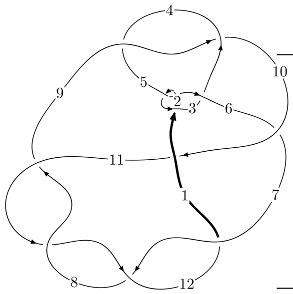
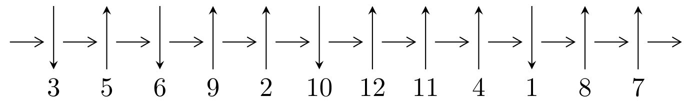
$12a_{0022}$ $(K12a_{0022})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -40u^{81} + 145u^{80} + \cdots + 8b - 29,\ -19u^{81} + 107u^{80} + \cdots + 4a + 41,\ u^{82} - 5u^{81} + \cdots - 5u + 1 \rangle$$
$$I_2^u = \langle b^4 - b^3u - b^3 + b^2u - u - 1,\ a,\ u^2 + u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 90 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. $\boldsymbol{I_1^u = \langle -40u^{81} + 145u^{80} + \cdots + 8b - 29,\ -19u^{81} + 107u^{80} + \cdots + 4a + 41,\ u^{82} - 5u^{81} + \cdots - 5u + 1 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^6 + 2u^4 + u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 4.75000u^{81} - 26.7500u^{80} + \cdots + 42.2500u - 10.2500 \\ 5u^{81} - \frac{145}{8}u^{80} + \cdots - 9u + \frac{29}{8} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{12} + 3u^{10} + 5u^8 - 2u^7 + 4u^6 - 4u^5 + 2u^4 - 4u^3 + u^2 + 1 \\ -\frac{1}{8}u^{81} + \frac{5}{8}u^{80} + \cdots - \frac{5}{8}u + \frac{1}{8} \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 6.87500u^{81} - 28.1250u^{80} + \cdots + 13.6250u - 4.12500 \\ 18u^{81} - 74u^{80} + \cdots + \frac{5}{2}u + \frac{7}{2} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{23}{4}u^{81} - \frac{103}{4}u^{80} + \cdots + \frac{69}{4}u - \frac{17}{4} \\ \frac{61}{4}u^{81} - \frac{509}{8}u^{80} + \cdots + \frac{9}{4}u + \frac{29}{8} \end{pmatrix}$$
$$a_8 = \begin{pmatrix} \frac{11}{2}u^{81} - \frac{105}{4}u^{80} + \cdots + \frac{81}{4}u - \frac{5}{2} \\ \frac{13}{2}u^{81} - \frac{251}{8}u^{80} + \cdots + 18u - \frac{25}{8} \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} \frac{3}{8}u^{81} - \frac{3}{2}u^{80} + \cdots + \frac{3}{8}u + 1 \\ -\frac{1}{2}u^{81} + \frac{9}{2}u^{80} + \cdots - \frac{43}{4}u + \frac{5}{2} \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{109}{8}u^{81} - \frac{281}{4}u^{80} + \cdots + \frac{271}{8}u + \frac{21}{4}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{82}+41u^{81}+\cdots+5u+1$
c_2, c_5	$u^{82}+5u^{81}+\cdots+5u+1$
c_3	$u^{82}-5u^{81}+\cdots+4087u+1321$
c_4, c_9	$u^{82}+u^{81}+\cdots+128u+256$
c_6	$u^{82}+3u^{81}+\cdots+81583u+8329$
c_7, c_8, c_{11} c_{12}	$u^{82}+3u^{81}+\cdots+5u+1$
c_{10}	$u^{82}-23u^{81}+\cdots-63989u+3971$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{82} + 5y^{81} + \cdots + 41y + 1$
c_2, c_5	$y^{82} + 41y^{81} + \cdots + 5y + 1$
c_3	$y^{82} - 31y^{81} + \cdots - 31850155y + 1745041$
c_4, c_9	$y^{82} + 45y^{81} + \cdots + 1327104y + 65536$
