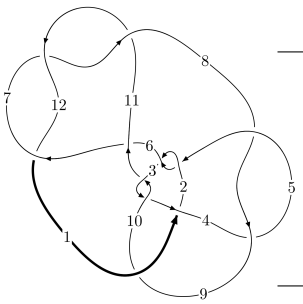
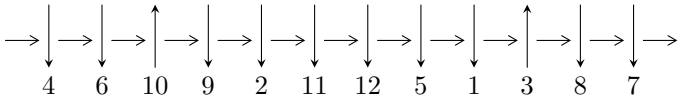
$12a_{0953}$ $(K12a_{0953})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -6.38203 \times 10^{172} u^{109} - 1.26988 \times 10^{173} u^{108} + \cdots + 7.34383 \times 10^{172} b - 6.55266 \times 10^{173},$$
$$- 8.43112 \times 10^{173} u^{109} - 1.62348 \times 10^{174} u^{108} + \cdots + 8.07821 \times 10^{173} a - 2.66760 \times 10^{175},$$
$$u^{110} + u^{109} + \cdots + 278u + 11 \rangle$$
$$I_2^u = \langle u^{17} - 3u^{16} + \cdots - 4u^2 + b,\ -2u^{17} + 3u^{16} + \cdots + a + 3,\ u^{18} - 2u^{17} + \cdots - 2u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 128 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. $\boldsymbol{I_1^u = \langle -6.38 \times 10^{172} u^{109} - 1.27 \times 10^{173} u^{108} + \cdots + 7.34 \times 10^{172} b - 6.55 \times 10^{173},\ -8.43 \times 10^{173} u^{109} - 1.62 \times 10^{174} u^{108} + \cdots + 8.08 \times 10^{173} a - 2.67 \times 10^{175},\ u^{110} + u^{109} + \cdots + 278u + 11 \rangle}$

