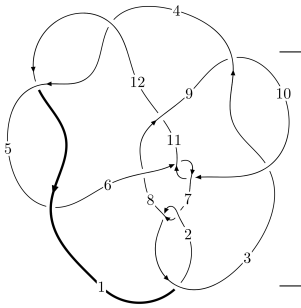
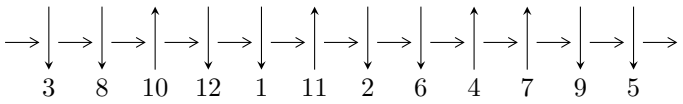
$12a_{0777}$ $(K12a_{0777})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 8.31484 \times 10^{237} u^{117} - 3.93039 \times 10^{237} u^{116} + \cdots + 1.72854 \times 10^{239} b + 2.06492 \times 10^{240}, \\ & 6.89267 \times 10^{239} u^{117} - 1.82120 \times 10^{240} u^{116} + \cdots + 1.01984 \times 10^{241} a + 1.75868 \times 10^{242}, \\ & u^{118} - u^{117} + \cdots + 167u - 59 \rangle \\ I_2^u = \langle & 106243u^{29} + 47719u^{28} + \cdots + 20891b - 107527, \\ & -48402u^{29} - 89702u^{28} + \cdots + 20891a + 137421,\ u^{30} - 8u^{28} + \cdots + u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 148 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. $\boldsymbol{I_1^u = \langle 8.31 \times 10^{237} u^{117} - 3.93 \times 10^{237} u^{116} + \cdots + 1.73 \times 10^{239} b + 2.06 \times 10^{240},\ 6.89 \times 10^{239} u^{117} - 1.82 \times 10^{240} u^{116} + \cdots + 1.02 \times 10^{241} a + 1.76 \times 10^{242},\ u^{118} - u^{117} + \cdots + 167u - 59 \rangle}$