c_6	$y^{82} - 37y^{81} + \cdots - 2124260175y + 69372241$
c_7, c_8, c_{11} c_{12}	$y^{82} + 95y^{81} + \cdots + y + 1$
c_{10}	$y^{82} - 17y^{81} + \cdots + 101206189y + 15768841$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.704314 + 0.732833I$ $a = -0.039392 - 0.613136I$ $b = -0.383636 + 0.526485I$	$-0.38177 - 5.18756I$	0
$u = -0.704314 - 0.732833I$ $a = -0.039392 + 0.613136I$ $b = -0.383636 - 0.526485I$	$-0.38177 + 5.18756I$	0
$u = -0.105779 + 0.955141I$ $a = -1.38658 - 0.34528I$ $b = -0.737097 + 0.693464I$	$-8.72790 - 2.31871I$	0
$u = -0.105779 - 0.955141I$ $a = -1.38658 + 0.34528I$ $b = -0.737097 - 0.693464I$	$-8.72790 + 2.31871I$	0
$u = -0.741465 + 0.744493I$ $a = 0.296277 + 0.595555I$ $b = 0.501466 - 0.980876I$	$-8.14095 - 7.21306I$	0
$u = -0.741465 - 0.744493I$ $a = 0.296277 - 0.595555I$ $b = 0.501466 + 0.980876I$	$-8.14095 + 7.21306I$	0
$u = -0.625049 + 0.701797I$ $a = -0.378967 + 0.585059I$ $b = 0.198631 + 0.083439I$	$1.02352 - 2.11165I$	0
$u = -0.625049 - 0.701797I$ $a = -0.378967 - 0.585059I$ $b = 0.198631 - 0.083439I$	$1.02352 + 2.11165I$	0
$u = -0.567368 + 0.920415I$ $a = -0.378006 + 0.357257I$ $b = -0.244076 + 0.661524I$	$0.39375 - 2.56563I$	0
$u = -0.567368 - 0.920415I$ $a = -0.378006 - 0.357257I$ $b = -0.244076 - 0.661524I$	$0.39375 + 2.56563I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.659941 + 0.872179I$ $a = 0.277339 - 0.046151I$ $b = 0.879179 + 0.019524I$	$-0.794028 - 0.020453I$	0
$u = -0.659941 - 0.872179I$ $a = 0.277339 + 0.046151I$ $b = 0.879179 - 0.019524I$	$-0.794028 + 0.020453I$	0
$u = 0.854489 + 0.292104I$ $a = -2.34167 + 0.05715I$ $b = -2.00466 - 0.97235I$	$-10.7779 - 10.0786I$	0
$u = 0.854489 - 0.292104I$ $a = -2.34167 - 0.05715I$ $b = -2.00466 + 0.97235I$	$-10.7779 + 10.0786I$	0
$u = 0.410592 + 1.038090I$ $a = -0.128468 - 0.117863I$ $b = -1.282850 + 0.198070I$	$-7.98722 - 0.83968I$	0
$u = 0.410592 - 1.038090I$ $a = -0.128468 + 0.117863I$ $b = -1.282850 - 0.198070I$	$-7.98722 + 0.83968I$	0
$u = 0.829105 + 0.286958I$ $a = 2.10320 - 0.00102I$ $b = 1.63515 + 0.78199I$	$-2.85556 - 7.68645I$	0
$u = 0.829105 - 0.286958I$ $a = 2.10320 + 0.00102I$ $b = 1.63515 - 0.78199I$	$-2.85556 + 7.68645I$	0
$u = -0.701766 + 0.880022I$ $a = -0.179014 - 0.153824I$ $b = -1.302540 - 0.384385I$	$-8.54157 + 1.77332I$	0
$u = -0.701766 - 0.880022I$ $a = -0.179014 + 0.153824I$ $b = -1.302540 + 0.384385I$	$-8.54157 - 1.77332I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.835427 + 0.163941I$ $a = -1.43377 + 0.88175I$ $b = -1.58005 + 0.86107I$	$-12.74480 + 0.10746I$	$-3.09571 + 0.I$
