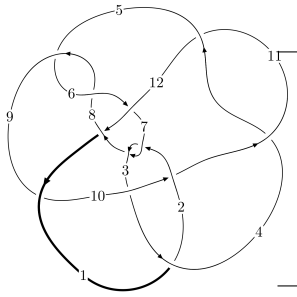
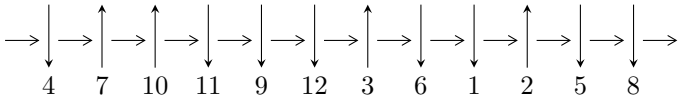
$12a_{1079}$ $(K12a_{1079})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.45606 \times 10^{1797} u^{172} + 4.28745 \times 10^{1797} u^{171} + \cdots + 9.44770 \times 10^{1797} b - 2.86748 \times 10^{1798},$$
$$1.34169 \times 10^{1798} u^{172} - 3.67073 \times 10^{1798} u^{171} + \cdots + 1.57462 \times 10^{1798} a + 2.75924 \times 10^{1799},$$
$$u^{173} - 3u^{172} + \cdots + 74u - 5 \rangle$$
$$I_2^u = \langle -6.40598 \times 10^{90} u^{40} - 1.88911 \times 10^{91} u^{39} + \cdots + 3.54564 \times 10^{91} b + 6.32745 \times 10^{91},$$
$$3.86971 \times 10^{90} u^{40} + 1.37761 \times 10^{91} u^{39} + \cdots + 5.06521 \times 10^{90} a + 2.20586 \times 10^{90},\ u^{41} + 4u^{40} + \cdots + 8u + 1 \rangle$$

$$I_1^v = \langle a,\ b - 1,\ v - 1 \rangle$$

* 3 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. $\boldsymbol{I_1^u = \langle -1.46 \times 10^{1797} u^{172} + 4.29 \times 10^{1797} u^{171} + \cdots + 9.45 \times 10^{1797} b - 2.87 \times 10^{1798},\ 1.34 \times 10^{1798} u^{172} - 3.67 \times 10^{1798} u^{171} + \cdots + 1.57 \times 10^{1798} a + 2.76 \times 10^{1799},\ u^{173} - 3u^{172} + \cdots + 74u - 5 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.852074u^{172} + 2.33119u^{171} + \cdots + 192.061u - 17.5233 \\ 0.154118u^{172} - 0.453809u^{171} + \cdots - 43.4524u + 3.03511 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.697956u^{172} + 1.87738u^{171} + \cdots + 148.609u - 14.4882 \\ 0.154118u^{172} - 0.453809u^{171} + \cdots - 43.4524u + 3.03511 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.880846u^{172} - 2.41344u^{171} + \cdots - 189.358u + 15.3554 \\ 0.0527602u^{172} - 0.167734u^{171} + \cdots - 44.7616u + 7.47187 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.659939u^{172} - 1.79682u^{171} + \cdots - 125.453u + 10.8685 \\ 0.150489u^{172} - 0.412764u^{171} + \cdots - 33.4644u + 2.15245 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.66068u^{172} - 4.55348u^{171} + \cdots - 348.176u + 32.1923 \\ -0.0936094u^{172} + 0.255286u^{171} + \cdots + 20.9243u - 1.12248 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.990881u^{172} - 2.73865u^{171} + \cdots - 246.669u + 23.9728 \\ 0.0504515u^{172} - 0.161358u^{171} + \cdots - 44.9493u + 7.44738 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.14343u^{172} - 3.12968u^{171} + \cdots - 248.351u + 22.1620 \\ 0.204142u^{172} - 0.568632u^{171} + \cdots - 60.6632u + 6.72298 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.911362u^{172} + 2.49693u^{171} + \cdots + 192.888u - 16.1126 \\ -0.100738u^{172} + 0.274420u^{171} + \cdots + 21.0835u - 2.10841 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.642395u^{172} - 1.78447u^{171} + \cdots - 137.745u + 12.1505 \\ -0.0117123u^{172} - 0.00281222u^{171} + \cdots - 14.1390u + 1.15428 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4.49529u^{172} - 13.8680u^{171} + \cdots - 2310.57u + 192.724$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{173} - 19u^{172} + \cdots + 21313u - 34383$
c_2, c_7	$u^{173} - 2u^{172} + \cdots - 128u - 57$
c_3	$u^{173} - 3u^{172} + \cdots + 74u - 5$
c_4, c_{11}	$u^{173} - 8u^{172} + \cdots - 475086499u - 26150301$
c_5, c_8	$u^{173} - 5u^{172} + \cdots - 39097u + 5255$
c_6	$u^{173} - 2u^{172} + \cdots - 127187u - 8237$
c_9	$u^{173} - 5u^{172} + \cdots - 11110439275u - 2018788719$
c_{10}	$u^{173} - u^{172} + \cdots - 195900u - 10457$
c_{12}	$u^{173} + 8u^{172} + \cdots + 109558u - 21897$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{173} - 51y^{172} + \cdots + 66157887691y - 1182190689$
c_2, c_7	$y^{173} - 84y^{172} + \cdots + 141898y - 3249$
c_3	$y^{173} + 57y^{172} + \cdots + 226y - 25$
c_4, c_{11}	$y^{173} - 98y^{172} + \cdots + 14008959254796871y - 683838242390601$
c_5, c_8	$y^{173} + 93y^{172} + \cdots - 1610278131y - 27615025$
c_6	$y^{173} - 10y^{172} + \cdots + 2537115305y - 67848169$
c_9	$y^{173} - 55y^{172} + \cdots - 3.85 \times 10^{19}y - 4.08 \times 10^{18}$
