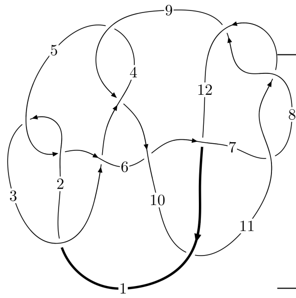
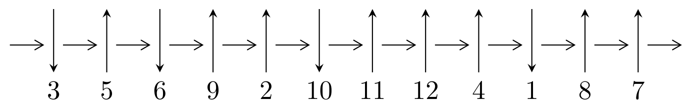
$12a_{0019}$ ($K12a_{0019}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 205u^{104} - 998u^{103} + \cdots + 16b - 31,\ 2u^{104} - 29u^{103} + \cdots + 8a + 71,\ u^{105} - 6u^{104} + \cdots - 5u + 1\rangle$$
$$I_2^u = \langle b^5 - b^4u - b^4 + 2b^3u + b^2 - bu - b + u,\ a,\ u^2 + u + 1\rangle$$

* 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. $I^u_1 = \langle 205u^{104} - 998u^{103} + \cdots + 16b - 31,\ 2u^{104} - 29u^{103} + \cdots + 8a + 71,\ u^{105} - 6u^{104} + \cdots - 5u + 1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u\\u^3+u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}u^4+u^2+1\\u^6+2u^4+u^2\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-0.250000u^{104} + 3.62500u^{103} + \cdots + 23.2500u - 8.87500\\-12.8125u^{104} + 62.3750u^{103} + \cdots - 10.4375u + 1.93750\end{pmatrix}$$
$$a_7 = \begin{pmatrix}u^{12} + 3u^{10} + 5u^8 - 2u^7 + 4u^6 - 4u^5 + 2u^4 - 4u^3 + u^2 + 1\\-0.0625000u^{103} + 0.312500u^{102} + \cdots + 0.250000u - 0.0625000\end{pmatrix}$$
$$a_1 = \begin{pmatrix}u^2+1\\u^2\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-19.3125u^{104} + 82.4375u^{103} + \cdots + 46.6875u - 19.2500\\-\frac{97}{2}u^{104} + \frac{1993}{8}u^{103} + \cdots - 68u + \frac{81}{8}\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-15.2500u^{104} + 69.6250u^{103} + \cdots + 24.2500u - 11.8750\\-37.9375u^{104} + 192.875u^{103} + \cdots - 43.8125u + 6.81250\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-0.187500u^{104} + 1.12500u^{103} + \cdots - 0.937500u + 1.18750\\-1.43750u^{104} + 6.93750u^{103} + \cdots + 0.0625000u - 0.375000\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.250000u^{104} + 2.68750u^{103} + \cdots - 6.12500u + 1.43750\\2.62500u^{104} - 12.5625u^{103} + \cdots + 0.375000u + 0.812500\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{461}{16}u^{104} + \frac{3579}{16}u^{103} + \cdots - \frac{4979}{16}u + \frac{163}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{105} + 52u^{104} + \cdots - 5u - 1$
c_2, c_5	$u^{105} + 6u^{104} + \cdots - 5u - 1$
c_3	$u^{105} - 6u^{104} + \cdots + 107353u - 23497$
c_4, c_9	$u^{105} + u^{104} + \cdots + 1024u - 1024$
c_6	$u^{105} + 3u^{104} + \cdots - 1465582u - 149381$
c_7, c_8, c_{11}	$u^{105} - 3u^{104} + \cdots - 2u - 1$
c_{10}	$u^{105} - 23u^{104} + \cdots + 167398u - 8023$
c_{12}	$u^{105} + 9u^{104} + \cdots + 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{105} + 8y^{104} + \cdots - 21y - 1$
