u + 10.9512 \\ 0.0000228831u^{59} - 0.000129239u^{58} + \cdots - 3.83757u - 1.50813 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.00191681u^{59} + 0.00522142u^{58} + \cdots + 7.64525u + 28.4871 \\ -0.000498029u^{59} + 0.00130545u^{58} + \cdots - 1.84746u + 4.50416 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00166805u^{59} + 0.00435306u^{58} + \cdots - 14.8874u + 11.7806 \\ 0.000432015u^{59} - 0.00114140u^{58} + \cdots - 0.328575u - 5.15749 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.00166805u^{59} + 0.00435306u^{58} + \cdots - 14.8874u + 11.7806 \\ 0.000199584u^{59} - 0.000526762u^{58} + \cdots - 1.86786u - 2.84024 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.000752232u^{59} + 0.00207616u^{58} + \cdots + 1.48938u + 14.5021 \\ -0.000400020u^{59} + 0.00107306u^{58} + \cdots + 0.385314u + 4.95029 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 0.00242528u^{59} - 0.00649531u^{58} + \cdots + 11.3474u - 23.9948 \\ 0.000228355u^{59} - 0.000590475u^{58} + \cdots + 7.46556u - 2.03457 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.00130054u^{59} - 0.00350454u^{58} + \cdots - 11.7943u - 31.3032$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{60} + 35u^{59} + \cdots + 2933u + 361$
c_2, c_5	$u^{60} + u^{59} + \cdots - 27u - 19$
c_3, c_9	$u^{60} + u^{59} + \cdots + 46u - 43$
c_4, c_7	$u^{60} - 4u^{59} + \cdots - 12u + 1$
c_6, c_{11}	$u^{60} - 3u^{59} + \cdots - 11482u + 3559$
c_8, c_{12}	$u^{60} + 3u^{59} + \cdots + 568u + 23$
c_{10}	$u^{60} + u^{59} + \cdots + 15055u - 761$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{60} - 11y^{59} + \cdots - 3170161y + 130321$
c_2, c_5	$y^{60} - 35y^{59} + \cdots - 2933y + 361$
c_3, c_9	$y^{60} + 49y^{59} + \cdots + 10526y + 1849$
c_4, c_7	$y^{60} + 2y^{59} + \cdots - 46y + 1$
c_6, c_{11}	$y^{60} + 65y^{59} + \cdots - 502242808y + 12666481$
c_8, c_{12}	$y^{60} - 47y^{59} + \cdots - 56882y + 529$
c_{10}	$y^{60} - 23y^{59} + \cdots - 95786899y + 579121$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.007350 + 0.006718I$ $a = -0.051105 - 0.783732I$ $b = -0.856821 + 0.663890I$	$8.73644 + 2.57827I$	$3.69883 - 3.02158I$
$u = -1.007350 - 0.006718I$ $a = -0.051105 + 0.783732I$ $b = -0.856821 - 0.663890I$	$8.73644 - 2.57827I$	$3.69883 + 3.02158I$
$u = 0.167317 + 1.021400I$ $a = -0.69860 - 1.40758I$ $b = 0.176226 + 0.887745I$	$3.79265 - 1.97736I$	$0.36666 + 2.76154I$
$u = 0.167317 - 1.021400I$ $a = -0.69860 + 1.40758I$ $b = 0.176226 - 0.887745I$	$3.79265 + 1.97736I$	$0.36666 - 2.76154I$
