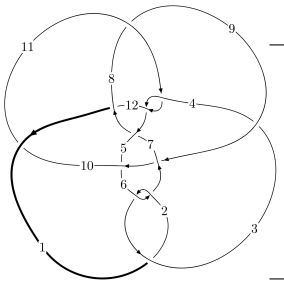
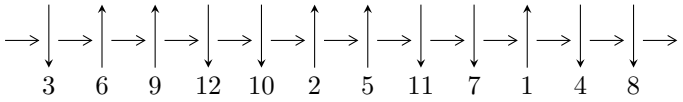
$12a_{0419}$ $(K12a_{0419})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 9.88459 \times 10^{1013} u^{181} + 1.80208 \times 10^{1014} u^{180} + \cdots + 2.42399 \times 10^{1014} b + 3.99849 \times 10^{1014},$$
$$- 2.88553 \times 10^{1013} u^{181} - 4.79670 \times 10^{1013} u^{180} + \cdots + 1.27578 \times 10^{1013} a - 1.17798 \times 10^{1014},$$
$$u^{182} + 2u^{181} + \cdots + 18u + 1 \rangle$$
$$I_2^u = \langle -1.15838 \times 10^{33} u^{42} - 1.70244 \times 10^{33} u^{41} + \cdots + 2.11466 \times 10^{32} b - 1.33001 \times 10^{33},$$
$$- 1.28770 \times 10^{33} u^{42} + 1.62157 \times 10^{32} u^{41} + \cdots + 2.11466 \times 10^{32} a - 6.36585 \times 10^{33},\ u^{43} + u^{42} + \cdots + 2u +$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 225 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. $\boldsymbol{I_1^u = \langle 9.88 \times 10^{1013} u^{181} + 1.80 \times 10^{1014} u^{180} + \cdots + 2.42 \times 10^{1014} b + 4.00 \times 10^{1014},\ -2.89 \times 10^{1013} u^{181} - 4.80 \times 10^{1013} u^{180} + \cdots + 1.28 \times 10^{1013} a - 1.18 \times 10^{1014},\ u^{182} + 2u^{181} + \cdots + 18u + 1 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 2.26177u^{181} + 3.75981u^{180} + \cdots + 147.770u + 9.23341 \\ -0.407782u^{181} - 0.743438u^{180} + \cdots - 27.0959u - 1.64955 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -3.27635u^{181} - 5.34779u^{180} + \cdots - 141.246u - 8.30418 \\ -0.0374048u^{181} + 0.441289u^{180} + \cdots + 39.6804u + 3.60649 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 3.24310u^{181} + 4.95955u^{180} + \cdots + 186.351u + 11.6467 \\ 0.352908u^{181} - 0.162965u^{180} + \cdots - 14.3448u - 0.886637 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} 2.89776u^{181} + 4.31013u^{180} + \cdots + 160.146u + 10.0693 \\ 0.228210u^{181} - 0.193110u^{180} + \cdots - 14.7200u - 0.813692 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 3.44546u^{181} + 6.53680u^{180} + \cdots + 327.617u + 24.9418 \\ -0.447829u^{181} - 0.305439u^{180} + \cdots + 2.78794u + 0.556196 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -4.22856u^{181} - 7.89659u^{180} + \cdots - 295.726u - 32.9946 \\ 0.193692u^{181} + 0.370684u^{180} + \cdots + 18.9442u + 1.19168 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -5.48557u^{181} - 10.1286u^{180} + \cdots - 548.088u - 44.6091 \\ -0.455170u^{181} - 0.262679u^{180} + \cdots - 12.6569u - 1.01401 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.47936u^{181} - 3.47355u^{180} + \cdots - 84.2762u - 8.47404 \\ 0.452183u^{181} + 0.416483u^{180} + \cdots + 37.1423u + 2.46176 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.74311u^{181} - 3.28687u^{180} + \cdots - 161.807u - 22.4706$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{182} + 80u^{181} + \cdots - 14u + 1$
c_2, c_6	$u^{182} + 40u^{180} + \cdots + 4u + 1$
c_3	$u^{182} + u^{181} + \cdots + 173061562687u + 50838216514$
c_4, c_{11}	$u^{182} + 2u^{181} + \cdots + 18u + 1$
c_5	$u^{182} - 6u^{180} + \cdots - 29u + 1$
c_7	$u^{182} + 16u^{181} + \cdots + 107815334379u + 9487345129$
c_8	$u^{182} + 18u^{181} + \cdots + 37740592u + 2302703$
c_9	$u^{182} + 8u^{181} + \cdots - 16483u + 704$
c_{10}	$u^{182} + 17u^{181} + \cdots + 1894916324u + 143269799$
c_{12}	$u^{182} - u^{181} + \cdots - 233173107u + 23453042$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{182} + 60y^{181} + \cdots - 458y + 1$
c_2, c_6	$y^{182} + 80y^{181} + \cdots - 14y + 1$
c_3	$y^{182} + 83y^{181} + \cdots + 1.73 \times 10^{23}y + 2.58 \times 10^{21}$
c_4, c_{11}	$y^{182} - 126y^{181} + \cdots - 110y + 1$
c_5	$y^{182} - 12y^{181} + \cdots + 393y + 1$
c_7	$y^{182} + 100y^{181} + \cdots + 4.51 \times 10^{21}y + 9.00 \times 10^{19}$
c_8	$y^{182} - 52y^{181} + \cdots - 245956311483672y + 5302441106209$
c_9	$y^{182} - 26y^{181} + \cdots - 28999369y + 495616$
c_{10}	$y^{182} + 35y^{181} + \cdots + 2524246924058369408y + 20526235305500401$
