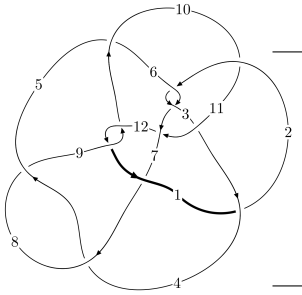
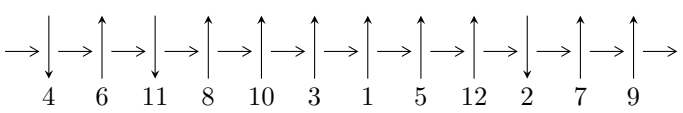
$12a_{0980}$ $(K12a_{0980})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.36657 \times 10^{1094} u^{178} - 6.23884 \times 10^{1094} u^{177} + \cdots + 5.80635 \times 10^{1093} b + 2.12651 \times 10^{1098}, \\ & - 9.79404 \times 10^{1098} u^{178} - 2.54297 \times 10^{1099} u^{177} + \cdots + 1.03893 \times 10^{1098} a + 4.07247 \times 10^{1103}, \\ & u^{179} + u^{178} + \cdots - 56442u + 17893 \rangle \\ I_2^u = \langle & -3.77559 \times 10^{62} u^{50} + 1.00246 \times 10^{63} u^{49} + \cdots + 1.99308 \times 10^{62} b + 1.21732 \times 10^{63}, \\ & - 1.54082 \times 10^{61} u^{50} + 1.52437 \times 10^{62} u^{49} + \cdots + 2.84726 \times 10^{61} a + 2.21864 \times 10^{62}, \\ & u^{51} - 14u^{49} + \cdots + 4u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 230 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. $\boldsymbol{I_1^u = \langle -6.37 \times 10^{1094} u^{178} - 6.24 \times 10^{1094} u^{177} + \cdots + 5.81 \times 10^{1093} b + 2.13 \times 10^{1098},\ -9.79 \times 10^{1098} u^{178} - 2.54 \times 10^{1099} u^{177} + \cdots + 1.04 \times 10^{1098} a + 4.07 \times 10^{1103},\ u^{179} + u^{178} + \cdots - 56442u + 17893 \rangle}$

(i) Arc colorings

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

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

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 9.42704u^{178} + 24.4768u^{177} + \cdots + 942651.u - 391987. \\ 10.9648u^{178} + 10.7449u^{177} + \cdots - 167474.u - 36623.9 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.915545u^{178} + 12.3950u^{177} + \cdots + 965308.u - 313140. \\ 14.0361u^{178} + 15.3675u^{177} + \cdots - 103237.u - 84350.7 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -5.94953u^{178} + 9.95972u^{177} + \cdots + 1.28611 \times 10^6 u - 383601. \\ 4.14236u^{178} + 4.34252u^{177} + \cdots - 74669.5u - 15655.1 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1.53779u^{178} + 13.7319u^{177} + \cdots + 1.11013 \times 10^6 u - 355363. \\ 10.9648u^{178} + 10.7449u^{177} + \cdots - 167474.u - 36623.9 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 14.7973u^{178} + 21.7781u^{177} + \cdots + 246198.u - 211700. \\ 16.1247u^{178} + 25.8989u^{177} + \cdots + 467075.u - 284144. \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 11.6170u^{178} + 8.59561u^{177} + \cdots - 351438.u + 7966.34 \\ -5.98509u^{178} - 12.6327u^{177} + \cdots - 337985.u + 167001. \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 13.7445u^{178} + 17.0895u^{177} + \cdots - 7907.38u - 109987. \\ 4.88861u^{178} + 9.90097u^{177} + \cdots + 304402.u - 136238. \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -14.0038u^{178} - 19.3801u^{177} + \cdots - 264116.u + 217958. \\ -12.5597u^{178} - 23.7283u^{177} + \cdots - 635008.u + 309138. \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$= -66.0926u^{178} - 118.720u^{177} + \cdots - 2.78433 \times 10^6 u + 1.47029 \times 10^6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{179} - 13u^{178} + \cdots + 89605118959u - 3985097653$
c_2, c_6	$u^{179} - 2u^{178} + \cdots - 29u + 1$
c_3	$u^{179} - 3u^{178} + \cdots - 36410582u - 8875751$
c_4, c_8	$u^{179} - u^{178} + \cdots - 56442u - 17893$
c_5	$u^{179} + 2u^{178} + \cdots - 2211089289451u + 384248970739$
c_7	$u^{179} - 15u^{177} + \cdots - 5920100u - 554293$
c_9, c_{12}	$u^{179} - 8u^{178} + \cdots + 129296u - 16120$
c_{10}	$u^{179} + 9u^{178} + \cdots + 72454819u - 599297$
c_{11}	$u^{179} - 32u^{177} + \cdots + 11845686300u + 9627412451$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{179} + 85y^{178} + \cdots + 1.82 \times 10^{21}y - 1.59 \times 10^{19}$
c_2, c_6	$y^{179} - 120y^{178} + \cdots - 119y - 1$
c_3	$y^{179} + 55y^{178} + \cdots - 2321290894230492y - 78778955814001$
c_4, c_8	$y^{179} - 111y^{178} + \cdots + 20997393572y - 320159449$
c_5	$y^{179} - 88y^{178} + \cdots + 7.44 \times 10^{24}y - 1.48 \times 10^{23}$
c_7	$y^{179} - 30y^{178} + \cdots + 17033627997446y - 307240729849$
c_9, c_{12}	$y^{179} + 108y^{178} + \cdots + 1685942496y - 259854400$
c_{10}	$y^{179} + 71y^{178} + \cdots + 1040989262644787y - 359156894209$