c_2, c_5	$y^{105} + 52y^{104} + \cdots - 5y - 1$
c_3	$y^{105} - 36y^{104} + \cdots + 985651187y - 552109009$
c_4, c_9	$y^{105} + 55y^{104} + \cdots - 25165824y - 1048576$
c_6	$y^{105} - 31y^{104} + \cdots + 449047075542y - 22314683161$
c_7, c_8, c_{11}	$y^{105} - 95y^{104} + \cdots + 2y - 1$
c_{10}	$y^{105} + 29y^{104} + \cdots - 2885666658y - 64368529$
c_{12}	$y^{105} - 3y^{104} + \cdots + 14y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.238259+0.986456I$ $a=-1.26147-0.77818I$ $b=-0.958466+0.563608I$	$3.17345-4.25894I$	0
$u=-0.238259-0.986456I$ $a=-1.26147+0.77818I$ $b=-0.958466-0.563608I$	$3.17345+4.25894I$	0
$u=-0.713466+0.725019I$ $a=-0.078403-0.675734I$ $b=-0.507694+0.558076I$	$-0.27464-5.50436I$	0
$u=-0.713466-0.725019I$ $a=-0.078403+0.675734I$ $b=-0.507694-0.558076I$	$-0.27464+5.50436I$	0
$u=-0.736153+0.712752I$ $a=\ \ 0.194353+0.806457I$ $b=\ \ 0.794010-0.666918I$	$5.05878-8.91753I$	0
$u=-0.736153-0.712752I$ $a=\ \ 0.194353-0.806457I$ $b=\ \ 0.794010+0.666918I$	$5.05878+8.91753I$	0
$u=-0.671892+0.802497I$ $a=-0.092701+0.249210I$ $b=-0.325633-0.405265I$	$1.28850-2.57717I$	0
$u=-0.671892-0.802497I$ $a=-0.092701-0.249210I$ $b=-0.325633+0.405265I$	$1.28850+2.57717I$	0
$u=-0.638895+0.706476I$ $a=-0.318007+0.601750I$ $b=\ \ 0.235155+0.010258I$	$1.04013-2.17525I$	0
$u=-0.638895-0.706476I$ $a=-0.318007-0.601750I$ $b=\ \ 0.235155-0.010258I$	$1.04013+2.17525I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.689517 + 0.630908I$ $a = 0.364134 - 1.084130I$ $b = -0.817093 - 0.314730I$	$6.79137 - 0.46918I$	0
$u = -0.689517 - 0.630908I$ $a = 0.364134 + 1.084130I$ $b = -0.817093 + 0.314730I$	$6.79137 + 0.46918I$	0
$u = -0.574800 + 0.919200I$ $a = -0.397771 + 0.333368I$ $b = -0.310416 + 0.660624I$	$0.42904 - 2.56514I$	0
$u = -0.574800 - 0.919200I$ $a = -0.397771 - 0.333368I$ $b = -0.310416 - 0.660624I$	$0.42904 + 2.56514I$	0
$u = 0.840312 + 0.309790I$ $a = -2.27824 - 0.15338I$ $b = -1.68105 - 1.17690I$	$2.76203 - 11.75360I$	0
$u = 0.840312 - 0.309790I$ $a = -2.27824 + 0.15338I$ $b = -1.68105 + 1.17690I$	$2.76203 + 11.75360I$	0
$u = -0.665816 + 0.883086I$ $a = 0.305710 + 0.000397I$ $b = 1.015970 - 0.021122I$	$-0.741803 + 0.253440I$	0
$u = -0.665816 - 0.883086I$ $a = 0.305710 - 0.000397I$ $b = 1.015970 + 0.021122I$	$-0.741803 - 0.253440I$	0
$u = 0.831615 + 0.295643I$ $a = 2.15583 + 0.06101I$ $b = 1.63171 + 0.91797I$	$-2.67355 - 8.10755I$	0
