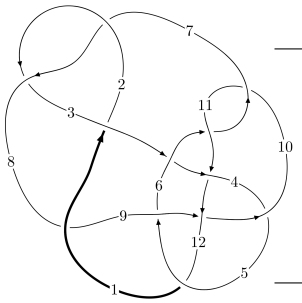
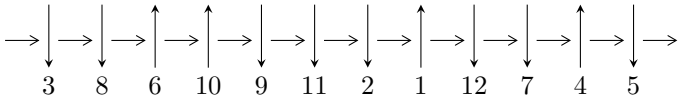
$12a_{0695}$ $(K12a_{0695})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -8.05911 \times 10^{332} u^{175} + 4.18234 \times 10^{332} u^{174} + \cdots + 1.15862 \times 10^{331} b - 1.72139 \times 10^{333},$$
$$4.55348 \times 10^{333} u^{175} - 2.30916 \times 10^{333} u^{174} + \cdots + 1.15862 \times 10^{331} a + 9.31822 \times 10^{333},\ u^{176} - u^{175} + \cdots + u \rangle$$
$$I_2^u = \langle -1320 u^{38} + 288 u^{37} + \cdots + 79 b - 520,\ -1681 u^{38} + 1253 u^{37} + \cdots + 79 a - 2010,$$
$$u^{39} - 11 u^{37} + \cdots - 7 u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 215 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. $\boldsymbol{I_1^u = \langle -8.06 \times 10^{332} u^{175} + 4.18 \times 10^{332} u^{174} + \cdots + 1.16 \times 10^{331} b - 1.72 \times 10^{333},\ 4.55 \times 10^{333} u^{175} - 2.31 \times 10^{333} u^{174} + \cdots + 1.16 \times 10^{331} a + 9.32 \times 10^{333},\ u^{176} - u^{175} + \cdots + u - 1 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^6 - u^4 + 1 \\ u^8 - 2u^6 + 2u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -393.011u^{175} + 199.304u^{174} + \cdots - 813.604u - 804.255 \\ 69.5581u^{175} - 36.0978u^{174} + \cdots + 168.780u + 148.573 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 80.7532u^{175} - 51.9642u^{174} + \cdots + 340.506u + 219.915 \\ -61.1617u^{175} + 32.3738u^{174} + \cdots - 165.021u - 130.889 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 142.500u^{175} - 69.2550u^{174} + \cdots + 214.426u + 268.079 \\ -25.5883u^{175} + 11.5078u^{174} + \cdots - 41.3361u - 48.0003 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -130.167u^{175} + 63.4849u^{174} + \cdots - 188.976u - 239.495 \\ 46.1287u^{175} - 22.1889u^{174} + \cdots + 93.4806u + 91.9512 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 23.0458u^{175} - 20.8010u^{174} + \cdots + 171.101u + 93.5464 \\ -65.4961u^{175} + 34.4807u^{174} + \cdots - 174.631u - 139.424 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -323.452u^{175} + 163.206u^{174} + \cdots - 644.825u - 655.682 \\ 69.5581u^{175} - 36.0978u^{174} + \cdots + 168.780u + 148.573 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 392.821u^{175} - 202.925u^{174} + \cdots + 886.971u + 824.892$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{176} + 91u^{175} + \cdots + 15u + 1$
c_2, c_7	$u^{176} - u^{175} + \cdots + u - 1$
c_3	$u^{176} - 7u^{175} + \cdots - 6680352u - 155647$
c_4	$u^{176} + u^{175} + \cdots - 2208u + 2592$
c_5	$u^{176} + 4u^{175} + \cdots - 28u + 1$
c_6, c_{10}	$u^{176} + 48u^{174} + \cdots + 26878u + 31907$
c_8	$u^{176} - 6u^{175} + \cdots + 22634157u - 2052171$
c_9	$u^{176} - 15u^{175} + \cdots + 55u - 1$
c_{11}	$u^{176} + 3u^{175} + \cdots - 39223u + 39029$
c_{12}	$u^{176} + 2u^{175} + \cdots + 58430u - 7292$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{176} + y^{175} + \cdots - 87y + 1$
c_2, c_7	$y^{176} - 91y^{175} + \cdots - 15y + 1$
c_3	$y^{176} - 23y^{175} + \cdots - 30510996087262y + 24225988609$
c_4	$y^{176} + y^{175} + \cdots + 583363584y + 6718464$
c_5	$y^{176} - 26y^{175} + \cdots + 92y + 1$
c_6, c_{10}	$y^{176} + 96y^{175} + \cdots + 33870568190y + 1018056649$
c_8	$y^{176} + 74y^{175} + \cdots - 184259306568177y + 4211405813241$
c_9	$y^{176} + 9y^{175} + \cdots - 417y + 1$
c_{11}	$y^{176} - 41y^{175} + \cdots - 26665548103y + 1523262841$
c_{12}	$y^{176} - 32y^{175} + \cdots - 4059654828y + 53173264$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.772084+0.631405I$ $a=\ \ 0.386729-0.478138I$ $b=-1.050600+0.015764I$	$1.75801+7.37531I$	0
$u=-0.772084-0.631405I$ $a=\ \ 0.386729+0.478138I$ $b=-1.050600-0.015764I$	$1.75801-7.37531I$	0
$u=-0.795396+0.611899I$ $a=-0.273713+0.895944I$ $b=\ \ 0.968103+0.184926I$	$1.69068-2.53258I$	0
$u=-0.795396-0.611899I$ $a=-0.273713-0.895944I$ $b=\ \ 0.968103-0.184926I$	$1.69068+2.53258I$	0
