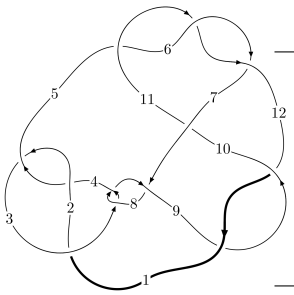
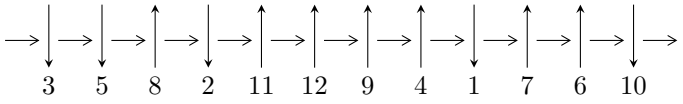
$12a_{0112}$ $(K12a_{0112})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 6.90259 \times 10^{236} u^{87} + 8.88875 \times 10^{237} u^{86} + \cdots + 2.40669 \times 10^{238} b - 4.89965 \times 10^{238}, \\ & 6.80069 \times 10^{238} u^{87} + 9.46673 \times 10^{239} u^{86} + \cdots + 5.53539 \times 10^{239} a + 2.08834 \times 10^{241}, \\ & u^{88} + 14u^{87} + \cdots + 3387u + 207 \rangle \\ I_2^u = \langle & b,\ -u^4 - u^3 - 2u^2 + a - u - 1,\ u^5 + u^4 + 2u^3 + u^2 + u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 93 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. $\boldsymbol{I_1^u = \langle 6.90 \times 10^{236} u^{87} + 8.89 \times 10^{237} u^{86} + \cdots + 2.41 \times 10^{238} b - 4.90 \times 10^{238},\ 6.80 \times 10^{238} u^{87} + 9.47 \times 10^{239} u^{86} + \cdots + 5.54 \times 10^{239} a + 2.09 \times 10^{241},\ u^{88} + 14 u^{87} + \cdots + 3387 u + 207 \rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.122858u^{87} - 1.71022u^{86} + \cdots - 627.195u - 37.7271 \\ -0.0286808u^{87} - 0.369335u^{86} + \cdots + 21.4446u + 2.03584 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00171350u^{87} - 0.0279250u^{86} + \cdots - 36.0867u - 5.51864 \\ -0.0374023u^{87} - 0.488646u^{86} + \cdots - 233.414u - 15.5951 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0424549u^{87} - 0.597700u^{86} + \cdots - 379.570u - 27.2479 \\ -0.0311366u^{87} - 0.382954u^{86} + \cdots + 100.315u + 8.26440 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0694474u^{87} + 0.975047u^{86} + \cdots + 215.246u + 12.4910 \\ 0.0385643u^{87} + 0.496854u^{86} + \cdots + 44.9227u + 3.00962 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.0356888u^{87} + 0.460721u^{86} + \cdots + 197.327u + 10.0764 \\ -0.0374023u^{87} - 0.488646u^{86} + \cdots - 233.414u - 15.5951 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0269231u^{87} + 0.335328u^{86} + \cdots + 210.971u + 21.3838 \\ -0.0159512u^{87} - 0.217071u^{86} + \cdots + 26.5351u + 1.10107 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 0.0237817u^{87} + 0.326428u^{86} + \cdots + 315.117u + 18.5023 \\ -0.0404086u^{87} - 0.542338u^{86} + \cdots - 222.919u - 13.8773 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.0753384u^{87} - 1.01734u^{86} + \cdots - 399.712u - 21.7576 \\ 0.00393597u^{87} + 0.0453448u^{86} + \cdots - 0.284989u - 0.354695 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.114811u^{87} - 1.49279u^{86} + \cdots - 618.725u - 34.0945$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{88}+46u^{87}+\cdots+7u+1$