c_{12}	$y^{182} - 59y^{181} + \cdots - 11000196487083765y + 550045179053764$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.009030 + 0.141856I$ $a = -0.313299 + 0.401315I$ $b = -2.13016 + 0.32049I$	$-5.55107 - 0.59106I$	0
$u = 1.009030 - 0.141856I$ $a = -0.313299 - 0.401315I$ $b = -2.13016 - 0.32049I$	$-5.55107 + 0.59106I$	0
$u = -1.023890 + 0.011929I$ $a = -0.29832 - 1.57682I$ $b = -0.078867 - 0.465740I$	$0.0137628 + 0.0482185I$	0
$u = -1.023890 - 0.011929I$ $a = -0.29832 + 1.57682I$ $b = -0.078867 + 0.465740I$	$0.0137628 - 0.0482185I$	0
$u = 0.947856 + 0.399001I$ $a = 1.162700 + 0.604371I$ $b = 0.790022 + 0.241060I$	$-2.28558 - 1.78667I$	0
$u = 0.947856 - 0.399001I$ $a = 1.162700 - 0.604371I$ $b = 0.790022 - 0.241060I$	$-2.28558 + 1.78667I$	0
$u = 0.968734 + 0.024336I$ $a = 0.61065 + 1.41694I$ $b = 0.383892 + 0.156040I$	$-0.77817 - 5.28244I$	0
$u = 0.968734 - 0.024336I$ $a = 0.61065 - 1.41694I$ $b = 0.383892 - 0.156040I$	$-0.77817 + 5.28244I$	0
$u = -0.166608 + 1.034190I$ $a = -0.473620 - 0.611144I$ $b = 0.201200 + 0.046334I$	$-1.04142 + 2.04374I$	0
$u = -0.166608 - 1.034190I$ $a = -0.473620 + 0.611144I$ $b = 0.201200 - 0.046334I$	$-1.04142 - 2.04374I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.006100+0.315489I$ $a=\ \ 2.10865+0.05491I$ $b=\ \ 2.57152-0.31924I$	$-0.31160+5.57110I$	0
$u=-1.006100-0.315489I$ $a=\ \ 2.10865-0.05491I$ $b=\ \ 2.57152+0.31924I$	$-0.31160-5.57110I$	0
$u=-0.948274+0.465858I$ $a=-0.096936+0.389458I$ $b=\ \ 0.783343+0.021851I$	$-0.49949+2.11576I$	0
$u=-0.948274-0.465858I$ $a=-0.096936-0.389458I$ $b=\ \ 0.783343-0.021851I$	$-0.49949-2.11576I$	0
$u=-0.043615+0.939743I$ $a=-0.608201+1.043260I$ $b=-0.449289+0.142500I$	$-1.83925+2.77276I$	0
$u=-0.043615-0.939743I$ $a=-0.608201-1.043260I$ $b=-0.449289-0.142500I$	$-1.83925-2.77276I$	0
$u=-0.103365+1.075060I$ $a=\ \ 0.257832-0.925480I$ $b=-0.401416+0.172859I$	$-3.03083-5.08964I$	0
$u=-0.103365-1.075060I$ $a=\ \ 0.257832+0.925480I$ $b=-0.401416-0.172859I$	$-3.03083+5.08964I$	0
$u=\ \ 0.209631+0.891648I$ $a=-0.323876-1.187200I$ $b=\ \ 0.534672-0.053449I$	$-2.06496+1.86441I$	0
$u=\ \ 0.209631-0.891648I$ $a=-0.323876+1.187200I$ $b=\ \ 0.534672+0.053449I$	$-2.06496-1.86441I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.913511 + 0.026956I$ $a = -1.094780 - 0.583268I$ $b = -1.78144 - 1.29355I$	$-0.75830 - 5.61050I$	0
$u = 0.913511 - 0.026956I$ $a = -1.094780 + 0.583268I$ $b = -1.78144 + 1.29355I$	$-0.75830 + 5.61050I$	0
$u = -1.021910 + 0.394620I$ $a = -0.755643 + 0.301443I$ $b = -1.49429 + 0.79233I$	$1.67984 - 1.70771I$	0
$u = -1.021910 - 0.394620I$ $a = -0.755643 - 0.301443I$ $b = -1.49429 - 0.79233I$	$1.67984 + 1.70771I$	0
$u = 1.021630 + 0.404588I$ $a = -1.80591 + 0.17101I$ $b = -2.35188 - 0.35534I$	$-1.56593 - 11.13020I$	0
$u = 1.021630 - 0.404588I$ $a = -1.80591 - 0.17101I$ $b = -2.35188 + 0.35534I$	$-1.56593 + 11.13020I$	0
$u = 0.494596 + 0.746564I$ $a = 0.04206 - 1.46230I$ $b = 0.846040 - 0.356835I$	$0.07980 + 6.70477I$	0
$u = 0.494596 - 0.746564I$ $a = 0.04206 + 1.46230I$ $b = 0.846040 + 0.356835I$	$0.07980 - 6.70477I$	0
$u = 0.409772 + 0.792393I$ $a = 0.659545 + 0.416504I$ $b = -0.094912 + 0.880997I$	$-0.62119 - 2.88256I$	0
$u = 0.409772 - 0.792393I$ $a = 0.659545 - 0.416504I$ $b = -0.094912 - 0.880997I$	$-0.62119 + 2.88256I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.439928+1.017320I$ $a=\ \ 0.469839+0.363233I$ $b=\ \ 0.101180+0.549735I$	$1.16243+3.40220I$	0
$u=-0.439928-1.017320I$ $a=\ \ 0.469839-0.363233I$ $b=\ \ 0.101180-0.549735I$	$1.16243-3.40220I$	0
$u=-0.473109+0.745843I$ $a=-0.989975+0.029769I$ $b=\ \ 0.1102610+0.0785284I$	$-0.03558+2.02814I$	0
$u=-0.473109-0.745843I$ $a=-0.989975-0.029769I$ $b=\ \ 0.1102610-0.0785284I$	$-0.03558-2.02814I$	0
$u=\ \ 0.122766+0.871575I$ $a=-0.547664+0.475647I$ $b=\ \ 0.110992+0.599971I$	$1.00419+2.17891I$	0
$u=\ \ 0.122766-0.871575I$ $a=-0.547664-0.475647I$ $b=\ \ 0.110992-0.599971I$	$1.00419-2.17891I$	0
$u=-0.872659+0.021473I$ $a=\ \ 0.955023+0.863297I$ $b=\ \ 1.61678+1.28554I$	$0.544965-0.181606I$	0
$u=-0.872659-0.021473I$ $a=\ \ 0.955023-0.863297I$ $b=\ \ 1.61678-1.28554I$	$0.544965+0.181606I$	0