(i) Arc colorings

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

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

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

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

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

$$a_{11} = \begin{pmatrix} -0.0675860u^{117} + 0.178577u^{116} + \cdots - 2.71344u - 17.2448 \\ -0.0481033u^{117} + 0.0227382u^{116} + \cdots + 4.60746u - 11.9460 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.35041u^{117} - 0.254370u^{116} + \cdots - 160.672u + 105.956 \\ 0.468192u^{117} - 0.0130686u^{116} + \cdots - 88.1432u + 45.9964 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.301176u^{117} + 0.0594844u^{116} + \cdots + 29.6650u - 1.93634 \\ 0.133068u^{117} - 0.0786827u^{116} + \cdots - 11.8488u + 17.9718 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.18359u^{117} - 0.271232u^{116} + \cdots - 124.787u + 85.1168 \\ 0.193309u^{117} + 0.0423118u^{116} + \cdots - 47.5214u + 20.4555 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0194826u^{117} + 0.155839u^{116} + \cdots - 7.32090u - 5.29873 \\ -0.0481033u^{117} + 0.0227382u^{116} + \cdots + 4.60746u - 11.9460 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.991454u^{117} - 0.0984787u^{116} + \cdots - 165.840u + 97.9375 \\ 0.654324u^{117} - 0.180806u^{116} + \cdots - 78.3906u + 51.7689 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1.16560u^{117} + 0.469100u^{116} + \cdots + 122.223u - 87.0159 \\ -0.559715u^{117} + 0.139939u^{116} + \cdots + 69.8418u - 42.6384 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.159031u^{117} + 0.176866u^{116} + \cdots - 8.92642u - 11.8415$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{118} + 59u^{117} + \cdots + 64351u + 3481$
c_2, c_7	$u^{118} + u^{117} + \cdots - 167u - 59$
c_3, c_9	$u^{118} + u^{117} + \cdots - 681405u - 118739$
c_4, c_5, c_{12}	$u^{118} + 3u^{117} + \cdots + 30u - 1$
c_6, c_{10}	$u^{118} - 2u^{117} + \cdots + 46028u + 3241$
c_8	$u^{118} - 9u^{117} + \cdots - 6352773u + 341129$
c_{11}	$u^{118} - 6u^{117} + \cdots - 1478146065u + 117887275$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{118} + 13y^{117} + \cdots + 257101793y + 12117361$
c_2, c_7	$y^{118} - 59y^{117} + \cdots - 64351y + 3481$
c_3, c_9	$y^{118} + 105y^{117} + \cdots + 500751984721y + 14098950121$
c_4, c_5, c_{12}	$y^{118} - 125y^{117} + \cdots - 110y + 1$
c_6, c_{10}	$y^{118} + 80y^{117} + \cdots + 87494132y + 10504081$
c_8	$y^{118} - 35y^{117} + \cdots - 4220593276107y + 116368994641$
c_{11}	$y^{118} - 60y^{117} + \cdots - 655020952466922525y + 13897409606925625$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.178023+0.973643I$ $a=\ \ 0.323995-0.685624I$ $b=-0.563611-0.705908I$	$-4.73958+2.23006I$	0
$u=-0.178023-0.973643I$ $a=\ \ 0.323995+0.685624I$ $b=-0.563611+0.705908I$	$-4.73958-2.23006I$	0
$u=\ \ 0.858025+0.485772I$ $a=\ \ 0.645004+0.736781I$ $b=-0.906752+0.645911I$	$-0.61747-4.47528I$	0
$u=\ \ 0.858025-0.485772I$ $a=\ \ 0.645004-0.736781I$ $b=-0.906752-0.645911I$	$-0.61747+4.47528I$	0
