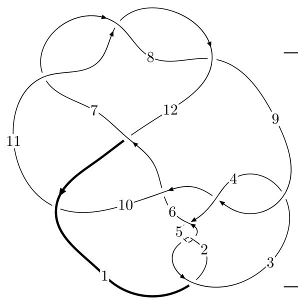
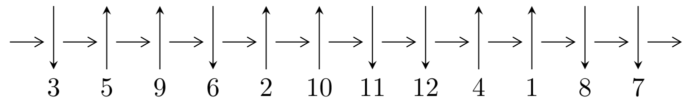
$12a_{0173}$ $(K12a_{0173})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 222u^{93} - 751u^{92} + \cdots + 16b + 223,\ 333u^{93} - 1867u^{92} + \cdots + 16a - 288,\ u^{94} - 6u^{93} + \cdots - 7u + 1\rangle$$
$$I_2^u = \langle -au + b - a,\ a^5 - a^4u - 2a^3u - 2a^3 - a^2 + au + u + 1,\ u^2 + u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 104 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. $\boldsymbol{I_1^u = \langle 222u^{93} - 751u^{92} + \cdots + 16b + 223,\ 333u^{93} - 1867u^{92} + \cdots + 16a - 288,\ u^{94} - 6u^{93} + \cdots - 7u + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -20.8125u^{93} + 116.688u^{92} + \cdots - 123.813u + 18 \\ -13.8750u^{93} + 46.9375u^{92} + \cdots + 67.8750u - 13.9375 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{1}{16}u^{93} - \frac{3}{8}u^{92} + \cdots + \frac{7}{16}u - \frac{17}{16} \\ 0.0625000u^{93} - 0.312500u^{92} + \cdots + 2.62500u^2 + 2.06250u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -\frac{655}{8}u^{93} + 450u^{92} + \cdots - \frac{3365}{8}u + \frac{481}{8} \\ -79.1875u^{93} + 363.500u^{92} + \cdots - 71.1875u + 1.18750 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^3 \\ u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -65.9375u^{93} + 362.563u^{92} + \cdots - 346.688u + 50 \\ -60.1250u^{93} + 267.563u^{92} + \cdots - 15.1250u - 5.81250 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} \frac{3}{8}u^{93} - \frac{9}{16}u^{92} + \cdots - \frac{43}{8}u + \frac{37}{16} \\ -1.43750u^{93} + 8.93750u^{92} + \cdots - 12.5625u + 1.87500 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.812500u^{93} + 1.75000u^{92} + \cdots + 10.8125u - 2.31250 \\ \frac{9}{8}u^{93} - \frac{67}{8}u^{92} + \cdots + \frac{153}{8}u - \frac{23}{8} \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{629}{16}u^{93} + \frac{2099}{16}u^{92} + \cdots + \frac{3621}{16}u - \frac{87}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{94} + 30u^{93} + \cdots - u + 1$
c_2, c_5	$u^{94} + 6u^{93} + \cdots + 7u + 1$
c_3, c_9	$u^{94} + u^{93} + \cdots + 3072u + 1024$
c_6	$u^{94} - 3u^{93} + \cdots - 87286u + 32129$
c_7, c_8, c_{11}	$u^{94} + 3u^{93} + \cdots - 2u + 1$
c_{10}	$u^{94} + 21u^{93} + \cdots + 36030u + 2513$
c_{12}	$u^{94} - 9u^{93} + \cdots - 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{94} + 74y^{93} + \cdots + 351y + 1$
c_2, c_5	$y^{94} + 30y^{93} + \cdots - y + 1$
c_3, c_9	$y^{94} - 55y^{93} + \cdots - 14680064y + 1048576$
c_6	$y^{94} - 37y^{93} + \cdots + 47515546332y + 1032272641$
c_7, c_8, c_{11}	$y^{94} - 85y^{93} + \cdots + 8y + 1$
