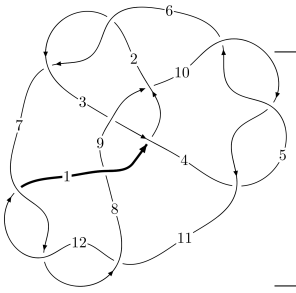
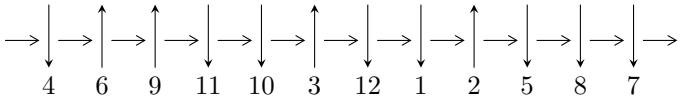
$12a_{0927}$ $(K12a_{0927})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 1.17204 \times 10^{92} u^{100} + 5.80593 \times 10^{92} u^{99} + \cdots + 1.37181 \times 10^{93} b - 1.38998 \times 10^{93},$$
$$1.34846 \times 10^{94} u^{100} + 5.39689 \times 10^{93} u^{99} + \cdots + 9.60265 \times 10^{93} a + 1.74373 \times 10^{94},\ u^{101} + 46 u^{99} + \cdots + u -$$
$$I_2^u = \langle -u^{18} - u^{17} + \cdots + b + 2u,\ u^{18} + 3u^{17} + \cdots + a - 3,\ u^{19} - u^{18} + \cdots - 2u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 120 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. $\boldsymbol{I_1^u = \langle 1.17 \times 10^{92} u^{100} + 5.81 \times 10^{92} u^{99} + \cdots + 1.37 \times 10^{93} b - 1.39 \times 10^{93},\ 1.35 \times 10^{94} u^{100} + 5.40 \times 10^{93} u^{99} + \cdots + 9.60 \times 10^{93} a + 1.74 \times 10^{94},\ u^{101} + 46 u^{99} + \cdots + u - 1 \rangle}$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.40425u^{100} - 0.562021u^{99} + \cdots - 10.2436u - 1.81588 \\ -0.0854374u^{100} - 0.423232u^{99} + \cdots - 1.90512u + 1.01325 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.48969u^{100} - 0.985252u^{99} + \cdots - 12.1487u - 0.802639 \\ -0.0854374u^{100} - 0.423232u^{99} + \cdots - 1.90512u + 1.01325 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.940964u^{100} - 0.279768u^{99} + \cdots - 5.22472u - 1.91292 \\ -0.237618u^{100} - 0.171606u^{99} + \cdots - 0.697920u + 0.894695 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^7 - 3u^5 - 2u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -1.29125u^{100} - 0.629929u^{99} + \cdots - 11.0393u - 0.969058 \\ -0.132061u^{100} - 0.130376u^{99} + \cdots - 2.32353u + 0.594206 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.868953u^{100} + 1.16462u^{99} + \cdots - 14.5751u - 2.32310 \\ 0.206049u^{100} - 0.125342u^{99} + \cdots - 0.0119723u + 0.0903791 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.482166u^{100} + 1.70715u^{99} + \cdots + 4.91113u + 0.887370 \\ -0.114195u^{100} - 0.653840u^{99} + \cdots - 0.298804u + 0.247379 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2.59770u^{100} - 1.50889u^{99} + \cdots + 12.8990u + 3.67843$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{101} - 17u^{100} + \cdots + 59829u - 3461$
c_2, c_6	$u^{101} + 2u^{100} + \cdots + 9256u - 1034$
c_3	$u^{101} - u^{100} + \cdots - 91u + 1$
