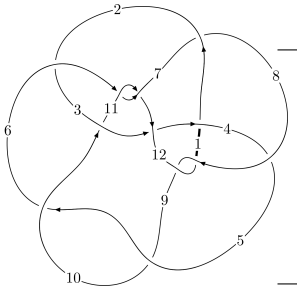
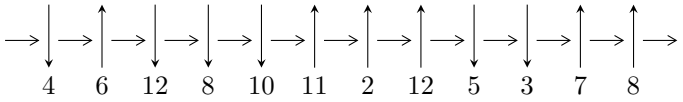
$12n_{0828}$ $(K12n_{0828})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 4.86488 \times 10^{164} u^{74} + 2.61870 \times 10^{164} u^{73} + \cdots + 7.00921 \times 10^{164} b + 5.62454 \times 10^{165}, \\ & 1.09347 \times 10^{165} u^{74} + 1.00292 \times 10^{165} u^{73} + \cdots + 2.10276 \times 10^{165} a + 1.21416 \times 10^{166}, \\ & u^{75} - 26u^{73} + \cdots - 29u - 11 \rangle \\ I_2^u = \langle & 3565784u^{20} + 1758543u^{19} + \cdots + 4587301b + 16185776, \\ & -848187u^{20} + 33456238u^{19} + \cdots + 22936505a - 154067073,\ u^{21} + u^{20} + \cdots - 6u + 5 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 96 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. $\boldsymbol{I_1^u = \langle 4.86 \times 10^{164} u^{74} + 2.62 \times 10^{164} u^{73} + \cdots + 7.01 \times 10^{164} b + 5.62 \times 10^{165},\ 1.09 \times 10^{165} u^{74} + 1.00 \times 10^{165} u^{73} + \cdots + 2.10 \times 10^{165} a + 1.21 \times 10^{166},\ u^{75} - 26 u^{73} + \cdots - 29u - 11 \rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_3 = \begin{pmatrix} -0.520016u^{74} - 0.476954u^{73} + \cdots + 17.4523u - 5.77412 \\ -0.694069u^{74} - 0.373608u^{73} + \cdots - 32.7082u - 8.02450 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 0.174054u^{74} - 0.103346u^{73} + \cdots + 50.1605u + 2.25038 \\ -0.694069u^{74} - 0.373608u^{73} + \cdots - 32.7082u - 8.02450 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.492874u^{74} + 0.989732u^{73} + \cdots + 37.5192u + 6.43908 \\ -0.533362u^{74} - 0.574794u^{73} + \cdots - 25.1238u - 7.74220 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.232330u^{74} + 0.157784u^{73} + \cdots + 85.2464u + 7.12576 \\ 0.332393u^{74} + 0.264914u^{73} + \cdots + 8.68473u + 1.62379 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.118936u^{74} - 0.271370u^{73} + \cdots + 78.1808u + 7.39601 \\ 0.581180u^{74} + 0.461009u^{73} + \cdots + 26.2919u + 6.63202 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0260069u^{74} - 0.241627u^{73} + \cdots + 43.5597u - 0.0222318 \\ -0.483810u^{74} - 0.266665u^{73} + \cdots - 18.8593u - 4.86120 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.608923u^{74} - 0.434802u^{73} + \cdots - 30.3780u - 3.65550 \\ -0.433540u^{74} - 0.348757u^{73} + \cdots - 25.2954u - 5.66632 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.194330u^{74} + 0.575188u^{73} + \cdots + 19.9609u + 1.00031 \\ -0.583866u^{74} - 0.672134u^{73} + \cdots - 27.3764u - 8.62099 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -3.00721u^{74} - 1.40524u^{73} + \cdots - 209.477u - 50.8854$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{75}+4u^{74}+\cdots+19778u+1511$