$u=-0.831404+0.564856I$ $a=\ \ 1.58196+2.22957I$ $b=-0.105424-1.183090I$	$5.96580+0.08209I$	0
$u=-0.831404-0.564856I$ $a=\ \ 1.58196-2.22957I$ $b=-0.105424+1.183090I$	$5.96580-0.08209I$	0
$u=\ \ 0.849290+0.512573I$ $a=-0.283240-0.874697I$ $b=\ \ 0.258320+0.238983I$	$1.91125-2.83680I$	0
$u=\ \ 0.849290-0.512573I$ $a=-0.283240+0.874697I$ $b=\ \ 0.258320-0.238983I$	$1.91125+2.83680I$	0
$u=\ \ 0.829391+0.601837I$ $a=\ \ 0.592729-1.265030I$ $b=\ \ 0.034321+0.795540I$	$2.03014-2.37634I$	0
$u=\ \ 0.829391-0.601837I$ $a=\ \ 0.592729+1.265030I$ $b=\ \ 0.034321-0.795540I$	$2.03014+2.37634I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.910137+0.253340I$		
$a=$	$1.16415-0.88953I$	$1.39492-3.24141I$	0
$b=$	$0.396738+1.048690I$		
$u=$	$0.910137-0.253340I$		
$a=$	$1.16415+0.88953I$	$1.39492+3.24141I$	0
$b=$	$0.396738-1.048690I$		
$u=$	$0.616520+0.706643I$		
$a=$	$0.43588-1.74272I$	$6.35204-1.82805I$	0
$b=$	$-0.41914+1.40025I$		
$u=$	$0.616520-0.706643I$		
$a=$	$0.43588+1.74272I$	$6.35204+1.82805I$	0
$b=$	$-0.41914-1.40025I$		
$u=$	$0.280512+0.887620I$		
$a=$	$0.19111+1.57165I$	$0.79685+7.07641I$	0
$b=$	$0.61812-1.28849I$		
$u=$	$0.280512-0.887620I$		
$a=$	$0.19111-1.57165I$	$0.79685-7.07641I$	0
$b=$	$0.61812+1.28849I$		
$u=$	$-0.989965+0.409703I$		
$a=$	$1.97607+0.57801I$	$1.41305-2.49952I$	0
$b=$	$-0.24577-1.41750I$		
$u=$	$-0.989965-0.409703I$		
$a=$	$1.97607-0.57801I$	$1.41305+2.49952I$	0
$b=$	$-0.24577+1.41750I$		
$u=$	$-0.726012+0.578316I$		
$a=$	$0.54695+2.85419I$	$6.26873+4.46261I$	0
$b=$	$0.189203-1.238060I$		
$u=$	$-0.726012-0.578316I$		
$a=$	$0.54695-2.85419I$	$6.26873-4.46261I$	0
$b=$	$0.189203+1.238060I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.071020+0.074266I$ $a=\ \ 0.905054-0.745487I$ $b=\ \ 0.188448-1.170340I$	$0.60233-2.21839I$	0
$u=-1.071020-0.074266I$ $a=\ \ 0.905054+0.745487I$ $b=\ \ 0.188448+1.170340I$	$0.60233+2.21839I$	0
$u=\ \ 0.751622+0.766640I$ $a=-0.72034+1.55866I$ $b=\ \ 0.424803-1.293130I$	$6.20636+7.20016I$	0
$u=\ \ 0.751622-0.766640I$ $a=-0.72034-1.55866I$ $b=\ \ 0.424803+1.293130I$	$6.20636-7.20016I$	0
$u=\ \ 0.523556+0.937772I$ $a=\ \ 0.19336-1.55260I$ $b=\ \ 0.202778+1.216910I$	$4.03333-3.06509I$	0
$u=\ \ 0.523556-0.937772I$ $a=\ \ 0.19336+1.55260I$ $b=\ \ 0.202778-1.216910I$	$4.03333+3.06509I$	0
$u=\ \ 0.248844+0.874267I$ $a=-0.36164-1.74912I$ $b=-0.62405+1.29170I$	$2.3648+15.3211I$	0
$u=\ \ 0.248844-0.874267I$ $a=-0.36164+1.74912I$ $b=-0.62405-1.29170I$	$2.3648-15.3211I$	0
$u=-0.313083+0.851026I$ $a=-0.15408+1.92699I$ $b=-0.346181-0.950469I$	$-0.58860-6.43357I$	0
$u=-0.313083-0.851026I$ $a=-0.15408-1.92699I$ $b=-0.346181+0.950469I$	$-0.58860+6.43357I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.845678 + 0.720150I$ $a = -0.87817 + 2.05654I$ $b = -0.494050 - 1.309690I$	$5.91779 - 12.72970I$	0
$u = 0.845678 - 0.720150I$ $a = -0.87817 - 2.05654I$ $b = -0.494050 + 1.309690I$	$5.91779 + 12.72970I$	0
$u = -0.099796 + 0.882186I$ $a = 0.65445 - 1.29489I$ $b = 0.119068 + 0.955437I$	$2.30671 - 0.53626I$	0
$u = -0.099796 - 0.882186I$ $a = 0.65445 + 1.29489I$ $b = 0.119068 - 0.955437I$	$2.30671 + 0.53626I$	0
$u = 1.061300 + 0.336516I$ $a = 0.789238 + 0.389183I$ $b = 0.518717 - 1.119720I$	$0.31189 + 3.87347I$	0
$u = 1.061300 - 0.336516I$ $a = 0.789238 - 0.389183I$ $b = 0.518717 + 1.119720I$	$0.31189 - 3.87347I$	0
$u = -0.583405 + 0.646906I$ $a = 0.00791 - 2.68900I$ $b = -0.384549 + 1.115100I$	$5.20189 + 4.64916I$	0
$u = -0.583405 - 0.646906I$ $a = 0.00791 + 2.68900I$ $b = -0.384549 - 1.115100I$	$5.20189 - 4.64916I$	0
$u = 0.861215 + 0.043974I$ $a = 0.315283 - 0.376908I$ $b = 0.576517 + 1.082110I$	$0.75643 - 4.68031I$	0
$u = 0.861215 - 0.043974I$ $a = 0.315283 + 0.376908I$ $b = 0.576517 - 1.082110I$	$0.75643 + 4.68031I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.032460+0.487696I$ $a=-1.17792-1.00521I$ $b=\ \ 0.410754+1.220280I$	$2.46883+2.35972I$	0
