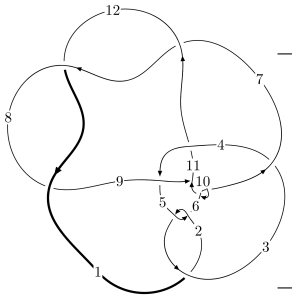
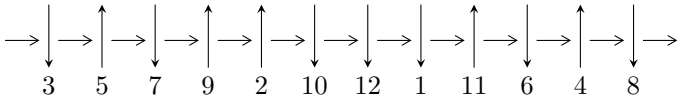
$12a_{0071}$ $(K12a_{0071})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 9.06148 \times 10^{225} u^{108} + 1.05422 \times 10^{226} u^{107} + \cdots + 5.27836 \times 10^{225} b + 1.18579 \times 10^{226},$$
$$- 3.01470 \times 10^{223} u^{108} - 3.51077 \times 10^{223} u^{107} + \cdots + 5.38608 \times 10^{223} a - 7.22964 \times 10^{223},$$
$$u^{109} + 3u^{108} + \cdots + 2u^2 + 1\rangle$$
$$I_2^u = \langle 21u^2 b + 49b^2 + 35bu + 10u^2 + 7b + 19u + 22,\ a,\ u^3 + u^2 - 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 115 representations.

[1]The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2]All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $\boldsymbol{I_1^u = \langle 9.06 \times 10^{225} u^{108} + 1.05 \times 10^{226} u^{107} + \cdots + 5.28 \times 10^{225} b + 1.19 \times 10^{226},\ -3.01 \times 10^{223} u^{108} - 3.51 \times 10^{223} u^{107} + \cdots + 5.39 \times 10^{223} a - 7.23 \times 10^{223},\ u^{109} + 3u^{108} + \cdots + 2u^2 + 1 \rangle}$

