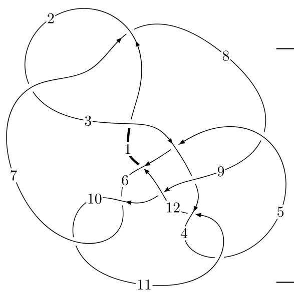
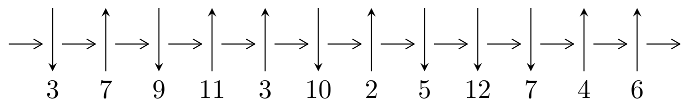
$12n_{0634}$ ($K12n_{0634}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -1.95711 \times 10^{172} u^{51} - 3.47717 \times 10^{172} u^{50} + \cdots + 1.87747 \times 10^{177} b + 1.65522 \times 10^{176}, \\
& 5.80863 \times 10^{175} u^{51} + 7.03687 \times 10^{175} u^{50} + \cdots + 8.07312 \times 10^{178} a + 1.92816 \times 10^{178}, \\
& u^{52} + u^{51} + \cdots - 430u - 1849 \rangle \\
I_2^u = \langle & 7.95354 \times 10^{18} u^{28} - 2.49597 \times 10^{18} u^{27} + \cdots + 1.30438 \times 10^{19} b + 9.76819 \times 10^{18}, \\
& - 2.06470 \times 10^{19} u^{28} - 4.89686 \times 10^{18} u^{27} + \cdots + 1.30438 \times 10^{19} a - 4.59506 \times 10^{19}, \\
& u^{29} + 16u^{27} + \cdots + 2u + 1 \rangle
\end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 81 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. $\boldsymbol{I_1^u = \langle -1.96 \times 10^{172} u^{51} - 3.48 \times 10^{172} u^{50} + \cdots + 1.88 \times 10^{177} b + 1.66 \times 10^{176},\ 5.81 \times 10^{175} u^{51} + 7.04 \times 10^{175} u^{50} + \cdots + 8.07 \times 10^{178} a + 1.93 \times 10^{178},\ u^{52} + u^{51} + \cdots - 430u - 1849 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.000719502u^{51} - 0.000871642u^{50} + \cdots - 2.02990u - 0.238837 \\ 0.0000104242u^{51} + 0.0000185205u^{50} + \cdots - 2.44475u - 0.0881622 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.000719502u^{51} - 0.000871642u^{50} + \cdots - 2.02990u - 0.238837 \\ -8.14632 \times 10^{-7}u^{51} - 0.0000812325u^{50} + \cdots - 1.04897u + 0.193144 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.000695591u^{51} + 0.000693094u^{50} + \cdots + 5.78811u + 1.78101 \\ 0.000147181u^{51} + 0.000119151u^{50} + \cdots + 2.46237u + 0.340252 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.000548410u^{51} + 0.000573943u^{50} + \cdots + 3.32574u + 1.44076 \\ 0.000147181u^{51} + 0.000119151u^{50} + \cdots + 2.46237u + 0.340252 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.000562077u^{51} - 0.000571100u^{50} + \cdots - 6.77593u - 2.97489 \\ -0.000159864u^{51} - 0.000179227u^{50} + \cdots - 2.17934u - 0.533160 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.000231771u^{51} + 0.000153448u^{50} + \cdots + 10.5786u + 4.67788 \\ 0.0000301411u^{51} + 0.0000823394u^{50} + \cdots + 2.47373u + 0.457419 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.000440440u^{51} + 0.000638660u^{50} + \cdots - 4.30838u + 4.57675 \\ 0.0000737660u^{51} + 0.0000885300u^{50} + \cdots - 0.804093u + 0.949948 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.000209766u^{51} + 0.000739361u^{50} + \cdots + 3.85584u - 4.14186$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{52} + 83u^{51} + \cdots - 10239762u + 3418801$
