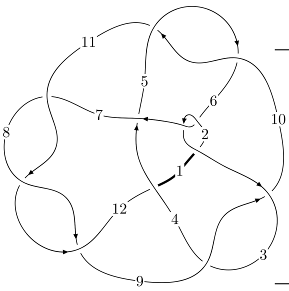
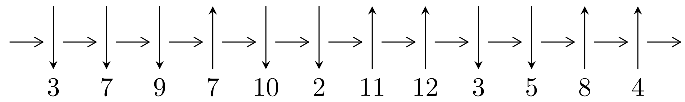
$12n_{0610}$ ($K12n_{0610}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 31u^{18} + 105u^{17} + \cdots + 2b + 78,\ -23u^{18} - 77u^{17} + \cdots + 4a - 56,\ u^{19} + 5u^{18} + \cdots - 2u + 4\rangle$$
$$I_2^u = \langle -u^{10} - u^9 + 5u^8 + 5u^7 - 7u^6 - 7u^5 + 2u^4 + 2u^3 - 2u^2 + b - 2u + 1,$$
$$2u^{10} - 13u^8 - u^7 + 29u^6 + 6u^5 - 25u^4 - 11u^3 + 9u^2 + a + 6u - 5,$$
$$u^{11} - 7u^9 - u^8 + 17u^7 + 6u^6 - 16u^5 - 11u^4 + 5u^3 + 6u^2 - 2u - 1\rangle$$
$$I_3^u = \langle 22u^5a^3 - 7u^5a^2 + \cdots + 11a^3 - 12a^2,\ 2u^5a^3 - 2u^5a^2 + \cdots - 9a + 31,\ u^6 - u^5 - 3u^4 + 2u^3 + 2u^2 + u - 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 54 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. $I_1^u = \langle 31u^{18} + 105u^{17} + \cdots + 2b + 78,\ -23u^{18} - 77u^{17} + \cdots + 4a - 56,\ u^{19} + 5u^{18} + \cdots - 2u + 4\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} \frac{23}{4}u^{18} + \frac{77}{4}u^{17} + \cdots - \frac{73}{4}u + 14 \\ -\frac{31}{2}u^{18} - \frac{105}{2}u^{17} + \cdots + \frac{89}{2}u - 39 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -\frac{5}{2}u^{18} - 8u^{17} + \cdots + 7u - \frac{11}{2} \\ \frac{11}{2}u^{18} + \frac{35}{2}u^{17} + \cdots - \frac{23}{2}u + 12 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} \frac{21}{4}u^{18} + \frac{71}{4}u^{17} + \cdots - \frac{63}{4}u + 13 \\ -\frac{27}{2}u^{18} - \frac{93}{2}u^{17} + \cdots + \frac{81}{2}u - 35 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} -\frac{35}{4}u^{18} - \frac{121}{4}u^{17} + \cdots + \frac{97}{4}u - 23 \\ \frac{17}{2}u^{18} + \frac{59}{2}u^{17} + \cdots - \frac{47}{2}u + 21 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{7}{4}u^{18} + \frac{17}{4}u^{17} + \cdots - \frac{9}{4}u^2 + \frac{11}{4}u \\ -\frac{9}{2}u^{18} - \frac{25}{2}u^{17} + \cdots + \frac{9}{2}u - 7 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} \frac{17}{2}u^{18} + 28u^{17} + \cdots - 18u + \frac{39}{2} \\ -\frac{19}{2}u^{18} - \frac{61}{2}u^{17} + \cdots + \frac{39}{2}u - 20 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 2u^{18} + \frac{15}{2}u^{17} + \cdots - \frac{15}{2}u + \frac{13}{2} \\ -\frac{5}{2}u^{18} - \frac{19}{2}u^{17} + \cdots + \frac{21}{2}u - 8 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 3u^{18} + 13u^{17} - 4u^{16} - 78u^{15} - 41u^{14} + 166u^{13} + 76u^{12} - 219u^{11} + 32u^{10} + 271u^9 - 88u^8 - 117u^7 + 158u^6 + 35u^5 - 79u^4 + 21u^3 + 27u^2 - 14u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{19}+14u^{18}+\cdots+5120u+4096$
c_2, c_6	$u^{19}-12u^{18}+\cdots-288u+64$
c_3, c_5, c_9 c_{10}	$u^{19}+u^{17}+\cdots-u-1$
c_4, c_{12}	$u^{19}+4u^{18}+\cdots-5u+1$