(i) Arc colorings

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

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

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

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

$$a_4 = \begin{pmatrix} 0.559721u^{108} + 0.651823u^{107} + \cdots - 0.410187u + 1.34228 \\ -1.71672u^{108} - 1.99725u^{107} + \cdots + 3.05241u - 2.24651 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 0.192858u^{108} + 0.779830u^{107} + \cdots + 2.58086u + 0.364839 \\ -0.692306u^{108} - 0.275910u^{107} + \cdots + 1.29823u - 1.50459 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -1.15700u^{108} - 1.34542u^{107} + \cdots + 2.64222u - 0.904224 \\ -1.71672u^{108} - 1.99725u^{107} + \cdots + 3.05241u - 2.24651 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -4.03867u^{108} - 6.47872u^{107} + \cdots + 0.850657u - 3.08463 \\ -3.85538u^{108} - 6.16675u^{107} + \cdots + 6.51846u - 3.48949 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.107568u^{108} + 0.213955u^{107} + \cdots + 0.809172u - 0.177700 \\ 1.39394u^{108} + 2.20200u^{107} + \cdots - 1.98924u + 1.33556 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.222413u^{108} - 0.429613u^{107} + \cdots - 0.690353u + 0.836754 \\ 1.26981u^{108} + 2.30353u^{107} + \cdots + 0.348221u + 1.14552 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1.03789u^{108} - 1.77503u^{107} + \cdots + 1.07250u - 1.04911 \\ -0.967747u^{108} - 1.68509u^{107} + \cdots - 0.843787u - 0.111823 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 10.5657u^{108} + 18.1769u^{107} + \cdots + 8.33675u + 11.3613$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{109}+50u^{108}+\cdots-9999u-2401$
c_2, c_5	$u^{109}+4u^{108}+\cdots-551u-49$
c_3	$49(49u^{109}+42u^{108}+\cdots-1346644u-153031)$
c_4	$49(49u^{109}+154u^{108}+\cdots+1.84924\times10^{7}u+1398784)$
c_6, c_{10}	$u^{109}+3u^{108}+\cdots+6u+1$
c_7, c_8, c_{12}	$u^{109}+3u^{108}+\cdots+2u^{2}+1$
c_9	$u^{109}-49u^{108}+\cdots-4u+1$
c_{11}	$u^{109}-5u^{108}+\cdots+48608u+21952$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{109} + 22y^{108} + \cdots + 18653329y - 5764801$
c_2, c_5	$y^{109} + 50y^{108} + \cdots - 9999y - 2401$
c_3	2401 $\cdot (2401y^{109} - 163660y^{108} + \cdots - 913616530238y - 23418486961)$
c_4	2401 $\cdot (2401y^{109} + 1666y^{108} + \cdots + 9951035523072y - 1956596678656)$
c_6, c_{10}	$y^{109} + 49y^{108} + \cdots - 4y - 1$
c_7, c_8, c_{12}	$y^{109} - 103y^{108} + \cdots - 4y - 1$
c_9	$y^{109} + 25y^{108} + \cdots + 72y - 1$
c_{11}	$y^{109} + 35y^{108} + \cdots - 3911670784y - 481890304$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.489926+0.841164I$ $a=-0.606125+1.170680I$ $b=1.134530-0.822129I$	$-2.69398+8.51191I$	0
$u=-0.489926-0.841164I$ $a=-0.606125-1.170680I$ $b=1.134530+0.822129I$	$-2.69398-8.51191I$	0
$u=0.509943+0.826525I$ $a=0.50185+1.38603I$ $b=-1.12948-1.03666I$	$-0.5579-14.3486I$	0