$u = 0.831615 - 0.295643I$ $a = 2.15583 - 0.06101I$ $b = 1.63171 - 0.91797I$	$-2.67355 + 8.10755I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.452334 + 1.030860I$ $a = -0.183842 - 0.270970I$ $b = -1.360810 - 0.270591I$	$4.93430 - 1.63016I$	0
$u = 0.452334 - 1.030860I$ $a = -0.183842 + 0.270970I$ $b = -1.360810 + 0.270591I$	$4.93430 + 1.63016I$	0
$u = -0.217271 + 0.841985I$ $a = 1.089980 + 0.405677I$ $b = 0.655102 - 0.510945I$	$-1.45249 - 1.72915I$	0
$u = -0.217271 - 0.841985I$ $a = 1.089980 - 0.405677I$ $b = 0.655102 + 0.510945I$	$-1.45249 + 1.72915I$	0
$u = -0.681527 + 0.905951I$ $a = -0.382548 - 0.129469I$ $b = -1.384110 + 0.114120I$	$4.48814 + 3.55358I$	0
$u = -0.681527 - 0.905951I$ $a = -0.382548 + 0.129469I$ $b = -1.384110 - 0.114120I$	$4.48814 - 3.55358I$	0
$u = -0.623618 + 0.962160I$ $a = 0.721379 - 0.227987I$ $b = 0.86546 - 1.18166I$	$5.81874 - 4.58356I$	0
$u = -0.623618 - 0.962160I$ $a = 0.721379 + 0.227987I$ $b = 0.86546 + 1.18166I$	$5.81874 + 4.58356I$	0
$u = 0.803505 + 0.279635I$ $a = -1.88136 - 0.03883I$ $b = -1.32765 - 0.58750I$	$-1.22209 - 4.21071I$	0
$u = 0.803505 - 0.279635I$ $a = -1.88136 + 0.03883I$ $b = -1.32765 + 0.58750I$	$-1.22209 + 4.21071I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=\ \ 0.452689+1.056720I$ $a=\ \ 0.074853+0.313378I$ $b=\ \ 1.017450+0.224839I$	$-0.99128+1.45005I$	0
$u=\ \ 0.452689-1.056720I$ $a=\ \ 0.074853-0.313378I$ $b=\ \ 1.017450-0.224839I$	$-0.99128-1.45005I$	0
$u=\ \ 0.249719+1.127130I$ $a=-0.337353+0.825247I$ $b=-1.172070+0.570226I$	$0.735634+0.034464I$	0
$u=\ \ 0.249719-1.127130I$ $a=-0.337353-0.825247I$ $b=-1.172070-0.570226I$	$0.735634-0.034464I$	0
$u=-0.359634+1.100080I$ $a=\ \ 0.93545+1.83419I$ $b=\ \ 1.95166-0.28636I$	$1.89142+2.96005I$	0
$u=-0.359634-1.100080I$ $a=\ \ 0.93545-1.83419I$ $b=\ \ 1.95166+0.28636I$	$1.89142-2.96005I$	0
$u=-0.389409+1.089920I$ $a=-0.63466-1.82375I$ $b=-1.96185-0.06207I$	$-3.13580-0.41934I$	0
$u=-0.389409-1.089920I$ $a=-0.63466+1.82375I$ $b=-1.96185+0.06207I$	$-3.13580+0.41934I$	0
$u=\ \ 0.807528+0.227271I$ $a=-1.67463+0.33114I$ $b=-1.45547+0.03303I$	$-1.76859-4.38470I$	0
$u=\ \ 0.807528-0.227271I$ $a=-1.67463-0.33114I$ $b=-1.45547-0.03303I$	$-1.76859+4.38470I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.772794 + 0.325455I$ $a = 1.79242 + 0.44030I$ $b = 0.757606 + 0.919693I$	$5.25845 - 2.77553I$	0
$u = 0.772794 - 0.325455I$ $a = 1.79242 - 0.44030I$ $b = 0.757606 - 0.919693I$	$5.25845 + 2.77553I$	0
$u = 0.502800 + 1.057210I$ $a = 0.216151 + 0.559139I$ $b = 0.777715 + 0.999350I$	$5.38886 + 8.04809I$	0
