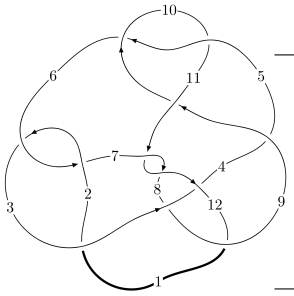
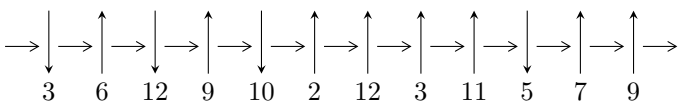
$12n_{0353}$ $(K12n_{0353})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -9.19698 \times 10^{252} u^{72} + 4.10952 \times 10^{253} u^{71} + \cdots + 1.58931 \times 10^{253} b + 8.73323 \times 10^{256}, \\ & -1.50404 \times 10^{255} u^{72} + 6.27835 \times 10^{255} u^{71} + \cdots + 7.16781 \times 10^{255} a + 2.14004 \times 10^{259}, \\ & u^{73} - 4u^{72} + \cdots - 7469u - 4961 \rangle \\ I_2^u = \langle & -9u^{21} - 48u^{20} + \cdots + b + 11,\ 28u^{21} + 177u^{20} + \cdots + a + 3,\ u^{22} + 7u^{21} + \cdots + 7u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 95 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. $\boldsymbol{I_1^u = \langle -9.20 \times 10^{252} u^{72} + 4.11 \times 10^{253} u^{71} + \cdots + 1.59 \times 10^{253} b + 8.73 \times 10^{256},\ -1.50 \times 10^{255} u^{72} + 6.28 \times 10^{255} u^{71} + \cdots + 7.17 \times 10^{255} a + 2.14 \times 10^{259},\ u^{73} - 4u^{72} + \cdots - 7469u - 4961 \rangle}$

(i) Arc colorings

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

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

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.209833u^{72} - 0.875910u^{71} + \cdots + 2329.47u - 2985.62 \\ 0.578676u^{72} - 2.58572u^{71} + \cdots + 2145.74u - 5494.97 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.50718u^{72} + 6.92175u^{71} + \cdots - 2293.79u + 12596.8 \\ 0.676487u^{72} - 3.11685u^{71} + \cdots + 970.426u - 5595.66 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.754050u^{72} + 3.46435u^{71} + \cdots - 1139.08u + 6262.26 \\ -1.15917u^{72} + 5.32183u^{71} + \cdots - 1731.26u + 9700.40 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.405124u^{72} - 1.85748u^{71} + \cdots + 592.184u - 3438.14 \\ -1.15917u^{72} + 5.32183u^{71} + \cdots - 1731.26u + 9700.40 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.368843u^{72} + 1.70981u^{71} + \cdots + 183.722u + 2509.35 \\ 0.578676u^{72} - 2.58572u^{71} + \cdots + 2145.74u - 5494.97 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.368843u^{72} + 1.70981u^{71} + \cdots + 183.722u + 2509.35 \\ 0.423437u^{72} - 1.87140u^{71} + \cdots + 2066.92u - 4331.94 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0556736u^{72} + 0.215818u^{71} + \cdots - 1052.76u + 687.535 \\ -0.208916u^{72} + 1.01482u^{71} + \cdots + 1183.76u + 1059.07 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.57181u^{72} + 7.22423u^{71} + \cdots - 2235.05u + 13095.6 \\ 0.607582u^{72} - 2.79839u^{71} + \cdots + 843.580u - 5009.04 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -1.51645u^{72} + 7.01530u^{71} + \cdots - 1132.33u + 11925.2 \\ 1.75380u^{72} - 7.99846u^{71} + \cdots + 4270.33u - 15380.1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 5.97688u^{72} - 27.3063u^{71} + \cdots + 12628.2u - 52558.5$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{73} + 42u^{72} + \cdots + u - 1$