c_4, c_5, c_{10}	$u^{101} - u^{100} + \cdots + 22u - 4$
c_7, c_{11}, c_{12}	$u^{101} + 46u^{99} + \cdots + u - 1$
c_8	$u^{101} - 2u^{99} + \cdots + 712u - 232$
c_9	$u^{101} + 3u^{100} + \cdots + 5282083u + 2372859$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{101} + 15y^{100} + \cdots + 43620123y - 11978521$
c_2, c_6	$y^{101} - 84y^{100} + \cdots + 41122612y - 1069156$
c_3	$y^{101} - 9y^{100} + \cdots + 7531y - 1$
c_4, c_5, c_{10}	$y^{101} + 107y^{100} + \cdots - 708y - 16$
c_7, c_{11}, c_{12}	$y^{101} + 92y^{100} + \cdots + 19y - 1$
c_8	$y^{101} - 4y^{100} + \cdots + 171472y - 53824$
c_9	$y^{101} - 39y^{100} + \cdots + 211509629585425y - 5630459833881$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.338601 + 0.929957I$ $a = -0.796464 + 1.012730I$ $b = -0.022504 - 1.387680I$	$5.03799 - 2.07046I$	0
$u = 0.338601 - 0.929957I$ $a = -0.796464 - 1.012730I$ $b = -0.022504 + 1.387680I$	$5.03799 + 2.07046I$	0
$u = 0.813138 + 0.514209I$ $a = 0.90012 - 1.28023I$ $b = 0.02602 + 1.43752I$	$4.47550 - 2.65435I$	0
$u = 0.813138 - 0.514209I$ $a = 0.90012 + 1.28023I$ $b = 0.02602 - 1.43752I$	$4.47550 + 2.65435I$	0
$u = -0.560557 + 0.768072I$ $a = -0.421182 - 1.247580I$ $b = 0.25302 + 1.54034I$	$9.75188 - 8.20632I$	0
$u = -0.560557 - 0.768072I$ $a = -0.421182 + 1.247580I$ $b = 0.25302 - 1.54034I$	$9.75188 + 8.20632I$	0
$u = 0.128473 + 1.056460I$ $a = -0.503339 + 0.351516I$ $b = -0.444666 + 0.213037I$	$-0.200435 + 0.703668I$	0
$u = 0.128473 - 1.056460I$ $a = -0.503339 - 0.351516I$ $b = -0.444666 - 0.213037I$	$-0.200435 - 0.703668I$	0
$u = -0.055755 + 1.087090I$ $a = 0.269569 + 1.352040I$ $b = 0.645189 - 0.746095I$	$3.31819 + 0.06863I$	0
$u = -0.055755 - 1.087090I$ $a = 0.269569 - 1.352040I$ $b = 0.645189 + 0.746095I$	$3.31819 - 0.06863I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.321913+0.829241I$ $a=-0.045721+1.039040I$ $b=-0.10695-1.44066I$	$5.22244-2.50144I$	0
$u=-0.321913-0.829241I$ $a=-0.045721-1.039040I$ $b=-0.10695+1.44066I$	$5.22244+2.50144I$	0
$u=0.406936+0.775815I$ $a=-0.300390-0.045936I$ $b=0.734298-0.534377I$	$2.94013+4.57156I$	0
$u=0.406936-0.775815I$ $a=-0.300390+0.045936I$ $b=0.734298+0.534377I$	$2.94013-4.57156I$	0
$u=0.787460+0.379801I$ $a=-0.855942+0.809852I$ $b=-0.140540-1.265200I$	$2.64686-2.47490I$	0
$u=0.787460-0.379801I$ $a=-0.855942-0.809852I$ $b=-0.140540+1.265200I$	$2.64686+2.47490I$	0
$u=-0.345176+1.073310I$ $a=-0.012039+0.367281I$ $b=0.639537-0.260559I$	$2.13144+4.10343I$	0
