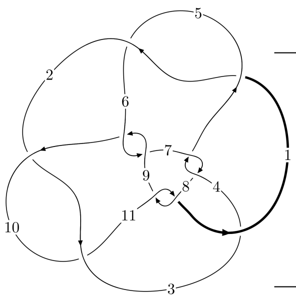
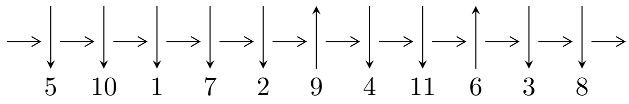
$11a_{304}$ ($K11a_{304}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$
\begin{aligned}
I_1^u &= \langle b+u,\ -3859u^{17}+8014u^{16}+\cdots+13433a-31560,\ u^{18}-9u^{16}+\cdots+2u-1\rangle \\
I_2^u &= \langle -6.09740\times 10^{97}u^{47}+2.58938\times 10^{98}u^{46}+\cdots+2.24272\times 10^{98}b-1.38856\times 10^{100}, \\
&\quad 1.06648\times 10^{100}u^{47}-4.25205\times 10^{100}u^{46}+\cdots+7.15429\times 10^{100}a+2.73856\times 10^{102}, \\
&\quad u^{48}-3u^{47}+\cdots+2258u+319\rangle \\
I_3^u &= \langle b+u,\ u^7-u^6-4u^5+3u^4+5u^3-4u^2+a+1,\ u^8-4u^6+6u^4-u^3-3u^2+u+1\rangle
\end{aligned}
$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 74 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.

$$\boldsymbol{I_1^u = \langle b+u,\ -3859u^{17}+8014u^{16}+\cdots+13433a-31560,\ u^{18}-9u^{16}+\cdots+2u-1\rangle}$$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$

$$a_3 = \begin{pmatrix}1\\u^2\end{pmatrix}$$

$$a_6 = \begin{pmatrix}0.287278u^{17} - 0.596590u^{16} + \cdots + 2.96665u + 2.34944\\-u\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$

$$a_5 = \begin{pmatrix}0.287278u^{17} - 0.596590u^{16} + \cdots + 1.96665u + 2.34944\\-u\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-0.596590u^{17} + 0.330157u^{16} + \cdots + 1.77488u + 1.28728\\-u^2\end{pmatrix}$$

$$a_9 = \begin{pmatrix}0.581553u^{17} - 0.0745180u^{16} + \cdots - 7.40646u + 0.419489\\0.330157u^{17} - 0.592868u^{16} + \cdots + 2.48046u - 0.596590\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-1.20948u^{17} + 0.0859823u^{16} + \cdots + 3.46899u + 0.746743\\-0.0831534u^{17} - 0.239857u^{16} + \cdots - 1.74987u + 0.522073\end{pmatrix}$$

$$a_4 = \begin{pmatrix}-0.722102u^{17} + 0.840095u^{16} + \cdots - 0.833246u + 1.68138\\-0.833991u^{17} + 1.04913u^{16} + \cdots - 2.01772u + 0.712425\end{pmatrix}$$

$$a_8 = \begin{pmatrix}0.661877u^{17} + 0.0748158u^{16} + \cdots - 7.07243u + 0.584828\\0.186407u^{17} - 0.456041u^{16} + \cdots + 1.92809u - 0.612596\end{pmatrix}$$