(i) Arc colorings

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

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

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

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

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

$$a_3 = \begin{pmatrix} 1.04369u^{109} + 2.00971u^{108} + \cdots + 410.322u + 33.0222 \\ 0.869033u^{109} + 1.72918u^{108} + \cdots + 215.319u + 8.92267 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 0.493453u^{109} - 0.225088u^{108} + \cdots + 53.1992u + 18.7418 \\ 2.24757u^{109} + 2.09482u^{108} + \cdots + 140.726u + 5.47659 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.161257u^{109} - 0.431389u^{108} + \cdots - 177.617u - 21.5655 \\ 2.15866u^{109} + 1.69325u^{108} + \cdots + 122.861u + 3.85095 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.852999u^{109} - 1.28126u^{108} + \cdots + 26.0895u + 12.5914 \\ 0.614891u^{109} - 2.63198u^{108} + \cdots - 444.568u - 17.4155 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.34925u^{109} - 1.78726u^{108} + \cdots - 249.644u + 13.2485 \\ 2.96760u^{109} + 2.44514u^{108} + \cdots + 112.628u + 4.40678 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.42892u^{109} - 1.87328u^{108} + \cdots - 8.25883u + 11.7779 \\ 0.444642u^{109} - 4.02819u^{108} + \cdots - 668.229u - 26.2983 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -3.06007u^{109} - 8.46109u^{108} + \cdots - 680.493u - 29.6266$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{110} - 12u^{109} + \cdots + 30u - 1$
c_2, c_5	$u^{110} + u^{109} + \cdots + 44559u + 1087$
c_3, c_{10}	$u^{110} + u^{109} + \cdots - 21765u + 12969$
c_4, c_8	$u^{110} + 4u^{109} + \cdots + 1542u + 279$
c_6	$u^{110} - u^{109} + \cdots + 10791316u + 468259$
c_7, c_{11}, c_{12}	$u^{110} + u^{109} + \cdots + 278u + 11$
c_9	$u^{110} + 6u^{109} + \cdots + 37u^2 - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{110} - 10y^{109} + \cdots - 82y + 1$
c_2, c_5	$y^{110} - 85y^{109} + \cdots - 674723791y + 1181569$
c_3, c_{10}	$y^{110} + 79y^{109} + \cdots - 4284448371y + 168194961$
c_4, c_8	$y^{110} + 56y^{109} + \cdots + 3663144y + 77841$
c_6	$y^{110} - 53y^{109} + \cdots - 63491367640358y + 219266491081$
c_7, c_{11}, c_{12}	$y^{110} + 95y^{109} + \cdots - 35726y + 121$
c_9	$y^{110} + 102y^{108} + \cdots - 74y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.050010 + 0.171279I$ $a = -0.33161 - 1.70441I$ $b = 0.166210 - 1.222580I$	$-6.04457 - 0.70873I$	0
$u = 1.050010 - 0.171279I$ $a = -0.33161 + 1.70441I$ $b = 0.166210 + 1.222580I$	$-6.04457 + 0.70873I$	0
$u = -0.891130 + 0.230513I$ $a = 0.41804 - 2.22971I$ $b = -0.46710 - 1.48139I$	$-6.4223 + 13.5900I$	0
$u = -0.891130 - 0.230513I$ $a = 0.41804 + 2.22971I$ $b = -0.46710 + 1.48139I$	$-6.4223 - 13.5900I$	0
$u = -0.996011 + 0.461027I$ $a = -0.52667 + 1.36913I$ $b = 0.120769 + 1.233970I$	$-6.47998 + 3.06048I$	0