c_{10}	$y^{94} + 23y^{93} + \cdots + 134228996y + 6315169$
c_{12}	$y^{94} - y^{93} + \cdots - 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.670150 + 0.687540I$ $a = 1.51532 - 0.23955I$ $b = 1.43637 + 0.41065I$	$-3.59197 - 3.38028I$	0
$u = -0.670150 - 0.687540I$ $a = 1.51532 + 0.23955I$ $b = 1.43637 - 0.41065I$	$-3.59197 + 3.38028I$	0
$u = 0.028187 + 0.943205I$ $a = 0.485350 - 1.000310I$ $b = -0.859995 - 0.725734I$	$-8.40957 - 3.13792I$	0
$u = 0.028187 - 0.943205I$ $a = 0.485350 + 1.000310I$ $b = -0.859995 + 0.725734I$	$-8.40957 + 3.13792I$	0
$u = -0.148866 + 1.063320I$ $a = 0.294932 + 0.195503I$ $b = -0.709994 - 0.403961I$	$-7.43720 - 1.60373I$	0
$u = -0.148866 - 1.063320I$ $a = 0.294932 - 0.195503I$ $b = -0.709994 + 0.403961I$	$-7.43720 + 1.60373I$	0
$u = -0.227030 + 1.053750I$ $a = 0.164857 - 0.261042I$ $b = 0.835518 + 0.426311I$	$-1.39198 - 3.10591I$	0
$u = -0.227030 - 1.053750I$ $a = 0.164857 + 0.261042I$ $b = 0.835518 - 0.426311I$	$-1.39198 + 3.10591I$	0
$u = -0.516749 + 0.947808I$ $a = 0.371632 + 0.718636I$ $b = 0.054881 + 0.933589I$	$-0.12135 - 2.69520I$	0
$u = -0.516749 - 0.947808I$ $a = 0.371632 - 0.718636I$ $b = 0.054881 - 0.933589I$	$-0.12135 + 2.69520I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.681660 + 0.840872I$ $a = 1.284810 - 0.135715I$ $b = 0.30599 - 1.51899I$	$-4.62497 - 2.25618I$	0
$u = 0.681660 - 0.840872I$ $a = 1.284810 + 0.135715I$ $b = 0.30599 + 1.51899I$	$-4.62497 + 2.25618I$	0
$u = 0.820354 + 0.710067I$ $a = 1.19044 + 1.34503I$ $b = 1.63767 - 0.08811I$	$-0.86724 - 1.44181I$	0
$u = 0.820354 - 0.710067I$ $a = 1.19044 - 1.34503I$ $b = 1.63767 + 0.08811I$	$-0.86724 + 1.44181I$	0
$u = -0.301226 + 1.064560I$ $a = 0.572796 - 0.267999I$ $b = 0.945557 + 0.533013I$	$-1.28046 - 3.45860I$	0
$u = -0.301226 - 1.064560I$ $a = 0.572796 + 0.267999I$ $b = 0.945557 - 0.533013I$	$-1.28046 + 3.45860I$	0
$u = -0.773091 + 0.795511I$ $a = -2.04021 + 1.13036I$ $b = -2.43499 + 0.17340I$	$-1.66418 + 4.07578I$	0
$u = -0.773091 - 0.795511I$ $a = -2.04021 - 1.13036I$ $b = -2.43499 - 0.17340I$	$-1.66418 - 4.07578I$	0
$u = 0.707009 + 0.855951I$ $a = -0.916465 + 0.148403I$ $b = -0.029416 + 1.238170I$	$1.39464 + 0.74314I$	0
$u = 0.707009 - 0.855951I$ $a = -0.916465 - 0.148403I$ $b = -0.029416 - 1.238170I$	$1.39464 - 0.74314I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.758040 + 0.817422I$ $a = 1.84855 - 1.28828I$ $b = 2.31971 - 0.42290I$	$3.44140 + 0.58481I$	0
$u = -0.758040 - 0.817422I$ $a = 1.84855 + 1.28828I$ $b = 2.31971 + 0.42290I$	$3.44140 - 0.58481I$	0
$u = 0.129795 + 0.870515I$ $a = -0.20956 + 1.60326I$ $b = 1.21590 + 0.76608I$	$-7.30094 + 5.76750I$	0
