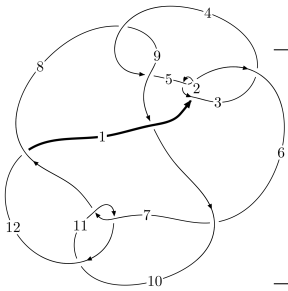
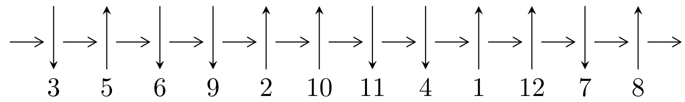
$12a_{0016}$ $(K12a_{0016})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 8u^{109} - 22u^{108} + \cdots + 2b + 6u,\ -8u^{109} + 24u^{108} + \cdots + 2a + 11,\ u^{110} - 3u^{109} + \cdots - 2u + 1\rangle$$
$$I_2^u = \langle -u^2a + b,\ u^4 - u^2a + 2u^3 + a^2 - au + 3u^2 - a + 2u + 1,\ u^5 + u^4 + 2u^3 + u^2 + u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 120 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. $I_1^u = \langle 8u^{109} - 22u^{108} + \cdots + 2b + 6u,\ -8u^{109} + 24u^{108} + \cdots + 2a + 11,\ u^{110} - 3u^{109} + \cdots - 2u + 1\rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 4u^{109} - 12u^{108} + \cdots + \frac{15}{2}u - \frac{11}{2} \\ -4u^{109} + 11u^{108} + \cdots - \frac{1}{2}u^2 - 3u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{11} - 2u^9 - 2u^7 - u^3 \\ -u^{13} - 3u^{11} - 5u^9 - 4u^7 - 2u^5 + u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 4u^{108} - 8u^{107} + \cdots - \frac{3}{2}u + \frac{1}{2} \\ -2u^{108} + \frac{5}{2}u^{107} + \cdots - \frac{11}{2}u^2 + 3u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^6 - u^4 + 1 \\ u^6 + 2u^4 + u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 2u^{109} - \frac{11}{2}u^{108} + \cdots + 6u - 3 \\ -2u^{109} + \frac{11}{2}u^{108} + \cdots - \frac{3}{2}u^2 - \frac{1}{2}u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -\frac{1}{2}u^{108} + u^{107} + \cdots + 2u - 1 \\ \frac{1}{2}u^{108} - u^{107} + \cdots - \frac{3}{2}u^2 + \frac{3}{2}u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{109} - \frac{31}{2}u^{108} + \cdots + \frac{47}{2}u - \frac{15}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{110} + 54u^{109} + \cdots + 7u + 1$
c_2, c_5	$u^{110} + 6u^{109} + \cdots + 5u + 1$
c_3	$u^{110} - 6u^{109} + \cdots - 455049u + 73746$
c_4, c_8	$u^{110} - u^{109} + \cdots - 10240u^2 + 1024$
c_6, c_{12}	$u^{110} - 3u^{109} + \cdots - 585u + 34$
c_7, c_{11}	$u^{110} + 3u^{109} + \cdots + 2u + 1$
c_9	$u^{110} + 13u^{109} + \cdots + 74128u + 1669$
c_{10}	$u^{110} - 59u^{109} + \cdots - 8u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{110} + 10y^{109} + \cdots - 9y + 1$
c_2, c_5	$y^{110} + 54y^{109} + \cdots + 7y + 1$
c_3	$y^{110} - 34y^{109} + \cdots - 23865354441y + 5438472516$
c_4, c_8	$y^{110} - 55y^{109} + \cdots - 20971520y + 1048576$
c_6, c_{12}	$y^{110} - 85y^{109} + \cdots + 105147y + 1156$
c_7, c_{11}	$y^{110} + 59y^{109} + \cdots + 8y + 1$
c_9	$y^{110} + 15y^{109} + \cdots - 1624602792y + 2785561$