$u = 0.120119 + 0.949857I$ $a = 0.243764 - 0.379978I$ $b = 0.032250 + 0.520457I$	$-0.77619 + 1.28470I$	$-6.96269 - 5.03629I$
$u = 0.120119 - 0.949857I$ $a = 0.243764 + 0.379978I$ $b = 0.032250 - 0.520457I$	$-0.77619 - 1.28470I$	$-6.96269 + 5.03629I$
$u = -0.436643 + 0.834573I$ $a = 0.916522 + 0.292944I$ $b = -0.973516 + 0.318596I$	$-0.52721 - 1.87425I$	$-8.40865 + 2.07235I$
$u = -0.436643 - 0.834573I$ $a = 0.916522 - 0.292944I$ $b = -0.973516 - 0.318596I$	$-0.52721 + 1.87425I$	$-8.40865 - 2.07235I$
$u = 0.233820 + 1.070940I$ $a = -0.287355 - 0.183543I$ $b = 0.439508 + 0.589156I$	$-0.817883 + 0.949182I$	$-8.00000 + 0.I$
$u = 0.233820 - 1.070940I$ $a = -0.287355 + 0.183543I$ $b = 0.439508 - 0.589156I$	$-0.817883 - 0.949182I$	$-8.00000 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.783519 + 0.441750I$ $a = 1.19806 - 1.78599I$ $b = -0.902727 + 1.012570I$	$2.59861 + 3.60251I$	$-5.47993 - 4.86448I$
$u = -0.783519 - 0.441750I$ $a = 1.19806 + 1.78599I$ $b = -0.902727 - 1.012570I$	$2.59861 - 3.60251I$	$-5.47993 + 4.86448I$
$u = -0.346136 + 1.116180I$ $a = -0.69410 + 1.24191I$ $b = -1.129160 - 0.396009I$	$-3.89834 - 2.15588I$	0
$u = -0.346136 - 1.116180I$ $a = -0.69410 - 1.24191I$ $b = -1.129160 + 0.396009I$	$-3.89834 + 2.15588I$	0
$u = -1.280030 + 0.312941I$ $a = -0.02697 - 1.54626I$ $b = 0.907660 + 0.163934I$	$5.59454 - 0.79177I$	0
$u = -1.280030 - 0.312941I$ $a = -0.02697 + 1.54626I$ $b = 0.907660 - 0.163934I$	$5.59454 + 0.79177I$	0
$u = 0.673670 + 0.088043I$ $a = -1.13855 + 0.86484I$ $b = 1.018250 - 0.455571I$	$1.34053 + 2.69149I$	$-4.70869 - 3.74095I$
$u = 0.673670 - 0.088043I$ $a = -1.13855 - 0.86484I$ $b = 1.018250 + 0.455571I$	$1.34053 - 2.69149I$	$-4.70869 + 3.74095I$
$u = 0.179970 + 1.330630I$ $a = 0.613950 + 1.012280I$ $b = 1.119500 - 0.531381I$	$-2.96619 + 5.50433I$	0
$u = 0.179970 - 1.330630I$ $a = 0.613950 - 1.012280I$ $b = 1.119500 + 0.531381I$	$-2.96619 - 5.50433I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.342990 + 0.174597I$ $a = -0.48406 - 1.61748I$ $b = 0.662047 + 0.683351I$	$3.31510 - 2.64385I$	0
$u = 1.342990 - 0.174597I$ $a = -0.48406 + 1.61748I$ $b = 0.662047 - 0.683351I$	$3.31510 + 2.64385I$	0
$u = 0.631122 + 0.052699I$ $a = -0.61769 - 1.35412I$ $b = 0.921626 + 0.670766I$	$1.60978 - 2.58403I$	$-1.183332 - 0.037949I$
$u = 0.631122 - 0.052699I$ $a = -0.61769 + 1.35412I$ $b = 0.921626 - 0.670766I$	$1.60978 + 2.58403I$	$-1.183332 + 0.037949I$
$u = -0.520152 + 0.044751I$ $a = 2.22330 + 0.65037I$ $b = -0.529944 - 0.260822I$	$-1.347560 + 0.092496I$	$-5.86116 + 1.61635I$
$u = -0.520152 - 0.044751I$ $a = 2.22330 - 0.65037I$ $b = -0.529944 + 0.260822I$	$-1.347560 - 0.092496I$	$-5.86116 - 1.61635I$