$u=-0.977446+0.274662I$ $a=-0.05383-2.67293I$ $b=\ \ 0.06116-1.44574I$	$-7.87809+0.99703I$	0
$u=-0.977446-0.274662I$ $a=-0.05383+2.67293I$ $b=\ \ 0.06116+1.44574I$	$-7.87809-0.99703I$	0
$u=-0.334365+0.923343I$ $a=-0.213558-0.256070I$ $b=\ \ 0.52407-1.32106I$	$-4.34744-7.95136I$	0
$u=-0.334365-0.923343I$ $a=-0.213558+0.256070I$ $b=\ \ 0.52407+1.32106I$	$-4.34744+7.95136I$	0
$u=-0.962975+0.338096I$ $a=-0.893396-0.162256I$ $b=\ \ 0.293659-0.422056I$	$-3.27326+3.33430I$	0
$u=-0.962975-0.338096I$ $a=-0.893396+0.162256I$ $b=\ \ 0.293659+0.422056I$	$-3.27326-3.33430I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.020340 + 0.225366I$ $a = -1.70751 - 0.45340I$ $b = 0.119139 + 0.496067I$	$-10.75740 - 4.49700I$	0
$u = 1.020340 - 0.225366I$ $a = -1.70751 + 0.45340I$ $b = 0.119139 - 0.496067I$	$-10.75740 + 4.49700I$	0
$u = 0.195857 + 1.026490I$ $a = 0.300728 - 0.521516I$ $b = -0.000667 - 0.926385I$	$-3.20690 - 0.20894I$	0
$u = 0.195857 - 1.026490I$ $a = 0.300728 + 0.521516I$ $b = -0.000667 + 0.926385I$	$-3.20690 + 0.20894I$	0
$u = 0.285625 + 1.007520I$ $a = -0.269949 + 0.465828I$ $b = 0.53299 + 1.32359I$	$-11.2076 + 11.9652I$	0
$u = 0.285625 - 1.007520I$ $a = -0.269949 - 0.465828I$ $b = 0.53299 - 1.32359I$	$-11.2076 - 11.9652I$	0
$u = 0.516576 + 0.788684I$ $a = 0.221479 + 0.107724I$ $b = 0.032787 - 1.051840I$	$-3.49244 + 0.29145I$	0
$u = 0.516576 - 0.788684I$ $a = 0.221479 - 0.107724I$ $b = 0.032787 + 1.051840I$	$-3.49244 - 0.29145I$	0
$u = 1.033500 + 0.229710I$ $a = 1.17745 + 3.29186I$ $b = 0.127765 + 1.060230I$	$-10.73850 + 3.13540I$	0
$u = 1.033500 - 0.229710I$ $a = 1.17745 - 3.29186I$ $b = 0.127765 - 1.060230I$	$-10.73850 - 3.13540I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.683401+0.822336I$ $a=\ \ 0.629727-1.005500I$ $b=-0.437187-0.953141I$	$-4.86789+2.12575I$	0
$u=-0.683401-0.822336I$ $a=\ \ 0.629727+1.005500I$ $b=-0.437187+0.953141I$	$-4.86789-2.12575I$	0
$u=-1.017520+0.341721I$ $a=\ \ 1.34641-2.28434I$ $b=\ \ 0.037618-1.069500I$	$-3.51249-1.10895I$	0
$u=-1.017520-0.341721I$ $a=\ \ 1.34641+2.28434I$ $b=\ \ 0.037618+1.069500I$	$-3.51249+1.10895I$	0
$u=\ \ 0.516963+0.762482I$ $a=\ \ 0.365457+0.019237I$ $b=-0.632025-0.008821I$	$-2.46513+1.44951I$	0
$u=\ \ 0.516963-0.762482I$ $a=\ \ 0.365457-0.019237I$ $b=-0.632025+0.008821I$	$-2.46513-1.44951I$	0
$u=\ \ 0.772499+0.483784I$ $a=\ \ 0.612327-0.823187I$ $b=\ \ 0.769941+0.423078I$	$-0.346230+0.449095I$	0
$u=\ \ 0.772499-0.483784I$ $a=\ \ 0.612327+0.823187I$ $b=\ \ 0.769941-0.423078I$	$-0.346230-0.449095I$	0
$u=-0.921937+0.582429I$ $a=\ \ 0.168922+0.707460I$ $b=\ \ 0.706492-0.108001I$	$1.55846+3.67318I$	0
$u=-0.921937-0.582429I$ $a=\ \ 0.168922-0.707460I$ $b=\ \ 0.706492+0.108001I$	$1.55846-3.67318I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.682462+0.590348I$ $a=\ \ 0.500722-0.345322I$ $b=-0.687773-0.324268I$	$2.26273+0.98072I$	0
$u=-0.682462-0.590348I$ $a=\ \ 0.500722+0.345322I$ $b=-0.687773+0.324268I$	$2.26273-0.98072I$	0
$u=-0.783078+0.781095I$ $a=\ \ 0.182632-0.707430I$ $b=\ \ 0.477682-0.623977I$	$-5.18250+3.74930I$	0