c_7, c_8, c_{11}	$u^{19}-5u^{18}+\cdots-2u-4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{19} - 30y^{18} + \cdots - 175112192y - 16777216$
c_2, c_6	$y^{19} - 14y^{18} + \cdots + 5120y - 4096$
c_3, c_5, c_9 c_{10}	$y^{19} + 2y^{18} + \cdots - 5y - 1$
c_4, c_{12}	$y^{19} + 6y^{18} + \cdots + 7y - 1$
c_7, c_8, c_{11}	$y^{19} - 21y^{18} + \cdots - 20y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.657865 + 0.659754I$ $a = -1.83847 - 0.19703I$ $b = 0.840313 + 0.475404I$	$-6.26672 + 9.86714I$	$-1.83864 - 7.22747I$
$u = 0.657865 - 0.659754I$ $a = -1.83847 + 0.19703I$ $b = 0.840313 - 0.475404I$	$-6.26672 - 9.86714I$	$-1.83864 + 7.22747I$
$u = -0.731989 + 0.424524I$ $a = -0.236670 + 0.017802I$ $b = 0.014997 + 0.399746I$	$1.25043 - 1.39622I$	$3.01531 + 0.47414I$
$u = -0.731989 - 0.424524I$ $a = -0.236670 - 0.017802I$ $b = 0.014997 - 0.399746I$	$1.25043 + 1.39622I$	$3.01531 - 0.47414I$
$u = 0.343340 + 0.751449I$ $a = 0.82615 + 1.26298I$ $b = 0.042850 - 0.808910I$	$-7.21208 - 5.16693I$	$-3.65094 + 2.70430I$
$u = 0.343340 - 0.751449I$ $a = 0.82615 - 1.26298I$ $b = 0.042850 + 0.808910I$	$-7.21208 + 5.16693I$	$-3.65094 - 2.70430I$
$u = 0.681999 + 0.462895I$ $a = 1.52804 + 0.77389I$ $b = -0.565827 - 0.578592I$	$0.46687 + 4.27090I$	$-1.13834 - 9.12104I$
$u = 0.681999 - 0.462895I$ $a = 1.52804 - 0.77389I$ $b = -0.565827 + 0.578592I$	$0.46687 - 4.27090I$	$-1.13834 + 9.12104I$
$u = -1.354910 + 0.296926I$ $a = 0.145523 + 0.433113I$ $b = 0.213860 - 1.352780I$	$-1.85132 + 1.41251I$	$-0.36067 - 3.57890I$
$u = -1.354910 - 0.296926I$ $a = 0.145523 - 0.433113I$ $b = 0.213860 + 1.352780I$	$-1.85132 - 1.41251I$	$-0.36067 + 3.57890I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.47733$ $a = 0.890647$ $b = -2.75655$	4.17390	-0.157280
$u = 0.186583 + 0.488198I$ $a = -1.295720 - 0.446937I$ $b = 0.229294 + 0.509039I$	$-0.957477 - 0.926186I$	$-5.31698 + 3.03988I$
$u = 0.186583 - 0.488198I$ $a = -1.295720 + 0.446937I$ $b = 0.229294 - 0.509039I$	$-0.957477 + 0.926186I$	$-5.31698 - 3.03988I$
$u = -1.58692 + 0.20962I$ $a = 1.074740 - 0.808456I$ $b = -3.13504 + 1.45007I$	$1.21163 - 13.10440I$	$1.22567 + 6.39706I$
$u = -1.58692 - 0.20962I$ $a = 1.074740 + 0.808456I$ $b = -3.13504 - 1.45007I$	$1.21163 + 13.10440I$	$1.22567 - 6.39706I$
$u = -1.60002 + 0.13490I$ $a = -0.946803 + 0.879127I$ $b = 2.76241 - 1.93610I$	$8.22021 - 6.49398I$	$0.71170 + 7.53180I$
$u = -1.60002 - 0.13490I$ $a = -0.946803 - 0.879127I$ $b = 2.76241 + 1.93610I$	$8.22021 + 6.49398I$	$0.71170 - 7.53180I$
$u = 1.64272 + 0.08524I$ $a = 0.047885 + 0.426520I$ $b = -0.024584 - 0.265877I$	$9.63124 + 3.23773I$	$4.43153 - 1.86824I$
$u = 1.64272 - 0.08524I$ $a = 0.047885 - 0.426520I$ $b = -0.024584 + 0.265877I$	$9.63124 - 3.23773I$	$4.43153 + 1.86824I$

II.

