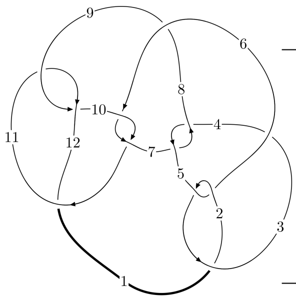
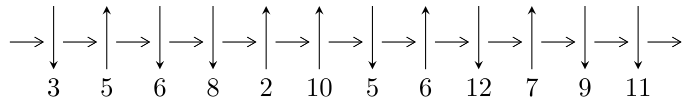
$12n_{0001}$ ($K12n_{0001}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 4.37455 \times 10^{135} u^{43} - 1.12079 \times 10^{136} u^{42} + \cdots + 3.29429 \times 10^{139} b + 3.17022 \times 10^{139}, \\ & 5.94999 \times 10^{134} u^{43} - 5.65113 \times 10^{136} u^{42} + \cdots + 1.31772 \times 10^{140} a - 1.01004 \times 10^{141}, \\ & u^{44} - 2u^{43} + \cdots + 18432u^2 + 4096 \rangle \\ I_2^u = \langle & b,\ 2u^3 + u^2 + a + 5u + 1,\ u^4 + u^3 + 3u^2 + 2u + 1 \rangle \end{aligned}$$

$$\begin{aligned} I_1^v = \langle & a,\ -623v^{11} + 133v^{10} + \cdots + 263b + 608, \\ & v^{12} - v^{11} - v^{10} + 6v^9 - 5v^8 - v^7 + 5v^6 - 9v^5 + 11v^4 - 7v^3 + 4v^2 - 3v + 1 \rangle \end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 60 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. $\boldsymbol{I_1^u = \langle 4.37 \times 10^{135} u^{43} - 1.12 \times 10^{136} u^{42} + \cdots + 3.29 \times 10^{139} b + 3.17 \times 10^{139},\ 5.95 \times 10^{134} u^{43} - 5.65 \times 10^{136} u^{42} + \cdots + 1.32 \times 10^{140} a - 1.01 \times 10^{141},\ u^{44} - 2u^{43} + \cdots + 18432 u^2 + 4096 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_{10} = \begin{pmatrix} -4.51538 \times 10^{-6} u^{43} + 0.000428858 u^{42} + \cdots + 11.6690 u + 7.66506 \\ -0.000132792 u^{43} + 0.000340222 u^{42} + \cdots - 0.117088 u - 0.962337 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.000137307 u^{43} + 0.000769080 u^{42} + \cdots + 11.5519 u + 6.70273 \\ -0.000132792 u^{43} + 0.000340222 u^{42} + \cdots - 0.117088 u - 0.962337 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0000465812 u^{43} - 0.0000760961 u^{42} + \cdots - 2.91296 u - 1.00498 \\ -0.000146319 u^{43} + 0.000385840 u^{42} + \cdots - 0.577119 u - 0.161513 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0000233627 u^{43} + 0.0000758354 u^{42} + \cdots + 0.973632 u + 0.112523 \\ -0.0000848623 u^{43} + 0.000160319 u^{42} + \cdots + 0.425724 u - 0.685913 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.000153153 u^{43} + 0.000767618 u^{42} + \cdots + 10.5379 u + 6.59579 \\ -0.0000848623 u^{43} + 0.000160319 u^{42} + \cdots + 0.425724 u - 0.685913 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.000294989 u^{43} - 0.000566017 u^{42} + \cdots + 5.23132 u + 1.61723 \\ 0.0000291099 u^{43} - 0.0000723952 u^{42} + \cdots + 0.112523 u + 0.0956936 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.000294989 u^{43} - 0.000566017 u^{42} + \cdots + 5.23132 u + 1.61723 \\ 0.0000637808 u^{43} - 0.000165274 u^{42} + \cdots - 1.09575 u - 0.00245309 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0000848166 u^{43} + 0.000176172 u^{42} + \cdots + 2.52664 u + 0.913367 \\ -0.0000382354 u^{43} + 0.000100076 u^{42} + \cdots - 0.386322 u - 0.0916094 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.00275050 u^{43} - 0.00388332 u^{42} + \cdots + 65.4192 u + 6.54832$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{44} + 8u^{43} + \cdots + 22u + 1$