$u=-0.783078-0.781095I$ $a=\ \ 0.182632+0.707430I$ $b=\ \ 0.477682+0.623977I$	$-5.18250-3.74930I$	0
$u=\ \ 1.105550+0.136685I$ $a=-0.75559-2.55426I$ $b=\ \ 0.453269-1.065720I$	$-11.00080-3.66295I$	0
$u=\ \ 1.105550-0.136685I$ $a=-0.75559+2.55426I$ $b=\ \ 0.453269+1.065720I$	$-11.00080+3.66295I$	0
$u=-1.044770+0.410002I$ $a=-1.03614+2.25742I$ $b=\ \ 0.500058+1.205840I$	$-3.04416+4.43321I$	0
$u=-1.044770-0.410002I$ $a=-1.03614-2.25742I$ $b=\ \ 0.500058-1.205840I$	$-3.04416-4.43321I$	0
$u=\ \ 1.046510+0.406654I$ $a=\ \ 0.14045+2.64046I$ $b=\ \ 0.11316+1.43195I$	$-13.72640-0.70682I$	0
$u=\ \ 1.046510-0.406654I$ $a=\ \ 0.14045-2.64046I$ $b=\ \ 0.11316-1.43195I$	$-13.72640+0.70682I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.12638$ $a=\ \ 0.597049$ $b=\ \ 0.628683$	-8.09514	0
$u=-0.387746+0.777565I$ $a=\ \ 0.367209+1.019680I$ $b=-0.376282+1.217240I$	$-6.08246-5.28057I$	$-8.52140+3.93120I$
$u=-0.387746-0.777565I$ $a=\ \ 0.367209-1.019680I$ $b=-0.376282-1.217240I$	$-6.08246+5.28057I$	$-8.52140-3.93120I$
$u=-1.056530+0.408404I$ $a=-0.545376-0.667481I$ $b=-1.319180+0.422276I$	$-3.34059+0.27536I$	0
$u=-1.056530-0.408404I$ $a=-0.545376+0.667481I$ $b=-1.319180-0.422276I$	$-3.34059-0.27536I$	0
$u=-1.109520+0.247784I$ $a=-0.85672+1.88600I$ $b=-0.30845+1.61094I$	$-9.03534+0.12549I$	0
$u=-1.109520-0.247784I$ $a=-0.85672-1.88600I$ $b=-0.30845-1.61094I$	$-9.03534-0.12549I$	0
$u=\ \ 0.349797+0.781053I$ $a=-0.238359-0.149902I$ $b=\ \ 0.524766+1.308620I$	$-4.47590+2.52001I$	$-8.18694+0.I$
$u=\ \ 0.349797-0.781053I$ $a=-0.238359+0.149902I$ $b=\ \ 0.524766-1.308620I$	$-4.47590-2.52001I$	$-8.18694+0.I$
$u=\ \ 1.127950+0.268186I$ $a=-0.319133+0.655761I$ $b=-0.960863-0.392426I$	$-11.74120+3.46348I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.127950 - 0.268186I$ $a = -0.319133 - 0.655761I$ $b = -0.960863 + 0.392426I$	$-11.74120 - 3.46348I$	0
$u = -0.306616 + 0.777888I$ $a = -0.613844 + 0.634447I$ $b = 1.035640 + 0.073019I$	$-7.28352 - 6.36734I$	$-6.65058 + 3.35165I$
$u = -0.306616 - 0.777888I$ $a = -0.613844 - 0.634447I$ $b = 1.035640 - 0.073019I$	$-7.28352 + 6.36734I$	$-6.65058 - 3.35165I$
$u = -1.060040 + 0.503533I$ $a = -2.47074 + 1.06236I$ $b = 0.163291 + 1.156170I$	$-13.0243 + 5.9687I$	0
$u = -1.060040 - 0.503533I$ $a = -2.47074 - 1.06236I$ $b = 0.163291 - 1.156170I$	$-13.0243 - 5.9687I$	0
$u = 1.050910 + 0.544899I$ $a = 0.130736 + 0.232548I$ $b = 0.573356 + 0.387424I$	$-1.80922 - 2.79462I$	0
$u = 1.050910 - 0.544899I$ $a = 0.130736 - 0.232548I$ $b = 0.573356 - 0.387424I$	$-1.80922 + 2.79462I$	0
$u = 1.079790 + 0.492167I$ $a = 0.89635 + 1.73010I$ $b = -0.062843 + 1.122220I$	$-2.37397 - 2.44443I$	0
$u = 1.079790 - 0.492167I$ $a = 0.89635 - 1.73010I$ $b = -0.062843 - 1.122220I$	$-2.37397 + 2.44443I$	0
$u = 1.117770 + 0.401032I$ $a = -0.90109 - 1.54732I$ $b = -0.51351 - 1.59748I$	$-14.9836 - 4.7022I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.117770 - 0.401032I$ $a = -0.90109 + 1.54732I$ $b = -0.51351 + 1.59748I$	$-14.9836 + 4.7022I$	0
$u = 1.083800 + 0.499911I$ $a = -0.428422 + 0.818144I$ $b = -1.377470 - 0.127783I$	$-2.63884 - 6.66081I$	0
