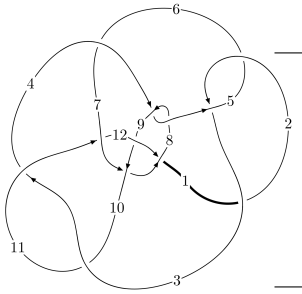
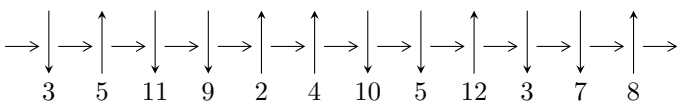
$12n_{0530}$ $(K12n_{0530})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -3.64573 \times 10^{258} u^{71} + 1.93369 \times 10^{258} u^{70} + \cdots + 2.61570 \times 10^{260} b - 8.84362 \times 10^{260}, \\ & 1.94505 \times 10^{261} u^{71} - 9.37390 \times 10^{260} u^{70} + \cdots + 1.85715 \times 10^{262} a + 2.78533 \times 10^{263}, \\ & u^{72} + 7u^{70} + \cdots + 174u + 71 \rangle \\ I_2^u = \langle & 2184459735 u^{30} + 2467043153 u^{29} + \cdots + 148046503 b + 1530935116, \\ & -5788205505 u^{30} - 2520329514 u^{29} + \cdots + 148046503 a - 9787930487,\ u^{31} + u^{30} + \cdots + u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 103 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. $\boldsymbol{I_1^u = \langle -3.65 \times 10^{258} u^{71} + 1.93 \times 10^{258} u^{70} + \cdots + 2.62 \times 10^{260} b - 8.84 \times 10^{260},\ 1.95 \times 10^{261} u^{71} - 9.37 \times 10^{260} u^{70} + \cdots + 1.86 \times 10^{262} a + 2.79 \times 10^{263},\ u^{72} + 7u^{70} + \cdots + 174u + 71 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.104733u^{71} + 0.0504747u^{70} + \cdots - 10.2744u - 14.9979 \\ 0.0139379u^{71} - 0.00739262u^{70} + \cdots + 0.899364u + 3.38097 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.100244u^{71} + 0.0145687u^{70} + \cdots - 6.20768u - 21.3805 \\ 0.0524115u^{71} - 0.0459288u^{70} + \cdots + 11.4091u + 1.78594 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.127174u^{71} + 0.0337253u^{70} + \cdots - 13.0344u - 24.2008 \\ 0.0395871u^{71} - 0.0395261u^{70} + \cdots + 9.98786u + 0.425816 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.156586u^{71} - 0.111459u^{70} + \cdots + 35.4012u + 9.44122 \\ 0.104480u^{71} - 0.0235722u^{70} + \cdots + 11.3081u + 19.1362 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.163406u^{71} + 0.0989962u^{70} + \cdots - 20.5083u - 13.3356 \\ -0.252000u^{71} + 0.111375u^{70} + \cdots - 34.9609u - 28.5427 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 0.0257924u^{71} + 0.00721650u^{70} + \cdots - 4.53635u + 7.33620 \\ 0.101128u^{71} - 0.0222456u^{70} + \cdots + 15.6108u + 16.7202 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.261066u^{71} - 0.135031u^{70} + \cdots + 46.7093u + 28.5775 \\ 0.104480u^{71} - 0.0235722u^{70} + \cdots + 11.3081u + 19.1362 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.173734u^{71} + 0.110746u^{70} + \cdots - 23.3198u - 13.1488 \\ -0.269089u^{71} + 0.124908u^{70} + \cdots - 39.0835u - 29.1901 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.631363u^{71} + 0.329602u^{70} + \cdots - 114.221u - 62.1901$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{72} + 90u^{71} + \cdots + 1404496977u + 27447121$