$$\boldsymbol{I_2^u = \langle -u^{10}-u^9+\cdots+b+1,\ 2u^{10}-13u^8+\cdots+a-5,\ u^{11}-7u^9+\cdots-2u-1\rangle}$$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -2u^{10}+13u^8+u^7-29u^6-6u^5+25u^4+11u^3-9u^2-6u+5 \\ u^{10}+u^9-5u^8-5u^7+7u^6+7u^5-2u^4-2u^3+2u^2+2u-1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 3u^{10}-20u^8-u^7+46u^6+8u^5-42u^4-18u^3+18u^2+12u-9 \\ -2u^{10}-2u^9+11u^8+11u^7-18u^6-20u^5+6u^4+13u^3-5u+1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2u^{10}+13u^8+2u^7-29u^6-10u^5+24u^4+15u^3-6u^2-6u+4 \\ u^{10}-5u^8-u^7+8u^6+3u^5-5u^4-2u^3+3u^2+2u-1 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} -u^{10}+u^9+7u^8-4u^7-18u^6+2u^5+19u^4+6u^3-7u^2-3u+4 \\ -u^9+5u^7+2u^6-8u^5-7u^4+4u^3+6u^2-2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{10}+7u^8+u^7-17u^6-5u^5+15u^4+8u^3-3u^2-3u+3 \\ u^6-u^5-3u^4+u^3+2u^2+2u-1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^{10}+u^9+8u^8-5u^7-23u^6+5u^5+28u^4+6u^3-14u^2-7u+6 \\ -u^8+5u^6+u^5-7u^4-3u^3+2u^2+2u-2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^{10}-u^9-6u^8+5u^7+13u^6-7u^5-14u^4+2u^3+10u^2-4 \\ -u^{10}+u^9+6u^8-4u^7-13u^6+2u^5+13u^4+5u^3-6u^2-2u+1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 5u^{10}-2u^9-38u^8+6u^7+97u^6+11u^5-90u^4-43u^3+21u^2+19u-10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{11} - 11u^{10} + \cdots + 7u - 1$
c_2	$u^{11} - 3u^{10} - u^9 + 8u^8 - 11u^6 + 5u^5 + 6u^4 - 7u^3 - u^2 + 3u - 1$
c_3, c_{10}	$u^{11} + 4u^9 + u^8 + 4u^7 + 3u^6 - u^5 + 2u^4 - 2u^3 - u^2 - u - 1$
c_4, c_{12}	$u^{11} - 6u^9 - 9u^8 + 2u^7 + 21u^6 + 35u^5 + 22u^4 - 8u^3 - 19u^2 - 11u - 3$
c_5, c_9	$u^{11} + 4u^9 - u^8 + 4u^7 - 3u^6 - u^5 - 2u^4 - 2u^3 + u^2 - u + 1$
c_6	$u^{11} + 3u^{10} - u^9 - 8u^8 + 11u^6 + 5u^5 - 6u^4 - 7u^3 + u^2 + 3u + 1$
c_7, c_8	$u^{11} - 7u^9 - u^8 + 17u^7 + 6u^6 - 16u^5 - 11u^4 + 5u^3 + 6u^2 - 2u - 1$
c_{11}	$u^{11} - 7u^9 + u^8 + 17u^7 - 6u^6 - 16u^5 + 11u^4 + 5u^3 - 6u^2 - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{11} - 23y^{10} + \cdots - 13y - 1$
c_2, c_6	$y^{11} - 11y^{10} + \cdots + 7y - 1$
c_3, c_5, c_9 c_{10}	$y^{11} + 8y^{10} + 24y^9 + 29y^8 - 2y^7 - 39y^6 - 33y^5 + 16y^3 + 7y^2 - y - 1$
c_4, c_{12}	$y^{11} - 12y^{10} + \cdots + 7y - 9$
c_7, c_8, c_{11}	$y^{11} - 14y^{10} + \cdots + 16y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.579371+0.652000I$ $a=-0.842460-0.562659I$ $b=\ \ 0.512370+0.070135I$	$1.84599-2.26752I$	$7.70963+6.53422I$