$u = 0.129795 - 0.870515I$ $a = -0.20956 - 1.60326I$ $b = 1.21590 - 0.76608I$	$-7.30094 - 5.76750I$	0
$u = -0.390296 + 1.052370I$ $a = -0.917390 - 0.070137I$ $b = -0.916064 - 0.825313I$	$1.057540 - 0.415655I$	0
$u = -0.390296 - 1.052370I$ $a = -0.917390 + 0.070137I$ $b = -0.916064 + 0.825313I$	$1.057540 + 0.415655I$	0
$u = 0.881750 + 0.696556I$ $a = -1.30206 - 1.74356I$ $b = -2.09845 - 0.37324I$	$2.09884 - 10.39320I$	0
$u = 0.881750 - 0.696556I$ $a = -1.30206 + 1.74356I$ $b = -2.09845 + 0.37324I$	$2.09884 + 10.39320I$	0
$u = 0.861955 + 0.728574I$ $a = -1.04499 - 1.61989I$ $b = -1.66754 - 0.38829I$	$5.87498 - 2.63356I$	0
$u = 0.861955 - 0.728574I$ $a = -1.04499 + 1.61989I$ $b = -1.66754 + 0.38829I$	$5.87498 + 2.63356I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.877643 + 0.710110I$ $a = 1.19562 + 1.73143I$ $b = 1.94503 + 0.42864I$	$7.48515 - 6.65000I$	0
$u = 0.877643 - 0.710110I$ $a = 1.19562 - 1.73143I$ $b = 1.94503 - 0.42864I$	$7.48515 + 6.65000I$	0
$u = -0.222597 + 1.109100I$ $a = -0.114066 + 0.610663I$ $b = -0.877550 - 0.310159I$	$0.03457 - 6.69622I$	0
$u = -0.222597 - 1.109100I$ $a = -0.114066 - 0.610663I$ $b = -0.877550 + 0.310159I$	$0.03457 + 6.69622I$	0
$u = 0.682317 + 0.903998I$ $a = -0.830811 + 0.899927I$ $b = 0.57217 + 1.71044I$	$-4.82787 + 7.52028I$	0
$u = 0.682317 - 0.903998I$ $a = -0.830811 - 0.899927I$ $b = 0.57217 - 1.71044I$	$-4.82787 - 7.52028I$	0
$u = 0.005767 + 0.865357I$ $a = -0.095106 + 1.029290I$ $b = 0.952216 + 0.583554I$	$-2.52879 - 0.93392I$	0
$u = 0.005767 - 0.865357I$ $a = -0.095106 - 1.029290I$ $b = 0.952216 - 0.583554I$	$-2.52879 + 0.93392I$	0
$u = 0.706391 + 0.890180I$ $a = 0.661512 - 0.528645I$ $b = -0.436068 - 1.333350I$	$1.28701 + 4.67596I$	0
$u = 0.706391 - 0.890180I$ $a = 0.661512 + 0.528645I$ $b = -0.436068 + 1.333350I$	$1.28701 - 4.67596I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.717761 + 0.883186I$ $a = -1.20707 + 1.68520I$ $b = -1.88096 + 1.10363I$	$1.33806 - 2.75239I$	0
$u = -0.717761 - 0.883186I$ $a = -1.20707 - 1.68520I$ $b = -1.88096 - 1.10363I$	$1.33806 + 2.75239I$	0
$u = -0.737938 + 0.867429I$ $a = -1.46729 + 1.65641I$ $b = -2.11782 + 0.95891I$	$1.36896 - 2.79585I$	0
$u = -0.737938 - 0.867429I$ $a = -1.46729 - 1.65641I$ $b = -2.11782 - 0.95891I$	$1.36896 + 2.79585I$	0
$u = -0.208400 + 1.126740I$ $a = -0.004628 - 0.735193I$ $b = 0.850790 + 0.246650I$	$-5.32826 - 10.21790I$	0
$u = -0.208400 - 1.126740I$ $a = -0.004628 + 0.735193I$ $b = 0.850790 - 0.246650I$	$-5.32826 + 10.21790I$	0
$u = -0.524352 + 1.021570I$ $a = -0.860237 - 0.944500I$ $b = -0.35864 - 1.40193I$	$-5.23793 - 4.84037I$	0
