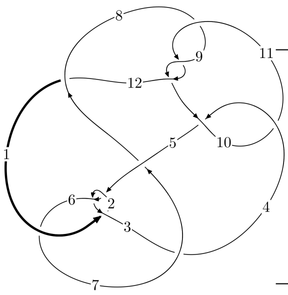
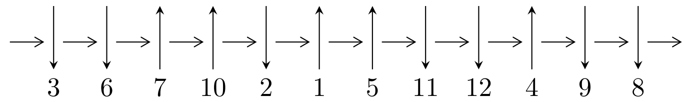
$12a_{0242}$ $(K12a_{0242})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -u^{100} + 2u^{99} + \cdots + b + 1,\ u^{99} - u^{98} + \cdots + a + u,\ u^{101} - 2u^{100} + \cdots - 3u + 1 \rangle$$
$$I_2^u = \langle -u^5 - u^4 + u^3 + u^2 + b,\ -u^5 - u^4 + u^3 + u^2 + a,\ u^6 + u^5 - u^4 - 2u^3 + u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 107 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.

$$\boldsymbol{I_1^u = \langle -u^{100}+2u^{99}+\cdots+b+1,\ u^{99}-u^{98}+\cdots+a+u,\ u^{101}-2u^{100}+\cdots-3u+1\rangle}$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2+1 \\ -u^4 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^5-2u^3+u \\ u^7-u^5+u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^9-2u^7+3u^5-2u^3+u \\ u^9-u^7+u^5+u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{99}+u^{98}+\cdots+2u^2-u \\ u^{100}-2u^{99}+\cdots+2u-1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{10}+3u^8-4u^6+3u^4-u^2+1 \\ -u^{12}+2u^{10}-2u^8+u^4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{99}+u^{98}+\cdots-4u+1 \\ -u^{100}+25u^{98}+\cdots-3u+1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^{22}+5u^{20}+\cdots-2u^2+1 \\ -u^{22}+4u^{20}-9u^{18}+12u^{16}-12u^{14}+10u^{12}-9u^{10}+6u^8-3u^6-u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{99}+u^{98}+\cdots-2u+1 \\ -u^{99}+u^{98}+\cdots-2u^3+2u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 12u^{100}-14u^{99}+\cdots+24u-14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{101} + 48u^{100} + \cdots + 5u + 1$
c_2, c_5	$u^{101} + 2u^{100} + \cdots - 3u - 1$
c_3	$u^{101} - 2u^{100} + \cdots - 20923u - 4753$
c_4, c_{10}	$u^{101} + u^{100} + \cdots + 192u + 64$
c_6	$u^{101} + 6u^{100} + \cdots - 4249u - 935$
c_7	$u^{101} + 12u^{100} + \cdots + 15457u + 841$
c_8, c_9, c_{11}	$u^{101} - 7u^{100} + \cdots - 6u + 1$
c_{12}	$u^{101} + 39u^{100} + \cdots - 24576u - 4096$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{101} + 12y^{100} + \cdots - 3y - 1$
c_2, c_5	$y^{101} - 48y^{100} + \cdots + 5y - 1$
c_3	$y^{101} - 24y^{100} + \cdots + 1248690765y - 22591009$
c_4, c_{10}	$y^{101} + 39y^{100} + \cdots - 24576y - 4096$
c_6	$y^{101} + 24y^{100} + \cdots - 42754659y - 874225$
c_7	$y^{101} + 12y^{100} + \cdots + 19680241y - 707281$
c_8, c_9, c_{11}	$y^{101} - 87y^{100} + \cdots + 14y - 1$
c_{12}	$y^{101} + 35y^{100} + \cdots + 452984832y - 16777216$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.052420 + 0.128459I$ $a = 0.1398400 - 0.0153419I$ $b = 0.432857 - 0.949399I$	$-4.78922 - 2.77784I$	0
$u = 1.052420 - 0.128459I$ $a = 0.1398400 + 0.0153419I$ $b = 0.432857 + 0.949399I$	$-4.78922 + 2.77784I$	0
$u = 0.755068 + 0.557624I$ $a = 0.102973 + 0.282474I$ $b = -0.578772 - 0.739571I$	$-6.39865 - 2.23005I$	0