$u = -0.996011 - 0.461027I$ $a = -0.52667 - 1.36913I$ $b = 0.120769 - 1.233970I$	$-6.47998 - 3.06048I$	0
$u = 0.420393 + 1.023990I$ $a = 0.714613 + 0.842054I$ $b = 0.34795 + 1.51364I$	$-7.29839 + 2.86587I$	0
$u = 0.420393 - 1.023990I$ $a = 0.714613 - 0.842054I$ $b = 0.34795 - 1.51364I$	$-7.29839 - 2.86587I$	0
$u = 0.196637 + 1.125380I$ $a = -0.332867 - 0.830505I$ $b = 0.941856 + 0.626895I$	$1.93918 + 4.29723I$	0
$u = 0.196637 - 1.125380I$ $a = -0.332867 + 0.830505I$ $b = 0.941856 - 0.626895I$	$1.93918 - 4.29723I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.560509+1.002830I$ $a=\ \ 0.654267-0.947169I$ $b=\ \ 0.36228-1.43029I$	$-4.06316-8.51627I$	0
$u=-0.560509-1.002830I$ $a=\ \ 0.654267+0.947169I$ $b=\ \ 0.36228+1.43029I$	$-4.06316+8.51627I$	0
$u=\ \ 0.829911+0.186392I$ $a=\ \ 0.38704+2.37181I$ $b=-0.49649+1.54762I$	$-9.87319-7.37056I$	0
$u=\ \ 0.829911-0.186392I$ $a=\ \ 0.38704-2.37181I$ $b=-0.49649-1.54762I$	$-9.87319+7.37056I$	0
$u=-0.499325+0.658079I$ $a=-0.579990+0.713612I$ $b=\ \ 0.086184+1.319000I$	$-6.08251+2.07429I$	0
$u=-0.499325-0.658079I$ $a=-0.579990-0.713612I$ $b=\ \ 0.086184-1.319000I$	$-6.08251-2.07429I$	0
$u=\ \ 0.797733+0.098380I$ $a=-1.02586-2.48430I$ $b=\ \ 0.185043-1.284780I$	$-6.64028-4.10812I$	$-15.1202+7.1213I$
$u=\ \ 0.797733-0.098380I$ $a=-1.02586+2.48430I$ $b=\ \ 0.185043+1.284780I$	$-6.64028+4.10812I$	$-15.1202-7.1213I$
$u=-0.231372+1.176400I$ $a=-1.50070+1.88344I$ $b=-0.084201+1.118770I$	$1.74981-3.45076I$	0
$u=-0.231372-1.176400I$ $a=-1.50070-1.88344I$ $b=-0.084201-1.118770I$	$1.74981+3.45076I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.788901+0.043875I$ $a=-0.005742-0.419288I$ $b=\ \ 0.494869-0.047059I$	$-2.51889-1.63919I$	$-8.00000+3.84553I$
$u=-0.788901-0.043875I$ $a=-0.005742+0.419288I$ $b=\ \ 0.494869+0.047059I$	$-2.51889+1.63919I$	$-8.00000-3.84553I$
$u=\ \ 0.339176+1.163640I$ $a=-0.06937-1.42094I$ $b=-0.115504-1.358120I$	$-3.39791-0.02090I$	0
$u=\ \ 0.339176-1.163640I$ $a=-0.06937+1.42094I$ $b=-0.115504+1.358120I$	$-3.39791+0.02090I$	0
$u=\ \ 0.198752+1.200600I$ $a=\ \ 1.162040+0.131402I$ $b=-0.426257-0.415124I$	$0.16219-1.87147I$	0
$u=\ \ 0.198752-1.200600I$ $a=\ \ 1.162040-0.131402I$ $b=-0.426257+0.415124I$	$0.16219+1.87147I$	0
$u=\ \ 0.758425+0.031986I$ $a=\ \ 0.05821-2.76156I$ $b=\ \ 0.229451-1.243480I$	$-4.65058-2.75633I$	$-14.4067+3.2910I$
$u=\ \ 0.758425-0.031986I$ $a=\ \ 0.05821+2.76156I$ $b=\ \ 0.229451+1.243480I$	$-4.65058+2.75633I$	$-14.4067-3.2910I$
$u=\ \ 0.720075+1.011810I$ $a=-0.408449-1.024220I$ $b=\ \ 0.021198-1.261860I$	$-3.50156-5.30371I$	0
$u=\ \ 0.720075-1.011810I$ $a=-0.408449+1.024220I$ $b=\ \ 0.021198+1.261860I$	$-3.50156+5.30371I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.738014 + 0.163439I$ $a = -0.815743 + 0.550940I$ $b = -1.176070 + 0.318613I$	$-0.76558 - 7.84667I$	$-9.97138 + 7.60895I$
