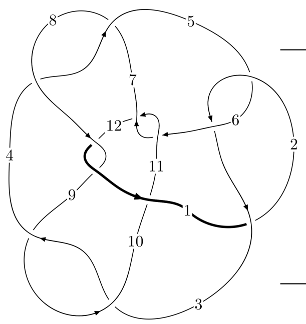
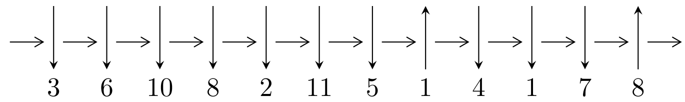
$12n_{0516}$ ($K12n_{0516}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -7.85298 \times 10^{46} u^{63} - 5.20735 \times 10^{47} u^{62} + \cdots + 6.20841 \times 10^{47} b - 2.06005 \times 10^{48},$$
$$-7.35896 \times 10^{48} u^{63} - 9.51515 \times 10^{48} u^{62} + \cdots + 4.34588 \times 10^{48} a + 4.04153 \times 10^{49},\ u^{64} + u^{63} + \cdots + u - 7$$
$$I_2^u = \langle u^{13} - 2u^{11} + u^{10} + 5u^9 - u^8 - 6u^7 + 3u^6 + 6u^5 - 2u^4 - 3u^3 + 2u^2 + b + u - 1,\ -u^{15} + 2u^{14} + \cdots + a - 3,$$
$$u^{16} - 3u^{14} + u^{13} + 8u^{12} - 2u^{11} - 13u^{10} + 5u^9 + 17u^8 - 6u^7 - 15u^6 + 6u^5 + 10u^4 - 4u^3 - 4u^2 + u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 80 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.

$$\boldsymbol{I_1^u = \langle -7.85\times10^{46}u^{63} - 5.21\times10^{47}u^{62} + \cdots + 6.21\times10^{47}b - 2.06\times10^{48},\ -7.36\times10^{48}u^{63} - 9.52\times10^{48}u^{62} + \cdots + 4.35\times10^{48}a + 4.04\times10^{49},\ u^{64} + u^{63} + \cdots + u - 7\rangle}$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1.69332u^{63} + 2.18946u^{62} + \cdots - 1.36290u - 9.29967 \\ 0.126489u^{63} + 0.838758u^{62} + \cdots + 0.322847u + 3.31817 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.458095u^{63} + 0.270972u^{62} + \cdots + 5.77781u - 3.68320 \\ -0.652252u^{63} - 0.459949u^{62} + \cdots - 3.70273u - 0.960278 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1.11035u^{63} + 0.730921u^{62} + \cdots + 9.48054u - 2.72293 \\ -0.652252u^{63} - 0.459949u^{62} + \cdots - 3.70273u - 0.960278 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.390009u^{63} + 1.20156u^{62} + \cdots + 9.75516u + 2.37373 \\ -1.02634u^{63} - 2.06653u^{62} + \cdots - 6.84016u + 0.604319 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1.03280u^{63} + 0.937261u^{62} + \cdots - 5.99095u - 13.2305 \\ 0.117302u^{63} + 0.462797u^{62} + \cdots + 0.960616u + 2.35400 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -1.98871u^{63} - 1.59326u^{62} + \cdots - 13.0023u + 2.89409 \\ 0.669965u^{63} + 0.133677u^{62} + \cdots + 3.58629u - 0.901368 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.547710u^{63} + 1.84010u^{62} + \cdots - 2.73316u + 10.4198 \\ 1.08225u^{63} + 0.435476u^{62} + \cdots + 6.51395u + 1.98262 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -3.58831u^{63} - 4.70243u^{62} + \cdots - 11.8066u - 39.5814$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{64} + 25u^{63} + \cdots + 365u + 49$
c_2, c_5	$u^{64} + u^{63} + \cdots + u - 7$
c_3, c_9	$u^{64} + u^{63} + \cdots - 21u - 11$