$u = 0.502800 - 1.057210I$ $a = 0.216151 - 0.559139I$ $b = 0.777715 - 0.999350I$	$5.38886 - 8.04809I$	0
$u = 0.481039 + 1.072010I$ $a = -0.058829 - 0.497848I$ $b = -0.663625 - 0.543924I$	$-0.74038 + 5.32830I$	0
$u = 0.481039 - 1.072010I$ $a = -0.058829 + 0.497848I$ $b = -0.663625 + 0.543924I$	$-0.74038 - 5.32830I$	0
$u = -0.476095 + 1.075970I$ $a = -0.23047 + 1.70037I$ $b = 1.74561 + 1.18904I$	$-0.79779 - 3.44805I$	0
$u = -0.476095 - 1.075970I$ $a = -0.23047 - 1.70037I$ $b = 1.74561 - 1.18904I$	$-0.79779 + 3.44805I$	0
$u = -0.442891 + 1.094540I$ $a = 0.10056 + 1.92739I$ $b = 2.09472 + 0.74492I$	$-0.86758 - 3.63979I$	0
$u = -0.442891 - 1.094540I$ $a = 0.10056 - 1.92739I$ $b = 2.09472 - 0.74492I$	$-0.86758 + 3.63979I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.537994 + 1.060310I$ $a = 0.79040 - 1.33454I$ $b = -1.04542 - 1.96500I$	$5.06634 - 2.14002I$	0
$u = -0.537994 - 1.060310I$ $a = 0.79040 + 1.33454I$ $b = -1.04542 + 1.96500I$	$5.06634 + 2.14002I$	0
$u = 0.791185 + 0.177363I$ $a = 1.300070 - 0.513805I$ $b = 1.187640 - 0.524337I$	$-4.51741 - 0.87205I$	0
$u = 0.791185 - 0.177363I$ $a = 1.300070 + 0.513805I$ $b = 1.187640 + 0.524337I$	$-4.51741 + 0.87205I$	0
$u = 0.789318 + 0.130913I$ $a = -0.990302 + 0.696881I$ $b = -0.968136 + 0.899123I$	$0.11479 + 2.61520I$	0
$u = 0.789318 - 0.130913I$ $a = -0.990302 - 0.696881I$ $b = -0.968136 - 0.899123I$	$0.11479 - 2.61520I$	0
$u = -0.497296 + 1.109830I$ $a = 0.54471 - 2.03133I$ $b = -2.21310 - 1.70139I$	$-2.35810 - 6.97390I$	0
$u = -0.497296 - 1.109830I$ $a = 0.54471 + 2.03133I$ $b = -2.21310 + 1.70139I$	$-2.35810 + 6.97390I$	0
$u = 0.268185 + 1.187910I$ $a = -0.028682 - 1.225910I$ $b = 1.40267 - 0.59674I$	$-5.82532 - 0.95127I$	0
$u = 0.268185 - 1.187910I$ $a = -0.028682 + 1.225910I$ $b = 1.40267 + 0.59674I$	$-5.82532 + 0.95127I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.243554 + 1.203910I$ $a = -0.14026 + 1.48236I$ $b = -1.46102 + 0.43158I$	$-7.51174 - 4.84738I$	0
$u = 0.243554 - 1.203910I$ $a = -0.14026 - 1.48236I$ $b = -1.46102 - 0.43158I$	$-7.51174 + 4.84738I$	0
$u = -0.510942 + 1.117850I$ $a = -0.74030 + 2.08914I$ $b = 2.29397 + 2.01991I$	$2.94950 - 10.49200I$	0
$u = -0.510942 - 1.117850I$ $a = -0.74030 - 2.08914I$ $b = 2.29397 - 2.01991I$	$2.94950 + 10.49200I$	0
$u = 0.227624 + 1.207990I$ $a = 0.29337 - 1.57666I$ $b = 1.43638 - 0.32576I$	$-2.19295 - 8.54270I$	0
$u = 0.227624 - 1.207990I$ $a = 0.29337 + 1.57666I$ $b = 1.43638 + 0.32576I$	$-2.19295 + 8.54270I$	0