c_2, c_4	$u^{88}-6u^{87}+\cdots+7u-1$
c_3, c_8	$u^{88}+u^{87}+\cdots-32u+32$
c_5, c_6, c_{11}	$u^{88}-2u^{87}+\cdots+u-1$
c_7	$u^{88}-33u^{87}+\cdots-18944u+1024$
c_9, c_{12}	$u^{88}-14u^{87}+\cdots-3387u+207$
c_{10}	$u^{88}+6u^{87}+\cdots-4287u-1585$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{88} - 2y^{87} + \cdots + 17y + 1$
c_2, c_4	$y^{88} - 46y^{87} + \cdots - 7y + 1$
c_3, c_8	$y^{88} - 33y^{87} + \cdots - 18944y + 1024$
c_5, c_6, c_{11}	$y^{88} - 82y^{87} + \cdots + 11y + 1$
c_7	$y^{88} + 35y^{87} + \cdots + 3538944y + 1048576$
c_9, c_{12}	$y^{88} + 66y^{87} + \cdots + 2032911y + 42849$
c_{10}	$y^{88} - 26y^{87} + \cdots - 57768789y + 2512225$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.936529+0.286385I$ $a=\ 0.375503-0.818432I$ $b=\ 0.670197-0.599214I$	$1.58963+0.54596I$	0
$u=-0.936529-0.286385I$ $a=\ 0.375503+0.818432I$ $b=\ 0.670197+0.599214I$	$1.58963-0.54596I$	0
$u=-0.158558+0.953109I$ $a=\ 1.35923-1.66559I$ $b=-0.799038-0.483668I$	$-1.208240-0.072119I$	0
$u=-0.158558-0.953109I$ $a=\ 1.35923+1.66559I$ $b=-0.799038+0.483668I$	$-1.208240+0.072119I$	0
$u=\ 0.049688+1.038260I$ $a=\ 0.246699-0.518699I$ $b=\ 0.189654-0.798658I$	$1.25966-1.52143I$	0
$u=\ 0.049688-1.038260I$ $a=\ 0.246699+0.518699I$ $b=\ 0.189654+0.798658I$	$1.25966+1.52143I$	0
$u=\ 0.957572+0.048444I$ $a=\ 0.18518+1.65682I$ $b=\ 0.704859+0.769906I$	$-5.39754-1.29517I$	0
$u=\ 0.957572-0.048444I$ $a=\ 0.18518-1.65682I$ $b=\ 0.704859-0.769906I$	$-5.39754+1.29517I$	0
$u=\ 0.672618+0.682873I$ $a=-0.400811+0.253113I$ $b=-0.747825+0.045261I$	$-0.26439-2.42416I$	0
$u=\ 0.672618-0.682873I$ $a=-0.400811-0.253113I$ $b=-0.747825-0.045261I$	$-0.26439+2.42416I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.927890 + 0.197280I$ $a = -0.307178 + 1.192550I$ $b = -0.836277 + 0.577421I$	$-1.73101 - 2.30754I$	0
$u = 0.927890 - 0.197280I$ $a = -0.307178 - 1.192550I$ $b = -0.836277 - 0.577421I$	$-1.73101 + 2.30754I$	0
$u = -0.992970 + 0.408219I$ $a = 0.27813 - 1.71995I$ $b = -0.764304 - 0.705483I$	$-1.77414 + 1.70120I$	0
$u = -0.992970 - 0.408219I$ $a = 0.27813 + 1.71995I$ $b = -0.764304 + 0.705483I$	$-1.77414 - 1.70120I$	0
$u = -0.240044 + 1.046750I$ $a = -0.640277 + 0.623290I$ $b = -0.547854 + 0.938031I$	$-0.63655 + 2.43655I$	0