c_2, c_7	$u^{52} - u^{51} + \cdots + 430u - 1849$
c_3	$u^{52} - u^{51} + \cdots - 96u + 9$
c_4, c_{11}	$u^{52} - 2u^{51} + \cdots - 1077u - 89$
c_5	$u^{52} + 47u^{50} + \cdots - 950335u - 289973$
c_6, c_{10}	$u^{52} + 2u^{51} + \cdots + 91u - 181$
c_8	$u^{52} + 5u^{51} + \cdots - 38226689u + 7428119$
c_9	$u^{52} - 5u^{51} + \cdots + 324u + 356$
c_{12}	$u^{52} - 2u^{51} + \cdots - 81165u + 4259$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{52} - 209y^{51} + \cdots + 1284466243376242y + 11688200277601$
c_2, c_7	$y^{52} + 83y^{51} + \cdots - 10239762y + 3418801$
c_3	$y^{52} - 11y^{51} + \cdots - 4590y + 81$
c_4, c_{11}	$y^{52} + 50y^{51} + \cdots - 321727y + 7921$
c_5	$y^{52} + 94y^{51} + \cdots - 346734679987y + 84084340729$
c_6, c_{10}	$y^{52} - 54y^{51} + \cdots + 1011111y + 32761$
c_8	$y^{52} - 73y^{51} + \cdots - 308498524989461y + 55176951878161$
c_9	$y^{52} - 25y^{51} + \cdots + 789296y + 126736$
c_{12}	$y^{52} + 98y^{51} + \cdots - 7982256041y + 18139081$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.275825 + 0.932345I$ $a = -0.380468 - 0.078038I$ $b = 1.52892 + 1.15015I$	$-2.42630 + 6.41308I$	$1.23938 - 7.68294I$
$u = 0.275825 - 0.932345I$ $a = -0.380468 + 0.078038I$ $b = 1.52892 - 1.15015I$	$-2.42630 - 6.41308I$	$1.23938 + 7.68294I$
$u = 0.539271 + 0.935679I$ $a = -0.287527 + 0.954049I$ $b = -0.817124 + 0.789515I$	$-3.75694 + 4.49624I$	$-7.52077 - 6.70808I$
$u = 0.539271 - 0.935679I$ $a = -0.287527 - 0.954049I$ $b = -0.817124 - 0.789515I$	$-3.75694 - 4.49624I$	$-7.52077 + 6.70808I$
$u = -0.650501 + 0.863107I$ $a = 0.691550 - 0.812723I$ $b = -1.61355 - 1.85935I$	$0.50603 - 2.57474I$	$0. + 4.06110I$
$u = -0.650501 - 0.863107I$ $a = 0.691550 + 0.812723I$ $b = -1.61355 + 1.85935I$	$0.50603 + 2.57474I$	$0. - 4.06110I$
$u = 0.202582 + 0.881244I$ $a = 0.630878 - 0.801031I$ $b = -0.512799 + 0.454432I$	$-1.81662 - 1.18879I$	$-5.31113 + 2.20959I$
$u = 0.202582 - 0.881244I$ $a = 0.630878 + 0.801031I$ $b = -0.512799 - 0.454432I$	$-1.81662 + 1.18879I$	$-5.31113 - 2.20959I$
$u = 0.351525 + 1.081680I$ $a = -0.672391 + 1.023130I$ $b = -0.217102 - 0.172805I$	$-8.65330 - 1.89169I$	$-8.34506 + 0.93318I$
$u = 0.351525 - 1.081680I$ $a = -0.672391 - 1.023130I$ $b = -0.217102 + 0.172805I$	$-8.65330 + 1.89169I$	$-8.34506 - 0.93318I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.818940 + 0.160767I$ $a = -1.69144 + 0.20465I$ $b = -0.928736 + 0.671508I$	$-5.38897 + 0.87571I$	$-2.85912 + 2.34335I$
$u = -0.818940 - 0.160767I$ $a = -1.69144 - 0.20465I$ $b = -0.928736 - 0.671508I$	$-5.38897 - 0.87571I$	$-2.85912 - 2.34335I$