$u=-0.345176-1.073310I$ $a=-0.012039-0.367281I$ $b=0.639537+0.260559I$	$2.13144-4.10343I$	0
$u=0.844506+0.188748I$ $a=-0.535125+0.252887I$ $b=-0.087205-1.339120I$	$2.69324-2.22762I$	0
$u=0.844506-0.188748I$ $a=-0.535125-0.252887I$ $b=-0.087205+1.339120I$	$2.69324+2.22762I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.799774+0.329138I$ $a=-1.54547-0.83395I$ $b=-0.28641+1.56866I$	$8.3431+12.9028I$	$0.-7.85868I$
$u=-0.799774-0.329138I$ $a=-1.54547+0.83395I$ $b=-0.28641-1.56866I$	$8.3431-12.9028I$	$0.+7.85868I$
$u=-0.732389+0.383945I$ $a=0.303247+0.402040I$ $b=0.127737-0.125151I$	$-0.84943+2.18733I$	$-11.7134-11.9875I$
$u=-0.732389-0.383945I$ $a=0.303247-0.402040I$ $b=0.127737+0.125151I$	$-0.84943-2.18733I$	$-11.7134+11.9875I$
$u=0.754882+0.273496I$ $a=-0.956345+0.605149I$ $b=-0.846330-0.599759I$	$1.25837-8.74577I$	$-2.71147+8.57986I$
$u=0.754882-0.273496I$ $a=-0.956345-0.605149I$ $b=-0.846330+0.599759I$	$1.25837+8.74577I$	$-2.71147-8.57986I$
$u=-0.742037+0.242897I$ $a=1.91043+0.22567I$ $b=0.16250-1.46227I$	$3.30401+6.47041I$	$-1.74126-7.20929I$
$u=-0.742037-0.242897I$ $a=1.91043-0.22567I$ $b=0.16250+1.46227I$	$3.30401-6.47041I$	$-1.74126+7.20929I$
$u=-0.777007$ $a=-0.409554$ $b=-0.578616$	-1.11245	-11.1750
$u=-0.025748+1.236330I$ $a=0.824447-0.076392I$ $b=-0.179975+1.350560I$	$10.93490+2.78038I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.025748-1.236330I$ $a=\ \ 0.824447+0.076392I$ $b=-0.179975-1.350560I$	$10.93490-2.78038I$	0
$u=-0.159559+1.251210I$ $a=-1.43728-1.79915I$ $b=-0.266877+1.026130I$	$2.17976+1.85998I$	0
$u=-0.159559-1.251210I$ $a=-1.43728+1.79915I$ $b=-0.266877-1.026130I$	$2.17976-1.85998I$	0
$u=\ \ 0.681119+0.191835I$ $a=\ \ 1.338130-0.230387I$ $b=\ \ 0.557811+0.339618I$	$-2.58528-3.94320I$	$-8.28628+7.57752I$
$u=\ \ 0.681119-0.191835I$ $a=\ \ 1.338130+0.230387I$ $b=\ \ 0.557811-0.339618I$	$-2.58528+3.94320I$	$-8.28628-7.57752I$
$u=-0.659379+0.224660I$ $a=-0.421405-0.382008I$ $b=-0.933561-0.630970I$	$1.19502+2.86675I$	$-0.48560-5.63717I$
$u=-0.659379-0.224660I$ $a=-0.421405+0.382008I$ $b=-0.933561+0.630970I$	$1.19502-2.86675I$	$-0.48560+5.63717I$
$u=\ \ 0.123790+1.319540I$ $a=-0.028371+1.029170I$ $b=\ \ 0.419572-0.634578I$	$4.45606+0.45152I$	0
$u=\ \ 0.123790-1.319540I$ $a=-0.028371-1.029170I$ $b=\ \ 0.419572+0.634578I$	$4.45606-0.45152I$	0
$u=-0.048734+1.338630I$ $a=\ \ 0.55365-2.90345I$ $b=\ \ 0.09844+1.58170I$	$11.89780-2.24580I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.048734-1.338630I$ $a=\ \ 0.55365+2.90345I$ $b=\ \ 0.09844-1.58170I$	$11.89780+2.24580I$	0