c_{11}	$y^{179} - 64y^{178} + \cdots + 2.73 \times 10^{21}y - 9.27 \times 10^{19}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.191510 + 0.975345I$ $a = 0.118476 - 0.197233I$ $b = -0.947699 + 0.317526I$	$4.79126 - 1.30542I$	0
$u = 0.191510 - 0.975345I$ $a = 0.118476 + 0.197233I$ $b = -0.947699 - 0.317526I$	$4.79126 + 1.30542I$	0
$u = 0.375219 + 0.907827I$ $a = 0.100769 + 0.225810I$ $b = 0.188848 - 1.139220I$	$-5.45462 - 0.67402I$	0
$u = 0.375219 - 0.907827I$ $a = 0.100769 - 0.225810I$ $b = 0.188848 + 1.139220I$	$-5.45462 + 0.67402I$	0
$u = -0.946996 + 0.254827I$ $a = 1.339280 - 0.439621I$ $b = 0.062365 - 0.796418I$	$0.388929 - 0.512029I$	0
$u = -0.946996 - 0.254827I$ $a = 1.339280 + 0.439621I$ $b = 0.062365 + 0.796418I$	$0.388929 + 0.512029I$	0
$u = -0.975305 + 0.098384I$ $a = -0.38360 + 1.53179I$ $b = -0.06444 + 2.27255I$	$3.17314 - 5.97245I$	0
$u = -0.975305 - 0.098384I$ $a = -0.38360 - 1.53179I$ $b = -0.06444 - 2.27255I$	$3.17314 + 5.97245I$	0
$u = 0.694979 + 0.746273I$ $a = 0.297989 - 0.458844I$ $b = 0.586488 - 1.068690I$	$-2.89144 - 0.09708I$	0
$u = 0.694979 - 0.746273I$ $a = 0.297989 + 0.458844I$ $b = 0.586488 + 1.068690I$	$-2.89144 + 0.09708I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.116062+1.015720I$ $a=-0.206539-0.424655I$ $b=-0.341854+1.180290I$	$-1.80573-3.51908I$	0
$u=-0.116062-1.015720I$ $a=-0.206539+0.424655I$ $b=-0.341854-1.180290I$	$-1.80573+3.51908I$	0
$u=-1.022450+0.148399I$ $a=-1.06383+1.34144I$ $b=-0.430224+0.883668I$	$-0.201149-1.026760I$	0
$u=-1.022450-0.148399I$ $a=-1.06383-1.34144I$ $b=-0.430224-0.883668I$	$-0.201149+1.026760I$	0
$u=1.04026$ $a=-1.37597$ $b=-1.38131$	6.45100	0
$u=1.028270+0.191790I$ $a=-1.69759-1.10708I$ $b=-0.500660-1.253070I$	$1.08260+5.29643I$	0
$u=1.028270-0.191790I$ $a=-1.69759+1.10708I$ $b=-0.500660+1.253070I$	$1.08260-5.29643I$	0
$u=-0.395308+0.868172I$ $a=-0.043328-0.380665I$ $b=0.007344+1.268340I$	$-3.54685-4.04229I$	0
$u=-0.395308-0.868172I$ $a=-0.043328+0.380665I$ $b=0.007344-1.268340I$	$-3.54685+4.04229I$	0
$u=0.234582+0.914258I$ $a=0.533039+0.548870I$ $b=-0.331503-1.024530I$	$0.38897+1.81521I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.234582 - 0.914258I$ $a = 0.533039 - 0.548870I$ $b = -0.331503 + 1.024530I$	$0.38897 - 1.81521I$	0
$u = 1.055370 + 0.060677I$ $a = -1.94809 + 0.29399I$ $b = -0.845985 + 0.870023I$	$6.97891 - 0.56802I$	0
$u = 1.055370 - 0.060677I$ $a = -1.94809 - 0.29399I$ $b = -0.845985 - 0.870023I$	$6.97891 + 0.56802I$	0
$u = -1.044820 + 0.204391I$ $a = -1.96034 + 0.56484I$ $b = -0.86099 + 1.44495I$	$4.45508 - 5.23948I$	0
$u = -1.044820 - 0.204391I$ $a = -1.96034 - 0.56484I$ $b = -0.86099 - 1.44495I$	$4.45508 + 5.23948I$	0
$u = 0.788571 + 0.493295I$ $a = 1.284810 + 0.477379I$ $b = -0.308034 + 0.691588I$	$1.48051 - 1.02975I$	0
$u = 0.788571 - 0.493295I$ $a = 1.284810 - 0.477379I$ $b = -0.308034 - 0.691588I$	$1.48051 + 1.02975I$	0
$u = -0.925596 + 0.013084I$ $a = -0.698849 + 0.532216I$ $b = -0.249552 - 1.386880I$	$-0.903421 + 0.405747I$	0
$u = -0.925596 - 0.013084I$ $a = -0.698849 - 0.532216I$ $b = -0.249552 + 1.386880I$	$-0.903421 - 0.405747I$	0
$u = -0.484278 + 0.787433I$ $a = -0.066392 + 0.304210I$ $b = 0.580563 + 1.201390I$	$1.31125 + 7.29801I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.484278-0.787433I$ $a=-0.066392-0.304210I$ $b=\ \ 0.580563-1.201390I$	$1.31125-7.29801I$	0
$u=\ \ 1.072350+0.115906I$ $a=\ \ 1.86158-1.10211I$ $b=\ \ 0.369327+1.113980I$	$6.99350+9.59579I$	0
$u=\ \ 1.072350-0.115906I$ $a=\ \ 1.86158+1.10211I$ $b=\ \ 0.369327-1.113980I$	$6.99350-9.59579I$	0
$u=-0.797805+0.734362I$ $a=-0.697193-1.051610I$ $b=-0.187724+0.468601I$	$2.22385-4.22991I$	0
$u=-0.797805-0.734362I$ $a=-0.697193+1.051610I$ $b=-0.187724-0.468601I$	$2.22385+4.22991I$	0
$u=-1.089330+0.082965I$ $a=\ \ 2.11407+0.72636I$ $b=\ \ 0.321990-0.997454I$	$3.15679-3.44042I$	0
$u=-1.089330-0.082965I$ $a=\ \ 2.11407-0.72636I$ $b=\ \ 0.321990+0.997454I$	$3.15679+3.44042I$	0
$u=\ \ 1.068920+0.230795I$ $a=-1.58462-0.59878I$ $b=-0.76662-1.31287I$	$1.43841+4.21089I$	0
$u=\ \ 1.068920-0.230795I$ $a=-1.58462+0.59878I$ $b=-0.76662+1.31287I$	$1.43841-4.21089I$	0
$u=\ \ 0.893618+0.137441I$ $a=\ \ 0.123624-0.813825I$ $b=\ \ 0.11336-1.63515I$	$-0.83450+3.38680I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.893618 - 0.137441I$ $a = 0.123624 + 0.813825I$ $b = 0.11336 + 1.63515I$	$-0.83450 - 3.38680I$	0