$u = 1.083800 - 0.499911I$ $a = -0.428422 - 0.818144I$ $b = -1.377470 + 0.127783I$	$-2.63884 + 6.66081I$	0
$u = 1.080440 + 0.533316I$ $a = -1.23116 - 2.18359I$ $b = 0.397623 - 1.272460I$	$-2.11626 - 7.86153I$	0
$u = 1.080440 - 0.533316I$ $a = -1.23116 + 2.18359I$ $b = 0.397623 + 1.272460I$	$-2.11626 + 7.86153I$	0
$u = -1.121440 + 0.490165I$ $a = 1.32588 - 1.60023I$ $b = -0.72581 - 1.29593I$	$-14.3467 + 2.9330I$	0
$u = -1.121440 - 0.490165I$ $a = 1.32588 + 1.60023I$ $b = -0.72581 + 1.29593I$	$-14.3467 - 2.9330I$	0
$u = 1.046050 + 0.640979I$ $a = -0.015346 - 0.736205I$ $b = 0.610846 - 0.051055I$	$-4.01044 - 6.74740I$	0
$u = 1.046050 - 0.640979I$ $a = -0.015346 + 0.736205I$ $b = 0.610846 + 0.051055I$	$-4.01044 + 6.74740I$	0
$u = -0.712689 + 0.297795I$ $a = -0.014630 + 0.262433I$ $b = -0.730960 + 0.954226I$	$-1.68046 - 1.40688I$	$-11.00348 - 2.62391I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.712689-0.297795I$ $a=-0.014630-0.262433I$ $b=-0.730960-0.954226I$	$-1.68046+1.40688I$	$-11.00348+2.62391I$
$u=-0.839473+0.922669I$ $a=-0.427168+0.292586I$ $b=\ \ 0.101516+1.009490I$	$-1.30136+3.30492I$	0
$u=-0.839473-0.922669I$ $a=-0.427168-0.292586I$ $b=\ \ 0.101516-1.009490I$	$-1.30136-3.30492I$	0
$u=\ \ 0.406047+0.633223I$ $a=\ \ 0.578774+0.677626I$ $b=-0.445359+0.800196I$	$-0.01158-1.88300I$	$-1.20387+0.87169I$
$u=\ \ 0.406047-0.633223I$ $a=\ \ 0.578774-0.677626I$ $b=-0.445359-0.800196I$	$-0.01158+1.88300I$	$-1.20387-0.87169I$
$u=\ \ 1.098930+0.598897I$ $a=-1.50104-1.08502I$ $b=\ \ 0.223133-1.104810I$	$-5.35382-5.59150I$	0
$u=\ \ 1.098930-0.598897I$ $a=-1.50104+1.08502I$ $b=\ \ 0.223133+1.104810I$	$-5.35382+5.59150I$	0
$u=-1.114350+0.581759I$ $a=-1.35294+2.26125I$ $b=\ \ 0.336429+1.311220I$	$-8.24734+10.39700I$	0
$u=-1.114350-0.581759I$ $a=-1.35294-2.26125I$ $b=\ \ 0.336429-1.311220I$	$-8.24734-10.39700I$	0
$u=\ \ 1.132610+0.572739I$ $a=\ \ 1.19290+1.68143I$ $b=-0.68957+1.42006I$	$-6.80804-7.61396I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.132610 - 0.572739I$ $a = 1.19290 - 1.68143I$ $b = -0.68957 - 1.42006I$	$-6.80804 + 7.61396I$	0
$u = -1.140710 + 0.559008I$ $a = -0.354045 - 0.741934I$ $b = -1.254600 + 0.035759I$	$-9.7508 + 11.3811I$	0
$u = -1.140710 - 0.559008I$ $a = -0.354045 + 0.741934I$ $b = -1.254600 - 0.035759I$	$-9.7508 - 11.3811I$	0
$u = 0.385608 + 0.618131I$ $a = 0.298234 - 0.777613I$ $b = -0.436190 - 1.097760I$	$-0.10394 + 3.29854I$	$-1.79450 - 5.17385I$
$u = 0.385608 - 0.618131I$ $a = 0.298234 + 0.777613I$ $b = -0.436190 + 1.097760I$	$-0.10394 - 3.29854I$	$-1.79450 + 5.17385I$
$u = -0.690251 + 0.227427I$ $a = -0.87744 + 2.33691I$ $b = 0.872943 + 0.718797I$	$-1.72906 + 2.63877I$	$-13.82343 - 2.18968I$
$u = -0.690251 - 0.227427I$ $a = -0.87744 - 2.33691I$ $b = 0.872943 - 0.718797I$	$-1.72906 - 2.63877I$	$-13.82343 + 2.18968I$
$u = 0.017975 + 0.711425I$ $a = 0.452630 + 0.606275I$ $b = -0.325421 + 0.761472I$	$0.10731 - 1.61150I$	$1.41032 + 3.85488I$
$u = 0.017975 - 0.711425I$ $a = 0.452630 - 0.606275I$ $b = -0.325421 - 0.761472I$	$0.10731 + 1.61150I$	$1.41032 - 3.85488I$