$u = 0.835427 - 0.163941I$ $a = -1.43377 - 0.88175I$ $b = -1.58005 - 0.86107I$	$-12.74480 - 0.10746I$	$-3.09571 + 0.I$
$u = -0.228543 + 0.813377I$ $a = 1.064610 + 0.363456I$ $b = 0.610969 - 0.498748I$	$-1.37873 - 1.65649I$	$-3.71571 + 4.84793I$
$u = -0.228543 - 0.813377I$ $a = 1.064610 - 0.363456I$ $b = 0.610969 + 0.498748I$	$-1.37873 + 1.65649I$	$-3.71571 - 4.84793I$
$u = 0.447742 + 1.064870I$ $a = 0.026648 + 0.300164I$ $b = 0.936468 + 0.133542I$	$-1.27806 + 1.55480I$	0
$u = 0.447742 - 1.064870I$ $a = 0.026648 - 0.300164I$ $b = 0.936468 - 0.133542I$	$-1.27806 - 1.55480I$	0
$u = -0.401903 + 1.086010I$ $a = -0.50943 - 1.80938I$ $b = -1.94745 - 0.21375I$	$-3.10543 - 0.73820I$	0
$u = -0.401903 - 1.086010I$ $a = -0.50943 + 1.80938I$ $b = -1.94745 + 0.21375I$	$-3.10543 + 0.73820I$	0
$u = 0.792544 + 0.272348I$ $a = -1.77905 - 0.02879I$ $b = -1.224390 - 0.466760I$	$-1.18892 - 3.99153I$	$4.00000 + 2.29977I$
$u = 0.792544 - 0.272348I$ $a = -1.77905 + 0.02879I$ $b = -1.224390 + 0.466760I$	$-1.18892 + 3.99153I$	$4.00000 - 2.29977I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.646960 + 0.529804I$ $a = 1.00756 - 1.18930I$ $b = -0.436228 - 1.048150I$	$-4.34258 - 1.45718I$	$4.00000 + 3.03293I$
$u = -0.646960 - 0.529804I$ $a = 1.00756 + 1.18930I$ $b = -0.436228 + 1.048150I$	$-4.34258 + 1.45718I$	$4.00000 - 3.03293I$
$u = -0.585550 + 1.006890I$ $a = 0.847118 - 0.654790I$ $b = 0.14547 - 1.74184I$	$-5.72135 - 3.35594I$	0
$u = -0.585550 - 1.006890I$ $a = 0.847118 + 0.654790I$ $b = 0.14547 + 1.74184I$	$-5.72135 + 3.35594I$	0
$u = -0.473787 + 1.064880I$ $a = -0.18710 + 1.59396I$ $b = 1.60049 + 1.10893I$	$-0.74392 - 3.35669I$	0
$u = -0.473787 - 1.064880I$ $a = -0.18710 - 1.59396I$ $b = 1.60049 - 1.10893I$	$-0.74392 + 3.35669I$	0
$u = 0.480590 + 1.080350I$ $a = -0.007942 - 0.520219I$ $b = -0.542127 - 0.479128I$	$-0.99744 + 5.35792I$	0
$u = 0.480590 - 1.080350I$ $a = -0.007942 + 0.520219I$ $b = -0.542127 + 0.479128I$	$-0.99744 - 5.35792I$	0
$u = 0.786259 + 0.197156I$ $a = 1.39080 - 0.38724I$ $b = 1.192400 - 0.326068I$	$-4.31599 - 1.20763I$	$-1.64666 - 0.57039I$
$u = 0.786259 - 0.197156I$ $a = 1.39080 + 0.38724I$ $b = 1.192400 + 0.326068I$	$-4.31599 + 1.20763I$	$-1.64666 + 0.57039I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.387160+1.125240I$ $a=\ \ 0.74985+2.17217I$ $b=\ \ 2.37416-0.11109I$	$-11.12530+0.93298I$	0
$u=-0.387160-1.125240I$ $a=\ \ 0.74985-2.17217I$ $b=\ \ 2.37416+0.11109I$	$-11.12530-0.93298I$	0
$u=\ \ 0.520504+1.092360I$ $a=\ \ 0.095680+0.832445I$ $b=-0.021566+1.043640I$	$-7.02432+7.67620I$	0