c_2, c_5	$u^{72} + 4u^{71} + \cdots - 28717u + 5239$
c_3, c_{10}	$u^{72} + 2u^{71} + \cdots + 1164u + 89$
c_4, c_8	$u^{72} + 7u^{70} + \cdots - 174u + 71$
c_6	$u^{72} + 12u^{71} + \cdots + 183732u + 262579$
c_7	$u^{72} - 11u^{70} + \cdots - 251726u + 58649$
c_9	$u^{72} + 3u^{71} + \cdots + 92u + 29$
c_{11}	$u^{72} + u^{71} + \cdots - 2131u + 145$
c_{12}	$u^{72} - u^{71} + \cdots + 9071598635u + 6503913561$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{72} - 202y^{71} + \cdots + 499387466684415153y + 753344451188641$
c_2, c_5	$y^{72} + 90y^{71} + \cdots + 1404496977y + 27447121$
c_3, c_{10}	$y^{72} - 56y^{71} + \cdots - 188640y + 7921$
c_4, c_8	$y^{72} + 14y^{71} + \cdots - 52712y + 5041$
c_6	$y^{72} + 70y^{71} + \cdots + 2835486348132y + 68947731241$
c_7	$y^{72} - 22y^{71} + \cdots - 71347990678y + 3439705201$
c_9	$y^{72} + 9y^{71} + \cdots + 38110y + 841$
c_{11}	$y^{72} - 13y^{71} + \cdots - 1039701y + 21025$
c_{12}	$y^{72} + 77y^{71} + \cdots + 3.46 \times 10^{20}y + 4.23 \times 10^{19}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.395735 + 0.962899I$ $a = 0.15710 - 1.90724I$ $b = 1.103020 + 0.378441I$	$-2.35206 - 4.90102I$	0
$u = 0.395735 - 0.962899I$ $a = 0.15710 + 1.90724I$ $b = 1.103020 - 0.378441I$	$-2.35206 + 4.90102I$	0
$u = 0.449062 + 0.795024I$ $a = -0.122453 - 0.304927I$ $b = -0.087555 + 0.465957I$	$0.05590 - 1.89763I$	$-1.60993 + 3.15256I$
$u = 0.449062 - 0.795024I$ $a = -0.122453 + 0.304927I$ $b = -0.087555 - 0.465957I$	$0.05590 + 1.89763I$	$-1.60993 - 3.15256I$
$u = 0.121973 + 1.102890I$ $a = -0.886065 - 0.527000I$ $b = -0.440152 + 0.475467I$	$3.69129 - 1.79239I$	0
$u = 0.121973 - 1.102890I$ $a = -0.886065 + 0.527000I$ $b = -0.440152 - 0.475467I$	$3.69129 + 1.79239I$	0
$u = 0.051307 + 0.865237I$ $a = -1.073040 - 0.163089I$ $b = 0.964573 + 0.239283I$	$-0.715343 - 0.560826I$	$-2.22835 + 1.84045I$
$u = 0.051307 - 0.865237I$ $a = -1.073040 + 0.163089I$ $b = 0.964573 - 0.239283I$	$-0.715343 + 0.560826I$	$-2.22835 - 1.84045I$
$u = 0.854276 + 0.144443I$ $a = 1.394460 + 0.022960I$ $b = 1.52014 - 0.19291I$	$-5.10447 + 1.24571I$	$-11.85389 - 4.33977I$
$u = 0.854276 - 0.144443I$ $a = 1.394460 - 0.022960I$ $b = 1.52014 + 0.19291I$	$-5.10447 - 1.24571I$	$-11.85389 + 4.33977I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.540643 + 1.035120I$ $a = -1.01016 + 1.22898I$ $b = -1.026380 - 0.257760I$	$-2.36515 - 4.35350I$	0