$u = 1.301050 + 0.150757I$ $a = -0.50507 - 1.81285I$ $b = -0.28034 - 1.41076I$	$-10.05760 + 4.50172I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.301050 - 0.150757I$ $a = -0.50507 + 1.81285I$ $b = -0.28034 + 1.41076I$	$-10.05760 - 4.50172I$	0
$u = -1.180670 + 0.579970I$ $a = 0.344722 - 0.264207I$ $b = 0.687240 - 0.388832I$	$-7.68860 + 3.24050I$	0
$u = -1.180670 - 0.579970I$ $a = 0.344722 + 0.264207I$ $b = 0.687240 + 0.388832I$	$-7.68860 - 3.24050I$	0
$u = 0.682235$ $a = 0.828571$ $b = 0.255539$	-1.12500	-8.21280
$u = -1.178750 + 0.614598I$ $a = 1.12473 - 1.74607I$ $b = -0.61954 - 1.42393I$	$-6.9196 + 13.5581I$	0
$u = -1.178750 - 0.614598I$ $a = 1.12473 + 1.74607I$ $b = -0.61954 + 1.42393I$	$-6.9196 - 13.5581I$	0
$u = 0.653056 + 0.141685I$ $a = -0.41230 + 3.45189I$ $b = 0.11253 + 1.49848I$	$-12.00690 - 2.18947I$	$-9.94665 + 2.73137I$
$u = 0.653056 - 0.141685I$ $a = -0.41230 - 3.45189I$ $b = 0.11253 - 1.49848I$	$-12.00690 + 2.18947I$	$-9.94665 - 2.73137I$
$u = 0.418073 + 0.487947I$ $a = 0.327616 + 1.223970I$ $b = 0.310750 + 0.469602I$	$-0.35938 - 1.60606I$	$-3.69880 + 2.56928I$
$u = 0.418073 - 0.487947I$ $a = 0.327616 - 1.223970I$ $b = 0.310750 - 0.469602I$	$-0.35938 + 1.60606I$	$-3.69880 - 2.56928I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.440468+0.462537I$ $a=\ 1.38465-1.39841I$ $b=\ 0.066294+1.144090I$	$-11.18430-1.82403I$	$-11.31344+0.36404I$
$u=-0.440468-0.462537I$ $a=\ 1.38465+1.39841I$ $b=\ 0.066294-1.144090I$	$-11.18430+1.82403I$	$-11.31344-0.36404I$
$u=-1.261000+0.543057I$ $a=\ 0.51934-1.63544I$ $b=-0.071791-1.185640I$	$-7.37913+5.55156I$	0
$u=-1.261000-0.543057I$ $a=\ 0.51934+1.63544I$ $b=-0.071791+1.185640I$	$-7.37913-5.55156I$	0
$u=\ 0.341157+0.525059I$ $a=-1.03969-1.17880I$ $b=\ 0.994163-0.140132I$	$-0.51879+2.42569I$	$-4.77231-4.53792I$
$u=\ 0.341157-0.525059I$ $a=-1.03969+1.17880I$ $b=\ 0.994163+0.140132I$	$-0.51879-2.42569I$	$-4.77231+4.53792I$
$u=\ 1.225500+0.625754I$ $a=\ 1.08651+1.82088I$ $b=-0.59341+1.40685I$	$-14.0989-17.8329I$	0
$u=\ 1.225500-0.625754I$ $a=\ 1.08651-1.82088I$ $b=-0.59341-1.40685I$	$-14.0989+17.8329I$	0
$u=-1.278080+0.560518I$ $a=-0.76585+1.57542I$ $b=\ 0.384163+1.049870I$	$-3.70057+6.57295I$	0
$u=-1.278080-0.560518I$ $a=-0.76585-1.57542I$ $b=\ 0.384163-1.049870I$	$-3.70057-6.57295I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.189107+0.573115I$ $a=-1.17392+0.80780I$ $b=\ \ 0.452719-1.285350I$	$-11.77820+1.33142I$	$-10.61965-0.69795I$
$u=-0.189107-0.573115I$ $a=-1.17392-0.80780I$ $b=\ \ 0.452719+1.285350I$	$-11.77820-1.33142I$	$-10.61965+0.69795I$
$u=-1.42108+0.22220I$ $a=-0.47818+1.66036I$ $b=-0.349624+1.341230I$	$-17.0778-7.6301I$	0
$u=-1.42108-0.22220I$ $a=-0.47818-1.66036I$ $b=-0.349624-1.341230I$	$-17.0778+7.6301I$	0
$u=\ \ 1.14121+0.88655I$ $a=-0.613104-0.752813I$ $b=\ \ 0.168279-0.965067I$	$-5.67132-6.44916I$	0
$u=\ \ 1.14121-0.88655I$ $a=-0.613104+0.752813I$ $b=\ \ 0.168279+0.965067I$	$-5.67132+6.44916I$	0
$u=\ \ 1.38741+0.52922I$ $a=-0.49625-1.65686I$ $b=\ \ 0.461666-1.027590I$	$-9.53007-7.61144I$	0
$u=\ \ 1.38741-0.52922I$ $a=-0.49625+1.65686I$ $b=\ \ 0.461666+1.027590I$	$-9.53007+7.61144I$	0