c_2	$u^{75}-7u^{74}+\cdots+18u+1$
c_3	$u^{75}-2u^{74}+\cdots-264568u+145247$
c_4	$u^{75}+u^{74}+\cdots-4794u-103$
c_5, c_9	$u^{75}-3u^{74}+\cdots+4690u-3812$
c_6, c_{11}	$u^{75}-26u^{73}+\cdots-29u+11$
c_7	$u^{75}+u^{74}+\cdots+1531u-221$
c_8, c_{12}	$u^{75}-5u^{74}+\cdots+6535u+1379$
c_{10}	$u^{75}-2u^{74}+\cdots-27u+7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{75} + 72y^{74} + \cdots - 34177216y - 2283121$
c_2	$y^{75} + 11y^{74} + \cdots + 92y - 1$
c_3	$y^{75} + 36y^{74} + \cdots + 220857023174y - 21096691009$
c_4	$y^{75} + 85y^{74} + \cdots + 17227620y - 10609$
c_5, c_9	$y^{75} - 45y^{74} + \cdots + 350201676y - 14531344$
c_6, c_{11}	$y^{75} - 52y^{74} + \cdots + 6627y - 121$
c_7	$y^{75} + 37y^{74} + \cdots + 884919y - 48841$
c_8, c_{12}	$y^{75} - 87y^{74} + \cdots + 99190065y - 1901641$
c_{10}	$y^{75} + 8y^{74} + \cdots - 2407y - 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.013866+0.992612I$ $a=\ \ 0.692135+0.718908I$ $b=\ \ 0.400349+1.084530I$	$-6.17619+2.37907I$	0
$u=-0.013866-0.992612I$ $a=\ \ 0.692135-0.718908I$ $b=\ \ 0.400349-1.084530I$	$-6.17619-2.37907I$	0
$u=\ \ 0.939254+0.315999I$ $a=\ \ 0.018888+0.438631I$ $b=-0.664173+0.848941I$	$-1.07144+2.44545I$	0
$u=\ \ 0.939254-0.315999I$ $a=\ \ 0.018888-0.438631I$ $b=-0.664173-0.848941I$	$-1.07144-2.44545I$	0
$u=-0.938498+0.408238I$ $a=\ \ 0.13100+1.90136I$ $b=-0.330038+0.911612I$	$-1.29527-3.07415I$	0
$u=-0.938498-0.408238I$ $a=\ \ 0.13100-1.90136I$ $b=-0.330038-0.911612I$	$-1.29527+3.07415I$	0
$u=-0.960972+0.048035I$ $a=-0.544278+1.052270I$ $b=\ \ 0.903732+0.646873I$	$1.079070-0.291978I$	0
$u=-0.960972-0.048035I$ $a=-0.544278-1.052270I$ $b=\ \ 0.903732-0.646873I$	$1.079070+0.291978I$	0
$u=-0.966822+0.378367I$ $a=\ \ 1.94521-0.03260I$ $b=-0.084333+0.363747I$	$2.57495-7.43580I$	0
$u=-0.966822-0.378367I$ $a=\ \ 1.94521+0.03260I$ $b=-0.084333-0.363747I$	$2.57495+7.43580I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.034730+0.129185I$ $a=\ \ 0.145476-0.953838I$ $b=-0.87885-1.88423I$	$5.36144-1.41166I$	0
$u=-1.034730-0.129185I$ $a=\ \ 0.145476+0.953838I$ $b=-0.87885+1.88423I$	$5.36144+1.41166I$	0
$u=\ \ 0.907268+0.075300I$ $a=\ \ 0.94549-2.12345I$ $b=-0.523555-0.950514I$	$-3.93565+1.98540I$	$0.+3.06730I$
$u=\ \ 0.907268-0.075300I$ $a=\ \ 0.94549+2.12345I$ $b=-0.523555+0.950514I$	$-3.93565-1.98540I$	$0.-3.06730I$
$u=\ \ 1.110880+0.165795I$ $a=-0.047261-0.317334I$ $b=\ \ 2.14672-0.81505I$	$5.56938+6.51079I$	0
$u=\ \ 1.110880-0.165795I$ $a=-0.047261+0.317334I$ $b=\ \ 2.14672+0.81505I$	$5.56938-6.51079I$	0
$u=-1.160340+0.126685I$ $a=\ \ 0.282949+0.314124I$ $b=-0.837413+0.239299I$	$2.25915-0.14325I$	0