c_{10}	$y^{110} - 13y^{109} + \cdots + 76y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.579982 + 0.823482I$ $a = -1.10813 - 1.57808I$ $b = 0.196290 + 1.248310I$	$-7.69991 + 3.23271I$	0
$u = -0.579982 - 0.823482I$ $a = -1.10813 + 1.57808I$ $b = 0.196290 - 1.248310I$	$-7.69991 - 3.23271I$	0
$u = -0.561599 + 0.852113I$ $a = 1.26319 + 1.80130I$ $b = 0.00553 - 1.44932I$	$-3.12530 + 6.60837I$	0
$u = -0.561599 - 0.852113I$ $a = 1.26319 - 1.80130I$ $b = 0.00553 + 1.44932I$	$-3.12530 - 6.60837I$	0
$u = 0.406550 + 0.888189I$ $a = -0.690850 - 0.195917I$ $b = 0.0799002 + 0.0496905I$	$0.19398 - 2.02003I$	0
$u = 0.406550 - 0.888189I$ $a = -0.690850 + 0.195917I$ $b = 0.0799002 - 0.0496905I$	$0.19398 + 2.02003I$	0
$u = 0.528135 + 0.808914I$ $a = 1.011690 - 0.239556I$ $b = 0.0721671 - 0.1011930I$	$-2.50066 - 5.75747I$	0
$u = 0.528135 - 0.808914I$ $a = 1.011690 + 0.239556I$ $b = 0.0721671 + 0.1011930I$	$-2.50066 + 5.75747I$	0
$u = -0.577603 + 0.864674I$ $a = -1.14476 - 1.89716I$ $b = -0.142767 + 1.339650I$	$-5.80226 + 11.67560I$	0
$u = -0.577603 - 0.864674I$ $a = -1.14476 + 1.89716I$ $b = -0.142767 - 1.339650I$	$-5.80226 - 11.67560I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.128950 + 1.034770I$ $a = -1.07011 - 1.42517I$ $b = 0.553854 + 0.773753I$	$1.55547 - 2.74435I$	0
$u = 0.128950 - 1.034770I$ $a = -1.07011 + 1.42517I$ $b = 0.553854 - 0.773753I$	$1.55547 + 2.74435I$	0
$u = -0.487300 + 0.806990I$ $a = 1.99235 + 1.41659I$ $b = -0.57504 - 1.94110I$	$-0.42932 + 4.54389I$	0
$u = -0.487300 - 0.806990I$ $a = 1.99235 - 1.41659I$ $b = -0.57504 + 1.94110I$	$-0.42932 - 4.54389I$	0
$u = 0.011304 + 0.929219I$ $a = -0.35995 - 1.94849I$ $b = -0.263245 + 1.087660I$	$2.57030 - 1.41361I$	0
$u = 0.011304 - 0.929219I$ $a = -0.35995 + 1.94849I$ $b = -0.263245 - 1.087660I$	$2.57030 + 1.41361I$	0
$u = -0.592873 + 0.707362I$ $a = 0.861643 + 0.645026I$ $b = -0.91828 - 1.09414I$	$-8.03143 + 1.39305I$	0
$u = -0.592873 - 0.707362I$ $a = 0.861643 - 0.645026I$ $b = -0.91828 + 1.09414I$	$-8.03143 - 1.39305I$	0
$u = 0.452920 + 0.800781I$ $a = -0.763988 + 0.178725I$ $b = 0.0478287 + 0.0879934I$	$-0.04986 - 1.88964I$	0
$u = 0.452920 - 0.800781I$ $a = -0.763988 - 0.178725I$ $b = 0.0478287 - 0.0879934I$	$-0.04986 + 1.88964I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.128527 + 1.087170I$ $a = 1.41312 + 1.45257I$ $b = -0.928389 - 0.812896I$	$-0.83737 - 7.40305I$	0
$u = 0.128527 - 1.087170I$ $a = 1.41312 - 1.45257I$ $b = -0.928389 + 0.812896I$	$-0.83737 + 7.40305I$	0
$u = 0.226104 + 1.082150I$ $a = 1.30997 + 0.79217I$ $b = -0.731357 - 0.110538I$	$-2.18609 + 0.20029I$	0