c_4, c_7	$u^{64} - 3u^{63} + \cdots + 9u - 1$
c_6, c_{11}	$u^{64} - 3u^{63} + \cdots - 2134u + 163$
c_8, c_{12}	$u^{64} + 3u^{63} + \cdots - 44u + 1$
c_{10}	$u^{64} + u^{63} + \cdots + 1218u + 817$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{64} + 35y^{63} + \cdots - 129697y + 2401$
c_2, c_5	$y^{64} - 25y^{63} + \cdots - 365y + 49$
c_3, c_9	$y^{64} + 21y^{63} + \cdots + 1847y + 121$
c_4, c_7	$y^{64} + 3y^{63} + \cdots + 67y + 1$
c_6, c_{11}	$y^{64} - 51y^{63} + \cdots - 1941718y + 26569$
c_8, c_{12}	$y^{64} + 63y^{63} + \cdots - 222y + 1$
c_{10}	$y^{64} - 17y^{63} + \cdots - 71533104y + 667489$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.371115 + 0.915968I$ $a = -0.249549 + 0.000216I$ $b = 1.41996 - 0.06852I$	$-4.48635 + 5.15157I$	$-8.61815 - 5.07687I$
$u = -0.371115 - 0.915968I$ $a = -0.249549 - 0.000216I$ $b = 1.41996 + 0.06852I$	$-4.48635 - 5.15157I$	$-8.61815 + 5.07687I$
$u = -0.857881 + 0.542275I$ $a = -1.74491 - 1.24280I$ $b = -0.157463 + 1.230750I$	$3.16250 + 2.17822I$	$-8.00000 - 2.65918I$
$u = -0.857881 - 0.542275I$ $a = -1.74491 + 1.24280I$ $b = -0.157463 - 1.230750I$	$3.16250 - 2.17822I$	$-8.00000 + 2.65918I$
$u = -0.774165 + 0.604979I$ $a = -0.379187 - 0.211028I$ $b = -1.184290 - 0.467280I$	$-0.067270 - 0.618429I$	$-7.06284 - 1.08548I$
$u = -0.774165 - 0.604979I$ $a = -0.379187 + 0.211028I$ $b = -1.184290 + 0.467280I$	$-0.067270 + 0.618429I$	$-7.06284 + 1.08548I$
$u = -0.697346 + 0.673163I$ $a = -1.356820 - 0.219530I$ $b = -0.281088 - 0.295837I$	$1.16285 - 2.77092I$	$-3.07563 + 5.25924I$
$u = -0.697346 - 0.673163I$ $a = -1.356820 + 0.219530I$ $b = -0.281088 + 0.295837I$	$1.16285 + 2.77092I$	$-3.07563 - 5.25924I$
$u = -0.650023 + 0.706094I$ $a = -0.285329 + 0.030490I$ $b = -1.046050 - 0.338958I$	$-0.317206 - 0.693581I$	$-9.74422 - 0.91005I$
$u = -0.650023 - 0.706094I$ $a = -0.285329 - 0.030490I$ $b = -1.046050 + 0.338958I$	$-0.317206 + 0.693581I$	$-9.74422 + 0.91005I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.005520 + 0.304620I$ $a = -0.923017 + 0.876033I$ $b = -0.04591 + 1.48528I$	$-3.50871 + 0.31411I$	$-14.0279 - 2.5519I$
$u = -1.005520 - 0.304620I$ $a = -0.923017 - 0.876033I$ $b = -0.04591 - 1.48528I$	$-3.50871 - 0.31411I$	$-14.0279 + 2.5519I$
$u = 1.06514$ $a = 2.45909$ $b = 1.23942$	-5.55858	-18.6480
$u = -0.895727 + 0.581855I$ $a = 1.75893 + 1.76078I$ $b = 1.60878 - 0.32014I$	$-0.42753 + 5.30671I$	$-8.00000 - 5.96802I$
$u = -0.895727 - 0.581855I$ $a = 1.75893 - 1.76078I$ $b = 1.60878 + 0.32014I$	$-0.42753 - 5.30671I$	$-8.00000 + 5.96802I$
$u = 0.597067 + 0.892023I$ $a = 0.024569 + 0.245452I$ $b = -1.45388 - 0.06677I$	$-3.48226 + 1.14380I$	0