c_2, c_5	$u^{44} + 8u^{43} + \cdots + 6u + 1$
c_3	$u^{44} - 8u^{43} + \cdots + 577140u + 41508$
c_4, c_7	$u^{44} - 2u^{43} + \cdots + 18432u^2 + 4096$
c_6, c_{10}	$u^{44} - 3u^{43} + \cdots - 120u + 16$
c_8	$u^{44} + 4u^{43} + \cdots + 2u + 1$
c_9, c_{11}	$u^{44} - 7u^{43} + \cdots + 8u + 1$
c_{12}	$u^{44} + 17u^{43} + \cdots + 48u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{44} + 64y^{43} + \cdots + 22y + 1$
c_2, c_5	$y^{44} + 8y^{43} + \cdots + 22y + 1$
c_3	$y^{44} + 120y^{43} + \cdots + 42862402296y + 1722914064$
c_4, c_7	$y^{44} + 70y^{43} + \cdots + 150994944y + 16777216$
c_6, c_{10}	$y^{44} - 33y^{43} + \cdots - 576y + 256$
c_8	$y^{44} - 80y^{43} + \cdots + 14y + 1$
c_9, c_{11}	$y^{44} - 17y^{43} + \cdots - 48y + 1$
c_{12}	$y^{44} + 27y^{43} + \cdots - 48y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.587750 + 0.727199I$ $a = 0.306966 - 0.640744I$ $b = -1.002580 + 0.067245I$	$0.0012605 + 0.0509035I$	$-2.15533 + 0.17848I$
$u = -0.587750 - 0.727199I$ $a = 0.306966 + 0.640744I$ $b = -1.002580 - 0.067245I$	$0.0012605 - 0.0509035I$	$-2.15533 - 0.17848I$
$u = 0.730847 + 0.390041I$ $a = 0.437616 - 0.402493I$ $b = -1.132220 - 0.401644I$	$2.44756 + 1.58887I$	$2.11619 + 0.16814I$
$u = 0.730847 - 0.390041I$ $a = 0.437616 + 0.402493I$ $b = -1.132220 + 0.401644I$	$2.44756 - 1.58887I$	$2.11619 - 0.16814I$
$u = -0.611739 + 0.487067I$ $a = -0.156519 + 0.760305I$ $b = 1.033990 + 0.442395I$	$-0.96246 + 4.43252I$	$-5.23001 - 6.92056I$
$u = -0.611739 - 0.487067I$ $a = -0.156519 - 0.760305I$ $b = 1.033990 - 0.442395I$	$-0.96246 - 4.43252I$	$-5.23001 + 6.92056I$
$u = -0.496705 + 0.586520I$ $a = 0.803429 - 0.614772I$ $b = -0.139559 - 0.567313I$	$0.003759 + 1.358260I$	$0.43877 - 4.70156I$
$u = -0.496705 - 0.586520I$ $a = 0.803429 + 0.614772I$ $b = -0.139559 + 0.567313I$	$0.003759 - 1.358260I$	$0.43877 + 4.70156I$
$u = 0.579885 + 0.494350I$ $a = -0.225969 + 0.616510I$ $b = 1.124200 + 0.621018I$	$0.29937 + 6.78003I$	$-1.02805 - 2.83496I$
$u = 0.579885 - 0.494350I$ $a = -0.225969 - 0.616510I$ $b = 1.124200 - 0.621018I$	$0.29937 - 6.78003I$	$-1.02805 + 2.83496I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.511627 + 0.444892I$ $a = 1.093280 - 0.445499I$ $b = 0.072410 - 0.459091I$	$-0.021919 + 1.380100I$	$-0.83838 - 4.05172I$
$u = -0.511627 - 0.444892I$ $a = 1.093280 + 0.445499I$ $b = 0.072410 + 0.459091I$	$-0.021919 - 1.380100I$	$-0.83838 + 4.05172I$
$u = 0.299193 + 0.591308I$ $a = 2.27653 - 0.10382I$ $b = -0.095849 + 0.693490I$	$-1.10964 + 2.86683I$	$-0.194269 - 1.150607I$
$u = 0.299193 - 0.591308I$ $a = 2.27653 + 0.10382I$ $b = -0.095849 - 0.693490I$	$-1.10964 - 2.86683I$	$-0.194269 + 1.150607I$
$u = -0.524212 + 0.325358I$ $a = -0.254256 + 1.159040I$ $b = 0.408649 + 0.820268I$	$-1.87563 - 1.38329I$	$-4.88472 + 0.88974I$
$u = -0.524212 - 0.325358I$ $a = -0.254256 - 1.159040I$ $b = 0.408649 - 0.820268I$	$-1.87563 + 1.38329I$	$-4.88472 - 0.88974I$
$u = 0.418662 + 0.429381I$ $a = -1.12716 + 1.24862I$ $b = 0.573000 + 0.460129I$	$-2.37055 - 0.63845I$	$-5.51576 - 1.51985I$