$u = 0.226104 - 1.082150I$ $a = 1.30997 - 0.79217I$ $b = -0.731357 + 0.110538I$	$-2.18609 - 0.20029I$	0
$u = 0.521951 + 0.724522I$ $a = 0.874689 - 0.434640I$ $b = -0.029472 - 0.261786I$	$-2.74492 + 1.47945I$	0
$u = 0.521951 - 0.724522I$ $a = 0.874689 + 0.434640I$ $b = -0.029472 + 0.261786I$	$-2.74492 - 1.47945I$	0
$u = -0.603428 + 0.653495I$ $a = 0.705508 + 0.281490I$ $b = -1.10269 - 1.10590I$	$-6.40282 - 7.03071I$	0
$u = -0.603428 - 0.653495I$ $a = 0.705508 - 0.281490I$ $b = -1.10269 + 1.10590I$	$-6.40282 + 7.03071I$	0
$u = -0.087587 + 0.882466I$ $a = -0.05146 + 2.36788I$ $b = 0.85301 - 1.20943I$	$1.34153 + 3.06537I$	$5.56421 + 0.I$
$u = -0.087587 - 0.882466I$ $a = -0.05146 - 2.36788I$ $b = 0.85301 + 1.20943I$	$1.34153 - 3.06537I$	$5.56421 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.467459+0.752773I$ $a=-2.12256-0.69643I$ $b=\ \ 1.06350+1.76434I$	$-0.606282-0.555086I$	$-5.95291+0.I$
$u=-0.467459-0.752773I$ $a=-2.12256+0.69643I$ $b=\ \ 1.06350-1.76434I$	$-0.606282+0.555086I$	$-5.95291+0.I$
$u=-0.575057+0.665687I$ $a=-0.913960-0.314089I$ $b=\ \ 1.05186+1.16392I$	$-3.65420-2.08576I$	0
$u=-0.575057-0.665687I$ $a=-0.913960+0.314089I$ $b=\ \ 1.05186-1.16392I$	$-3.65420+2.08576I$	0
$u=\ \ 0.819934+0.162919I$ $a=-0.41914-1.36387I$ $b=\ \ 1.32289-1.67361I$	$-2.26724+12.52740I$	$-2.80434-7.99531I$
$u=\ \ 0.819934-0.162919I$ $a=-0.41914+1.36387I$ $b=\ \ 1.32289+1.67361I$	$-2.26724-12.52740I$	$-2.80434+7.99531I$
$u=-0.828291+0.028957I$ $a=\ \ 0.701648-0.191250I$ $b=\ \ 1.336090-0.429868I$	$1.62988+3.17856I$	$-3.50751-5.52897I$
$u=-0.828291-0.028957I$ $a=\ \ 0.701648+0.191250I$ $b=\ \ 1.336090+0.429868I$	$1.62988-3.17856I$	$-3.50751+5.52897I$
$u=\ \ 0.806530+0.157966I$ $a=\ \ 0.53866+1.33941I$ $b=-1.17343+1.59078I$	$0.21834+7.31585I$	$0.-4.55869I$
$u=\ \ 0.806530-0.157966I$ $a=\ \ 0.53866-1.33941I$ $b=-1.17343-1.59078I$	$0.21834-7.31585I$	$0.+4.55869I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.792107 + 0.182923I$ $a = -0.519053 - 1.102450I$ $b = 1.27628 - 1.28558I$	$-4.65166 + 4.23372I$	$-5.98881 - 2.52410I$
$u = 0.792107 - 0.182923I$ $a = -0.519053 + 1.102450I$ $b = 1.27628 + 1.28558I$	$-4.65166 - 4.23372I$	$-5.98881 + 2.52410I$
$u = 0.507208 + 1.073690I$ $a = 0.813220 + 1.009570I$ $b = -0.554966 - 0.329840I$	$-3.13792 + 0.92257I$	0
$u = 0.507208 - 1.073690I$ $a = 0.813220 - 1.009570I$ $b = -0.554966 + 0.329840I$	$-3.13792 - 0.92257I$	0
$u = -0.795193 + 0.053029I$ $a = -0.528875 + 0.373665I$ $b = -0.905963 + 0.770490I$	$3.25367 - 0.82072I$	$2.37894 - 1.72031I$