$u=\ \ 0.520504-1.092360I$ $a=\ \ 0.095680-0.832445I$ $b=-0.021566-1.043640I$	$-7.02432-7.67620I$	0
$u=-0.489951+1.107000I$ $a=\ \ 0.44869-2.01555I$ $b=-2.19473-1.55021I$	$-2.46183-6.60369I$	0
$u=-0.489951-1.107000I$ $a=\ \ 0.44869+2.01555I$ $b=-2.19473+1.55021I$	$-2.46183+6.60369I$	0
$u=\ \ 0.278575+1.179870I$ $a=-0.079195-1.106280I$ $b=\ \ 1.35992-0.65097I$	$-5.69304-0.73230I$	0
$u=\ \ 0.278575-1.179870I$ $a=-0.079195+1.106280I$ $b=\ \ 1.35992+0.65097I$	$-5.69304+0.73230I$	0
$u=\ \ 0.252443+1.203480I$ $a=-0.05183+1.44329I$ $b=-1.47746+0.48712I$	$-7.63888-4.38566I$	0
$u=\ \ 0.252443-1.203480I$ $a=-0.05183-1.44329I$ $b=-1.47746-0.48712I$	$-7.63888+4.38566I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.494792 + 1.131070I$ $a = -0.56672 + 2.31046I$ $b = 2.65647 + 1.74358I$	$-10.36760 - 8.71428I$	0
$u = -0.494792 - 1.131070I$ $a = -0.56672 - 2.31046I$ $b = 2.65647 - 1.74358I$	$-10.36760 + 8.71428I$	0
$u = 0.322106 + 1.195250I$ $a = 0.527321 + 0.957086I$ $b = -1.34997 + 0.92937I$	$-8.57034 + 2.40449I$	0
$u = 0.322106 - 1.195250I$ $a = 0.527321 - 0.957086I$ $b = -1.34997 - 0.92937I$	$-8.57034 - 2.40449I$	0
$u = 0.241449 + 1.225680I$ $a = 0.08124 - 1.72667I$ $b = 1.60146 - 0.35341I$	$-15.7352 - 6.6947I$	0
$u = 0.241449 - 1.225680I$ $a = 0.08124 + 1.72667I$ $b = 1.60146 + 0.35341I$	$-15.7352 + 6.6947I$	0
$u = 0.633300 + 0.364129I$ $a = 1.146130 + 0.757063I$ $b = -0.206752 + 0.243475I$	$-4.89815 - 3.14508I$	$2.29655 + 3.69057I$
$u = 0.633300 - 0.364129I$ $a = 1.146130 - 0.757063I$ $b = -0.206752 - 0.243475I$	$-4.89815 + 3.14508I$	$2.29655 - 3.69057I$
$u = 0.338253 + 1.225240I$ $a = -0.917777 - 1.065290I$ $b = 1.49348 - 1.21156I$	$-17.0811 + 4.0269I$	0
$u = 0.338253 - 1.225240I$ $a = -0.917777 + 1.065290I$ $b = 1.49348 + 1.21156I$	$-17.0811 - 4.0269I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.529169 + 1.165730I$ $a = -0.55607 + 1.33364I$ $b = -1.49781 + 0.01915I$	$-7.15078 + 6.07252I$	0
$u = 0.529169 - 1.165730I$ $a = -0.55607 - 1.33364I$ $b = -1.49781 - 0.01915I$	$-7.15078 - 6.07252I$	0
$u = 0.556937 + 1.154960I$ $a = 0.23026 - 1.59190I$ $b = 1.89941 - 0.80869I$	$-3.79190 + 9.02671I$	0
$u = 0.556937 - 1.154960I$ $a = 0.23026 + 1.59190I$ $b = 1.89941 + 0.80869I$	$-3.79190 - 9.02671I$	0
$u = 0.571315 + 1.163160I$ $a = -0.20043 + 1.83707I$ $b = -2.42638 + 0.96617I$	$-5.46594 + 12.87520I$	0
$u = 0.571315 - 1.163160I$ $a = -0.20043 - 1.83707I$ $b = -2.42638 - 0.96617I$	$-5.46594 - 12.87520I$	0