$u = 0.540643 - 1.035120I$ $a = -1.01016 - 1.22898I$ $b = -1.026380 + 0.257760I$	$-2.36515 + 4.35350I$	0
$u = -0.836968 + 0.820484I$ $a = 0.062748 + 0.354211I$ $b = -0.028412 + 0.257770I$	$-7.21762 + 1.57842I$	0
$u = -0.836968 - 0.820484I$ $a = 0.062748 - 0.354211I$ $b = -0.028412 - 0.257770I$	$-7.21762 - 1.57842I$	0
$u = -0.089104 + 1.169450I$ $a = 1.390420 + 0.100465I$ $b = 0.418314 - 0.347525I$	$2.56389 + 4.98234I$	0
$u = -0.089104 - 1.169450I$ $a = 1.390420 - 0.100465I$ $b = 0.418314 + 0.347525I$	$2.56389 - 4.98234I$	0
$u = 1.146330 + 0.264545I$ $a = -1.42952 + 0.07044I$ $b = -1.293780 + 0.058915I$	$-5.24347 - 1.12672I$	0
$u = 1.146330 - 0.264545I$ $a = -1.42952 - 0.07044I$ $b = -1.293780 - 0.058915I$	$-5.24347 + 1.12672I$	0
$u = 0.443052 + 0.675051I$ $a = -0.782382 + 0.844362I$ $b = 0.437835 - 0.368886I$	$-0.38463 - 1.62177I$	$-3.30795 + 2.54804I$
$u = 0.443052 - 0.675051I$ $a = -0.782382 - 0.844362I$ $b = 0.437835 + 0.368886I$	$-0.38463 + 1.62177I$	$-3.30795 - 2.54804I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.967859+0.698281I$ $a=-1.55826-0.52021I$ $b=-1.54355+0.43095I$	$-5.51623+9.76846I$	0
$u=-0.967859-0.698281I$ $a=-1.55826+0.52021I$ $b=-1.54355-0.43095I$	$-5.51623-9.76846I$	0
$u=-1.029520+0.617322I$ $a=1.55254+0.54349I$ $b=1.48143-0.48596I$	$-5.12009+3.07867I$	0
$u=-1.029520-0.617322I$ $a=1.55254-0.54349I$ $b=1.48143+0.48596I$	$-5.12009-3.07867I$	0
$u=-0.303232+1.174180I$ $a=0.067205-1.186790I$ $b=-1.340260+0.045475I$	$-3.37394-4.41777I$	0
$u=-0.303232-1.174180I$ $a=0.067205+1.186790I$ $b=-1.340260-0.045475I$	$-3.37394+4.41777I$	0
$u=-0.680975+0.228717I$ $a=-0.009465+0.667107I$ $b=0.005071+0.860625I$	$-0.64872-2.42772I$	$-5.12888+2.87093I$
$u=-0.680975-0.228717I$ $a=-0.009465-0.667107I$ $b=0.005071-0.860625I$	$-0.64872+2.42772I$	$-5.12888-2.87093I$
$u=-0.832013+0.984749I$ $a=0.312085-0.103923I$ $b=0.219473-0.028625I$	$-6.76288+4.64270I$	0
$u=-0.832013-0.984749I$ $a=0.312085+0.103923I$ $b=0.219473+0.028625I$	$-6.76288-4.64270I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.573176+0.388286I$ $a=1.29722+1.23670I$ $b=1.168720-0.573152I$	$-3.16144+2.19845I$	$-6.25562-1.59959I$
$u=-0.573176-0.388286I$ $a=1.29722-1.23670I$ $b=1.168720+0.573152I$	$-3.16144-2.19845I$	$-6.25562+1.59959I$
$u=0.094458+1.330650I$ $a=-0.148020+0.447289I$ $b=-1.139030-0.357153I$	$1.31162-5.11847I$	0
$u=0.094458-1.330650I$ $a=-0.148020-0.447289I$ $b=-1.139030+0.357153I$	$1.31162+5.11847I$	0