c_{10}	$y^{173} + 53y^{172} + \cdots + 582535008y - 109348849$
c_{12}	$y^{173} - 40y^{172} + \cdots - 18126440756y - 479478609$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.771804+0.616839I$ $a=-0.39746-1.58134I$ $b=\ \ 0.575916+0.329596I$	$0.73868-6.06646I$	0
$u=-0.771804-0.616839I$ $a=-0.39746+1.58134I$ $b=\ \ 0.575916-0.329596I$	$0.73868+6.06646I$	0
$u=\ \ 0.327529+0.959841I$ $a=-0.909180+0.473505I$ $b=\ \ 0.521248-0.478347I$	$-4.82456-3.09167I$	0
$u=\ \ 0.327529-0.959841I$ $a=-0.909180-0.473505I$ $b=\ \ 0.521248+0.478347I$	$-4.82456+3.09167I$	0
$u=-0.893032+0.512926I$ $a=-1.87164-0.35247I$ $b=\ \ 1.195920-0.317103I$	$3.46692-4.24825I$	0
$u=-0.893032-0.512926I$ $a=-1.87164+0.35247I$ $b=\ \ 1.195920+0.317103I$	$3.46692+4.24825I$	0
$u=-0.884605+0.378784I$ $a=\ \ 1.85819-0.14668I$ $b=-1.265240+0.030420I$	$7.57089-1.71431I$	0
$u=-0.884605-0.378784I$ $a=\ \ 1.85819+0.14668I$ $b=-1.265240-0.030420I$	$7.57089+1.71431I$	0
$u=\ \ 1.020480+0.191153I$ $a=-2.22668-0.53281I$ $b=\ \ 1.060020+0.469899I$	$2.47628+9.71556I$	0
$u=\ \ 1.020480-0.191153I$ $a=-2.22668+0.53281I$ $b=\ \ 1.060020-0.469899I$	$2.47628-9.71556I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.310676 + 0.909070I$ $a = 1.13471 - 0.91152I$ $b = -0.769375 - 0.374994I$	$1.35686 + 2.59200I$	0
$u = 0.310676 - 0.909070I$ $a = 1.13471 + 0.91152I$ $b = -0.769375 + 0.374994I$	$1.35686 - 2.59200I$	0
$u = 0.209331 + 0.932459I$ $a = 0.515968 + 0.653908I$ $b = 0.891224 + 0.338281I$	$-1.01217 + 3.12518I$	0
$u = 0.209331 - 0.932459I$ $a = 0.515968 - 0.653908I$ $b = 0.891224 - 0.338281I$	$-1.01217 - 3.12518I$	0
$u = -0.903470 + 0.153525I$ $a = 0.089516 + 0.427393I$ $b = 0.150812 + 0.347980I$	$-1.85433 + 1.23746I$	0
$u = -0.903470 - 0.153525I$ $a = 0.089516 - 0.427393I$ $b = 0.150812 - 0.347980I$	$-1.85433 - 1.23746I$	0
$u = -0.534516 + 0.943325I$ $a = 0.253784 + 0.163165I$ $b = 0.143471 - 0.644994I$	$-5.23731 - 5.69130I$	0
$u = -0.534516 - 0.943325I$ $a = 0.253784 - 0.163165I$ $b = 0.143471 + 0.644994I$	$-5.23731 + 5.69130I$	0
$u = 0.847467 + 0.694335I$ $a = 1.130120 - 0.548135I$ $b = -1.074320 - 0.683913I$	$2.13377 + 3.30366I$	0
$u = 0.847467 - 0.694335I$ $a = 1.130120 + 0.548135I$ $b = -1.074320 + 0.683913I$	$2.13377 - 3.30366I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.059570+0.295085I$ $a=\ \ 1.94245+0.11465I$ $b=-1.155320+0.440201I$	$6.18080-6.34984I$	0
$u=-1.059570-0.295085I$ $a=\ \ 1.94245-0.11465I$ $b=-1.155320-0.440201I$	$6.18080+6.34984I$	0
$u=-1.057830+0.417082I$ $a=\ \ 1.365150+0.034155I$ $b=-1.59091+0.12319I$	$4.45701-9.89476I$	0
$u=-1.057830-0.417082I$ $a=\ \ 1.365150-0.034155I$ $b=-1.59091-0.12319I$	$4.45701+9.89476I$	0
$u=\ \ 0.115228+0.839112I$ $a=-1.67477+0.38358I$ $b=-1.149070+0.528934I$	$-4.12366-3.97170I$	0
$u=\ \ 0.115228-0.839112I$ $a=-1.67477-0.38358I$ $b=-1.149070-0.528934I$	$-4.12366+3.97170I$	0
$u=\ \ 0.274378+0.797674I$ $a=-0.885026-0.966071I$ $b=-0.954736-0.435772I$	$2.53247+7.27988I$	0
$u=\ \ 0.274378-0.797674I$ $a=-0.885026+0.966071I$ $b=-0.954736+0.435772I$	$2.53247-7.27988I$	0
$u=\ \ 0.811488+0.839964I$ $a=-1.57035+1.08983I$ $b=\ \ 0.245624+0.756593I$	$-7.44936-0.53307I$	0
$u=\ \ 0.811488-0.839964I$ $a=-1.57035-1.08983I$ $b=\ \ 0.245624-0.756593I$	$-7.44936+0.53307I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.595608+1.013850I$ $a=-0.169753+0.015600I$ $b=\ 0.001884+0.755426I$	$-5.25176-2.86179I$	0
$u=-0.595608-1.013850I$ $a=-0.169753-0.015600I$ $b=\ 0.001884-0.755426I$	$-5.25176+2.86179I$	0
$u=\ 0.485744+0.665646I$ $a=\ 1.006990-0.543825I$ $b=-1.25260-0.86382I$	$0.02523+12.00230I$	0
$u=\ 0.485744-0.665646I$ $a=\ 1.006990+0.543825I$ $b=-1.25260+0.86382I$	$0.02523-12.00230I$	0
$u=-0.288924+0.768932I$ $a=-1.45194+0.66827I$ $b=-0.568154-0.388478I$	$-4.58612-2.13205I$	0
$u=-0.288924-0.768932I$ $a=-1.45194-0.66827I$ $b=-0.568154+0.388478I$	$-4.58612+2.13205I$	0
$u=\ 0.090615+0.816399I$ $a=\ 1.34471+1.06956I$ $b=\ 0.693540+0.393354I$	$-3.40908+3.07298I$	0
$u=\ 0.090615-0.816399I$ $a=\ 1.34471-1.06956I$ $b=\ 0.693540-0.393354I$	$-3.40908-3.07298I$	0