$u = 0.755068 - 0.557624I$ $a = 0.102973 - 0.282474I$ $b = -0.578772 + 0.739571I$	$-6.39865 + 2.23005I$	0
$u = 0.633815 + 0.669876I$ $a = 0.580927 + 0.080737I$ $b = 0.92685 + 1.45655I$	$-1.26580 - 9.60369I$	0
$u = 0.633815 - 0.669876I$ $a = 0.580927 - 0.080737I$ $b = 0.92685 - 1.45655I$	$-1.26580 + 9.60369I$	0
$u = 1.030840 + 0.337224I$ $a = -0.046217 + 0.243872I$ $b = 0.457897 + 0.352581I$	$-1.96756 - 1.35415I$	0
$u = 1.030840 - 0.337224I$ $a = -0.046217 - 0.243872I$ $b = 0.457897 - 0.352581I$	$-1.96756 + 1.35415I$	0
$u = 1.070010 + 0.217154I$ $a = -0.199686 - 0.063001I$ $b = -0.705802 + 0.573504I$	$-0.934930 - 0.044176I$	0
$u = 1.070010 - 0.217154I$ $a = -0.199686 + 0.063001I$ $b = -0.705802 - 0.573504I$	$-0.934930 + 0.044176I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.609804 + 0.654819I$ $a = -0.509436 - 0.264760I$ $b = -0.79698 - 1.54382I$	$3.60239 - 5.43636I$	$0. + 6.67139I$
$u = 0.609804 - 0.654819I$ $a = -0.509436 + 0.264760I$ $b = -0.79698 + 1.54382I$	$3.60239 + 5.43636I$	$0. - 6.67139I$
$u = 0.938435 + 0.588259I$ $a = -0.842077 - 0.734205I$ $b = 0.197316 - 0.238136I$	$-2.16486 + 4.72332I$	0
$u = 0.938435 - 0.588259I$ $a = -0.842077 + 0.734205I$ $b = 0.197316 + 0.238136I$	$-2.16486 - 4.72332I$	0
$u = -0.966470 + 0.548870I$ $a = 1.28398 - 0.83171I$ $b = 0.88047 - 1.68436I$	$-0.672587 + 1.029480I$	0
$u = -0.966470 - 0.548870I$ $a = 1.28398 + 0.83171I$ $b = 0.88047 + 1.68436I$	$-0.672587 - 1.029480I$	0
$u = 0.959435 + 0.569390I$ $a = 1.041610 + 0.586251I$ $b = 0.099199 + 0.178007I$	$2.57284 + 0.65864I$	0
$u = 0.959435 - 0.569390I$ $a = 1.041610 - 0.586251I$ $b = 0.099199 - 0.178007I$	$2.57284 - 0.65864I$	0
$u = -0.534368 + 0.701148I$ $a = -0.818876 + 0.909716I$ $b = 0.359753 + 0.781522I$	$0.58025 - 3.29880I$	$0. + 3.45551I$
$u = -0.534368 - 0.701148I$ $a = -0.818876 - 0.909716I$ $b = 0.359753 - 0.781522I$	$0.58025 + 3.29880I$	$0. - 3.45551I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.602981 + 0.633411I$ $a = -1.23643 + 0.76240I$ $b = -0.033260 + 1.072500I$	$0.39493 + 3.62199I$	$0. - 4.25248I$
$u = -0.602981 - 0.633411I$ $a = -1.23643 - 0.76240I$ $b = -0.033260 - 1.072500I$	$0.39493 - 3.62199I$	$0. + 4.25248I$
$u = -1.098480 + 0.249907I$ $a = 1.46633 + 2.09687I$ $b = 0.95181 + 2.80503I$	$-4.54068 - 0.41043I$	0
$u = -1.098480 - 0.249907I$ $a = 1.46633 - 2.09687I$ $b = 0.95181 - 2.80503I$	$-4.54068 + 0.41043I$	0
$u = 0.991961 + 0.547840I$ $a = -1.371260 - 0.274593I$ $b = -0.568754 + 0.042247I$	$-0.36209 - 3.54745I$	0
$u = 0.991961 - 0.547840I$ $a = -1.371260 + 0.274593I$ $b = -0.568754 - 0.042247I$	$-0.36209 + 3.54745I$	0
$u = -0.559631 + 0.661068I$ $a = 1.023780 - 0.774703I$ $b = -0.135780 - 0.895963I$	$4.42732 + 0.11667I$	$4.83665 + 0.I$
$u = -0.559631 - 0.661068I$ $a = 1.023780 + 0.774703I$ $b = -0.135780 + 0.895963I$	$4.42732 - 0.11667I$	$4.83665 + 0.I$