$u=-0.571365+0.268353I$ $a=-1.57384-2.30271I$ $b=-1.097390+0.512023I$	$-3.68144+7.02753I$	$-8.48206-7.62204I$
$u=-0.571365-0.268353I$ $a=-1.57384+2.30271I$ $b=-1.097390-0.512023I$	$-3.68144-7.02753I$	$-8.48206+7.62204I$
$u=-0.578086+0.219362I$ $a=0.051134-0.479362I$ $b=0.193593-1.265520I$	$0.42855+3.78859I$	$-11.02576-5.40615I$
$u=-0.578086-0.219362I$ $a=0.051134+0.479362I$ $b=0.193593+1.265520I$	$0.42855-3.78859I$	$-11.02576+5.40615I$
$u=-0.441835+0.400017I$ $a=0.356531+0.389777I$ $b=1.016320-0.905156I$	$-5.02849+3.73076I$	$-5.1233-21.3943I$
$u=-0.441835-0.400017I$ $a=0.356531-0.389777I$ $b=1.016320+0.905156I$	$-5.02849-3.73076I$	$-5.1233+21.3943I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.09417+0.94741I$ $a=-1.43865-0.61242I$ $b=-1.49559+0.20888I$	$-13.0216+6.2886I$	0
$u=-1.09417-0.94741I$ $a=-1.43865+0.61242I$ $b=-1.49559-0.20888I$	$-13.0216-6.2886I$	0
$u=-0.397869+0.372222I$ $a=1.56775-0.76536I$ $b=-0.813659+0.553224I$	$-6.67154+2.30013I$	$-7.54665-1.33223I$
$u=-0.397869-0.372222I$ $a=1.56775+0.76536I$ $b=-0.813659-0.553224I$	$-6.67154-2.30013I$	$-7.54665+1.33223I$
$u=0.335065+0.350080I$ $a=-5.42556+0.37620I$ $b=-0.827281+0.133830I$	$-1.19027-4.32625I$	$-9.73628+5.44169I$
$u=0.335065-0.350080I$ $a=-5.42556-0.37620I$ $b=-0.827281-0.133830I$	$-1.19027+4.32625I$	$-9.73628-5.44169I$
$u=0.297766+0.375697I$ $a=-0.900173-0.634319I$ $b=0.455987+0.336230I$	$-0.352890-1.156840I$	$-3.33626+6.27843I$
$u=0.297766-0.375697I$ $a=-0.900173+0.634319I$ $b=0.455987-0.336230I$	$-0.352890+1.156840I$	$-3.33626-6.27843I$
$u=-0.98368+1.16684I$ $a=-1.152340-0.780833I$ $b=-1.44325+0.05558I$	$-12.32380+1.39774I$	0
$u=-0.98368-1.16684I$ $a=-1.152340+0.780833I$ $b=-1.44325-0.05558I$	$-12.32380-1.39774I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.10388+1.52966I$ $a=-0.36680-1.40579I$ $b=\ \ 0.14248+1.43260I$	$5.86544-1.77991I$	0
$u=-0.10388-1.52966I$ $a=-0.36680+1.40579I$ $b=\ \ 0.14248-1.43260I$	$5.86544+1.77991I$	0
$u=\ \ 0.453819+0.080930I$ $a=\ \ 1.95367+2.95184I$ $b=\ \ 0.783084-0.260390I$	$-0.198226+0.836420I$	$-5.38993-3.91161I$
$u=\ \ 0.453819-0.080930I$ $a=\ \ 1.95367-2.95184I$ $b=\ \ 0.783084+0.260390I$	$-0.198226-0.836420I$	$-5.38993+3.91161I$
$u=\ \ 1.19227+1.02193I$ $a=-0.453256+0.116492I$ $b=-0.02029-1.48602I$	$-8.87243-8.99590I$	0
$u=\ \ 1.19227-1.02193I$ $a=-0.453256-0.116492I$ $b=-0.02029+1.48602I$	$-8.87243+8.99590I$	0
$u=-0.45141+1.52991I$ $a=\ \ 0.263474+0.588048I$ $b=\ \ 1.48307+0.04643I$	$-1.78537+3.12124I$	0
$u=-0.45141-1.52991I$ $a=\ \ 0.263474-0.588048I$ $b=\ \ 1.48307-0.04643I$	$-1.78537-3.12124I$	0