$u=-1.032460-0.487696I$ $a=-1.17792+1.00521I$ $b=\ \ 0.410754-1.220280I$	$2.46883-2.35972I$	0
$u=-1.067040+0.408222I$ $a=\ \ 0.665900+0.010605I$ $b=\ \ 0.709813-0.292700I$	$-2.10742+0.78957I$	0
$u=-1.067040-0.408222I$ $a=\ \ 0.665900-0.010605I$ $b=\ \ 0.709813+0.292700I$	$-2.10742-0.78957I$	0
$u=-0.786697+0.829996I$ $a=-0.41693-1.78105I$ $b=-0.055073+0.896428I$	$1.92689+3.02550I$	0
$u=-0.786697-0.829996I$ $a=-0.41693+1.78105I$ $b=-0.055073-0.896428I$	$1.92689-3.02550I$	0
$u=-0.980441+0.591046I$ $a=-1.35563-1.40335I$ $b=\ \ 0.333446+1.065070I$	$4.04540+0.18260I$	0
$u=-0.980441-0.591046I$ $a=-1.35563+1.40335I$ $b=\ \ 0.333446-1.065070I$	$4.04540-0.18260I$	0
$u=-0.241160+0.807723I$ $a=\ \ 0.439582-0.080960I$ $b=-1.128980+0.235809I$	$-0.97830-9.12392I$	0
$u=-0.241160-0.807723I$ $a=\ \ 0.439582+0.080960I$ $b=-1.128980-0.235809I$	$-0.97830+9.12392I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.671840 + 0.507044I$ $a = 0.875589 - 0.171426I$ $b = -0.398835 + 0.082234I$	$2.40897 - 1.35178I$	0
$u = 0.671840 - 0.507044I$ $a = 0.875589 + 0.171426I$ $b = -0.398835 - 0.082234I$	$2.40897 + 1.35178I$	0
$u = 0.175513 + 0.822563I$ $a = 0.256083 + 0.569844I$ $b = -0.333797 - 0.579083I$	$-1.67003 + 3.31142I$	0
$u = 0.175513 - 0.822563I$ $a = 0.256083 - 0.569844I$ $b = -0.333797 + 0.579083I$	$-1.67003 - 3.31142I$	0
$u = 0.960683 + 0.654923I$ $a = 1.40621 - 1.67804I$ $b = 0.53868 + 1.37935I$	$5.36515 - 3.35518I$	0
$u = 0.960683 - 0.654923I$ $a = 1.40621 + 1.67804I$ $b = 0.53868 - 1.37935I$	$5.36515 + 3.35518I$	0
$u = 1.085560 + 0.417412I$ $a = 0.472209 - 1.231880I$ $b = 0.719180 - 0.879757I$	$0.915909 - 0.765885I$	0
$u = 1.085560 - 0.417412I$ $a = 0.472209 + 1.231880I$ $b = 0.719180 + 0.879757I$	$0.915909 + 0.765885I$	0
$u = 1.161860 + 0.174990I$ $a = -0.650483 - 0.876063I$ $b = -0.352058 + 0.392549I$	$-4.47664 - 4.01647I$	0
$u = 1.161860 - 0.174990I$ $a = -0.650483 + 0.876063I$ $b = -0.352058 - 0.392549I$	$-4.47664 + 4.01647I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.821933$ $a=\ \ 0.330890$ $b=\ \ 0.486971$	-1.19520	0
$u=\ \ 0.762330+0.288285I$ $a=-2.42154-0.10478I$ $b=-0.429476-1.052040I$	$1.31789-6.31914I$	0
$u=\ \ 0.762330-0.288285I$ $a=-2.42154+0.10478I$ $b=-0.429476+1.052040I$	$1.31789+6.31914I$	0
$u=\ \ 0.370598+0.725861I$ $a=-0.04809+1.93496I$ $b=-0.19371-1.45794I$	$5.24700+4.17041I$	0
$u=\ \ 0.370598-0.725861I$ $a=-0.04809-1.93496I$ $b=-0.19371+1.45794I$	$5.24700-4.17041I$	0
$u=\ \ 1.102650+0.438310I$ $a=\ \ 2.41955-2.23545I$ $b=\ \ 0.244397+0.947753I$	$-3.59005-0.60302I$	0
$u=\ \ 1.102650-0.438310I$ $a=\ \ 2.41955+2.23545I$ $b=\ \ 0.244397-0.947753I$	$-3.59005+0.60302I$	0
$u=\ \ 1.149430+0.301597I$ $a=-1.33084+0.80196I$ $b=-1.015400-0.465558I$	$-6.72097-2.25375I$	0
$u=\ \ 1.149430-0.301597I$ $a=-1.33084-0.80196I$ $b=-1.015400+0.465558I$	$-6.72097+2.25375I$	0
$u=\ \ 1.109120+0.442579I$ $a=-0.21854+1.62375I$ $b=-1.42865+0.20992I$	$-5.26203-3.34381I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.109120 - 0.442579I$ $a = -0.21854 - 1.62375I$ $b = -1.42865 - 0.20992I$	$-5.26203 + 3.34381I$	0
$u = 1.127650 + 0.398051I$ $a = 0.107256 + 0.326558I$ $b = -0.72104 + 1.29672I$	$-1.91518 + 2.79794I$	0
$u = 1.127650 - 0.398051I$ $a = 0.107256 - 0.326558I$ $b = -0.72104 - 1.29672I$	$-1.91518 - 2.79794I$	0
$u = 1.148970 + 0.340430I$ $a = -0.125278 - 0.412078I$ $b = -0.395184 + 1.241730I$	$0.10609 + 2.29823I$	0
$u = 1.148970 - 0.340430I$ $a = -0.125278 + 0.412078I$ $b = -0.395184 - 1.241730I$	$0.10609 - 2.29823I$	0
$u = -1.109310 + 0.469165I$ $a = 1.079680 - 0.534307I$ $b = 0.401940 + 0.866799I$	$-3.35800 + 6.83420I$	0
$u = -1.109310 - 0.469165I$ $a = 1.079680 + 0.534307I$ $b = 0.401940 - 0.866799I$	$-3.35800 - 6.83420I$	0
$u = 1.020680 + 0.641610I$ $a = 0.96255 - 1.06129I$ $b = -0.094578 + 1.179150I$	$2.54989 - 2.61011I$	0
$u = 1.020680 - 0.641610I$ $a = 0.96255 + 1.06129I$ $b = -0.094578 - 1.179150I$	$2.54989 + 2.61011I$	0