$u = 1.114920 + 0.238092I$ $a = 0.284121 + 0.095472I$ $b = 1.059400 - 0.516964I$	$-5.34739 + 2.98728I$	0
$u = 1.114920 - 0.238092I$ $a = 0.284121 - 0.095472I$ $b = 1.059400 + 0.516964I$	$-5.34739 - 2.98728I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.120580+0.224260I$ $a=-1.34807-1.71177I$ $b=-0.64781-2.48601I$	$-2.28390-4.97717I$	0
$u=-1.120580-0.224260I$ $a=-1.34807+1.71177I$ $b=-0.64781+2.48601I$	$-2.28390+4.97717I$	0
$u=-1.097540+0.321538I$ $a=\ \ 0.62090+2.60978I$ $b=\ \ 0.52128+3.42738I$	$-5.22703+0.81000I$	0
$u=-1.097540-0.321538I$ $a=\ \ 0.62090-2.60978I$ $b=\ \ 0.52128-3.42738I$	$-5.22703-0.81000I$	0
$u=-0.418601+0.745337I$ $a=-0.031445-1.080460I$ $b=-0.636462-0.121876I$	$-0.004549+0.828463I$	$-2.59773-3.39866I$
$u=-0.418601-0.745337I$ $a=-0.031445+1.080460I$ $b=-0.636462+0.121876I$	$-0.004549-0.828463I$	$-2.59773+3.39866I$
$u=\ \ 0.341589+0.777836I$ $a=\ \ 2.60469+0.69821I$ $b=\ \ 1.029160+0.935138I$	$-2.75864+11.91880I$	$-3.31016-7.20088I$
$u=\ \ 0.341589-0.777836I$ $a=\ \ 2.60469-0.69821I$ $b=\ \ 1.029160-0.935138I$	$-2.75864-11.91880I$	$-3.31016+7.20088I$
$u=-0.998781+0.571100I$ $a=-1.160180+0.609320I$ $b=-0.93422+1.48602I$	$3.13296+4.68056I$	0
$u=-0.998781-0.571100I$ $a=-1.160180-0.609320I$ $b=-0.93422-1.48602I$	$3.13296-4.68056I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.572328 + 0.624706I$ $a = 0.273818 + 0.545396I$ $b = 0.53365 + 1.66046I$	$0.876218 - 1.073990I$	$-0.47148 + 3.54648I$
$u = 0.572328 - 0.624706I$ $a = 0.273818 - 0.545396I$ $b = 0.53365 - 1.66046I$	$0.876218 + 1.073990I$	$-0.47148 - 3.54648I$
$u = 1.108560 + 0.343316I$ $a = -0.216053 - 0.426382I$ $b = -1.119240 - 0.438738I$	$-6.42822 - 3.14881I$	0
$u = 1.108560 - 0.343316I$ $a = -0.216053 + 0.426382I$ $b = -1.119240 + 0.438738I$	$-6.42822 + 3.14881I$	0
$u = -1.140370 + 0.219226I$ $a = 1.18416 + 1.60649I$ $b = 0.40484 + 2.47427I$	$-7.44620 - 9.17178I$	0
$u = -1.140370 - 0.219226I$ $a = 1.18416 - 1.60649I$ $b = 0.40484 - 2.47427I$	$-7.44620 + 9.17178I$	0
$u = 0.347158 + 0.760698I$ $a = -2.62218 - 0.68502I$ $b = -1.18577 - 0.88400I$	$2.29536 + 7.62101I$	$0.67662 - 6.29564I$
$u = 0.347158 - 0.760698I$ $a = -2.62218 + 0.68502I$ $b = -1.18577 + 0.88400I$	$2.29536 - 7.62101I$	$0.67662 + 6.29564I$
$u = -1.111800 + 0.363448I$ $a = -0.24482 - 2.31312I$ $b = -0.36784 - 3.24484I$	$-3.73764 + 5.11320I$	0
$u = -1.111800 - 0.363448I$ $a = -0.24482 + 2.31312I$ $b = -0.36784 + 3.24484I$	$-3.73764 - 5.11320I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.374481 + 0.736699I$ $a = 0.356343 + 1.067530I$ $b = 0.611684 - 0.079445I$	$3.53001 - 2.28299I$	$3.74749 + 1.05855I$
$u = -0.374481 - 0.736699I$ $a = 0.356343 - 1.067530I$ $b = 0.611684 + 0.079445I$	$3.53001 + 2.28299I$	$3.74749 - 1.05855I$