$u = 0.738014 - 0.163439I$ $a = -0.815743 - 0.550940I$ $b = -1.176070 - 0.318613I$	$-0.76558 + 7.84667I$	$-9.97138 - 7.60895I$
$u = -0.321642 + 1.205180I$ $a = 0.725644 - 0.628669I$ $b = -0.352838 + 0.205292I$	$1.02880 + 5.67372I$	0
$u = -0.321642 - 1.205180I$ $a = 0.725644 + 0.628669I$ $b = -0.352838 - 0.205292I$	$1.02880 - 5.67372I$	0
$u = -0.172321 + 1.239970I$ $a = 1.06617 - 1.55432I$ $b = -0.75294 - 1.34218I$	$1.55530 + 1.42254I$	0
$u = -0.172321 - 1.239970I$ $a = 1.06617 + 1.55432I$ $b = -0.75294 + 1.34218I$	$1.55530 - 1.42254I$	0
$u = -0.216210 + 1.236910I$ $a = 0.26823 + 1.44359I$ $b = -0.14081 + 1.45105I$	$-3.62106 + 2.01275I$	0
$u = -0.216210 - 1.236910I$ $a = 0.26823 - 1.44359I$ $b = -0.14081 - 1.45105I$	$-3.62106 - 2.01275I$	0
$u = -0.722561 + 0.134829I$ $a = -0.19581 + 3.27871I$ $b = 0.249342 + 1.262220I$	$-1.29033 + 6.93091I$	$-10.85274 - 7.10174I$
$u = -0.722561 - 0.134829I$ $a = -0.19581 - 3.27871I$ $b = 0.249342 - 1.262220I$	$-1.29033 - 6.93091I$	$-10.85274 + 7.10174I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.301684 + 1.236350I$ $a = -1.01913 - 1.37825I$ $b = -0.049984 - 1.195340I$	$-0.95667 - 1.07479I$	0
$u = 0.301684 - 1.236350I$ $a = -1.01913 + 1.37825I$ $b = -0.049984 + 1.195340I$	$-0.95667 + 1.07479I$	0
$u = -0.246692 + 1.268370I$ $a = 0.595285 + 0.754326I$ $b = 1.69503 - 1.36528I$	$0.61040 + 3.00455I$	0
$u = -0.246692 - 1.268370I$ $a = 0.595285 - 0.754326I$ $b = 1.69503 + 1.36528I$	$0.61040 - 3.00455I$	0
$u = 0.624691 + 0.321842I$ $a = 0.627869 - 0.737601I$ $b = 0.607962 + 0.047917I$	$2.47086 - 3.80105I$	$-4.19881 + 4.45632I$
$u = 0.624691 - 0.321842I$ $a = 0.627869 + 0.737601I$ $b = 0.607962 - 0.047917I$	$2.47086 + 3.80105I$	$-4.19881 - 4.45632I$
$u = -0.142805 + 1.291600I$ $a = -0.291525 - 0.565579I$ $b = -0.636406 + 0.309305I$	$2.97808 + 2.36366I$	0
$u = -0.142805 - 1.291600I$ $a = -0.291525 + 0.565579I$ $b = -0.636406 - 0.309305I$	$2.97808 - 2.36366I$	0
$u = 0.664623 + 0.183592I$ $a = -0.424696 + 0.631747I$ $b = 0.435288 + 0.029541I$	$-2.82670 - 1.16520I$	$-7.45501 + 5.98665I$
$u = 0.664623 - 0.183592I$ $a = -0.424696 - 0.631747I$ $b = 0.435288 - 0.029541I$	$-2.82670 + 1.16520I$	$-7.45501 - 5.98665I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.060773+1.314470I$ $a=-0.957724+0.081566I$ $b=\ \ 0.526607+0.774592I$	$4.35676+2.14029I$	0
$u=-0.060773-1.314470I$ $a=-0.957724-0.081566I$ $b=\ \ 0.526607-0.774592I$	$4.35676-2.14029I$	0
$u=\ \ 0.325016+1.278670I$ $a=\ \ 1.19355+1.49980I$ $b=-0.382018+1.281910I$	$-0.57323-6.67327I$	0
$u=\ \ 0.325016-1.278670I$ $a=\ \ 1.19355-1.49980I$ $b=-0.382018-1.281910I$	$-0.57323+6.67327I$	0
$u=-0.334997+1.281810I$ $a=\ \ 0.222024-0.119846I$ $b=-0.622164+0.187888I$	$1.59715+2.41690I$	0
$u=-0.334997-1.281810I$ $a=\ \ 0.222024+0.119846I$ $b=-0.622164-0.187888I$	$1.59715-2.41690I$	0