$u = -0.314101 + 0.729321I$ $a = -0.353856 + 0.409317I$ $b = 1.208190 - 0.290318I$	$-2.52634 - 0.76605I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.314101-0.729321I$ $a=-0.353856-0.409317I$ $b=\ \ 1.208190+0.290318I$	$-2.52634+0.76605I$	0
$u=-1.102590+0.488489I$ $a=\ \ 2.37026+1.14278I$ $b=\ \ 0.730174-1.045170I$	$1.45031+6.51082I$	0
$u=-1.102590-0.488489I$ $a=\ \ 2.37026-1.14278I$ $b=\ \ 0.730174+1.045170I$	$1.45031-6.51082I$	0
$u=-1.116910+0.462832I$ $a=-0.889434-1.076330I$ $b=-1.308490+0.333537I$	$-5.10271+4.19567I$	0
$u=-1.116910-0.462832I$ $a=-0.889434+1.076330I$ $b=-1.308490-0.333537I$	$-5.10271-4.19567I$	0
$u=-1.132710+0.432211I$ $a=-0.425026-0.222004I$ $b=-0.571757-0.793007I$	$-4.08066+1.91553I$	0
$u=-1.132710-0.432211I$ $a=-0.425026+0.222004I$ $b=-0.571757+0.793007I$	$-4.08066-1.91553I$	0
$u=\ \ 1.127290+0.449606I$ $a=-2.29662+1.17707I$ $b=-0.375417-0.888596I$	$-3.98556-5.91625I$	0
$u=\ \ 1.127290-0.449606I$ $a=-2.29662-1.17707I$ $b=-0.375417+0.888596I$	$-3.98556+5.91625I$	0
$u=\ \ 1.195800+0.216834I$ $a=\ \ 0.367574+0.639383I$ $b=\ \ 0.461498-0.804631I$	$-5.60516+3.26989I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$1.195800-0.216834I$		
$a=$	$0.367574-0.639383I$	$-5.60516-3.26989I$	0
$b=$	$0.461498+0.804631I$		
$u=$	$0.802928+0.913116I$		
$a=$	$0.57944-1.47675I$	$3.98256-3.34707I$	0
$b=$	$0.205000+1.376830I$		
$u=$	$0.802928-0.913116I$		
$a=$	$0.57944+1.47675I$	$3.98256+3.34707I$	0
$b=$	$0.205000-1.376830I$		
$u=$	$1.114550+0.496877I$		
$a=$	$-0.081801-0.999291I$	$-1.35981-6.50933I$	0
$b=$	$0.776697-0.101325I$		
$u=$	$1.114550-0.496877I$		
$a=$	$-0.081801+0.999291I$	$-1.35981+6.50933I$	0
$b=$	$0.776697+0.101325I$		
$u=$	$-0.737524+0.248902I$		
$a=$	$0.392874+0.215227I$	$-1.57694+0.35222I$	0
$b=$	$0.751175-0.294294I$		
$u=$	$-0.737524-0.248902I$		
$a=$	$0.392874-0.215227I$	$-1.57694-0.35222I$	0
$b=$	$0.751175+0.294294I$		
$u=$	$-0.222104+0.742979I$		
$a=$	$0.51526-2.39158I$	$4.10383-5.66169I$	0
$b=$	$0.329587+1.286650I$		
$u=$	$-0.222104-0.742979I$		
$a=$	$0.51526+2.39158I$	$4.10383+5.66169I$	0
$b=$	$0.329587-1.286650I$		
$u=$	$-0.323824+0.697430I$		
$a=$	$-0.39163+2.59098I$	$4.13041-6.46057I$	0
$b=$	$-0.470617-1.168510I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.323824-0.697430I$ $a=-0.39163-2.59098I$ $b=-0.470617+1.168510I$	$4.13041+6.46057I$	0
$u=1.102110+0.553096I$ $a=-1.40166+0.77728I$ $b=0.12059-1.52990I$	$3.09215-9.04075I$	0
$u=1.102110-0.553096I$ $a=-1.40166-0.77728I$ $b=0.12059+1.52990I$	$3.09215+9.04075I$	0
$u=1.198800+0.299443I$ $a=1.121620-0.502016I$ $b=1.042960+0.314526I$	$-5.44766+5.63504I$	0
$u=1.198800-0.299443I$ $a=1.121620+0.502016I$ $b=1.042960-0.314526I$	$-5.44766-5.63504I$	0
$u=-1.133980+0.491441I$ $a=-2.08481-1.47147I$ $b=-0.68646+1.41039I$	$-1.24811+10.61340I$	0
$u=-1.133980-0.491441I$ $a=-2.08481+1.47147I$ $b=-0.68646-1.41039I$	$-1.24811-10.61340I$	0
$u=-1.116770+0.538746I$ $a=2.03504+1.93835I$ $b=0.499272-1.193270I$	$1.81529+11.21060I$	0
$u=-1.116770-0.538746I$ $a=2.03504-1.93835I$ $b=0.499272+1.193270I$	$1.81529-11.21060I$	0
$u=-1.172470+0.416602I$ $a=-0.173424-0.491972I$ $b=-0.766162-0.434850I$	$-4.65714+1.52614I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.172470-0.416602I$ $a=-0.173424+0.491972I$ $b=-0.766162+0.434850I$	$-4.65714-1.52614I$	0
$u=-1.184240+0.416265I$ $a=-0.37553+1.37125I$ $b=\ \ 0.169580+0.841280I$	$-4.10518-1.37085I$	0
$u=-1.184240-0.416265I$ $a=-0.37553-1.37125I$ $b=\ \ 0.169580-0.841280I$	$-4.10518+1.37085I$	0
$u=\ \ 0.072417+0.733451I$ $a=-0.210381+0.686533I$ $b=\ \ 0.671296-0.535595I$	$-1.10366+2.46800I$	$-4.00000-5.47297I$
$u=\ \ 0.072417-0.733451I$ $a=-0.210381-0.686533I$ $b=\ \ 0.671296+0.535595I$	$-1.10366-2.46800I$	$-4.00000+5.47297I$
$u=-1.186700+0.435786I$ $a=-0.423915-0.689789I$ $b=-0.521557-0.765967I$	$-4.30040+2.11581I$	0
$u=-1.186700-0.435786I$ $a=-0.423915+0.689789I$ $b=-0.521557+0.765967I$	$-4.30040-2.11581I$	0