$u = -0.340956 + 0.748894I$ $a = -0.547438 - 1.193920I$ $b = -0.653813 + 0.195404I$	$-0.87772 - 5.64328I$	$-2.11529 + 3.95512I$
$u = -0.340956 - 0.748894I$ $a = -0.547438 + 1.193920I$ $b = -0.653813 - 0.195404I$	$-0.87772 + 5.64328I$	$-2.11529 - 3.95512I$
$u = -1.019800 + 0.591476I$ $a = 1.148060 - 0.373840I$ $b = 1.11297 - 1.29175I$	$-0.85273 + 8.26854I$	0
$u = -1.019800 - 0.591476I$ $a = 1.148060 + 0.373840I$ $b = 1.11297 + 1.29175I$	$-0.85273 - 8.26854I$	0
$u = -1.143830 + 0.294047I$ $a = -0.78969 - 2.09405I$ $b = -0.45626 - 3.15545I$	$-12.66950 - 0.31771I$	0
$u = -1.143830 - 0.294047I$ $a = -0.78969 + 2.09405I$ $b = -0.45626 + 3.15545I$	$-12.66950 + 0.31771I$	0
$u = 0.345911 + 0.731475I$ $a = 2.66528 + 0.61476I$ $b = 1.40337 + 0.66992I$	$-0.20007 + 2.98834I$	$-2.71240 - 3.17778I$
$u = 0.345911 - 0.731475I$ $a = 2.66528 - 0.61476I$ $b = 1.40337 - 0.66992I$	$-0.20007 - 2.98834I$	$-2.71240 + 3.17778I$

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.139320 + 0.371305I$ $a = \quad 0.31637 + 2.12611I$ $b = \quad 0.48661 + 3.21867I$	$-9.15955 + 8.82637I$	0
$u = -1.139320 - 0.371305I$ $a = \quad 0.31637 - 2.12611I$ $b = \quad 0.48661 - 3.21867I$	$-9.15955 - 8.82637I$	0
$u = -1.077030 + 0.542858I$ $a = \quad 0.071890 - 0.629892I$ $b = -0.283599 - 0.913705I$	$-0.45669 + 5.39599I$	0
$u = -1.077030 - 0.542858I$ $a = \quad 0.071890 + 0.629892I$ $b = -0.283599 + 0.913705I$	$-0.45669 - 5.39599I$	0
$u = \quad 1.100270 + 0.494755I$ $a = -0.32807 + 1.65232I$ $b = \quad 0.27526 + 2.25742I$	$-2.87000 - 2.35849I$	0
$u = \quad 1.100270 - 0.494755I$ $a = -0.32807 - 1.65232I$ $b = \quad 0.27526 - 2.25742I$	$-2.87000 + 2.35849I$	0
$u = \quad 0.259363 + 0.735630I$ $a = -2.40428 - 0.68228I$ $b = -0.805941 - 0.276762I$	$-8.48867 + 3.43756I$	$-7.95352 - 2.84384I$
$u = \quad 0.259363 - 0.735630I$ $a = -2.40428 + 0.68228I$ $b = -0.805941 + 0.276762I$	$-8.48867 - 3.43756I$	$-7.95352 + 2.84384I$
$u = -1.107400 + 0.512207I$ $a = \quad 0.130066 + 1.191490I$ $b = \quad 0.80513 + 1.69395I$	$-5.28761 + 4.34357I$	0
$u = -1.107400 - 0.512207I$ $a = \quad 0.130066 - 1.191490I$ $b = \quad 0.80513 - 1.69395I$	$-5.28761 - 4.34357I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.129590 + 0.478328I$ $a = -0.14991 - 1.46790I$ $b = -0.92464 - 2.18332I$	$-8.43973 + 0.95842I$	0
$u = 1.129590 - 0.478328I$ $a = -0.14991 + 1.46790I$ $b = -0.92464 + 2.18332I$	$-8.43973 - 0.95842I$	0
$u = 1.108120 + 0.527727I$ $a = 0.13959 - 2.44107I$ $b = -0.23659 - 3.14177I$	$-3.82038 - 6.62383I$	0
$u = 1.108120 - 0.527727I$ $a = 0.13959 + 2.44107I$ $b = -0.23659 + 3.14177I$	$-3.82038 + 6.62383I$	0
$u = -1.090320 + 0.586037I$ $a = -0.794158 - 0.400622I$ $b = -1.41676 + 0.02390I$	$-1.98492 + 4.22859I$	0
$u = -1.090320 - 0.586037I$ $a = -0.794158 + 0.400622I$ $b = -1.41676 - 0.02390I$	$-1.98492 - 4.22859I$	0