$u = 0.37351 + 1.47885I$ $a = -0.042265 + 0.991284I$ $b = 0.254547 - 0.892528I$	$-2.44888 - 1.09682I$	0
$u = 0.37351 - 1.47885I$ $a = -0.042265 - 0.991284I$ $b = 0.254547 + 0.892528I$	$-2.44888 + 1.09682I$	0
$u = 0.379838 + 0.129064I$ $a = -2.69838 - 0.75915I$ $b = 0.310209 - 0.552194I$	$2.41343 - 4.02201I$	$-2.17904 + 4.26768I$
$u = 0.379838 - 0.129064I$ $a = -2.69838 + 0.75915I$ $b = 0.310209 + 0.552194I$	$2.41343 + 4.02201I$	$-2.17904 - 4.26768I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.342835$ $a=\ \ 1.82728$ $b=-0.751050$	-0.992150	-10.3910
$u=-0.45172+1.60124I$ $a=-0.073209+1.127150I$ $b=\ \ 0.012328-0.990813I$	$-6.51294-4.15782I$	0
$u=-0.45172-1.60124I$ $a=-0.073209-1.127150I$ $b=\ \ 0.012328+0.990813I$	$-6.51294+4.15782I$	0
$u=\ \ 0.296399+0.062088I$ $a=\ \ 1.87004-4.59300I$ $b=-0.931163-0.266156I$	$-2.29321-2.81632I$	$-7.40161+5.36260I$
$u=\ \ 0.296399-0.062088I$ $a=\ \ 1.87004+4.59300I$ $b=-0.931163+0.266156I$	$-2.29321+2.81632I$	$-7.40161-5.36260I$
$u=-0.171614+0.220877I$ $a=-0.57331-3.91406I$ $b=\ \ 1.079170-0.455056I$	$0.20500+8.08474I$	$-6.89819-9.56475I$
$u=-0.171614-0.220877I$ $a=-0.57331+3.91406I$ $b=\ \ 1.079170+0.455056I$	$0.20500-8.08474I$	$-6.89819+9.56475I$
$u=-1.72762$ $a=-0.420167$ $b=\ \ 1.16186$	-5.68066	0
$u=\ \ 0.13406+1.78859I$ $a=-0.020787-1.023100I$ $b=\ \ 1.223600+0.590393I$	$-5.36689-6.58267I$	0
$u=\ \ 0.13406-1.78859I$ $a=-0.020787+1.023100I$ $b=\ \ 1.223600-0.590393I$	$-5.36689+6.58267I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.54349 + 1.71557I$ $a = 0.182247 + 1.206790I$ $b = -0.223941 - 1.051210I$	$-2.29420 + 9.43598I$	0
$u = 0.54349 - 1.71557I$ $a = 0.182247 - 1.206790I$ $b = -0.223941 + 1.051210I$	$-2.29420 - 9.43598I$	0
$u = 0.36459 + 1.77723I$ $a = -0.882179 - 0.158077I$ $b = -0.848721 - 0.077580I$	$0.50904 - 3.72563I$	0
$u = 0.36459 - 1.77723I$ $a = -0.882179 + 0.158077I$ $b = -0.848721 + 0.077580I$	$0.50904 + 3.72563I$	0
$u = 0.96428 + 1.53998I$ $a = -0.035444 - 1.020920I$ $b = -1.264660 + 0.346449I$	$-7.16461 + 2.87399I$	0
$u = 0.96428 - 1.53998I$ $a = -0.035444 + 1.020920I$ $b = -1.264660 - 0.346449I$	$-7.16461 - 2.87399I$	0
$u = 0.22234 + 1.88376I$ $a = 0.101412 + 0.495797I$ $b = 1.213340 - 0.305461I$	$-4.20439 + 4.30937I$	0
$u = 0.22234 - 1.88376I$ $a = 0.101412 - 0.495797I$ $b = 1.213340 + 0.305461I$	$-4.20439 - 4.30937I$	0
$u = 1.67961 + 0.89723I$ $a = 0.479659 + 0.380032I$ $b = -1.148550 - 0.220866I$	$-1.59063 - 4.29713I$	0