$u = -0.795193 - 0.053029I$ $a = -0.528875 - 0.373665I$ $b = -0.905963 - 0.770490I$	$3.25367 + 0.82072I$	$2.37894 + 1.72031I$
$u = 0.488937 + 1.104850I$ $a = -0.432111 - 1.066750I$ $b = 0.387961 + 0.735312I$	$-0.04787 - 3.54238I$	0
$u = 0.488937 - 1.104850I$ $a = -0.432111 + 1.066750I$ $b = 0.387961 - 0.735312I$	$-0.04787 + 3.54238I$	0
$u = -0.767663 + 0.149617I$ $a = 0.522352 - 0.771363I$ $b = 0.54928 - 1.61345I$	$0.28498 - 6.22966I$	$-1.67005 + 5.40696I$
$u = -0.767663 - 0.149617I$ $a = 0.522352 + 0.771363I$ $b = 0.54928 + 1.61345I$	$0.28498 + 6.22966I$	$-1.67005 - 5.40696I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.413961 + 1.146140I$ $a = 0.43422 + 2.07516I$ $b = 1.20426 - 1.84563I$	$2.54580 + 4.57308I$	0
$u = -0.413961 - 1.146140I$ $a = 0.43422 - 2.07516I$ $b = 1.20426 + 1.84563I$	$2.54580 - 4.57308I$	0
$u = 0.763221 + 0.125905I$ $a = 1.04676 + 1.31046I$ $b = -0.59709 + 1.37823I$	$2.27168 + 4.64244I$	$0.14088 - 6.23456I$
$u = 0.763221 - 0.125905I$ $a = 1.04676 - 1.31046I$ $b = -0.59709 - 1.37823I$	$2.27168 - 4.64244I$	$0.14088 + 6.23456I$
$u = -0.759138 + 0.112943I$ $a = -0.473360 + 0.674125I$ $b = -0.57188 + 1.33475I$	$2.55409 - 1.75029I$	$2.58514 + 1.16963I$
$u = -0.759138 - 0.112943I$ $a = -0.473360 - 0.674125I$ $b = -0.57188 - 1.33475I$	$2.55409 + 1.75029I$	$2.58514 - 1.16963I$
$u = 0.517547 + 1.118880I$ $a = 0.54435 + 1.49296I$ $b = -0.917306 - 0.885875I$	$-3.84920 - 7.45703I$	0
$u = 0.517547 - 1.118880I$ $a = 0.54435 - 1.49296I$ $b = -0.917306 + 0.885875I$	$-3.84920 + 7.45703I$	0
$u = 0.348172 + 1.192970I$ $a = -1.31970 + 0.77788I$ $b = -0.12251 - 1.61626I$	$-0.502173 + 0.513562I$	0
$u = 0.348172 - 1.192970I$ $a = -1.31970 - 0.77788I$ $b = -0.12251 + 1.61626I$	$-0.502173 - 0.513562I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.379263 + 1.186000I$ $a = -0.16882 + 2.36666I$ $b = 1.84998 - 1.82441I$	$4.19584 - 2.40976I$	0
$u = -0.379263 - 1.186000I$ $a = -0.16882 - 2.36666I$ $b = 1.84998 + 1.82441I$	$4.19584 + 2.40976I$	0
$u = 0.698012 + 0.281638I$ $a = 0.607096 + 0.269495I$ $b = -1.162940 + 0.229128I$	$-6.27859 + 2.81930I$	$-7.65388 - 2.76519I$
$u = 0.698012 - 0.281638I$ $a = 0.607096 - 0.269495I$ $b = -1.162940 - 0.229128I$	$-6.27859 - 2.81930I$	$-7.65388 + 2.76519I$
$u = 0.407392 + 1.179060I$ $a = -0.068976 + 0.937001I$ $b = -1.67160 - 0.80250I$	$5.23948 - 4.51130I$	0
$u = 0.407392 - 1.179060I$ $a = -0.068976 - 0.937001I$ $b = -1.67160 + 0.80250I$	$5.23948 + 4.51130I$	0
$u = 0.392928 + 1.189590I$ $a = 0.510361 - 1.133510I$ $b = 1.34113 + 1.39839I$	$6.09922 + 0.72292I$	0
$u = 0.392928 - 1.189590I$ $a = 0.510361 + 1.133510I$ $b = 1.34113 - 1.39839I$	$6.09922 - 0.72292I$	0