$u=0.509943-0.826525I$ $a=0.50185-1.38603I$ $b=-1.12948+1.03666I$	$-0.5579+14.3486I$	0
$u=0.648459+0.806149I$ $a=1.065950+0.105647I$ $b=-0.773273+0.689039I$	$-0.92733+8.91163I$	0
$u=0.648459-0.806149I$ $a=1.065950-0.105647I$ $b=-0.773273-0.689039I$	$-0.92733-8.91163I$	0
$u=-0.705187+0.776451I$ $a=-0.857316+0.368561I$ $b=0.796547+0.451101I$	$-3.29024-3.05508I$	0
$u=-0.705187-0.776451I$ $a=-0.857316-0.368561I$ $b=0.796547-0.451101I$	$-3.29024+3.05508I$	0
$u=0.520207+0.931345I$ $a=0.253538+0.739970I$ $b=-0.677677-0.603783I$	$3.72190-5.56725I$	0
$u=0.520207-0.931345I$ $a=0.253538-0.739970I$ $b=-0.677677+0.603783I$	$3.72190+5.56725I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.332705+0.846613I$ $a=-0.994225+0.334332I$ $b=\ \ 1.147690+0.019200I$	$-4.05789+3.74836I$	0
$u=-0.332705-0.846613I$ $a=-0.994225-0.334332I$ $b=\ \ 1.147690-0.019200I$	$-4.05789-3.74836I$	0
$u=\ \ 0.362269+0.817846I$ $a=-0.241246-1.015470I$ $b=\ \ 0.522740+0.796545I$	$4.88494-0.80424I$	0
$u=\ \ 0.362269-0.817846I$ $a=-0.241246+1.015470I$ $b=\ \ 0.522740-0.796545I$	$4.88494+0.80424I$	0
$u=\ \ 0.640718+0.619636I$ $a=-1.130640-0.166942I$ $b=\ \ 0.673295-0.437255I$	$0.92415+4.09684I$	0
$u=\ \ 0.640718-0.619636I$ $a=-1.130640+0.166942I$ $b=\ \ 0.673295+0.437255I$	$0.92415-4.09684I$	0
$u=-0.821915+0.342724I$ $a=\ \ 0.666369-0.371402I$ $b=-0.172804-0.223629I$	$-1.34681+0.71674I$	0
$u=-0.821915-0.342724I$ $a=\ \ 0.666369+0.371402I$ $b=-0.172804+0.223629I$	$-1.34681-0.71674I$	0
$u=\ \ 0.438488+0.747759I$ $a=-0.60734-1.53057I$ $b=\ \ 0.973424+0.926486I$	$1.56612-8.78514I$	0
$u=\ \ 0.438488-0.747759I$ $a=-0.60734+1.53057I$ $b=\ \ 0.973424-0.926486I$	$1.56612+8.78514I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.651090+0.533274I$ $a=-0.28816+1.45770I$ $b=\ \ 1.062210-0.259698I$	$-5.38646+0.84334I$	0
$u=-0.651090-0.533274I$ $a=-0.28816-1.45770I$ $b=\ \ 1.062210+0.259698I$	$-5.38646-0.84334I$	0
$u=-0.416063+0.725434I$ $a=\ \ 0.68573-1.28827I$ $b=-0.903118+0.735994I$	$-0.49874+3.40197I$	0
$u=-0.416063-0.725434I$ $a=\ \ 0.68573+1.28827I$ $b=-0.903118-0.735994I$	$-0.49874-3.40197I$	0
$u=\ \ 0.251562+0.774587I$ $a=\ \ 1.165860-0.068813I$ $b=-1.137790+0.418799I$	$-3.07379+2.21369I$	0
$u=\ \ 0.251562-0.774587I$ $a=\ \ 1.165860+0.068813I$ $b=-1.137790-0.418799I$	$-3.07379-2.21369I$	0
$u=\ \ 0.579115+0.507577I$ $a=\ \ 0.05747+1.87013I$ $b=-1.137540-0.504304I$	$-4.32288-6.26751I$	0
$u=\ \ 0.579115-0.507577I$ $a=\ \ 0.05747-1.87013I$ $b=-1.137540+0.504304I$	$-4.32288+6.26751I$	0
$u=\ \ 1.013290+0.706462I$ $a=-0.425669-0.055355I$ $b=\ \ 0.197913-0.411645I$	$3.19213-4.51638I$	0
$u=\ \ 1.013290-0.706462I$ $a=-0.425669+0.055355I$ $b=\ \ 0.197913+0.411645I$	$3.19213+4.51638I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.935705 + 0.861076I$ $a = 0.293724 + 0.261994I$ $b = -0.468609 + 0.170672I$	$2.71396 - 0.69644I$	0