$u = 0.009597 + 0.902263I$ $a = 0.631888 - 0.476415I$ $b = -0.180297 + 1.161690I$	$-1.17829 - 1.51049I$	0
$u = 0.009597 - 0.902263I$ $a = 0.631888 + 0.476415I$ $b = -0.180297 - 1.161690I$	$-1.17829 + 1.51049I$	0
$u = -0.795290 + 0.404762I$ $a = -1.51504 - 0.62301I$ $b = -0.470451 + 1.030880I$	$-0.79294 - 2.75953I$	0
$u = -0.795290 - 0.404762I$ $a = -1.51504 + 0.62301I$ $b = -0.470451 - 1.030880I$	$-0.79294 + 2.75953I$	0
$u = -0.885818 + 0.081819I$ $a = -2.65694 - 0.88690I$ $b = -0.199628 - 0.659956I$	$1.99440 - 3.25458I$	0
$u = -0.885818 - 0.081819I$ $a = -2.65694 + 0.88690I$ $b = -0.199628 + 0.659956I$	$1.99440 + 3.25458I$	0
$u = -0.790038 + 0.400109I$ $a = 2.06005 + 0.39546I$ $b = 1.143800 - 0.529162I$	$4.11819 + 1.31718I$	0
$u = -0.790038 - 0.400109I$ $a = 2.06005 - 0.39546I$ $b = 1.143800 + 0.529162I$	$4.11819 - 1.31718I$	0
$u = 0.368314 + 0.786480I$ $a = -0.055277 - 1.054380I$ $b = -0.30421 + 1.38213I$	$-0.75429 - 5.59436I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.368314 - 0.786480I$ $a = -0.055277 + 1.054380I$ $b = -0.30421 - 1.38213I$	$-0.75429 + 5.59436I$	0
$u = 1.141300 + 0.083051I$ $a = 1.57053 - 0.51047I$ $b = 0.442379 + 0.865177I$	$8.26946 - 1.83716I$	0
$u = 1.141300 - 0.083051I$ $a = 1.57053 + 0.51047I$ $b = 0.442379 - 0.865177I$	$8.26946 + 1.83716I$	0
$u = -0.276710 + 1.112220I$ $a = 0.103126 + 0.516037I$ $b = -0.626442 - 1.133640I$	$2.36728 + 4.36232I$	0
$u = -0.276710 - 1.112220I$ $a = 0.103126 - 0.516037I$ $b = -0.626442 + 1.133640I$	$2.36728 - 4.36232I$	0
$u = 0.275018 + 0.801148I$ $a = -0.073003 + 0.909575I$ $b = 0.729499 - 0.190679I$	$6.49608 + 9.46240I$	0
$u = 0.275018 - 0.801148I$ $a = -0.073003 - 0.909575I$ $b = 0.729499 + 0.190679I$	$6.49608 - 9.46240I$	0
$u = 0.951414 + 0.657939I$ $a = 1.68782 - 0.15946I$ $b = 0.796773 + 0.916864I$	$-2.13218 + 5.45756I$	0
$u = 0.951414 - 0.657939I$ $a = 1.68782 + 0.15946I$ $b = 0.796773 - 0.916864I$	$-2.13218 - 5.45756I$	0
$u = -0.144554 + 1.149850I$ $a = 0.216287 - 0.174095I$ $b = 0.510759 + 0.957280I$	$4.18934 + 2.17036I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.144554-1.149850I$ $a=\ \ 0.216287+0.174095I$ $b=\ \ 0.510759-0.957280I$	$4.18934-2.17036I$	0
$u=-1.037100+0.529592I$ $a=\ \ 1.82446-0.08271I$ $b=\ \ 0.89977-1.20050I$	$3.01705-12.23120I$	0
$u=-1.037100-0.529592I$ $a=\ \ 1.82446+0.08271I$ $b=\ \ 0.89977+1.20050I$	$3.01705+12.23120I$	0
$u=\ \ 0.346376+0.750958I$ $a=-0.198505+0.241752I$ $b=-0.413113-1.216860I$	$0.41963+5.33170I$	0
$u=\ \ 0.346376-0.750958I$ $a=-0.198505-0.241752I$ $b=-0.413113+1.216860I$	$0.41963-5.33170I$	0
$u=-0.816915+0.127889I$ $a=\ \ 1.23300-1.70481I$ $b=\ \ 0.47885-1.67712I$	$2.85122+4.76181I$	0
$u=-0.816915-0.127889I$ $a=\ \ 1.23300+1.70481I$ $b=\ \ 0.47885+1.67712I$	$2.85122-4.76181I$	0
$u=\ \ 0.822937+0.015885I$ $a=\ \ 0.360949-0.120252I$ $b=-0.17133+1.46839I$	$-0.05020-4.15344I$	0
$u=\ \ 0.822937-0.015885I$ $a=\ \ 0.360949+0.120252I$ $b=-0.17133-1.46839I$	$-0.05020+4.15344I$	0
$u=\ \ 1.078340+0.479447I$ $a=-1.123520-0.089759I$ $b=-0.52947-1.37164I$	$1.63166+6.37273I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.078340 - 0.479447I$ $a = -1.123520 + 0.089759I$ $b = -0.52947 + 1.37164I$	$1.63166 - 6.37273I$	0
$u = 0.801770$ $a = -2.96835$ $b = -1.20745$	5.37744	0
$u = -1.188800 + 0.196438I$ $a = -1.25535 + 0.65654I$ $b = -0.95789 + 1.37969I$	$5.16568 - 5.08352I$	0
$u = -1.188800 - 0.196438I$ $a = -1.25535 - 0.65654I$ $b = -0.95789 - 1.37969I$	$5.16568 + 5.08352I$	0
$u = 0.772288 + 0.013491I$ $a = -2.79080 + 1.53448I$ $b = 0.131268 + 0.625517I$	$5.76475 + 8.81745I$	0
$u = 0.772288 - 0.013491I$ $a = -2.79080 - 1.53448I$ $b = 0.131268 - 0.625517I$	$5.76475 - 8.81745I$	0
$u = -1.124030 + 0.494970I$ $a = 1.44326 - 0.31578I$ $b = 0.280647 - 1.111280I$	$-1.17991 - 0.91573I$	0
$u = -1.124030 - 0.494970I$ $a = 1.44326 + 0.31578I$ $b = 0.280647 + 1.111280I$	$-1.17991 + 0.91573I$	0
$u = -1.182700 + 0.332842I$ $a = -2.19273 + 0.64571I$ $b = -0.335844 + 1.057860I$	$0.49381 - 5.85529I$	0
$u = -1.182700 - 0.332842I$ $a = -2.19273 - 0.64571I$ $b = -0.335844 - 1.057860I$	$0.49381 + 5.85529I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.706053+0.289145I$ $a=\ \ 0.618666+0.412008I$ $b=-0.163361+0.832838I$	$2.73557-3.64954I$	0