II. $I_2^u = \langle 106243u^{29} + 47719u^{28} + \cdots + 20891b - 107527,\ -4.84 \times 10^4 u^{29} - 8.97 \times 10^4 u^{28} + \cdots + 2.09 \times 10^4 a + 1.37 \times 10^5,\ u^{30} - 8u^{28} + \cdots + u + 1\rangle$

(i) Arc colorings

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

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

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

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

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

$$a_{11} = \begin{pmatrix} 2.31688u^{29} + 4.29381u^{28} + \cdots - 14.9805u - 6.57800 \\ -5.08559u^{29} - 2.28419u^{28} + \cdots + 9.01044u + 5.14705 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -10.3712u^{29} + 6.67847u^{28} + \cdots + 23.0285u + 2.28208 \\ 0.109329u^{29} + 3.23551u^{28} + \cdots - 1.72921u - 5.69791 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.32923u^{29} + 9.18381u^{28} + \cdots - 38.9350u - 28.2032 \\ -1.22225u^{29} + 3.42143u^{28} + \cdots + 6.42195u - 0.980566 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -10.3706u^{29} + 3.97568u^{28} + \cdots + 24.9143u + 6.46230 \\ 1.26753u^{29} + 1.17524u^{28} + \cdots - 4.92188u - 4.31200 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 7.40247u^{29} + 6.57800u^{28} + \cdots - 23.9909u - 11.7250 \\ -5.08559u^{29} - 2.28419u^{28} + \cdots + 9.01044u + 5.14705 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 13.8724u^{29} - 2.86334u^{28} + \cdots - 31.1366u - 4.53913 \\ 0.422000u^{29} - 2.31688u^{28} + \cdots + 13.1275u + 7.40247 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -18.5441u^{29} + 5.65990u^{28} + \cdots + 33.6323u + 0.800536 \\ -3.41123u^{29} + 4.63956u^{28} + \cdots - 10.0181u - 8.27332 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{451679}{20891}u^{29} - \frac{198831}{20891}u^{28} + \cdots + \frac{425617}{20891}u + \frac{25926}{20891}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{30} - 16u^{29} + \cdots - 15u + 1$
c_2	$u^{30} - 8u^{28} + \cdots - u + 1$
c_3	$u^{30} + 16u^{28} + \cdots - u + 1$
c_4, c_5	$u^{30} - 2u^{29} + \cdots - 2u + 1$
c_6	$u^{30} - u^{29} + \cdots + 2u + 1$
c_7	$u^{30} - 8u^{28} + \cdots + u + 1$
c_8	$u^{30} + 2u^{29} + \cdots + 5u + 1$
c_9	$u^{30} + 16u^{28} + \cdots + u + 1$
c_{10}	$u^{30} + u^{29} + \cdots - 2u + 1$
c_{11}	$u^{30} + 11u^{29} + \cdots + 11u + 1$
c_{12}	$u^{30} + 2u^{29} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{30} + 8y^{29} + \cdots + 37y + 1$
c_2, c_7	$y^{30} - 16y^{29} + \cdots - 15y + 1$
c_3, c_9	$y^{30} + 32y^{29} + \cdots + 29y + 1$
c_4, c_5, c_{12}	$y^{30} - 34y^{29} + \cdots - 6y + 1$
c_6, c_{10}	$y^{30} + 19y^{29} + \cdots + 16y + 1$
c_8	$y^{30} - 4y^{29} + \cdots + 9y + 1$
c_{11}	$y^{30} - 5y^{29} + \cdots - 13y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.935657 + 0.277734I$ $a = 0.18128 + 2.57261I$ $b = 0.07703 + 1.51268I$	$-7.55937 - 1.14774I$	$-1.15287 + 8.27084I$
$u = 0.935657 - 0.277734I$ $a = 0.18128 - 2.57261I$ $b = 0.07703 - 1.51268I$	$-7.55937 + 1.14774I$	$-1.15287 - 8.27084I$
$u = -0.999223 + 0.280360I$ $a = -0.45009 - 1.47966I$ $b = 0.235315 - 1.355000I$	$-13.22280 + 3.13616I$	$-14.4247 - 3.5409I$
$u = -0.999223 - 0.280360I$ $a = -0.45009 + 1.47966I$ $b = 0.235315 + 1.355000I$	$-13.22280 - 3.13616I$	$-14.4247 + 3.5409I$
$u = -0.889266 + 0.239105I$ $a = 0.69646 - 3.70735I$ $b = -0.12854 - 1.43419I$	$-12.75610 - 0.99580I$	$-14.6758 - 0.8292I$
$u = -0.889266 - 0.239105I$ $a = 0.69646 + 3.70735I$ $b = -0.12854 + 1.43419I$	$-12.75610 + 0.99580I$	$-14.6758 + 0.8292I$
$u = 0.781210 + 0.752083I$ $a = 0.098937 + 0.825516I$ $b = -0.156925 + 0.545499I$	$-0.02802 - 2.90859I$	$-0.94107 + 6.85739I$
$u = 0.781210 - 0.752083I$ $a = 0.098937 - 0.825516I$ $b = -0.156925 - 0.545499I$	$-0.02802 + 2.90859I$	$-0.94107 - 6.85739I$
$u = -0.998743 + 0.485559I$ $a = -0.452037 + 0.670486I$ $b = 0.941641 + 0.288308I$	$-2.13620 + 4.96967I$	$-9.26455 - 6.24860I$
$u = -0.998743 - 0.485559I$ $a = -0.452037 - 0.670486I$ $b = 0.941641 - 0.288308I$	$-2.13620 - 4.96967I$	$-9.26455 + 6.24860I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.008800 + 0.467665I$ $a = 0.477004 - 0.051132I$ $b = 0.997919 + 0.666568I$	$-2.21787 - 0.94421I$	$-8.03923 + 2.06472I$