$u = 1.67961 - 0.89723I$ $a = 0.479659 - 0.380032I$ $b = -1.148550 + 0.220866I$	$-1.59063 + 4.29713I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.05205 + 1.91687I$ $a = 0.162195 - 0.881999I$ $b = -1.327950 + 0.474120I$	$-10.72230 + 1.07223I$	0
$u = 0.05205 - 1.91687I$ $a = 0.162195 + 0.881999I$ $b = -1.327950 - 0.474120I$	$-10.72230 - 1.07223I$	0
$u = -0.94156 + 1.78663I$ $a = -0.116273 - 1.092550I$ $b = 1.304530 + 0.496577I$	$-10.53220 - 9.42728I$	0
$u = -0.94156 - 1.78663I$ $a = -0.116273 + 1.092550I$ $b = 1.304530 - 0.496577I$	$-10.53220 + 9.42728I$	0
$u = -0.13842 + 2.02925I$ $a = -0.253801 - 0.631347I$ $b = 1.39836 + 0.30006I$	$-7.82500 + 4.70197I$	0
$u = -0.13842 - 2.02925I$ $a = -0.253801 + 0.631347I$ $b = 1.39836 - 0.30006I$	$-7.82500 - 4.70197I$	0
$u = 0.94830 + 1.92269I$ $a = 0.160247 - 1.197610I$ $b = -1.275950 + 0.609274I$	$-5.5691 + 15.3844I$	0
$u = 0.94830 - 1.92269I$ $a = 0.160247 + 1.197610I$ $b = -1.275950 - 0.609274I$	$-5.5691 - 15.3844I$	0
$u = -0.69511 + 2.27123I$ $a = 0.392091 + 0.819280I$ $b = -1.36545 - 0.50326I$	$-0.91388 - 7.09123I$	0
$u = -0.69511 - 2.27123I$ $a = 0.392091 - 0.819280I$ $b = -1.36545 + 0.50326I$	$-0.91388 + 7.09123I$	0

II.

$\boldsymbol{I_2^u = \langle -1.50\times 10^7 u^{15} - 2.91\times 10^6 u^{14} + \cdots + 2.60\times 10^7 b + 3.14\times 10^7,\ 5.06\times 10^7 u^{15} + 1.93\times 10^7 u^{14} + \cdots + 2.60\times 10^7 a - 1.08\times 10^8,\ u^{16} + 2u^{14} + \cdots - 6u + 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -1.94816u^{15} - 0.742080u^{14} + \cdots - 20.2601u + 4.15208 \\ 0.576104u^{15} + 0.111922u^{14} + \cdots + 7.08162u - 1.20706 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.37205u^{15} - 0.630158u^{14} + \cdots - 13.1784u + 2.94503 \\ 0.576104u^{15} + 0.111922u^{14} + \cdots + 7.08162u - 1.20706 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.635947u^{15} - 0.266901u^{14} + \cdots + 9.79214u - 6.41038 \\ 0.329868u^{15} + 0.589621u^{14} + \cdots - 0.434301u + 2.03882 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.54782u^{15} + 0.0499397u^{14} + \cdots + 19.5088u - 4.73371 \\ -1.78902u^{15} - 0.836104u^{14} + \cdots - 15.5610u + 3.93263 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.410379u^{15} + 0.364053u^{14} + \cdots - 8.98198u + 5.67013 \\ 1.06297u^{15} + 0.392340u^{14} + \cdots + 8.97100u - 3.59713 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.410379u^{15} + 0.364053u^{14} + \cdots - 8.98198u + 5.67013 \\ 1.32987u^{15} + 0.589621u^{14} + \cdots + 11.5657u - 3.96118 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.28768u^{15} - 0.560350u^{14} + \cdots - 10.7155u + 1.55549 \\ 