c_2, c_6	$u^{73} - 2u^{72} + \cdots + 3u - 1$
c_3	$u^{73} - 4u^{72} + \cdots - 7469u - 4961$
c_4	$u^{73} + u^{72} + \cdots + 504u - 34447$
c_5, c_{10}	$u^{73} - u^{72} + \cdots + 6u - 19$
c_7, c_{11}	$u^{73} - 3u^{72} + \cdots + 518u - 77$
c_8	$u^{73} - u^{72} + \cdots - 4184u - 2449$
c_9	$u^{73} - 35u^{72} + \cdots - 3270u + 361$
c_{12}	$u^{73} + u^{72} + \cdots + 9112u - 2479$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{73} - 6y^{72} + \cdots + 109y - 1$
c_2, c_6	$y^{73} + 42y^{72} + \cdots + y - 1$
c_3	$y^{73} - 80y^{72} + \cdots + 887378547y - 24611521$
c_4	$y^{73} - 5y^{72} + \cdots + 9963979872y - 1186595809$
c_5, c_{10}	$y^{73} + 35y^{72} + \cdots - 3270y - 361$
c_7, c_{11}	$y^{73} - 25y^{72} + \cdots - 47222y - 5929$
c_8	$y^{73} + 83y^{72} + \cdots - 316258558y - 5997601$
c_9	$y^{73} + 15y^{72} + \cdots - 1105302y - 130321$
c_{12}	$y^{73} + 79y^{72} + \cdots - 157637734y - 6145441$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.960694 + 0.223002I$ $a = -0.31701 - 1.62689I$ $b = -0.06752 - 1.93464I$	$-5.68153 + 1.21562I$	0
$u = \quad 0.960694 - 0.223002I$ $a = -0.31701 + 1.62689I$ $b = -0.06752 + 1.93464I$	$-5.68153 - 1.21562I$	0
$u = -0.800102 + 0.544363I$ $a = -1.340300 - 0.231886I$ $b = -0.229015 + 0.678752I$	$3.32889 + 1.44969I$	0
$u = -0.800102 - 0.544363I$ $a = -1.340300 + 0.231886I$ $b = -0.229015 - 0.678752I$	$3.32889 - 1.44969I$	0
$u = \quad 0.164338 + 1.072630I$ $a = -0.568772 + 0.453403I$ $b = \quad 0.067159 - 0.480853I$	$3.93954 + 2.04644I$	0
$u = \quad 0.164338 - 1.072630I$ $a = -0.568772 - 0.453403I$ $b = \quad 0.067159 + 0.480853I$	$3.93954 - 2.04644I$	0
$u = -0.436988 + 1.059720I$ $a = -0.333172 + 0.259820I$ $b = -0.045424 + 0.670574I$	$0.65478 + 1.74378I$	0
$u = -0.436988 - 1.059720I$ $a = -0.333172 - 0.259820I$ $b = -0.045424 - 0.670574I$	$0.65478 - 1.74378I$	0
$u = -0.795078 + 0.220539I$ $a = -1.98401 - 0.60795I$ $b = -0.300669 - 0.679598I$	$1.18619 - 7.05030I$	0
$u = -0.795078 - 0.220539I$ $a = -1.98401 + 0.60795I$ $b = -0.300669 + 0.679598I$	$1.18619 + 7.05030I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.802130+0.134868I$ $a=-0.306467+0.314014I$ $b=-0.350471-0.748878I$	$-3.45310+2.18113I$	0
$u=-0.802130-0.134868I$ $a=-0.306467-0.314014I$ $b=-0.350471+0.748878I$	$-3.45310-2.18113I$	0