$u=\ \ 0.452314+1.270540I$ $a=\ \ 0.78602-1.48254I$ $b=\ \ 0.167551+1.383620I$	$7.24145-6.94635I$	0
$u=\ \ 0.452314-1.270540I$ $a=\ \ 0.78602+1.48254I$ $b=\ \ 0.167551-1.383620I$	$7.24145+6.94635I$	0
$u=-0.238627+1.333130I$ $a=\ \ 0.079299+0.683567I$ $b=\ \ 0.655029-0.237112I$	$3.08685+3.11452I$	0
$u=-0.238627-1.333130I$ $a=\ \ 0.079299-0.683567I$ $b=\ \ 0.655029+0.237112I$	$3.08685-3.11452I$	0
$u=\ \ 0.608901+0.192542I$ $a=-0.385198+1.115390I$ $b=-0.203404-0.637908I$	$1.37542-2.38581I$	$0.25318+6.68724I$
$u=\ \ 0.608901-0.192542I$ $a=-0.385198-1.115390I$ $b=-0.203404+0.637908I$	$1.37542+2.38581I$	$0.25318-6.68724I$
$u=-0.212837+1.348630I$ $a=\ \ 0.173204+0.342037I$ $b=-0.515624-0.729139I$	$3.32479+3.40667I$	0
$u=-0.212837-1.348630I$ $a=\ \ 0.173204-0.342037I$ $b=-0.515624+0.729139I$	$3.32479-3.40667I$	0
$u=-0.629319$ $a=-0.702050$ $b=-0.548156$	-1.22681	-8.76370

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.160524 + 1.364360I$ $a = 1.76789 - 1.18203I$ $b = -0.009637 + 0.248297I$	$7.62385 - 1.80031I$	0
$u = 0.160524 - 1.364360I$ $a = 1.76789 + 1.18203I$ $b = -0.009637 - 0.248297I$	$7.62385 + 1.80031I$	0
$u = 0.551646 + 0.273553I$ $a = 2.47112 - 0.13182I$ $b = 0.33166 + 1.54527I$	$8.78897 - 4.29126I$	$1.52859 + 7.08794I$
$u = 0.551646 - 0.273553I$ $a = 2.47112 + 0.13182I$ $b = 0.33166 - 1.54527I$	$8.78897 + 4.29126I$	$1.52859 - 7.08794I$
$u = 0.030644 + 1.385460I$ $a = 0.44733 - 2.69168I$ $b = 0.04203 + 1.58721I$	$11.97780 - 2.24521I$	0
$u = 0.030644 - 1.385460I$ $a = 0.44733 + 2.69168I$ $b = 0.04203 - 1.58721I$	$11.97780 + 2.24521I$	0
$u = -0.151276 + 1.377880I$ $a = 0.125296 - 1.287730I$ $b = -1.080770 + 0.264270I$	$7.92835 + 1.55973I$	0
$u = -0.151276 - 1.377880I$ $a = 0.125296 + 1.287730I$ $b = -1.080770 - 0.264270I$	$7.92835 - 1.55973I$	0
$u = 0.250853 + 1.369630I$ $a = 0.06598 - 1.62169I$ $b = 0.055380 + 0.653130I$	$6.32441 - 5.55834I$	0
$u = 0.250853 - 1.369630I$ $a = 0.06598 + 1.62169I$ $b = 0.055380 - 0.653130I$	$6.32441 + 5.55834I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.270313 + 1.372210I$ $a = -0.659965 + 0.973165I$ $b = -0.619046 - 0.391720I$	$2.37745 - 7.40004I$	0
$u = 0.270313 - 1.372210I$ $a = -0.659965 - 0.973165I$ $b = -0.619046 + 0.391720I$	$2.37745 + 7.40004I$	0
$u = -0.551260 + 0.236529I$ $a = -3.45506 - 0.56029I$ $b = 0.04181 + 1.46447I$	$8.40226 - 0.97889I$	$1.86302 - 1.67471I$