$u = 0.935705 - 0.861076I$ $a = 0.293724 - 0.261994I$ $b = -0.468609 - 0.170672I$	$2.71396 + 0.69644I$	0
$u = 1.280350 + 0.018606I$ $a = -1.43758 + 0.46050I$ $b = -0.179102 - 0.349982I$	$-0.30029 - 3.05301I$	0
$u = 1.280350 - 0.018606I$ $a = -1.43758 - 0.46050I$ $b = -0.179102 + 0.349982I$	$-0.30029 + 3.05301I$	0
$u = -1.30388$ $a = 0.888977$ $b = 0.696510$	-2.58592	0
$u = -1.303700 + 0.057096I$ $a = 0.74284 + 1.24535I$ $b = 0.334669 - 0.980720I$	$-0.740344 + 0.546849I$	0
$u = -1.303700 - 0.057096I$ $a = 0.74284 - 1.24535I$ $b = 0.334669 + 0.980720I$	$-0.740344 - 0.546849I$	0
$u = -0.493875 + 0.488188I$ $a = 0.884027 - 0.566340I$ $b = -0.585707 + 0.067307I$	$-1.18169 + 0.83074I$	$-5.14593 - 2.98967I$
$u = -0.493875 - 0.488188I$ $a = 0.884027 + 0.566340I$ $b = -0.585707 - 0.067307I$	$-1.18169 - 0.83074I$	$-5.14593 + 2.98967I$
$u = -1.322990 + 0.037419I$ $a = 0.419364 - 0.288008I$ $b = 2.24257 - 0.59888I$	$-5.13718 + 0.93066I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.322990-0.037419I$ $a=\ \ 0.419364+0.288008I$ $b=\ \ 2.24257+0.59888I$	$-5.13718-0.93066I$	0
$u=-1.327760+0.089354I$ $a=-0.08728+1.59023I$ $b=\ \ 0.294552-1.028630I$	$-1.54532+6.50144I$	0
$u=-1.327760-0.089354I$ $a=-0.08728-1.59023I$ $b=\ \ 0.294552+1.028630I$	$-1.54532-6.50144I$	0
$u=\ \ 1.346210+0.060339I$ $a=-0.006328+0.929324I$ $b=-0.225605-1.369110I$	$-3.32385-2.89150I$	0
$u=\ \ 1.346210-0.060339I$ $a=-0.006328-0.929324I$ $b=-0.225605+1.369110I$	$-3.32385+2.89150I$	0
$u=\ \ 1.364470+0.020474I$ $a=-0.295490-0.214355I$ $b=-4.33439+0.52295I$	$-4.95461+3.75362I$	0
$u=\ \ 1.364470-0.020474I$ $a=-0.295490+0.214355I$ $b=-4.33439-0.52295I$	$-4.95461-3.75362I$	0
$u=\ \ 1.373840+0.099861I$ $a=\ \ 0.819714+0.934876I$ $b=\ \ 0.250264-0.590954I$	$-2.88115-3.30978I$	0
$u=\ \ 1.373840-0.099861I$ $a=\ \ 0.819714-0.934876I$ $b=\ \ 0.250264+0.590954I$	$-2.88115+3.30978I$	0
$u=\ \ 1.405360+0.131951I$ $a=\ \ 1.51446+0.37423I$ $b=\ \ 0.346042+0.380484I$	$-4.85566-8.88179I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.405360 - 0.131951I$ $a = 1.51446 - 0.37423I$ $b = 0.346042 - 0.380484I$	$-4.85566 + 8.88179I$	0
$u = -1.42243 + 0.11797I$ $a = -1.192690 + 0.117412I$ $b = -0.762736 + 0.416056I$	$-6.25207 + 4.41292I$	0
$u = -1.42243 - 0.11797I$ $a = -1.192690 - 0.117412I$ $b = -0.762736 - 0.416056I$	$-6.25207 - 4.41292I$	0
$u = 1.44211 + 0.02977I$ $a = 0.303260 - 0.075434I$ $b = 4.14471 + 2.85875I$	$-5.17776 + 0.09499I$	0
$u = 1.44211 - 0.02977I$ $a = 0.303260 + 0.075434I$ $b = 4.14471 - 2.85875I$	$-5.17776 - 0.09499I$	0
$u = -1.44737 + 0.07794I$ $a = -0.658075 - 0.070611I$ $b = -1.61466 + 0.78393I$	$-6.17975 + 3.74343I$	0
$u = -1.44737 - 0.07794I$ $a = -0.658075 + 0.070611I$ $b = -1.61466 - 0.78393I$	$-6.17975 - 3.74343I$	0
$u = -1.45325 + 0.17426I$ $a = -0.022009 + 0.560798I$ $b = 1.191190 - 0.354754I$	$-5.88811 - 1.65848I$	0
$u = -1.45325 - 0.17426I$ $a = -0.022009 - 0.560798I$ $b = 1.191190 + 0.354754I$	$-5.88811 + 1.65848I$	0