$u=-0.065346+1.324070I$ $a=-0.718008-0.719851I$ $b=-0.343606+0.754448I$	$3.05619+2.45375I$	0
$u=-0.065346-1.324070I$ $a=-0.718008+0.719851I$ $b=-0.343606-0.754448I$	$3.05619-2.45375I$	0
$u=-0.656295+0.133338I$ $a=-1.73483+2.00258I$ $b=\ \ 0.161395+1.294360I$	$-6.95923+1.03924I$	$-16.0013+1.4098I$
$u=-0.656295-0.133338I$ $a=-1.73483-2.00258I$ $b=\ \ 0.161395-1.294360I$	$-6.95923-1.03924I$	$-16.0013-1.4098I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.264807+1.313810I$ $a=-1.20479+1.35359I$ $b=\ \ 1.73533+1.21667I$	$1.08272+3.54798I$	0
$u=-0.264807-1.313810I$ $a=-1.20479-1.35359I$ $b=\ \ 1.73533-1.21667I$	$1.08272-3.54798I$	0
$u=-0.624777+0.200749I$ $a=\ \ 1.00682-2.21299I$ $b=\ \ 0.210298-1.174680I$	$-1.51058+1.20506I$	$-10.99229-2.06390I$
$u=-0.624777-0.200749I$ $a=\ \ 1.00682+2.21299I$ $b=\ \ 0.210298+1.174680I$	$-1.51058-1.20506I$	$-10.99229+2.06390I$
$u=-0.651711+0.041925I$ $a=-1.83899-2.23339I$ $b=-1.79819-1.32359I$	$-3.19651+0.22460I$	$30.7228+1.1581I$
$u=-0.651711-0.041925I$ $a=-1.83899+2.23339I$ $b=-1.79819+1.32359I$	$-3.19651-0.22460I$	$30.7228-1.1581I$
$u=\ \ 0.417022+0.499919I$ $a=\ \ 0.005765+0.426647I$ $b=-0.651653+0.225845I$	$3.25707+0.27852I$	$-2.37532+2.79897I$
$u=\ \ 0.417022-0.499919I$ $a=\ \ 0.005765-0.426647I$ $b=-0.651653-0.225845I$	$3.25707-0.27852I$	$-2.37532-2.79897I$
$u=\ \ 0.345550+1.330980I$ $a=\ \ 1.84070+1.07680I$ $b=-0.245543+1.224530I$	$-2.15277-8.23151I$	0
$u=\ \ 0.345550-1.330980I$ $a=\ \ 1.84070-1.07680I$ $b=-0.245543-1.224530I$	$-2.15277+8.23151I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.285225+1.353120I$ $a=\ \ 1.82269-0.32543I$ $b=-0.234618-1.170990I$	$-2.23412+4.50974I$	0
$u=-0.285225-1.353120I$ $a=\ \ 1.82269+0.32543I$ $b=-0.234618+1.170990I$	$-2.23412-4.50974I$	0
$u=-0.305774+1.348780I$ $a=\ \ 1.25651-1.67733I$ $b=-0.326172-1.356400I$	$3.39421+10.67120I$	0
$u=-0.305774-1.348780I$ $a=\ \ 1.25651+1.67733I$ $b=-0.326172+1.356400I$	$3.39421-10.67120I$	0
$u=\ \ 0.126711+0.602710I$ $a=\ \ 0.18799-1.79023I$ $b=\ \ 0.570104+0.240230I$	$1.61917+4.58161I$	$-3.97305-3.68619I$
$u=\ \ 0.126711-0.602710I$ $a=\ \ 0.18799+1.79023I$ $b=\ \ 0.570104-0.240230I$	$1.61917-4.58161I$	$-3.97305+3.68619I$
$u=\ \ 0.311376+1.361300I$ $a=-0.445403-0.794303I$ $b=\ \ 1.319850-0.195094I$	$4.05196-11.66000I$	0
$u=\ \ 0.311376-1.361300I$ $a=-0.445403+0.794303I$ $b=\ \ 1.319850+0.195094I$	$4.05196+11.66000I$	0
$u=-0.034974+1.407370I$ $a=-0.596722-0.292925I$ $b=\ \ 0.585931-1.085300I$	$6.97198-3.50584I$	0
$u=-0.034974-1.407370I$ $a=-0.596722+0.292925I$ $b=\ \ 0.585931+1.085300I$	$6.97198+3.50584I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.295776 + 1.378230I$ $a = 0.345785 - 0.120824I$ $b = -0.649170 - 0.273610I$	$2.16438 - 4.72448I$	0
$u = 0.295776 - 1.378230I$ $a = 0.345785 + 0.120824I$ $b = -0.649170 + 0.273610I$	$2.16438 + 4.72448I$	0
$u = -0.279651 + 1.383870I$ $a = -1.005800 + 0.806794I$ $b = 0.049401 + 1.296110I$	$3.55772 + 4.58327I$	0