$u=\ 0.656834+0.456210I$ $a=\ 2.44343-0.66596I$ $b=-0.020467-0.688172I$	$-3.03193+6.49857I$	0
$u=\ 0.656834-0.456210I$ $a=\ 2.44343+0.66596I$ $b=-0.020467+0.688172I$	$-3.03193-6.49857I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.573018 + 0.543113I$ $a = -1.036760 + 0.596641I$ $b = 1.14168 + 0.89708I$	$-2.74658 + 6.71616I$	0
$u = 0.573018 - 0.543113I$ $a = -1.036760 - 0.596641I$ $b = 1.14168 - 0.89708I$	$-2.74658 - 6.71616I$	0
$u = -1.050190 + 0.606462I$ $a = -1.38501 - 0.32197I$ $b = 1.53027 - 0.37409I$	$2.82769 - 3.81698I$	0
$u = -1.050190 - 0.606462I$ $a = -1.38501 + 0.32197I$ $b = 1.53027 + 0.37409I$	$2.82769 + 3.81698I$	0
$u = -0.620347 + 1.051040I$ $a = 0.111676 + 0.732193I$ $b = -1.253110 - 0.353916I$	$0.75493 - 2.23733I$	0
$u = -0.620347 - 1.051040I$ $a = 0.111676 - 0.732193I$ $b = -1.253110 + 0.353916I$	$0.75493 + 2.23733I$	0
$u = 0.798891 + 0.934167I$ $a = 1.73060 - 0.88718I$ $b = -1.085620 - 0.539353I$	$-4.08066 + 7.63216I$	0
$u = 0.798891 - 0.934167I$ $a = 1.73060 + 0.88718I$ $b = -1.085620 + 0.539353I$	$-4.08066 - 7.63216I$	0
$u = -0.436532 + 0.635112I$ $a = -1.38475 - 1.10083I$ $b = 1.237080 - 0.610945I$	$3.24345 - 7.96682I$	0
$u = -0.436532 - 0.635112I$ $a = -1.38475 + 1.10083I$ $b = 1.237080 + 0.610945I$	$3.24345 + 7.96682I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.476347+1.142860I$ $a=-0.248989+0.082084I$ $b=-0.371624-0.514992I$	$-6.14067-3.17595I$	0
$u=-0.476347-1.142860I$ $a=-0.248989-0.082084I$ $b=-0.371624+0.514992I$	$-6.14067+3.17595I$	0
$u=1.201370+0.302411I$ $a=1.301830+0.096557I$ $b=-1.261640+0.068574I$	$3.90299+0.46319I$	0
$u=1.201370-0.302411I$ $a=1.301830-0.096557I$ $b=-1.261640-0.068574I$	$3.90299-0.46319I$	0
$u=0.790408+0.974551I$ $a=-0.222631+0.218548I$ $b=0.570108-0.583458I$	$1.39173+3.03834I$	0
$u=0.790408-0.974551I$ $a=-0.222631-0.218548I$ $b=0.570108+0.583458I$	$1.39173-3.03834I$	0
$u=0.652253+0.358586I$ $a=0.351804-0.584101I$ $b=-0.082947+0.626679I$	$3.14829+2.27443I$	0
$u=0.652253-0.358586I$ $a=0.351804+0.584101I$ $b=-0.082947-0.626679I$	$3.14829-2.27443I$	0
$u=1.090420+0.641267I$ $a=1.28188-0.96977I$ $b=-0.951554-0.253556I$	$0.79136+3.29959I$	0
$u=1.090420-0.641267I$ $a=1.28188+0.96977I$ $b=-0.951554+0.253556I$	$0.79136-3.29959I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.192030 + 0.440347I$ $a = -1.231700 - 0.113799I$ $b = 1.301890 - 0.116928I$	$7.48423 + 5.34721I$	0
$u = 1.192030 - 0.440347I$ $a = -1.231700 + 0.113799I$ $b = 1.301890 + 0.116928I$	$7.48423 - 5.34721I$	0
$u = 0.781611 + 1.011340I$ $a = 0.088109 + 0.454713I$ $b = 0.965838 - 0.735415I$	$1.33379 + 2.59811I$	0
$u = 0.781611 - 1.011340I$ $a = 0.088109 - 0.454713I$ $b = 0.965838 + 0.735415I$	$1.33379 - 2.59811I$	0
$u = -0.898132 + 0.938994I$ $a = -0.113394 + 0.229786I$ $b = 0.300953 + 0.965635I$	$-2.29687 - 3.81092I$	0
$u = -0.898132 - 0.938994I$ $a = -0.113394 - 0.229786I$ $b = 0.300953 - 0.965635I$	$-2.29687 + 3.81092I$	0
$u = -0.202556 + 0.666398I$ $a = 1.48907 - 2.53927I$ $b = 1.144620 - 0.491821I$	$-0.04009 - 10.77620I$	0
$u = -0.202556 - 0.666398I$ $a = 1.48907 + 2.53927I$ $b = 1.144620 + 0.491821I$	$-0.04009 + 10.77620I$	0
$u = -0.582427 + 1.198980I$ $a = 0.1062270 + 0.0814320I$ $b = 0.307299 + 0.661890I$	$-5.39810 - 6.59757I$	0
$u = -0.582427 - 1.198980I$ $a = 0.1062270 - 0.0814320I$ $b = 0.307299 - 0.661890I$	$-5.39810 + 6.59757I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.595071+0.293276I$ $a=-0.960088-0.059502I$ $b=\ \ 1.157920-0.699124I$	$-2.76594-0.82042I$	0
$u=-0.595071-0.293276I$ $a=-0.960088+0.059502I$ $b=\ \ 1.157920+0.699124I$	$-2.76594+0.82042I$	0
$u=\ \ 0.197798+0.632612I$ $a=\ \ 0.298551+0.201969I$ $b=-0.140312-0.490544I$	$-0.251995+1.167390I$	0
$u=\ \ 0.197798-0.632612I$ $a=\ \ 0.298551-0.201969I$ $b=-0.140312+0.490544I$	$-0.251995-1.167390I$	0
$u=-1.176470+0.663942I$ $a=-1.026570-0.199156I$ $b=\ \ 1.038940-0.525323I$	$-3.18652-1.20243I$	0
$u=-1.176470-0.663942I$ $a=-1.026570+0.199156I$ $b=\ \ 1.038940+0.525323I$	$-3.18652+1.20243I$	0
$u=\ \ 0.489322+0.424466I$ $a=\ \ 3.61572-1.51104I$ $b=-1.041160-0.486793I$	$-2.98959+5.99414I$	0