$u = -0.240044 - 1.046750I$ $a = -0.640277 - 0.623290I$ $b = -0.547854 - 0.938031I$	$-0.63655 - 2.43655I$	0
$u = -0.901912$ $a = 0.475848$ $b = 0.618625$	1.84548	0
$u = -0.999368 + 0.482478I$ $a = -0.385520 + 1.298070I$ $b = -0.681224 + 0.844671I$	$-1.59853 + 4.33517I$	0
$u = -0.999368 - 0.482478I$ $a = -0.385520 - 1.298070I$ $b = -0.681224 - 0.844671I$	$-1.59853 - 4.33517I$	0
$u = 1.107320 + 0.199270I$ $a = 0.60506 - 1.33234I$ $b = 0.985248 - 0.683709I$	$-4.52658 - 6.80550I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.107320 - 0.199270I$ $a = 0.60506 + 1.33234I$ $b = 0.985248 + 0.683709I$	$-4.52658 + 6.80550I$	0
$u = -0.979582 + 0.586031I$ $a = 0.004868 + 1.287640I$ $b = 0.928514 + 0.612301I$	$2.32070 + 5.36796I$	0
$u = -0.979582 - 0.586031I$ $a = 0.004868 - 1.287640I$ $b = 0.928514 - 0.612301I$	$2.32070 - 5.36796I$	0
$u = -1.122670 + 0.270465I$ $a = -0.800454 + 0.947773I$ $b = -0.935027 + 0.654173I$	$-1.23452 - 3.53072I$	0
$u = -1.122670 - 0.270465I$ $a = -0.800454 - 0.947773I$ $b = -0.935027 - 0.654173I$	$-1.23452 + 3.53072I$	0
$u = -0.532169 + 0.647609I$ $a = -1.117930 + 0.206729I$ $b = -0.928319 + 0.547493I$	$-0.68637 - 4.27140I$	0
$u = -0.532169 - 0.647609I$ $a = -1.117930 - 0.206729I$ $b = -0.928319 - 0.547493I$	$-0.68637 + 4.27140I$	0
$u = 0.049130 + 1.172290I$ $a = -0.77333 - 1.57633I$ $b = 1.142770 - 0.685681I$	$7.63686 - 5.93187I$	0
$u = 0.049130 - 1.172290I$ $a = -0.77333 + 1.57633I$ $b = 1.142770 + 0.685681I$	$7.63686 + 5.93187I$	0
$u = -0.097525 + 1.179330I$ $a = 0.526131 + 0.428629I$ $b = 0.502102 + 0.976980I$	$5.60936 + 0.10985I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.097525-1.179330I$ $a=\ \ 0.526131-0.428629I$ $b=\ \ 0.502102-0.976980I$	$5.60936-0.10985I$	0
$u=-0.271686+1.161130I$ $a=-0.66534+1.39246I$ $b=\ \ 1.092670+0.554601I$	$3.72025+3.22037I$	0
$u=-0.271686-1.161130I$ $a=-0.66534-1.39246I$ $b=\ \ 1.092670-0.554601I$	$3.72025-3.22037I$	0
$u=-0.178894+1.179540I$ $a=-1.51426-1.29003I$ $b=\ \ 0.862175-0.410472I$	$4.87067+2.63124I$	0
$u=-0.178894-1.179540I$ $a=-1.51426+1.29003I$ $b=\ \ 0.862175+0.410472I$	$4.87067-2.63124I$	0
$u=\ \ 0.345533+1.154470I$ $a=-0.219535-0.551957I$ $b=-0.324272-0.793372I$	$0.97891-2.18458I$	0
$u=\ \ 0.345533-1.154470I$ $a=-0.219535+0.551957I$ $b=-0.324272+0.793372I$	$0.97891+2.18458I$	0
$u=-0.618566+1.037550I$ $a=\ \ 0.280639+0.194471I$ $b=\ \ 0.760975+0.164149I$	$4.80573+5.40225I$	0