$u=-1.34640+0.95807I$ $a=\ \ 1.35297+0.43389I$ $b=\ \ 1.359800-0.221402I$	$-11.83750+3.84980I$	0
$u=-1.34640-0.95807I$ $a=\ \ 1.35297-0.43389I$ $b=\ \ 1.359800+0.221402I$	$-11.83750-3.84980I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.07100 + 1.27533I$ $a = 1.06920 - 0.95111I$ $b = 1.51696 + 0.65693I$	$-13.7424 - 16.3876I$	0
$u = 1.07100 - 1.27533I$ $a = 1.06920 + 0.95111I$ $b = 1.51696 - 0.65693I$	$-13.7424 + 16.3876I$	0
$u = 1.45912 + 0.82147I$ $a = -0.861847 + 0.180322I$ $b = -1.74894 + 0.62571I$	$-14.3075 - 0.9208I$	0
$u = 1.45912 - 0.82147I$ $a = -0.861847 - 0.180322I$ $b = -1.74894 - 0.62571I$	$-14.3075 + 0.9208I$	0
$u = 1.13934 + 1.24259I$ $a = 0.490867 - 0.170499I$ $b = -0.34581 + 1.55094I$	$-8.26186 + 0.50360I$	0
$u = 1.13934 - 1.24259I$ $a = 0.490867 + 0.170499I$ $b = -0.34581 - 1.55094I$	$-8.26186 - 0.50360I$	0
$u = 1.40221 + 0.96945I$ $a = 0.906396 - 0.225397I$ $b = 1.65571 - 0.47881I$	$-14.9087 + 7.5805I$	0
$u = 1.40221 - 0.96945I$ $a = 0.906396 + 0.225397I$ $b = 1.65571 + 0.47881I$	$-14.9087 - 7.5805I$	0
$u = 1.04699 + 1.39296I$ $a = -0.886462 + 0.974314I$ $b = -1.59579 - 0.76315I$	$-12.4101 - 8.0043I$	0
$u = 1.04699 - 1.39296I$ $a = -0.886462 - 0.974314I$ $b = -1.59579 + 0.76315I$	$-12.4101 + 8.0043I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.21287+1.28487I$		
$a=\quad 1.128290+0.522196I$	$-10.89700+5.27373I$	0
$b=\quad 1.361540-0.097914I$		
$u=-1.21287-1.28487I$		
$a=\quad 1.128290-0.522196I$	$-10.89700-5.27373I$	0
$b=\quad 1.361540+0.097914I$		

II.

$\boldsymbol{I_2^u = \langle 2.18\times 10^9 u^{30} + 2.47\times 10^9 u^{29} + \cdots + 1.48\times 10^8 b + 1.53\times 10^9,\ -5.79\times 10^9 u^{30} - 2.52\times 10^9 u^{29} + \cdots + 1.48\times 10^8 a - 9.79\times 10^9,\ u^{31} + u^{30} + \cdots + u - 1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 39.0972u^{30} + 17.0239u^{29} + \cdots - 99.1802u + 66.1139 \\ -14.7552u^{30} - 16.6640u^{29} + \cdots + 31.0442u - 10.3409 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -18.0162u^{30} - 2.47624u^{29} + \cdots + 56.7338u - 29.8879 \\ 9.28688u^{30} + 9.90889u^{29} + \cdots - 23.3547u + 0.230898 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -14.4870u^{30} - 6.55365u^{29} + \cdots + 46.5324u - 14.5789 \\ 4.49815u^{30} + 7.70859u^{29} + \cdots - 12.2189u - 7.37571 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -12.0556u^{30} - 16.1150u^{29} + \cdots + 18.9197u - 8.33258 \\ 3.92187u^{30} + 9.65956u^{29} + \cdots + 2.00374u - 4.05938 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -10.8188u^{30} - 23.6255u^{29} + \cdots + 6.21977u + 24.1388 \\ -3.93581u^{30} + 3.47531u^{29} + \cdots + 11.1257u - 21.4435 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 9.24223u^{30} + 5.40214u^{29} + \cdots - 13.6874u + 13.6500 \\ -3.91150u^{30} - 7.55693u^{29} + \cdots + 7.31831u - 1.58206 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -8.13377u^{30} - 6.45547u^{29} + \cdots + 20.9234u - 12.3920 \\ 3.92187u^{30} + 9.65956u^{29} + \cdots + 2.00374u - 4.05938 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -12.0704u^{30} - 20.0918u^{29} + \cdots + 17.1696u + 10.0725 \\ -4.50508u^{30} + 5.97409u^{29} + \cdots + 16.0388u - 30.7245 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{62375183}{13458773}u^{30} + \frac{565714406}{13458773}u^{29} + \cdots + \frac{551787507}{13458773}u - \frac{1029337351}{13458773}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{31} - 31u^{30} + \cdots - 30u + 1$
c_2	$u^{31} + u^{30} + \cdots - 4u - 1$
c_3	$u^{31} + u^{30} + \cdots - u + 1$
c_4	$u^{31} + u^{30} + \cdots + u - 1$
c_5	$u^{31} - u^{30} + \cdots - 4u + 1$
c_6	$u^{31} + u^{30} + \cdots + 21u - 1$
c_7	$u^{31} - u^{30} + \cdots + 3u - 1$
c_8	$u^{31} - u^{30} + \cdots + u + 1$
c_9	$u^{31} + 6u^{30} + \cdots + 5u - 1$
c_{10}	$u^{31} - u^{30} + \cdots - u - 1$
c_{11}	$u^{31} + 2u^{29} + \cdots + 6u - 1$
c_{12}	$u^{31} + 7u^{29} + \cdots - 82u - 173$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{31} - 49y^{30} + \cdots - 38y - 1$
c_2, c_5	$y^{31} + 31y^{30} + \cdots - 30y - 1$
c_3, c_{10}	$y^{31} - 15y^{30} + \cdots + 23y - 1$
c_4, c_8	$y^{31} + 23y^{30} + \cdots - 21y - 1$
c_6	$y^{31} + 19y^{30} + \cdots + 111y - 1$
c_7	$y^{31} + 7y^{30} + \cdots + 17y - 1$
c_9	$y^{31} - 2y^{30} + \cdots + 5y - 1$
c_{11}	$y^{31} + 4y^{30} + \cdots + 28y - 1$
c_{12}	$y^{31} + 14y^{30} + \cdots - 95346y - 29929$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.00320$ $a = -1.44536$ $b = -1.45021$	-4.80480	-8.23200
$u = \quad 0.414761 + 0.893790I$ $a = \quad 0.0188869 + 0.1373480I$ $b = -1.051220 + 0.535306I$	$-2.06404 + 0.04099I$	$-7.61696 + 0.53823I$
$u = \quad 0.414761 - 0.893790I$ $a = \quad 0.0188869 - 0.1373480I$ $b = -1.051220 - 0.535306I$	$-2.06404 - 0.04099I$	$-7.61696 - 0.53823I$
$u = \quad 0.514757 + 0.936922I$ $a = -0.73973 + 1.51693I$ $b = -0.951675 - 0.357092I$	$-1.70969 - 3.70189I$	$-1.88232 + 1.78013I$
$u = \quad 0.514757 - 0.936922I$ $a = -0.73973 - 1.51693I$ $b = -0.951675 + 0.357092I$	$-1.70969 + 3.70189I$	$-1.88232 - 1.78013I$
$u = \quad 0.157872 + 0.742681I$ $a = -0.06796 - 2.93576I$ $b = \quad 1.086440 + 0.417304I$	$-2.53106 - 7.07661I$	$-1.89774 + 8.89193I$