$u = 1.008800 - 0.467665I$ $a = 0.477004 + 0.051132I$ $b = 0.997919 - 0.666568I$	$-2.21787 + 0.94421I$	$-8.03923 - 2.06472I$
$u = -0.240510 + 1.096620I$ $a = 0.125072 - 0.618007I$ $b = -0.270914 - 0.880946I$	$-2.77232 + 1.21915I$	$-3.48531 - 5.17568I$
$u = -0.240510 - 1.096620I$ $a = 0.125072 + 0.618007I$ $b = -0.270914 + 0.880946I$	$-2.77232 - 1.21915I$	$-3.48531 + 5.17568I$
$u = -0.699566 + 0.453828I$ $a = -0.18781 - 1.49760I$ $b = -0.676486 + 0.247446I$	$-1.07938 - 1.05485I$	$-8.36742 + 1.33883I$
$u = -0.699566 - 0.453828I$ $a = -0.18781 + 1.49760I$ $b = -0.676486 - 0.247446I$	$-1.07938 + 1.05485I$	$-8.36742 - 1.33883I$
$u = 1.120860 + 0.385715I$ $a = -1.84260 - 1.68283I$ $b = 0.347382 - 0.844833I$	$-11.14400 - 5.76201I$	$-12.5670 + 7.0903I$
$u = 1.120860 - 0.385715I$ $a = -1.84260 + 1.68283I$ $b = 0.347382 + 0.844833I$	$-11.14400 + 5.76201I$	$-12.5670 - 7.0903I$
$u = 0.726664 + 0.252393I$ $a = 0.36174 + 2.66704I$ $b = -0.314845 - 0.667987I$	$-9.50295 + 3.08048I$	$-6.01479 - 1.21393I$
$u = 0.726664 - 0.252393I$ $a = 0.36174 - 2.66704I$ $b = -0.314845 + 0.667987I$	$-9.50295 - 3.08048I$	$-6.01479 + 1.21393I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.613249 + 0.396539I$ $a = 0.92700 + 1.57300I$ $b = -0.784037 + 0.812321I$	$-0.91175 - 2.81566I$	$-4.67420 + 4.13005I$
$u = 0.613249 - 0.396539I$ $a = 0.92700 - 1.57300I$ $b = -0.784037 - 0.812321I$	$-0.91175 + 2.81566I$	$-4.67420 - 4.13005I$
$u = -1.181850 + 0.525577I$ $a = -1.03717 + 1.61957I$ $b = 0.419859 + 1.077930I$	$-3.89698 + 5.98314I$	$-10.63531 - 3.01585I$
$u = -1.181850 - 0.525577I$ $a = -1.03717 - 1.61957I$ $b = 0.419859 - 1.077930I$	$-3.89698 - 5.98314I$	$-10.63531 + 3.01585I$
$u = -1.113620 + 0.821105I$ $a = 0.182578 - 0.708726I$ $b = 0.078004 - 0.709017I$	$-5.13336 + 5.49870I$	$-6.92736 - 3.03355I$
$u = -1.113620 - 0.821105I$ $a = 0.182578 + 0.708726I$ $b = 0.078004 + 0.709017I$	$-5.13336 - 5.49870I$	$-6.92736 + 3.03355I$
$u = 1.30309 + 0.62762I$ $a = -0.72406 - 1.57317I$ $b = 0.267826 - 1.157830I$	$-7.16185 - 7.12351I$	$-11.55116 + 7.92646I$
$u = 1.30309 - 0.62762I$ $a = -0.72406 + 1.57317I$ $b = 0.267826 + 1.157830I$	$-7.16185 + 7.12351I$	$-11.55116 - 7.92646I$
$u = -0.366749 + 0.334200I$ $a = 0.643715 - 0.562218I$ $b = -0.533224 + 0.848835I$	$-1.07879 - 2.00024I$	$-4.77925 + 4.65171I$
$u = -0.366749 - 0.334200I$ $a = 0.643715 + 0.562218I$ $b = -0.533224 - 0.848835I$	$-1.07879 + 2.00024I$	$-4.77925 - 4.65171I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{30}-16u^{29}+\cdots-15u+1)(u^{118}+59u^{117}+\cdots+64351u+3481)$
c_2	$(u^{30}-8u^{28}+\cdots-u+1)(u^{118}+u^{117}+\cdots-167u-59)$
c_3	$(u^{30}+16u^{28}+\cdots-u+1)(u^{118}+u^{117}+\cdots-681405u-118739)$
c_4, c_5	$(u^{30}-2u^{29}+\cdots-2u+1)(u^{118}+3u^{117}+\cdots+30u-1)$
c_6	$(u^{30}-u^{29}+\cdots+2u+1)(u^{118}-2u^{117}+\cdots+46028u+3241)$
c_7	$(u^{30}-8u^{28}+\cdots+u+1)(u^{118}+u^{117}+\cdots-167u-59)$
c_8	$(u^{30}+2u^{29}+\cdots+5u+1)(u^{118}-9u^{117}+\cdots-6352773u+341129)$
c_9	$(u^{30}+16u^{28}+\cdots+u+1)(u^{118}+u^{117}+\cdots-681405u-118739)$
c_{10}	$(u^{30}+u^{29}+\cdots-2u+1)(u^{118}-2u^{117}+\cdots+46028u+3241)$
c_{11}	$(u^{30}+11u^{29}+\cdots+11u+1)$ $\cdot(u^{118}-6u^{117}+\cdots-1478146065u+117887275)$
c_{12}	$(u^{30}+2u^{29}+\cdots+2u+1)(u^{118}+3u^{117}+\cdots+30u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{30}+8y^{29}+\cdots+37y+1)$ $\cdot(y^{118}+13y^{117}+\cdots+257101793y+12117361)$
c_2, c_7	$(y^{30}-16y^{29}+\cdots-15y+1)(y^{118}-59y^{117}+\cdots-64351y+3481)$
c_3, c_9	$(y^{30}+32y^{29}+\cdots+29y+1)$ $\cdot(y^{118}+105y^{117}+\cdots+500751984721y+14098950121)$
c_4, c_5, c_{12}	$(y^{30}-34y^{29}+\cdots-6y+1)(y^{118}-125y^{117}+\cdots-110y+1)$
c_6, c_{10}	$(y^{30}+19y^{29}+\cdots+16y+1)$ $\cdot(y^{118}+80y^{117}+\cdots+87494132y+10504081)$
c_8	$(y^{30}-4y^{29}+\cdots+9y+1)$ $\cdot(y^{118}-35y^{117}+\cdots-4220593276107y+116368994641)$
c_{11}	$(y^{30}-5y^{29}+\cdots-13y+1)$ $\cdot(y^{118}-60y^{117}+\cdots-655020952466922525y+13897409606925625)$