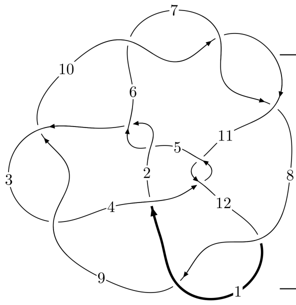
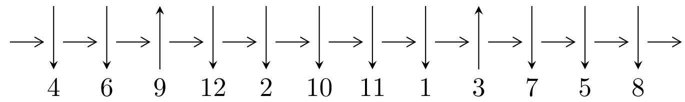
$12a_{0930}$ $(K12a_{0930})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 9.59690 \times 10^{335} u^{96} - 1.05215 \times 10^{336} u^{95} + \cdots + 3.44266 \times 10^{336} b - 5.12396 \times 10^{337}, \\
& 8.78993 \times 10^{338} u^{96} - 1.24791 \times 10^{339} u^{95} + \cdots + 3.52873 \times 10^{339} a + 1.10173 \times 10^{340}, \\
& u^{97} - 2u^{96} + \cdots + 1714u + 41 \rangle \\
I_2^u = \langle & 509208711230210 u^{22} + 109407337183821 u^{21} + \cdots + 568431948846091 b + 2350612385286411, \\
& - 7.80907 \times 10^{15} u^{22} - 1.63603 \times 10^{15} u^{21} + \cdots + 2.84216 \times 10^{14} a - 3.68176 \times 10^{16},\ u^{23} - 7u^{21} + \cdots + 8u - \\
I_3^u = \langle & b + 1,\ a + 1,\ u + 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 121 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. $\boldsymbol{I^u_1 = \langle 9.60 \times 10^{335} u^{96} - 1.05 \times 10^{336} u^{95} + \cdots + 3.44 \times 10^{336} b - 5.12 \times 10^{337},\ 8.79 \times 10^{338} u^{96} - 1.25 \times 10^{339} u^{95} + \cdots + 3.53 \times 10^{339} a + 1.10 \times 10^{340},\ u^{97} - 2u^{96} + \cdots + 1714u + 41 \rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.249096u^{96} + 0.353643u^{95} + \cdots + 791.383u - 3.12216 \\ -0.278764u^{96} + 0.305620u^{95} + \cdots + 673.123u + 14.8837 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.527860u^{96} + 0.659263u^{95} + \cdots + 1464.51u + 11.7615 \\ -0.278764u^{96} + 0.305620u^{95} + \cdots + 673.123u + 14.8837 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.0762388u^{96} - 0.0826739u^{95} + \cdots - 282.307u + 8.80990 \\ 0.140133u^{96} - 0.171057u^{95} + \cdots - 376.086u - 8.22131 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.340979u^{96} + 0.446598u^{95} + \cdots + 974.929u + 0.494949 \\ -0.323338u^{96} + 0.384426u^{95} + \cdots + 878.917u + 19.5453 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.0726071u^{96} - 0.0690112u^{95} + \cdots - 167.910u - 16.7409 \\ 0.199514u^{96} - 0.0750754u^{95} + \cdots - 320.938u - 8.18508 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.0146069u^{96} - 0.0282631u^{95} + \cdots - 99.5227u - 6.12905 \\ -0.699903u^{96} + 0.763490u^{95} + \cdots + 1488.36u + 34.3576 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.366501u^{96} + 0.396659u^{95} + \cdots + 785.732u + 6.52821 \\ -0.343656u^{96} + 0.391918u^{95} + \cdots + 332.980u + 7.46440 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.204866u^{96} - 0.0714659u^{95} + \cdots - 29.8300u - 8.45377 \\ -0.0464229u^{96} + 0.0479177u^{95} + \cdots + 147.679u + 3.12461 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.92098u^{96} + 3.83799u^{95} + \cdots - 1343.96u - 38.2137$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{97} - 13u^{96} + \cdots + 83802u - 29149$