$u = -0.335509 + 0.751647I$ $a = 0.538199 - 0.371856I$ $b = -0.932426 - 0.178983I$	$-0.27804 - 1.89990I$	$0.73245 + 4.61007I$
$u = -0.335509 - 0.751647I$ $a = 0.538199 + 0.371856I$ $b = -0.932426 + 0.178983I$	$-0.27804 + 1.89990I$	$0.73245 - 4.61007I$
$u = 0.213597 + 1.222440I$ $a = -0.743596 - 0.589889I$ $b = 1.60989 - 1.34032I$	$1.01333 + 1.02881I$	0
$u = 0.213597 - 1.222440I$ $a = -0.743596 + 0.589889I$ $b = 1.60989 + 1.34032I$	$1.01333 - 1.02881I$	0
$u = -0.055615 + 0.755904I$ $a = 0.49398 - 1.42299I$ $b = -1.190970 - 0.372066I$	$-2.79971 - 1.53838I$	$-4.05410 + 0.44087I$
$u = -0.055615 - 0.755904I$ $a = 0.49398 + 1.42299I$ $b = -1.190970 + 0.372066I$	$-2.79971 + 1.53838I$	$-4.05410 - 0.44087I$
$u = 0.679978$ $a = 1.52551$ $b = 0.501507$	-1.67869	-6.69150
$u = 0.336439 + 0.585453I$ $a = -0.443953 - 0.493321I$ $b = -0.599232 - 0.191514I$	$-3.82874 - 0.83282I$	$-6.69897 - 1.25074I$

<table>
<tr><th>Solutions to I_1^u</th><th>$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$</th><th>Cusp shape</th></tr>
<tr><td>$u = 0.336439 - 0.585453I$
$a = -0.443953 + 0.493321I$
$b = -0.599232 + 0.191514I$</td><td>$-3.82874 + 0.83282I$</td><td>$-6.69897 + 1.25074I$</td></tr>
<tr><td>$u = 0.521240 + 0.365317I$
$a = 0.555831 + 0.734286I$
$b = -1.084070 + 0.405815I$</td><td>$-1.16726 - 3.02767I$</td><td>$1.89586 + 2.76037I$</td></tr>
<tr><td>$u = 0.521240 - 0.365317I$
$a = 0.555831 - 0.734286I$
$b = -1.084070 - 0.405815I$</td><td>$-1.16726 + 3.02767I$</td><td>$1.89586 - 2.76037I$</td></tr>
<tr><td>$u = -0.898610 + 1.083740I$
$a = -0.832366 - 0.553360I$
$b = -0.203830 + 0.717311I$</td><td>$-7.83351 + 4.08846I$</td><td>0</td></tr>
<tr><td>$u = -0.898610 - 1.083740I$
$a = -0.832366 + 0.553360I$
$b = -0.203830 - 0.717311I$</td><td>$-7.83351 - 4.08846I$</td><td>0</td></tr>
<tr><td>$u = 1.02788 + 1.21603I$
$a = 0.666350 - 1.075790I$
$b = 2.88476 + 0.58421I$</td><td>$-9.81716 - 1.76389I$</td><td>0</td></tr>
<tr><td>$u = 1.02788 - 1.21603I$
$a = 0.666350 + 1.075790I$
$b = 2.88476 - 0.58421I$</td><td>$-9.81716 + 1.76389I$</td><td>0</td></tr>
<tr><td>$u = -0.08564 + 1.59213I$
$a = -0.412998 + 0.094265I$
$b = 0.692278 + 0.084135I$</td><td>$-8.51191 - 3.22667I$</td><td>0</td></tr>
<tr><td>$u = -0.08564 - 1.59213I$
$a = -0.412998 - 0.094265I$
$b = 0.692278 - 0.084135I$</td><td>$-8.51191 + 3.22667I$</td><td>0</td></tr>
<tr><td>$u = -0.330077 + 0.195063I$
$a = 0.625921 + 0.929420I$
$b = 0.680678 - 0.511018I$</td><td>$1.12780 - 0.87427I$</td><td>$7.10299 + 3.37562I$</td></tr>
</table>

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.330077 - 0.195063I$ $a = 0.625921 - 0.929420I$ $b = 0.680678 + 0.511018I$	$1.12780 + 0.87427I$	$7.10299 - 3.37562I$