$u = 0.597067 - 0.892023I$ $a = 0.024569 - 0.245452I$ $b = -1.45388 + 0.06677I$	$-3.48226 - 1.14380I$	0
$u = -0.559478 + 0.919447I$ $a = -0.206651 - 0.005295I$ $b = 1.53912 + 0.83354I$	$-3.36566 - 9.85168I$	0
$u = -0.559478 - 0.919447I$ $a = -0.206651 + 0.005295I$ $b = 1.53912 - 0.83354I$	$-3.36566 + 9.85168I$	0
$u = 0.916404 + 0.593398I$ $a = 0.319890 + 0.450880I$ $b = 0.167272 - 0.326682I$	$1.79208 - 3.22792I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.916404 - 0.593398I$ $a = 0.319890 - 0.450880I$ $b = 0.167272 + 0.326682I$	$1.79208 + 3.22792I$	0
$u = 0.968315 + 0.512599I$ $a = 0.667248 + 1.104970I$ $b = -1.13705 + 1.56486I$	$-2.38426 - 5.52251I$	0
$u = 0.968315 - 0.512599I$ $a = 0.667248 - 1.104970I$ $b = -1.13705 - 1.56486I$	$-2.38426 + 5.52251I$	0
$u = 0.458469 + 0.773809I$ $a = -0.365977 - 0.435982I$ $b = 1.36736 - 0.65169I$	$1.92183 + 3.34302I$	$-2.34549 - 5.45826I$
$u = 0.458469 - 0.773809I$ $a = -0.365977 + 0.435982I$ $b = 1.36736 + 0.65169I$	$1.92183 - 3.34302I$	$-2.34549 + 5.45826I$
$u = 0.781870 + 0.435593I$ $a = 2.32610 - 2.04972I$ $b = 1.55966 + 0.88903I$	$-1.62663 + 1.61635I$	$-10.68775 - 0.61960I$
$u = 0.781870 - 0.435593I$ $a = 2.32610 + 2.04972I$ $b = 1.55966 - 0.88903I$	$-1.62663 - 1.61635I$	$-10.68775 + 0.61960I$
$u = 0.394059 + 0.796783I$ $a = 0.067963 - 0.328943I$ $b = -1.29066 + 0.68009I$	$-4.83374 + 2.64674I$	$-8.71564 - 1.20360I$
$u = 0.394059 - 0.796783I$ $a = 0.067963 + 0.328943I$ $b = -1.29066 - 0.68009I$	$-4.83374 - 2.64674I$	$-8.71564 + 1.20360I$
$u = 0.851879 + 0.716505I$ $a = -0.867199 + 0.921044I$ $b = -0.045981 - 1.060590I$	$2.98092 - 2.73164I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.851879 - 0.716505I$ $a = -0.867199 - 0.921044I$ $b = -0.045981 + 1.060590I$	$2.98092 + 2.73164I$	0
$u = 0.692371 + 0.478325I$ $a = -0.687637 + 1.208310I$ $b = -0.067945 + 0.390241I$	$2.43536 - 1.37800I$	$-3.03170 + 4.30230I$
$u = 0.692371 - 0.478325I$ $a = -0.687637 - 1.208310I$ $b = -0.067945 - 0.390241I$	$2.43536 + 1.37800I$	$-3.03170 - 4.30230I$
$u = -0.965929 + 0.642706I$ $a = 1.406400 - 0.035612I$ $b = 0.366038 - 0.021949I$	$0.34858 + 7.88695I$	0
$u = -0.965929 - 0.642706I$ $a = 1.406400 + 0.035612I$ $b = 0.366038 + 0.021949I$	$0.34858 - 7.88695I$	0
$u = 0.827576 + 0.058957I$ $a = 0.354062 - 1.262080I$ $b = -0.449402 + 0.256518I$	$-3.04990 + 3.22340I$	$-13.6310 - 5.3592I$
$u = 0.827576 - 0.058957I$ $a = 0.354062 + 1.262080I$ $b = -0.449402 - 0.256518I$	$-3.04990 - 3.22340I$	$-13.6310 + 5.3592I$
$u = -1.172890 + 0.150474I$ $a = -1.81652 - 0.37330I$ $b = -1.64426 + 0.42875I$	$-3.25362 - 1.09733I$	0
$u = -1.172890 - 0.150474I$ $a = -1.81652 + 0.37330I$ $b = -1.64426 - 0.42875I$	$-3.25362 + 1.09733I$	0