$$a_8 = \begin{pmatrix}0.661877u^{17} + 0.0748158u^{16} + \cdots - 7.07243u + 0.584828\\0.186407u^{17} - 0.456041u^{16} + \cdots + 1.92809u - 0.612596\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{37965}{13433}u^{17} - \frac{30147}{13433}u^{16} + \cdots - \frac{4675}{1919}u - \frac{54291}{13433}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_5 c_{10}	$u^{18} - 9u^{16} + \cdots + 2u - 1$
c_3	$u^{18} - 17u^{17} + \cdots + 640u - 64$
c_4, c_7, c_8 c_{11}	$u^{18} - u^{17} + \cdots + 4u + 1$
c_6, c_9	$u^{18} + 11u^{17} + \cdots + 208u + 16$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_{10}	$y^{18} - 18y^{17} + \cdots + 6y + 1$
c_3	$y^{18} - 3y^{17} + \cdots - 24576y + 4096$
c_4, c_7, c_8 c_{11}	$y^{18} + 13y^{17} + \cdots - 14y + 1$
c_6, c_9	$y^{18} + 11y^{17} + \cdots - 12160y + 256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.408078 + 0.786624I$ $a = 0.191327 + 1.032300I$ $b = -0.408078 - 0.786624I$	$6.34892 + 0.61291I$	$-0.81864 + 1.96169I$
$u = 0.408078 - 0.786624I$ $a = 0.191327 - 1.032300I$ $b = -0.408078 + 0.786624I$	$6.34892 - 0.61291I$	$-0.81864 - 1.96169I$
$u = -1.181090 + 0.239212I$ $a = -0.11707 + 1.45553I$ $b = 1.181090 - 0.239212I$	$-5.93754 - 0.90931I$	$-12.67105 + 3.59251I$
$u = -1.181090 - 0.239212I$ $a = -0.11707 - 1.45553I$ $b = 1.181090 + 0.239212I$	$-5.93754 + 0.90931I$	$-12.67105 - 3.59251I$
$u = 0.108330 + 0.747006I$ $a = -1.32407 + 0.67886I$ $b = -0.108330 - 0.747006I$	$5.38862 + 5.69558I$	$-1.81453 - 3.55021I$
$u = 0.108330 - 0.747006I$ $a = -1.32407 - 0.67886I$ $b = -0.108330 + 0.747006I$	$5.38862 - 5.69558I$	$-1.81453 + 3.55021I$
$u = -1.275010 + 0.262336I$ $a = 1.175550 + 0.241403I$ $b = 1.275010 - 0.262336I$	$0.95391 + 8.87623I$	$-7.74572 - 6.85139I$
$u = -1.275010 - 0.262336I$ $a = 1.175550 - 0.241403I$ $b = 1.275010 + 0.262336I$	$0.95391 - 8.87623I$	$-7.74572 + 6.85139I$
$u = 1.33028$ $a = -0.683762$ $b = -1.33028$	-6.40721	-14.9220
$u = 1.41995 + 0.20994I$ $a = -0.613065 + 1.144820I$ $b = -1.41995 - 0.20994I$	$-6.13065 - 4.90278I$	$-7.01114 + 4.15155I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.41995 - 0.20994I$ $a = -0.613065 - 1.144820I$ $b = -1.41995 + 0.20994I$	$-6.13065 + 4.90278I$	$-7.01114 - 4.15155I$
$u = -0.542099$ $a = 0.262417$ $b = 0.542099$	-0.811801	-12.0990
$u = 1.49966 + 0.40429I$ $a = -0.028686 + 0.907225I$ $b = -1.49966 - 0.40429I$	$-10.72730 - 4.74355I$	$-14.8235 + 1.3888I$
$u = 1.49966 - 0.40429I$ $a = -0.028686 - 0.907225I$ $b = -1.49966 + 0.40429I$	$-10.72730 + 4.74355I$	$-14.8235 - 1.3888I$
$u = -1.53397 + 0.54225I$ $a = 0.050667 + 1.000190I$ $b = 1.53397 - 0.54225I$	$-3.9883 + 16.2483I$	$-8.61000 - 8.11381I$
$u = -1.53397 - 0.54225I$ $a = 0.050667 - 1.000190I$ $b = 1.53397 + 0.54225I$	$-3.9883 - 16.2483I$	$-8.61000 + 8.11381I$
$u = 0.159971 + 0.264831I$ $a = 2.87602 + 0.51667I$ $b = -0.159971 - 0.264831I$	$-0.39235 + 1.59654I$	$-2.49522 - 4.52605I$
$u = 0.159971 - 0.264831I$ $a = 2.87602 - 0.51667I$ $b = -0.159971 + 0.264831I$	$-0.39235 - 1.59654I$	$-2.49522 + 4.52605I$