c_2, c_5	$u^{97} - u^{96} + \cdots - 22184u - 2161$
c_3, c_9	$u^{97} - 14u^{96} + \cdots + 1812u - 149$
c_4, c_{11}	$u^{97} - 3u^{96} + \cdots - 356u - 59$
c_6, c_7, c_{10}	$u^{97} + 4u^{96} + \cdots + 4242u + 242$
c_8, c_{12}	$u^{97} - 2u^{96} + \cdots + 1714u + 41$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{97} - 37y^{96} + \cdots + 128682539484y - 849664201$
c_2, c_5	$y^{97} - 79y^{96} + \cdots + 423448954y - 4669921$
c_3, c_9	$y^{97} - 3452y^{95} + \cdots - 696744y - 22201$
c_4, c_{11}	$y^{97} - 47y^{96} + \cdots - 64542y - 3481$
c_6, c_7, c_{10}	$y^{97} - 110y^{96} + \cdots + 17376496y - 58564$
c_8, c_{12}	$y^{97} - 68y^{96} + \cdots + 2983388y - 1681$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.00099$ $a=\ 0.104557$ $b=\ 8.97759$	-3.28781	-2205.50
$u=-0.236628+0.987183I$ $a=\ 0.733045+1.115450I$ $b=-0.640466-1.082220I$	$-5.18696-5.17546I$	0
$u=-0.236628-0.987183I$ $a=\ 0.733045-1.115450I$ $b=-0.640466+1.082220I$	$-5.18696+5.17546I$	0
$u=\ 1.006690+0.203483I$ $a=\ 1.35334-1.08695I$ $b=\ 0.454354+0.669034I$	$-3.28245-0.83839I$	0
$u=\ 1.006690-0.203483I$ $a=\ 1.35334+1.08695I$ $b=\ 0.454354-0.669034I$	$-3.28245+0.83839I$	0
$u=\ 0.059389+1.035400I$ $a=\ 0.00927-1.53980I$ $b=\ 0.430082+1.145650I$	$-2.87174-6.62403I$	0
$u=\ 0.059389-1.035400I$ $a=\ 0.00927+1.53980I$ $b=\ 0.430082-1.145650I$	$-2.87174+6.62403I$	0
$u=-1.041690+0.037723I$ $a=\ 0.863323-0.623359I$ $b=\ 0.534994+1.031760I$	$-2.20470+0.29278I$	0
$u=-1.041690-0.037723I$ $a=\ 0.863323+0.623359I$ $b=\ 0.534994-1.031760I$	$-2.20470-0.29278I$	0
$u=-0.987860+0.352019I$ $a=-0.934926-0.230856I$ $b=-0.173771+0.697387I$	$-0.897884-0.166548I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.987860 - 0.352019I$ $a = -0.934926 + 0.230856I$ $b = -0.173771 - 0.697387I$	$-0.897884 + 0.166548I$	0
$u = \ \ 0.937667$ $a = -0.678354$ $b = -3.75942$	-8.62239	0
$u = \ \ 0.543866 + 0.923125I$ $a = -0.82668 + 1.28337I$ $b = \ \ 0.571458 - 0.472121I$	$-12.51620 - 5.63081I$	0
$u = \ \ 0.543866 - 0.923125I$ $a = -0.82668 - 1.28337I$ $b = \ \ 0.571458 + 0.472121I$	$-12.51620 + 5.63081I$	0
$u = -0.403795 + 0.996611I$ $a = -0.79352 - 1.17354I$ $b = \ \ 0.418677 + 0.887734I$	$-1.17057 - 1.72797I$	0
$u = -0.403795 - 0.996611I$ $a = -0.79352 + 1.17354I$ $b = \ \ 0.418677 - 0.887734I$	$-1.17057 + 1.72797I$	0
$u = -1.089510 + 0.121285I$ $a = -1.83583 + 0.43767I$ $b = -0.415865 - 0.714017I$	$-7.90895 + 0.71724I$	0