$u=-0.330029+1.180410I$ $a=\ \ 0.607699-0.317572I$ $b=\ \ 0.032457-0.739244I$	$2.70715-2.50353I$	0
$u=-0.330029-1.180410I$ $a=\ \ 0.607699+0.317572I$ $b=\ \ 0.032457+0.739244I$	$2.70715+2.50353I$	0
$u=-0.661879+1.045090I$ $a=\ \ 0.806091+0.004427I$ $b=\ \ 0.145525-0.713654I$	$3.77152+3.96149I$	0
$u=-0.661879-1.045090I$ $a=\ \ 0.806091-0.004427I$ $b=\ \ 0.145525+0.713654I$	$3.77152-3.96149I$	0
$u=\ \ 0.716179+0.098392I$ $a=\ \ 0.780594-0.817015I$ $b=-0.982012-0.581986I$	$4.73461+4.33640I$	0
$u=\ \ 0.716179-0.098392I$ $a=\ \ 0.780594+0.817015I$ $b=-0.982012+0.581986I$	$4.73461-4.33640I$	0
$u=\ \ 0.632663+0.312150I$ $a=\ \ 1.67667-0.35481I$ $b=-0.283393+0.257017I$	$5.10442+3.75309I$	0
$u=\ \ 0.632663-0.312150I$ $a=\ \ 1.67667+0.35481I$ $b=-0.283393-0.257017I$	$5.10442-3.75309I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.697508+0.042276I$ $a=0.320190+1.056290I$ $b=1.293460+0.457104I$	$3.08996+0.50335I$	0
$u=-0.697508-0.042276I$ $a=0.320190-1.056290I$ $b=1.293460-0.457104I$	$3.08996-0.50335I$	0
$u=-1.344490+0.232038I$ $a=0.222248+0.421654I$ $b=0.107848+1.300160I$	$-3.26184-1.83723I$	0
$u=-1.344490-0.232038I$ $a=0.222248-0.421654I$ $b=0.107848-1.300160I$	$-3.26184+1.83723I$	0
$u=-0.629638+0.051553I$ $a=-0.506953+0.948183I$ $b=-1.270960-0.116190I$	$-0.96981+3.12263I$	$0.-3.92838I$
$u=-0.629638-0.051553I$ $a=-0.506953-0.948183I$ $b=-1.270960+0.116190I$	$-0.96981-3.12263I$	$0.+3.92838I$
$u=0.623255+0.102892I$ $a=0.812430+0.004182I$ $b=-1.051920-0.163847I$	$4.88061+4.25358I$	$7.95219-6.27359I$
$u=0.623255-0.102892I$ $a=0.812430-0.004182I$ $b=-1.051920+0.163847I$	$4.88061-4.25358I$	$7.95219+6.27359I$
$u=-0.570164+0.021414I$ $a=0.589757-1.092380I$ $b=1.64229+0.16254I$	$1.88323+7.93272I$	$1.77664-7.45810I$
$u=-0.570164-0.021414I$ $a=0.589757+1.092380I$ $b=1.64229-0.16254I$	$1.88323-7.93272I$	$1.77664+7.45810I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.30805+1.39618I$ $a=\ 0.292611+0.126630I$ $b=\ 0.015318+0.602025I$	$-0.08107+3.31791I$	0
$u=-0.30805-1.39618I$ $a=\ 0.292611-0.126630I$ $b=\ 0.015318-0.602025I$	$-0.08107-3.31791I$	0
$u=-1.38600+0.44020I$ $a=\ 0.082384-0.995509I$ $b=-0.47298-1.51710I$	$0.98783+1.74704I$	0
$u=-1.38600-0.44020I$ $a=\ 0.082384+0.995509I$ $b=-0.47298+1.51710I$	$0.98783-1.74704I$	0
$u=\ 1.46506+0.00570I$ $a=-0.244949+0.905533I$ $b=\ 0.06859+1.83552I$	$-4.04293-0.08034I$	0
$u=\ 1.46506-0.00570I$ $a=-0.244949-0.905533I$ $b=\ 0.06859-1.83552I$	$-4.04293+0.08034I$	0
$u=-0.445112+0.281624I$ $a=\ 2.64254+1.30726I$ $b=\ 0.326600+0.664261I$	$-0.18113-2.12200I$	$-60.10+0.246955I$
$u=-0.445112-0.281624I$ $a=\ 2.64254-1.30726I$ $b=\ 0.326600-0.664261I$	$-0.18113+2.12200I$	$-60.10-0.246955I$