$u=-0.618566-1.037550I$ $a=\ \ 0.280639-0.194471I$ $b=\ \ 0.760975-0.164149I$	$4.80573-5.40225I$	0
$u=-0.383860+1.157030I$ $a=\ \ 0.47369-1.62147I$ $b=-1.114180-0.702529I$	$1.12733+8.44671I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.383860-1.157030I$ $a=\ \ 0.47369+1.62147I$ $b=-1.114180+0.702529I$	$1.12733-8.44671I$	0
$u=-0.021394+1.229940I$ $a=\ \ 0.87335+1.30563I$ $b=-1.134670+0.531246I$	$10.11390-0.59412I$	0
$u=-0.021394-1.229940I$ $a=\ \ 0.87335-1.30563I$ $b=-1.134670-0.531246I$	$10.11390+0.59412I$	0
$u=-1.104080+0.603800I$ $a=-0.27187-1.45375I$ $b=-1.021110-0.711171I$	$-0.53124+10.13980I$	0
$u=-1.104080-0.603800I$ $a=-0.27187+1.45375I$ $b=-1.021110+0.711171I$	$-0.53124-10.13980I$	0
$u=\ \ 0.679458+1.091510I$ $a=\ \ 0.670170+0.284575I$ $b=\ \ 0.843455+0.544076I$	$-1.84267+0.64548I$	0
$u=\ \ 0.679458-1.091510I$ $a=\ \ 0.670170-0.284575I$ $b=\ \ 0.843455-0.544076I$	$-1.84267-0.64548I$	0
$u=-0.237285+1.275700I$ $a=-0.223312-0.483493I$ $b=-0.181216-0.887325I$	$7.25991+4.32353I$	0
$u=-0.237285-1.275700I$ $a=-0.223312+0.483493I$ $b=-0.181216+0.887325I$	$7.25991-4.32353I$	0
$u=\ \ 0.456039+1.231780I$ $a=-1.04841-1.46067I$ $b=\ \ 0.864810-0.542688I$	$-1.77594-3.72393I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.456039 - 1.231780I$ $a = -1.04841 + 1.46067I$ $b = 0.864810 + 0.542688I$	$-1.77594 + 3.72393I$	0
$u = 0.022099 + 1.329330I$ $a = -0.686226 + 0.293109I$ $b = 1.221780 + 0.085487I$	$6.41930 + 0.59704I$	0
$u = 0.022099 - 1.329330I$ $a = -0.686226 - 0.293109I$ $b = 1.221780 - 0.085487I$	$6.41930 - 0.59704I$	0
$u = 0.157039 + 1.370650I$ $a = 0.658441 + 0.215863I$ $b = -1.225890 + 0.135801I$	$6.31625 - 4.73507I$	0
$u = 0.157039 - 1.370650I$ $a = 0.658441 - 0.215863I$ $b = -1.225890 - 0.135801I$	$6.31625 + 4.73507I$	0
$u = 0.465964 + 1.299550I$ $a = 0.468359 + 0.706801I$ $b = 0.590340 + 0.969623I$	$-1.23104 - 6.37786I$	0
$u = 0.465964 - 1.299550I$ $a = 0.468359 - 0.706801I$ $b = 0.590340 - 0.969623I$	$-1.23104 + 6.37786I$	0
$u = 0.44859 + 1.37548I$ $a = 0.573859 + 1.243100I$ $b = -1.099580 + 0.597714I$	$3.15715 - 7.30484I$	0
$u = 0.44859 - 1.37548I$ $a = 0.573859 - 1.243100I$ $b = -1.099580 - 0.597714I$	$3.15715 + 7.30484I$	0
$u = -0.15862 + 1.43810I$ $a = 0.756590 + 0.287532I$ $b = -1.257530 + 0.061097I$	$12.66800 + 2.43863I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.15862-1.43810I$ $a=\ \ 0.756590-0.287532I$ $b=-1.257530-0.061097I$	$12.66800-2.43863I$	0