$u = -1.089510 - 0.121285I$ $a = -1.83583 - 0.43767I$ $b = -0.415865 + 0.714017I$	$-7.90895 - 0.71724I$	0
$u = \ \ 1.115620 + 0.034953I$ $a = \ \ 0.492249 - 1.264290I$ $b = \ \ 0.55813 + 1.63026I$	$-7.70818 - 2.22028I$	0
$u = \ \ 1.115620 - 0.034953I$ $a = \ \ 0.492249 + 1.264290I$ $b = \ \ 0.55813 - 1.63026I$	$-7.70818 + 2.22028I$	0

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.359991 + 0.802181I$ $a = -0.296638 + 1.381910I$ $b = \ \ 0.062718 - 1.088860I$	$3.34481 - 0.89059I$	0
$u = \ \ 0.359991 - 0.802181I$ $a = -0.296638 - 1.381910I$ $b = \ \ 0.062718 + 1.088860I$	$3.34481 + 0.89059I$	0
$u = \ \ 1.160300 + 0.029718I$ $a = -1.14308 + 1.74240I$ $b = -0.492514 - 1.084760I$	$-14.1423 - 5.8216I$	0
$u = \ \ 1.160300 - 0.029718I$ $a = -1.14308 - 1.74240I$ $b = -0.492514 + 1.084760I$	$-14.1423 + 5.8216I$	0
$u = \ \ 1.108780 + 0.425877I$ $a = -0.872737 + 0.916234I$ $b = -0.490789 - 1.054630I$	$0.97153 - 3.65106I$	0
$u = \ \ 1.108780 - 0.425877I$ $a = -0.872737 - 0.916234I$ $b = -0.490789 + 1.054630I$	$0.97153 + 3.65106I$	0
$u = \ \ 1.18971$ $a = \ \ 0.0975768$ $b = -1.62408$	-7.17810	0
$u = -0.790199$ $a = -0.687237$ $b = -0.309181$	-1.20435	-8.00000
$u = \ \ 0.260780 + 0.729992I$ $a = -0.81245 - 1.69234I$ $b = \ \ 0.106403 + 0.939014I$	$0.031297 - 0.283167I$	$-10.47064 + 0.I$
$u = \ \ 0.260780 - 0.729992I$ $a = -0.81245 + 1.69234I$ $b = \ \ 0.106403 - 0.939014I$	$0.031297 + 0.283167I$	$-10.47064 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.157150 + 0.429543I$ $a = 0.58879 + 1.77745I$ $b = 0.524055 - 1.081700I$	$-9.59278 + 3.62722I$	0
$u = -1.157150 - 0.429543I$ $a = 0.58879 - 1.77745I$ $b = 0.524055 + 1.081700I$	$-9.59278 - 3.62722I$	0
$u = -0.160568 + 0.737142I$ $a = -0.164412 - 0.618806I$ $b = 0.730298 + 0.089390I$	$-5.97152 + 2.38544I$	$-14.0737 - 2.8213I$
$u = -0.160568 - 0.737142I$ $a = -0.164412 + 0.618806I$ $b = 0.730298 - 0.089390I$	$-5.97152 - 2.38544I$	$-14.0737 + 2.8213I$
$u = 1.228540 + 0.266915I$ $a = 0.391803 + 0.241594I$ $b = 0.562530 - 0.408648I$	$-4.71575 - 3.09828I$	0
$u = 1.228540 - 0.266915I$ $a = 0.391803 - 0.241594I$ $b = 0.562530 + 0.408648I$	$-4.71575 + 3.09828I$	0
$u = -1.267880 + 0.177238I$ $a = 0.678839 + 0.142037I$ $b = 0.526237 - 0.977461I$	$-2.23986 + 3.29378I$	0
$u = -1.267880 - 0.177238I$ $a = 0.678839 - 0.142037I$ $b = 0.526237 + 0.977461I$	$-2.23986 - 3.29378I$	0
$u = 1.217560 + 0.402996I$ $a = 0.814080 - 0.788075I$ $b = 0.736447 + 1.145140I$	$-1.56639 - 7.72027I$	0
$u = 1.217560 - 0.402996I$ $a = 0.814080 + 0.788075I$ $b = 0.736447 - 1.145140I$	$-1.56639 + 7.72027I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.240650 + 0.368915I$ $a = 0.191262 - 0.405765I$ $b = -0.519677 + 1.078090I$	$-6.89673 + 1.47760I$	0