$u = -1.106080 + 0.570992I$ $a = 0.642285 + 0.669252I$ $b = 1.40913 + 0.52941I$	$1.38275 + 7.25833I$	0
$u = -1.106080 - 0.570992I$ $a = 0.642285 - 0.669252I$ $b = 1.40913 - 0.52941I$	$1.38275 - 7.25833I$	0
$u = 1.114420 + 0.562555I$ $a = -0.81295 - 2.95978I$ $b = -0.81437 - 3.80458I$	$-2.44582 - 7.91446I$	0
$u = 1.114420 - 0.562555I$ $a = -0.81295 + 2.95978I$ $b = -0.81437 + 3.80458I$	$-2.44582 + 7.91446I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.407550+0.629321I$ $a=-0.677042-0.205606I$ $b=-0.244368+0.284778I$	$1.49320-0.76735I$	$6.12300+0.96206I$
$u=-0.407550-0.629321I$ $a=-0.677042+0.205606I$ $b=-0.244368-0.284778I$	$1.49320+0.76735I$	$6.12300-0.96206I$
$u=-1.120230+0.566440I$ $a=-0.667711-0.855882I$ $b=-1.59973-0.83078I$	$-3.16163+10.62420I$	0
$u=-1.120230-0.566440I$ $a=-0.667711+0.855882I$ $b=-1.59973+0.83078I$	$-3.16163-10.62420I$	0
$u=\ \ 1.135270+0.538064I$ $a=\ \ 0.52498+2.30671I$ $b=\ \ 0.87565+3.29608I$	$-11.02440-8.24194I$	0
$u=\ \ 1.135270-0.538064I$ $a=\ \ 0.52498-2.30671I$ $b=\ \ 0.87565-3.29608I$	$-11.02440+8.24194I$	0
$u=\ \ 1.121660+0.571763I$ $a=\ \ 1.02281+2.77205I$ $b=\ \ 0.93735+3.74422I$	$0.01813-12.65240I$	0
$u=\ \ 1.121660-0.571763I$ $a=\ \ 1.02281-2.77205I$ $b=\ \ 0.93735-3.74422I$	$0.01813+12.65240I$	0
$u=\ \ 1.128560+0.575455I$ $a=-1.06834-2.64436I$ $b=-0.96826-3.71918I$	$-5.0801-17.0054I$	0
$u=\ \ 1.128560-0.575455I$ $a=-1.06834+2.64436I$ $b=-0.96826+3.71918I$	$-5.0801+17.0054I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.283550 + 0.647515I$ $a = 2.23141 + 0.35424I$ $b = 1.074950 - 0.206995I$	$-1.48981 + 2.04466I$	$-5.62916 - 3.79059I$
$u = 0.283550 - 0.647515I$ $a = 2.23141 - 0.35424I$ $b = 1.074950 + 0.206995I$	$-1.48981 - 2.04466I$	$-5.62916 + 3.79059I$
$u = 0.112489 + 0.678879I$ $a = 1.98470 + 0.88755I$ $b = 0.480281 - 0.196783I$	$-5.59993 - 5.24861I$	$-6.43481 + 3.80727I$
$u = 0.112489 - 0.678879I$ $a = 1.98470 - 0.88755I$ $b = 0.480281 + 0.196783I$	$-5.59993 + 5.24861I$	$-6.43481 - 3.80727I$
$u = 0.555631 + 0.364904I$ $a = -0.478905 - 0.138519I$ $b = -0.050258 + 0.905826I$	$-0.57618 - 1.33093I$	$-3.67880 + 6.04129I$
$u = 0.555631 - 0.364904I$ $a = -0.478905 + 0.138519I$ $b = -0.050258 - 0.905826I$	$-0.57618 + 1.33093I$	$-3.67880 - 6.04129I$
$u = -0.223103 + 0.609649I$ $a = 1.28747 + 0.84230I$ $b = 0.462436 - 0.362061I$	$-2.87314 + 0.06313I$	$-4.60896 + 0.44073I$
$u = -0.223103 - 0.609649I$ $a = 1.28747 - 0.84230I$ $b = 0.462436 + 0.362061I$	$-2.87314 - 0.06313I$	$-4.60896 - 0.44073I$
$u = 0.134739 + 0.590370I$ $a = -1.83884 - 0.72913I$ $b = -0.565952 + 0.320273I$	$-0.36248 - 1.81610I$	$-2.37443 + 3.66266I$
$u = 0.134739 - 0.590370I$ $a = -1.83884 + 0.72913I$ $b = -0.565952 - 0.320273I$	$-0.36248 + 1.81610I$	$-2.37443 - 3.66266I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.512467$ $a = \quad 2.15131$ $b = \quad 0.883872$	-2.31617	-2.44180

II.