$u=-0.547508$ $a=-3.18325$ $b=\ \ 0.650133$	1.52279	9.62570
$u=-0.094475+0.535440I$ $a=\ \ 0.347771-1.278000I$ $b=\ \ 1.033350+0.461461I$	$5.45652+5.74955I$	$8.27153-6.35837I$
$u=-0.094475-0.535440I$ $a=\ \ 0.347771+1.278000I$ $b=\ \ 1.033350-0.461461I$	$5.45652-5.74955I$	$8.27153+6.35837I$
$u=-0.40315+1.41421I$ $a=\ \ 0.190985-0.550246I$ $b=\ \ 0.348570-0.863292I$	$6.81786+5.34505I$	0
$u=-0.40315-1.41421I$ $a=\ \ 0.190985+0.550246I$ $b=\ \ 0.348570+0.863292I$	$6.81786-5.34505I$	0
$u=\ \ 0.52142+1.40786I$ $a=-0.41170-1.42636I$ $b=\ \ 1.117850-0.729506I$	$0.43903-12.59080I$	0
$u=\ \ 0.52142-1.40786I$ $a=-0.41170+1.42636I$ $b=\ \ 1.117850+0.729506I$	$0.43903+12.59080I$	0
$u=-0.62249+1.37484I$ $a=-0.533773+0.267110I$ $b=-0.794629+0.526308I$	$3.66078+2.71789I$	0
$u=-0.62249-1.37484I$ $a=-0.533773-0.267110I$ $b=-0.794629-0.526308I$	$3.66078-2.71789I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.452328+0.182517I$ $a=-0.775066+0.069599I$ $b=\ \ 0.182906-0.784119I$	$2.76640+1.62363I$	$5.37285-3.69344I$
$u=-0.452328-0.182517I$ $a=-0.775066-0.069599I$ $b=\ \ 0.182906+0.784119I$	$2.76640-1.62363I$	$5.37285+3.69344I$
$u=-0.23658+1.50088I$ $a=-0.697005+0.179142I$ $b=\ \ 1.259650+0.155114I$	$12.4798+7.9130I$	0
$u=-0.23658-1.50088I$ $a=-0.697005-0.179142I$ $b=\ \ 1.259650-0.155114I$	$12.4798-7.9130I$	0
$u=-0.398905+0.257394I$ $a=\ \ 1.275610+0.173707I$ $b=\ \ 0.796240-0.210293I$	$1.231150-0.339540I$	$8.48317+1.18283I$
$u=-0.398905-0.257394I$ $a=\ \ 1.275610-0.173707I$ $b=\ \ 0.796240+0.210293I$	$1.231150+0.339540I$	$8.48317-1.18283I$
$u=-0.45854+1.47063I$ $a=\ \ 1.03639-1.31302I$ $b=-0.907266-0.539160I$	$4.03499+7.02654I$	0
$u=-0.45854-1.47063I$ $a=\ \ 1.03639+1.31302I$ $b=-0.907266+0.539160I$	$4.03499-7.02654I$	0
$u=-0.45869+1.51594I$ $a=-0.391021+0.671604I$ $b=-0.594978+0.999319I$	$4.62335+9.74269I$	0
$u=-0.45869-1.51594I$ $a=-0.391021-0.671604I$ $b=-0.594978-0.999319I$	$4.62335-9.74269I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.43792+1.56540I$ $a=-0.592932+1.155750I$ $b=\ \ 1.121840+0.613720I$	$9.08319+10.71720I$	0
$u=-0.43792-1.56540I$ $a=-0.592932-1.155750I$ $b=\ \ 1.121840-0.613720I$	$9.08319-10.71720I$	0
$u=-0.48396+1.59795I$ $a=\ \ 0.448307-1.330000I$ $b=-1.130750-0.741204I$	$6.3330+16.0842I$	0
$u=-0.48396-1.59795I$ $a=\ \ 0.448307+1.330000I$ $b=-1.130750+0.741204I$	$6.3330-16.0842I$	0
$u=-0.148251+0.239950I$ $a=\ \ 1.71349+3.10527I$ $b=-1.043500-0.215301I$	$6.92468+1.07292I$	$11.82072-0.64085I$