$u=-1.160340-0.126685I$ $a=\ \ 0.282949-0.314124I$ $b=-0.837413-0.239299I$	$2.25915+0.14325I$	0
$u=\ \ 0.206317+1.155090I$ $a=-0.603459+0.707647I$ $b=-0.521027+0.818222I$	$-4.61919-3.44875I$	0
$u=\ \ 0.206317-1.155090I$ $a=-0.603459-0.707647I$ $b=-0.521027-0.818222I$	$-4.61919+3.44875I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.114000 + 0.368961I$ $a = -1.019900 + 0.719651I$ $b = 0.988836 + 0.744888I$	$4.35958 + 4.55603I$	0
$u = 1.114000 - 0.368961I$ $a = -1.019900 - 0.719651I$ $b = 0.988836 - 0.744888I$	$4.35958 - 4.55603I$	0
$u = 0.760290 + 0.301132I$ $a = -1.63953 - 0.05711I$ $b = -0.341483 + 0.350286I$	$-3.59837 - 0.23339I$	$3.34922 - 1.64513I$
$u = 0.760290 - 0.301132I$ $a = -1.63953 + 0.05711I$ $b = -0.341483 - 0.350286I$	$-3.59837 + 0.23339I$	$3.34922 + 1.64513I$
$u = -0.002744 + 1.189670I$ $a = 0.701533 - 0.828624I$ $b = 0.653223 - 1.002770I$	$-0.08499 - 10.49950I$	0
$u = -0.002744 - 1.189670I$ $a = 0.701533 + 0.828624I$ $b = 0.653223 + 1.002770I$	$-0.08499 + 10.49950I$	0
$u = 1.172170 + 0.305565I$ $a = 0.523471 + 0.816282I$ $b = -0.132271 - 0.058421I$	$-1.80185 + 2.16906I$	0
$u = 1.172170 - 0.305565I$ $a = 0.523471 - 0.816282I$ $b = -0.132271 + 0.058421I$	$-1.80185 - 2.16906I$	0
$u = 1.173800 + 0.362759I$ $a = -0.378650 + 0.861125I$ $b = 1.099170 + 0.869923I$	$3.34164 + 4.17608I$	0
$u = 1.173800 - 0.362759I$ $a = -0.378650 - 0.861125I$ $b = 1.099170 - 0.869923I$	$3.34164 - 4.17608I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.052071+0.743666I$ $a=-1.22281-1.12361I$ $b=-0.525972-1.114410I$	$-6.07542+3.12385I$	$-2.56319-4.01706I$
$u=-0.052071-0.743666I$ $a=-1.22281+1.12361I$ $b=-0.525972+1.114410I$	$-6.07542-3.12385I$	$-2.56319+4.01706I$
$u=\ \ 0.647746+0.356319I$ $a=-0.52809+1.45131I$ $b=\ \ 1.33036+0.69475I$	$3.40846+5.43996I$	$-0.90178-5.14570I$
$u=\ \ 0.647746-0.356319I$ $a=-0.52809-1.45131I$ $b=\ \ 1.33036-0.69475I$	$3.40846-5.43996I$	$-0.90178+5.14570I$
$u=-1.237780+0.300983I$ $a=-0.68099-1.37162I$ $b=\ \ 0.955357-0.902724I$	$7.74101-8.12655I$	0
$u=-1.237780-0.300983I$ $a=-0.68099+1.37162I$ $b=\ \ 0.955357+0.902724I$	$7.74101+8.12655I$	0
$u=-0.404055+0.594522I$ $a=\ \ 0.79451-1.92548I$ $b=\ \ 0.006207-1.108050I$	$1.03252+3.60544I$	$-4.06380-1.82140I$
$u=-0.404055-0.594522I$ $a=\ \ 0.79451+1.92548I$ $b=\ \ 0.006207+1.108050I$	$1.03252-3.60544I$	$-4.06380+1.82140I$
$u=\ \ 0.686004$ $a=\ \ 1.77921$ $b=-1.18115$	-2.50904	-13.2560
$u=-1.337960+0.048610I$ $a=\ \ 0.085328+0.223266I$ $b=\ \ 0.89019+1.54950I$	$6.53570-1.10775I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.337960-0.048610I$ $a=\ 0.085328-0.223266I$ $b=\ 0.89019-1.54950I$	$6.53570+1.10775I$	0