$u=\ \ 1.061940+0.387693I$ $a=\ \ 0.752968+0.326112I$ $b=\ \ 1.68899+0.74071I$	$2.65927-3.49415I$	0
$u=\ \ 1.061940-0.387693I$ $a=\ \ 0.752968-0.326112I$ $b=\ \ 1.68899-0.74071I$	$2.65927+3.49415I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.029820+0.471134I$ $a=-0.695018+0.627876I$ $b=-2.05239+0.07516I$	$-4.91072+2.60056I$	0
$u=-1.029820-0.471134I$ $a=-0.695018-0.627876I$ $b=-2.05239-0.07516I$	$-4.91072-2.60056I$	0
$u=-1.042850+0.445106I$ $a=-1.117350+0.501463I$ $b=-0.974232+0.390855I$	$-2.44187+5.72625I$	0
$u=-1.042850-0.445106I$ $a=-1.117350-0.501463I$ $b=-0.974232-0.390855I$	$-2.44187-5.72625I$	0
$u=-0.313703+0.804817I$ $a=-0.642167+0.426873I$ $b=0.155789+0.796728I$	$-0.232400-0.983727I$	0
$u=-0.313703-0.804817I$ $a=-0.642167-0.426873I$ $b=0.155789-0.796728I$	$-0.232400+0.983727I$	0
$u=-1.135020+0.096203I$ $a=1.39768-1.41526I$ $b=2.03788-1.09850I$	$-3.52324+2.42981I$	0
$u=-1.135020-0.096203I$ $a=1.39768+1.41526I$ $b=2.03788+1.09850I$	$-3.52324-2.42981I$	0
$u=-1.094990+0.347334I$ $a=-0.614598+0.358300I$ $b=-2.47322+0.66744I$	$-2.12331+12.08440I$	0
$u=-1.094990-0.347334I$ $a=-0.614598-0.358300I$ $b=-2.47322-0.66744I$	$-2.12331-12.08440I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.087640 + 0.370755I$ $a = 0.658927 + 0.390268I$ $b = 2.25881 + 0.57503I$	$0.45219 - 6.49738I$	0
$u = 1.087640 - 0.370755I$ $a = 0.658927 - 0.390268I$ $b = 2.25881 - 0.57503I$	$0.45219 + 6.49738I$	0
$u = -0.383925 + 0.758280I$ $a = -0.949582 + 0.691523I$ $b = 0.0585502 - 0.0482950I$	$3.66110 + 5.98563I$	0
$u = -0.383925 - 0.758280I$ $a = -0.949582 - 0.691523I$ $b = 0.0585502 + 0.0482950I$	$3.66110 - 5.98563I$	0
$u = -1.150780 + 0.071912I$ $a = -0.446515 + 0.363356I$ $b = -1.26845 - 1.89681I$	$-8.05622 + 2.42918I$	0
$u = -1.150780 - 0.071912I$ $a = -0.446515 - 0.363356I$ $b = -1.26845 + 1.89681I$	$-8.05622 - 2.42918I$	0
$u = 0.523690 + 0.664837I$ $a = 0.656045 + 0.384686I$ $b = 0.151256 + 0.873918I$	$-0.63709 + 1.91849I$	0
$u = 0.523690 - 0.664837I$ $a = 0.656045 - 0.384686I$ $b = 0.151256 - 0.873918I$	$-0.63709 - 1.91849I$	0
$u = 0.077307 + 1.152530I$ $a = -0.610762 + 0.832657I$ $b = -0.1026890 + 0.0288167I$	$-6.59732 - 6.52254I$	0
$u = 0.077307 - 1.152530I$ $a = -0.610762 - 0.832657I$ $b = -0.1026890 - 0.0288167I$	$-6.59732 + 6.52254I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.157490 + 0.074157I$ $a = -0.895828 + 0.135122I$ $b = -2.06913 - 0.93311I$	$-4.87734 - 1.50235I$	0
$u = 1.157490 - 0.074157I$ $a = -0.895828 - 0.135122I$ $b = -2.06913 + 0.93311I$	$-4.87734 + 1.50235I$	0
$u = 0.512743 + 0.655907I$ $a = 1.290390 + 0.139531I$ $b = 0.0081725 + 0.1250560I$	$-0.99697 - 6.30001I$	0
$u = 0.512743 - 0.655907I$ $a = 1.290390 - 0.139531I$ $b = 0.0081725 - 0.1250560I$	$-0.99697 + 6.30001I$	0
$u = 0.358868 + 0.747225I$ $a = 0.912763 + 0.764350I$ $b = 0.0315625 - 0.0820181I$	$4.83309 - 0.72593I$	0
$u = 0.358868 - 0.747225I$ $a = 0.912763 - 0.764350I$ $b = 0.0315625 + 0.0820181I$	$4.83309 + 0.72593I$	0
$u = -1.171230 + 0.078145I$ $a = -1.23232 - 1.98992I$ $b = -1.71566 - 1.63366I$	$-3.09865 + 4.77084I$	0
$u = -1.171230 - 0.078145I$ $a = -1.23232 + 1.98992I$ $b = -1.71566 + 1.63366I$	$-3.09865 - 4.77084I$	0
$u = 1.145480 + 0.264663I$ $a = 0.824884 + 0.488640I$ $b = 1.45286 - 0.24358I$	$-2.18439 - 4.50657I$	0
$u = 1.145480 - 0.264663I$ $a = 0.824884 - 0.488640I$ $b = 1.45286 + 0.24358I$	$-2.18439 + 4.50657I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.178790 + 0.109097I$ $a = 1.03810 - 1.91406I$ $b = 1.61342 - 1.50768I$	$-5.16369 - 10.73600I$	0
$u = 1.178790 - 0.109097I$ $a = 1.03810 + 1.91406I$ $b = 1.61342 + 1.50768I$	$-5.16369 + 10.73600I$	0
$u = 0.350762 + 0.736423I$ $a = 0.824471 + 1.077340I$ $b = 0.476660 - 0.249754I$	$2.71377 + 2.34753I$	0
$u = 0.350762 - 0.736423I$ $a = 0.824471 - 1.077340I$ $b = 0.476660 + 0.249754I$	$2.71377 - 2.34753I$	0
$u = -0.074986 + 1.184210I$ $a = 0.611288 + 0.771304I$ $b = -0.0221398 + 0.0372648I$	$-0.18248 + 9.21724I$	0
$u = -0.074986 - 1.184210I$ $a = 0.611288 - 0.771304I$ $b = -0.0221398 - 0.0372648I$	$-0.18248 - 9.21724I$	0