$u = 1.240650 - 0.368915I$ $a = 0.191262 + 0.405765I$ $b = -0.519677 - 1.078090I$	$-6.89673 - 1.47760I$	0
$u = 1.259380 + 0.349247I$ $a = -0.356452 + 0.242013I$ $b = -0.997759 + 0.233167I$	$-10.25980 - 6.27168I$	0
$u = 1.259380 - 0.349247I$ $a = -0.356452 - 0.242013I$ $b = -0.997759 - 0.233167I$	$-10.25980 + 6.27168I$	0
$u = 0.069586 + 0.678813I$ $a = 0.359342 - 1.324650I$ $b = -0.334946 + 1.148020I$	$1.89522 + 3.59670I$	$-3.22502 - 6.27042I$
$u = 0.069586 - 0.678813I$ $a = 0.359342 + 1.324650I$ $b = -0.334946 - 1.148020I$	$1.89522 - 3.59670I$	$-3.22502 + 6.27042I$
$u = -1.207750 + 0.537510I$ $a = 0.652393 + 1.198970I$ $b = 0.96200 - 1.24131I$	$-8.23196 + 10.60790I$	0
$u = -1.207750 - 0.537510I$ $a = 0.652393 - 1.198970I$ $b = 0.96200 + 1.24131I$	$-8.23196 - 10.60790I$	0
$u = -0.251619 + 1.300430I$ $a = 0.087461 + 1.259290I$ $b = -0.219236 - 0.872762I$	$1.21797 - 1.00031I$	0
$u = -0.251619 - 1.300430I$ $a = 0.087461 - 1.259290I$ $b = -0.219236 + 0.872762I$	$1.21797 + 1.00031I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.225120+0.503889I$ $a=-0.58912-1.29789I$ $b=-0.71519+1.24236I$	$-4.07967+7.14680I$	0
$u=-1.225120-0.503889I$ $a=-0.58912+1.29789I$ $b=-0.71519-1.24236I$	$-4.07967-7.14680I$	0
$u=0.608427+0.287937I$ $a=-0.794839-0.362171I$ $b=0.77786-1.38261I$	$-8.53694-1.57343I$	$-10.60265+1.06566I$
$u=0.608427-0.287937I$ $a=-0.794839+0.362171I$ $b=0.77786+1.38261I$	$-8.53694+1.57343I$	$-10.60265-1.06566I$
$u=-0.015635+1.347280I$ $a=-0.399900+1.334910I$ $b=0.584733-1.067800I$	$-10.7431+10.3794I$	0
$u=-0.015635-1.347280I$ $a=-0.399900-1.334910I$ $b=0.584733+1.067800I$	$-10.7431-10.3794I$	0
$u=0.618891+0.184854I$ $a=-1.80641+2.28001I$ $b=0.333765+0.342067I$	$-12.12580-5.94770I$	$-17.3706+1.5513I$
$u=0.618891-0.184854I$ $a=-1.80641-2.28001I$ $b=0.333765-0.342067I$	$-12.12580+5.94770I$	$-17.3706-1.5513I$
$u=-1.171010+0.697628I$ $a=-0.456614-1.290590I$ $b=-0.473878+0.657609I$	$-8.20157+2.65755I$	0
$u=-1.171010-0.697628I$ $a=-0.456614+1.290590I$ $b=-0.473878-0.657609I$	$-8.20157-2.65755I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.314220 + 0.407705I$ $a = 0.928702 - 0.304670I$ $b = 0.347914 + 0.703563I$	$-3.57329 - 3.99154I$	0
$u = 1.314220 - 0.407705I$ $a = 0.928702 + 0.304670I$ $b = 0.347914 - 0.703563I$	$-3.57329 + 3.99154I$	0
$u = -0.587686 + 0.184049I$ $a = 0.17715 - 1.94184I$ $b = -0.143820 + 1.355940I$	$1.24512 + 2.95965I$	$-17.1971 - 8.3280I$
$u = -0.587686 - 0.184049I$ $a = 0.17715 + 1.94184I$ $b = -0.143820 - 1.355940I$	$1.24512 - 2.95965I$	$-17.1971 + 8.3280I$
$u = 1.380920 + 0.295378I$ $a = -1.091370 + 0.168749I$ $b = -0.484273 - 0.978684I$	$-6.97072 - 4.52407I$	0