$u=-1.278100+0.422698I$ $a=\ 0.395219+1.012020I$ $b=-1.09039+1.47215I$	$-2.27515-7.48919I$	0
$u=-1.278100-0.422698I$ $a=\ 0.395219-1.012020I$ $b=-1.09039-1.47215I$	$-2.27515+7.48919I$	0
$u=-0.630165+0.173633I$ $a=\ 1.17934-1.10273I$ $b=-0.690665+0.543583I$	$4.27365-0.04437I$	$3.14115+2.61297I$
$u=-0.630165-0.173633I$ $a=\ 1.17934+1.10273I$ $b=-0.690665-0.543583I$	$4.27365+0.04437I$	$3.14115-2.61297I$
$u=\ 0.201905+0.589482I$ $a=\ 0.41957-1.35572I$ $b=\ 0.678636-1.018540I$	$1.71568-0.87377I$	$-4.45101-0.59244I$
$u=\ 0.201905-0.589482I$ $a=\ 0.41957+1.35572I$ $b=\ 0.678636+1.018540I$	$1.71568+0.87377I$	$-4.45101+0.59244I$
$u=\ 1.255700+0.619721I$ $a=\ 0.150657-0.302176I$ $b=-0.850030-0.371842I$	$-1.71673+3.48360I$	0
$u=\ 1.255700-0.619721I$ $a=\ 0.150657+0.302176I$ $b=-0.850030+0.371842I$	$-1.71673-3.48360I$	0
$u=\ 1.373600+0.302564I$ $a=\ 0.148834-0.958574I$ $b=-0.831950-0.610118I$	$11.26350+2.23040I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.373600 - 0.302564I$ $a = 0.148834 + 0.958574I$ $b = -0.831950 + 0.610118I$	$11.26350 - 2.23040I$	0
$u = 1.277590 + 0.602915I$ $a = 0.361233 - 1.084430I$ $b = -1.00616 - 1.06220I$	$-1.23702 + 9.55268I$	0
$u = 1.277590 - 0.602915I$ $a = 0.361233 + 1.084430I$ $b = -1.00616 + 1.06220I$	$-1.23702 - 9.55268I$	0
$u = -0.53023 + 1.32146I$ $a = -0.371566 + 0.232025I$ $b = -0.602848 - 0.069339I$	$4.94966 + 2.13138I$	0
$u = -0.53023 - 1.32146I$ $a = -0.371566 - 0.232025I$ $b = -0.602848 + 0.069339I$	$4.94966 - 2.13138I$	0
$u = -1.33869 + 0.49079I$ $a = -0.297532 - 0.830875I$ $b = 1.12359 - 1.40728I$	$-2.01665 - 7.67344I$	0
$u = -1.33869 - 0.49079I$ $a = -0.297532 + 0.830875I$ $b = 1.12359 + 1.40728I$	$-2.01665 + 7.67344I$	0
$u = 1.43679 + 0.09756I$ $a = -0.060747 + 0.750626I$ $b = 0.00253 + 2.18189I$	$7.07352 - 1.46642I$	0
$u = 1.43679 - 0.09756I$ $a = -0.060747 - 0.750626I$ $b = 0.00253 - 2.18189I$	$7.07352 + 1.46642I$	0
$u = 1.04085 + 1.02337I$ $a = 0.404301 + 0.100962I$ $b = 0.686049 - 0.445349I$	$3.77545 + 0.13140I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.04085 - 1.02337I$ $a = 0.404301 - 0.100962I$ $b = 0.686049 + 0.445349I$	$3.77545 - 0.13140I$	0
$u = -0.520472$ $a = -3.56024$ $b = -0.196479$	-2.81755	-5.84520
$u = 1.37763 + 0.57274I$ $a = -0.327901 + 1.049300I$ $b = 1.16712 + 1.26375I$	$4.2230 + 16.6469I$	0
$u = 1.37763 - 0.57274I$ $a = -0.327901 - 1.049300I$ $b = 1.16712 - 1.26375I$	$4.2230 - 16.6469I$	0
$u = -1.29659 + 0.76159I$ $a = -0.040832 - 0.596066I$ $b = 0.645843 - 0.482141I$	$0.41911 - 3.99968I$	0
$u = -1.29659 - 0.76159I$ $a = -0.040832 + 0.596066I$ $b = 0.645843 + 0.482141I$	$0.41911 + 3.99968I$	0