$u = -1.182310 + 0.109853I$ $a = 0.980182 + 0.264074I$ $b = 2.24126 - 0.83390I$	$-6.13126 + 5.46331I$	0
$u = -1.182310 - 0.109853I$ $a = 0.980182 - 0.264074I$ $b = 2.24126 + 0.83390I$	$-6.13126 - 5.46331I$	0
$u = 0.084791 + 1.190600I$ $a = -0.633586 + 0.768477I$ $b = 0.0385920 - 0.0115308I$	$-2.2740 - 15.0260I$	0
$u = 0.084791 - 1.190600I$ $a = -0.633586 - 0.768477I$ $b = 0.0385920 + 0.0115308I$	$-2.2740 + 15.0260I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.521370+0.614871I$ $a=-0.14023-1.66409I$ $b=-0.805733-0.557452I$	$1.10086-1.82815I$	0
$u=-0.521370-0.614871I$ $a=-0.14023+1.66409I$ $b=-0.805733+0.557452I$	$1.10086+1.82815I$	0
$u=1.191350+0.124175I$ $a=0.608850+0.381822I$ $b=1.61182-1.21452I$	$-3.52865-5.52089I$	0
$u=1.191350-0.124175I$ $a=0.608850-0.381822I$ $b=1.61182+1.21452I$	$-3.52865+5.52089I$	0
$u=1.199570+0.020586I$ $a=-0.950215-0.946839I$ $b=-1.96369-0.36176I$	$-6.97409+1.38401I$	0
$u=1.199570-0.020586I$ $a=-0.950215+0.946839I$ $b=-1.96369+0.36176I$	$-6.97409-1.38401I$	0
$u=0.009940+1.202340I$ $a=0.152701-0.721877I$ $b=-0.162865+0.233313I$	$-3.37095+1.01527I$	0
$u=0.009940-1.202340I$ $a=0.152701+0.721877I$ $b=-0.162865-0.233313I$	$-3.37095-1.01527I$	0
$u=-0.006295+1.206770I$ $a=0.414908+0.867625I$ $b=0.130140+0.293336I$	$0.77508+4.01705I$	0
$u=-0.006295-1.206770I$ $a=0.414908-0.867625I$ $b=0.130140-0.293336I$	$0.77508-4.01705I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.214870+0.084740I$ $a=\ \ 0.885085+0.447815I$ $b=\ \ 2.17241-0.50810I$	$-7.02455-0.37232I$	0
$u=-1.214870-0.084740I$ $a=\ \ 0.885085-0.447815I$ $b=\ \ 2.17241+0.50810I$	$-7.02455+0.37232I$	0
$u=\ \ 1.136840+0.448961I$ $a=-0.039366+0.246237I$ $b=-0.894431-0.344364I$	$-2.02741-7.04890I$	0
$u=\ \ 1.136840-0.448961I$ $a=-0.039366-0.246237I$ $b=-0.894431+0.344364I$	$-2.02741+7.04890I$	0
$u=\ \ 1.222220+0.038878I$ $a=-0.665158+0.138449I$ $b=-1.83516-0.86764I$	$-5.17211-1.79123I$	0
$u=\ \ 1.222220-0.038878I$ $a=-0.665158-0.138449I$ $b=-1.83516+0.86764I$	$-5.17211+1.79123I$	0
$u=-1.179980+0.332676I$ $a=-0.979830+0.385264I$ $b=-1.39508+0.31645I$	$-2.90773+1.67823I$	0
$u=-1.179980-0.332676I$ $a=-0.979830-0.385264I$ $b=-1.39508-0.31645I$	$-2.90773-1.67823I$	0
$u=-1.222950+0.098574I$ $a=-0.611746+0.306596I$ $b=-1.91149-1.35410I$	$-5.88701+10.52240I$	0
$u=-1.222950-0.098574I$ $a=-0.611746-0.306596I$ $b=-1.91149+1.35410I$	$-5.88701-10.52240I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.337983+0.683082I$ $a=-0.90210+1.18684I$ $b=-0.508297-0.479779I$	$0.15922-8.16631I$	0
$u=-0.337983-0.683082I$ $a=-0.90210-1.18684I$ $b=-0.508297+0.479779I$	$0.15922+8.16631I$	0
$u=1.232460+0.170914I$ $a=-1.40923-0.77204I$ $b=-2.36457-0.75685I$	$-7.17036-6.09836I$	0
$u=1.232460-0.170914I$ $a=-1.40923+0.77204I$ $b=-2.36457+0.75685I$	$-7.17036+6.09836I$	0
$u=1.247090+0.055355I$ $a=1.23653-1.45284I$ $b=1.81286-1.27652I$	$-9.93442-2.22963I$	0
$u=1.247090-0.055355I$ $a=1.23653+1.45284I$ $b=1.81286+1.27652I$	$-9.93442+2.22963I$	0
$u=1.259070+0.111332I$ $a=-0.487282+0.213669I$ $b=-1.63698-0.76567I$	$-5.41124-1.66385I$	0
$u=1.259070-0.111332I$ $a=-0.487282-0.213669I$ $b=-1.63698+0.76567I$	$-5.41124+1.66385I$	0
$u=-0.553673+0.474572I$ $a=-0.599887+0.333001I$ $b=-0.399140+0.634231I$	$-0.22539+1.84351I$	0
$u=-0.553673-0.474572I$ $a=-0.599887-0.333001I$ $b=-0.399140-0.634231I$	$-0.22539-1.84351I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.461654+0.558096I$ $a=-0.650106+0.513933I$ $b=\ \ 0.095947+0.375961I$	$-0.22902+1.47887I$	0
$u=-0.461654-0.558096I$ $a=-0.650106-0.513933I$ $b=\ \ 0.095947-0.375961I$	$-0.22902-1.47887I$	0
$u=-1.279310+0.047906I$ $a=-1.38215+0.74820I$ $b=-1.88606+0.71650I$	$-3.66448+0.68864I$	0
$u=-1.279310-0.047906I$ $a=-1.38215-0.74820I$ $b=-1.88606-0.71650I$	$-3.66448-0.68864I$	0
$u=-1.299630+0.079845I$ $a=\ \ 0.585065+0.006843I$ $b=\ \ 1.76128+0.99090I$	$-7.48248+1.01387I$	0
$u=-1.299630-0.079845I$ $a=\ \ 0.585065-0.006843I$ $b=\ \ 1.76128-0.99090I$	$-7.48248-1.01387I$	0
$u=-1.347770+0.042179I$ $a=\ \ 0.502688+0.054756I$ $b=\ \ 1.66603-0.97379I$	$-6.85153+5.21485I$	0
$u=-1.347770-0.042179I$ $a=\ \ 0.502688-0.054756I$ $b=\ \ 1.66603+0.97379I$	$-6.85153-5.21485I$	0