$u=\ \ 0.071889+0.731792I$ $a=-0.338728+0.484995I$ $b=-0.243358+0.888891I$	$-0.51279+5.40936I$	$0.-9.29687I$
$u=\ \ 0.071889-0.731792I$ $a=-0.338728-0.484995I$ $b=-0.243358-0.888891I$	$-0.51279-5.40936I$	$0.+9.29687I$
$u=\ \ 1.173830+0.470685I$ $a=-0.927298+0.817013I$ $b=-0.766926-0.606520I$	$-4.27472-6.89146I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.173830 - 0.470685I$ $a = -0.927298 - 0.817013I$ $b = -0.766926 + 0.606520I$	$-4.27472 + 6.89146I$	0
$u = 1.175690 + 0.468912I$ $a = -1.61937 + 0.43730I$ $b = -0.526444 - 0.794436I$	$-4.05946 - 6.38399I$	0
$u = 1.175690 - 0.468912I$ $a = -1.61937 - 0.43730I$ $b = -0.526444 + 0.794436I$	$-4.05946 + 6.38399I$	0
$u = -1.137580 + 0.559245I$ $a = -0.061670 - 1.049350I$ $b = -1.262850 - 0.426638I$	$-4.93188 + 5.70545I$	0
$u = -1.137580 - 0.559245I$ $a = -0.061670 + 1.049350I$ $b = -1.262850 + 0.426638I$	$-4.93188 - 5.70545I$	0
$u = -1.154410 + 0.525262I$ $a = -1.94106 - 1.58632I$ $b = -0.355472 + 1.325150I$	$1.38902 + 10.43390I$	0
$u = -1.154410 - 0.525262I$ $a = -1.94106 + 1.58632I$ $b = -0.355472 - 1.325150I$	$1.38902 - 10.43390I$	0
$u = 1.174610 + 0.479406I$ $a = 1.31536 + 0.76129I$ $b = 0.281124 + 0.824571I$	$-3.65691 - 9.86910I$	0
$u = 1.174610 - 0.479406I$ $a = 1.31536 - 0.76129I$ $b = 0.281124 - 0.824571I$	$-3.65691 + 9.86910I$	0
$u = -1.223090 + 0.338813I$ $a = 0.586120 + 0.104216I$ $b = 0.440885 - 0.678091I$	$-5.98974 + 0.55484I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.223090-0.338813I$ $a=\ 0.586120-0.104216I$ $b=\ 0.440885+0.678091I$	$-5.98974-0.55484I$	0
$u=-0.607134+0.396852I$ $a=\ 0.04771+2.95080I$ $b=\ 0.43987-1.38765I$	$2.57464+6.02790I$	$0.-10.82497I$
$u=-0.607134-0.396852I$ $a=\ 0.04771-2.95080I$ $b=\ 0.43987+1.38765I$	$2.57464-6.02790I$	$0.+10.82497I$
$u=-1.253680+0.236749I$ $a=-0.376101-0.201834I$ $b=-0.589920-1.176920I$	$-4.31495-3.50502I$	0
$u=-1.253680-0.236749I$ $a=-0.376101+0.201834I$ $b=-0.589920+1.176920I$	$-4.31495+3.50502I$	0
$u=-1.257190+0.277300I$ $a=\ 0.459746+0.090302I$ $b=\ 0.618097+1.238700I$	$-2.51639-11.58610I$	0
$u=-1.257190-0.277300I$ $a=\ 0.459746-0.090302I$ $b=\ 0.618097-1.238700I$	$-2.51639+11.58610I$	0
$u=-1.168560+0.549871I$ $a=\ 0.122598+1.140220I$ $b=\ 1.179450+0.277101I$	$-3.7206+14.1595I$	0
$u=-1.168560-0.549871I$ $a=\ 0.122598-1.140220I$ $b=\ 1.179450-0.277101I$	$-3.7206-14.1595I$	0
$u=\ 0.054379+0.705314I$ $a=\ 0.617176+0.727473I$ $b=\ 0.483198-0.764978I$	$-0.87341+2.01981I$	$-5.14293-3.35958I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.054379 - 0.705314I$ $a = 0.617176 - 0.727473I$ $b = 0.483198 + 0.764978I$	$-0.87341 - 2.01981I$	$-5.14293 + 3.35958I$
$u = 1.187680 + 0.528833I$ $a = -0.369081 - 0.225916I$ $b = 0.394017 - 0.498012I$	$-4.66781 - 8.27032I$	0
$u = 1.187680 - 0.528833I$ $a = -0.369081 + 0.225916I$ $b = 0.394017 + 0.498012I$	$-4.66781 + 8.27032I$	0
$u = -1.163460 + 0.583791I$ $a = 1.35129 + 1.60341I$ $b = 0.397483 - 1.006660I$	$-3.14433 + 11.73400I$	0
$u = -1.163460 - 0.583791I$ $a = 1.35129 - 1.60341I$ $b = 0.397483 + 1.006660I$	$-3.14433 - 11.73400I$	0
$u = 1.189800 + 0.571082I$ $a = 1.89975 - 1.39573I$ $b = 0.65426 + 1.29821I$	$-0.4611 - 20.6157I$	0
$u = 1.189800 - 0.571082I$ $a = 1.89975 + 1.39573I$ $b = 0.65426 - 1.29821I$	$-0.4611 + 20.6157I$	0
$u = 1.185350 + 0.583791I$ $a = -1.74367 + 1.28974I$ $b = -0.67410 - 1.28761I$	$-1.93705 - 12.46360I$	0
$u = 1.185350 - 0.583791I$ $a = -1.74367 - 1.28974I$ $b = -0.67410 + 1.28761I$	$-1.93705 + 12.46360I$	0
$u = 0.662828 + 0.129930I$ $a = 0.86476 - 1.40046I$ $b = -0.446552 - 0.808407I$	$3.00119 - 2.10517I$	$0.14722 + 1.76350I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.662828 - 0.129930I$ $a = 0.86476 + 1.40046I$ $b = -0.446552 + 0.808407I$	$3.00119 + 2.10517I$	$0.14722 - 1.76350I$
$u = 1.248840 + 0.455509I$ $a = -0.0655681 - 0.1038220I$ $b = -0.132246 + 0.834563I$	$-1.71949 - 4.07049I$	0
$u = 1.248840 - 0.455509I$ $a = -0.0655681 + 0.1038220I$ $b = -0.132246 - 0.834563I$	$-1.71949 + 4.07049I$	0