$u=\ 1.37711+0.55990I$ $a=-0.543341-1.220170I$ $b=-0.10757-1.80567I$	$-7.78936-4.71097I$	0
$u=\ 1.37711-0.55990I$ $a=-0.543341+1.220170I$ $b=-0.10757+1.80567I$	$-7.78936+4.71097I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.503647$ $a = -0.984699$ $b = 0.808330$	1.57161	5.96450
$u = 0.463701 + 0.131323I$ $a = -1.78260 + 1.42853I$ $b = 0.591813 + 0.515091I$	$1.58882 - 0.32095I$	$2.16231 - 0.77182I$
$u = 0.463701 - 0.131323I$ $a = -1.78260 - 1.42853I$ $b = 0.591813 - 0.515091I$	$1.58882 + 0.32095I$	$2.16231 + 0.77182I$
$u = 1.48212 + 0.39520I$ $a = 0.466011 + 1.151950I$ $b = 0.06640 + 1.79340I$	$-9.37134 + 0.19549I$	0
$u = 1.48212 - 0.39520I$ $a = 0.466011 - 1.151950I$ $b = 0.06640 - 1.79340I$	$-9.37134 - 0.19549I$	0
$u = -0.14949 + 1.54080I$ $a = -0.489674 - 0.086157I$ $b = -0.047121 - 0.560015I$	$1.51048 + 8.25732I$	0
$u = -0.14949 - 1.54080I$ $a = -0.489674 + 0.086157I$ $b = -0.047121 + 0.560015I$	$1.51048 - 8.25732I$	0
$u = 1.56042 + 0.34674I$ $a = 0.010384 - 1.048110I$ $b = 0.67684 - 1.68437I$	$-1.26128 - 7.24457I$	0
$u = 1.56042 - 0.34674I$ $a = 0.010384 + 1.048110I$ $b = 0.67684 + 1.68437I$	$-1.26128 + 7.24457I$	0
$u = 1.65389 + 0.09304I$ $a = 0.414399 + 0.961671I$ $b = -0.02065 + 1.74832I$	$-8.67096 + 2.54106I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.65389 - 0.09304I$ $a = 0.414399 - 0.961671I$ $b = -0.02065 - 1.74832I$	$-8.67096 - 2.54106I$	0
$u = -0.010648 + 0.336630I$ $a = -0.862000 + 0.884016I$ $b = 0.186715 + 0.375985I$	$0.391751 + 1.001410I$	$6.35526 - 6.56819I$
$u = -0.010648 - 0.336630I$ $a = -0.862000 - 0.884016I$ $b = 0.186715 - 0.375985I$	$0.391751 - 1.001410I$	$6.35526 + 6.56819I$
$u = 1.69732 + 0.15917I$ $a = -0.038668 + 1.110620I$ $b = 0.55120 + 1.40451I$	$-7.69355 - 0.16950I$	0
$u = 1.69732 - 0.15917I$ $a = -0.038668 - 1.110620I$ $b = 0.55120 - 1.40451I$	$-7.69355 + 0.16950I$	0
$u = 1.71266 + 0.01894I$ $a = -0.436259 + 0.898448I$ $b = 0.05204 + 1.71503I$	$-6.53777 - 7.64853I$	0
$u = 1.71266 - 0.01894I$ $a = -0.436259 - 0.898448I$ $b = 0.05204 - 1.71503I$	$-6.53777 + 7.64853I$	0
$u = -1.64149 + 0.52671I$ $a = -0.146618 + 0.979002I$ $b = 0.32106 + 1.60321I$	$-3.98213 + 4.52901I$	0
$u = -1.64149 - 0.52671I$ $a = -0.146618 - 0.979002I$ $b = 0.32106 - 1.60321I$	$-3.98213 - 4.52901I$	0
$u = -1.62388 + 0.66255I$ $a = 0.156149 - 1.005480I$ $b = -0.33974 - 1.66999I$	$-1.69099 + 9.76232I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.62388-0.66255I$ $a=\ \ 0.156149+1.005480I$ $b=-0.33974+1.66999I$	$-1.69099-9.76232I$	0
$u=-1.75783+0.13522I$ $a=-0.154026+0.860113I$ $b=\ \ 0.14670+1.46011I$	$-5.44293+1.91638I$	0