$u = -1.37317 + 0.63897I$ $a = 0.030652 + 0.763246I$ $b = -1.163710 + 0.673853I$	$8.47631 - 9.19794I$	0
$u = -1.37317 - 0.63897I$ $a = 0.030652 - 0.763246I$ $b = -1.163710 - 0.673853I$	$8.47631 + 9.19794I$	0
$u = 0.399944 + 0.225942I$ $a = -0.97127 + 2.25690I$ $b = 1.265320 + 0.451196I$	$3.42078 + 5.42017I$	$-0.67147 - 4.81273I$
$u = 0.399944 - 0.225942I$ $a = -0.97127 - 2.25690I$ $b = 1.265320 - 0.451196I$	$3.42078 - 5.42017I$	$-0.67147 + 4.81273I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.047641+0.411386I$ $a=\ 1.018950-0.899310I$ $b=\ 0.382640-0.474799I$	$-0.012233-1.006120I$	$-0.14669+6.62242I$
$u=-0.047641-0.411386I$ $a=\ 1.018950+0.899310I$ $b=\ 0.382640+0.474799I$	$-0.012233+1.006120I$	$-0.14669-6.62242I$
$u=-0.167122$ $a=-8.32002$ $b=-0.479306$	-2.84829	-2.66050
$u=-1.79051+0.67497I$ $a=\ 0.228770-0.140811I$ $b=\ 0.177471+0.154132I$	$4.72272+3.49376I$	0
$u=-1.79051-0.67497I$ $a=\ 0.228770+0.140811I$ $b=\ 0.177471-0.154132I$	$4.72272-3.49376I$	0

II.

$\boldsymbol{I_2^u = \langle 3.57\times 10^6 u^{20} + 1.76\times 10^6 u^{19} + \cdots + 4.59\times 10^6 b + 1.62\times 10^7,\ -8.48\times 10^5 u^{20} + 3.35\times 10^7 u^{19} + \cdots + 2.29\times 10^7 a - 1.54\times 10^8,\ u^{21} + u^{20} + \cdots - 6u + 5\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_3 = \begin{pmatrix} 0.0369798u^{20} - 1.45865u^{19} + \cdots - 13.1245u + 6.71711 \\ -0.777316u^{20} - 0.383350u^{19} + \cdots + 6.41390u - 3.52839 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 0.814296u^{20} - 1.07530u^{19} + \cdots - 19.5384u + 10.2455 \\ -0.777316u^{20} - 0.383350u^{19} + \cdots + 6.41390u - 3.52839 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.252921u^{20} - 0.758060u^{19} + \cdots - 2.49621u + 5.84126 \\ -0.495626u^{20} - 0.795075u^{19} + \cdots + 1.93899u + 0.815101 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.860543u^{20} + 1.73551u^{19} + \cdots + 11.3000u - 9.27095 \\ 0.326407u^{20} + 0.988228u^{19} + \cdots + 1.22673u - 2.67701 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.00585499u^{20} - 0.951995u^{19} + \cdots - 14.0920u + 3.66552 \\ 0.210010u^{20} + 0.171345u^{19} + \cdots + 0.699044u - 2.11466 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.965535u^{20} - 1.09140u^{19} + \cdots - 22.6790u + 10.0385 \\ -0.611923u^{20} - 0.730373u^{19} + \cdots + 4.87009u - 3.01351 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.244683u^{20} - 0.311053u^{19} + \cdots - 2.38142u + 3.17549 \\ -0.128348u^{20} - 0.518938u^{19} + \cdots + 0.357854u + 0.856290 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.422140u^{20} - 0.564907u^{19} + \cdots + 0.669517u + 2.97935 \\ -0.534291u^{20} - 0.622926u^{19} + \cdots + 2.08439u - 0.234950 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{2314838}{4587301}u^{20} - \frac{20496911}{4587301}u^{19} + \cdots - \frac{242100829}{4587301}u + \frac{93801989}{4587301}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{21} - 5u^{20} + \cdots - 3u - 1$