$u = 0.418662 - 0.429381I$ $a = -1.12716 - 1.24862I$ $b = 0.573000 - 0.460129I$	$-2.37055 + 0.63845I$	$-5.51576 + 1.51985I$
$u = -0.89693 + 1.10743I$ $a = -0.995115 + 0.841611I$ $b = 1.367840 + 0.047642I$	$3.71063 - 1.12943I$	0
$u = -0.89693 - 1.10743I$ $a = -0.995115 - 0.841611I$ $b = 1.367840 - 0.047642I$	$3.71063 + 1.12943I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.11702+1.45676I$ $a=-0.0541211-0.0270150I$ $b=-0.525995+0.033075I$	$5.55211+3.08791I$	0
$u=-0.11702-1.45676I$ $a=-0.0541211+0.0270150I$ $b=-0.525995-0.033075I$	$5.55211-3.08791I$	0
$u=-0.50581+1.37651I$ $a=1.240180-0.406596I$ $b=-1.36837+0.37289I$	$3.06981-7.05974I$	0
$u=-0.50581-1.37651I$ $a=1.240180+0.406596I$ $b=-1.36837-0.37289I$	$3.06981+7.05974I$	0
$u=0.175618+0.424295I$ $a=6.42637+3.07840I$ $b=-0.342417+0.239754I$	$-1.92351-1.76678I$	$8.1243+28.0957I$
$u=0.175618-0.424295I$ $a=6.42637-3.07840I$ $b=-0.342417-0.239754I$	$-1.92351+1.76678I$	$8.1243-28.0957I$
$u=1.11832+1.28481I$ $a=0.800873+0.371072I$ $b=-1.46830-0.16447I$	$5.66847+1.40169I$	0
$u=1.11832-1.28481I$ $a=0.800873-0.371072I$ $b=-1.46830+0.16447I$	$5.66847-1.40169I$	0
$u=1.44144+0.90992I$ $a=-0.651114-0.640799I$ $b=1.46122-0.25816I$	$5.49304-4.87559I$	0
$u=1.44144-0.90992I$ $a=-0.651114+0.640799I$ $b=1.46122+0.25816I$	$5.49304+4.87559I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.19127 + 2.08900I$ $a = 1.45451 + 0.12813I$ $b = -1.301920 + 0.064317I$	$8.56289 - 3.55763I$	0
$u = 0.19127 - 2.08900I$ $a = 1.45451 - 0.12813I$ $b = -1.301920 - 0.064317I$	$8.56289 + 3.55763I$	0
$u = -0.36840 + 2.10955I$ $a = -0.0581272 + 0.0787356I$ $b = -0.280354 + 1.371580I$	$10.23040 + 6.56728I$	0
$u = -0.36840 - 2.10955I$ $a = -0.0581272 - 0.0787356I$ $b = -0.280354 - 1.371580I$	$10.23040 - 6.56728I$	0
$u = 0.76685 + 2.01630I$ $a = 1.004910 + 0.650911I$ $b = -1.42673 + 0.75889I$	$13.8428 - 14.0825I$	0
$u = 0.76685 - 2.01630I$ $a = 1.004910 - 0.650911I$ $b = -1.42673 - 0.75889I$	$13.8428 + 14.0825I$	0
$u = -0.01900 + 2.17067I$ $a = 0.0496534 - 0.0826517I$ $b = -0.160771 - 1.385870I$	$10.46560 + 0.62164I$	0
$u = -0.01900 - 2.17067I$ $a = 0.0496534 + 0.0826517I$ $b = -0.160771 + 1.385870I$	$10.46560 - 0.62164I$	0
$u = 0.61800 + 2.21033I$ $a = -1.060520 - 0.447387I$ $b = 1.56771 - 0.52759I$	$16.1314 - 7.4218I$	0
$u = 0.61800 - 2.21033I$ $a = -1.060520 + 0.447387I$ $b = 1.56771 + 0.52759I$	$16.1314 + 7.4218I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.48180 + 2.24551I$ $a = 0.994426 - 0.463135I$ $b = -1.49947 - 0.71295I$	$14.6778 + 6.8524I$	0
$u = -0.48180 - 2.24551I$ $a = 0.994426 + 0.463135I$ $b = -1.49947 + 0.71295I$	$14.6778 - 6.8524I$	0
$u = -0.21908 + 2.39343I$ $a = -1.055840 + 0.248840I$ $b = 1.63553 + 0.43161I$	$16.6724 + 0.0015I$	0
$u = -0.21908 - 2.39343I$ $a = -1.055840 - 0.248840I$ $b = 1.63553 - 0.43161I$	$16.6724 - 0.0015I$	0