$u=\ \ 0.489322-0.424466I$ $a=\ \ 3.61572+1.51104I$ $b=-1.041160+0.486793I$	$-2.98959-5.99414I$	0
$u=\ \ 0.553755+0.311828I$ $a=\ \ 0.086698+0.147270I$ $b=\ \ 0.00775-1.58504I$	$-2.77098-3.15696I$	0
$u=\ \ 0.553755-0.311828I$ $a=\ \ 0.086698-0.147270I$ $b=\ \ 0.00775+1.58504I$	$-2.77098+3.15696I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.051630 + 0.871791I$ $a = 1.47913 - 0.77264I$ $b = -0.396452 - 0.582440I$	$-3.81059 - 7.12042I$	0
$u = 1.051630 - 0.871791I$ $a = 1.47913 + 0.77264I$ $b = -0.396452 + 0.582440I$	$-3.81059 + 7.12042I$	0
$u = 1.339450 + 0.272311I$ $a = -1.305310 - 0.185779I$ $b = 1.224180 - 0.120179I$	$7.83078 - 4.10815I$	0
$u = 1.339450 - 0.272311I$ $a = -1.305310 + 0.185779I$ $b = 1.224180 + 0.120179I$	$7.83078 + 4.10815I$	0
$u = -0.260548 + 1.346570I$ $a = -0.372320 + 0.129068I$ $b = 0.383847 - 0.198499I$	$-5.78719 - 3.27740I$	0
$u = -0.260548 - 1.346570I$ $a = -0.372320 - 0.129068I$ $b = 0.383847 + 0.198499I$	$-5.78719 + 3.27740I$	0
$u = -0.540444 + 0.236092I$ $a = -1.76684 - 1.87855I$ $b = 1.064290 - 0.461952I$	$6.03952 - 1.30060I$	0
$u = -0.540444 - 0.236092I$ $a = -1.76684 + 1.87855I$ $b = 1.064290 + 0.461952I$	$6.03952 + 1.30060I$	0
$u = 1.00260 + 0.99784I$ $a = -0.0479860 + 0.0683654I$ $b = 0.463303 - 1.175820I$	$-3.9091 + 14.3052I$	0
$u = 1.00260 - 0.99784I$ $a = -0.0479860 - 0.0683654I$ $b = 0.463303 + 1.175820I$	$-3.9091 - 14.3052I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.380777+0.433816I$ $a=\ \ 1.39771+1.44587I$ $b=-1.141210+0.620104I$	$1.18248-3.63276I$	0
$u=-0.380777-0.433816I$ $a=\ \ 1.39771-1.44587I$ $b=-1.141210-0.620104I$	$1.18248+3.63276I$	0
$u=\ \ 1.02110+0.99823I$ $a=\ \ 0.0181824-0.0903520I$ $b=-0.565972+1.238050I$	$-7.12079+7.64482I$	0
$u=\ \ 1.02110-0.99823I$ $a=\ \ 0.0181824+0.0903520I$ $b=-0.565972-1.238050I$	$-7.12079-7.64482I$	0
$u=-0.221479+0.524398I$ $a=\ \ 0.420856-0.196728I$ $b=-0.073568-1.045510I$	$-0.32442+2.05901I$	0
$u=-0.221479-0.524398I$ $a=\ \ 0.420856+0.196728I$ $b=-0.073568+1.045510I$	$-0.32442-2.05901I$	0
$u=-0.94557+1.07962I$ $a=\ \ 0.069344-0.261082I$ $b=-0.341921-0.882790I$	$1.76439-8.64944I$	0
$u=-0.94557-1.07962I$ $a=\ \ 0.069344+0.261082I$ $b=-0.341921+0.882790I$	$1.76439+8.64944I$	0
$u=\ \ 0.01118+1.43980I$ $a=\ \ 0.077941-0.361287I$ $b=\ \ 1.150280-0.237849I$	$0.01971+4.42792I$	0
$u=\ \ 0.01118-1.43980I$ $a=\ \ 0.077941+0.361287I$ $b=\ \ 1.150280+0.237849I$	$0.01971-4.42792I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.89322 + 1.14294I$ $a = -1.42783 + 0.82370I$ $b = 1.110460 + 0.566366I$	$-3.14263 + 11.42110I$	0
$u = 0.89322 - 1.14294I$ $a = -1.42783 - 0.82370I$ $b = 1.110460 - 0.566366I$	$-3.14263 - 11.42110I$	0
$u = -1.01855 + 1.06509I$ $a = -1.34401 - 0.89192I$ $b = 1.079310 - 0.862048I$	$1.61273 - 9.07333I$	0
$u = -1.01855 - 1.06509I$ $a = -1.34401 + 0.89192I$ $b = 1.079310 + 0.862048I$	$1.61273 + 9.07333I$	0
$u = -1.07007 + 1.01607I$ $a = 0.222969 - 0.283585I$ $b = -0.588593 - 0.899615I$	$1.93016 + 1.77297I$	0
$u = -1.07007 - 1.01607I$ $a = 0.222969 + 0.283585I$ $b = -0.588593 + 0.899615I$	$1.93016 - 1.77297I$	0
$u = -0.59580 + 1.36183I$ $a = 0.330826 + 0.187193I$ $b = -0.412461 - 0.047465I$	$-5.08049 - 6.03903I$	0
$u = -0.59580 - 1.36183I$ $a = 0.330826 - 0.187193I$ $b = -0.412461 + 0.047465I$	$-5.08049 + 6.03903I$	0
$u = -1.25785 + 0.80648I$ $a = -1.60637 - 0.35517I$ $b = 0.929722 - 0.430484I$	$2.25673 - 6.96320I$	0
$u = -1.25785 - 0.80648I$ $a = -1.60637 + 0.35517I$ $b = 0.929722 + 0.430484I$	$2.25673 + 6.96320I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.68933+1.33561I$ $a=-1.32515-1.00348I$ $b=\ \ 0.845483-0.389760I$	$2.07173-0.49277I$	0
$u=-0.68933-1.33561I$ $a=-1.32515+1.00348I$ $b=\ \ 0.845483+0.389760I$	$2.07173+0.49277I$	0
$u=-0.026810+0.492713I$ $a=\ \ 1.094720+0.033699I$ $b=-1.46826+0.52395I$	$-1.06608+2.76062I$	$-21.2259-6.9158I$
$u=-0.026810-0.492713I$ $a=\ \ 1.094720-0.033699I$ $b=-1.46826-0.52395I$	$-1.06608-2.76062I$	$-21.2259+6.9158I$