$u = 1.380920 - 0.295378I$ $a = -1.091370 - 0.168749I$ $b = -0.484273 + 0.978684I$	$-6.97072 + 4.52407I$	0
$u = -1.37522 + 0.33577I$ $a = 0.1227200 + 0.0495155I$ $b = -1.37069 - 0.43293I$	$-18.2002 + 9.6383I$	0
$u = -1.37522 - 0.33577I$ $a = 0.1227200 - 0.0495155I$ $b = -1.37069 + 0.43293I$	$-18.2002 - 9.6383I$	0
$u = -0.194872 + 0.521399I$ $a = 1.36940 + 1.36276I$ $b = 0.294275 - 1.219930I$	$-2.02000 + 1.29634I$	$-8.59011 - 0.82038I$
$u = -0.194872 - 0.521399I$ $a = 1.36940 - 1.36276I$ $b = 0.294275 + 1.219930I$	$-2.02000 - 1.29634I$	$-8.59011 + 0.82038I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.38278+0.47931I$ $a=-0.922359-0.965064I$ $b=-0.628563+1.191530I$	$-7.44264+12.01200I$	0
$u=-1.38278-0.47931I$ $a=-0.922359+0.965064I$ $b=-0.628563-1.191530I$	$-7.44264-12.01200I$	0
$u=\ \ 0.511444+0.007065I$ $a=\ \ 1.07473-1.61079I$ $b=-0.455182-0.805255I$	$-5.90476-1.88902I$	$-15.6602+3.6803I$
$u=\ \ 0.511444-0.007065I$ $a=\ \ 1.07473+1.61079I$ $b=-0.455182+0.805255I$	$-5.90476+1.88902I$	$-15.6602-3.6803I$
$u=-1.38284+0.56555I$ $a=\ \ 0.667751+1.008680I$ $b=\ \ 0.533437-1.065920I$	$-2.81814+7.51527I$	0
$u=-1.38284-0.56555I$ $a=\ \ 0.667751-1.008680I$ $b=\ \ 0.533437+1.065920I$	$-2.81814-7.51527I$	0
$u=-1.47880+0.28152I$ $a=-0.075108-0.161487I$ $b=\ \ 1.069950+0.176091I$	$-13.04180+3.71273I$	0
$u=-1.47880-0.28152I$ $a=-0.075108+0.161487I$ $b=\ \ 1.069950-0.176091I$	$-13.04180-3.71273I$	0
$u=\ \ 1.44289+0.58865I$ $a=-0.589386+1.237170I$ $b=-0.78686-1.29449I$	$-15.4099-17.0449I$	0
$u=\ \ 1.44289-0.58865I$ $a=-0.589386-1.237170I$ $b=-0.78686+1.29449I$	$-15.4099+17.0449I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.355355+0.262107I$ $a=3.66678+1.73790I$ $b=-0.569014-0.278034I$	$-7.32083-0.05422I$	$-11.26067-1.17952I$
$u=-0.355355-0.262107I$ $a=3.66678-1.73790I$ $b=-0.569014+0.278034I$	$-7.32083+0.05422I$	$-11.26067+1.17952I$
$u=-1.56131+0.04903I$ $a=-0.088615+0.389218I$ $b=-0.401182+0.578109I$	$-15.8959-1.9312I$	0
$u=-1.56131-0.04903I$ $a=-0.088615-0.389218I$ $b=-0.401182-0.578109I$	$-15.8959+1.9312I$	0
$u=1.33761+0.83433I$ $a=-0.26867+1.53959I$ $b=-0.547204-1.071990I$	$-14.6163-1.3587I$	0
$u=1.33761-0.83433I$ $a=-0.26867-1.53959I$ $b=-0.547204+1.071990I$	$-14.6163+1.3587I$	0
$u=1.56303+0.21448I$ $a=-0.176215+0.008120I$ $b=0.463840-0.557066I$	$-11.32950+0.56232I$	0
$u=1.56303-0.21448I$ $a=-0.176215-0.008120I$ $b=0.463840+0.557066I$	$-11.32950-0.56232I$	0
$u=0.36061+1.53955I$ $a=0.465321-1.193640I$ $b=-0.470435+0.865629I$	$-5.70209+1.92973I$	0