$u = 0.246091 + 0.620256I$ $a = 0.773027 - 0.155433I$ $b = -0.661265 - 0.106458I$	$1.10260 + 2.13635I$	$0.17574 - 3.94064I$
$u = 0.246091 - 0.620256I$ $a = 0.773027 + 0.155433I$ $b = -0.661265 + 0.106458I$	$1.10260 - 2.13635I$	$0.17574 + 3.94064I$
$u = -0.043326 + 0.655594I$ $a = 1.169300 + 0.550350I$ $b = 0.461845 - 0.689797I$	$-0.95088 + 2.02575I$	$-5.13657 - 4.39126I$
$u = -0.043326 - 0.655594I$ $a = 1.169300 - 0.550350I$ $b = 0.461845 + 0.689797I$	$-0.95088 - 2.02575I$	$-5.13657 + 4.39126I$
$u = -0.445166 + 0.475804I$ $a = -0.33294 - 2.99324I$ $b = -0.491504 + 1.141000I$	$4.16260 + 1.71506I$	$3.72243 + 0.09200I$
$u = -0.445166 - 0.475804I$ $a = -0.33294 + 2.99324I$ $b = -0.491504 - 1.141000I$	$4.16260 - 1.71506I$	$3.72243 - 0.09200I$
$u = -1.234230 + 0.548529I$ $a = -1.38563 - 0.91989I$ $b = -0.206830 + 0.984167I$	$-1.05654 + 5.72493I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.234230-0.548529I$ $a=-1.38563+0.91989I$ $b=-0.206830-0.984167I$	$-1.05654-5.72493I$	0
$u=-0.164791+0.627268I$ $a=\ \ 0.38992-2.13028I$ $b=\ \ 0.62895+1.35708I$	$1.44620-6.26487I$	$-5.34247+8.47027I$
$u=-0.164791-0.627268I$ $a=\ \ 0.38992+2.13028I$ $b=\ \ 0.62895-1.35708I$	$1.44620+6.26487I$	$-5.34247-8.47027I$
$u=-0.485819+0.382380I$ $a=-0.75206-1.50650I$ $b=-0.427723-0.412375I$	$-0.47366+2.62000I$	$-4.00000-3.89706I$
$u=-0.485819-0.382380I$ $a=-0.75206+1.50650I$ $b=-0.427723+0.412375I$	$-0.47366-2.62000I$	$-4.00000+3.89706I$
$u=-1.369000+0.264323I$ $a=-0.657816-0.231476I$ $b=-0.335666+1.091160I$	$-2.35034+7.04297I$	0
$u=-1.369000-0.264323I$ $a=-0.657816+0.231476I$ $b=-0.335666-1.091160I$	$-2.35034-7.04297I$	0
$u=-0.260506+0.514839I$ $a=-1.38485+1.71261I$ $b=-0.622023-1.037490I$	$3.80166-2.34195I$	$3.05678+1.85897I$
$u=-0.260506-0.514839I$ $a=-1.38485-1.71261I$ $b=-0.622023+1.037490I$	$3.80166+2.34195I$	$3.05678-1.85897I$
$u=-0.134040+0.483396I$ $a=-0.506129+0.319299I$ $b=\ \ 1.240310+0.167330I$	$-2.46756-0.23213I$	$-7.92891-5.47646I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.134040-0.483396I$ $a=-0.506129-0.319299I$ $b=\ \ 1.240310-0.167330I$	$-2.46756+0.23213I$	$-7.92891+5.47646I$
$u=\ \ 0.488262+0.032647I$ $a=\ \ 1.85075-6.44674I$ $b=-0.015614+0.788291I$	$-1.06810-2.66800I$	$0.74659+4.59920I$
$u=\ \ 0.488262-0.032647I$ $a=\ \ 1.85075+6.44674I$ $b=-0.015614-0.788291I$	$-1.06810+2.66800I$	$0.74659-4.59920I$
$u=-0.165725+0.446697I$ $a=-3.52502-1.54399I$ $b=-0.289256+0.735153I$	$-0.84212-2.87138I$	$-2.49784+0.59531I$
$u=-0.165725-0.446697I$ $a=-3.52502+1.54399I$ $b=-0.289256-0.735153I$	$-0.84212+2.87138I$	$-2.49784-0.59531I$
$u=\ \ 0.447544$ $a=-1.81798$ $b=\ \ 1.36476$	-2.63096	7.77480

II. $I_2^u = \langle -1320u^{38} + 288u^{37} + \cdots + 79b - 520,\ -1681u^{38} + 1253u^{37} + \cdots + 79a - 2010,\ u^{39} - 11u^{37} + \cdots - 7u^2 + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^6 - u^4 + 1 \\ u^8 - 2u^6 + 2u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 21.2785u^{38} - 15.8608u^{37} + \cdots - 18.1139u + 25.4430 \\ 16.7089u^{38} - 3.64557u^{37} + \cdots - 35.8354u + 6.58228 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -29.9494u^{38} + 4.02532u^{37} + \cdots + 42.7975u - 13.1013 \\ -19.9620u^{38} - 0.481013u^{37} + \cdots + 42.8481u - 1.07595 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 48.1392u^{38} - 46.4304u^{37} + \cdots - 105.557u + 72.7215 \\ -11.9241u^{38} - 15.9620u^{37} + \cdots + 18.6962u + 28.8481 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 44.2532u^{38} - 26.8734u^{37} + \cdots - 88.0127u + 39.4937 \\ 1.24051u^{38} - 13.3797u^{37} + \cdots - 18.9620u + 14.5190 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -33.9494u^{38} + 4.02532u^{37} + \cdots + 56.7975u - 14.1013 \\ -19.9620u^{38} - 0.481013u^{37} + \cdots + 43.8481u - 1.07595 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 37.9873u^{38} - 19.5063u^{37} + \cdots - 53.9494u + 32.0253 \\ 16.7089u^{38} - 3.64557u^{37} + \cdots - 35.8354u + 6.58228 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{201}{79}u^{38} + \frac{5785}{79}u^{37} + \cdots + \frac{5860}{79}u - \frac{13739}{79}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{39} - 22u^{38} + \cdots + 14u - 1$