$u=\ \ 1.352340+0.019957I$ $a=\ \ 1.002800+0.867738I$ $b=\ \ 1.56720+0.87016I$	$-5.93701-6.27570I$	0
$u=\ \ 1.352340-0.019957I$ $a=\ \ 1.002800-0.867738I$ $b=\ \ 1.56720-0.87016I$	$-5.93701+6.27570I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.311700 + 0.469067I$ $a = -0.609227 + 0.018349I$ $b = -1.48382 + 0.51985I$	$-7.59726 - 0.05302I$	0
$u = 1.311700 - 0.469067I$ $a = -0.609227 - 0.018349I$ $b = -1.48382 - 0.51985I$	$-7.59726 + 0.05302I$	0
$u = 1.319020 + 0.487375I$ $a = -1.136060 - 0.088242I$ $b = -2.16649 - 0.55772I$	$-5.69234 - 6.96557I$	0
$u = 1.319020 - 0.487375I$ $a = -1.136060 + 0.088242I$ $b = -2.16649 + 0.55772I$	$-5.69234 + 6.96557I$	0
$u = 1.32202 + 0.51370I$ $a = 0.977648 - 0.376818I$ $b = 1.62556 - 0.30335I$	$-5.90649 - 7.98073I$	0
$u = 1.32202 - 0.51370I$ $a = 0.977648 + 0.376818I$ $b = 1.62556 + 0.30335I$	$-5.90649 + 7.98073I$	0
$u = -1.39490 + 0.29190I$ $a = 1.138630 - 0.515829I$ $b = 2.25135 - 0.91332I$	$-7.73023 + 4.29582I$	0
$u = -1.39490 - 0.29190I$ $a = 1.138630 + 0.515829I$ $b = 2.25135 + 0.91332I$	$-7.73023 - 4.29582I$	0
$u = 1.37105 + 0.42048I$ $a = -1.081160 - 0.264992I$ $b = -2.08465 - 0.67973I$	$-5.87340 - 7.08858I$	0
$u = 1.37105 - 0.42048I$ $a = -1.081160 + 0.264992I$ $b = -2.08465 + 0.67973I$	$-5.87340 + 7.08858I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.35398+0.54659I$ $a=\ \ 1.037700+0.010983I$ $b=\ \ 2.18551-0.46064I$	$-7.02366+10.93540I$	0
$u=-1.35398-0.54659I$ $a=\ \ 1.037700-0.010983I$ $b=\ \ 2.18551+0.46064I$	$-7.02366-10.93540I$	0
$u=-1.39012+0.46177I$ $a=-0.983149-0.103026I$ $b=-1.56692-0.06387I$	$-4.12378+1.84628I$	0
$u=-1.39012-0.46177I$ $a=-0.983149+0.103026I$ $b=-1.56692+0.06387I$	$-4.12378-1.84628I$	0
$u=\ \ 0.077822+0.517192I$ $a=-0.042973+1.153600I$ $b=\ \ 0.442844+0.516492I$	$0.79313+1.54992I$	0
$u=\ \ 0.077822-0.517192I$ $a=-0.042973-1.153600I$ $b=\ \ 0.442844-0.516492I$	$0.79313-1.54992I$	0
$u=\ \ 1.38794+0.52494I$ $a=\ \ 1.151980+0.364855I$ $b=\ \ 2.03780+0.50960I$	$-3.74007-9.98254I$	0
$u=\ \ 1.38794-0.52494I$ $a=\ \ 1.151980-0.364855I$ $b=\ \ 2.03780-0.50960I$	$-3.74007+9.98254I$	0
$u=-1.35907+0.60513I$ $a=-1.175010+0.561048I$ $b=-2.01499+0.38181I$	$-5.44353+2.80424I$	0
$u=-1.35907-0.60513I$ $a=-1.175010-0.561048I$ $b=-2.01499-0.38181I$	$-5.44353-2.80424I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.40097+0.51596I$ $a=-1.101200+0.346640I$ $b=-2.20239+0.57007I$	$-11.2687+12.3565I$	0
$u=-1.40097-0.51596I$ $a=-1.101200-0.346640I$ $b=-2.20239-0.57007I$	$-11.2687-12.3565I$	0
$u=-1.37195+0.59278I$ $a=\ \ 0.587596-0.055233I$ $b=\ \ 1.264170+0.153162I$	$-4.72161+4.05361I$	0
$u=-1.37195-0.59278I$ $a=\ \ 0.587596+0.055233I$ $b=\ \ 1.264170-0.153162I$	$-4.72161-4.05361I$	0
$u=\ \ 1.40620+0.53059I$ $a=\ \ 1.113250+0.329635I$ $b=\ \ 2.17755+0.67040I$	$-4.8525-15.1923I$	0
$u=\ \ 1.40620-0.53059I$ $a=\ \ 1.113250-0.329635I$ $b=\ \ 2.17755-0.67040I$	$-4.8525+15.1923I$	0
$u=-1.47078+0.33869I$ $a=\ \ 0.982642-0.510574I$ $b=\ \ 2.02199-1.05158I$	$-7.22827+10.15400I$	0
$u=-1.47078-0.33869I$ $a=\ \ 0.982642+0.510574I$ $b=\ \ 2.02199+1.05158I$	$-7.22827-10.15400I$	0
$u=-1.41339+0.53128I$ $a=-1.108950+0.323663I$ $b=-2.21661+0.69429I$	$-6.9974+21.0296I$	0
$u=-1.41339-0.53128I$ $a=-1.108950-0.323663I$ $b=-2.21661-0.69429I$	$-6.9974-21.0296I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.41657+0.52796I$ $a=\ 0.894339-0.034315I$ $b=\ 2.04741-0.31774I$	$-7.99671+5.07222I$	0
$u=-1.41657-0.52796I$ $a=\ 0.894339+0.034315I$ $b=\ 2.04741+0.31774I$	$-7.99671-5.07222I$	0
$u=\ 1.42832+0.51696I$ $a=-0.707537-0.038113I$ $b=-1.72162+0.02398I$	$-8.05429-7.15608I$	0
$u=\ 1.42832-0.51696I$ $a=-0.707537+0.038113I$ $b=-1.72162-0.02398I$	$-8.05429+7.15608I$	0
$u=\ 1.48600+0.40235I$ $a=-0.881448-0.423908I$ $b=-1.79299-0.92209I$	$-6.16462-6.52287I$	0
$u=\ 1.48600-0.40235I$ $a=-0.881448+0.423908I$ $b=-1.79299+0.92209I$	$-6.16462+6.52287I$	0
$u=\ 0.329528+0.311108I$ $a=\ 2.64729-0.01620I$ $b=\ 0.202174-0.266844I$	$-2.28250-1.41843I$	$-10.96887+3.04728I$
$u=\ 0.329528-0.311108I$ $a=\ 2.64729+0.01620I$ $b=\ 0.202174+0.266844I$	$-2.28250+1.41843I$	$-10.96887-3.04728I$