$u = 0.358574 + 0.605548I$ $a = -0.725871 - 0.684487I$ $b = 0.181111 + 1.173260I$	$-6.57846 + 4.17153I$	$-0.218037 + 0.553666I$
$u = 0.358574 - 0.605548I$ $a = -0.725871 + 0.684487I$ $b = 0.181111 - 1.173260I$	$-6.57846 - 4.17153I$	$-0.218037 - 0.553666I$
$u = 0.522003 + 1.192470I$ $a = 0.95599 - 1.38115I$ $b = 1.72988 + 0.74459I$	$-15.8138 + 4.8468I$	0
$u = 0.522003 - 1.192470I$ $a = 0.95599 + 1.38115I$ $b = 1.72988 - 0.74459I$	$-15.8138 - 4.8468I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.580577 + 1.170980I$ $a = 0.20698 - 2.03262I$ $b = 2.86387 - 1.01322I$	$-13.4120 + 15.3715I$	0
$u = 0.580577 - 1.170980I$ $a = 0.20698 + 2.03262I$ $b = 2.86387 + 1.01322I$	$-13.4120 - 15.3715I$	0
$u = -0.633105 + 0.172755I$ $a = -2.82368 + 0.73281I$ $b = -1.72041 + 1.20662I$	$-7.70310 + 4.34280I$	$1.05723 - 2.52323I$
$u = -0.633105 - 0.172755I$ $a = -2.82368 - 0.73281I$ $b = -1.72041 - 1.20662I$	$-7.70310 - 4.34280I$	$1.05723 + 2.52323I$
$u = -0.469905 + 0.400587I$ $a = -1.70527 + 0.49698I$ $b = -0.460855 + 0.893450I$	$1.183240 - 0.630202I$	$8.42558 + 2.80238I$
$u = -0.469905 - 0.400587I$ $a = -1.70527 - 0.49698I$ $b = -0.460855 - 0.893450I$	$1.183240 + 0.630202I$	$8.42558 - 2.80238I$
$u = 0.353527 + 0.489455I$ $a = 0.831523 + 0.783639I$ $b = -0.196486 - 0.779621I$	$0.57076 + 2.04372I$	$3.58253 - 2.28115I$
$u = 0.353527 - 0.489455I$ $a = 0.831523 - 0.783639I$ $b = -0.196486 + 0.779621I$	$0.57076 - 2.04372I$	$3.58253 + 2.28115I$
$u = -0.550775 + 0.221389I$ $a = 2.42931 - 0.59762I$ $b = 1.16401 - 1.01324I$	$-0.02868 + 2.38938I$	$3.67522 - 4.58945I$
$u = -0.550775 - 0.221389I$ $a = 2.42931 + 0.59762I$ $b = 1.16401 + 1.01324I$	$-0.02868 - 2.38938I$	$3.67522 + 4.58945I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.472632 + 0.351594I$ $a = -0.840285 - 0.800430I$ $b = 0.213524 + 0.348569I$	$1.10262 - 1.31646I$	$6.13864 + 5.00378I$
$u = 0.472632 - 0.351594I$ $a = -0.840285 + 0.800430I$ $b = 0.213524 - 0.348569I$	$1.10262 + 1.31646I$	$6.13864 - 5.00378I$

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

(i) Arc colorings

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

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

$$a_2 = \begin{pmatrix} 1 \\ -u-1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ u+1 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 0 \\ b \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ b^2u + u + 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ -u-1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} bu + b \\ 2b \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -b^3u \\ -2b^3u - 2b^3 + b \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -b^2 - u \\ -b^3u - b^3 + 2b^2u - 2u - 2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -5b^2u - 3b^2 + 3bu - b + 5u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_5	$(u^2 - u + 1)^4$