$u=-0.579371-0.652000I$ $a=-0.842460+0.562659I$ $b=\ \ 0.512370-0.070135I$	$1.84599+2.26752I$	$7.70963-6.53422I$
$u=-1.17071$ $a=\ \ 0.718847$ $b=-0.387689$	-0.926107	2.28510
$u=\ \ 0.548197+0.267302I$ $a=\ \ 0.773035+0.456348I$ $b=\ \ 0.051698+1.041650I$	$4.46954+0.96297I$	$1.50871-7.32884I$
$u=\ \ 0.548197-0.267302I$ $a=\ \ 0.773035-0.456348I$ $b=\ \ 0.051698-1.041650I$	$4.46954-0.96297I$	$1.50871+7.32884I$
$u=\ \ 1.52989$ $a=-1.75406$ $b=\ \ 5.06427$	2.74678	-6.18970
$u=-1.57622+0.07505I$ $a=-0.197276+0.748318I$ $b=\ \ 0.112310-0.460322I$	$11.80780-2.19766I$	$5.16669+2.50465I$
$u=-1.57622-0.07505I$ $a=-0.197276-0.748318I$ $b=\ \ 0.112310+0.460322I$	$11.80780+2.19766I$	$5.16669-2.50465I$
$u=\ \ 1.58380+0.17649I$ $a=\ \ 0.839023+0.333910I$ $b=-2.31428-0.45989I$	$9.15447+5.23820I$	$6.25661-4.80987I$
$u=\ \ 1.58380-0.17649I$ $a=\ \ 0.839023-0.333910I$ $b=-2.31428+0.45989I$	$9.15447-5.23820I$	$6.25661+4.80987I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.311994$ $a = \quad 5.89057$ $b = -1.40079$	-3.73847	-13.3790

III. $\boldsymbol{I_3^u = \langle 22u^5a^3 - 7u^5a^2 + \cdots + 11a^3 - 12a^2,\ 2u^5a^3 - 2u^5a^2 + \cdots - 9a + 31,\ u^6 - u^5 - 3u^4 + 2u^3 + 2u^2 + u - 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} a \\ -0.511628a^3u^5 + 0.162791a^2u^5 + \cdots - 0.255814a^3 + 0.279070a^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} a^2u \\ 0.325581a^3u^5 + 0.837209a^2u^5 + \cdots + 0.279070a - 1.53488 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.511628a^3u^5 + 0.162791a^2u^5 + \cdots + 0.279070a^2 + a \\ 0.674419a^3u^5 - 0.465116a^2u^5 + \cdots - 0.604651a + 0.325581 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} -0.604651a^3u^5 + a^2u^5 + \cdots - 0.0930233a - 0.488372 \\ 0.767442a^3u^5 - 1.30233a^2u^5 + \cdots + 0.488372a + 0.813953 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.48837a^3u^5 - 0.0930233a^2u^5 + \cdots + 0.813953a + 0.0232558 \\ 2.23256a^3u^5 + 0.162791a^2u^5 + \cdots - 1.11628a + 0.139535 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.95349a^3u^5 + 0.511628a^2u^5 + \cdots + 0.372093a - 0.0465116 \\ -2.79070a^3u^5 - 0.418605a^2u^5 + \cdots + 1.30233a - 1.16279 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.837209a^3u^5 + 0.418605a^2u^5 + \cdots + 0.627907a - 1.95349 \\ -0.720930a^3u^5 - 0.488372a^2u^5 + \cdots - 1.11628a + 0.139535 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^3 + 8u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^2+3u+1)^{12}$