$u = 0.255114 + 0.232956I$ $a = -3.71521 + 1.79997I$ $b = -0.880754 - 0.179713I$	$-5.75128 - 6.56432I$	$-4.11138 + 4.05271I$
$u = 0.255114 - 0.232956I$ $a = -3.71521 - 1.79997I$ $b = -0.880754 + 0.179713I$	$-5.75128 + 6.56432I$	$-4.11138 - 4.05271I$
$u = -0.337796$ $a = 3.69732$ $b = 1.37016$	-0.727216	-13.1080
$u = 0.03672 + 1.74560I$ $a = -0.251249 + 0.023127I$ $b = 1.289730 + 0.212055I$	$-12.39400 + 0.81454I$	0
$u = 0.03672 - 1.74560I$ $a = -0.251249 - 0.023127I$ $b = 1.289730 - 0.212055I$	$-12.39400 - 0.81454I$	0
$u = -1.15761 + 1.51843I$ $a = 0.586482 + 0.796448I$ $b = 2.30536 - 1.24673I$	$-10.15170 - 6.43419I$	0
$u = -1.15761 - 1.51843I$ $a = 0.586482 - 0.796448I$ $b = 2.30536 + 1.24673I$	$-10.15170 + 6.43419I$	0
$u = 0.32226 + 1.90220I$ $a = 0.014803 - 0.900992I$ $b = 1.44976 + 0.57133I$	$-19.1346 + 2.1490I$	0
$u = 0.32226 - 1.90220I$ $a = 0.014803 + 0.900992I$ $b = 1.44976 - 0.57133I$	$-19.1346 - 2.1490I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.07800 + 1.98796I$ $a = -0.109017 - 0.866405I$ $b = 0.805068 + 0.656452I$	$-15.4556 + 6.9522I$	0
$u = 0.07800 - 1.98796I$ $a = -0.109017 + 0.866405I$ $b = 0.805068 - 0.656452I$	$-15.4556 - 6.9522I$	0
$u = -0.02112 + 2.09350I$ $a = -0.144533 + 0.825946I$ $b = 0.865609 - 1.012250I$	$-14.6985 - 0.9884I$	0
$u = -0.02112 - 2.09350I$ $a = -0.144533 - 0.825946I$ $b = 0.865609 + 1.012250I$	$-14.6985 + 0.9884I$	0
$u = 0.53139 + 2.03050I$ $a = 0.245255 + 0.983595I$ $b = -3.40407 - 0.93661I$	$19.4506 + 5.7616I$	0
$u = 0.53139 - 2.03050I$ $a = 0.245255 - 0.983595I$ $b = -3.40407 + 0.93661I$	$19.4506 - 5.7616I$	0
$u = -0.43024 + 2.08016I$ $a = 0.185917 - 0.896546I$ $b = -2.73017 + 0.92922I$	$17.8356 - 14.3502I$	0
$u = -0.43024 - 2.08016I$ $a = 0.185917 + 0.896546I$ $b = -2.73017 - 0.92922I$	$17.8356 + 14.3502I$	0
$u = -0.09944 + 2.16592I$ $a = 0.924083 + 0.081345I$ $b = -3.92522 - 0.71460I$	$-15.4081 + 4.9026I$	0
$u = -0.09944 - 2.16592I$ $a = 0.924083 - 0.081345I$ $b = -3.92522 + 0.71460I$	$-15.4081 - 4.9026I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.47962 + 2.20629I$ $a = 0.053614 + 0.744727I$ $b = 1.49215 - 0.97274I$	$-18.5854 - 3.5520I$	0
$u = -0.47962 - 2.20629I$ $a = 0.053614 - 0.744727I$ $b = 1.49215 + 0.97274I$	$-18.5854 + 3.5520I$	0

II. $I_2^u = \langle 7.95 \times 10^{18}u^{28} - 2.50 \times 10^{18}u^{27} + \cdots + 1.30 \times 10^{19}b + 9.77 \times 10^{18},\ -2.06 \times 10^{19}u^{28} - 4.90 \times 10^{18}u^{27} + \cdots + 1.30 \times 10^{19}a - 4.60 \times 10^{19},\ u^{29} + 16u^{27} + \cdots + 2u + 1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1.58289u^{28} + 0.375416u^{27} + \cdots + 23.0341u + 3.52278 \\ -0.609755u^{28} + 0.191352u^{27} + \cdots - 1.62838u - 0.748874 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1.58289u^{28} + 