$u=\ \ 0.29341+1.47990I$ $a=-0.39388+1.47257I$ $b=-0.00064+1.43127I$	$-7.83616-0.90984I$	0
$u=\ \ 0.29341-1.47990I$ $a=-0.39388-1.47257I$ $b=-0.00064-1.43127I$	$-7.83616+0.90984I$	0
$u=-0.219019+0.426393I$ $a=-1.36079-2.17280I$ $b=-0.390412+0.560000I$	$0.15969-6.71976I$	$-4.00000+5.95672I$
$u=-0.219019-0.426393I$ $a=-1.36079+2.17280I$ $b=-0.390412-0.560000I$	$0.15969+6.71976I$	$-4.00000-5.95672I$
$u=\ \ 1.26696+0.87132I$ $a=\ \ 1.55381-0.28865I$ $b=-1.136610-0.482113I$	$-2.21266+9.70416I$	0
$u=\ \ 1.26696-0.87132I$ $a=\ \ 1.55381+0.28865I$ $b=-1.136610+0.482113I$	$-2.21266-9.70416I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.70912+1.39026I$ $a=\ \ 0.529659-0.194908I$ $b=-0.858036-0.602660I$	$1.25833+1.46506I$	0
$u=-0.70912-1.39026I$ $a=\ \ 0.529659+0.194908I$ $b=-0.858036+0.602660I$	$1.25833-1.46506I$	0
$u=\ \ 0.74538+1.37969I$ $a=\ \ 0.779922-0.083463I$ $b=-0.690066+0.410656I$	$-3.45403+0.99244I$	0
$u=\ \ 0.74538-1.37969I$ $a=\ \ 0.779922+0.083463I$ $b=-0.690066-0.410656I$	$-3.45403-0.99244I$	0
$u=\ \ 0.270858+0.299713I$ $a=-0.42510-3.44166I$ $b=-1.120710-0.431374I$	$2.61891-2.60527I$	$2.19979+2.42977I$
$u=\ \ 0.270858-0.299713I$ $a=-0.42510+3.44166I$ $b=-1.120710+0.431374I$	$2.61891+2.60527I$	$2.19979-2.42977I$
$u=\ \ 1.19735+1.05685I$ $a=-1.40190+0.42418I$ $b=\ \ 1.165460+0.514043I$	$-2.14917+7.43905I$	0
$u=\ \ 1.19735-1.05685I$ $a=-1.40190-0.42418I$ $b=\ \ 1.165460-0.514043I$	$-2.14917-7.43905I$	0
$u=\ \ 0.131695+0.359172I$ $a=-1.94861+4.86669I$ $b=\ \ 0.998265+0.422503I$	$-2.40329+0.40749I$	$-11.27009+0.81722I$
$u=\ \ 0.131695-0.359172I$ $a=-1.94861-4.86669I$ $b=\ \ 0.998265-0.422503I$	$-2.40329-0.40749I$	$-11.27009-0.81722I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.14275+1.14857I$ $a=\ \ 1.24104+0.69121I$ $b=-1.23896+0.77805I$	$-4.8409-14.7640I$	0
$u=-1.14275-1.14857I$ $a=\ \ 1.24104-0.69121I$ $b=-1.23896-0.77805I$	$-4.8409+14.7640I$	0
$u=\ \ 0.61057+1.50821I$ $a=\ \ 0.412925+0.132575I$ $b=-0.797914+0.364812I$	$-1.292400+0.235559I$	0
$u=\ \ 0.61057-1.50821I$ $a=\ \ 0.412925-0.132575I$ $b=-0.797914-0.364812I$	$-1.292400-0.235559I$	0
$u=\ \ 0.360748+0.057808I$ $a=-1.81412-2.11052I$ $b=\ \ 0.322395-1.000550I$	$-5.45575-3.27553I$	$-11.12246+3.81811I$
$u=\ \ 0.360748-0.057808I$ $a=-1.81412+2.11052I$ $b=\ \ 0.322395+1.000550I$	$-5.45575+3.27553I$	$-11.12246-3.81811I$
$u=-1.18500+1.16023I$ $a=-1.252350-0.647899I$ $b=\ \ 1.23895-0.73568I$	$-1.4041-21.0729I$	0
$u=-1.18500-1.16023I$ $a=-1.252350+0.647899I$ $b=\ \ 1.23895+0.73568I$	$-1.4041+21.0729I$	0
$u=\ \ 0.229098+0.236735I$ $a=\ \ 4.67353-10.02870I$ $b=\ \ 0.417238-0.056129I$	$-3.21981-6.95231I$	$-16.0662+21.3010I$
$u=\ \ 0.229098-0.236735I$ $a=\ \ 4.67353+10.02870I$ $b=\ \ 0.417238+0.056129I$	$-3.21981+6.95231I$	$-16.0662-21.3010I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.281786+0.164554I$ $a=-1.57933-3.60160I$ $b=-0.632665-0.429307I$	$1.61418-3.63737I$	$-3.03644+2.05493I$
$u=-0.281786-0.164554I$ $a=-1.57933+3.60160I$ $b=-0.632665+0.429307I$	$1.61418+3.63737I$	$-3.03644-2.05493I$
$u=-1.23998+1.15184I$ $a=\ \ 1.36064+0.54329I$ $b=-0.915621+0.418635I$	$-0.85773-3.62337I$	0
$u=-1.23998-1.15184I$ $a=\ \ 1.36064-0.54329I$ $b=-0.915621-0.418635I$	$-0.85773+3.62337I$	0
$u=-0.199861+0.231647I$ $a=\ \ 0.95907+3.00855I$ $b=\ \ 0.666540+0.257986I$	$-1.46465-0.07572I$	$-7.82957-0.25967I$
$u=-0.199861-0.231647I$ $a=\ \ 0.95907-3.00855I$ $b=\ \ 0.666540-0.257986I$	$-1.46465+0.07572I$	$-7.82957+0.25967I$
$u=\ \ 0.275213$ $a=-14.8178$ $b=-0.369430$	-7.33542	-36.0940
$u=\ \ 1.23400+1.22259I$ $a=-1.144000+0.603249I$ $b=\ \ 1.173050+0.611089I$	$0.34581+9.42252I$	0
$u=\ \ 1.23400-1.22259I$ $a=-1.144000-0.603249I$ $b=\ \ 1.173050-0.611089I$	$0.34581-9.42252I$	0
$u=-1.44536+0.98520I$ $a=\ \ 1.143970+0.261724I$ $b=-0.985011+0.449323I$	$-2.45138-4.64512I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.44536-0.98520I$ $a=\ \ 1.143970-0.261724I$ $b=-0.985011-0.449323I$	$-2.45138+4.64512I$	0
$u=\ \ 0.233347+0.056878I$ $a=-1.75864-1.41813I$ $b=\ \ 1.47296-0.43619I$	$-1.73590+0.84771I$	$10.7047-12.7164I$