c_2	$u^{39} - 11u^{37} + \cdots + 7u^2 - 1$
c_3	$u^{39} + 14u^{38} + \cdots + 27u + 1$
c_4	$u^{39} - 5u^{37} + \cdots - u - 1$
c_5	$u^{39} + u^{38} + \cdots - 3u - 1$
c_6	$u^{39} + u^{38} + \cdots - u - 1$
c_7	$u^{39} - 11u^{37} + \cdots - 7u^2 + 1$
c_8	$u^{39} + 3u^{38} + \cdots - 16u^2 + 1$
c_9	$u^{39} - 4u^{38} + \cdots + 4u^3 - 1$
c_{10}	$u^{39} - u^{38} + \cdots - u + 1$
c_{11}	$u^{39} - 4u^{38} + \cdots - 2u + 1$
c_{12}	$u^{39} + u^{38} + \cdots - 5u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{39} + 2y^{38} + \cdots + 18y - 1$
c_2, c_7	$y^{39} - 22y^{38} + \cdots + 14y - 1$
c_3	$y^{39} + 6y^{38} + \cdots + 93y - 1$
c_4	$y^{39} - 10y^{38} + \cdots + 29y - 1$
c_5	$y^{39} - 25y^{38} + \cdots - 13y - 1$
c_6, c_{10}	$y^{39} + 17y^{38} + \cdots - 35y - 1$
c_8	$y^{39} + 3y^{38} + \cdots + 32y - 1$
c_9	$y^{39} - 10y^{38} + \cdots - 16y^2 - 1$
c_{11}	$y^{39} - 12y^{37} + \cdots + 26y - 1$
c_{12}	$y^{39} - 7y^{38} + \cdots - 5y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.751125+0.607987I$ $a=\ 0.93272+2.43950I$ $b=\ 0.408681-1.181550I$	$4.39114+3.73658I$	$0.21770-4.07359I$
$u=-0.751125-0.607987I$ $a=\ 0.93272-2.43950I$ $b=\ 0.408681+1.181550I$	$4.39114-3.73658I$	$0.21770+4.07359I$
$u=\ 0.880555+0.388580I$ $a=\ 0.122964+0.417898I$ $b=-0.382591-0.845691I$	$2.78752-3.64576I$	$3.20370+7.20127I$
$u=\ 0.880555-0.388580I$ $a=\ 0.122964-0.417898I$ $b=-0.382591+0.845691I$	$2.78752+3.64576I$	$3.20370-7.20127I$
$u=\ 0.767352+0.722116I$ $a=-0.61893+1.57826I$ $b=-0.008292-0.774485I$	$1.52806-2.74415I$	$-10.11225+3.83327I$
$u=\ 0.767352-0.722116I$ $a=-0.61893-1.57826I$ $b=-0.008292+0.774485I$	$1.52806+2.74415I$	$-10.11225-3.83327I$
$u=-0.924131+0.551954I$ $a=\ 1.28519+1.73496I$ $b=-0.308154-1.075690I$	$3.83478+0.81357I$	$0.-4.61744I$
$u=-0.924131-0.551954I$ $a=\ 1.28519-1.73496I$ $b=-0.308154+1.075690I$	$3.83478-0.81357I$	$0.+4.61744I$
$u=\ 0.848149+0.356879I$ $a=-0.395713-1.187420I$ $b=\ 0.551676-0.855429I$	$2.93312+0.48296I$	$1.31431+0.60010I$
$u=\ 0.848149-0.356879I$ $a=-0.395713+1.187420I$ $b=\ 0.551676+0.855429I$	$2.93312-0.48296I$	$1.31431-0.60010I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.106370 + 0.371548I$ $a = 0.050839 - 0.396682I$ $b = -0.500980 + 1.273570I$	$-0.75944 + 3.04264I$	$-6.18806 - 4.42670I$
$u = 1.106370 - 0.371548I$ $a = 0.050839 + 0.396682I$ $b = -0.500980 - 1.273570I$	$-0.75944 - 3.04264I$	$-6.18806 + 4.42670I$
$u = -1.152490 + 0.293263I$ $a = -1.037930 + 0.670378I$ $b = -0.155139 - 0.699297I$	$-3.62854 + 4.09440I$	$-4.00000 - 4.55067I$
$u = -1.152490 - 0.293263I$ $a = -1.037930 - 0.670378I$ $b = -0.155139 + 0.699297I$	$-3.62854 - 4.09440I$	$-4.00000 + 4.55067I$
$u = -1.121680 + 0.398535I$ $a = -0.700227 - 1.195450I$ $b = -1.240270 + 0.013959I$	$-5.46699 + 2.61946I$	$-10.15713 + 1.18434I$
$u = -1.121680 - 0.398535I$ $a = -0.700227 + 1.195450I$ $b = -1.240270 - 0.013959I$	$-5.46699 - 2.61946I$	$-10.15713 - 1.18434I$
$u = -0.759695 + 0.935359I$ $a = 0.48922 + 1.49465I$ $b = 0.184594 - 1.328340I$	$4.07674 + 3.38226I$	$31.0257 - 26.4605I$
$u = -0.759695 - 0.935359I$ $a = 0.48922 - 1.49465I$ $b = 0.184594 + 1.328340I$	$4.07674 - 3.38226I$	$31.0257 + 26.4605I$
$u = -1.161500 + 0.387209I$ $a = 0.497226 + 1.105290I$ $b = -0.001749 + 0.571107I$	$-4.61087 - 0.63016I$	$-9.33297 + 0.I$
$u = -1.161500 - 0.387209I$ $a = 0.497226 - 1.105290I$ $b = -0.001749 - 0.571107I$	$-4.61087 + 0.63016I$	$-9.33297 + 0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.177518 + 0.735256I$ $a = -1.133720 - 0.206021I$ $b = -0.038828 + 0.612662I$	$-0.85269 + 4.26324I$	$-1.90292 - 5.06768I$
$u = 0.177518 - 0.735256I$ $a = -1.133720 + 0.206021I$ $b = -0.038828 - 0.612662I$	$-0.85269 - 4.26324I$	$-1.90292 + 5.06768I$