$u = -1.187400 + 0.076445I$ $a = 2.20975 + 0.70478I$ $b = 1.68317 + 0.47480I$	$-10.28720 - 0.24729I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.187400-0.076445I$ $a=\ 2.20975-0.70478I$ $b=\ 1.68317-0.47480I$	$-10.28720+0.24729I$	0
$u=\ 0.649477+0.461049I$ $a=-0.545471+1.205120I$ $b=\ 0.025243+0.420984I$	$2.43555-1.37713I$	$-2.48418+4.50652I$
$u=\ 0.649477-0.461049I$ $a=-0.545471-1.205120I$ $b=\ 0.025243-0.420984I$	$2.43555+1.37713I$	$-2.48418-4.50652I$
$u=-1.010460+0.669661I$ $a=\ 1.34958+1.35057I$ $b=\ 1.206140-0.351826I$	$-1.39409+6.02950I$	0
$u=-1.010460-0.669661I$ $a=\ 1.34958-1.35057I$ $b=\ 1.206140+0.351826I$	$-1.39409-6.02950I$	0
$u=-0.898375+0.815724I$ $a=\ 0.506734-0.223654I$ $b=-0.012593-0.831763I$	$8.50218+3.05145I$	0
$u=-0.898375-0.815724I$ $a=\ 0.506734+0.223654I$ $b=-0.012593+0.831763I$	$8.50218-3.05145I$	0
$u=\ 1.234370+0.078310I$ $a=-2.24169-0.21794I$ $b=-1.84636-0.41895I$	$-10.34120-8.02728I$	0
$u=\ 1.234370-0.078310I$ $a=-2.24169+0.21794I$ $b=-1.84636+0.41895I$	$-10.34120+8.02728I$	0
$u=\ 1.092590+0.608643I$ $a=\ 1.85261-1.17381I$ $b=\ 1.38520+0.95415I$	$-6.86464-7.86312I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.092590 - 0.608643I$ $a = 1.85261 + 1.17381I$ $b = 1.38520 - 0.95415I$	$-6.86464 + 7.86312I$	0
$u = 1.090750 + 0.629227I$ $a = -1.67774 + 1.10641I$ $b = -1.79920 - 0.82291I$	$0.06662 - 8.65572I$	0
$u = 1.090750 - 0.629227I$ $a = -1.67774 - 1.10641I$ $b = -1.79920 + 0.82291I$	$0.06662 + 8.65572I$	0
$u = 0.928957 + 0.899756I$ $a = -0.280326 + 0.368000I$ $b = 0.099596 - 0.430826I$	$4.89538 - 3.31206I$	0
$u = 0.928957 - 0.899756I$ $a = -0.280326 - 0.368000I$ $b = 0.099596 + 0.430826I$	$4.89538 + 3.31206I$	0
$u = -1.153990 + 0.595067I$ $a = -1.11490 - 1.27051I$ $b = -1.57061 + 0.32109I$	$-6.95046 + 0.36378I$	0
$u = -1.153990 - 0.595067I$ $a = -1.11490 + 1.27051I$ $b = -1.57061 - 0.32109I$	$-6.95046 - 0.36378I$	0
$u = 1.088600 + 0.714285I$ $a = 0.79820 - 1.46524I$ $b = 1.60298 + 0.07379I$	$-4.99650 - 7.10286I$	0
$u = 1.088600 - 0.714285I$ $a = 0.79820 + 1.46524I$ $b = 1.60298 - 0.07379I$	$-4.99650 + 7.10286I$	0
$u = -1.106450 + 0.707429I$ $a = -1.66490 - 1.28159I$ $b = -1.67082 + 1.00047I$	$-5.0534 + 15.8408I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.106450 - 0.707429I$ $a = -1.66490 + 1.28159I$ $b = -1.67082 - 1.00047I$	$-5.0534 - 15.8408I$	0
$u = -0.525925$ $a = -0.416776$ $b = -0.487079$	-0.777990	-12.7260
$u = -0.035617 + 0.416471I$ $a = -1.82679 - 1.45388I$ $b = 0.296847 + 0.840473I$	$-0.83793 + 2.36944I$	$-4.69100 - 1.64356I$
$u = -0.035617 - 0.416471I$ $a = -1.82679 + 1.45388I$ $b = 0.296847 - 0.840473I$	$-0.83793 - 2.36944I$	$-4.69100 + 1.64356I$

II.