II. $\boldsymbol{I_2^u = \langle -6.10\times 10^{97}u^{47} + 2.59\times 10^{98}u^{46} + \cdots + 2.24\times 10^{98}b - 1.39\times 10^{100},\ 1.07\times 10^{100}u^{47} - 4.25\times 10^{100}u^{46} + \cdots + 7.15\times 10^{100}a + 2.74\times 10^{102},\ u^{48} - 3u^{47} + \cdots + 2258u + 319\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-0.149069u^{47} + 0.594336u^{46} + \cdots - 256.237u - 38.2785\\0.271875u^{47} - 1.15457u^{46} + \cdots + 396.158u + 61.9139\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-u\\-u^3 + u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0.122806u^{47} - 0.560233u^{46} + \cdots + 139.921u + 23.6354\\0.271875u^{47} - 1.15457u^{46} + \cdots + 396.158u + 61.9139\end{pmatrix}$$
$$a_1 = \begin{pmatrix}1.54072u^{47} - 6.38173u^{46} + \cdots + 2672.27u + 435.306\\1.99109u^{47} - 8.19373u^{46} + \cdots + 3481.47u + 562.648\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-0.0375732u^{47} + 0.143876u^{46} + \cdots - 130.196u - 23.4217\\0.460900u^{47} - 1.84389u^{46} + \cdots + 889.590u + 143.667\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-0.00542028u^{47} + 0.0383142u^{46} + \cdots + 63.9028u + 9.35070\\0.0486115u^{47} - 0.222442u^{46} + \cdots + 91.9873u + 18.1913\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0.185270u^{47} - 0.834683u^{46} + \cdots + 187.771u + 28.3446\\0.335022u^{47} - 1.41596u^{46} + \cdots + 528.630u + 82.1633\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.456200u^{47} - 1.83795u^{46} + \cdots + 821.370u + 131.984\\0.476207u^{47} - 1.90758u^{46} + \cdots + 910.659u + 147.924\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.456200u^{47} - 1.83795u^{46} + \cdots + 821.370u + 131.984\\0.476207u^{47} - 1.90758u^{46} + \cdots + 910.659u + 147.924\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6.23467u^{47} - 25.2293u^{46} + \cdots + 11604.2u + 1881.95$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_5 c_{10}	$u^{48} - 3u^{47} + \cdots + 2258u + 319$
c_3	$(u^{24} + 4u^{23} + \cdots + 2u + 1)^2$
c_4, c_7, c_8 c_{11}	$u^{48} - 5u^{47} + \cdots + 314u + 61$
c_6, c_9	$(u^{24} - 4u^{23} + \cdots - 2u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_{10}	$y^{48} - 37y^{47} + \cdots + 318056y + 101761$
c_3	$(y^{24} + 6y^{23} + \cdots + 8y + 1)^2$
c_4, c_7, c_8 c_{11}	$y^{48} + 31y^{47} + \cdots - 55164y + 3721$
c_6, c_9	$(y^{24} + 20y^{23} + \cdots + 52y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.507410 + 0.882826I$ $a = -1.098430 + 0.558103I$ $b = 1.264200 - 0.100697I$	$-4.43678 - 0.22592I$	$-13.45627 + 0.I$
$u = -0.507410 - 0.882826I$ $a = -1.098430 - 0.558103I$ $b = 1.264200 + 0.100697I$	$-4.43678 + 0.22592I$	$-13.45627 + 0.I$
$u = 0.762695 + 0.579511I$ $a = 0.392365 - 0.571771I$ $b = 0.154819 + 0.470368I$	$1.82625 - 2.21677I$	$-1.73188 + 4.68950I$
$u = 0.762695 - 0.579511I$ $a = 0.392365 + 0.571771I$ $b = 0.154819 - 0.470368I$	$1.82625 + 2.21677I$	$-1.73188 - 4.68950I$
$u = -0.737778 + 0.756607I$ $a = 0.143305 - 0.121548I$ $b = 0.916292 + 0.212779I$	$-0.282838 - 0.252163I$	$-7.00000 + 0.I$
$u = -0.737778 - 0.756607I$ $a = 0.143305 + 0.121548I$ $b = 0.916292 - 0.212779I$	$-0.282838 + 0.252163I$	$-7.00000 + 0.I$
$u = -0.916292 + 0.212779I$ $a = -0.033385 + 0.208446I$ $b = 0.737778 + 0.756607I$	$-0.282838 + 0.252163I$	$-7.62766 - 0.43499I$