c_2, c_6	$(u^2+u-1)^{12}$
c_3, c_5, c_9 c_{10}	$u^{24}-u^{23}+\cdots+14u-1$
c_4, c_{12}	$u^{24}+7u^{23}+\cdots+146u+139$
c_7, c_8, c_{11}	$(u^6+u^5-3u^4-2u^3+2u^2-u-1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^2 - 7y + 1)^{12}$
c_2, c_6	$(y^2 - 3y + 1)^{12}$
c_3, c_5, c_9 c_{10}	$y^{24} + 7y^{23} + \cdots - 92y + 1$
c_4, c_{12}	$y^{24} - 9y^{23} + \cdots - 45780y + 19321$
c_7, c_8, c_{11}	$(y^6 - 7y^5 + 17y^4 - 16y^3 + 6y^2 - 5y + 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.493180 + 0.575288I$ $a = 0.657492 + 0.467942I$ $b = -0.520619 + 0.221185I$	$0.98760 - 1.97241I$	$-3.42428 + 3.68478I$
$u = -0.493180 + 0.575288I$ $a = -1.132730 - 0.592761I$ $b = 0.463950 + 0.261122I$	$0.98760 - 1.97241I$	$-3.42428 + 3.68478I$
$u = -0.493180 + 0.575288I$ $a = -0.877441 + 1.072190I$ $b = 0.49508 - 1.34709I$	$-6.90809 - 1.97241I$	$-3.42428 + 3.68478I$
$u = -0.493180 + 0.575288I$ $a = 2.12164 - 0.74540I$ $b = -0.346720 + 0.084390I$	$-6.90809 - 1.97241I$	$-3.42428 + 3.68478I$
$u = -0.493180 - 0.575288I$ $a = 0.657492 - 0.467942I$ $b = -0.520619 - 0.221185I$	$0.98760 + 1.97241I$	$-3.42428 - 3.68478I$
$u = -0.493180 - 0.575288I$ $a = -1.132730 + 0.592761I$ $b = 0.463950 - 0.261122I$	$0.98760 + 1.97241I$	$-3.42428 - 3.68478I$
$u = -0.493180 - 0.575288I$ $a = -0.877441 - 1.072190I$ $b = 0.49508 + 1.34709I$	$-6.90809 + 1.97241I$	$-3.42428 - 3.68478I$
$u = -0.493180 - 0.575288I$ $a = 2.12164 + 0.74540I$ $b = -0.346720 - 0.084390I$	$-6.90809 + 1.97241I$	$-3.42428 - 3.68478I$
$u = 0.483672$ $a = 1.38685 + 1.13721I$ $b = -0.452109 + 1.065290I$	4.68669	5.41680
$u = 0.483672$ $a = 1.38685 - 1.13721I$ $b = -0.452109 - 1.065290I$	4.68669	5.41680

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.483672$ $a = -2.99214$ $b = 1.78193$	-3.20899	5.41680
$u = 0.483672$ $a = -4.26951$ $b = 0.585345$	-3.20899	5.41680
$u = 1.52087 + 0.16310I$ $a = 0.981577 + 0.385534I$ $b = -2.51558 - 0.17254I$	$7.64342 + 4.59213I$	$0.58114 - 3.20482I$
$u = 1.52087 + 0.16310I$ $a = -0.720483 + 0.010543I$ $b = 2.36775 - 0.07374I$	$7.64342 + 4.59213I$	$0.58114 - 3.20482I$
$u = 1.52087 + 0.16310I$ $a = -0.85700 - 1.31859I$ $b = 2.04763 + 2.23940I$	$-0.25226 + 4.59213I$	$0.58114 - 3.20482I$
$u = 1.52087 + 0.16310I$ $a = 0.173447 + 0.281644I$ $b = -1.66060 - 1.59461I$	$-0.25226 + 4.59213I$	$0.58114 - 3.20482I$
$u = 1.52087 - 0.16310I$ $a = 0.981577 - 0.385534I$ $b = -2.51558 + 0.17254I$	$7.64342 - 4.59213I$	$0.58114 + 3.20482I$