$u = -0.279651 - 1.383870I$ $a = -1.005800 - 0.806794I$ $b = 0.049401 - 1.296110I$	$3.55772 - 4.58327I$	0
$u = 0.46837 + 1.33629I$ $a = 1.01802 + 1.15044I$ $b = -0.338731 + 1.182980I$	$-1.40857 - 6.07621I$	0
$u = 0.46837 - 1.33629I$ $a = 1.01802 - 1.15044I$ $b = -0.338731 - 1.182980I$	$-1.40857 + 6.07621I$	0
$u = 0.13083 + 1.41396I$ $a = -0.710916 - 0.255906I$ $b = 0.833661 - 0.308878I$	$9.27329 - 1.61572I$	0
$u = 0.13083 - 1.41396I$ $a = -0.710916 + 0.255906I$ $b = 0.833661 + 0.308878I$	$9.27329 + 1.61572I$	0
$u = 0.02062 + 1.42200I$ $a = 0.432581 + 0.754867I$ $b = -0.789312 + 0.357523I$	$7.96585 + 4.10763I$	0
$u = 0.02062 - 1.42200I$ $a = 0.432581 - 0.754867I$ $b = -0.789312 - 0.357523I$	$7.96585 - 4.10763I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.35181 + 1.38171I$ $a = -1.45295 - 1.07127I$ $b = 0.60544 - 1.53791I$	$-4.91513 - 11.63040I$	0
$u = 0.35181 - 1.38171I$ $a = -1.45295 + 1.07127I$ $b = 0.60544 + 1.53791I$	$-4.91513 + 11.63040I$	0
$u = 0.23073 + 1.41737I$ $a = 0.178281 + 0.738035I$ $b = -0.679647 + 0.090588I$	$8.03217 - 6.91623I$	0
$u = 0.23073 - 1.41737I$ $a = 0.178281 - 0.738035I$ $b = -0.679647 - 0.090588I$	$8.03217 + 6.91623I$	0
$u = -0.05264 + 1.44906I$ $a = 0.230026 + 0.531076I$ $b = -0.297269 - 1.100570I$	$0.78465 + 3.44901I$	0
$u = -0.05264 - 1.44906I$ $a = 0.230026 - 0.531076I$ $b = -0.297269 + 1.100570I$	$0.78465 - 3.44901I$	0
$u = -0.37596 + 1.41268I$ $a = -1.36528 + 1.12032I$ $b = 0.55134 + 1.48619I$	$-1.2168 + 18.1462I$	0
$u = -0.37596 - 1.41268I$ $a = -1.36528 - 1.12032I$ $b = 0.55134 - 1.48619I$	$-1.2168 - 18.1462I$	0
$u = -0.513629$ $a = 0.942963$ $b = 0.489457$	-1.00417	-9.25650
$u = -0.323556 + 0.388501I$ $a = 2.14061 - 0.94998I$ $b = 0.21788 - 1.43964I$	$-2.18284 + 1.26597I$	$-8.57108 + 1.19721I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.323556-0.388501I$ $a=\ \ 2.14061+0.94998I$ $b=\ \ 0.21788+1.43964I$	$-2.18284-1.26597I$	$-8.57108-1.19721I$
$u=-0.190784+0.456887I$ $a=\ \ 0.36048+1.81087I$ $b=-0.439215+1.010850I$	$0.99579-4.24735I$	$-5.08512+0.45385I$
$u=-0.190784-0.456887I$ $a=\ \ 0.36048-1.81087I$ $b=-0.439215-1.010850I$	$0.99579+4.24735I$	$-5.08512-0.45385I$
$u=-0.43979+1.47867I$ $a=\ \ 0.885017-0.818042I$ $b=-0.308812-1.148350I$	$-0.45773+8.32281I$	0
$u=-0.43979-1.47867I$ $a=\ \ 0.885017+0.818042I$ $b=-0.308812+1.148350I$	$-0.45773-8.32281I$	0
$u=\ \ 0.09062+1.59376I$ $a=\ \ 0.266598+0.074268I$ $b=-0.274397+1.139190I$	$5.65632-7.83814I$	0
$u=\ \ 0.09062-1.59376I$ $a=\ \ 0.266598-0.074268I$ $b=-0.274397-1.139190I$	$5.65632+7.83814I$	0
$u=-0.232392+0.322404I$ $a=\ \ 0.69704-1.31730I$ $b=-0.275570-0.789921I$	$-0.534371+1.163650I$	$-6.49007-6.43502I$
$u=-0.232392-0.322404I$ $a=\ \ 0.69704+1.31730I$ $b=-0.275570+0.789921I$	$-0.534371-1.163650I$	$-6.49007+6.43502I$
$u=-0.0576275$ $a=\ \ 16.0040$ $b=\ \ 0.598579$	-1.41672	-4.29020