$u = 0.657190 + 0.353180I$ $a = 0.603599 - 0.062740I$ $b = -1.035640 - 0.145534I$	$-5.21588 - 5.43372I$	$-6.35737 + 4.53160I$
$u = 0.657190 - 0.353180I$ $a = 0.603599 + 0.062740I$ $b = -1.035640 + 0.145534I$	$-5.21588 + 5.43372I$	$-6.35737 - 4.53160I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.399775 + 1.189730I$ $a = 0.21805 - 2.06307I$ $b = -1.73761 + 1.50516I$	$6.33069 + 2.21234I$	0
$u = -0.399775 - 1.189730I$ $a = 0.21805 + 2.06307I$ $b = -1.73761 - 1.50516I$	$6.33069 - 2.21234I$	0
$u = -0.491061 + 1.156340I$ $a = -1.35904 - 1.51080I$ $b = -0.38225 + 2.14323I$	$1.97040 + 3.53194I$	0
$u = -0.491061 - 1.156340I$ $a = -1.35904 + 1.51080I$ $b = -0.38225 - 2.14323I$	$1.97040 - 3.53194I$	0
$u = 0.732239 + 0.108513I$ $a = -1.38411 - 1.13292I$ $b = 0.307181 - 1.116300I$	$1.58615 - 0.58965I$	$-2.07800 - 0.97177I$
$u = 0.732239 - 0.108513I$ $a = -1.38411 + 1.13292I$ $b = 0.307181 + 1.116300I$	$1.58615 + 0.58965I$	$-2.07800 + 0.97177I$
$u = 0.365257 + 1.209930I$ $a = 1.26314 - 1.20974I$ $b = 0.51622 + 2.09356I$	$4.34795 + 3.40901I$	0
$u = 0.365257 - 1.209930I$ $a = 1.26314 + 1.20974I$ $b = 0.51622 - 2.09356I$	$4.34795 - 3.40901I$	0
$u = 0.359487 + 1.219040I$ $a = -1.46794 + 1.26755I$ $b = -0.30978 - 2.32417I$	$1.94636 + 8.59411I$	0
$u = 0.359487 - 1.219040I$ $a = -1.46794 - 1.26755I$ $b = -0.30978 + 2.32417I$	$1.94636 - 8.59411I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.490134 + 1.175270I$ $a = 0.75303 - 2.05112I$ $b = 0.57013 + 2.89728I$	$4.64951 - 3.96013I$	0
$u = 0.490134 - 1.175270I$ $a = 0.75303 + 2.05112I$ $b = 0.57013 - 2.89728I$	$4.64951 + 3.96013I$	0
$u = -0.494920 + 1.182490I$ $a = 1.55048 + 1.06172I$ $b = -0.12686 - 2.10588I$	$5.65654 + 6.38567I$	0
$u = -0.494920 - 1.182490I$ $a = 1.55048 - 1.06172I$ $b = -0.12686 + 2.10588I$	$5.65654 - 6.38567I$	0
$u = 0.499816 + 1.182010I$ $a = -0.56993 + 2.39465I$ $b = -1.18433 - 2.97646I$	$5.34282 - 9.31716I$	0
$u = 0.499816 - 1.182010I$ $a = -0.56993 - 2.39465I$ $b = -1.18433 + 2.97646I$	$5.34282 + 9.31716I$	0
$u = -0.507954 + 1.179230I$ $a = -1.76230 - 1.22811I$ $b = 0.06729 + 2.40466I$	$3.28961 + 10.96240I$	0
$u = -0.507954 - 1.179230I$ $a = -1.76230 + 1.22811I$ $b = 0.06729 - 2.40466I$	$3.28961 - 10.96240I$	0
$u = -0.428422 + 1.211720I$ $a = 0.67472 - 1.44248I$ $b = -1.73574 + 0.61936I$	$6.98159 + 3.47872I$	0
$u = -0.428422 - 1.211720I$ $a = 0.67472 + 1.44248I$ $b = -1.73574 - 0.61936I$	$6.98159 - 3.47872I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.523849 + 1.179140I$ $a = -0.03926 - 2.55082I$ $b = 1.91455 + 2.27803I$	$-1.71917 - 9.10568I$	0