$u = -0.551260 - 0.236529I$ $a = -3.45506 + 0.56029I$ $b = 0.04181 - 1.46447I$	$8.40226 + 0.97889I$	$1.86302 + 1.67471I$
$u = -0.200699 + 1.387680I$ $a = 0.54548 + 3.81886I$ $b = 0.03756 - 1.57332I$	$13.8987 + 6.0274I$	0
$u = -0.200699 - 1.387680I$ $a = 0.54548 - 3.81886I$ $b = 0.03756 + 1.57332I$	$13.8987 - 6.0274I$	0
$u = -0.221577 + 1.389650I$ $a = 2.67668 + 2.67309I$ $b = 0.01190 - 1.48145I$	$13.59660 + 1.89175I$	0
$u = -0.221577 - 1.389650I$ $a = 2.67668 - 2.67309I$ $b = 0.01190 + 1.48145I$	$13.59660 - 1.89175I$	0
$u = -0.261270 + 1.388330I$ $a = -0.916443 - 0.073681I$ $b = 1.047840 + 0.631466I$	$6.33302 + 6.22584I$	0
$u = -0.261270 - 1.388330I$ $a = -0.916443 + 0.073681I$ $b = 1.047840 - 0.631466I$	$6.33302 - 6.22584I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.200751 + 1.399130I$ $a = -0.92911 + 2.47143I$ $b = 0.26421 - 1.70761I$	$14.4126 - 1.0864I$	0
$u = 0.200751 - 1.399130I$ $a = -0.92911 - 2.47143I$ $b = 0.26421 + 1.70761I$	$14.4126 + 1.0864I$	0
$u = 0.21988 + 1.40059I$ $a = -1.59795 + 2.30465I$ $b = -0.40144 - 1.59340I$	$14.1350 - 7.1569I$	0
$u = 0.21988 - 1.40059I$ $a = -1.59795 - 2.30465I$ $b = -0.40144 + 1.59340I$	$14.1350 + 7.1569I$	0
$u = -0.29630 + 1.39861I$ $a = -2.04244 - 1.97677I$ $b = -0.18413 + 1.48474I$	$8.52537 + 10.23280I$	0
$u = -0.29630 - 1.39861I$ $a = -2.04244 + 1.97677I$ $b = -0.18413 - 1.48474I$	$8.52537 - 10.23280I$	0
$u = -0.547687 + 0.105446I$ $a = 1.135650 + 0.577720I$ $b = 0.336961 + 0.799665I$	$-1.31790 + 0.62224I$	$-7.09922 + 0.77597I$
$u = -0.547687 - 0.105446I$ $a = 1.135650 - 0.577720I$ $b = 0.336961 - 0.799665I$	$-1.31790 - 0.62224I$	$-7.09922 - 0.77597I$
$u = 0.480019 + 0.282782I$ $a = 0.649807 - 0.476462I$ $b = -0.22688 + 1.63741I$	$9.05022 + 1.50195I$	$1.96716 + 2.77210I$
$u = 0.480019 - 0.282782I$ $a = 0.649807 + 0.476462I$ $b = -0.22688 - 1.63741I$	$9.05022 - 1.50195I$	$1.96716 - 2.77210I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.30052 + 1.41380I$ $a = 0.21485 - 1.48584I$ $b = 0.889892 + 0.660149I$	$6.6355 - 12.5722I$	0
$u = 0.30052 - 1.41380I$ $a = 0.21485 + 1.48584I$ $b = 0.889892 - 0.660149I$	$6.6355 + 12.5722I$	0
$u = 0.04134 + 1.45689I$ $a = 0.700785 - 0.798334I$ $b = -0.531147 + 0.725633I$	$10.09610 + 3.53770I$	0
$u = 0.04134 - 1.45689I$ $a = 0.700785 + 0.798334I$ $b = -0.531147 - 0.725633I$	$10.09610 - 3.53770I$	0
$u = 0.30096 + 1.42621I$ $a = 1.11691 - 2.05682I$ $b = 0.24255 + 1.39901I$	$8.29004 - 6.40229I$	0