$u=-0.706053-0.289145I$ $a=\ \ 0.618666-0.412008I$ $b=-0.163361-0.832838I$	$2.73557+3.64954I$	0
$u=-0.219861+0.728037I$ $a=\ \ 0.275643-1.094810I$ $b=\ \ 0.538557+0.161565I$	$1.77929-4.20041I$	0
$u=-0.219861-0.728037I$ $a=\ \ 0.275643+1.094810I$ $b=\ \ 0.538557-0.161565I$	$1.77929+4.20041I$	0
$u=-0.854353+0.903285I$ $a=\ \ 0.399708-0.223974I$ $b=-0.154240-1.091590I$	$-0.18011-2.39642I$	0
$u=-0.854353-0.903285I$ $a=\ \ 0.399708+0.223974I$ $b=-0.154240+1.091590I$	$-0.18011+2.39642I$	0
$u=\ \ 0.126555+1.237890I$ $a=\ \ 0.201374+0.261483I$ $b=\ \ 0.475752-1.106210I$	$-0.72693-8.29143I$	0
$u=\ \ 0.126555-1.237890I$ $a=\ \ 0.201374-0.261483I$ $b=\ \ 0.475752+1.106210I$	$-0.72693+8.29143I$	0
$u=-0.092167+1.243940I$ $a=\ \ 0.159980-0.280420I$ $b=\ \ 0.534164+1.181950I$	$3.6088+14.3003I$	0
$u=-0.092167-1.243940I$ $a=\ \ 0.159980+0.280420I$ $b=\ \ 0.534164-1.181950I$	$3.6088-14.3003I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.143450 + 0.558703I$ $a = 1.50878 + 0.15613I$ $b = 0.520565 + 1.074370I$	$-3.00244 + 5.99318I$	0
$u = 1.143450 - 0.558703I$ $a = 1.50878 - 0.15613I$ $b = 0.520565 - 1.074370I$	$-3.00244 - 5.99318I$	0
$u = 1.182360 + 0.480617I$ $a = -1.90987 - 0.05793I$ $b = -0.374567 - 1.304610I$	$1.86761 + 10.39370I$	0
$u = 1.182360 - 0.480617I$ $a = -1.90987 + 0.05793I$ $b = -0.374567 + 1.304610I$	$1.86761 - 10.39370I$	0
$u = 1.266980 + 0.271325I$ $a = -1.353550 + 0.266542I$ $b = -1.170570 + 0.130249I$	$6.26061 + 2.93785I$	0
$u = 1.266980 - 0.271325I$ $a = -1.353550 - 0.266542I$ $b = -1.170570 - 0.130249I$	$6.26061 - 2.93785I$	0
$u = -1.286460 + 0.171895I$ $a = -1.59609 - 0.01924I$ $b = -1.364240 - 0.155380I$	$9.46041 - 2.58014I$	0
$u = -1.286460 - 0.171895I$ $a = -1.59609 + 0.01924I$ $b = -1.364240 + 0.155380I$	$9.46041 + 2.58014I$	0
$u = -1.249080 + 0.407640I$ $a = 1.089510 + 0.531724I$ $b = 1.066740 + 0.682532I$	$9.49493 - 1.84699I$	0
$u = -1.249080 - 0.407640I$ $a = 1.089510 - 0.531724I$ $b = 1.066740 - 0.682532I$	$9.49493 + 1.84699I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.431527+0.532213I$ $a=\ 1.041410-0.254935I$ $b=-0.214681-0.052655I$	$1.92118+0.01916I$	0
$u=-0.431527-0.532213I$ $a=\ 1.041410+0.254935I$ $b=-0.214681+0.052655I$	$1.92118-0.01916I$	0
$u=-0.354079+0.568266I$ $a=-0.128174+0.479796I$ $b=-0.576423-0.050350I$	$1.52134-0.06996I$	0
$u=-0.354079-0.568266I$ $a=-0.128174-0.479796I$ $b=-0.576423+0.050350I$	$1.52134+0.06996I$	0
$u=\ 1.211500+0.563382I$ $a=\ 1.163050+0.157930I$ $b=-0.017581+0.721230I$	$3.43282+3.61703I$	0
$u=\ 1.211500-0.563382I$ $a=\ 1.163050-0.157930I$ $b=-0.017581-0.721230I$	$3.43282-3.61703I$	0
$u=\ 1.313360+0.279450I$ $a=-0.779251+0.504175I$ $b=-1.072240+0.719881I$	$8.13424-0.02322I$	0
$u=\ 1.313360-0.279450I$ $a=-0.779251-0.504175I$ $b=-1.072240-0.719881I$	$8.13424+0.02322I$	0
$u=\ 1.284380+0.397758I$ $a=\ 1.211550-0.407112I$ $b=\ 1.134080-0.335247I$	$6.14499+8.32466I$	0
$u=\ 1.284380-0.397758I$ $a=\ 1.211550+0.407112I$ $b=\ 1.134080+0.335247I$	$6.14499-8.32466I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.463287+0.450067I$ $a=\ 0.070428+1.220100I$ $b=\ 0.712359+0.938781I$	$3.42564-4.90396I$	0
$u=-0.463287-0.450067I$ $a=\ 0.070428-1.220100I$ $b=\ 0.712359-0.938781I$	$3.42564+4.90396I$	0
$u=-1.300460+0.386368I$ $a=\ 1.311520+0.431049I$ $b=\ 1.363040+0.263759I$	$11.1192-13.6069I$	0
$u=-1.300460-0.386368I$ $a=\ 1.311520-0.431049I$ $b=\ 1.363040-0.263759I$	$11.1192+13.6069I$	0
$u=-1.324720+0.349256I$ $a=-1.224920-0.466147I$ $b=-1.411840-0.066299I$	$9.76089-3.17558I$	0
$u=-1.324720-0.349256I$ $a=-1.224920+0.466147I$ $b=-1.411840+0.066299I$	$9.76089+3.17558I$	0
$u=\ 1.213360+0.637876I$ $a=\ 1.098450-0.583440I$ $b=\ 0.454463+1.070970I$	$7.86500+7.36048I$	0
$u=\ 1.213360-0.637876I$ $a=\ 1.098450+0.583440I$ $b=\ 0.454463-1.070970I$	$7.86500-7.36048I$	0
$u=-1.370820+0.005414I$ $a=\ 0.61114-1.48366I$ $b=\ 0.211344-0.720861I$	$4.27212+0.87438I$	0
$u=-1.370820-0.005414I$ $a=\ 0.61114+1.48366I$ $b=\ 0.211344+0.720861I$	$4.27212-0.87438I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.274392 + 0.565528I$ $a = -0.05091 + 2.10737I$ $b = 0.448306 - 0.402700I$	$5.51101 - 2.02856I$	0