$u = 0.523849 - 1.179140I$ $a = -0.03926 + 2.55082I$ $b = 1.91455 - 2.27803I$	$-1.71917 + 9.10568I$	0
$u = -0.477259 + 1.205010I$ $a = 1.362350 + 0.317722I$ $b = -0.73341 - 1.44993I$	$6.63442 + 5.43541I$	0
$u = -0.477259 - 1.205010I$ $a = 1.362350 - 0.317722I$ $b = -0.73341 + 1.44993I$	$6.63442 - 5.43541I$	0
$u = 0.519304 + 1.190370I$ $a = -0.14297 + 2.76693I$ $b = -2.07221 - 2.71035I$	$3.26514 - 12.19690I$	0
$u = 0.519304 - 1.190370I$ $a = -0.14297 - 2.76693I$ $b = -2.07221 + 2.71035I$	$3.26514 + 12.19690I$	0
$u = 0.628194 + 0.302021I$ $a = -0.782163 - 0.035357I$ $b = 0.902462 - 0.036429I$	$-2.36622 - 0.81836I$	$-3.40956 + 0.70885I$
$u = 0.628194 - 0.302021I$ $a = -0.782163 + 0.035357I$ $b = 0.902462 + 0.036429I$	$-2.36622 + 0.81836I$	$-3.40956 - 0.70885I$
$u = -0.440512 + 1.226900I$ $a = -1.18374 + 1.20119I$ $b = 2.00793 + 0.02526I$	$5.38653 + 7.66239I$	0
$u = -0.440512 - 1.226900I$ $a = -1.18374 - 1.20119I$ $b = 2.00793 - 0.02526I$	$5.38653 - 7.66239I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.524277 + 1.193940I$ $a = 0.05264 - 2.87689I$ $b = 2.30560 + 2.67048I$	$0.7867 - 17.4656I$	0
$u = 0.524277 - 1.193940I$ $a = 0.05264 + 2.87689I$ $b = 2.30560 - 2.67048I$	$0.7867 + 17.4656I$	0
$u = -0.676138 + 0.154497I$ $a = 0.362911 - 0.849043I$ $b = 0.08403 - 1.41391I$	$-0.888884 + 0.929390I$	$-3.75477 - 1.10365I$
$u = -0.676138 - 0.154497I$ $a = 0.362911 + 0.849043I$ $b = 0.08403 + 1.41391I$	$-0.888884 - 0.929390I$	$-3.75477 + 1.10365I$
$u = -0.469401 + 1.221640I$ $a = -1.52045 + 0.28914I$ $b = 1.44919 + 1.14088I$	$5.18083 + 1.47813I$	0
$u = -0.469401 - 1.221640I$ $a = -1.52045 - 0.28914I$ $b = 1.44919 - 1.14088I$	$5.18083 - 1.47813I$	0
$u = 0.344949 + 0.596122I$ $a = -0.728991 + 0.654589I$ $b = 0.346398 + 0.099866I$	$-0.61758 - 1.45216I$	$-4.40076 + 4.02243I$
$u = 0.344949 - 0.596122I$ $a = -0.728991 - 0.654589I$ $b = 0.346398 - 0.099866I$	$-0.61758 + 1.45216I$	$-4.40076 - 4.02243I$
$u = -0.229291 + 0.287793I$ $a = -0.89506 + 1.47855I$ $b = 0.523982 + 0.596248I$	$-0.31251 - 1.54411I$	$-2.34290 + 4.88175I$
$u = -0.229291 - 0.287793I$ $a = -0.89506 - 1.47855I$ $b = 0.523982 - 0.596248I$	$-0.31251 + 1.54411I$	$-2.34290 - 4.88175I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3u^3a-u^4+2u^3-2au+u^2+a+2u+1$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_5	$(y^2 + y + 1)^5$
c_4, c_8	y^{10}
c_6, c_9, c_{12}	$(y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1)^2$
c_7, c_{11}	$(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)^2$