$u = -0.524352 - 1.021570I$ $a = -0.860237 + 0.944500I$ $b = -0.35864 + 1.40193I$	$-5.23793 + 4.84037I$	0
$u = 0.866098 + 0.763349I$ $a = -0.74715 - 1.63566I$ $b = -1.30988 - 0.62048I$	$6.43442 - 2.50562I$	0
$u = 0.866098 - 0.763349I$ $a = -0.74715 + 1.63566I$ $b = -1.30988 + 0.62048I$	$6.43442 + 2.50562I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.095033 + 0.837949I$ $a = 0.04708 - 1.43600I$ $b = -1.161730 - 0.628848I$	$-1.75593 + 2.53049I$	0
$u = 0.095033 - 0.837949I$ $a = 0.04708 + 1.43600I$ $b = -1.161730 + 0.628848I$	$-1.75593 - 2.53049I$	0
$u = -0.424352 + 1.076360I$ $a = 1.157350 + 0.174838I$ $b = 0.99354 + 1.01112I$	$-4.02052 + 2.87938I$	0
$u = -0.424352 - 1.076360I$ $a = 1.157350 - 0.174838I$ $b = 0.99354 - 1.01112I$	$-4.02052 - 2.87938I$	0
$u = -0.658896 + 0.954952I$ $a = 0.25075 - 1.81159I$ $b = 1.04116 - 1.64540I$	$-4.36826 - 1.76808I$	0
$u = -0.658896 - 0.954952I$ $a = 0.25075 + 1.81159I$ $b = 1.04116 + 1.64540I$	$-4.36826 + 1.76808I$	0
$u = 0.860409 + 0.792585I$ $a = 0.47498 + 1.53086I$ $b = 0.921903 + 0.686814I$	$9.09436 + 1.27268I$	0
$u = 0.860409 - 0.792585I$ $a = 0.47498 - 1.53086I$ $b = 0.921903 - 0.686814I$	$9.09436 - 1.27268I$	0
$u = 0.856194 + 0.815572I$ $a = -0.24752 - 1.42122I$ $b = -0.597569 - 0.719094I$	$4.41649 + 4.98775I$	0
$u = 0.856194 - 0.815572I$ $a = -0.24752 + 1.42122I$ $b = -0.597569 + 0.719094I$	$4.41649 - 4.98775I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.737336+0.926535I$ $a=\ \ 1.10299-2.19955I$ $b=\ \ 2.00654-1.63952I$	$3.10639-6.25660I$	0
$u=-0.737336-0.926535I$ $a=\ \ 1.10299+2.19955I$ $b=\ \ 2.00654+1.63952I$	$3.10639+6.25660I$	0
$u=-0.739971+0.944705I$ $a=-0.99082+2.39371I$ $b=-1.98203+1.87142I$	$-2.12113-9.79929I$	0
$u=-0.739971-0.944705I$ $a=-0.99082-2.39371I$ $b=-1.98203-1.87142I$	$-2.12113+9.79929I$	0
$u=-0.460070+0.644601I$ $a=-0.981985-0.230514I$ $b=-0.782718-0.369925I$	$0.76337-1.37281I$	$5.90020+4.40804I$
$u=-0.460070-0.644601I$ $a=-0.981985+0.230514I$ $b=-0.782718+0.369925I$	$0.76337+1.37281I$	$5.90020-4.40804I$
$u=-0.778683+0.137337I$ $a=-0.712517-0.452447I$ $b=\ \ 0.847873-0.744073I$	$-1.07737-7.05448I$	$2.24170+5.60574I$
$u=-0.778683-0.137337I$ $a=-0.712517+0.452447I$ $b=\ \ 0.847873+0.744073I$	$-1.07737+7.05448I$	$2.24170-5.60574I$
$u=-0.760762+0.101349I$ $a=\ \ 0.717928+0.321797I$ $b=-0.838743+0.523922I$	$4.07426-3.50683I$	$7.35202+4.80092I$
$u=-0.760762-0.101349I$ $a=\ \ 0.717928-0.321797I$ $b=-0.838743-0.523922I$	$4.07426+3.50683I$	$7.35202-4.80092I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.735624 + 1.009360I$ $a = 0.89651 + 1.66114I$ $b = 2.23298 + 1.26801I$	$-1.78001 + 7.28363I$	0
$u = 0.735624 - 1.009360I$ $a = 0.89651 - 1.66114I$ $b = 2.23298 - 1.26801I$	$-1.78001 - 7.28363I$	0