$u = 0.301168 + 1.197690I$ $a = -0.373349 - 1.125900I$ $b = 1.43290 - 0.80406I$	$-6.20384 - 0.85870I$	0
$u = 0.301168 - 1.197690I$ $a = -0.373349 + 1.125900I$ $b = 1.43290 + 0.80406I$	$-6.20384 + 0.85870I$	0
$u = 0.333757 + 1.198830I$ $a = 0.644673 + 0.891724I$ $b = -1.31591 + 1.01915I$	$-8.71997 + 2.83880I$	0
$u = 0.333757 - 1.198830I$ $a = 0.644673 - 0.891724I$ $b = -1.31591 - 1.01915I$	$-8.71997 - 2.83880I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.356711 + 1.200770I$ $a = -0.824331 - 0.700922I$ $b = 1.17320 - 1.17227I$	$-3.93501 + 6.49394I$	0
$u = 0.356711 - 1.200770I$ $a = -0.824331 + 0.700922I$ $b = 1.17320 + 1.17227I$	$-3.93501 - 6.49394I$	0
$u = -0.622708 + 0.404742I$ $a = 1.71545 - 1.16576I$ $b = 0.23776 - 1.48997I$	$6.94859 - 2.43790I$	$11.62543 + 0.I$
$u = -0.622708 - 0.404742I$ $a = 1.71545 + 1.16576I$ $b = 0.23776 + 1.48997I$	$6.94859 + 2.43790I$	$11.62543 + 0.I$
$u = 0.566388 + 1.134480I$ $a = 0.07140 + 1.51630I$ $b = -1.59727 + 1.44583I$	$2.86970 + 7.81430I$	0
$u = 0.566388 - 1.134480I$ $a = 0.07140 - 1.51630I$ $b = -1.59727 - 1.44583I$	$2.86970 - 7.81430I$	0
$u = 0.501549 + 1.174570I$ $a = 0.796476 - 1.026530I$ $b = 1.015150 + 0.567854I$	$-2.94328 + 2.09281I$	0
$u = 0.501549 - 1.174570I$ $a = 0.796476 + 1.026530I$ $b = 1.015150 - 0.567854I$	$-2.94328 - 2.09281I$	0
$u = 0.521351 + 1.171550I$ $a = -0.67242 + 1.26699I$ $b = -1.41472 - 0.23732I$	$-7.43391 + 5.70780I$	0
$u = 0.521351 - 1.171550I$ $a = -0.67242 - 1.26699I$ $b = -1.41472 + 0.23732I$	$-7.43391 - 5.70780I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.562673 + 1.156350I$ $a = 0.19763 - 1.67071I$ $b = 2.05844 - 0.91159I$	$-3.81483 + 9.29793I$	0
$u = 0.562673 - 1.156350I$ $a = 0.19763 + 1.67071I$ $b = 2.05844 + 0.91159I$	$-3.81483 - 9.29793I$	0
$u = 0.542343 + 1.169450I$ $a = 0.51864 - 1.52373I$ $b = 1.86918 - 0.17093I$	$-4.55606 + 9.37865I$	0
$u = 0.542343 - 1.169450I$ $a = 0.51864 + 1.52373I$ $b = 1.86918 + 0.17093I$	$-4.55606 - 9.37865I$	0
$u = 0.550239 + 0.446862I$ $a = 0.913043 + 0.920010I$ $b = -0.626335 - 0.207161I$	$7.18932 - 3.77486I$	$10.71298 + 4.55097I$
$u = 0.550239 - 0.446862I$ $a = 0.913043 - 0.920010I$ $b = -0.626335 + 0.207161I$	$7.18932 + 3.77486I$	$10.71298 - 4.55097I$
$u = 0.018185 + 0.705737I$ $a = -1.099490 - 0.347649I$ $b = -0.495607 + 0.762907I$	$1.80406 + 0.58240I$	$2.57608 + 0.I$
$u = 0.018185 - 0.705737I$ $a = -1.099490 + 0.347649I$ $b = -0.495607 - 0.762907I$	$1.80406 - 0.58240I$	$2.57608 + 0.I$