0.375416u^{27} + \cdots + 23.0341u + 3.52278 \\ -0.646274u^{28} + 0.321379u^{27} + \cdots + 0.705339u - 0.373458 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -2.19231u^{28} - 0.581219u^{27} + \cdots - 25.5255u - 3.87277 \\ 0.146160u^{28} + 0.168172u^{27} + \cdots - 3.05911u + 0.0131335 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -2.33847u^{28} - 0.749392u^{27} + \cdots - 22.4664u - 3.88591 \\ 0.146160u^{28} + 0.168172u^{27} + \cdots - 3.05911u + 0.0131335 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1.23953u^{28} + 0.189431u^{27} + \cdots - 8.70535u - 5.08357 \\ 0.592887u^{28} + 0.289661u^{27} + \cdots + 7.84451u + 1.80937 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -3.39570u^{28} - 0.362303u^{27} + \cdots - 20.3142u + 1.55184 \\ 0.716281u^{28} + 0.0775215u^{27} + \cdots - 1.88678u - 0.0652422 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1.88363u^{28} - 0.861725u^{27} + \cdots - 12.0156u - 6.82950 \\ -0.288048u^{28} + 0.0864079u^{27} + \cdots - 1.05603u - 1.20804 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{37295273734905786033}{13043842048949049407}u^{28} + \frac{7379073912415012035}{13043842048949049407}u^{27} + \cdots + \frac{5236986043751365 67}{13043842048949049407}u - \frac{12328496894734939546}{13043842048949049407}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{29} - 32u^{28} + \cdots - 30u + 1$
c_2	$u^{29} + 16u^{27} + \cdots + 2u + 1$
c_3	$u^{29} - u^{27} + \cdots + 4u + 1$
c_4	$u^{29} + u^{28} + \cdots - u - 13$
c_5	$u^{29} + u^{28} + \cdots - u - 1$
c_6	$u^{29} + u^{28} + \cdots - 3u - 1$
c_7	$u^{29} + 16u^{27} + \cdots + 2u - 1$
c_8	$u^{29} - 6u^{27} + \cdots + 5u + 1$
c_9	$u^{29} - 4u^{28} + \cdots + 24u - 4$
c_{10}	$u^{29} - u^{28} + \cdots - 3u + 1$
c_{11}	$u^{29} - u^{28} + \cdots - u + 13$
c_{12}	$u^{29} - u^{28} + \cdots + 355u + 187$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{29} - 52y^{28} + \cdots + 34y - 1$
c_2, c_7	$y^{29} + 32y^{28} + \cdots - 30y - 1$
c_3	$y^{29} - 2y^{28} + \cdots + 26y - 1$
c_4, c_{11}	$y^{29} + 23y^{28} + \cdots - 2209y - 169$
c_5	$y^{29} + 15y^{28} + \cdots + 11y - 1$
c_6, c_{10}	$y^{29} - 17y^{28} + \cdots + 17y - 1$
c_8	$y^{29} - 12y^{28} + \cdots - 103y - 1$
c_9	$y^{29} - 8y^{28} + \cdots - 288y - 16$
c_{12}	$y^{29} + 39y^{28} + \cdots + 65437y - 34969$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.501818 + 0.833839I$ $a = 0.467030 + 0.518760I$ $b = -1.186310 - 0.660678I$	$-2.46701 + 3.31089I$	$-6.64762 - 4.28533I$
$u = -0.501818 - 0.833839I$ $a = 0.467030 - 0.518760I$ $b = -1.186310 + 0.660678I$	$-2.46701 - 3.31089I$	$-6.64762 + 4.28533I$
$u = 0.395046 + 0.881302I$ $a = 0.193357 - 1.331450I$ $b = 1.139830 + 0.271865I$	$-6.12414 + 8.00905I$	$-5.12519 - 8.45010I$