II. $\boldsymbol{I_2^u = \langle b,\ 2u^3+u^2+a+5u+1,\ u^4+u^3+3u^2+2u+1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -2u^3-u^2-5u-1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -2u^3-u^2-5u-1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^2+1 \\ u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -2u^3-2u^2-5u-2 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^3+2u \\ u^3+u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^3+2u \\ u^3+u^2+2u+1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2-1 \\ -u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3u^2-2u-1$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_7	$y^4 + 5y^3 + 7y^2 + 2y + 1$
c_2, c_5	$y^4 + y^3 + 3y^2 + 2y + 1$
c_3	$y^4 + 9y^3 + 31y^2 + 19y + 4$
c_6, c_{10}	y^4
c_8	$y^4 - 11y^3 + 31y^2 + 10y + 1$
c_9, c_{11}, c_{12}	$(y-1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.395123 + 0.506844I$ $a = 0.59074 - 2.34806I$ $b = 0$	$-1.85594 + 1.41510I$	$-0.51206 - 2.21528I$
$u = -0.395123 - 0.506844I$ $a = 0.59074 + 2.34806I$ $b = 0$	$-1.85594 - 1.41510I$	$-0.51206 + 2.21528I$
$u = -0.10488 + 1.55249I$ $a = 0.409261 - 0.055548I$ $b = 0$	$5.14581 + 3.16396I$	$-7.98794 - 4.08190I$
$u = -0.10488 - 1.55249I$ $a = 0.409261 + 0.055548I$ $b = 0$	$5.14581 - 3.16396I$	$-7.98794 + 4.08190I$

III. $\boldsymbol{I_1^v = \langle a,\ -623v^{11} + 133v^{10} + \cdots + 263b + 608,\ v^{12} - v^{11} + \cdots - 3v + 1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ 2.36882v^{11} - 0.505703v^{10} + \cdots + 5.05323v - 2.31179 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 2.36882v^{11} - 0.505703v^{10} + \cdots + 5.05323v - 2.31179 \\ 2.36882v^{11} - 0.505703v^{10} + \cdots + 5.05323v - 2.31179 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 6.30038v^{11} - 2.03042v^{10} + \cdots + 12.9506v - 7.99620 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -6.30038v^{11} + 2.03042v^{10} + \cdots - 12.9506v + 8.99620 \\ -10.9962v^{11} + 3.69582v^{10} + \cdots - 22.4943v + 16.0380 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -4.69582v^{11} + 1.66540v^{10} + \cdots - 9.54373v + 7.04183 \\ -10.9962v^{11} + 3.69582v^{10} + \cdots - 22.4943v + 16.0380 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -4.26996v^{11} + 1.59696v^{10} + \cdots - 9.90494v + 6.30038 \\ -7.30038v^{11} + 3.03042v^{10} + \cdots - 16.9506v + 10.9962 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1.59696v^{11} + 0.756654v^{10} + \cdots - 4.39544v + 2.03042 \\ -7.30038v^{11} + 3.03042v^{10} + \cdots - 16.9506v + 10.9962 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ -6.30038v^{11} + 2.03042v^{10} + \cdots - 12.9506v + 7.99620 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{3729}{263}v^{11} + \frac{1130}{263}v^{10} + \frac{4668}{263}v^9 - \frac{19527}{263}v^8 + \frac{5107}{263}v^7 + \frac{8452}{263}v^6 - \frac{14914}{263}v^5 + \frac{24322}{263}v^4 - \frac{22832}{263}v^3 + \frac{7241}{263}v^2 - \frac{5199}{263}v + \frac{4001}{263}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_5	$(y^2 + y + 1)^6$
c_4, c_7	y^{12}
c_6, c_9, c_{10} c_{11}	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)^2$