$u = \quad 0.157872 - 0.742681I$ $a = -0.06796 + 2.93576I$ $b = \quad 1.086440 - 0.417304I$	$-2.53106 + 7.07661I$	$-1.89774 - 8.89193I$
$u = \quad 0.206713 + 1.227890I$ $a = -0.835315 - 0.743685I$ $b = -0.726976 + 0.045716I$	$2.77050 - 2.34424I$	$-3.13614 + 3.15282I$
$u = \quad 0.206713 - 1.227890I$ $a = -0.835315 + 0.743685I$ $b = -0.726976 - 0.045716I$	$2.77050 + 2.34424I$	$-3.13614 - 3.15282I$
$u = -0.799098 + 0.958393I$ $a = \quad 0.210652 + 0.276427I$ $b = \quad 0.591143 - 0.280685I$	$-6.97387 + 5.05702I$	$-11.0205 - 11.4486I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.799098-0.958393I$ $a=\ 0.210652-0.276427I$ $b=\ 0.591143+0.280685I$	$-6.97387-5.05702I$	$-11.0205+11.4486I$
$u=-0.767016+1.013840I$ $a=-0.606380+0.010069I$ $b=\ 0.544901+0.698390I$	$-6.88066+0.75245I$	$-4.79263+1.69482I$
$u=-0.767016-1.013840I$ $a=-0.606380-0.010069I$ $b=\ 0.544901-0.698390I$	$-6.88066-0.75245I$	$-4.79263-1.69482I$
$u=-0.065070+1.273420I$ $a=\ 1.28964+0.58739I$ $b=\ 0.731464+0.113037I$	$1.94312+4.25275I$	$-3.91634-1.69636I$
$u=-0.065070-1.273420I$ $a=\ 1.28964-0.58739I$ $b=\ 0.731464-0.113037I$	$1.94312-4.25275I$	$-3.91634+1.69636I$
$u=\ 0.033858+1.309040I$ $a=\ 0.131726-0.097082I$ $b=\ 1.170920-0.347806I$	$-0.15060+6.18563I$	$-3.72734-7.09079I$
$u=\ 0.033858-1.309040I$ $a=\ 0.131726+0.097082I$ $b=\ 1.170920+0.347806I$	$-0.15060-6.18563I$	$-3.72734+7.09079I$
$u=\ 0.271080+0.614683I$ $a=\ 2.54685+0.92775I$ $b=-0.601081+0.067316I$	$0.407610+0.293898I$	$2.93790+1.44236I$
$u=\ 0.271080-0.614683I$ $a=\ 2.54685-0.92775I$ $b=-0.601081-0.067316I$	$0.407610-0.293898I$	$2.93790-1.44236I$
$u=\ 0.050242+0.666747I$ $a=-2.76384+3.05830I$ $b=\ 0.645198-0.202972I$	$-0.60697-4.13489I$	$3.15721+1.64275I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.050242 - 0.666747I$ $a = -2.76384 - 3.05830I$ $b = 0.645198 + 0.202972I$	$-0.60697 + 4.13489I$	$3.15721 - 1.64275I$
$u = 0.178470 + 1.354410I$ $a = -0.001365 + 0.938047I$ $b = -1.247660 - 0.346739I$	$0.16222 - 3.81499I$	$-2.00000 + 3.53888I$
$u = 0.178470 - 1.354410I$ $a = -0.001365 - 0.938047I$ $b = -1.247660 + 0.346739I$	$0.16222 + 3.81499I$	$-2.00000 - 3.53888I$
$u = 0.258726 + 0.456167I$ $a = -1.035170 - 0.319743I$ $b = -0.149548 - 0.975049I$	$0.99073 - 3.69106I$	$3.33675 + 4.02693I$
$u = 0.258726 - 0.456167I$ $a = -1.035170 + 0.319743I$ $b = -0.149548 + 0.975049I$	$0.99073 + 3.69106I$	$3.33675 - 4.02693I$
$u = -0.322722 + 0.307676I$ $a = -0.038832 - 1.039290I$ $b = -1.090450 + 0.785922I$	$-5.09942 + 3.47271I$	$-12.7570 + 6.6208I$