$u=\ \ 0.233347-0.056878I$ $a=-1.75864+1.41813I$ $b=\ \ 1.47296+0.43619I$	$-1.73590-0.84771I$	$10.7047+12.7164I$
$u=-0.161708+0.164950I$ $a=\ \ 0.039432+1.336790I$ $b=-0.675722+1.129920I$	$-0.73454-2.34093I$	$14.3158-10.9429I$
$u=-0.161708-0.164950I$ $a=\ \ 0.039432-1.336790I$ $b=-0.675722-1.129920I$	$-0.73454+2.34093I$	$14.3158+10.9429I$
$u=\ \ 1.35566+1.14725I$ $a=\ \ 1.062650-0.562680I$ $b=-1.188430-0.669605I$	$3.94810+4.36162I$	0
$u=\ \ 1.35566-1.14725I$ $a=\ \ 1.062650+0.562680I$ $b=-1.188430+0.669605I$	$3.94810-4.36162I$	0
$u=\ \ 1.24947+1.32010I$ $a=\ \ 1.115280-0.657489I$ $b=-1.153690-0.615821I$	$4.1843+14.1413I$	0
$u=\ \ 1.24947-1.32010I$ $a=\ \ 1.115280+0.657489I$ $b=-1.153690+0.615821I$	$4.1843-14.1413I$	0
$u=\ \ 0.106054+0.137180I$ $a=\ \ 1.140470+0.701562I$ $b=-1.77806+0.75687I$	$-1.12029-2.35732I$	$-83.1331-68.1270I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.106054 - 0.137180I$ $a = 1.140470 - 0.701562I$ $b = -1.77806 - 0.75687I$	$-1.12029 + 2.35732I$	$-83.1331 + 68.1270I$
$u = -1.14349 + 1.49257I$ $a = -0.534176 - 0.051240I$ $b = 1.108580 + 0.603272I$	$-5.13750 + 5.70484I$	0
$u = -1.14349 - 1.49257I$ $a = -0.534176 + 0.051240I$ $b = 1.108580 - 0.603272I$	$-5.13750 - 5.70484I$	0
$u = 0.31408 + 1.87481I$ $a = -0.390747 - 0.437455I$ $b = 0.902258 - 0.415976I$	$2.29988 - 2.89024I$	0
$u = 0.31408 - 1.87481I$ $a = -0.390747 + 0.437455I$ $b = 0.902258 + 0.415976I$	$2.29988 + 2.89024I$	0
$u = 0.75156 + 1.82392I$ $a = -0.751552 + 0.609069I$ $b = 0.866179 + 0.410595I$	$-0.24995 + 1.88241I$	0
$u = 0.75156 - 1.82392I$ $a = -0.751552 - 0.609069I$ $b = 0.866179 - 0.410595I$	$-0.24995 - 1.88241I$	0
$u = -1.19249 + 1.58454I$ $a = 0.611465 + 0.027573I$ $b = -1.080280 - 0.550315I$	$-1.83842 + 11.72340I$	0
$u = -1.19249 - 1.58454I$ $a = 0.611465 - 0.027573I$ $b = -1.080280 + 0.550315I$	$-1.83842 - 11.72340I$	0
$u = 1.75154 + 2.17674I$ $a = -0.876531 + 0.580572I$ $b = 0.900051 + 0.459766I$	$-0.24409 + 1.89759I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.75154 - 2.17674I$ $a = -0.876531 - 0.580572I$ $b = 0.900051 - 0.459766I$	$-0.24409 - 1.89759I$	0
$u = -0.57403 + 3.27869I$ $a = 0.820454 + 0.602706I$ $b = -0.862689 + 0.484557I$	$-0.35740 - 1.98173I$	0
$u = -0.57403 - 3.27869I$ $a = 0.820454 - 0.602706I$ $b = -0.862689 - 0.484557I$	$-0.35740 + 1.98173I$	0

II.

$\boldsymbol{I_2^u = \langle -6.41\times 10^{90}u^{40}-1.89\times 10^{91}u^{39}+\cdots+3.55\times 10^{91}b+6.33\times 10^{91},\ 3.87\times 10^{90}u^{40}+1.38\times 10^{91}u^{39}+\cdots+5.07\times 10^{90}a+2.21\times 10^{90},\ u^{41}+4u^{40}+\cdots+8u+1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$

$$a_4 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-0.763979u^{40} - 2.71975u^{39} + \cdots - 5.05847u - 0.435494\\0.180672u^{40} + 0.532797u^{39} + \cdots - 4.35985u - 1.78457\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-0.583308u^{40} - 2.18695u^{39} + \cdots - 9.41832u - 2.22006\\0.180672u^{40} + 0.532797u^{39} + \cdots - 4.35985u - 1.78457\end{pmatrix}$$

$$a_2 = \begin{pmatrix}0.493136u^{40} + 1.80281u^{39} + \cdots + 12.0580u + 1.94930\\-0.250054u^{40} - 0.726703u^{39} + \cdots - 5.18045u + 1.23710\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-0.322186u^{40} - 1.29954u^{39} + \cdots - 7.71395u - 0.780577\\-0.184764u^{40} - 0.784460u^{39} + \cdots - 3.72762u - 1.41781\end{pmatrix}$$

$$a_5 = \begin{pmatrix}0.0449115u^{40} - 0.0648536u^{39} + \cdots + 2.25221u + 1.15905\\0.205611u^{40} + 0.654268u^{39} + \cdots + 1.96948u + 1.24059\end{pmatrix}$$

$$a_1 = \begin{pmatrix}0.236336u^{40} + 1.09068u^{39} + \cdots + 7.74230u + 3.35613\\-0.0930975u^{40} - 0.110825u^{39} + \cdots - 2.91670u + 1.55217\end{pmatrix}$$

$$a_9 = \begin{pmatrix}-0.0446578u^{40} - 0.498544u^{39} + \cdots - 6.20282u - 2.11052\\0.497668u^{40} + 1.54471u^{39} + \cdots + 4.22623u - 0.242844\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}0.462813u^{40} + 1.75922u^{39} + \cdots + 3.27199u + 1.22909\\0.394878u^{40} + 1.51216u^{39} + \cdots + 3.93208u + 0.327294\end{pmatrix}$$