$u = 0.30096 - 1.42621I$ $a = 1.11691 + 2.05682I$ $b = 0.24255 - 1.39901I$	$8.29004 + 6.40229I$	0
$u = -0.473695 + 0.236439I$ $a = -0.86694 - 2.68749I$ $b = -0.07268 + 1.55428I$	$8.70674 + 3.45703I$	$2.44717 - 9.91200I$
$u = -0.473695 - 0.236439I$ $a = -0.86694 + 2.68749I$ $b = -0.07268 - 1.55428I$	$8.70674 - 3.45703I$	$2.44717 + 9.91200I$
$u = -0.30470 + 1.44424I$ $a = -0.402971 - 0.560318I$ $b = -0.161745 + 0.293715I$	$4.96437 + 6.03326I$	0
$u = -0.30470 - 1.44424I$ $a = -0.402971 + 0.560318I$ $b = -0.161745 - 0.293715I$	$4.96437 - 6.03326I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.31504+1.44516I$ $a=\ \ 1.55186+2.38348I$ $b=\ \ 0.29560-1.59663I$	$14.0172+16.9441I$	0
$u=-0.31504-1.44516I$ $a=\ \ 1.55186-2.38348I$ $b=\ \ 0.29560+1.59663I$	$14.0172-16.9441I$	0
$u=\ \ 0.31481+1.51069I$ $a=-1.11031+2.32799I$ $b=-0.05247-1.47834I$	$10.97510-6.80865I$	0
$u=\ \ 0.31481-1.51069I$ $a=-1.11031-2.32799I$ $b=-0.05247+1.47834I$	$10.97510+6.80865I$	0
$u=-0.07125+1.54701I$ $a=\ \ 0.24035+2.66634I$ $b=-0.18266-1.56545I$	$17.6103-6.2593I$	0
$u=-0.07125-1.54701I$ $a=\ \ 0.24035-2.66634I$ $b=-0.18266+1.56545I$	$17.6103+6.2593I$	0
$u=-0.090348+0.422609I$ $a=-0.670633+0.126283I$ $b=-0.284960+0.359912I$	$-0.342899+1.083340I$	$-5.49487-5.61803I$
$u=-0.090348-0.422609I$ $a=-0.670633-0.126283I$ $b=-0.284960-0.359912I$	$-0.342899-1.083340I$	$-5.49487+5.61803I$
$u=-0.055576+0.292303I$ $a=\ \ 0.64785+3.69479I$ $b=\ \ 0.621082-0.277003I$	$2.82192-0.05355I$	$4.54835-0.89727I$
$u=-0.055576-0.292303I$ $a=\ \ 0.64785-3.69479I$ $b=\ \ 0.621082+0.277003I$	$2.82192+0.05355I$	$4.54835+0.89727I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.167888$		
$a = -8.08813$	2.81213	8.15040
$b = \quad 0.399625$		

II.

$\boldsymbol{I_2^u = \langle -u^{18}-u^{17}+\cdots+b+2u,\ u^{18}+3u^{17}+\cdots+a-3,\ u^{19}-u^{18}+\cdots-2u+1\rangle}$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{18} - 3u^{17} + \cdots + 3u + 3 \\ u^{18} + u^{17} + \cdots + 3u^2 - 2u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2u^{17} + 2u^{16} + \cdots + u + 3 \\ u^{18} + u^{17} + \cdots + 3u^2 - 2u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2u^{18} + u^{17} + \cdots + u - 4 \\ -u^{18} - 8u^{16} + \cdots - 2u - 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^7 - 3u^5 - 2u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^{18} - u^{17} + \cdots + u + 3 \\ u^{18} + u^{17} + \cdots + 5u^2 - 2u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2u^{18} + 19u^{16} + \cdots - 11u - 3 \\ -u^{18} - 2u^{17} + \cdots - 27u^3 - 2u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2u^{18} + 2u^{17} + \cdots - 3u + 2 \\ -u^{18} + u^{17} + \cdots + 3u + 2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -5u^{18} + 5u^{17} - 44u^{16} + 40u^{15} - 156u^{14} + 130u^{13} - 276u^{12} + 207u^{11} - 244u^{10} + 141u^9 - 104u^8 - 8u^7 - 51u^6 - 36u^5 - 40u^4 + 18u^3 - 8u^2 + 13u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{19}+2u^{18}+\cdots-4u+1$
c_2	$u^{19}-3u^{18}+\cdots+u+2$
c_3	$u^{19}-u^{17}+\cdots+2u^2+1$
c_4, c_5	$u^{19}+11u^{17}+\cdots+2u^2+1$
c_6	$u^{19}+3u^{18}+\cdots+u-2$
c_7	$u^{19}+u^{18}+\cdots-2u-1$
c_8	$u^{19}-u^{18}+\cdots-7u-2$
c_9	$u^{19}+2u^{17}+\cdots-u^2+1$
c_{10}	$u^{19}+11u^{17}+\cdots-2u^2-1$
c_{11}, c_{12}	$u^{19}-u^{18}+\cdots-2u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{19} + 2y^{18} + \cdots + 4y - 1$
c_2, c_6	$y^{19} - 21y^{18} + \cdots + 49y - 4$
c_3	$y^{19} - 2y^{18} + \cdots - 4y - 1$
c_4, c_5, c_{10}	$y^{19} + 22y^{18} + \cdots - 4y - 1$
c_7, c_{11}, c_{12}	$y^{19} + 19y^{18} + \cdots + 16y - 1$
c_8	$y^{19} - y^{18} + \cdots + 37y - 4$
c_9	$y^{19} + 4y^{18} + \cdots + 2y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.886443 + 0.453355I$ $a = -0.716598 + 0.909448I$ $b = -0.077183 - 1.278510I$	$2.38737 - 2.81719I$	$-9.7675 + 12.6617I$
$u = 0.886443 - 0.453355I$ $a = -0.716598 - 0.909448I$ $b = -0.077183 + 1.278510I$	$2.38737 + 2.81719I$	$-9.7675 - 12.6617I$
$u = -0.088895 + 1.160480I$ $a = 1.10669 + 1.03757I$ $b = 0.210413 - 0.837050I$	$1.67617 + 0.71995I$	$-1.96518 + 0.21105I$
$u = -0.088895 - 1.160480I$ $a = 1.10669 - 1.03757I$ $b = 0.210413 + 0.837050I$	$1.67617 - 0.71995I$	$-1.96518 - 0.21105I$
$u = -0.655190 + 0.282477I$ $a = -0.049085 - 0.233175I$ $b = -0.233097 - 0.515283I$	$-0.50072 + 1.73928I$	$-1.86896 - 1.30041I$
$u = -0.655190 - 0.282477I$ $a = -0.049085 + 0.233175I$ $b = -0.233097 + 0.515283I$	$-0.50072 - 1.73928I$	$-1.86896 + 1.30041I$
$u = 0.115166 + 1.323600I$ $a = -0.41987 - 1.81336I$ $b = -0.18953 + 1.55344I$	$12.45790 + 1.16993I$	$6.72713 + 1.16230I$
$u = 0.115166 - 1.323600I$ $a = -0.41987 + 1.81336I$ $b = -0.18953 - 1.55344I$	$12.45790 - 1.16993I$	$6.72713 - 1.16230I$
$u = -0.155593 + 1.346690I$ $a = -0.62452 - 1.29696I$ $b = -0.640183 + 0.101653I$	$6.87721 + 2.00897I$	$-1.71426 - 3.94861I$