$u = 0.395046 - 0.881302I$ $a = 0.193357 + 1.331450I$ $b = 1.139830 - 0.271865I$	$-6.12414 - 8.00905I$	$-5.12519 + 8.45010I$
$u = -0.341041 + 1.028870I$ $a = -0.194038 - 0.579843I$ $b = 1.10689 - 1.28067I$	$-3.12004 - 6.46709I$	$-9.74691 + 8.24915I$
$u = -0.341041 - 1.028870I$ $a = -0.194038 + 0.579843I$ $b = 1.10689 + 1.28067I$	$-3.12004 + 6.46709I$	$-9.74691 - 8.24915I$
$u = 0.400082 + 1.085830I$ $a = 0.741612 + 0.558186I$ $b = -1.54514 + 1.73471I$	$1.43870 + 1.55601I$	$3.91538 - 4.80433I$
$u = 0.400082 - 1.085830I$ $a = 0.741612 - 0.558186I$ $b = -1.54514 - 1.73471I$	$1.43870 - 1.55601I$	$3.91538 + 4.80433I$
$u = -0.377353 + 1.105050I$ $a = 0.019943 - 0.931023I$ $b = -1.48812 - 0.50305I$	$-3.06298 - 3.21483I$	$-6.22465 + 3.26026I$
$u = -0.377353 - 1.105050I$ $a = 0.019943 + 0.931023I$ $b = -1.48812 + 0.50305I$	$-3.06298 + 3.21483I$	$-6.22465 - 3.26026I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.757913 + 0.894886I$ $a = -0.934300 + 0.874778I$ $b = 1.59792 + 2.38337I$	$-0.51479 - 2.85047I$	$-6.69492 + 4.19394I$
$u = -0.757913 - 0.894886I$ $a = -0.934300 - 0.874778I$ $b = 1.59792 - 2.38337I$	$-0.51479 + 2.85047I$	$-6.69492 - 4.19394I$
$u = 0.284256 + 1.182870I$ $a = 0.333089 - 0.615425I$ $b = -1.232700 + 0.271698I$	$-2.12362 + 0.73935I$	$-5.54663 - 2.17801I$
$u = 0.284256 - 1.182870I$ $a = 0.333089 + 0.615425I$ $b = -1.232700 - 0.271698I$	$-2.12362 - 0.73935I$	$-5.54663 + 2.17801I$
$u = 0.125391 + 0.740741I$ $a = 0.072781 + 1.150700I$ $b = 0.445959 + 0.328062I$	$-0.218621 + 1.074110I$	$-0.75381 - 2.66974I$
$u = 0.125391 - 0.740741I$ $a = 0.072781 - 1.150700I$ $b = 0.445959 - 0.328062I$	$-0.218621 - 1.074110I$	$-0.75381 + 2.66974I$
$u = 0.856142 + 1.047000I$ $a = -0.906222 + 0.682310I$ $b = -0.823807 - 0.830433I$	$-6.75266 - 3.66088I$	$-3.57875 + 1.97522I$
$u = 0.856142 - 1.047000I$ $a = -0.906222 - 0.682310I$ $b = -0.823807 + 0.830433I$	$-6.75266 + 3.66088I$	$-3.57875 - 1.97522I$
$u = -0.09611 + 1.48953I$ $a = 0.207292 - 0.225440I$ $b = 0.209690 + 0.379206I$	$-9.07326 - 3.27525I$	$-11.96737 + 3.20156I$
$u = -0.09611 - 1.48953I$ $a = 0.207292 + 0.225440I$ $b = 0.209690 - 0.379206I$	$-9.07326 + 3.27525I$	$-11.96737 - 3.20156I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.464529$ $a = 2.40413$ $b = 1.14153$	-0.233389	4.21310
$u = -0.162389 + 0.372510I$ $a = 1.81490 + 1.30389I$ $b = -1.027750 + 0.895148I$	$-4.36963 + 2.21765I$	$-9.43891 - 3.55386I$
$u = -0.162389 - 0.372510I$ $a = 1.81490 - 1.30389I$ $b = -1.027750 - 0.895148I$	$-4.36963 - 2.21765I$	$-9.43891 + 3.55386I$
$u = 0.120647 + 0.309845I$ $a = -2.64004 + 2.81826I$ $b = 0.376943 + 0.344347I$	$-5.97746 - 1.81572I$	$-6.79885 + 3.34834I$