$u = 0.575244 + 1.161420I$ $a = -0.14081 + 1.86816I$ $b = -2.47530 + 1.10945I$	$-5.2550 + 13.3202I$	0
$u = 0.575244 - 1.161420I$ $a = -0.14081 - 1.86816I$ $b = -2.47530 - 1.10945I$	$-5.2550 - 13.3202I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.429242 + 0.557449I$ $a = -0.723728 - 0.813562I$ $b = 0.510392 + 0.973611I$	$6.41254 + 5.37409I$	$9.09083 - 0.75897I$
$u = 0.429242 - 0.557449I$ $a = -0.723728 + 0.813562I$ $b = 0.510392 - 0.973611I$	$6.41254 - 5.37409I$	$9.09083 + 0.75897I$
$u = 0.582876 + 1.160370I$ $a = 0.04995 - 1.94974I$ $b = 2.62873 - 1.34120I$	$0.2193 + 17.0224I$	0
$u = 0.582876 - 1.160370I$ $a = 0.04995 + 1.94974I$ $b = 2.62873 + 1.34120I$	$0.2193 - 17.0224I$	0
$u = -0.634632 + 0.242992I$ $a = -2.55479 + 0.96939I$ $b = -1.30427 + 1.51785I$	$5.41399 + 6.01907I$	$9.29127 - 4.00944I$
$u = -0.634632 - 0.242992I$ $a = -2.55479 - 0.96939I$ $b = -1.30427 - 1.51785I$	$5.41399 - 6.01907I$	$9.29127 + 4.00944I$
$u = 0.382893 + 0.502487I$ $a = 0.804799 + 0.794530I$ $b = -0.287890 - 0.800421I$	$0.76766 + 2.22421I$	$4.53977 - 1.76011I$
$u = 0.382893 - 0.502487I$ $a = 0.804799 - 0.794530I$ $b = -0.287890 + 0.800421I$	$0.76766 - 2.22421I$	$4.53977 + 1.76011I$
$u = -0.577546 + 0.231711I$ $a = 2.45271 - 0.71226I$ $b = 1.19514 - 1.16114I$	$0.07601 + 2.67386I$	$4.60628 - 4.13106I$
$u = -0.577546 - 0.231711I$ $a = 2.45271 + 0.71226I$ $b = 1.19514 + 1.16114I$	$0.07601 - 2.67386I$	$4.60628 + 4.13106I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.482094+0.376524I$ $a=-1.79488+0.53486I$ $b=-0.521056+0.936711I$	$1.225990-0.574113I$	$8.49089+2.78120I$
$u=-0.482094-0.376524I$ $a=-1.79488-0.53486I$ $b=-0.521056-0.936711I$	$1.225990+0.574113I$	$8.49089-2.78120I$
$u=\quad 0.471185+0.382816I$ $a=-0.850445-0.822138I$ $b=\quad 0.283823+0.380432I$	$1.26363-1.29419I$	$6.60572+5.01711I$
$u=\quad 0.471185-0.382816I$ $a=-0.850445+0.822138I$ $b=\quad 0.283823-0.380432I$	$1.26363+1.29419I$	$6.60572-5.01711I$
$u=-0.455100$ $a=-2.60012$ $b=-1.23114$	1.78041	6.28650

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= b^4u + b^4 + 4b^3 - 5b^2u - 5b^2 + 3bu - b + 4u + 10$

(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_9	u^{10}
c_6, c_{10}	$(u^5 + u^4 + 2u^3 + u^2 + u + 1)^2$
c_7, c_8	$(u^5 - u^4 - 2u^3 + u^2 + u + 1)^2$
c_{11}	$(u^5 + u^4 - 2u^3 - u^2 + u - 1)^2$
c_{12}	$(u^5 - 3u^4 + 4u^3 - u^2 - u + 1)^2$

(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_9	y^{10}
c_6, c_{10}	$(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)^2$