$u=-1.75783-0.13522I$ $a=-0.154026-0.860113I$ $b=\ \ 0.14670-1.46011I$	$-5.44293-1.91638I$	0
$u=\ \ 1.77611+0.03947I$ $a=\ \ 0.016455+1.094850I$ $b=-0.54064+1.51324I$	$-8.82927-5.92695I$	0
$u=\ \ 1.77611-0.03947I$ $a=\ \ 0.016455-1.094850I$ $b=-0.54064-1.51324I$	$-8.82927+5.92695I$	0
$u=-1.80292+0.06963I$ $a=\ \ 0.205300+0.777815I$ $b=-0.03434+1.45649I$	$-4.37924+2.95785I$	0
$u=-1.80292-0.06963I$ $a=\ \ 0.205300-0.777815I$ $b=-0.03434-1.45649I$	$-4.37924-2.95785I$	0
$u=\ \ 1.75562+0.45978I$ $a=-0.028610+1.074530I$ $b=-0.55514+1.73413I$	$-7.12058-10.34450I$	0
$u=\ \ 1.75562-0.45978I$ $a=-0.028610-1.074530I$ $b=-0.55514-1.73413I$	$-7.12058+10.34450I$	0
$u=\ \ 1.73522+0.57056I$ $a=\ \ 0.041863-1.072980I$ $b=\ \ 0.55270-1.79198I$	$-4.7685-16.0285I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$1.73522-0.57056I$		
$a=$	$0.041863+1.072980I$	$-4.7685+16.0285I$	0
$b=$	$0.55270+1.79198I$		
$u=$	$-1.83475+0.17714I$		
$a=$	$-0.000375+0.827349I$	$-5.37639+2.89949I$	0
$b=$	$-0.049312+0.996855I$		
$u=$	$-1.83475-0.17714I$		
$a=$	$-0.000375-0.827349I$	$-5.37639-2.89949I$	0
$b=$	$-0.049312-0.996855I$		

II. $I_2^u =$
$\langle -9u^{21}-48u^{20}+\cdots+b+11,\ 28u^{21}+177u^{20}+\cdots+a+3,\ u^{22}+7u^{21}+\cdots+7u+1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -28u^{21} - 177u^{20} + \cdots - 66u - 3 \\ 9u^{21} + 48u^{20} + \cdots - 57u - 11 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 6u^{21} + 41u^{20} + \cdots + 92u + 16 \\ -15u^{21} - 100u^{20} + \cdots - 137u - 19 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u - 1 \\ u^{21} + 7u^{20} + \cdots + 28u + 6 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{21} - 7u^{20} + \cdots - 29u - 7 \\ u^{21} + 7u^{20} + \cdots + 28u + 6 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -37u^{21} - 225u^{20} + \cdots - 9u + 8 \\ 9u^{21} + 48u^{20} + \cdots - 57u - 11 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -37u^{21} - 225u^{20} + \cdots - 9u + 8 \\ 3u^{21} - 7u^{20} + \cdots - 258u - 45 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -53u^{21} - 365u^{20} + \cdots - 460u - 65 \\ 28u^{21} + 177u^{20} + \cdots + 66u + 3 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 7u^{21} + 49u^{20} + \cdots + 142u + 28 \\ -7u^{21} - 48u^{20} + \cdots - 120u - 21 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 8u^{21} + 40u^{20} + \cdots - 16u - 4 \\ 2u^{21} + 19u^{20} + \cdots + 60u + 11 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 76u^{21} + 537u^{20} + 1268u^{19} + 254u^{18} - 4506u^{17} - 9416u^{16} - 6062u^{15} + 8390u^{14} + 23885u^{13} + 25018u^{12} + 7101u^{11} - 17555u^{10} - 30785u^9 - 25183u^8 - 8290u^7 + 6877u^6 + 12900u^5 + 10927u^4 + 6127u^3 + 2402u^2 + 611u + 94$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{22} - 15u^{21} + \cdots - 17u + 1$