$u = 0.274392 - 0.565528I$ $a = -0.05091 - 2.10737I$ $b = 0.448306 + 0.402700I$	$5.51101 + 2.02856I$	0
$u = 1.244720 + 0.590356I$ $a = -1.197210 + 0.464363I$ $b = -0.937140 - 0.743431I$	$7.99509 + 6.89648I$	0
$u = 1.244720 - 0.590356I$ $a = -1.197210 - 0.464363I$ $b = -0.937140 + 0.743431I$	$7.99509 - 6.89648I$	0
$u = 1.358740 + 0.238635I$ $a = -1.258710 - 0.479757I$ $b = -0.921532 - 0.421182I$	$8.14047 + 5.63796I$	0
$u = 1.358740 - 0.238635I$ $a = -1.258710 + 0.479757I$ $b = -0.921532 + 0.421182I$	$8.14047 - 5.63796I$	0
$u = 0.607643 + 0.108986I$ $a = 1.68350 + 0.93969I$ $b = 0.428656 + 0.811200I$	$-1.24790 - 1.39236I$	0
$u = 0.607643 - 0.108986I$ $a = 1.68350 - 0.93969I$ $b = 0.428656 - 0.811200I$	$-1.24790 + 1.39236I$	0
$u = -1.272120 + 0.570991I$ $a = 1.204780 - 0.161415I$ $b = 0.078276 - 0.959698I$	$2.55998 - 3.98453I$	0
$u = -1.272120 - 0.570991I$ $a = 1.204780 + 0.161415I$ $b = 0.078276 + 0.959698I$	$2.55998 + 3.98453I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.572547 + 0.178090I$ $a = 1.26152 - 0.94850I$ $b = 0.480119 - 0.508685I$	$-1.23367 + 1.36203I$	0
$u = 0.572547 - 0.178090I$ $a = 1.26152 + 0.94850I$ $b = 0.480119 + 0.508685I$	$-1.23367 - 1.36203I$	0
$u = -1.377340 + 0.278456I$ $a = -0.650388 + 0.060262I$ $b = -0.639270 - 0.275858I$	$4.13633 - 2.76909I$	0
$u = -1.377340 - 0.278456I$ $a = -0.650388 - 0.060262I$ $b = -0.639270 + 0.275858I$	$4.13633 + 2.76909I$	0
$u = -0.587077$ $a = 0.493869$ $b = -0.196501$	0.831035	0
$u = 1.410190 + 0.095380I$ $a = 0.179036 - 1.171520I$ $b = 0.273435 - 0.458450I$	$9.18182 + 6.52595I$	0
$u = 1.410190 - 0.095380I$ $a = 0.179036 + 1.171520I$ $b = 0.273435 + 0.458450I$	$9.18182 - 6.52595I$	0
$u = -1.30161 + 0.61493I$ $a = -1.42525 - 0.15911I$ $b = -0.73789 + 1.40394I$	$5.68900 - 10.55460I$	0
$u = -1.30161 - 0.61493I$ $a = -1.42525 + 0.15911I$ $b = -0.73789 - 1.40394I$	$5.68900 + 10.55460I$	0
$u = 1.34368 + 0.53604I$ $a = -1.41035 - 0.13672I$ $b = -0.60402 - 1.31637I$	$2.55699 + 9.11548I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.34368 - 0.53604I$ $a = -1.41035 + 0.13672I$ $b = -0.60402 + 1.31637I$	$2.55699 - 9.11548I$	0
$u = -1.28961 + 0.66534I$ $a = 0.933132 + 0.398669I$ $b = 0.449122 - 0.947341I$	$4.28798 - 1.54089I$	0
$u = -1.28961 - 0.66534I$ $a = 0.933132 - 0.398669I$ $b = 0.449122 + 0.947341I$	$4.28798 + 1.54089I$	0
$u = 0.414811 + 0.354749I$ $a = -1.20879 + 2.85179I$ $b = 0.252145 - 0.243796I$	$5.50053 - 2.04282I$	0
$u = 0.414811 - 0.354749I$ $a = -1.20879 - 2.85179I$ $b = 0.252145 + 0.243796I$	$5.50053 + 2.04282I$	0
$u = -0.299049 + 0.443132I$ $a = -0.85877 + 1.65199I$ $b = -0.189892 - 1.225320I$	$-2.29062 + 2.55843I$	0
$u = -0.299049 - 0.443132I$ $a = -0.85877 - 1.65199I$ $b = -0.189892 + 1.225320I$	$-2.29062 - 2.55843I$	0
$u = 1.27848 + 0.72240I$ $a = 0.783287 - 0.509375I$ $b = 0.568028 + 0.879832I$	$8.94284 - 3.58421I$	0
$u = 1.27848 - 0.72240I$ $a = 0.783287 + 0.509375I$ $b = 0.568028 - 0.879832I$	$8.94284 + 3.58421I$	0
$u = -1.34125 + 0.60229I$ $a = 1.44010 - 0.02253I$ $b = 0.741178 - 1.113260I$	$7.96784 - 8.36977I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.34125-0.60229I$ $a=\ \ 1.44010+0.02253I$ $b=\ \ 0.741178+1.113260I$	$7.96784+8.36977I$	0
$u=-1.42638+0.41732I$ $a=-1.37079+0.48051I$ $b=-0.74096+1.32244I$	$5.91188-9.77674I$	0
$u=-1.42638-0.41732I$ $a=-1.37079-0.48051I$ $b=-0.74096-1.32244I$	$5.91188+9.77674I$	0
$u=\ \ 1.48667+0.05972I$ $a=\ \ 0.619667+1.001470I$ $b=\ \ 0.331926+0.803847I$	$8.61324+5.18149I$	0
$u=\ \ 1.48667-0.05972I$ $a=\ \ 0.619667-1.001470I$ $b=\ \ 0.331926-0.803847I$	$8.61324-5.18149I$	0
$u=\ \ 1.36432+0.60953I$ $a=\ \ 1.44386+0.05674I$ $b=\ \ 0.67364+1.25857I$	$3.2246+14.7275I$	0
$u=\ \ 1.36432-0.60953I$ $a=\ \ 1.44386-0.05674I$ $b=\ \ 0.67364-1.25857I$	$3.2246-14.7275I$	0
$u=-1.37237+0.60687I$ $a=\ \ 1.46332-0.06870I$ $b=\ \ 0.71403-1.34667I$	$7.6660-20.7354I$	0
$u=-1.37237-0.60687I$ $a=\ \ 1.46332+0.06870I$ $b=\ \ 0.71403+1.34667I$	$7.6660+20.7354I$	0
$u=-0.483320+0.057422I$ $a=\ \ 0.871668+0.971674I$ $b=-0.391148+0.987378I$	$2.78485-3.64676I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.483320-0.057422I$ $a=\ \ 0.871668-0.971674I$ $b=-0.391148-0.987378I$	$2.78485+3.64676I$	0