c_8, c_{12}	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 0.815127 + 0.417821I$ $a = 0$ $b = -1.002190 - 0.295542I$	$1.89061 - 1.10558I$	$2.90246 + 2.38339I$
$v = 0.815127 - 0.417821I$ $a = 0$ $b = -1.002190 + 0.295542I$	$1.89061 + 1.10558I$	$2.90246 - 2.38339I$
$v = -0.045720 + 0.914831I$ $a = 0$ $b = -1.002190 + 0.295542I$	$1.89061 - 2.95419I$	$-0.30406 + 4.29351I$
$v = -0.045720 - 0.914831I$ $a = 0$ $b = -1.002190 - 0.295542I$	$1.89061 + 2.95419I$	$-0.30406 - 4.29351I$
$v = 0.679704 + 0.059778I$ $a = 0$ $b = 1.073950 + 0.558752I$	$3.66314I$	$0.57335 - 2.34011I$
$v = 0.679704 - 0.059778I$ $a = 0$ $b = 1.073950 - 0.558752I$	$- 3.66314I$	$0.57335 + 2.34011I$
$v = -0.288082 + 0.618530I$ $a = 0$ $b = 1.073950 - 0.558752I$	$- 7.72290I$	$-3.68173 + 10.26242I$
$v = -0.288082 - 0.618530I$ $a = 0$ $b = 1.073950 + 0.558752I$	$7.72290I$	$-3.68173 - 10.26242I$
$v = 0.93136 + 1.30101I$ $a = 0$ $b = 0.428243 - 0.664531I$	$-1.89061 + 2.95419I$	$-6.66783 - 2.20469I$
$v = 0.93136 - 1.30101I$ $a = 0$ $b = 0.428243 + 0.664531I$	$-1.89061 - 2.95419I$	$-6.66783 + 2.20469I$

Solutions to I_1^v		$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v=$	$-1.59239+0.15607I$		
$a=$	0	$-1.89061-1.10558I$	$-2.82220+2.24866I$
$b=$	$0.428243-0.664531I$		
$v=$	$-1.59239-0.15607I$		
$a=$	0	$-1.89061+1.10558I$	$-2.82220-2.24866I$
$b=$	$0.428243+0.664531I$		

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^6)(u^4-u^3+3u^2-2u+1)(u^{44}+8u^{43}+\cdots+22u+1)$
c_2	$((u^2+u+1)^6)(u^4-u^3+u^2+1)(u^{44}+8u^{43}+\cdots+6u+1)$
c_3	$(u^2-u+1)^6(u^4+u^3+5u^2-u+2)$ $\cdot(u^{44}-8u^{43}+\cdots+577140u+41508)$
c_4	$u^{12}(u^4-u^3+3u^2-2u+1)(u^{44}-2u^{43}+\cdots+18432u^2+4096)$
c_5	$((u^2-u+1)^6)(u^4+u^3+u^2+1)(u^{44}+8u^{43}+\cdots+6u+1)$
c_6	$u^4(u^6-u^5+\cdots-u+1)^2(u^{44}-3u^{43}+\cdots-120u+16)$
c_7	$u^{12}(u^4+u^3+3u^2+2u+1)(u^{44}-2u^{43}+\cdots+18432u^2+4096)$
c_8	$(u^4-5u^3+7u^2-2u+1)(u^6-3u^5+5u^4-4u^3+2u^2-u+1)^2$ $\cdot(u^{44}+4u^{43}+\cdots+2u+1)$
c_9	$((u-1)^4)(u^6+u^5+\cdots+u+1)^2(u^{44}-7u^{43}+\cdots+8u+1)$
c_{10}	$u^4(u^6+u^5+\cdots+u+1)^2(u^{44}-3u^{43}+\cdots-120u+16)$
c_{11}	$((u+1)^4)(u^6-u^5+\cdots-u+1)^2(u^{44}-7u^{43}+\cdots+8u+1)$
c_{12}	$(u+1)^4(u^6+3u^5+5u^4+4u^3+2u^2+u+1)^2$ $\cdot(u^{44}+17u^{43}+\cdots+48u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^6)(y^4+5y^3+\cdots+2y+1)(y^{44}+64y^{43}+\cdots+22y+1)$
c_2, c_5	$((y^2+y+1)^6)(y^4+y^3+3y^2+2y+1)(y^{44}+8y^{43}+\cdots+22y+1)$
c_3	$(y^2+y+1)^6(y^4+9y^3+31y^2+19y+4)$ $\cdot\,(y^{44}+120y^{43}+\cdots+42862402296y+1722914064)$
c_4, c_7	$y^{12}(y^4+5y^3+7y^2+2y+1)$ $\cdot\,(y^{44}+70y^{43}+\cdots+150994944y+16777216)$
c_6, c_{10}	$y^4(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2$ $\cdot\,(y^{44}-33y^{43}+\cdots-576y+256)$
c_8	$(y^4-11y^3+31y^2+10y+1)(y^6+y^5+5y^4+6y^2+3y+1)^2$ $\cdot\,(y^{44}-80y^{43}+\cdots+14y+1)$
c_9, c_{11}	$(y-1)^4(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2$ $\cdot\,(y^{44}-17y^{43}+\cdots-48y+1)$
c_{12}	$((y-1)^4)(y^6+y^5+\cdots+3y+1)^2(y^{44}+27y^{43}+\cdots-48y+1)$