II.

$\boldsymbol{I_2^u = \langle u^{17}-3u^{16}+\cdots-4u^2+b,\ -2u^{17}+3u^{16}+\cdots+a+3,\ u^{18}-2u^{17}+\cdots-2u+1\rangle}$

(i) Arc colorings

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

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

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

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

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

$$a_3 = \begin{pmatrix} 2u^{17}-3u^{16}+\cdots+5u-3 \\ -u^{17}+3u^{16}+\cdots+11u^3+4u^2 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 2u^{17}-4u^{16}+\cdots+7u-4 \\ -u^{17}+3u^{16}+\cdots+11u^3+6u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{17}+2u^{16}+\cdots+5u+2 \\ 2u^{17}-4u^{16}+\cdots-7u^2+4u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^{17}-7u^{15}+\cdots-7u+1 \\ -u^{17}+2u^{16}+\cdots+2u^2-3u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{17}-2u^{16}+\cdots+12u-3 \\ u^{16}-2u^{15}+\cdots-u^2+2u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^{17}+u^{16}+\cdots-10u+1 \\ -u^{15}+u^{14}+\cdots-u^2-2u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^{17}-12u^{16}+30u^{15}-108u^{14}+186u^{13}-376u^{12}+488u^{11}-611u^{10}+573u^9-379u^8+148u^7+108u^6-238u^5+175u^4-110u^3-11u^2+39u-24$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} - 3u^{17} + \cdots - 12u + 1$
c_2	$u^{18} + 6u^{17} + \cdots + 3u + 1$
c_3	$u^{18} + 3u^{16} + \cdots - u - 1$
c_4	$u^{18} + u^{17} + \cdots - 3u^2 - 1$
c_5	$u^{18} - 6u^{17} + \cdots - 3u + 1$
c_6	$u^{18} - 2u^{17} + \cdots - 2u + 1$
c_7	$u^{18} + 2u^{17} + \cdots + 2u + 1$
c_8	$u^{18} - u^{17} + \cdots - 3u^2 - 1$
c_9	$u^{18} + u^{17} + \cdots - 8u^2 + 1$
c_{10}	$u^{18} + 3u^{16} + \cdots + u - 1$
c_{11}, c_{12}	$u^{18} - 2u^{17} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{18} - 3y^{17} + \cdots - 24y + 1$
c_2, c_5	$y^{18} - 18y^{17} + \cdots - 9y + 1$
c_3, c_{10}	$y^{18} + 6y^{17} + \cdots + 3y + 1$
c_4, c_8	$y^{18} + 3y^{17} + \cdots + 6y + 1$
c_6	$y^{18} - 6y^{17} + \cdots + 22y^2 + 1$
c_7, c_{11}, c_{12}	$y^{18} + 18y^{17} + \cdots + 30y^2 + 1$
c_9	$y^{18} + 3y^{17} + \cdots - 16y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.899070 + 0.296939I$ $a = -0.78660 - 1.51879I$ $b = 0.127629 - 1.200400I$	$-6.06159 - 2.47615I$	$-10.59940 + 0.77033I$
$u = 0.899070 - 0.296939I$ $a = -0.78660 + 1.51879I$ $b = 0.127629 + 1.200400I$	$-6.06159 + 2.47615I$	$-10.59940 - 0.77033I$
$u = 0.204639 + 1.135870I$ $a = 0.56272 - 1.33211I$ $b = -0.079922 - 1.388890I$	$-4.06126 - 1.19772I$	$-12.19608 - 0.41000I$
$u = 0.204639 - 1.135870I$ $a = 0.56272 + 1.33211I$ $b = -0.079922 + 1.388890I$	$-4.06126 + 1.19772I$	$-12.19608 + 0.41000I$
$u = 0.048213 + 1.273000I$ $a = -0.79521 - 1.22515I$ $b = 0.471201 + 0.767194I$	$3.74341 + 4.09979I$	$-2.54920 - 6.04640I$
$u = 0.048213 - 1.273000I$ $a = -0.79521 + 1.22515I$ $b = 0.471201 - 0.767194I$	$3.74341 - 4.09979I$	$-2.54920 + 6.04640I$