$u=\ \ 0.171056+0.452346I$ $a=\ \ 1.62690-0.33575I$ $b=-0.132232+1.094240I$	$-1.29818-1.79089I$	0
$u=\ \ 0.171056-0.452346I$ $a=\ \ 1.62690+0.33575I$ $b=-0.132232-1.094240I$	$-1.29818+1.79089I$	0
$u=\ \ 1.46478+0.39312I$ $a=\ \ 0.425368-0.432559I$ $b=\ \ 0.509073-0.516107I$	$9.61557+3.39490I$	0
$u=\ \ 1.46478-0.39312I$ $a=\ \ 0.425368+0.432559I$ $b=\ \ 0.509073+0.516107I$	$9.61557-3.39490I$	0
$u=-0.00919+1.54645I$ $a=-0.067869-0.287686I$ $b=-0.264091+1.033410I$	$-2.31727-3.25372I$	0
$u=-0.00919-1.54645I$ $a=-0.067869+0.287686I$ $b=-0.264091-1.033410I$	$-2.31727+3.25372I$	0
$u=-1.56071+0.28245I$ $a=\ \ 0.385025+0.248639I$ $b=\ \ 0.428827+0.605510I$	$5.33412+2.24303I$	0
$u=-1.56071-0.28245I$ $a=\ \ 0.385025-0.248639I$ $b=\ \ 0.428827-0.605510I$	$5.33412-2.24303I$	0
$u=-1.41078+0.74554I$ $a=-0.900025-0.072026I$ $b=-0.465274+1.119340I$	$1.74526-6.99377I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.41078-0.74554I$ $a=-0.900025+0.072026I$ $b=-0.465274-1.119340I$	$1.74526+6.99377I$	0
$u=1.50866+0.59449I$ $a=-1.000700-0.260290I$ $b=-0.47694-1.34638I$	$3.01744+10.41440I$	0
$u=1.50866-0.59449I$ $a=-1.000700+0.260290I$ $b=-0.47694+1.34638I$	$3.01744-10.41440I$	0
$u=1.68528+0.34996I$ $a=0.240064-0.274510I$ $b=0.445167-0.723113I$	$9.48697-7.78115I$	0
$u=1.68528-0.34996I$ $a=0.240064+0.274510I$ $b=0.445167+0.723113I$	$9.48697+7.78115I$	0
$u=0.208962+0.131458I$ $a=-0.45240-2.30713I$ $b=-0.844539-0.267955I$	$4.88227+1.22625I$	$20.3866-4.5077I$
$u=0.208962-0.131458I$ $a=-0.45240+2.30713I$ $b=-0.844539+0.267955I$	$4.88227-1.22625I$	$20.3866+4.5077I$
$u=-0.59682+1.68006I$ $a=0.066279+0.239835I$ $b=-0.195769-0.862286I$	$-1.57696-1.34670I$	0
$u=-0.59682-1.68006I$ $a=0.066279-0.239835I$ $b=-0.195769+0.862286I$	$-1.57696+1.34670I$	0

II. $I_2^u = \langle -3.78\times 10^{62}u^{50} + 1.00\times 10^{63}u^{49} + \cdots + 1.99\times 10^{62}b + 1.22\times 10^{63},\ -1.54\times 10^{61}u^{50} + 1.52\times 10^{62}u^{49} + \cdots + 2.85\times 10^{61}a + 2.22\times 10^{62},\ u^{51} - 14u^{49} + \cdots + 4u - 1\rangle$

(i) Arc colorings

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

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

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.541158u^{50} - 5.35381u^{49} + \cdots + 25.8127u - 7.79218 \\ 1.89435u^{50} - 5.02968u^{49} + \cdots + 25.3900u - 6.10773 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.559833u^{50} - 0.619223u^{49} + \cdots - 3.85770u - 0.703667 \\ 1.59675u^{50} - 6.44983u^{49} + \cdots + 35.0211u - 8.46165 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.543746u^{50} + 0.450978u^{49} + \cdots + 0.665611u + 1.34139 \\ 1.31196u^{50} + 2.62999u^{49} + \cdots - 11.6830u + 1.91273 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1.35319u^{50} - 0.324131u^{49} + \cdots + 0.422740u - 1.68446 \\ 1.89435u^{50} - 5.02968u^{49} + \cdots + 25.3900u - 6.10773 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2.68157u^{50} + 1.76611u^{49} + \cdots - 13.4431u + 2.18496 \\ -4.69431u^{50} - 0.435040u^{49} + \cdots - 1.01710u - 0.581665 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 4.36872u^{50} - 0.637137u^{49} + \cdots - 12.2510u + 2.05020 \\ 10.4949u^{50} - 4.74977u^{49} + \cdots + 39.4113u - 5.11508 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0587031u^{50} + 1.29634u^{49} + \cdots - 13.3028u + 2.05635 \\ 0.432218u^{50} - 5.06057u^{49} + \cdots + 29.7516u - 5.44889 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.59330u^{50} + 1.98072u^{49} + \cdots - 30.4391u + 3.90148 \\ -8.08962u^{50} + 4.34168u^{49} + \cdots - 38.1942u + 8.98115 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 17.5227u^{50} - 13.1567u^{49} + \cdots + 81.8976u - 9.45100$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{51} - 4u^{50} + \cdots + 23u + 19$
c_2	$u^{51} + u^{50} + \cdots + 5u + 1$
c_3	$u^{51} + 7u^{49} + \cdots + 8u - 1$
c_4	$u^{51} - 14u^{49} + \cdots + 4u + 1$
c_5	$u^{51} + u^{50} + \cdots - 71u - 121$
c_6	$u^{51} - u^{50} + \cdots + 5u - 1$
c_7	$u^{51} - u^{50} + \cdots + 10u + 7$
c_8	$u^{51} - 14u^{49} + \cdots + 4u - 1$
c_9	$u^{51} + 15u^{50} + \cdots + 80u + 8$
c_{10}	$u^{51} - 4u^{50} + \cdots - 7u + 1$
c_{11}	$u^{51} - u^{50} + \cdots - 10u - 19$