$\boldsymbol{I_2^u = \langle u^{13} - 2u^{11} + \cdots + b - 1,\ -u^{15} + 2u^{14} + \cdots + a - 3,\ u^{16} - 3u^{14} + \cdots + u + 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2u^{15} + 4u^{14} + 6u^{13} - 13u^{12} - 17u^{11} + 32u^{10} + 27u^9 - 57u^8 - 34u^7 + 66u^6 + 28u^5 - 63u^4 - 14u^3 + 35u^2 - u - 18$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{16} - 6u^{15} + \cdots - 9u + 1$
c_2	$u^{16} - 3u^{14} + \cdots - u + 1$
c_3	$u^{16} + 8u^{14} + \cdots - u + 1$
c_4	$u^{16} - 2u^{15} + \cdots + u + 1$
c_5	$u^{16} - 3u^{14} + \cdots + u + 1$
c_6	$u^{16} - 6u^{14} + \cdots - 4u + 1$
c_7	$u^{16} + 2u^{15} + \cdots - u + 1$
c_8	$u^{16} + 4u^{15} + \cdots + 8u + 3$
c_9	$u^{16} + 8u^{14} + \cdots + u + 1$
c_{10}	$u^{16} - 12u^{15} + \cdots + 4u + 1$
c_{11}	$u^{16} - 6u^{14} + \cdots + 4u + 1$
c_{12}	$u^{16} - 4u^{15} + \cdots - 8u + 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{16} + 14y^{15} + \cdots + 7y + 1$
c_2, c_5	$y^{16} - 6y^{15} + \cdots - 9y + 1$
c_3, c_9	$y^{16} + 16y^{15} + \cdots + 11y + 1$
c_4, c_7	$y^{16} + 10y^{15} + \cdots - 5y + 1$
c_6, c_{11}	$y^{16} - 12y^{15} + \cdots - 14y + 1$
c_8, c_{12}	$y^{16} + 6y^{15} + \cdots + 14y + 9$
c_{10}	$y^{16} - 2y^{15} + \cdots - 16y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.697088 + 0.669632I$ $a = 1.019220 - 0.460118I$ $b = 1.149200 + 0.054160I$	$0.02773 + 1.95723I$	$-6.96082 - 3.46038I$
$u = 0.697088 - 0.669632I$ $a = 1.019220 + 0.460118I$ $b = 1.149200 - 0.054160I$	$0.02773 - 1.95723I$	$-6.96082 + 3.46038I$
$u = -0.858913 + 0.641497I$ $a = 1.25891 + 1.35675I$ $b = 0.060267 - 1.095260I$	$4.17448 + 2.50164I$	$1.63264 - 3.76808I$
$u = -0.858913 - 0.641497I$ $a = 1.25891 - 1.35675I$ $b = 0.060267 + 1.095260I$	$4.17448 - 2.50164I$	$1.63264 + 3.76808I$
$u = -1.083430 + 0.218721I$ $a = -1.93923 - 0.45656I$ $b = -1.45846 + 0.77557I$	$-3.73156 - 1.08240I$	$-18.1024 + 3.9332I$
$u = -1.083430 - 0.218721I$ $a = -1.93923 + 0.45656I$ $b = -1.45846 - 0.77557I$	$-3.73156 + 1.08240I$	$-18.1024 - 3.9332I$
$u = 0.993253 + 0.639630I$ $a = -1.29065 + 1.22703I$ $b = -1.367360 + 0.028381I$	$-0.90271 - 7.06415I$	$-9.34862 + 8.78611I$
$u = 0.993253 - 0.639630I$ $a = -1.29065 - 1.22703I$ $b = -1.367360 - 0.028381I$	$-0.90271 + 7.06415I$	$-9.34862 - 8.78611I$
$u = 0.764991 + 0.200725I$ $a = 1.38195 - 1.78127I$ $b = 0.126233 - 0.802194I$	$1.83703 - 0.82457I$	$-12.09308 - 1.50076I$