$$a_6 = \begin{pmatrix}-0.504817u^{40} - 1.91641u^{39} + \cdots - 15.4310u - 2.78430\\0.000614494u^{40} - 0.162058u^{39} + \cdots - 11.4524u - 2.27283\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 13.0566u^{40} + 48.8251u^{39} + \cdots + 201.006u + 16.0619$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{41}+3u^{40}+\cdots+5u-1$
c_2	$u^{41}+2u^{40}+\cdots-2u-1$
c_3	$u^{41}+4u^{40}+\cdots+8u+1$
c_4	$u^{41}+2u^{40}+\cdots+3u+1$
c_5	$u^{41}-6u^{40}+\cdots+11u-1$
c_6	$u^{41}-2u^{40}+\cdots+7u+3$
c_7	$u^{41}-2u^{40}+\cdots-2u+1$
c_8	$u^{41}+6u^{40}+\cdots+11u+1$
c_9	$u^{41}+9u^{40}+\cdots-245u+43$
c_{10}	$u^{41}-u^{40}+\cdots+8u+3$
c_{11}	$u^{41}-2u^{40}+\cdots+3u-1$
c_{12}	$u^{41}+12u^{40}+\cdots+4u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{41} - 23y^{40} + \cdots - 7y - 1$
c_2, c_7	$y^{41} - 24y^{40} + \cdots + 36y - 1$
c_3	$y^{41} + 54y^{40} + \cdots - 8y - 1$
c_4, c_{11}	$y^{41} + 2y^{40} + \cdots - 7y - 1$
c_5, c_8	$y^{41} + 18y^{40} + \cdots + 3y - 1$
c_6	$y^{41} - 18y^{40} + \cdots + 103y - 9$
c_9	$y^{41} - 15y^{40} + \cdots - 22879y - 1849$
c_{10}	$y^{41} + 29y^{40} + \cdots + 10y - 9$
c_{12}	$y^{41} - 60y^{40} + \cdots - 90y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.519600+0.823390I$ $a=\ 0.0318540+0.1215280I$ $b=\ 0.110011-0.971361I$	$-6.04012-4.89441I$	$-11.09334+5.96160I$
$u=-0.519600-0.823390I$ $a=\ 0.0318540-0.1215280I$ $b=\ 0.110011+0.971361I$	$-6.04012+4.89441I$	$-11.09334-5.96160I$
$u=\ 0.772150+0.693935I$ $a=-0.55916+1.49440I$ $b=\ 0.653551-0.031455I$	$2.49865+4.82480I$	$1.83523-6.56334I$
$u=\ 0.772150-0.693935I$ $a=-0.55916-1.49440I$ $b=\ 0.653551+0.031455I$	$2.49865-4.82480I$	$1.83523+6.56334I$
$u=-1.015940+0.264045I$ $a=-1.72247+0.15437I$ $b=\ 1.213780-0.349939I$	$5.27050-6.60777I$	$-1.14612+7.13667I$
$u=-1.015940-0.264045I$ $a=-1.72247-0.15437I$ $b=\ 1.213780+0.349939I$	$5.27050+6.60777I$	$-1.14612-7.13667I$
$u=-0.480498+1.027800I$ $a=\ 0.586486-0.354862I$ $b=\ 1.143530+0.531702I$	$1.30291-3.55768I$	$0.+8.05240I$
$u=-0.480498-1.027800I$ $a=\ 0.586486+0.354862I$ $b=\ 1.143530-0.531702I$	$1.30291+3.55768I$	$0.-8.05240I$
$u=\ 0.469234+1.072390I$ $a=\ 0.401538-0.802477I$ $b=-0.708390-0.334626I$	$-1.13294+2.10954I$	0
$u=\ 0.469234-1.072390I$ $a=\ 0.401538+0.802477I$ $b=-0.708390+0.334626I$	$-1.13294-2.10954I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.504496 + 1.128020I$ $a = 0.207932 - 0.955157I$ $b = -0.986973 - 0.168446I$	$-1.58158 + 2.40548I$	0
$u = 0.504496 - 1.128020I$ $a = 0.207932 + 0.955157I$ $b = -0.986973 + 0.168446I$	$-1.58158 - 2.40548I$	0
$u = 0.943541 + 0.800725I$ $a = -1.93770 + 0.80821I$ $b = 0.926275 + 0.625409I$	$0.49123 + 8.62241I$	0
$u = 0.943541 - 0.800725I$ $a = -1.93770 - 0.80821I$ $b = 0.926275 - 0.625409I$	$0.49123 - 8.62241I$	0
$u = 0.357671 + 0.664380I$ $a = 0.216331 + 1.152770I$ $b = 1.030350 - 0.532868I$	$-3.50335 - 4.79038I$	$-7.79216 + 6.10738I$
$u = 0.357671 - 0.664380I$ $a = 0.216331 - 1.152770I$ $b = 1.030350 + 0.532868I$	$-3.50335 + 4.79038I$	$-7.79216 - 6.10738I$
$u = -1.016030 + 0.730073I$ $a = 1.33137 + 0.56401I$ $b = -1.278120 + 0.482304I$	$4.31949 - 3.19355I$	0
$u = -1.016030 - 0.730073I$ $a = 1.33137 - 0.56401I$ $b = -1.278120 - 0.482304I$	$4.31949 + 3.19355I$	0
$u = -0.517413 + 0.339003I$ $a = 4.32461 + 4.16229I$ $b = -0.501613 + 0.075923I$	$-3.08412 + 6.77173I$	$5.97918 + 6.92597I$
$u = -0.517413 - 0.339003I$ $a = 4.32461 - 4.16229I$ $b = -0.501613 - 0.075923I$	$-3.08412 - 6.77173I$	$5.97918 - 6.92597I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.276811+1.383390I$ $a=-0.181152+0.130077I$ $b=\ \ 0.562952-0.117650I$	$-5.48768-3.32991I$	0
$u=-0.276811-1.383390I$ $a=-0.181152-0.130077I$ $b=\ \ 0.562952+0.117650I$	$-5.48768+3.32991I$	0
$u=\ \ 0.062511+0.580723I$ $a=-1.41604+0.62470I$ $b=-1.144100+0.563700I$	$0.51284-10.42480I$	$-0.95607+6.35463I$
$u=\ \ 0.062511-0.580723I$ $a=-1.41604-0.62470I$ $b=-1.144100-0.563700I$	$0.51284+10.42480I$	$-0.95607-6.35463I$
$u=-0.516059$ $a=-8.29925$ $b=\ \ 0.489380$	-7.17877	15.7260
$u=\ \ 1.13916+0.95101I$ $a=\ \ 1.54955-0.39851I$ $b=-1.150930-0.463429I$	$-2.33097+8.99690I$	0