c_2	$u^{22} - u^{21} + \cdots - u + 1$
c_3	$u^{22} + 7u^{21} + \cdots + 7u + 1$
c_4	$u^{22} - 2u^{20} + \cdots + 2u + 1$
c_5	$u^{22} + 6u^{20} + \cdots + 4u^2 + 1$
c_6	$u^{22} + u^{21} + \cdots + u + 1$
c_7	$u^{22} - 2u^{21} + \cdots + 4u^2 + 1$
c_8	$u^{22} + 8u^{20} + \cdots - 8u^2 + 1$
c_9	$u^{22} + 12u^{21} + \cdots + 8u + 1$
c_{10}	$u^{22} + 6u^{20} + \cdots + 4u^2 + 1$
c_{11}	$u^{22} + 2u^{21} + \cdots + 4u^2 + 1$
c_{12}	$u^{22} + 4u^{20} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{22} - y^{21} + \cdots - 19y + 1$
c_2, c_6	$y^{22} + 15y^{21} + \cdots + 17y + 1$
c_3	$y^{22} - 15y^{21} + \cdots + 7y + 1$
c_4	$y^{22} - 4y^{21} + \cdots + 10y + 1$
c_5, c_{10}	$y^{22} + 12y^{21} + \cdots + 8y + 1$
c_7, c_{11}	$y^{22} - 12y^{21} + \cdots + 8y + 1$
c_8	$y^{22} + 16y^{21} + \cdots - 16y + 1$
c_9	$y^{22} + 4y^{21} + \cdots - 8y + 1$
c_{12}	$y^{22} + 8y^{21} + \cdots - 12y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.786340+0.565962I$ $a=-0.480702-0.627163I$ $b=\ \ 0.794404-0.189170I$	$5.03496-3.36076I$	$8.69178-1.68696I$
$u=-0.786340-0.565962I$ $a=-0.480702+0.627163I$ $b=\ \ 0.794404+0.189170I$	$5.03496+3.36076I$	$8.69178+1.68696I$
$u=-0.645075+0.696793I$ $a=\ \ 0.519121+0.744340I$ $b=-0.426535-0.029869I$	$2.08453+1.37373I$	$6.40548-4.04825I$
$u=-0.645075-0.696793I$ $a=\ \ 0.519121-0.744340I$ $b=-0.426535+0.029869I$	$2.08453-1.37373I$	$6.40548+4.04825I$
$u=\ \ 1.050430+0.104212I$ $a=\ \ 0.033541+1.394220I$ $b=\ \ 0.14477+2.02805I$	$-6.17325+1.44187I$	$-4.49643-5.78362I$
$u=\ \ 1.050430-0.104212I$ $a=\ \ 0.033541-1.394220I$ $b=\ \ 0.14477-2.02805I$	$-6.17325-1.44187I$	$-4.49643+5.78362I$
$u=-0.196664+0.874491I$ $a=\ \ 0.533665+1.019810I$ $b=\ \ 0.576578-0.060736I$	$1.15199+2.87768I$	$6.14711-2.75750I$
$u=-0.196664-0.874491I$ $a=\ \ 0.533665-1.019810I$ $b=\ \ 0.576578+0.060736I$	$1.15199-2.87768I$	$6.14711+2.75750I$
$u=-0.025945+0.804370I$ $a=-0.552142-1.124630I$ $b=-1.022830+0.014286I$	$3.28844+7.64426I$	$8.77312-6.57606I$
$u=-0.025945-0.804370I$ $a=-0.552142+1.124630I$ $b=-1.022830-0.014286I$	$3.28844-7.64426I$	$8.77312+6.57606I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.552269+0.511977I$ $a=-0.662176-0.681665I$ $b=\ \ 0.762642+0.506834I$	$5.76722+5.07165I$	$11.26800-7.37230I$
$u=-0.552269-0.511977I$ $a=-0.662176+0.681665I$ $b=\ \ 0.762642-0.506834I$	$5.76722-5.07165I$	$11.26800+7.37230I$
$u=-0.320236+0.596503I$ $a=\ \ 0.719182+0.904753I$ $b=\ \ 0.136570-0.890708I$	$2.51715+2.73559I$	$3.06423-4.00239I$