$u=\ 1.46134+0.56591I$ $a=\ 0.675399-0.199345I$ $b=\ 1.298770-0.275770I$	$-10.94210+0.13111I$	0
$u=\ 1.46134-0.56591I$ $a=\ 0.675399+0.199345I$ $b=\ 1.298770+0.275770I$	$-10.94210-0.13111I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.54826+0.54683I$ $a=-0.575383-0.080483I$ $b=-1.111390-0.198391I$	$-4.75456-2.53354I$	0
$u=-1.54826-0.54683I$ $a=-0.575383+0.080483I$ $b=-1.111390+0.198391I$	$-4.75456+2.53354I$	0
$u=\ \ 1.58891+0.50038I$ $a=-0.589038-0.384733I$ $b=-1.138810-0.782176I$	$-3.39578-10.81060I$	0
$u=\ \ 1.58891-0.50038I$ $a=-0.589038+0.384733I$ $b=-1.138810+0.782176I$	$-3.39578+10.81060I$	0
$u=\ \ 1.55817+0.58962I$ $a=\ \ 0.523360-0.123280I$ $b=\ \ 1.070320-0.289966I$	$-6.74069+8.23797I$	0
$u=\ \ 1.55817-0.58962I$ $a=\ \ 0.523360+0.123280I$ $b=\ \ 1.070320+0.289966I$	$-6.74069-8.23797I$	0
$u=-1.57877+0.55933I$ $a=\ \ 0.550205-0.299586I$ $b=\ \ 1.069390-0.562308I$	$-2.39409+5.65869I$	0
$u=-1.57877-0.55933I$ $a=\ \ 0.550205+0.299586I$ $b=\ \ 1.069390+0.562308I$	$-2.39409-5.65869I$	0
$u=-0.244994+0.019428I$ $a=\ \ 2.82334-1.75655I$ $b=-0.720345+1.197780I$	$-5.53952-1.76841I$	$-6.31054+0.53214I$
$u=-0.244994-0.019428I$ $a=\ \ 2.82334+1.75655I$ $b=-0.720345-1.197780I$	$-5.53952+1.76841I$	$-6.31054-0.53214I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.220248+0.058584I$ $a=-2.06030-3.56868I$ $b=-0.018963-0.770201I$	$-1.06632-1.46141I$	$-4.65838+2.99597I$
$u=-0.220248-0.058584I$ $a=-2.06030+3.56868I$ $b=-0.018963+0.770201I$	$-1.06632+1.46141I$	$-4.65838-2.99597I$
$u=-0.136256+0.050619I$ $a=-7.86888+1.63778I$ $b=-0.201382-0.626587I$	$-3.04957+4.66149I$	$-12.8011-6.5761I$
$u=-0.136256-0.050619I$ $a=-7.86888-1.63778I$ $b=-0.201382+0.626587I$	$-3.04957-4.66149I$	$-12.8011+6.5761I$
$u=-0.0073798+0.1121080I$ $a=\ \ 1.72286-8.23141I$ $b=-0.076112+0.803118I$	$-3.48377+1.26062I$	$-14.5556-1.8178I$
$u=-0.0073798-0.1121080I$ $a=\ \ 1.72286+8.23141I$ $b=-0.076112-0.803118I$	$-3.48377-1.26062I$	$-14.5556+1.8178I$
$u=-0.0530995+0.0941323I$ $a=\ \ 0.84618+9.22200I$ $b=\ \ 0.873013+1.012040I$	$-0.00983+4.32982I$	$-0.237716-1.379884I$
$u=-0.0530995-0.0941323I$ $a=\ \ 0.84618-9.22200I$ $b=\ \ 0.873013-1.012040I$	$-0.00983-4.32982I$	$-0.237716+1.379884I$
$u=\ \ 0.0894092+0.0264817I$ $a=-11.35930-2.50398I$ $b=-0.91861-1.11978I$	$-2.05940+9.80001I$	$-2.85598-5.19981I$
$u=\ \ 0.0894092-0.0264817I$ $a=-11.35930+2.50398I$ $b=-0.91861+1.11978I$	$-2.05940-9.80001I$	$-2.85598+5.19981I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.16005+1.96875I$ $a=-0.032187-0.195560I$ $b=\ \ 0.0105251-0.0206240I$	$3.42714+2.86954I$	0
$u=-0.16005-1.96875I$ $a=-0.032187+0.195560I$ $b=\ \ 0.0105251+0.0206240I$	$3.42714-2.86954I$	0

II.

$\boldsymbol{I_2^u = \langle -1.16\times 10^{33}u^{42} - 1.70\times 10^{33}u^{41} + \cdots + 2.11\times 10^{32}b - 1.33\times 10^{33},\ -1.29\times 10^{33}u^{42} + 1.62\times 10^{32}u^{41} + \cdots + 2.11\times 10^{32}a - 6.37\times 10^{33},\ u^{43} + u^{42} + \cdots + 2u + 1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 6.08938u^{42} - 0.766824u^{41} + \cdots - 31.8497u + 30.1034 \\ 5.47783u^{42} + 8.05062u^{41} + \cdots - 16.3644u + 6.28948 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -11.6126u^{42} - 11.7491u^{41} + \cdots + 55.7010u - 26.7564 \\ -2.53628u^{42} - 1.15504u^{41} + \cdots + 14.9692u - 10.3714 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -2.64422u^{42} - 18.4919u^{41} + \cdots - 7.86228u + 30.6701 \\ -5.19016u^{42} - 16.9115u^{41} + \cdots + 10.3522u + 15.2810 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} -1.37536u^{42} - 19.1784u^{41} + \cdots - 13.6032u + 39.5324 \\ -1.98691u^{42} - 10.3609u^{41} + \cdots + 1.88209u + 15.7185 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -5.79164u^{42} + 6.04583u^{41} + \cdots + 27.8521u - 48.5369 \\ -0.473205u^{42} + 5.61577u^{41} + \cdots + 9.24257u - 18.5165 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 10.8379u^{42} + 7.04368u^{41} + \cdots - 51.2332u + 35.4218 \\ 6.31427u^{42} + 8.49903u^{41} + \cdots - 21.1023u + 11.1387 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.275980u^{42} + 7.73119u^{41} + \cdots + 5.59083u - 28.0925 \\ 0.492532u^{42} + 4.72372u^{41} + \cdots + 2.85792u - 10.9713 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -12.4950u^{42} - 4.85510u^{41} + \cdots + 52.5668u - 49.4783 \\ -2.07591u^{42} + 4.38430u^{41} + \cdots + 11.6898u - 21.5923 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -10.8171u^{42} - 22.5095u^{41} + \cdots + 7.87998u + 8.10939$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{43} - 21u^{42} + \cdots - 28u + 1$