$u = -0.689419$ $a = 0.667245$ $b = 1.07551$	-3.41868	-11.8650
$u = -0.279230 + 1.288320I$ $a = 0.507129 - 0.584360I$ $b = -1.085760 + 0.082045I$	$0.60877 + 3.49550I$	$-7.35924 - 2.49555I$
$u = -0.279230 - 1.288320I$ $a = 0.507129 + 0.584360I$ $b = -1.085760 - 0.082045I$	$0.60877 - 3.49550I$	$-7.35924 + 2.49555I$
$u = -0.138567 + 1.327240I$ $a = 0.072237 + 1.066510I$ $b = 0.843586 + 0.108155I$	$2.43103 + 1.96189I$	$-12.44412 - 2.82262I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.138567-1.327240I$ $a=\ 0.072237-1.066510I$ $b=\ 0.843586-0.108155I$	$2.43103-1.96189I$	$-12.44412+2.82262I$
$u=\ 0.43736+1.35700I$ $a=\ 1.19641+1.07688I$ $b=-0.266574+1.110210I$	$-0.98296-7.39826I$	$-8.48477+5.54499I$
$u=\ 0.43736-1.35700I$ $a=\ 1.19641-1.07688I$ $b=-0.266574-1.110210I$	$-0.98296+7.39826I$	$-8.48477-5.54499I$
$u=\ 0.15185+1.48120I$ $a=\ 0.126254-0.390239I$ $b=\ 0.233323-0.718874I$	$6.53198-6.58971I$	$-4.57522+4.29356I$
$u=\ 0.15185-1.48120I$ $a=\ 0.126254+0.390239I$ $b=\ 0.233323+0.718874I$	$6.53198+6.58971I$	$-4.57522-4.29356I$
$u=-0.408552$ $a=-3.20878$ $b=-0.871014$	-1.85255	-27.0540
$u=\ 0.225646+0.283632I$ $a=-2.61216+2.02448I$ $b=-0.345729+0.782049I$	$0.42622-4.93589I$	$-12.3326+7.2983I$
$u=\ 0.225646-0.283632I$ $a=-2.61216-2.02448I$ $b=-0.345729-0.782049I$	$0.42622+4.93589I$	$-12.3326-7.2983I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{18}-3u^{17}+\cdots-12u+1)(u^{110}-12u^{109}+\cdots+30u-1)$
c_2	$(u^{18}+6u^{17}+\cdots+3u+1)(u^{110}+u^{109}+\cdots+44559u+1087)$
c_3	$(u^{18}+3u^{16}+\cdots-u-1)(u^{110}+u^{109}+\cdots-21765u+12969)$
c_4	$(u^{18}+u^{17}+\cdots-3u^2-1)(u^{110}+4u^{109}+\cdots+1542u+279)$
c_5	$(u^{18}-6u^{17}+\cdots-3u+1)(u^{110}+u^{109}+\cdots+44559u+1087)$
c_6	$(u^{18}-2u^{17}+\cdots-2u+1)(u^{110}-u^{109}+\cdots+1.07913\times10^{7}u+468259)$
c_7	$(u^{18}+2u^{17}+\cdots+2u+1)(u^{110}+u^{109}+\cdots+278u+11)$
c_8	$(u^{18}-u^{17}+\cdots-3u^2-1)(u^{110}+4u^{109}+\cdots+1542u+279)$
c_9	$(u^{18}+u^{17}+\cdots-8u^2+1)(u^{110}+6u^{109}+\cdots+37u^2-1)$
c_{10}	$(u^{18}+3u^{16}+\cdots+u-1)(u^{110}+u^{109}+\cdots-21765u+12969)$
c_{11}, c_{12}	$(u^{18}-2u^{17}+\cdots-2u+1)(u^{110}+u^{109}+\cdots+278u+11)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{18}-3y^{17}+\cdots-24y+1)(y^{110}-10y^{109}+\cdots-82y+1)$
c_2, c_5	$(y^{18}-18y^{17}+\cdots-9y+1)$ $\cdot(y^{110}-85y^{109}+\cdots-674723791y+1181569)$
c_3, c_{10}	$(y^{18}+6y^{17}+\cdots+3y+1)$ $\cdot(y^{110}+79y^{109}+\cdots-4284448371y+168194961)$
c_4, c_8	$(y^{18}+3y^{17}+\cdots+6y+1)(y^{110}+56y^{109}+\cdots+3663144y+77841)$
c_6	$(y^{18}-6y^{17}+\cdots+22y^2+1)$ $\cdot(y^{110}-53y^{109}+\cdots-63491367640358y+219266491081)$
c_7, c_{11}, c_{12}	$(y^{18}+18y^{17}+\cdots+30y^2+1)(y^{110}+95y^{109}+\cdots-35726y+121)$
c_9	$(y^{18}+3y^{17}+\cdots-16y+1)(y^{110}+102y^{108}+\cdots-74y+1)$