2.08061u^{15} + 1.90825u^{14} + \cdots + 12.3794u - 2.05941 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -0.376194u^{15} + 0.0413337u^{14} + \cdots - 5.33982u + 4.04169 \\ -1.16597u^{15} - 1.06395u^{14} + \cdots - 4.36721u - 0.249796 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{171433056}{25980989}u^{15} + \frac{71506332}{25980989}u^{14} + \cdots + \frac{1610812870}{25980989}u - \frac{747202050}{25980989}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{16} - 8u^{15} + \cdots - 11u + 1$
c_2	$u^{16} - 4u^{14} + \cdots + u + 1$
c_3	$u^{16} + 10u^{14} + \cdots + 2u + 1$
c_4	$u^{16} - 3u^{15} + \cdots - 2u^2 + 1$
c_5	$u^{16} - 4u^{14} + \cdots - u + 1$
c_6	$u^{16} + 2u^{14} + \cdots - 6u + 1$
c_7	$u^{16} + 3u^{15} + \cdots - 2u^2 + 1$
c_8	$u^{16} + 4u^{15} + \cdots + 4u + 1$
c_9	$u^{16} + 10u^{14} + \cdots - 2u + 1$
c_{10}	$u^{16} - 12u^{15} + \cdots - 39u + 7$
c_{11}	$u^{16} + 2u^{14} + \cdots + 6u + 1$
c_{12}	$u^{16} - 4u^{15} + \cdots - 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{16} + 8y^{15} + \cdots + y + 1$
c_2, c_5	$y^{16} - 8y^{15} + \cdots - 11y + 1$
c_3, c_9	$y^{16} + 20y^{15} + \cdots + 16y + 1$
c_4, c_7	$y^{16} + 9y^{15} + \cdots - 4y + 1$
c_6, c_{11}	$y^{16} + 4y^{15} + \cdots - 10y + 1$
c_8, c_{12}	$y^{16} - 12y^{15} + \cdots - 16y + 1$
c_{10}	$y^{16} + 14y^{14} + \cdots + 299y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.848678 + 0.085474I$ $a = -0.348467 + 0.518085I$ $b = -0.877180 - 0.669466I$	$8.17515 - 2.59376I$	$-11.23658 + 3.27423I$
$u = 0.848678 - 0.085474I$ $a = -0.348467 - 0.518085I$ $b = -0.877180 + 0.669466I$	$8.17515 + 2.59376I$	$-11.23658 - 3.27423I$
$u = -0.197488 + 1.171200I$ $a = -0.995321 + 0.627483I$ $b = -1.084020 - 0.313740I$	$-3.62157 - 3.10177I$	$-11.65478 + 4.58211I$
$u = -0.197488 - 1.171200I$ $a = -0.995321 - 0.627483I$ $b = -1.084020 + 0.313740I$	$-3.62157 + 3.10177I$	$-11.65478 - 4.58211I$
$u = -0.358669 + 1.174890I$ $a = 0.898291 + 0.084340I$ $b = 0.552813 + 0.248801I$	$1.24172 + 3.04680I$	$-4.72616 - 0.51189I$
$u = -0.358669 - 1.174890I$ $a = 0.898291 - 0.084340I$ $b = 0.552813 - 0.248801I$	$1.24172 - 3.04680I$	$-4.72616 + 0.51189I$
$u = 1.311460 + 0.162263I$ $a = -0.32990 + 1.75849I$ $b = 0.884570 - 0.318899I$	$5.97555 + 1.37057I$	$-3.09878 - 6.37528I$
$u = 1.311460 - 0.162263I$ $a = -0.32990 - 1.75849I$ $b = 0.884570 + 0.318899I$	$5.97555 - 1.37057I$	$-3.09878 + 6.37528I$
$u = -0.258625 + 0.594122I$ $a = 1.52106 + 0.93961I$ $b = -0.724239 + 0.209142I$	$-2.15911 - 0.80662I$	$-14.01192 + 1.37171I$