c_2	$u^{21} + 5u^{19} + \cdots + u - 1$
c_3	$u^{21} - 3u^{20} + \cdots + 47u + 43$
c_4	$u^{21} + 6u^{19} + \cdots + 7u + 1$
c_5	$u^{21} - 9u^{19} + \cdots - 10u - 4$
c_6	$u^{21} + u^{20} + \cdots - 6u + 5$
c_7	$u^{21} + 8u^{19} + \cdots - 6u - 7$
c_8	$u^{21} - 8u^{19} + \cdots + 4u - 1$
c_9	$u^{21} - 9u^{19} + \cdots - 10u + 4$
c_{10}	$u^{21} - u^{20} + \cdots + 4u - 1$
c_{11}	$u^{21} - u^{20} + \cdots - 6u - 5$
c_{12}	$u^{21} - 8u^{19} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{21} + 11y^{20} + \cdots + 11y - 1$
c_2	$y^{21} + 10y^{20} + \cdots - 5y - 1$
c_3	$y^{21} + 27y^{20} + \cdots + 11153y - 1849$
c_4	$y^{21} + 12y^{20} + \cdots - 17y - 1$
c_5, c_9	$y^{21} - 18y^{20} + \cdots + 268y - 16$
c_6, c_{11}	$y^{21} - 17y^{20} + \cdots + 226y - 25$
c_7	$y^{21} + 16y^{20} + \cdots - 370y - 49$
c_8, c_{12}	$y^{21} - 16y^{20} + \cdots - 20y - 1$
c_{10}	$y^{21} + 3y^{20} + \cdots - 4y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.001020+0.262420I$ $a=-0.921736-0.575279I$ $b=\ \ 1.64460-0.25263I$	$4.36516-6.59975I$	$1.05252+8.07459I$
$u=-1.001020-0.262420I$ $a=-0.921736+0.575279I$ $b=\ \ 1.64460+0.25263I$	$4.36516+6.59975I$	$1.05252-8.07459I$
$u=-0.137847+0.949067I$ $a=-0.852631-0.775856I$ $b=-0.503361-1.102010I$	$-7.38286+2.58162I$	$-9.14346-2.28449I$
$u=-0.137847-0.949067I$ $a=-0.852631+0.775856I$ $b=-0.503361+1.102010I$	$-7.38286-2.58162I$	$-9.14346+2.28449I$
$u=\ \ 0.933976+0.190871I$ $a=\ \ 0.53801-2.33404I$ $b=-0.338970-0.954357I$	$-3.93389+2.54020I$	$-4.26332-10.43284I$
$u=\ \ 0.933976-0.190871I$ $a=\ \ 0.53801+2.33404I$ $b=-0.338970+0.954357I$	$-3.93389-2.54020I$	$-4.26332+10.43284I$
$u=-0.983637+0.420576I$ $a=\ \ 0.057658-0.984094I$ $b=\ \ 0.000605-0.667761I$	$-0.01096-2.31575I$	$2.89116+3.13951I$
$u=-0.983637-0.420576I$ $a=\ \ 0.057658+0.984094I$ $b=\ \ 0.000605+0.667761I$	$-0.01096+2.31575I$	$2.89116-3.13951I$
$u=\ \ 0.686384+0.325532I$ $a=-2.10424+0.04632I$ $b=-0.267232+0.305573I$	$-4.27917-0.25341I$	$-10.22146-1.60946I$
$u=\ \ 0.686384-0.325532I$ $a=-2.10424-0.04632I$ $b=-0.267232-0.305573I$	$-4.27917+0.25341I$	$-10.22146+1.60946I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.753934$ $a=\ \ 2.10025$ $b=-0.921449$	-2.13830	10.8270
$u=\ \ 0.476315+0.539233I$ $a=-0.302885-0.739305I$ $b=-0.310507+0.873261I$	$3.63985+1.20269I$	$0.11227-2.52581I$
$u=\ \ 0.476315-0.539233I$ $a=-0.302885+0.739305I$ $b=-0.310507-0.873261I$	$3.63985-1.20269I$	$0.11227+2.52581I$