$u = 0.799634 + 0.960875I$ $a = -1.093490 - 0.304083I$ $b = -1.70422 - 0.08876I$	$3.96230 + 1.16547I$	0
$u = 0.799634 - 0.960875I$ $a = -1.093490 + 0.304083I$ $b = -1.70422 + 0.08876I$	$3.96230 - 1.16547I$	0
$u = 0.790634 + 0.978809I$ $a = 1.222190 + 0.622146I$ $b = 1.97666 + 0.28955I$	$8.51444 + 4.86478I$	0
$u = 0.790634 - 0.978809I$ $a = 1.222190 - 0.622146I$ $b = 1.97666 - 0.28955I$	$8.51444 - 4.86478I$	0
$u = 0.780705 + 0.998864I$ $a = -1.35648 - 0.99279I$ $b = -2.27006 - 0.52715I$	$5.70442 + 8.62660I$	0
$u = 0.780705 - 0.998864I$ $a = -1.35648 + 0.99279I$ $b = -2.27006 + 0.52715I$	$5.70442 - 8.62660I$	0
$u = 0.760688 + 1.015770I$ $a = -1.30322 - 1.45901I$ $b = -2.44837 - 0.92304I$	$4.98657 + 8.67496I$	0
$u = 0.760688 - 1.015770I$ $a = -1.30322 + 1.45901I$ $b = -2.44837 + 0.92304I$	$4.98657 - 8.67496I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.722300 + 0.014530I$ $a = -0.781532 - 0.041951I$ $b = 0.742160 - 0.066804I$	$2.12360 - 0.00608I$	$4.54516 - 0.30055I$
$u = -0.722300 - 0.014530I$ $a = -0.781532 + 0.041951I$ $b = 0.742160 + 0.066804I$	$2.12360 + 0.00608I$	$4.54516 + 0.30055I$
$u = 0.760541 + 1.030980I$ $a = 1.48255 + 1.66923I$ $b = 2.68333 + 1.00565I$	$6.4926 + 12.7332I$	0
$u = 0.760541 - 1.030980I$ $a = 1.48255 - 1.66923I$ $b = 2.68333 - 1.00565I$	$6.4926 - 12.7332I$	0
$u = 0.756313 + 1.038710I$ $a = -1.51396 - 1.82875I$ $b = -2.77753 - 1.11565I$	$1.0412 + 16.4719I$	0
$u = 0.756313 - 1.038710I$ $a = -1.51396 + 1.82875I$ $b = -2.77753 + 1.11565I$	$1.0412 - 16.4719I$	0
$u = -0.585200 + 0.297480I$ $a = 1.221580 + 0.461509I$ $b = 0.173343 + 0.683235I$	$-3.34282 + 0.54984I$	$-0.040630 + 1.106990I$
$u = -0.585200 - 0.297480I$ $a = 1.221580 - 0.461509I$ $b = 0.173343 - 0.683235I$	$-3.34282 - 0.54984I$	$-0.040630 - 1.106990I$
$u = 0.061423 + 0.558350I$ $a = 0.79099 + 1.29367I$ $b = 1.011230 + 0.039242I$	$-2.80374 + 0.56424I$	$-2.87695 + 0.40186I$
$u = 0.061423 - 0.558350I$ $a = 0.79099 - 1.29367I$ $b = 1.011230 - 0.039242I$	$-2.80374 - 0.56424I$	$-2.87695 - 0.40186I$

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.350629 + 0.139994I$ $a = 0.47125 + 1.44033I$ $b = 0.429853 - 1.025940I$	$-5.26747 - 4.05421I$	$-4.34818 + 4.22545I$
$u = 0.350629 - 0.139994I$ $a = 0.47125 - 1.44033I$ $b = 0.429853 + 1.025940I$	$-5.26747 + 4.05421I$	$-4.34818 - 4.22545I$
$u = 0.207313 + 0.143702I$ $a = -0.68341 - 1.86348I$ $b = -0.371998 + 0.632450I$	$-0.010818 - 1.279380I$	$0.07288 + 5.41961I$
$u = 0.207313 - 0.143702I$ $a = -0.68341 + 1.86348I$ $b = -0.371998 - 0.632450I$	$-0.010818 + 1.279380I$	$0.07288 - 5.41961I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -a^4 + 4a^3 - 3a^2u - 4au - 5a + 4u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_5	$(u^2 - u + 1)^5$