$u=0.36061-1.53955I$ $a=0.465321+1.193640I$ $b=-0.470435-0.865629I$	$-5.70209-1.92973I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=\ \ 1.49444+0.67390I$ $a=\ \ 0.418462-1.297480I$ $b=\ \ 0.645589+1.257170I$	$-9.81336-9.75749I$	0
$u=\ \ 1.49444-0.67390I$ $a=\ \ 0.418462+1.297480I$ $b=\ \ 0.645589-1.257170I$	$-9.81336+9.75749I$	0
$u=-0.166447+0.307482I$ $a=-0.978555+0.680012I$ $b=-0.195678+0.283655I$	$-0.483968+0.821988I$	$-9.69774-8.32847I$
$u=-0.166447-0.307482I$ $a=-0.978555-0.680012I$ $b=-0.195678-0.283655I$	$-0.483968-0.821988I$	$-9.69774+8.32847I$
$u=-1.71826+0.47540I$ $a=\ \ 0.209793+0.367422I$ $b=-0.518592-0.551800I$	$-16.2830-3.0557I$	0
$u=-1.71826-0.47540I$ $a=\ \ 0.209793-0.367422I$ $b=-0.518592+0.551800I$	$-16.2830+3.0557I$	0
$u=-0.0238705$ $a=-21.0915$ $b=-0.653218$	-1.50308	-5.69350

II.
$\boldsymbol{I_2^u = \langle 5.09\times 10^{14}u^{22}+1.09\times 10^{14}u^{21}+\cdots+5.68\times 10^{13}b+2.35\times 10^{15},\ -7.81\times 10^{15}u^{22}-1.64\times 10^{15}u^{21}+\cdots+2.84\times 10^{14}a-3.68\times 10^{16},\ u^{23}-7u^{21}+\cdots+8u-1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 27.4758u^{22}+5.75630u^{21}+\cdots-426.335u+129.541 \\ -8.95813u^{22}-1.92472u^{21}+\cdots+137.570u-41.3526 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ -u^3+u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 18.5177u^{22}+3.83157u^{21}+\cdots-288.765u+88.1883 \\ -8.95813u^{22}-1.92472u^{21}+\cdots+137.570u-41.3526 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1.38244u^{22}-0.469686u^{21}+\cdots+25.9438u-2.00907 \\ -3.87936u^{22}-0.748487u^{21}+\cdots+57.0007u-19.4066 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 18.2475u^{22}+3.81754u^{21}+\cdots-283.192u+86.3862 \\ -8.62905u^{22}-1.89474u^{21}+\cdots+131.840u-39.5645 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -3.74239u^{22}-0.693224u^{21}+\cdots+49.6503u-20.1633 \\ 3.58600u^{22}+0.596297u^{21}+\cdots-56.3817u+19.3097 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 5.78765u^{22}+1.12595u^{21}+\cdots-83.2384u+29.7697 \\ -3.57259u^{22}-0.0187181u^{21}+\cdots+61.7765u-21.1490 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 3.91862u^{22}+0.984338u^{21}+\cdots-61.3344u+17.2421 \\ -0.381329u^{22}+0.252476u^{21}+\cdots+10.4275u-3.02976 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 2.78803u^{22}+0.329082u^{21}+\cdots-35.3880u+16.5738 \\ -4.13662u^{22}-0.829994u^{21}+\cdots+61.2207u-20.5325 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= \frac{7318270583903694}{284215974230455}u^{22}+\frac{1309447333672492}{284215974230455}u^{21}+\cdots-\frac{108327404387464633}{284215974230455}u+\frac{32848607482929543}{284215974230455}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{23} - 3u^{22} + \cdots + 16u - 1$