c_{12}	$u^{51} - 15u^{50} + \cdots + 80u - 8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{51} + 20y^{50} + \cdots - 12771y - 361$
c_2, c_6	$y^{51} - 29y^{50} + \cdots + 13y - 1$
c_3	$y^{51} + 14y^{50} + \cdots - 36y - 1$
c_4, c_8	$y^{51} - 28y^{50} + \cdots + 10y^2 - 1$
c_5	$y^{51} - 25y^{50} + \cdots + 204933y - 14641$
c_7	$y^{51} - 3y^{50} + \cdots + 1906y - 49$
c_9, c_{12}	$y^{51} + 43y^{50} + \cdots - 2592y - 64$
c_{10}	$y^{51} + 26y^{50} + \cdots - 13y - 1$
c_{11}	$y^{51} - 9y^{50} + \cdots + 4052y - 361$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.875432 + 0.484952I$ $a = 1.79697 - 1.05547I$ $b = 0.190345 + 0.786306I$	$1.44982 + 4.26800I$	$4.45695 - 7.59681I$
$u = 0.875432 - 0.484952I$ $a = 1.79697 + 1.05547I$ $b = 0.190345 - 0.786306I$	$1.44982 - 4.26800I$	$4.45695 + 7.59681I$
$u = -0.666523 + 0.662906I$ $a = -0.213787 - 0.531624I$ $b = -0.540799 - 1.136060I$	$-3.20491 + 0.16866I$	$-4.96325 - 2.37046I$
$u = -0.666523 - 0.662906I$ $a = -0.213787 + 0.531624I$ $b = -0.540799 + 1.136060I$	$-3.20491 - 0.16866I$	$-4.96325 + 2.37046I$
$u = -1.065900 + 0.163881I$ $a = -1.20663 + 1.10416I$ $b = -0.55261 + 1.87359I$	$3.86630 - 6.11456I$	$13.6912 + 11.6820I$
$u = -1.065900 - 0.163881I$ $a = -1.20663 - 1.10416I$ $b = -0.55261 - 1.87359I$	$3.86630 + 6.11456I$	$13.6912 - 11.6820I$
$u = -0.810329 + 0.354128I$ $a = 2.19869 + 1.72918I$ $b = 0.383326 - 0.926951I$	$5.45916 - 9.84193I$	$7.99032 + 10.46337I$
$u = -0.810329 - 0.354128I$ $a = 2.19869 - 1.72918I$ $b = 0.383326 + 0.926951I$	$5.45916 + 9.84193I$	$7.99032 - 10.46337I$
$u = 1.106720 + 0.189900I$ $a = -1.46984 - 0.34194I$ $b = -0.473451 - 1.201110I$	$1.07125 + 3.40512I$	0
$u = 1.106720 - 0.189900I$ $a = -1.46984 + 0.34194I$ $b = -0.473451 + 1.201110I$	$1.07125 - 3.40512I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.864980 + 0.076532I$ $a = 0.745406 - 0.354878I$ $b = 0.086866 - 1.409100I$	$-0.72570 + 2.91843I$	$5.89114 + 1.85917I$
$u = 0.864980 - 0.076532I$ $a = 0.745406 + 0.354878I$ $b = 0.086866 + 1.409100I$	$-0.72570 - 2.91843I$	$5.89114 - 1.85917I$
$u = -0.868074 + 0.019073I$ $a = 0.72500 - 1.85331I$ $b = 0.16088 - 2.07164I$	$2.78748 + 5.33446I$	$4.48357 - 8.25790I$
$u = -0.868074 - 0.019073I$ $a = 0.72500 + 1.85331I$ $b = 0.16088 + 2.07164I$	$2.78748 - 5.33446I$	$4.48357 + 8.25790I$
$u = 0.811426 + 0.301192I$ $a = 1.30954 + 0.82093I$ $b = -0.019881 + 0.613724I$	$-0.201374 - 0.654119I$	$4.13039 + 1.55719I$
$u = 0.811426 - 0.301192I$ $a = 1.30954 - 0.82093I$ $b = -0.019881 - 0.613724I$	$-0.201374 + 0.654119I$	$4.13039 - 1.55719I$
$u = -0.991939 + 0.634615I$ $a = -1.64966 - 0.09650I$ $b = -0.759697 + 0.913801I$	$-2.23511 - 5.25810I$	0
$u = -0.991939 - 0.634615I$ $a = -1.64966 + 0.09650I$ $b = -0.759697 - 0.913801I$	$-2.23511 + 5.25810I$	0
$u = 0.194008 + 0.783432I$ $a = 0.133591 - 0.584239I$ $b = -0.520682 + 1.133750I$	$1.38418 - 3.89206I$	$6.95296 + 4.07459I$
$u = 0.194008 - 0.783432I$ $a = 0.133591 + 0.584239I$ $b = -0.520682 - 1.133750I$	$1.38418 + 3.89206I$	$6.95296 - 4.07459I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.294040 + 0.740076I$ $a = -0.643424 + 0.252191I$ $b = -0.234652 - 1.245670I$	$-1.00967 + 4.34462I$	$5.40886 - 6.21134I$
$u = 0.294040 - 0.740076I$ $a = -0.643424 - 0.252191I$ $b = -0.234652 + 1.245670I$	$-1.00967 - 4.34462I$	$5.40886 + 6.21134I$
$u = 1.221190 + 0.281010I$ $a = -1.318760 + 0.465733I$ $b = -1.263560 + 0.498298I$	$7.88421 + 1.70581I$	0
$u = 1.221190 - 0.281010I$ $a = -1.318760 - 0.465733I$ $b = -1.263560 - 0.498298I$	$7.88421 - 1.70581I$	0
$u = -0.659663 + 0.282648I$ $a = 2.23616 + 1.99883I$ $b = 0.443706 - 0.320846I$	$5.67876 + 1.71149I$	$19.6183 + 6.2324I$
$u = -0.659663 - 0.282648I$ $a = 2.23616 - 1.99883I$ $b = 0.443706 + 0.320846I$	$5.67876 - 1.71149I$	$19.6183 - 6.2324I$
$u = 1.150740 + 0.642204I$ $a = 1.170280 - 0.163805I$ $b = 0.075425 + 0.833992I$	$1.34871 + 4.08692I$	0
$u = 1.150740 - 0.642204I$ $a = 1.170280 + 0.163805I$ $b = 0.075425 - 0.833992I$	$1.34871 - 4.08692I$	0
$u = -1.306640 + 0.254636I$ $a = -1.358400 + 0.005891I$ $b = -1.073030 + 0.260436I$	$8.22150 - 3.99979I$	0
$u = -1.306640 - 0.254636I$ $a = -1.358400 - 0.005891I$ $b = -1.073030 - 0.260436I$	$8.22150 + 3.99979I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.607695$ $a = -3.11193$ $b = -1.29630$	4.81707	5.54850