$u=\ \ 1.13916-0.95101I$ $a=\ \ 1.54955+0.39851I$ $b=-1.150930+0.463429I$	$-2.33097-8.99690I$	0
$u=-0.123958+0.494638I$ $a=\ \ 0.364094-0.165052I$ $b=-0.910340-0.866875I$	$-0.94903+2.39411I$	$-13.74629+1.16223I$
$u=-0.123958-0.494638I$ $a=\ \ 0.364094+0.165052I$ $b=-0.910340+0.866875I$	$-0.94903-2.39411I$	$-13.74629-1.16223I$
$u=-0.60218+1.40181I$ $a=\ \ 0.218172+0.059029I$ $b=-0.554629-0.175083I$	$-4.94655-5.78713I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.60218-1.40181I$ $a=\ \ 0.218172-0.059029I$ $b=-0.554629+0.175083I$	$-4.94655+5.78713I$	0
$u=-0.30783+1.52146I$ $a=-0.38770-1.41936I$ $b=\ \ 0.03360-1.46924I$	$-7.79328+0.94674I$	0
$u=-0.30783-1.52146I$ $a=-0.38770+1.41936I$ $b=\ \ 0.03360+1.46924I$	$-7.79328-0.94674I$	0
$u=\ \ 0.66068+1.46546I$ $a=\ \ 0.369780+0.579023I$ $b=-0.575124+0.605255I$	$1.32502-1.67201I$	0
$u=\ \ 0.66068-1.46546I$ $a=\ \ 0.369780-0.579023I$ $b=-0.575124-0.605255I$	$1.32502+1.67201I$	0
$u=\ \ 0.180377+0.302366I$ $a=-1.54419+0.56583I$ $b=\ \ 1.55407-0.03581I$	$-1.96969+0.91814I$	$-12.3799-21.2139I$
$u=\ \ 0.180377-0.302366I$ $a=-1.54419-0.56583I$ $b=\ \ 1.55407+0.03581I$	$-1.96969-0.91814I$	$-12.3799+21.2139I$
$u=-0.229299+0.141620I$ $a=\ \ 0.665819-0.638353I$ $b=-1.53827+0.31304I$	$-1.08601-2.43088I$	$-15.0321+21.2118I$
$u=-0.229299-0.141620I$ $a=\ \ 0.665819+0.638353I$ $b=-1.53827-0.31304I$	$-1.08601+2.43088I$	$-15.0321-21.2118I$
$u=-1.74223+4.59191I$ $a=-0.869509-0.530183I$ $b=\ \ 0.875674-0.480957I$	$-0.18980-1.95729I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.74223-4.59191I$		
$a=-0.869509+0.530183I$	$-0.18980+1.95729I$	0
$b=\ \ 0.875674+0.480957I$		

III. $I_1^v = \langle a,\ b-1,\ v-1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u-1$
c_2, c_4, c_6 c_7, c_9, c_{10} c_{11}, c_{12}	$u+1$
c_3, c_5, c_8	u

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_7, c_9 c_{10}, c_{11}, c_{12}	$y-1$
c_3, c_5, c_8	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v =$ 1.00000		
$a =$ 0	-1.64493	-6.00000
$b =$ 1.00000		

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u^{41}+3u^{40}+\cdots+5u-1)$ $\cdot(u^{173}-19u^{172}+\cdots+21313u-34383)$
c_2	$(u+1)(u^{41}+2u^{40}+\cdots-2u-1)(u^{173}-2u^{172}+\cdots-128u-57)$
c_3	$u(u^{41}+4u^{40}+\cdots+8u+1)(u^{173}-3u^{172}+\cdots+74u-5)$
c_4	$(u+1)(u^{41}+2u^{40}+\cdots+3u+1)$ $\cdot(u^{173}-8u^{172}+\cdots-475086499u-26150301)$
c_5	$u(u^{41}-6u^{40}+\cdots+11u-1)(u^{173}-5u^{172}+\cdots-39097u+5255)$
c_6	$(u+1)(u^{41}-2u^{40}+\cdots+7u+3)(u^{173}-2u^{172}+\cdots-127187u-8237)$
c_7	$(u+1)(u^{41}-2u^{40}+\cdots-2u+1)(u^{173}-2u^{172}+\cdots-128u-57)$
c_8	$u(u^{41}+6u^{40}+\cdots+11u+1)(u^{173}-5u^{172}+\cdots-39097u+5255)$
c_9	$(u+1)(u^{41}+9u^{40}+\cdots-245u+43)$ $\cdot(u^{173}-5u^{172}+\cdots-11110439275u-2018788719)$
c_{10}	$(u+1)(u^{41}-u^{40}+\cdots+8u+3)(u^{173}-u^{172}+\cdots-195900u-10457)$
c_{11}	$(u+1)(u^{41}-2u^{40}+\cdots+3u-1)$ $\cdot(u^{173}-8u^{172}+\cdots-475086499u-26150301)$
c_{12}	$(u+1)(u^{41}+12u^{40}+\cdots+4u-1)$ $\cdot(u^{173}+8u^{172}+\cdots+109558u-21897)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)(y^{41}-23y^{40}+\cdots-7y-1)$ $\cdot(y^{173}-51y^{172}+\cdots+66157887691y-1182190689)$
c_2, c_7	$(y-1)(y^{41}-24y^{40}+\cdots+36y-1)$ $\cdot(y^{173}-84y^{172}+\cdots+141898y-3249)$
c_3	$y(y^{41}+54y^{40}+\cdots-8y-1)(y^{173}+57y^{172}+\cdots+226y-25)$
c_4, c_{11}	$(y-1)(y^{41}+2y^{40}+\cdots-7y-1)$ $\cdot(y^{173}-98y^{172}+\cdots+14008959254796871y-683838242390601)$
c_5, c_8	$y(y^{41}+18y^{40}+\cdots+3y-1)$ $\cdot(y^{173}+93y^{172}+\cdots-1610278131y-27615025)$
c_6	$(y-1)(y^{41}-18y^{40}+\cdots+103y-9)$ $\cdot(y^{173}-10y^{172}+\cdots+2537115305y-67848169)$
c_9	$(y-1)(y^{41}-15y^{40}+\cdots-22879y-1849)$ $\cdot(y^{173}-55y^{172}+\cdots-3.85\times10^{19}y-4.08\times10^{18})$
c_{10}	$(y-1)(y^{41}+29y^{40}+\cdots+10y-9)$ $\cdot(y^{173}+53y^{172}+\cdots+582535008y-109348849)$
c_{12}	$(y-1)(y^{41}-60y^{40}+\cdots-90y-1)$ $\cdot(y^{173}-40y^{172}+\cdots-18126440756y-479478609)$