c_2	$u^{23} + 7u^{22} + \cdots - 4u - 1$
c_3	$u^{23} + 2u^{22} + \cdots + u^2 + 1$
c_4	$u^{23} - 7u^{22} + \cdots - 4u - 1$
c_5	$u^{23} - 7u^{22} + \cdots - 4u + 1$
c_6, c_7	$u^{23} + 3u^{22} + \cdots + 7u + 1$
c_8	$u^{23} - 7u^{21} + \cdots + 8u + 1$
c_9	$u^{23} - 2u^{22} + \cdots - u^2 - 1$
c_{10}	$u^{23} - 3u^{22} + \cdots + 7u - 1$
c_{11}	$u^{23} + 7u^{22} + \cdots - 4u + 1$
c_{12}	$u^{23} - 7u^{21} + \cdots + 8u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{23} - 7y^{22} + \cdots + 22y - 1$
c_2, c_5	$y^{23} - 13y^{22} + \cdots + 4y - 1$
c_3, c_9	$y^{23} + 2y^{22} + \cdots - 2y - 1$
c_4, c_{11}	$y^{23} - 5y^{22} + \cdots - 4y - 1$
c_6, c_7, c_{10}	$y^{23} - 29y^{22} + \cdots + 97y - 1$
c_8, c_{12}	$y^{23} - 14y^{22} + \cdots + 50y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.00790$ $a=-0.459350$ $b=-2.40493$	-3.26795	0.122800
$u=\ 0.287415+0.988576I$ $a=\ 1.12270-1.04490I$ $b=-0.304008+0.988745I$	$-4.47405+1.16683I$	$-9.37780-0.15334I$
$u=\ 0.287415-0.988576I$ $a=\ 1.12270+1.04490I$ $b=-0.304008-0.988745I$	$-4.47405-1.16683I$	$-9.37780+0.15334I$
$u=-0.752270+0.566346I$ $a=\ 0.55645+2.73540I$ $b=\ 0.406570-0.830074I$	$-11.57440+6.83134I$	$-12.8239-7.5040I$
$u=-0.752270-0.566346I$ $a=\ 0.55645-2.73540I$ $b=\ 0.406570+0.830074I$	$-11.57440-6.83134I$	$-12.8239+7.5040I$
$u=\ 0.053846+1.076160I$ $a=\ 0.308144+1.360130I$ $b=\ 0.053171-0.922904I$	$1.61758+0.26087I$	$-5.81412+0.75603I$
$u=\ 0.053846-1.076160I$ $a=\ 0.308144-1.360130I$ $b=\ 0.053171+0.922904I$	$1.61758-0.26087I$	$-5.81412-0.75603I$
$u=\ 0.916877$ $a=-1.01735$ $b=-2.54439$	-8.74085	-32.3250
$u=\ 1.13830$ $a=\ 0.0789085$ $b=-2.31821$	-7.53236	-35.2440
$u=-0.340767+1.096140I$ $a=-0.572338-1.271450I$ $b=\ 0.473344+0.851645I$	$-1.76317-1.95999I$	$-16.2140+4.2831I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.340767 - 1.096140I$ $a = -0.572338 + 1.271450I$ $b = 0.473344 - 0.851645I$	$-1.76317 + 1.95999I$	$-16.2140 - 4.2831I$
$u = 1.128870 + 0.502364I$ $a = 1.37474 - 1.15927I$ $b = 0.174430 + 0.715540I$	$-7.18576 - 2.12735I$	$-11.11765 + 1.98047I$
$u = 1.128870 - 0.502364I$ $a = 1.37474 + 1.15927I$ $b = 0.174430 - 0.715540I$	$-7.18576 + 2.12735I$	$-11.11765 - 1.98047I$
$u = -1.315210 + 0.510566I$ $a = -0.636833 - 1.187270I$ $b = -0.741762 + 1.162050I$	$-5.31790 + 7.73609I$	$-15.4979 - 6.2643I$
$u = -1.315210 - 0.510566I$ $a = -0.636833 + 1.187270I$ $b = -0.741762 - 1.162050I$	$-5.31790 - 7.73609I$	$-15.4979 + 6.2643I$
$u = 1.38928 + 0.34223I$ $a = -0.722896 + 0.271037I$ $b = -0.480891 - 0.867643I$	$-3.56509 - 4.84918I$	$-13.3314 + 8.1284I$