$u = 0.764991 - 0.200725I$ $a = 1.38195 + 1.78127I$ $b = 0.126233 + 0.802194I$	$1.83703 + 0.82457I$	$-12.09308 + 1.50076I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.904876+0.830651I$ $a=-0.283918+0.502389I$ $b=\quad 0.025373+0.533046I$	$7.95111+3.09873I$	$-10.71462-3.22283I$
$u=-0.904876-0.830651I$ $a=-0.283918-0.502389I$ $b=\quad 0.025373-0.533046I$	$7.95111-3.09873I$	$-10.71462+3.22283I$
$u=\quad 0.921176+0.893488I$ $a=-0.537236+0.264160I$ $b=\quad 0.095236-0.832026I$	$5.34876-3.28911I$	$3.79077+2.57921I$
$u=\quad 0.921176-0.893488I$ $a=-0.537236-0.264160I$ $b=\quad 0.095236+0.832026I$	$5.34876+3.28911I$	$3.79077-2.57921I$
$u=-0.529286+0.266978I$ $a=-1.60905+2.15788I$ $b=\quad 0.869516+0.421920I$	$-1.54536+3.30158I$	$-8.70391-5.45477I$
$u=-0.529286-0.266978I$ $a=-1.60905-2.15788I$ $b=\quad 0.869516-0.421920I$	$-1.54536-3.30158I$	$-8.70391+5.45477I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{16} - 6u^{15} + \cdots - 9u + 1)(u^{64} + 25u^{63} + \cdots + 365u + 49)$
c_2	$(u^{16} - 3u^{14} + \cdots - u + 1)(u^{64} + u^{63} + \cdots + u - 7)$
c_3	$(u^{16} + 8u^{14} + \cdots - u + 1)(u^{64} + u^{63} + \cdots - 21u - 11)$
c_4	$(u^{16} - 2u^{15} + \cdots + u + 1)(u^{64} - 3u^{63} + \cdots + 9u - 1)$
c_5	$(u^{16} - 3u^{14} + \cdots + u + 1)(u^{64} + u^{63} + \cdots + u - 7)$
c_6	$(u^{16} - 6u^{14} + \cdots - 4u + 1)(u^{64} - 3u^{63} + \cdots - 2134u + 163)$
c_7	$(u^{16} + 2u^{15} + \cdots - u + 1)(u^{64} - 3u^{63} + \cdots + 9u - 1)$
c_8	$(u^{16} + 4u^{15} + \cdots + 8u + 3)(u^{64} + 3u^{63} + \cdots - 44u + 1)$
c_9	$(u^{16} + 8u^{14} + \cdots + u + 1)(u^{64} + u^{63} + \cdots - 21u - 11)$
c_{10}	$(u^{16} - 12u^{15} + \cdots + 4u + 1)(u^{64} + u^{63} + \cdots + 1218u + 817)$
c_{11}	$(u^{16} - 6u^{14} + \cdots + 4u + 1)(u^{64} - 3u^{63} + \cdots - 2134u + 163)$
c_{12}	$(u^{16} - 4u^{15} + \cdots - 8u + 3)(u^{64} + 3u^{63} + \cdots - 44u + 1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{16} + 14y^{15} + \cdots + 7y + 1)(y^{64} + 35y^{63} + \cdots - 129697y + 2401)$
c_2, c_5	$(y^{16} - 6y^{15} + \cdots - 9y + 1)(y^{64} - 25y^{63} + \cdots - 365y + 49)$
c_3, c_9	$(y^{16} + 16y^{15} + \cdots + 11y + 1)(y^{64} + 21y^{63} + \cdots + 1847y + 121)$
c_4, c_7	$(y^{16} + 10y^{15} + \cdots - 5y + 1)(y^{64} + 3y^{63} + \cdots + 67y + 1)$
c_6, c_{11}	$(y^{16} - 12y^{15} + \cdots - 14y + 1)(y^{64} - 51y^{63} + \cdots - 1941718y + 26569)$
c_8, c_{12}	$(y^{16} + 6y^{15} + \cdots + 14y + 9)(y^{64} + 63y^{63} + \cdots - 222y + 1)$
c_{10}	$(y^{16} - 2y^{15} + \cdots - 16y + 1)$ $\cdot (y^{64} - 17y^{63} + \cdots - 71533104y + 667489)$