$u = 1.46074 + 0.22397I$ $a = -0.087044 + 0.735866I$ $b = -1.246400 - 0.536367I$	$-7.30379 - 3.60572I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.46074 - 0.22397I$ $a = -0.087044 - 0.735866I$ $b = -1.246400 + 0.536367I$	$-7.30379 + 3.60572I$	0
$u = 0.517939 + 0.030277I$ $a = -1.257170 - 0.613936I$ $b = 0.585738 + 0.551331I$	$0.80173 + 2.83553I$	$-4.73944 - 4.73337I$
$u = 0.517939 - 0.030277I$ $a = -1.257170 + 0.613936I$ $b = 0.585738 - 0.551331I$	$0.80173 - 2.83553I$	$-4.73944 + 4.73337I$
$u = -0.268706 + 0.441472I$ $a = 2.76472 + 1.19560I$ $b = 0.174119 - 0.914672I$	$0.49351 + 6.83165I$	$0.30272 - 12.02369I$
$u = -0.268706 - 0.441472I$ $a = 2.76472 - 1.19560I$ $b = 0.174119 + 0.914672I$	$0.49351 - 6.83165I$	$0.30272 + 12.02369I$
$u = -1.46682 + 0.28160I$ $a = 0.432061 + 0.746282I$ $b = 0.980677 - 0.924511I$	$-1.01642 + 4.71566I$	0
$u = -1.46682 - 0.28160I$ $a = 0.432061 - 0.746282I$ $b = 0.980677 + 0.924511I$	$-1.01642 - 4.71566I$	0
$u = 0.316309 + 0.384190I$ $a = -1.93029 + 1.27801I$ $b = -0.506253 - 0.870148I$	$-0.67357 - 2.60087I$	$-3.21300 + 6.51215I$
$u = 0.316309 - 0.384190I$ $a = -1.93029 - 1.27801I$ $b = -0.506253 + 0.870148I$	$-0.67357 + 2.60087I$	$-3.21300 - 6.51215I$
$u = -1.46418 + 0.35096I$ $a = 0.061766 - 0.696071I$ $b = -1.204820 - 0.108656I$	$-8.55069 + 2.04352I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.46418-0.35096I$ $a=\ \ 0.061766+0.696071I$ $b=-1.204820+0.108656I$	$-8.55069-2.04352I$	0
$u=\ \ 1.48529+0.26251I$ $a=-0.349746+0.983137I$ $b=-1.32341-0.99961I$	$-6.67106-7.00396I$	0
$u=\ \ 1.48529-0.26251I$ $a=-0.349746-0.983137I$ $b=-1.32341+0.99961I$	$-6.67106+7.00396I$	0
$u=\ \ 0.027486+0.487190I$ $a=-0.96250-2.69226I$ $b=\ \ 0.177661+0.847878I$	$3.12289+1.30549I$	$8.69976-1.36522I$
$u=\ \ 0.027486-0.487190I$ $a=-0.96250+2.69226I$ $b=\ \ 0.177661-0.847878I$	$3.12289-1.30549I$	$8.69976+1.36522I$
$u=-1.49169+0.26804I$ $a=\ \ 0.449384+1.049550I$ $b=\ \ 1.33215-1.16283I$	$-4.69085+12.48030I$	0
$u=-1.49169-0.26804I$ $a=\ \ 0.449384-1.049550I$ $b=\ \ 1.33215+1.16283I$	$-4.69085-12.48030I$	0
$u=-1.50759+0.17219I$ $a=-0.617594-1.177080I$ $b=-1.17609+0.78971I$	$-11.1073+8.7748I$	0
$u=-1.50759-0.17219I$ $a=-0.617594+1.177080I$ $b=-1.17609-0.78971I$	$-11.1073-8.7748I$	0
$u=\ \ 0.086000+0.474332I$ $a=-2.43919-1.92635I$ $b=\ \ 0.367378+0.456437I$	$2.74605-4.56330I$	$6.84455+8.54463I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.086000 - 0.474332I$ $a = -2.43919 + 1.92635I$ $b = 0.367378 - 0.456437I$	$2.74605 + 4.56330I$	$6.84455 - 8.54463I$
$u = 1.49415 + 0.33116I$ $a = 0.076295 - 0.792286I$ $b = 1.375540 + 0.230057I$	$-9.99282 - 8.09149I$	0
$u = 1.49415 - 0.33116I$ $a = 0.076295 + 0.792286I$ $b = 1.375540 - 0.230057I$	$-9.99282 + 8.09149I$	0
$u = 1.52357 + 0.17118I$ $a = 0.421306 - 1.094450I$ $b = 1.124160 + 0.649554I$	$-12.44990 - 3.40335I$	0