$u = -0.258625 - 0.594122I$ $a = 1.52106 - 0.93961I$ $b = -0.724239 - 0.209142I$	$-2.15911 + 0.80662I$	$-14.01192 - 1.37171I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.42499 + 0.57815I$ $a = \quad 0.58297 - 1.70738I$ $b = -0.823392 + 0.939526I$	$3.90110 + 3.42244I$	$1.25743 - 7.02245I$
$u = -1.42499 - 0.57815I$ $a = \quad 0.58297 + 1.70738I$ $b = -0.823392 - 0.939526I$	$3.90110 - 3.42244I$	$1.25743 + 7.02245I$
$u = \quad 0.300412 + 0.138730I$ $a = -1.81674 - 2.37481I$ $b = \quad 0.864792 + 0.780054I$	$1.09392 - 2.94039I$	$-12.11036 + 5.85027I$
$u = \quad 0.300412 - 0.138730I$ $a = -1.81674 + 2.37481I$ $b = \quad 0.864792 - 0.780054I$	$1.09392 + 2.94039I$	$-12.11036 - 5.85027I$
$u = -0.22078 + 1.83089I$ $a = -0.011897 + 0.531685I$ $b = \quad 1.206660 - 0.440272I$	$-1.44728 + 6.14957I$	$-9.41886 - 5.41107I$
$u = -0.22078 - 1.83089I$ $a = -0.011897 - 0.531685I$ $b = \quad 1.206660 + 0.440272I$	$-1.44728 - 6.14957I$	$-9.41886 + 5.41107I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{16} - 8u^{15} + \cdots - 11u + 1)(u^{60} + 35u^{59} + \cdots + 2933u + 361)$
c_2	$(u^{16} - 4u^{14} + \cdots + u + 1)(u^{60} + u^{59} + \cdots - 27u - 19)$
c_3	$(u^{16} + 10u^{14} + \cdots + 2u + 1)(u^{60} + u^{59} + \cdots + 46u - 43)$
c_4	$(u^{16} - 3u^{15} + \cdots - 2u^2 + 1)(u^{60} - 4u^{59} + \cdots - 12u + 1)$
c_5	$(u^{16} - 4u^{14} + \cdots - u + 1)(u^{60} + u^{59} + \cdots - 27u - 19)$
c_6	$(u^{16} + 2u^{14} + \cdots - 6u + 1)(u^{60} - 3u^{59} + \cdots - 11482u + 3559)$
c_7	$(u^{16} + 3u^{15} + \cdots - 2u^2 + 1)(u^{60} - 4u^{59} + \cdots - 12u + 1)$
c_8	$(u^{16} + 4u^{15} + \cdots + 4u + 1)(u^{60} + 3u^{59} + \cdots + 568u + 23)$
c_9	$(u^{16} + 10u^{14} + \cdots - 2u + 1)(u^{60} + u^{59} + \cdots + 46u - 43)$
c_{10}	$(u^{16} - 12u^{15} + \cdots - 39u + 7)(u^{60} + u^{59} + \cdots + 15055u - 761)$
c_{11}	$(u^{16} + 2u^{14} + \cdots + 6u + 1)(u^{60} - 3u^{59} + \cdots - 11482u + 3559)$
c_{12}	$(u^{16} - 4u^{15} + \cdots - 4u + 1)(u^{60} + 3u^{59} + \cdots + 568u + 23)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{16}+8y^{15}+\cdots+y+1)(y^{60}-11y^{59}+\cdots-3170161y+130321)$
c_2, c_5	$(y^{16}-8y^{15}+\cdots-11y+1)(y^{60}-35y^{59}+\cdots-2933y+361)$
c_3, c_9	$(y^{16}+20y^{15}+\cdots+16y+1)(y^{60}+49y^{59}+\cdots+10526y+1849)$
c_4, c_7	$(y^{16}+9y^{15}+\cdots-4y+1)(y^{60}+2y^{59}+\cdots-46y+1)$
c_6, c_{11}	$(y^{16}+4y^{15}+\cdots-10y+1)$ $\cdot(y^{60}+65y^{59}+\cdots-502242808y+12666481)$
c_8, c_{12}	$(y^{16}-12y^{15}+\cdots-16y+1)(y^{60}-47y^{59}+\cdots-56882y+529)$
c_{10}	$(y^{16}+14y^{14}+\cdots+299y+49)$ $\cdot(y^{60}-23y^{59}+\cdots-95786899y+579121)$