c_2	$u^{43} - u^{42} + \cdots - 2u - 1$
c_3	$u^{43} + 10u^{41} + \cdots + 46u - 19$
c_4	$u^{43} + u^{42} + \cdots + 2u + 1$
c_5	$u^{43} + u^{42} + \cdots + 5u - 1$
c_6	$u^{43} + u^{42} + \cdots - 2u + 1$
c_7	$u^{43} + 5u^{42} + \cdots + u - 1$
c_8	$u^{43} - 19u^{42} + \cdots + 20u - 1$
c_9	$u^{43} + 17u^{42} + \cdots - 2u + 1$
c_{10}	$u^{43} + 4u^{42} + \cdots + 12u - 1$
c_{11}	$u^{43} - u^{42} + \cdots + 2u - 1$
c_{12}	$u^{43} - 2u^{42} + \cdots + 26u - 5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{43} + 17y^{42} + \cdots + 12y - 1$
c_2, c_6	$y^{43} + 21y^{42} + \cdots - 28y - 1$
c_3	$y^{43} + 20y^{42} + \cdots - 11906y - 361$
c_4, c_{11}	$y^{43} - 25y^{42} + \cdots + 20y - 1$
c_5	$y^{43} - 7y^{42} + \cdots - 55y - 1$
c_7	$y^{43} + 29y^{42} + \cdots + 29y - 1$
c_8	$y^{43} - 11y^{42} + \cdots + 46y - 1$
c_9	$y^{43} - 17y^{42} + \cdots - 12y - 1$
c_{10}	$y^{43} - 12y^{42} + \cdots + 146y - 1$
c_{12}	$y^{43} - 14y^{42} + \cdots + 866y - 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.565151+0.800616I$ $a=-0.185627+0.542499I$ $b=\ \ 0.274493+0.668369I$	$-0.686696+0.673462I$	$-5.67919+1.84612I$
$u=-0.565151-0.800616I$ $a=-0.185627-0.542499I$ $b=\ \ 0.274493-0.668369I$	$-0.686696-0.673462I$	$-5.67919-1.84612I$
$u=\ \ 0.914332+0.229073I$ $a=\ \ 1.050760-0.761962I$ $b=\ \ 2.18027-0.99698I$	$-3.07780-10.54400I$	$-7.92431+8.70011I$
$u=\ \ 0.914332-0.229073I$ $a=\ \ 1.050760+0.761962I$ $b=\ \ 2.18027+0.99698I$	$-3.07780+10.54400I$	$-7.92431-8.70011I$
$u=-0.917630+0.211655I$ $a=-1.41256-0.56579I$ $b=-2.22258-0.87483I$	$-1.05238+4.95322I$	$-6.38591-4.44936I$
$u=-0.917630-0.211655I$ $a=-1.41256+0.56579I$ $b=-2.22258+0.87483I$	$-1.05238-4.95322I$	$-6.38591+4.44936I$
$u=\ \ 0.887205+0.201480I$ $a=\ \ 0.830229-0.066285I$ $b=\ \ 1.73340-1.40424I$	$-6.39188-2.42893I$	$-11.24732+5.26931I$
$u=\ \ 0.887205-0.201480I$ $a=\ \ 0.830229+0.066285I$ $b=\ \ 1.73340+1.40424I$	$-6.39188+2.42893I$	$-11.24732-5.26931I$
$u=-0.196540+1.135610I$ $a=-0.492451-0.676345I$ $b=-0.137904-0.282759I$	$0.71795+3.69642I$	$-9.20992+0.I$
$u=-0.196540-1.135610I$ $a=-0.492451+0.676345I$ $b=-0.137904+0.282759I$	$0.71795-3.69642I$	$-9.20992+0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.126640+0.320280I$ $a=-0.831118+0.686523I$ $b=-0.912029+0.260840I$	$-2.44112+3.38307I$	$-5.07283-4.00845I$
$u=-1.126640-0.320280I$ $a=-0.831118-0.686523I$ $b=-0.912029-0.260840I$	$-2.44112-3.38307I$	$-5.07283+4.00845I$
$u=1.197860+0.008892I$ $a=-0.379046-0.493992I$ $b=-0.405921+0.960135I$	$-7.97372+1.44568I$	$-12.67725+0.I$
$u=1.197860-0.008892I$ $a=-0.379046+0.493992I$ $b=-0.405921-0.960135I$	$-7.97372-1.44568I$	$-12.67725+0.I$
$u=-1.196420+0.113382I$ $a=0.646564+0.031567I$ $b=2.36000-0.87609I$	$-6.25020+1.44230I$	$-16.0171-3.2552I$
$u=-1.196420-0.113382I$ $a=0.646564-0.031567I$ $b=2.36000+0.87609I$	$-6.25020-1.44230I$	$-16.0171+3.2552I$
$u=-0.011133+0.758671I$ $a=0.430596-0.830453I$ $b=0.030419+0.422050I$	$-2.25228+1.16332I$	$-5.50591-1.22848I$
$u=-0.011133-0.758671I$ $a=0.430596+0.830453I$ $b=0.030419-0.422050I$	$-2.25228-1.16332I$	$-5.50591+1.22848I$
$u=-1.268520+0.067807I$ $a=0.136821+0.967894I$ $b=0.026150+0.431672I$	$-2.96494+3.70265I$	0
$u=-1.268520-0.067807I$ $a=0.136821-0.967894I$ $b=0.026150-0.431672I$	$-2.96494-3.70265I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.27569$ $a=\ \ 1.38622$ $b=\ \ 2.07324$	-4.00337	-13.2720
$u=-0.047233+0.717801I$ $a=\ \ 0.73180-1.30877I$ $b=-0.307807+0.084455I$	$-2.11862-4.88343I$	$-2.05264+6.77099I$
$u=-0.047233-0.717801I$ $a=\ \ 0.73180+1.30877I$ $b=-0.307807-0.084455I$	$-2.11862+4.88343I$	$-2.05264-6.77099I$