$u=-0.148251-0.239950I$ $a=\ \ 1.71349-3.10527I$ $b=-1.043500+0.215301I$	$6.92468-1.07292I$	$11.82072+0.64085I$
$u=\ \ 0.093432+0.176931I$ $a=\ \ 3.34527-2.60951I$ $b=-0.284902-0.457886I$	$-1.69196-0.57556I$	$-4.55877-0.73024I$
$u=\ \ 0.093432-0.176931I$ $a=\ \ 3.34527+2.60951I$ $b=-0.284902+0.457886I$	$-1.69196+0.57556I$	$-4.55877+0.73024I$

II. $I_2^u = \langle b,\ -u^4 - u^3 - 2u^2 + a - u - 1,\ u^5 + u^4 + 2u^3 + u^2 + u + 1 \rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^4 + u^3 + 2u^2 + u + 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^4 + u^3 + 2u^2 + u + 1 \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^4 + u^3 + 2u^2 + u + 1 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 + u^3 + u^2 + 1 \end{pmatrix}$$

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -u^4 + 4u^3 + 2u^2 + 5u + 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.339110 + 0.822375I$ $a = -0.428550 + 1.039280I$ $b = 0$	$-1.31583 - 1.53058I$	$-0.02714 + 4.76366I$
$u = 0.339110 - 0.822375I$ $a = -0.428550 - 1.039280I$ $b = 0$	$-1.31583 + 1.53058I$	$-0.02714 - 4.76366I$
$u = -0.766826$ $a = 1.30408$ $b = 0$	0.756147	-2.80750
$u = -0.455697 + 1.200150I$ $a = 0.276511 + 0.728237I$ $b = 0$	$4.22763 + 4.40083I$	$4.43089 - 2.80751I$
$u = -0.455697 - 1.200150I$ $a = 0.276511 - 0.728237I$ $b = 0$	$4.22763 - 4.40083I$	$4.43089 + 2.80751I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^5)(u^{88}+46u^{87}+\cdots+7u+1)$
c_2	$((u-1)^5)(u^{88}-6u^{87}+\cdots+7u-1)$
c_3, c_8	$u^5(u^{88}+u^{87}+\cdots-32u+32)$
c_4	$((u+1)^5)(u^{88}-6u^{87}+\cdots+7u-1)$
c_5, c_6	$(u^5-u^4-2u^3+u^2+u+1)(u^{88}-2u^{87}+\cdots+u-1)$
c_7	$u^5(u^{88}-33u^{87}+\cdots-18944u+1024)$
c_9	$(u^5+u^4+2u^3+u^2+u+1)(u^{88}-14u^{87}+\cdots-3387u+207)$
c_{10}	$(u^5-3u^4+4u^3-u^2-u+1)(u^{88}+6u^{87}+\cdots-4287u-1585)$
c_{11}	$(u^5+u^4-2u^3-u^2+u-1)(u^{88}-2u^{87}+\cdots+u-1)$
c_{12}	$(u^5-u^4+2u^3-u^2+u-1)(u^{88}-14u^{87}+\cdots-3387u+207)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^5)(y^{88}-2y^{87}+\cdots+17y+1)$
c_2, c_4	$((y-1)^5)(y^{88}-46y^{87}+\cdots-7y+1)$
c_3, c_8	$y^5(y^{88}-33y^{87}+\cdots-18944y+1024)$
c_5, c_6, c_{11}	$(y^5-5y^4+8y^3-3y^2-y-1)(y^{88}-82y^{87}+\cdots+11y+1)$
c_7	$y^5(y^{88}+35y^{87}+\cdots+3538944y+1048576)$
c_9, c_{12}	$(y^5+3y^4+4y^3+y^2-y-1)(y^{88}+66y^{87}+\cdots+2032911y+42849)$
c_{10}	$(y^5-y^4+8y^3-3y^2+3y-1)$ $\cdot(y^{88}-26y^{87}+\cdots-57768789y+2512225)$