$u=-0.320236-0.596503I$ $a=\ \ 0.719182-0.904753I$ $b=\ \ 0.136570+0.890708I$	$2.51715-2.73559I$	$3.06423+4.00239I$
$u=-0.160838+0.633062I$ $a=-0.702253-1.056490I$ $b=-0.866556+0.783842I$	$4.58448+0.25572I$	$9.66478+0.84740I$
$u=-0.160838-0.633062I$ $a=-0.702253+1.056490I$ $b=-0.866556-0.783842I$	$4.58448-0.25572I$	$9.66478-0.84740I$
$u=-1.42190+0.08708I$ $a=\ \ 0.039113+0.548518I$ $b=-0.13321+1.42787I$	$-2.62572-1.09341I$	$7.40708-0.45044I$
$u=-1.42190-0.08708I$ $a=\ \ 0.039113-0.548518I$ $b=-0.13321-1.42787I$	$-2.62572+1.09341I$	$7.40708+0.45044I$
$u=\ \ 1.52157+0.14127I$ $a=\ \ 0.023534+1.285360I$ $b=\ \ 0.07886+1.61385I$	$-8.18195-2.56207I$	$0.65909+2.77062I$
$u=\ \ 1.52157-0.14127I$ $a=\ \ 0.023534-1.285360I$ $b=\ \ 0.07886-1.61385I$	$-8.18195+2.56207I$	$0.65909-2.77062I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.96273+0.15882I$ $a=\quad 0.029119+0.703327I$ $b=-0.044696+1.062180I$	$-5.80293+2.78792I$	0
$u=-1.96273-0.15882I$ $a=\quad 0.029119-0.703327I$ $b=-0.044696-1.062180I$	$-5.80293-2.78792I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{22}-15u^{21}+\cdots-17u+1)(u^{73}+42u^{72}+\cdots+u-1)$
c_2	$(u^{22}-u^{21}+\cdots-u+1)(u^{73}-2u^{72}+\cdots+3u-1)$
c_3	$(u^{22}+7u^{21}+\cdots+7u+1)(u^{73}-4u^{72}+\cdots-7469u-4961)$
c_4	$(u^{22}-2u^{20}+\cdots+2u+1)(u^{73}+u^{72}+\cdots+504u-34447)$
c_5	$(u^{22}+6u^{20}+\cdots+4u^2+1)(u^{73}-u^{72}+\cdots+6u-19)$
c_6	$(u^{22}+u^{21}+\cdots+u+1)(u^{73}-2u^{72}+\cdots+3u-1)$
c_7	$(u^{22}-2u^{21}+\cdots+4u^2+1)(u^{73}-3u^{72}+\cdots+518u-77)$
c_8	$(u^{22}+8u^{20}+\cdots-8u^2+1)(u^{73}-u^{72}+\cdots-4184u-2449)$
c_9	$(u^{22}+12u^{21}+\cdots+8u+1)(u^{73}-35u^{72}+\cdots-3270u+361)$
c_{10}	$(u^{22}+6u^{20}+\cdots+4u^2+1)(u^{73}-u^{72}+\cdots+6u-19)$
c_{11}	$(u^{22}+2u^{21}+\cdots+4u^2+1)(u^{73}-3u^{72}+\cdots+518u-77)$
c_{12}	$(u^{22}+4u^{20}+\cdots+2u+1)(u^{73}+u^{72}+\cdots+9112u-2479)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{22}-y^{21}+\cdots-19y+1)(y^{73}-6y^{72}+\cdots+109y-1)$
c_2, c_6	$(y^{22}+15y^{21}+\cdots+17y+1)(y^{73}+42y^{72}+\cdots+y-1)$
c_3	$(y^{22}-15y^{21}+\cdots+7y+1)$ $\cdot(y^{73}-80y^{72}+\cdots+887378547y-24611521)$
c_4	$(y^{22}-4y^{21}+\cdots+10y+1)$ $\cdot(y^{73}-5y^{72}+\cdots+9963979872y-1186595809)$
c_5, c_{10}	$(y^{22}+12y^{21}+\cdots+8y+1)(y^{73}+35y^{72}+\cdots-3270y-361)$
c_7, c_{11}	$(y^{22}-12y^{21}+\cdots+8y+1)(y^{73}-25y^{72}+\cdots-47222y-5929)$
c_8	$(y^{22}+16y^{21}+\cdots-16y+1)$ $\cdot(y^{73}+83y^{72}+\cdots-316258558y-5997601)$
c_9	$(y^{22}+4y^{21}+\cdots-8y+1)(y^{73}+15y^{72}+\cdots-1105302y-130321)$
c_{12}	$(y^{22}+8y^{21}+\cdots-12y+1)$ $\cdot(y^{73}+79y^{72}+\cdots-157637734y-6145441)$