c_2	$(u^2 + u + 1)^4$
c_4, c_9	u^8
c_6, c_{10}	$(u^4 + u^3 + u^2 + 1)^2$
c_7, c_8	$(u^4 + u^3 + 3u^2 + 2u + 1)^2$
c_{11}, c_{12}	$(u^4 - u^3 + 3u^2 - 2u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_5	$(y^2 + y + 1)^4$
c_4, c_9	y^8
c_6, c_{10}	$(y^4 + y^3 + 3y^2 + 2y + 1)^2$
c_7, c_8, c_{11} c_{12}	$(y^4 + 5y^3 + 7y^2 + 2y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.500000 + 0.866025I$ $a = 0$ $b = 0.447930 - 0.664845I$	$0.21101 - 3.44499I$	$1.64912 + 8.49900I$
$u = -0.500000 + 0.866025I$ $a = 0$ $b = -0.799738 + 0.055496I$	$0.211005 - 0.614778I$	$4.65255 - 0.59814I$
$u = -0.500000 + 0.866025I$ $a = 0$ $b = -0.363298 + 1.193330I$	$-6.79074 - 5.19385I$	$-1.80063 + 6.43123I$
$u = -0.500000 + 0.866025I$ $a = 0$ $b = 1.215110 + 0.282041I$	$-6.79074 + 1.13408I$	$1.99896 + 0.39034I$
$u = -0.500000 - 0.866025I$ $a = 0$ $b = 0.447930 + 0.664845I$	$0.21101 + 3.44499I$	$1.64912 - 8.49900I$
$u = -0.500000 - 0.866025I$ $a = 0$ $b = -0.799738 - 0.055496I$	$0.211005 + 0.614778I$	$4.65255 + 0.59814I$
$u = -0.500000 - 0.866025I$ $a = 0$ $b = -0.363298 - 1.193330I$	$-6.79074 + 5.19385I$	$-1.80063 - 6.43123I$
$u = -0.500000 - 0.866025I$ $a = 0$ $b = 1.215110 - 0.282041I$	$-6.79074 - 1.13408I$	$1.99896 - 0.39034I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^4)(u^{82}+41u^{81}+\cdots+5u+1)$
c_2	$((u^2+u+1)^4)(u^{82}+5u^{81}+\cdots+5u+1)$
c_3	$((u^2-u+1)^4)(u^{82}-5u^{81}+\cdots+4087u+1321)$
c_4, c_9	$u^8(u^{82}+u^{81}+\cdots+128u+256)$
c_5	$((u^2-u+1)^4)(u^{82}+5u^{81}+\cdots+5u+1)$
c_6	$((u^4+u^3+u^2+1)^2)(u^{82}+3u^{81}+\cdots+81583u+8329)$
c_7, c_8	$((u^4+u^3+3u^2+2u+1)^2)(u^{82}+3u^{81}+\cdots+5u+1)$
c_{10}	$((u^4+u^3+u^2+1)^2)(u^{82}-23u^{81}+\cdots-63989u+3971)$
c_{11}, c_{12}	$((u^4-u^3+3u^2-2u+1)^2)(u^{82}+3u^{81}+\cdots+5u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^4)(y^{82}+5y^{81}+\cdots+41y+1)$
c_2, c_5	$((y^2+y+1)^4)(y^{82}+41y^{81}+\cdots+5y+1)$
c_3	$((y^2+y+1)^4)(y^{82}-31y^{81}+\cdots-3.18502\times 10^7 y+1745041)$
c_4, c_9	$y^8(y^{82}+45y^{81}+\cdots+1327104y+65536)$
c_6	$(y^4+y^3+3y^2+2y+1)^2$ $\cdot(y^{82}-37y^{81}+\cdots-2124260175y+69372241)$
c_7, c_8, c_{11} c_{12}	$((y^4+5y^3+7y^2+2y+1)^2)(y^{82}+95y^{81}+\cdots+y+1)$
c_{10}	$(y^4+y^3+3y^2+2y+1)^2$ $\cdot(y^{82}-17y^{81}+\cdots+101206189y+15768841)$