$u = -0.322722 - 0.307676I$ $a = -0.038832 + 1.039290I$ $b = -1.090450 - 0.785922I$	$-5.09942 - 3.47271I$	$-12.7570 - 6.6208I$
$u = 0.13208 + 1.57427I$ $a = 0.370056 - 1.343350I$ $b = -0.15120 + 1.53870I$	$5.70515 + 1.78957I$	$-26.6318 + 0.I$
$u = 0.13208 - 1.57427I$ $a = 0.370056 + 1.343350I$ $b = -0.15120 - 1.53870I$	$5.70515 - 1.78957I$	$-26.6318 + 0.I$
$u = -1.26626 + 1.08833I$ $a = 1.243460 + 0.514827I$ $b = 1.42486 - 0.17270I$	$-11.52450 + 4.48140I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.26626-1.08833I$		
$a=\ 1.243460-0.514827I$	$-11.52450-4.48140I$	0
$b=\ 1.42486+0.17270I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{31}-31u^{30}+\cdots-30u+1)$ $\cdot(u^{72}+90u^{71}+\cdots+1404496977u+27447121)$
c_2	$(u^{31}+u^{30}+\cdots-4u-1)(u^{72}+4u^{71}+\cdots-28717u+5239)$
c_3	$(u^{31}+u^{30}+\cdots-u+1)(u^{72}+2u^{71}+\cdots+1164u+89)$
c_4	$(u^{31}+u^{30}+\cdots+u-1)(u^{72}+7u^{70}+\cdots-174u+71)$
c_5	$(u^{31}-u^{30}+\cdots-4u+1)(u^{72}+4u^{71}+\cdots-28717u+5239)$
c_6	$(u^{31}+u^{30}+\cdots+21u-1)(u^{72}+12u^{71}+\cdots+183732u+262579)$
c_7	$(u^{31}-u^{30}+\cdots+3u-1)(u^{72}-11u^{70}+\cdots-251726u+58649)$
c_8	$(u^{31}-u^{30}+\cdots+u+1)(u^{72}+7u^{70}+\cdots-174u+71)$
c_9	$(u^{31}+6u^{30}+\cdots+5u-1)(u^{72}+3u^{71}+\cdots+92u+29)$
c_{10}	$(u^{31}-u^{30}+\cdots-u-1)(u^{72}+2u^{71}+\cdots+1164u+89)$
c_{11}	$(u^{31}+2u^{29}+\cdots+6u-1)(u^{72}+u^{71}+\cdots-2131u+145)$
c_{12}	$(u^{31}+7u^{29}+\cdots-82u-173)$ $\cdot(u^{72}-u^{71}+\cdots+9071598635u+6503913561)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{31} - 49y^{30} + \cdots - 38y - 1)$ $\cdot (y^{72} - 202y^{71} + \cdots + 499387466684415153y + 753344451188641)$
c_2, c_5	$(y^{31} + 31y^{30} + \cdots - 30y - 1)$ $\cdot (y^{72} + 90y^{71} + \cdots + 1404496977y + 27447121)$
c_3, c_{10}	$(y^{31} - 15y^{30} + \cdots + 23y - 1)(y^{72} - 56y^{71} + \cdots - 188640y + 7921)$
c_4, c_8	$(y^{31} + 23y^{30} + \cdots - 21y - 1)(y^{72} + 14y^{71} + \cdots - 52712y + 5041)$
c_6	$(y^{31} + 19y^{30} + \cdots + 111y - 1)$ $\cdot (y^{72} + 70y^{71} + \cdots + 2835486348132y + 68947731241)$
c_7	$(y^{31} + 7y^{30} + \cdots + 17y - 1)$ $\cdot (y^{72} - 22y^{71} + \cdots - 71347990678y + 3439705201)$
c_9	$(y^{31} - 2y^{30} + \cdots + 5y - 1)(y^{72} + 9y^{71} + \cdots + 38110y + 841)$
c_{11}	$(y^{31} + 4y^{30} + \cdots + 28y - 1)(y^{72} - 13y^{71} + \cdots - 1039701y + 21025)$
c_{12}	$(y^{31} + 14y^{30} + \cdots - 95346y - 29929)$ $\cdot (y^{72} + 77y^{71} + \cdots + 3.46 \times 10^{20}y + 4.23 \times 10^{19})$