c_{10}	$(y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.339110 + 0.822375I$ $a = -0.80632 + 1.36366I$ $b = -0.307991 - 1.215160I$	$0.32910 - 3.56046I$	$-0.88631 + 6.04478I$
$u = 0.339110 + 0.822375I$ $a = 1.58413 + 0.01647I$ $b = -0.898363 + 0.874307I$	$0.329100 + 0.499304I$	$3.42267 + 1.01043I$
$u = 0.339110 - 0.822375I$ $a = -0.80632 - 1.36366I$ $b = -0.307991 + 1.215160I$	$0.32910 + 3.56046I$	$-0.88631 - 6.04478I$
$u = 0.339110 - 0.822375I$ $a = 1.58413 - 0.01647I$ $b = -0.898363 - 0.874307I$	$0.329100 - 0.499304I$	$3.42267 - 1.01043I$
$u = -0.766826$ $a = 0.410598 + 0.711177I$ $b = 0.241441 + 0.418187I$	$2.40108 - 2.02988I$	$0.40252 + 2.76390I$
$u = -0.766826$ $a = 0.410598 - 0.711177I$ $b = 0.241441 - 0.418187I$	$2.40108 + 2.02988I$	$0.40252 - 2.76390I$
$u = -0.455697 + 1.200150I$ $a = -0.252108 + 0.649344I$ $b = 1.021040 - 0.524691I$	$5.87256 + 6.43072I$	$2.86519 - 5.89938I$
$u = -0.455697 + 1.200150I$ $a = -0.436295 - 0.543004I$ $b = -0.056121 + 1.146590I$	$5.87256 + 2.37095I$	$4.19593 - 1.57328I$
$u = -0.455697 - 1.200150I$ $a = -0.252108 - 0.649344I$ $b = 1.021040 + 0.524691I$	$5.87256 - 6.43072I$	$2.86519 + 5.89938I$
$u = -0.455697 - 1.200150I$ $a = -0.436295 + 0.543004I$ $b = -0.056121 - 1.146590I$	$5.87256 - 2.37095I$	$4.19593 + 1.57328I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^5)(u^{110}+54u^{109}+\cdots+7u+1)$
c_2	$((u^2+u+1)^5)(u^{110}+6u^{109}+\cdots+5u+1)$
c_3	$((u^2-u+1)^5)(u^{110}-6u^{109}+\cdots-455049u+73746)$
c_4, c_8	$u^{10}(u^{110}-u^{109}+\cdots-10240u^2+1024)$
c_5	$((u^2-u+1)^5)(u^{110}+6u^{109}+\cdots+5u+1)$
c_6	$((u^5-u^4-2u^3+u^2+u+1)^2)(u^{110}-3u^{109}+\cdots-585u+34)$
c_7	$((u^5+u^4+2u^3+u^2+u+1)^2)(u^{110}+3u^{109}+\cdots+2u+1)$
c_9	$((u^5-u^4-2u^3+u^2+u+1)^2)(u^{110}+13u^{109}+\cdots+74128u+1669)$
c_{10}	$((u^5+3u^4+4u^3+u^2-u-1)^2)(u^{110}-59u^{109}+\cdots-8u+1)$
c_{11}	$((u^5-u^4+2u^3-u^2+u-1)^2)(u^{110}+3u^{109}+\cdots+2u+1)$
c_{12}	$((u^5+u^4-2u^3-u^2+u-1)^2)(u^{110}-3u^{109}+\cdots-585u+34)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^5)(y^{110}+10y^{109}+\cdots-9y+1)$
c_2, c_5	$((y^2+y+1)^5)(y^{110}+54y^{109}+\cdots+7y+1)$
c_3	$((y^2+y+1)^5)(y^{110}-34y^{109}+\cdots-2.38654\times10^{10}y+5.43847\times10^9)$
c_4, c_8	$y^{10}(y^{110}-55y^{109}+\cdots-2.09715\times10^7y+1048576)$
c_6, c_{12}	$(y^5-5y^4+8y^3-3y^2-y-1)^2$ $\cdot(y^{110}-85y^{109}+\cdots+105147y+1156)$
c_7, c_{11}	$((y^5+3y^4+4y^3+y^2-y-1)^2)(y^{110}+59y^{109}+\cdots+8y+1)$
c_9	$(y^5-5y^4+8y^3-3y^2-y-1)^2$ $\cdot(y^{110}+15y^{109}+\cdots-1624602792y+2785561)$
c_{10}	$((y^5-y^4+8y^3-3y^2+3y-1)^2)(y^{110}-13y^{109}+\cdots+76y+1)$