$u = 1.52357 - 0.17118I$ $a = 0.421306 + 1.094450I$ $b = 1.124160 - 0.649554I$	$-12.44990 + 3.40335I$	0
$u = -0.160251 + 0.432564I$ $a = 2.74408 - 0.38939I$ $b = -0.076446 - 0.185049I$	$1.93549 + 1.48976I$	$4.80637 - 4.55092I$
$u = -0.160251 - 0.432564I$ $a = 2.74408 + 0.38939I$ $b = -0.076446 + 0.185049I$	$1.93549 - 1.48976I$	$4.80637 + 4.55092I$
$u = -1.54980 + 0.09230I$ $a = -0.363553 - 0.522923I$ $b = -0.543928 + 0.839192I$	$-6.36585 + 3.09614I$	0
$u = -1.54980 - 0.09230I$ $a = -0.363553 + 0.522923I$ $b = -0.543928 - 0.839192I$	$-6.36585 - 3.09614I$	0
$u = 1.52512 + 0.30119I$ $a = 0.381361 - 0.948118I$ $b = 1.52384 + 0.96207I$	$-9.2312 - 12.6732I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.52512 - 0.30119I$ $a = 0.381361 + 0.948118I$ $b = 1.52384 - 0.96207I$	$-9.2312 + 12.6732I$	0
$u = -1.53021 + 0.29511I$ $a = -0.473162 - 0.979653I$ $b = -1.52026 + 1.16960I$	$-7.1817 + 18.4464I$	0
$u = -1.53021 - 0.29511I$ $a = -0.473162 + 0.979653I$ $b = -1.52026 - 1.16960I$	$-7.1817 - 18.4464I$	0
$u = -0.028029 + 0.432349I$ $a = 1.28487 - 1.33272I$ $b = -0.012099 + 0.713001I$	$0.85731 + 1.39747I$	$1.09021 - 4.04698I$
$u = -0.028029 - 0.432349I$ $a = 1.28487 + 1.33272I$ $b = -0.012099 - 0.713001I$	$0.85731 - 1.39747I$	$1.09021 + 4.04698I$
$u = -1.53867 + 0.32025I$ $a = -0.373328 - 0.730198I$ $b = -1.096350 + 0.805215I$	$-2.93916 + 10.06180I$	0
$u = -1.53867 - 0.32025I$ $a = -0.373328 + 0.730198I$ $b = -1.096350 - 0.805215I$	$-2.93916 - 10.06180I$	0
$u = -0.404504 + 0.057065I$ $a = 0.83922 - 1.30855I$ $b = -0.19631 + 1.74420I$	$0.671600 + 0.217161I$	$-12.32084 + 0.43118I$
$u = -0.404504 - 0.057065I$ $a = 0.83922 + 1.30855I$ $b = -0.19631 - 1.74420I$	$0.671600 - 0.217161I$	$-12.32084 - 0.43118I$
$u = 1.58565 + 0.17300I$ $a = 0.029475 - 0.750207I$ $b = 0.775362 + 0.263203I$	$-11.13310 - 0.27637I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.58565 - 0.17300I$ $a = 0.029475 + 0.750207I$ $b = 0.775362 - 0.263203I$	$-11.13310 + 0.27637I$	0
$u = 0.317229 + 0.245819I$ $a = -1.24995 + 0.85292I$ $b = -0.738382 - 0.858373I$	$-0.37551 - 2.54693I$	$1.38986 + 6.91010I$
$u = 0.317229 - 0.245819I$ $a = -1.24995 - 0.85292I$ $b = -0.738382 + 0.858373I$	$-0.37551 + 2.54693I$	$1.38986 - 6.91010I$
$u = 0.214125 + 0.331266I$ $a = 0.79698 - 1.33459I$ $b = -0.08689 + 2.01105I$	$-0.555437 + 0.437836I$	$4.35743 + 8.19634I$
$u = 0.214125 - 0.331266I$ $a = 0.79698 + 1.33459I$ $b = -0.08689 - 2.01105I$	$-0.555437 - 0.437836I$	$4.35743 - 8.19634I$
$u = -0.295460 + 0.242991I$ $a = -0.28861 - 1.62323I$ $b = -0.03817 + 2.38617I$	$0.03496 - 4.63924I$	$-4.02680 - 10.12172I$
$u = -0.295460 - 0.242991I$ $a = -0.28861 + 1.62323I$ $b = -0.03817 - 2.38617I$	$0.03496 + 4.63924I$	$-4.02680 + 10.12172I$
$u = -1.61960 + 0.20021I$ $a = 0.142144 - 0.608389I$ $b = -0.637498 + 0.018740I$	$-8.65273 - 5.12333I$	0
$u = -1.61960 - 0.20021I$ $a = 0.142144 + 0.608389I$ $b = -0.637498 - 0.018740I$	$-8.65273 + 5.12333I$	0