$u=\ \ 1.297710+0.049111I$ $a=-0.958357+0.058286I$ $b=-2.23720-0.24341I$	$-7.42479-3.50502I$	0
$u=\ \ 1.297710-0.049111I$ $a=-0.958357-0.058286I$ $b=-2.23720+0.24341I$	$-7.42479+3.50502I$	0
$u=\ \ 1.330900+0.006653I$ $a=-0.134334-0.718223I$ $b=\ \ 0.230826-0.150354I$	$-4.95626+8.95445I$	0
$u=\ \ 1.330900-0.006653I$ $a=-0.134334+0.718223I$ $b=\ \ 0.230826+0.150354I$	$-4.95626-8.95445I$	0
$u=\ \ 0.044207+0.632858I$ $a=-0.97806-1.46172I$ $b=\ \ 0.429288-0.128050I$	$-1.48097+1.36518I$	$0.320270+0.970120I$
$u=\ \ 0.044207-0.632858I$ $a=-0.97806+1.46172I$ $b=\ \ 0.429288+0.128050I$	$-1.48097-1.36518I$	$0.320270-0.970120I$
$u=-1.31304+0.58058I$ $a=\ \ 1.096960-0.552633I$ $b=\ \ 2.00716-0.36957I$	$-5.36677+2.82669I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.31304-0.58058I$ $a=1.096960+0.552633I$ $b=2.00716+0.36957I$	$-5.36677-2.82669I$	0
$u=-1.41096+0.40220I$ $a=0.979847-0.277139I$ $b=2.09731-0.73887I$	$-6.82418+9.25279I$	0
$u=-1.41096-0.40220I$ $a=0.979847+0.277139I$ $b=2.09731+0.73887I$	$-6.82418-9.25279I$	0
$u=1.40238+0.47077I$ $a=-1.055200-0.221287I$ $b=-1.83349-0.51367I$	$-4.54693-9.04995I$	0
$u=1.40238-0.47077I$ $a=-1.055200+0.221287I$ $b=-1.83349+0.51367I$	$-4.54693+9.04995I$	0
$u=1.42623+0.42710I$ $a=-0.983914-0.267954I$ $b=-1.97665-0.77167I$	$-6.24794-5.75781I$	0
$u=1.42623-0.42710I$ $a=-0.983914+0.267954I$ $b=-1.97665+0.77167I$	$-6.24794+5.75781I$	0
$u=-0.310676+0.013099I$ $a=-1.66167+3.52268I$ $b=-0.597416+1.075280I$	$1.67338+0.10116I$	$4.79649-0.11122I$
$u=-0.310676-0.013099I$ $a=-1.66167-3.52268I$ $b=-0.597416-1.075280I$	$1.67338-0.10116I$	$4.79649+0.11122I$
$u=0.183489+0.205725I$ $a=-1.03544-4.14597I$ $b=0.688486-0.794377I$	$0.70925+5.27416I$	$1.94196-5.03576I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.183489 - 0.205725I$ $a = -1.03544 + 4.14597I$ $b = 0.688486 + 0.794377I$	$0.70925 - 5.27416I$	$1.94196 + 5.03576I$
$u = -0.18252 + 1.89544I$ $a = 0.011085 + 0.142621I$ $b = 0.036578 + 0.247131I$	$3.51628 + 2.83574I$	0
$u = -0.18252 - 1.89544I$ $a = 0.011085 - 0.142621I$ $b = 0.036578 - 0.247131I$	$3.51628 - 2.83574I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{43}-21u^{42}+\cdots-28u+1)(u^{182}+80u^{181}+\cdots-14u+1)$
c_2	$(u^{43}-u^{42}+\cdots-2u-1)(u^{182}+40u^{180}+\cdots+4u+1)$
c_3	$(u^{43}+10u^{41}+\cdots+46u-19)$ $\cdot(u^{182}+u^{181}+\cdots+173061562687u+50838216514)$
c_4	$(u^{43}+u^{42}+\cdots+2u+1)(u^{182}+2u^{181}+\cdots+18u+1)$
c_5	$(u^{43}+u^{42}+\cdots+5u-1)(u^{182}-6u^{180}+\cdots-29u+1)$
c_6	$(u^{43}+u^{42}+\cdots-2u+1)(u^{182}+40u^{180}+\cdots+4u+1)$
c_7	$(u^{43}+5u^{42}+\cdots+u-1)$ $\cdot(u^{182}+16u^{181}+\cdots+107815334379u+9487345129)$
c_8	$(u^{43}-19u^{42}+\cdots+20u-1)$ $\cdot(u^{182}+18u^{181}+\cdots+37740592u+2302703)$
c_9	$(u^{43}+17u^{42}+\cdots-2u+1)(u^{182}+8u^{181}+\cdots-16483u+704)$
c_{10}	$(u^{43}+4u^{42}+\cdots+12u-1)$ $\cdot(u^{182}+17u^{181}+\cdots+1894916324u+143269799)$
c_{11}	$(u^{43}-u^{42}+\cdots+2u-1)(u^{182}+2u^{181}+\cdots+18u+1)$
c_{12}	$(u^{43}-2u^{42}+\cdots+26u-5)$ $\cdot(u^{182}-u^{181}+\cdots-233173107u+23453042)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{43}+17y^{42}+\cdots+12y-1)(y^{182}+60y^{181}+\cdots-458y+1)$
c_2, c_6	$(y^{43}+21y^{42}+\cdots-28y-1)(y^{182}+80y^{181}+\cdots-14y+1)$
c_3	$(y^{43}+20y^{42}+\cdots-11906y-361)$ $\cdot(y^{182}+83y^{181}+\cdots+1.73\times10^{23}y+2.58\times10^{21})$
c_4, c_{11}	$(y^{43}-25y^{42}+\cdots+20y-1)(y^{182}-126y^{181}+\cdots-110y+1)$
c_5	$(y^{43}-7y^{42}+\cdots-55y-1)(y^{182}-12y^{181}+\cdots+393y+1)$
c_7	$(y^{43}+29y^{42}+\cdots+29y-1)$ $\cdot(y^{182}+100y^{181}+\cdots+4.51\times10^{21}y+9.00\times10^{19})$
c_8	$(y^{43}-11y^{42}+\cdots+46y-1)$ $\cdot(y^{182}-52y^{181}+\cdots-245956311483672y+5302441106209)$
c_9	$(y^{43}-17y^{42}+\cdots-12y-1)$ $\cdot(y^{182}-26y^{181}+\cdots-28999369y+495616)$
c_{10}	$(y^{43}-12y^{42}+\cdots+146y-1)$ $\cdot(y^{182}+35y^{181}+\cdots+2524246924058369408y+20526235305500401)$
c_{12}	$(y^{43}-14y^{42}+\cdots+866y-25)$ $\cdot(y^{182}-59y^{181}+\cdots-11000196487083765y+550045179053764)$