$u = -1.129770 + 0.527026I$ $a = -1.82527 - 1.68003I$ $b = -0.437966 + 1.329980I$	$0.39829 + 10.67690I$	$0. - 10.13842I$
$u = -1.129770 - 0.527026I$ $a = -1.82527 + 1.68003I$ $b = -0.437966 - 1.329980I$	$0.39829 - 10.67690I$	$0. + 10.13842I$
$u = 1.136250 + 0.516889I$ $a = -0.384631 + 1.159830I$ $b = -1.218770 + 0.106054I$	$-4.59494 - 5.14380I$	$0. + 3.50636I$
$u = 1.136250 - 0.516889I$ $a = -0.384631 - 1.159830I$ $b = -1.218770 - 0.106054I$	$-4.59494 + 5.14380I$	$0. - 3.50636I$
$u = -0.299038 + 0.682499I$ $a = 0.06014 - 2.42466I$ $b = 0.416936 + 1.286680I$	$2.83471 - 5.99783I$	$-0.96448 + 6.23796I$
$u = -0.299038 - 0.682499I$ $a = 0.06014 + 2.42466I$ $b = 0.416936 - 1.286680I$	$2.83471 + 5.99783I$	$-0.96448 - 6.23796I$
$u = -0.741193 + 0.046981I$ $a = 2.13302 - 3.63413I$ $b = 0.092856 - 0.615234I$	$-1.58113 - 2.48581I$	$-14.05725 + 0.17718I$
$u = -0.741193 - 0.046981I$ $a = 2.13302 + 3.63413I$ $b = 0.092856 + 0.615234I$	$-1.58113 + 2.48581I$	$-14.05725 - 0.17718I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.168480 + 0.507594I$ $a = 1.346740 + 0.328331I$ $b = 0.062706 + 0.577661I$	$-3.74004 - 8.94101I$	$0. + 6.74372I$
$u = 1.168480 - 0.507594I$ $a = 1.346740 - 0.328331I$ $b = 0.062706 - 0.577661I$	$-3.74004 + 8.94101I$	$0. - 6.74372I$
$u = 0.712733 + 0.070680I$ $a = 1.73066 - 0.76241I$ $b = 0.494983 + 1.172290I$	$1.37314 - 5.29110I$	$-1.93175 + 7.76427I$
$u = 0.712733 - 0.070680I$ $a = 1.73066 + 0.76241I$ $b = 0.494983 - 1.172290I$	$1.37314 + 5.29110I$	$-1.93175 - 7.76427I$
$u = 0.283155 + 0.628424I$ $a = -0.530896 - 0.144135I$ $b = 1.294700 + 0.066786I$	$-2.11038 + 0.58155I$	$5.84509 - 2.65015I$
$u = 0.283155 - 0.628424I$ $a = -0.530896 + 0.144135I$ $b = 1.294700 - 0.066786I$	$-2.11038 - 0.58155I$	$5.84509 + 2.65015I$
$u = 1.266810 + 0.360293I$ $a = -0.985245 + 0.231821I$ $b = -0.351161 - 1.037820I$	$-1.96137 - 6.65000I$	0
$u = 1.266810 - 0.360293I$ $a = -0.985245 - 0.231821I$ $b = -0.351161 + 1.037820I$	$-1.96137 + 6.65000I$	0
$u = -0.613533$ $a = -1.07233$ $b = 1.27353$	-2.86170	-27.3290

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{39}-22u^{38}+\cdots+14u-1)(u^{176}+91u^{175}+\cdots+15u+1)$
c_2	$(u^{39}-11u^{37}+\cdots+7u^2-1)(u^{176}-u^{175}+\cdots+u-1)$
c_3	$(u^{39}+14u^{38}+\cdots+27u+1)$ $\cdot(u^{176}-7u^{175}+\cdots-6680352u-155647)$
c_4	$(u^{39}-5u^{37}+\cdots-u-1)(u^{176}+u^{175}+\cdots-2208u+2592)$
c_5	$(u^{39}+u^{38}+\cdots-3u-1)(u^{176}+4u^{175}+\cdots-28u+1)$
c_6	$(u^{39}+u^{38}+\cdots-u-1)(u^{176}+48u^{174}+\cdots+26878u+31907)$
c_7	$(u^{39}-11u^{37}+\cdots-7u^2+1)(u^{176}-u^{175}+\cdots+u-1)$
c_8	$(u^{39}+3u^{38}+\cdots-16u^2+1)$ $\cdot(u^{176}-6u^{175}+\cdots+22634157u-2052171)$
c_9	$(u^{39}-4u^{38}+\cdots+4u^3-1)(u^{176}-15u^{175}+\cdots+55u-1)$
c_{10}	$(u^{39}-u^{38}+\cdots-u+1)(u^{176}+48u^{174}+\cdots+26878u+31907)$
c_{11}	$(u^{39}-4u^{38}+\cdots-2u+1)(u^{176}+3u^{175}+\cdots-39223u+39029)$
c_{12}	$(u^{39}+u^{38}+\cdots-5u-1)(u^{176}+2u^{175}+\cdots+58430u-7292)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{39}+2y^{38}+\cdots+18y-1)(y^{176}+y^{175}+\cdots-87y+1)$
c_2, c_7	$(y^{39}-22y^{38}+\cdots+14y-1)(y^{176}-91y^{175}+\cdots-15y+1)$
c_3	$(y^{39}+6y^{38}+\cdots+93y-1)$ $\cdot(y^{176}-23y^{175}+\cdots-30510996087262y+24225988609)$
c_4	$(y^{39}-10y^{38}+\cdots+29y-1)$ $\cdot(y^{176}+y^{175}+\cdots+583363584y+6718464)$
c_5	$(y^{39}-25y^{38}+\cdots-13y-1)(y^{176}-26y^{175}+\cdots+92y+1)$
c_6, c_{10}	$(y^{39}+17y^{38}+\cdots-35y-1)$ $\cdot(y^{176}+96y^{175}+\cdots+33870568190y+1018056649)$
c_8	$(y^{39}+3y^{38}+\cdots+32y-1)$ $\cdot(y^{176}+74y^{175}+\cdots-184259306568177y+4211405813241)$
c_9	$(y^{39}-10y^{38}+\cdots-16y^2-1)(y^{176}+9y^{175}+\cdots-417y+1)$
c_{11}	$(y^{39}-12y^{37}+\cdots+26y-1)$ $\cdot(y^{176}-41y^{175}+\cdots-26665548103y+1523262841)$
c_{12}	$(y^{39}-7y^{38}+\cdots-5y-1)$ $\cdot(y^{176}-32y^{175}+\cdots-4059654828y+53173264)$