$\boldsymbol{I_2^u = \langle -u^5-u^4+u^3+u^2+b,\ -u^5-u^4+u^3+u^2+a,\ u^6+u^5-u^4-2u^3+u+1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2+1 \\ -u^4 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^5-2u^3+u \\ u^5+u^4-2u^3-u^2+u+1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2-1 \\ u^4 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^5+u^4-u^3-u^2 \\ u^5+u^4-u^3-u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^5+u^4-u^3-u^2 \\ u^5+u^4-u^3-u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^2+1 \\ -u^4 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^5+u^4-u^3-1 \\ u^5+2u^4-u^3-u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4u^4-3u^2-3u-3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.002190 + 0.295542I$ $a = -1.000940 + 0.863088I$ $b = -1.000940 + 0.863088I$	$-3.53554 - 0.92430I$	$-6.79748 + 1.68215I$
$u = 1.002190 - 0.295542I$ $a = -1.000940 - 0.863088I$ $b = -1.000940 - 0.863088I$	$-3.53554 + 0.92430I$	$-6.79748 - 1.68215I$
$u = -0.428243 + 0.664531I$ $a = -0.573013 + 0.494098I$ $b = -0.573013 + 0.494098I$	$0.245672 - 0.924305I$	$-1.96974 + 0.88960I$
$u = -0.428243 - 0.664531I$ $a = -0.573013 - 0.494098I$ $b = -0.573013 - 0.494098I$	$0.245672 + 0.924305I$	$-1.96974 - 0.88960I$
$u = -1.073950 + 0.558752I$ $a = 0.573950 - 0.818891I$ $b = 0.573950 - 0.818891I$	$-1.64493 + 5.69302I$	$-5.23279 - 6.15196I$
$u = -1.073950 - 0.558752I$ $a = 0.573950 + 0.818891I$ $b = 0.573950 + 0.818891I$	$-1.64493 - 5.69302I$	$-5.23279 + 6.15196I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)(u^{101}+48u^{100}+\cdots+5u+1)$
c_2	$(u^6+u^5-u^4-2u^3+u+1)(u^{101}+2u^{100}+\cdots-3u-1)$
c_3	$(u^6-u^5-u^4+2u^3-u+1)(u^{101}-2u^{100}+\cdots-20923u-4753)$
c_4, c_{10}	$u^6(u^{101}+u^{100}+\cdots+192u+64)$
c_5	$(u^6-u^5-u^4+2u^3-u+1)(u^{101}+2u^{100}+\cdots-3u-1)$
c_6	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)(u^{101}+6u^{100}+\cdots-4249u-935)$
c_7	$(u^6+u^5-u^4-2u^3+u+1)(u^{101}+12u^{100}+\cdots+15457u+841)$
c_8, c_9	$((u-1)^6)(u^{101}-7u^{100}+\cdots-6u+1)$
c_{11}	$((u+1)^6)(u^{101}-7u^{100}+\cdots-6u+1)$
c_{12}	$u^6(u^{101}+39u^{100}+\cdots-24576u-4096)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^6+y^5+5y^4+6y^2+3y+1)(y^{101}+12y^{100}+\cdots-3y-1)$
c_2, c_5	$(y^6-3y^5+5y^4-4y^3+2y^2-y+1)(y^{101}-48y^{100}+\cdots+5y-1)$
c_3	$(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{101}-24y^{100}+\cdots+1248690765y-22591009)$
c_4, c_{10}	$y^6(y^{101}+39y^{100}+\cdots-24576y-4096)$
c_6	$(y^6+y^5+5y^4+6y^2+3y+1)$ $\cdot(y^{101}+24y^{100}+\cdots-42754659y-874225)$
c_7	$(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{101}+12y^{100}+\cdots+19680241y-707281)$
c_8, c_9, c_{11}	$((y-1)^6)(y^{101}-87y^{100}+\cdots+14y-1)$
c_{12}	$y^6(y^{101}+35y^{100}+\cdots+4.52985\times10^8y-1.67772\times10^7)$