$u = 1.52087 - 0.16310I$ $a = -0.720483 - 0.010543I$ $b = 2.36775 + 0.07374I$	$7.64342 - 4.59213I$	$0.58114 + 3.20482I$
$u = 1.52087 - 0.16310I$ $a = -0.85700 + 1.31859I$ $b = 2.04763 - 2.23940I$	$-0.25226 - 4.59213I$	$0.58114 + 3.20482I$
$u = 1.52087 - 0.16310I$ $a = 0.173447 - 0.281644I$ $b = -1.66060 + 1.59461I$	$-0.25226 - 4.59213I$	$0.58114 + 3.20482I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.53904$ $a = -0.554670 + 0.861910I$ $b = 1.58366 - 0.52245I$	11.6079	4.26950
$u = -1.53904$ $a = -0.554670 - 0.861910I$ $b = 1.58366 + 0.52245I$	11.6079	4.26950
$u = -1.53904$ $a = 1.11428$ $b = -3.94128$	3.71224	4.26950
$u = -1.53904$ $a = 1.79000$ $b = -4.35087$	3.71224	4.26950

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2+3u+1)^{12})(u^{11}-11u^{10}+\cdots+7u-1)$ $\cdot(u^{19}+14u^{18}+\cdots+5120u+4096)$
c_2	$(u^2+u-1)^{12}$ $\cdot(u^{11}-3u^{10}-u^9+8u^8-11u^6+5u^5+6u^4-7u^3-u^2+3u-1)$ $\cdot(u^{19}-12u^{18}+\cdots-288u+64)$
c_3, c_{10}	$(u^{11}+4u^9+u^8+4u^7+3u^6-u^5+2u^4-2u^3-u^2-u-1)$ $\cdot(u^{19}+u^{17}+\cdots-u-1)(u^{24}-u^{23}+\cdots+14u-1)$
c_4, c_{12}	$(u^{11}-6u^9-9u^8+2u^7+21u^6+35u^5+22u^4-8u^3-19u^2-11u-3)$ $\cdot(u^{19}+4u^{18}+\cdots-5u+1)(u^{24}+7u^{23}+\cdots+146u+139)$
c_5, c_9	$(u^{11}+4u^9-u^8+4u^7-3u^6-u^5-2u^4-2u^3+u^2-u+1)$ $\cdot(u^{19}+u^{17}+\cdots-u-1)(u^{24}-u^{23}+\cdots+14u-1)$
c_6	$(u^2+u-1)^{12}$ $\cdot(u^{11}+3u^{10}-u^9-8u^8+11u^6+5u^5-6u^4-7u^3+u^2+3u+1)$ $\cdot(u^{19}-12u^{18}+\cdots-288u+64)$
c_7, c_8	$(u^6+u^5-3u^4-2u^3+2u^2-u-1)^4$ $\cdot(u^{11}-7u^9-u^8+17u^7+6u^6-16u^5-11u^4+5u^3+6u^2-2u-1)$ $\cdot(u^{19}-5u^{18}+\cdots-2u-4)$
c_{11}	$(u^6+u^5-3u^4-2u^3+2u^2-u-1)^4$ $\cdot(u^{11}-7u^9+u^8+17u^7-6u^6-16u^5+11u^4+5u^3-6u^2-2u+1)$ $\cdot(u^{19}-5u^{18}+\cdots-2u-4)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2-7y+1)^{12})(y^{11}-23y^{10}+\cdots-13y-1)$ $\cdot(y^{19}-30y^{18}+\cdots-175112192y-16777216)$
c_2, c_6	$((y^2-3y+1)^{12})(y^{11}-11y^{10}+\cdots+7y-1)$ $\cdot(y^{19}-14y^{18}+\cdots+5120y-4096)$
c_3, c_5, c_9 c_{10}	$(y^{11}+8y^{10}+24y^9+29y^8-2y^7-39y^6-33y^5+16y^3+7y^2-y-1)$ $\cdot(y^{19}+2y^{18}+\cdots-5y-1)(y^{24}+7y^{23}+\cdots-92y+1)$
c_4, c_{12}	$(y^{11}-12y^{10}+\cdots+7y-9)(y^{19}+6y^{18}+\cdots+7y-1)$ $\cdot(y^{24}-9y^{23}+\cdots-45780y+19321)$
c_7, c_8, c_{11}	$(y^6-7y^5+17y^4-16y^3+6y^2-5y+1)^4$ $\cdot(y^{11}-14y^{10}+\cdots+16y-1)(y^{19}-21y^{18}+\cdots-20y-16)$