c_7, c_8, c_{11}	$(y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1)^2$
c_{12}	$(y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.500000 + 0.866025I$ $a = 0$ $b = -0.881753 + 0.117510I$	$0.32910 - 3.56046I$	$2.53179 + 8.01848I$
$u = -0.500000 + 0.866025I$ $a = 0$ $b = 0.542643 - 0.704866I$	$0.329100 - 0.499304I$	$5.04069 - 0.50981I$
$u = -0.500000 + 0.866025I$ $a = 0$ $b = 0.383413 + 0.664091I$	$2.40108 - 2.02988I$	$6.62546 + 2.50057I$
$u = -0.500000 + 0.866025I$ $a = 0$ $b = -0.811514 + 0.994721I$	$5.87256 - 6.43072I$	$6.60498 + 6.63374I$
$u = -0.500000 + 0.866025I$ $a = 0$ $b = 1.267210 - 0.205431I$	$5.87256 + 2.37095I$	$9.19707 - 1.05452I$
$u = -0.500000 - 0.866025I$ $a = 0$ $b = -0.881753 - 0.117510I$	$0.32910 + 3.56046I$	$2.53179 - 8.01848I$
$u = -0.500000 - 0.866025I$ $a = 0$ $b = 0.542643 + 0.704866I$	$0.329100 + 0.499304I$	$5.04069 + 0.50981I$
$u = -0.500000 - 0.866025I$ $a = 0$ $b = 0.383413 - 0.664091I$	$2.40108 + 2.02988I$	$6.62546 - 2.50057I$
$u = -0.500000 - 0.866025I$ $a = 0$ $b = -0.811514 - 0.994721I$	$5.87256 + 6.43072I$	$6.60498 - 6.63374I$
$u = -0.500000 - 0.866025I$ $a = 0$ $b = 1.267210 + 0.205431I$	$5.87256 - 2.37095I$	$9.19707 + 1.05452I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^5)(u^{105}+52u^{104}+\cdots-5u-1)$
c_2	$((u^2+u+1)^5)(u^{105}+6u^{104}+\cdots-5u-1)$
c_3	$((u^2-u+1)^5)(u^{105}-6u^{104}+\cdots+107353u-23497)$
c_4, c_9	$u^{10}(u^{105}+u^{104}+\cdots+1024u-1024)$
c_5	$((u^2-u+1)^5)(u^{105}+6u^{104}+\cdots-5u-1)$
c_6	$(u^5+u^4+2u^3+u^2+u+1)^2$ $\cdot(u^{105}+3u^{104}+\cdots-1465582u-149381)$
c_7, c_8	$((u^5-u^4-2u^3+u^2+u+1)^2)(u^{105}-3u^{104}+\cdots-2u-1)$
c_{10}	$((u^5+u^4+2u^3+u^2+u+1)^2)(u^{105}-23u^{104}+\cdots+167398u-8023)$
c_{11}	$((u^5+u^4-2u^3-u^2+u-1)^2)(u^{105}-3u^{104}+\cdots-2u-1)$
c_{12}	$((u^5-3u^4+4u^3-u^2-u+1)^2)(u^{105}+9u^{104}+\cdots+6u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^5)(y^{105}+8y^{104}+\cdots-21y-1)$
c_2, c_5	$((y^2+y+1)^5)(y^{105}+52y^{104}+\cdots-5y-1)$
c_3	$((y^2+y+1)^5)(y^{105}-36y^{104}+\cdots+9.85651\times 10^8 y-5.52109\times 10^8)$
c_4, c_9	$y^{10}(y^{105}+55y^{104}+\cdots-2.51658\times 10^7 y-1048576)$
c_6	$(y^5+3y^4+4y^3+y^2-y-1)^2$ $\cdot (y^{105}-31y^{104}+\cdots+449047075542y-22314683161)$
c_7, c_8, c_{11}	$((y^5-5y^4+8y^3-3y^2-y-1)^2)(y^{105}-95y^{104}+\cdots+2y-1)$
c_{10}	$(y^5+3y^4+4y^3+y^2-y-1)^2$ $\cdot (y^{105}+29y^{104}+\cdots-2885666658y-64368529)$
c_{12}	$((y^5-y^4+8y^3-3y^2+3y-1)^2)(y^{105}-3y^{104}+\cdots+14y-1)$