c_2	$(u^2 + u + 1)^5$
c_3, 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_4 c_5	$(y^2 + y + 1)^5$
c_3, 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
$u = -0.500000 + 0.866025I$ $a = 0.881753 + 0.117510I$ $b = 0.339110 + 0.822375I$	$-0.32910 - 3.56046I$	$0.01046 + 8.35149I$
$u = -0.500000 + 0.866025I$ $a = -0.542643 - 0.704866I$ $b = 0.339110 - 0.822375I$	$-0.329100 - 0.499304I$	$-2.49844 - 0.84282I$
$u = -0.500000 + 0.866025I$ $a = -0.383413 + 0.664091I$ $b = -0.766826$	$-2.40108 - 2.02988I$	$-0.33682 + 2.50057I$
$u = -0.500000 + 0.866025I$ $a = 0.811514 + 0.994721I$ $b = -0.455697 + 1.200150I$	$-5.87256 - 6.43072I$	$-4.29156 + 5.94266I$
$u = -0.500000 + 0.866025I$ $a = -1.267210 - 0.205431I$ $b = -0.455697 - 1.200150I$	$-5.87256 + 2.37095I$	$-6.88365 - 0.36343I$
$u = -0.500000 - 0.866025I$ $a = 0.881753 - 0.117510I$ $b = 0.339110 - 0.822375I$	$-0.32910 + 3.56046I$	$0.01046 - 8.35149I$
$u = -0.500000 - 0.866025I$ $a = -0.542643 + 0.704866I$ $b = 0.339110 + 0.822375I$	$-0.329100 + 0.499304I$	$-2.49844 + 0.84282I$
$u = -0.500000 - 0.866025I$ $a = -0.383413 - 0.664091I$ $b = -0.766826$	$-2.40108 + 2.02988I$	$-0.33682 - 2.50057I$
$u = -0.500000 - 0.866025I$ $a = 0.811514 - 0.994721I$ $b = -0.455697 - 1.200150I$	$-5.87256 + 6.43072I$	$-4.29156 - 5.94266I$
$u = -0.500000 - 0.866025I$ $a = -1.267210 + 0.205431I$ $b = -0.455697 + 1.200150I$	$-5.87256 - 2.37095I$	$-6.88365 + 0.36343I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$((u^2-u+1)^5)(u^{94}+30u^{93}+\cdots-u+1)$
c_2	$((u^2+u+1)^5)(u^{94}+6u^{93}+\cdots+7u+1)$
c_3, c_9	$u^{10}(u^{94}+u^{93}+\cdots+3072u+1024)$
c_5	$((u^2-u+1)^5)(u^{94}+6u^{93}+\cdots+7u+1)$
c_6	$((u^5-u^4+2u^3-u^2+u-1)^2)(u^{94}-3u^{93}+\cdots-87286u+32129)$
c_7, c_8	$((u^5+u^4-2u^3-u^2+u-1)^2)(u^{94}+3u^{93}+\cdots-2u+1)$
c_{10}	$((u^5-u^4+2u^3-u^2+u-1)^2)(u^{94}+21u^{93}+\cdots+36030u+2513)$
c_{11}	$((u^5-u^4-2u^3+u^2+u+1)^2)(u^{94}+3u^{93}+\cdots-2u+1)$
c_{12}	$((u^5+3u^4+4u^3+u^2-u-1)^2)(u^{94}-9u^{93}+\cdots-6u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y^2+y+1)^5)(y^{94}+74y^{93}+\cdots+351y+1)$
c_2, c_5	$((y^2+y+1)^5)(y^{94}+30y^{93}+\cdots-y+1)$
c_3, c_9	$y^{10}(y^{94}-55y^{93}+\cdots-1.46801\times 10^7 y+1048576)$
c_6	$(y^5+3y^4+4y^3+y^2-y-1)^2$ $\cdot(y^{94}-37y^{93}+\cdots+47515546332y+1032272641)$
c_7, c_8, c_{11}	$((y^5-5y^4+8y^3-3y^2-y-1)^2)(y^{94}-85y^{93}+\cdots+8y+1)$
c_{10}	$(y^5+3y^4+4y^3+y^2-y-1)^2$ $\cdot(y^{94}+23y^{93}+\cdots+134228996y+6315169)$
c_{12}	$((y^5-y^4+8y^3-3y^2+3y-1)^2)(y^{94}-y^{93}+\cdots-4y+1)$