$u = -0.155593 - 1.346690I$ $a = -0.62452 + 1.29696I$ $b = -0.640183 - 0.101653I$	$6.87721 - 2.00897I$	$-1.71426 + 3.94861I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.169490 + 1.400430I$ $a = -1.14282 + 3.38727I$ $b = -0.10110 - 1.58854I$	$13.5666 - 4.7196I$	$5.48212 + 2.36816I$
$u = 0.169490 - 1.400430I$ $a = -1.14282 - 3.38727I$ $b = -0.10110 + 1.58854I$	$13.5666 + 4.7196I$	$5.48212 - 2.36816I$
$u = -0.27333 + 1.39440I$ $a = -0.341325 - 0.338769I$ $b = 0.420683 + 0.436838I$	$4.80685 + 5.19614I$	$-0.17965 - 1.92409I$
$u = -0.27333 - 1.39440I$ $a = -0.341325 + 0.338769I$ $b = 0.420683 - 0.436838I$	$4.80685 - 5.19614I$	$-0.17965 + 1.92409I$
$u = 0.36151 + 1.43875I$ $a = 0.99294 - 1.73689I$ $b = 0.170869 + 1.345600I$	$8.27633 - 7.37319I$	$4.02539 + 9.62777I$
$u = 0.36151 - 1.43875I$ $a = 0.99294 + 1.73689I$ $b = 0.170869 - 1.345600I$	$8.27633 + 7.37319I$	$4.02539 - 9.62777I$
$u = -0.395920$ $a = 3.91237$ $b = 0.595540$	2.44142	-14.4680
$u = 0.338351 + 0.119715I$ $a = 3.23840 - 2.07906I$ $b = 0.14136 + 1.55398I$	$8.44919 - 2.73166I$	$-2.00535 + 0.64537I$
$u = 0.338351 - 0.119715I$ $a = 3.23840 + 2.07906I$ $b = 0.14136 - 1.55398I$	$8.44919 + 2.73166I$	$-2.00535 - 0.64537I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{19}+2u^{18}+\cdots-4u+1)(u^{101}-17u^{100}+\cdots+59829u-3461)$
c_2	$(u^{19}-3u^{18}+\cdots+u+2)(u^{101}+2u^{100}+\cdots+9256u-1034)$
c_3	$(u^{19}-u^{17}+\cdots+2u^2+1)(u^{101}-u^{100}+\cdots-91u+1)$
c_4, c_5	$(u^{19}+11u^{17}+\cdots+2u^2+1)(u^{101}-u^{100}+\cdots+22u-4)$
c_6	$(u^{19}+3u^{18}+\cdots+u-2)(u^{101}+2u^{100}+\cdots+9256u-1034)$
c_7	$(u^{19}+u^{18}+\cdots-2u-1)(u^{101}+46u^{99}+\cdots+u-1)$
c_8	$(u^{19}-u^{18}+\cdots-7u-2)(u^{101}-2u^{99}+\cdots+712u-232)$
c_9	$(u^{19}+2u^{17}+\cdots-u^2+1)(u^{101}+3u^{100}+\cdots+5282083u+2372859)$
c_{10}	$(u^{19}+11u^{17}+\cdots-2u^2-1)(u^{101}-u^{100}+\cdots+22u-4)$
c_{11}, c_{12}	$(u^{19}-u^{18}+\cdots-2u+1)(u^{101}+46u^{99}+\cdots+u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{19}+2y^{18}+\cdots+4y-1)$ $\cdot(y^{101}+15y^{100}+\cdots+43620123y-11978521)$
c_2, c_6	$(y^{19}-21y^{18}+\cdots+49y-4)$ $\cdot(y^{101}-84y^{100}+\cdots+41122612y-1069156)$
c_3	$(y^{19}-2y^{18}+\cdots-4y-1)(y^{101}-9y^{100}+\cdots+7531y-1)$
c_4, c_5, c_{10}	$(y^{19}+22y^{18}+\cdots-4y-1)(y^{101}+107y^{100}+\cdots-708y-16)$
c_7, c_{11}, c_{12}	$(y^{19}+19y^{18}+\cdots+16y-1)(y^{101}+92y^{100}+\cdots+19y-1)$
c_8	$(y^{19}-y^{18}+\cdots+37y-4)(y^{101}-4y^{100}+\cdots+171472y-53824)$
c_9	$(y^{19}+4y^{18}+\cdots+2y-1)$ $\cdot(y^{101}-39y^{100}+\cdots+211509629585425y-5630459833881)$