$u = \quad 1.390090 + 0.111749I$ $a = -0.753525 - 1.047260I$ $b = -0.033369 - 0.680984I$	$4.11233 - 1.41735I$	0
$u = \quad 1.390090 - 0.111749I$ $a = -0.753525 + 1.047260I$ $b = -0.033369 + 0.680984I$	$4.11233 + 1.41735I$	0
$u = -0.081273 + 0.591689I$ $a = \quad 0.010561 + 0.563872I$ $b = -0.778588 - 0.257567I$	$3.94099 + 0.91402I$	$9.41395 - 0.58355I$
$u = -0.081273 - 0.591689I$ $a = \quad 0.010561 - 0.563872I$ $b = -0.778588 + 0.257567I$	$3.94099 - 0.91402I$	$9.41395 + 0.58355I$
$u = -1.384370 + 0.229245I$ $a = -0.739817 + 0.373753I$ $b = -0.125940 + 0.263610I$	$8.86111 - 4.14289I$	0
$u = -1.384370 - 0.229245I$ $a = -0.739817 - 0.373753I$ $b = -0.125940 - 0.263610I$	$8.86111 + 4.14289I$	0
$u = \quad 1.33576 + 0.49758I$ $a = -1.42604 - 0.18799I$ $b = -0.74512 - 1.26777I$	$5.26432 + 8.77471I$	0
$u = \quad 1.33576 - 0.49758I$ $a = -1.42604 + 0.18799I$ $b = -0.74512 + 1.26777I$	$5.26432 - 8.77471I$	0
$u = -1.38376 + 0.55097I$ $a = -1.304970 + 0.161940I$ $b = -0.54257 + 1.34604I$	$3.66642 - 9.56959I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.38376-0.55097I$ $a=-1.304970-0.161940I$ $b=-0.54257-1.34604I$	$3.66642+9.56959I$	0
$u=0.25121+1.49864I$ $a=0.115865+0.352670I$ $b=-0.133007-1.032110I$	$-2.32247+2.62705I$	0
$u=0.25121-1.49864I$ $a=0.115865-0.352670I$ $b=-0.133007+1.032110I$	$-2.32247-2.62705I$	0
$u=-1.52913+0.09424I$ $a=-0.273047+0.875379I$ $b=0.151894+0.724742I$	$8.48276+7.25343I$	0
$u=-1.52913-0.09424I$ $a=-0.273047-0.875379I$ $b=0.151894-0.724742I$	$8.48276-7.25343I$	0
$u=0.257959+0.378346I$ $a=1.64378+1.68153I$ $b=-0.185313-1.188480I$	$-2.34683+0.66847I$	$0.611367+1.094057I$
$u=0.257959-0.378346I$ $a=1.64378-1.68153I$ $b=-0.185313+1.188480I$	$-2.34683-0.66847I$	$0.611367-1.094057I$
$u=0.124254+0.357413I$ $a=-1.91737+0.62337I$ $b=-0.240660-1.341300I$	$-1.05125+4.40914I$	$3.04156-5.02545I$
$u=0.124254-0.357413I$ $a=-1.91737-0.62337I$ $b=-0.240660+1.341300I$	$-1.05125-4.40914I$	$3.04156+5.02545I$
$u=0.56594+1.53130I$ $a=0.245386-0.126442I$ $b=-0.121356+0.933322I$	$-1.92794+1.59344I$	0

	Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.56594-1.53130I$		
$a=$	$0.245386+0.126442I$	$-1.92794-1.59344I$	0
$b=$	$-0.121356-0.933322I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{51}-4u^{50}+\cdots+23u+19)$ $\cdot(u^{179}-13u^{178}+\cdots+89605118959u-3985097653)$
c_2	$(u^{51}+u^{50}+\cdots+5u+1)(u^{179}-2u^{178}+\cdots-29u+1)$
c_3	$(u^{51}+7u^{49}+\cdots+8u-1)$ $\cdot(u^{179}-3u^{178}+\cdots-36410582u-8875751)$
c_4	$(u^{51}-14u^{49}+\cdots+4u+1)(u^{179}-u^{178}+\cdots-56442u-17893)$
c_5	$(u^{51}+u^{50}+\cdots-71u-121)$ $\cdot(u^{179}+2u^{178}+\cdots-2211089289451u+384248970739)$
c_6	$(u^{51}-u^{50}+\cdots+5u-1)(u^{179}-2u^{178}+\cdots-29u+1)$
c_7	$(u^{51}-u^{50}+\cdots+10u+7)(u^{179}-15u^{177}+\cdots-5920100u-554293)$
c_8	$(u^{51}-14u^{49}+\cdots+4u-1)(u^{179}-u^{178}+\cdots-56442u-17893)$
c_9	$(u^{51}+15u^{50}+\cdots+80u+8)(u^{179}-8u^{178}+\cdots+129296u-16120)$
c_{10}	$(u^{51}-4u^{50}+\cdots-7u+1)(u^{179}+9u^{178}+\cdots+7.24548\times10^{7}u-599297)$
c_{11}	$(u^{51}-u^{50}+\cdots-10u-19)$ $\cdot(u^{179}-32u^{177}+\cdots+11845686300u+9627412451)$
c_{12}	$(u^{51}-15u^{50}+\cdots+80u-8)(u^{179}-8u^{178}+\cdots+129296u-16120)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{51}+20y^{50}+\cdots-12771y-361)$ $\cdot(y^{179}+85y^{178}+\cdots+1.82\times10^{21}y-1.59\times10^{19})$
c_2, c_6	$(y^{51}-29y^{50}+\cdots+13y-1)(y^{179}-120y^{178}+\cdots-119y-1)$
c_3	$(y^{51}+14y^{50}+\cdots-36y-1)$ $\cdot(y^{179}+55y^{178}+\cdots-2321290894230492y-78778955814001)$
c_4, c_8	$(y^{51}-28y^{50}+\cdots+10y^2-1)$ $\cdot(y^{179}-111y^{178}+\cdots+20997393572y-320159449)$
c_5	$(y^{51}-25y^{50}+\cdots+204933y-14641)$ $\cdot(y^{179}-88y^{178}+\cdots+7.44\times10^{24}y-1.48\times10^{23})$
c_7	$(y^{51}-3y^{50}+\cdots+1906y-49)$ $\cdot(y^{179}-30y^{178}+\cdots+17033627997446y-307240729849)$
c_9, c_{12}	$(y^{51}+43y^{50}+\cdots-2592y-64)$ $\cdot(y^{179}+108y^{178}+\cdots+1685942496y-259854400)$
c_{10}	$(y^{51}+26y^{50}+\cdots-13y-1)$ $\cdot(y^{179}+71y^{178}+\cdots+1040989262644787y-359156894209)$
c_{11}	$(y^{51}-9y^{50}+\cdots+4052y-361)$ $\cdot(y^{179}-64y^{178}+\cdots+2.73\times10^{21}y-9.27\times10^{19})$