$u = 1.38928 - 0.34223I$ $a = -0.722896 - 0.271037I$ $b = -0.480891 + 0.867643I$	$-3.56509 + 4.84918I$	$-13.3314 - 8.1284I$
$u = -0.554871$ $a = -0.624890$ $b = 0.507385$	-2.30602	-17.6770
$u = 1.49949$ $a = -0.379057$ $b = 0.322041$	-11.0674	-9.68470
$u = -1.65976 + 0.26119I$ $a = 0.481768 - 0.023592I$ $b = -0.081123 - 0.573767I$	$-15.3549 - 2.6562I$	$-10.86536 + 3.03468I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.65976 - 0.26119I$ $a = 0.481768 + 0.023592I$ $b = -0.081123 + 0.573767I$	$-15.3549 + 2.6562I$	$-10.86536 - 3.03468I$
$u = 0.212651 + 0.005563I$ $a = 0.28914 - 4.01886I$ $b = 0.219322 + 1.288240I$	$1.56755 - 2.67049I$	$-3.55373 - 3.77681I$
$u = 0.212651 - 0.005563I$ $a = 0.28914 + 4.01886I$ $b = 0.219322 - 1.288240I$	$1.56755 + 2.67049I$	$-3.55373 + 3.77681I$

III. $I_3^u = \langle b+1,\ a+1,\ u+1 \rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -2 \\ -1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_3 c_4, c_8	$u-1$
c_5, c_9, c_{11} c_{12}	$u+1$
c_6, c_7, c_{10}	u

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_5, c_8 c_9, c_{11}, c_{12}	$y-1$
c_6, c_7, c_{10}	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$		
$a = -1.00000$	-3.28987	-12.0000
$b = -1.00000$		

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u^{23}-3u^{22}+\cdots+16u-1)$ $\cdot(u^{97}-13u^{96}+\cdots+83802u-29149)$
c_2	$(u-1)(u^{23}+7u^{22}+\cdots-4u-1)(u^{97}-u^{96}+\cdots-22184u-2161)$
c_3	$(u-1)(u^{23}+2u^{22}+\cdots+u^2+1)(u^{97}-14u^{96}+\cdots+1812u-149)$
c_4	$(u-1)(u^{23}-7u^{22}+\cdots-4u-1)(u^{97}-3u^{96}+\cdots-356u-59)$
c_5	$(u+1)(u^{23}-7u^{22}+\cdots-4u+1)(u^{97}-u^{96}+\cdots-22184u-2161)$
c_6, c_7	$u(u^{23}+3u^{22}+\cdots+7u+1)(u^{97}+4u^{96}+\cdots+4242u+242)$
c_8	$(u-1)(u^{23}-7u^{21}+\cdots+8u+1)(u^{97}-2u^{96}+\cdots+1714u+41)$
c_9	$(u+1)(u^{23}-2u^{22}+\cdots-u^2-1)(u^{97}-14u^{96}+\cdots+1812u-149)$
c_{10}	$u(u^{23}-3u^{22}+\cdots+7u-1)(u^{97}+4u^{96}+\cdots+4242u+242)$
c_{11}	$(u+1)(u^{23}+7u^{22}+\cdots-4u+1)(u^{97}-3u^{96}+\cdots-356u-59)$
c_{12}	$(u+1)(u^{23}-7u^{21}+\cdots+8u-1)(u^{97}-2u^{96}+\cdots+1714u+41)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)(y^{23}-7y^{22}+\cdots+22y-1)$ $\cdot(y^{97}-37y^{96}+\cdots+128682539484y-849664201)$
c_2, c_5	$(y-1)(y^{23}-13y^{22}+\cdots+4y-1)$ $\cdot(y^{97}-79y^{96}+\cdots+423448954y-4669921)$
c_3, c_9	$(y-1)(y^{23}+2y^{22}+\cdots-2y-1)$ $\cdot(y^{97}-3452y^{95}+\cdots-696744y-22201)$
c_4, c_{11}	$(y-1)(y^{23}-5y^{22}+\cdots-4y-1)(y^{97}-47y^{96}+\cdots-64542y-3481)$
c_6, c_7, c_{10}	$y(y^{23}-29y^{22}+\cdots+97y-1)$ $\cdot(y^{97}-110y^{96}+\cdots+17376496y-58564)$
c_8, c_{12}	$(y-1)(y^{23}-14y^{22}+\cdots+50y-1)$ $\cdot(y^{97}-68y^{96}+\cdots+2983388y-1681)$