$u=\ \ 1.370620+0.034901I$ $a=-0.117613-0.704260I$ $b=\ \ 0.02178-2.18523I$	$7.55445+0.17379I$	$6.36834+1.10559I$
$u=\ \ 1.370620-0.034901I$ $a=-0.117613+0.704260I$ $b=\ \ 0.02178+2.18523I$	$7.55445-0.17379I$	$6.36834-1.10559I$
$u=-1.314580+0.500777I$ $a=\ \ 0.351230+0.955966I$ $b=-1.05469+1.43008I$	$-3.61843-7.80961I$	$-5.08756+5.98059I$
$u=-1.314580-0.500777I$ $a=\ \ 0.351230-0.955966I$ $b=-1.05469-1.43008I$	$-3.61843+7.80961I$	$-5.08756-5.98059I$
$u=\ \ 1.31032+0.74608I$ $a=-0.083874+0.426133I$ $b=\ \ 0.761324+0.466956I$	$-1.66929+3.96809I$	$-0.71858-12.39534I$
$u=\ \ 1.31032-0.74608I$ $a=-0.083874-0.426133I$ $b=\ \ 0.761324-0.466956I$	$-1.66929-3.96809I$	$-0.71858+12.39534I$
$u=-1.46356+0.64846I$ $a=\ \ 0.185956-0.063411I$ $b=\ \ 0.507174-0.292801I$	$4.75936+3.16555I$	$4.09678+3.29546I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.46356-0.64846I$		
$a=\quad 0.185956+0.063411I$	$4.75936-3.16555I$	$4.09678-3.29546I$
$b=\quad 0.507174+0.292801I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{21}-5u^{20}+\cdots-3u-1)(u^{75}+4u^{74}+\cdots+19778u+1511)$
c_2	$(u^{21}+5u^{19}+\cdots+u-1)(u^{75}-7u^{74}+\cdots+18u+1)$
c_3	$(u^{21}-3u^{20}+\cdots+47u+43)(u^{75}-2u^{74}+\cdots-264568u+145247)$
c_4	$(u^{21}+6u^{19}+\cdots+7u+1)(u^{75}+u^{74}+\cdots-4794u-103)$
c_5	$(u^{21}-9u^{19}+\cdots-10u-4)(u^{75}-3u^{74}+\cdots+4690u-3812)$
c_6	$(u^{21}+u^{20}+\cdots-6u+5)(u^{75}-26u^{73}+\cdots-29u+11)$
c_7	$(u^{21}+8u^{19}+\cdots-6u-7)(u^{75}+u^{74}+\cdots+1531u-221)$
c_8	$(u^{21}-8u^{19}+\cdots+4u-1)(u^{75}-5u^{74}+\cdots+6535u+1379)$
c_9	$(u^{21}-9u^{19}+\cdots-10u+4)(u^{75}-3u^{74}+\cdots+4690u-3812)$
c_{10}	$(u^{21}-u^{20}+\cdots+4u-1)(u^{75}-2u^{74}+\cdots-27u+7)$
c_{11}	$(u^{21}-u^{20}+\cdots-6u-5)(u^{75}-26u^{73}+\cdots-29u+11)$
c_{12}	$(u^{21}-8u^{19}+\cdots+4u+1)(u^{75}-5u^{74}+\cdots+6535u+1379)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{21}+11y^{20}+\cdots+11y-1)$ $\cdot(y^{75}+72y^{74}+\cdots-34177216y-2283121)$
c_2	$(y^{21}+10y^{20}+\cdots-5y-1)(y^{75}+11y^{74}+\cdots+92y-1)$
c_3	$(y^{21}+27y^{20}+\cdots+11153y-1849)$ $\cdot(y^{75}+36y^{74}+\cdots+220857023174y-21096691009)$
c_4	$(y^{21}+12y^{20}+\cdots-17y-1)$ $\cdot(y^{75}+85y^{74}+\cdots+17227620y-10609)$
c_5, c_9	$(y^{21}-18y^{20}+\cdots+268y-16)$ $\cdot(y^{75}-45y^{74}+\cdots+350201676y-14531344)$
c_6, c_{11}	$(y^{21}-17y^{20}+\cdots+226y-25)(y^{75}-52y^{74}+\cdots+6627y-121)$
c_7	$(y^{21}+16y^{20}+\cdots-370y-49)$ $\cdot(y^{75}+37y^{74}+\cdots+884919y-48841)$
c_8, c_{12}	$(y^{21}-16y^{20}+\cdots-20y-1)$ $\cdot(y^{75}-87y^{74}+\cdots+99190065y-1901641)$
c_{10}	$(y^{21}+3y^{20}+\cdots-4y-1)(y^{75}+8y^{74}+\cdots-2407y-49)$