$u = 0.120647 - 0.309845I$ $a = -2.64004 - 2.81826I$ $b = 0.376943 - 0.344347I$	$-5.97746 + 1.81572I$	$-6.79885 - 3.34834I$
$u = -0.08118 + 1.72162I$ $a = -0.376707 - 0.332059I$ $b = 1.30625 + 0.74373I$	$-12.44300 + 1.68015I$	$-8.40294 + 0.I$
$u = -0.08118 - 1.72162I$ $a = -0.376707 + 0.332059I$ $b = 1.30625 - 0.74373I$	$-12.44300 - 1.68015I$	$-8.40294 + 0.I$
$u = 0.36851 + 2.08278I$ $a = -0.000762 - 0.835761I$ $b = 1.54959 + 0.95102I$	$-17.4518 + 2.8402I$	0
$u = 0.36851 - 2.08278I$ $a = -0.000762 + 0.835761I$ $b = 1.54959 - 0.95102I$	$-17.4518 - 2.8402I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{29} - 32u^{28} + \cdots - 30u + 1)$ $\cdot (u^{52} + 83u^{51} + \cdots - 10239762u + 3418801)$
c_2	$(u^{29} + 16u^{27} + \cdots + 2u + 1)(u^{52} - u^{51} + \cdots + 430u - 1849)$
c_3	$(u^{29} - u^{27} + \cdots + 4u + 1)(u^{52} - u^{51} + \cdots - 96u + 9)$
c_4	$(u^{29} + u^{28} + \cdots - u - 13)(u^{52} - 2u^{51} + \cdots - 1077u - 89)$
c_5	$(u^{29} + u^{28} + \cdots - u - 1)(u^{52} + 47u^{50} + \cdots - 950335u - 289973)$
c_6	$(u^{29} + u^{28} + \cdots - 3u - 1)(u^{52} + 2u^{51} + \cdots + 91u - 181)$
c_7	$(u^{29} + 16u^{27} + \cdots + 2u - 1)(u^{52} - u^{51} + \cdots + 430u - 1849)$
c_8	$(u^{29} - 6u^{27} + \cdots + 5u + 1)(u^{52} + 5u^{51} + \cdots - 3.82267 \times 10^{7}u + 7428119)$
c_9	$(u^{29} - 4u^{28} + \cdots + 24u - 4)(u^{52} - 5u^{51} + \cdots + 324u + 356)$
c_{10}	$(u^{29} - u^{28} + \cdots - 3u + 1)(u^{52} + 2u^{51} + \cdots + 91u - 181)$
c_{11}	$(u^{29} - u^{28} + \cdots - u + 13)(u^{52} - 2u^{51} + \cdots - 1077u - 89)$
c_{12}	$(u^{29} - u^{28} + \cdots + 355u + 187)(u^{52} - 2u^{51} + \cdots - 81165u + 4259)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{29} - 52y^{28} + \cdots + 34y - 1)$ $\cdot\, (y^{52} - 209y^{51} + \cdots + 1284466243376242y + 11688200277601)$
c_2, c_7	$(y^{29} + 32y^{28} + \cdots - 30y - 1)$ $\cdot\, (y^{52} + 83y^{51} + \cdots - 10239762y + 3418801)$
c_3	$(y^{29} - 2y^{28} + \cdots + 26y - 1)(y^{52} - 11y^{51} + \cdots - 4590y + 81)$
c_4, c_{11}	$(y^{29} + 23y^{28} + \cdots - 2209y - 169)$ $\cdot\, (y^{52} + 50y^{51} + \cdots - 321727y + 7921)$
c_5	$(y^{29} + 15y^{28} + \cdots + 11y - 1)$ $\cdot\, (y^{52} + 94y^{51} + \cdots - 346734679987y + 84084340729)$
c_6, c_{10}	$(y^{29} - 17y^{28} + \cdots + 17y - 1)(y^{52} - 54y^{51} + \cdots + 1011111y + 32761)$
c_8	$(y^{29} - 12y^{28} + \cdots - 103y - 1)$ $\cdot\, (y^{52} - 73y^{51} + \cdots - 308498524989461y + 55176951878161)$
c_9	$(y^{29} - 8y^{28} + \cdots - 288y - 16)$ $\cdot\, (y^{52} - 25y^{51} + \cdots + 789296y + 126736)$
c_{12}	$(y^{29} + 39y^{28} + \cdots + 65437y - 34969)$ $\cdot\, (y^{52} + 98y^{51} + \cdots - 7982256041y + 18139081)$