II. $I_2^u = \langle 21u^2b + 10u^2 + \cdots + 7b + 22,\ a,\ u^3 + u^2 - 1\rangle$

(i) Arc colorings

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

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

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

$$a_1 = \begin{pmatrix} -u \\ u^2 + u - 1 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} -u^2b + bu \\ -2u^2b - 2bu + 4b \end{pmatrix}$$

$$a_3 = \begin{pmatrix} b \\ b \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{3}{7}u^2 + b - \frac{2}{7}u + \frac{1}{7} \\ \frac{10}{7}u^2 + b + \frac{12}{7}u - \frac{6}{7} \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ -u^2 - u + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{82}{7}u^2b - \frac{71}{7}bu + \frac{19}{49}u^2 - \frac{17}{7}b - \frac{155}{49}u - \frac{262}{49}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^2-u+1)^3$
c_2	$(u^2+u+1)^3$
c_3	$49(49u^6-7u^5+29u^4+18u^3+15u^2+4u+1)$
c_4	$49(49u^6+7u^5-6u^4+15u^3+2u^2-u+1)$
c_6	$(u^3-u^2+2u-1)^2$
c_7, c_8	$(u^3+u^2-1)^2$
c_9	$(u^3+3u^2+2u-1)^2$
c_{10}	$(u^3+u^2+2u+1)^2$
c_{11}	u^6
c_{12}	$(u^3-u^2+1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y^2+y+1)^3$
c_3	$2401(2401y^6+2793y^5+2563y^4+700y^3+139y^2+14y+1)$
c_4	$2401(2401y^6-637y^5+22y^4-137y^3+22y^2+3y+1)$
c_6, c_{10}	$(y^3+3y^2+2y-1)^2$
c_7, c_8, c_{12}	$(y^3-y^2+2y-1)^2$
c_9	$(y^3-5y^2+10y-1)^2$
c_{11}	y^6

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.877439+0.744862I$ $a=0$ $b=0.171467+0.353309I$	$3.02413+4.85801I$	$-7.94313-10.82265I$
$u=-0.877439+0.744862I$ $a=0$ $b=0.220241-0.325149I$	$3.02413+0.79824I$	$7.13283-3.60755I$
$u=-0.877439-0.744862I$ $a=0$ $b=0.171467-0.353309I$	$3.02413-4.85801I$	$-7.94313+10.82265I$
$u=-0.877439-0.744862I$ $a=0$ $b=0.220241+0.325149I$	$3.02413-0.79824I$	$7.13283+3.60755I$
$u=0.754878$ $a=0$ $b=-0.463136+0.802176I$	$-1.11345+2.02988I$	$-5.93460-2.73535I$
$u=0.754878$ $a=0$ $b=-0.463136-0.802176I$	$-1.11345-2.02988I$	$-5.93460+2.73535I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^3)(u^{109}+50u^{108}+\cdots-9999u-2401)$
c_2	$((u^2+u+1)^3)(u^{109}+4u^{108}+\cdots-551u-49)$
c_3	$2401(49u^6-7u^5+29u^4+18u^3+15u^2+4u+1)$ $\cdot(49u^{109}+42u^{108}+\cdots-1346644u-153031)$
c_4	$2401(49u^6+7u^5-6u^4+15u^3+2u^2-u+1)$ $\cdot(49u^{109}+154u^{108}+\cdots+18492416u+1398784)$
c_5	$((u^2-u+1)^3)(u^{109}+4u^{108}+\cdots-551u-49)$
c_6	$((u^3-u^2+2u-1)^2)(u^{109}+3u^{108}+\cdots+6u+1)$
c_7, c_8	$((u^3+u^2-1)^2)(u^{109}+3u^{108}+\cdots+2u^2+1)$
c_9	$((u^3+3u^2+2u-1)^2)(u^{109}-49u^{108}+\cdots-4u+1)$
c_{10}	$((u^3+u^2+2u+1)^2)(u^{109}+3u^{108}+\cdots+6u+1)$
c_{11}	$u^6(u^{109}-5u^{108}+\cdots+48608u+21952)$
c_{12}	$((u^3-u^2+1)^2)(u^{109}+3u^{108}+\cdots+2u^2+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^3)(y^{109}+22y^{108}+\cdots+1.86533\times10^7 y-5764801)$
c_2, c_5	$((y^2+y+1)^3)(y^{109}+50y^{108}+\cdots-9999y-2401)$
c_3	$5764801(2401y^6+2793y^5+2563y^4+700y^3+139y^2+14y+1)$ $\cdot(2401y^{109}-163660y^{108}+\cdots-913616530238y-23418486961)$
c_4	$5764801(2401y^6-637y^5+22y^4-137y^3+22y^2+3y+1)$ $\cdot(2401y^{109}+1666y^{108}+\cdots+9951035523072y-1956596678656)$
c_6, c_{10}	$((y^3+3y^2+2y-1)^2)(y^{109}+49y^{108}+\cdots-4y-1)$
c_7, c_8, c_{12}	$((y^3-y^2+2y-1)^2)(y^{109}-103y^{108}+\cdots-4y-1)$
c_9	$((y^3-5y^2+10y-1)^2)(y^{109}+25y^{108}+\cdots+72y-1)$
c_{11}	$y^6(y^{109}+35y^{108}+\cdots-3.91167\times10^9 y-4.81890\times10^8)$