$u = -0.916292 - 0.212779I$ $a = -0.033385 - 0.208446I$ $b = 0.737778 - 0.756607I$	$-0.282838 - 0.252163I$	$-7.62766 + 0.43499I$
$u = -1.084950 + 0.073103I$ $a = -0.008039 - 0.977174I$ $b = -2.83805 + 2.46715I$	$-1.83976 + 0.26235I$	$18.4351 + 36.8531I$
$u = -1.084950 - 0.073103I$ $a = -0.008039 + 0.977174I$ $b = -2.83805 - 2.46715I$	$-1.83976 - 0.26235I$	$18.4351 - 36.8531I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.185015+0.891964I$ $a=\quad 1.39762-0.46861I$ $b=-1.241010+0.316801I$	$-3.16425+4.93690I$	$-9.72258-5.53812I$
$u=-0.185015-0.891964I$ $a=\quad 1.39762+0.46861I$ $b=-1.241010-0.316801I$	$-3.16425-4.93690I$	$-9.72258+5.53812I$
$u=-1.143710+0.210666I$ $a=-0.37949-1.52464I$ $b=-1.389740+0.219183I$	$-6.06530+3.64576I$	0
$u=-1.143710-0.210666I$ $a=-0.37949+1.52464I$ $b=-1.389740-0.219183I$	$-6.06530-3.64576I$	0
$u=\quad 1.013570+0.603926I$ $a=-0.671512+0.079817I$ $b=\quad 0.137025-0.636866I$	$4.61294-5.64930I$	0
$u=\quad 1.013570-0.603926I$ $a=-0.671512-0.079817I$ $b=\quad 0.137025+0.636866I$	$4.61294+5.64930I$	0
$u=\quad 1.076670+0.546759I$ $a=\quad 0.593477+0.736101I$ $b=\quad 0.316671-0.434852I$	$-0.782529+1.065850I$	0
$u=\quad 1.076670-0.546759I$ $a=\quad 0.593477-0.736101I$ $b=\quad 0.316671+0.434852I$	$-0.782529-1.065850I$	0
$u=-1.200180+0.290326I$ $a=-0.837459-0.455709I$ $b=-1.305520+0.094166I$	$-2.69997+4.12763I$	0
$u=-1.200180-0.290326I$ $a=-0.837459+0.455709I$ $b=-1.305520-0.094166I$	$-2.69997-4.12763I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.264200+0.100697I$ $a=-0.129257+0.980773I$ $b=\ \ 0.507410-0.882826I$	$-4.43678-0.22592I$	0
$u=-1.264200-0.100697I$ $a=-0.129257-0.980773I$ $b=\ \ 0.507410+0.882826I$	$-4.43678+0.22592I$	0
$u=\ \ 1.241010+0.316801I$ $a=-0.136900-1.039440I$ $b=\ \ 0.185015+0.891964I$	$-3.16425-4.93690I$	0
$u=\ \ 1.241010-0.316801I$ $a=-0.136900+1.039440I$ $b=\ \ 0.185015-0.891964I$	$-3.16425+4.93690I$	0
$u=\ \ 1.262020+0.321043I$ $a=-0.023468+0.958439I$ $b=-0.28931-1.41057I$	$1.74071-9.53525I$	0
$u=\ \ 1.262020-0.321043I$ $a=-0.023468-0.958439I$ $b=-0.28931+1.41057I$	$1.74071+9.53525I$	0
$u=\ \ 1.305520+0.094166I$ $a=\ \ 0.850020-0.294012I$ $b=\ \ 1.200180+0.290326I$	$-2.69997-4.12763I$	0
$u=\ \ 1.305520-0.094166I$ $a=\ \ 0.850020+0.294012I$ $b=\ \ 1.200180-0.290326I$	$-2.69997+4.12763I$	0
$u=-0.350000+0.566175I$ $a=-0.98088+1.39510I$ $b=\ \ 1.49434+0.04435I$	$-0.47769+2.08395I$	$-4.74669-3.16145I$
$u=-0.350000-0.566175I$ $a=-0.98088-1.39510I$ $b=\ \ 1.49434-0.04435I$	$-0.47769-2.08395I$	$-4.74669+3.16145I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.137025+0.636866I$ $a=-0.251867+1.198590I$ $b=-1.013570-0.603926I$	$4.61294-5.64930I$	$-2.87192+2.20392I$
$u=-0.137025-0.636866I$ $a=-0.251867-1.198590I$ $b=-1.013570+0.603926I$	$4.61294+5.64930I$	$-2.87192-2.20392I$
$u=\ \ 1.389740+0.219183I$ $a=\ \ 0.345996-1.251770I$ $b=\ \ 1.143710+0.210666I$	$-6.06530-3.64576I$	0
$u=\ \ 1.389740-0.219183I$ $a=\ \ 0.345996+1.251770I$ $b=\ \ 1.143710-0.210666I$	$-6.06530+3.64576I$	0
$u=\ \ 0.28931+1.41057I$ $a=\ \ 0.770694+0.397207I$ $b=-1.262020-0.321043I$	$1.74071-9.53525I$	0
$u=\ \ 0.28931-1.41057I$ $a=\ \ 0.770694-0.397207I$ $b=-1.262020+0.321043I$	$1.74071+9.53525I$	0
$u=-0.316671+0.434852I$ $a=\ \ 1.41976-1.57779I$ $b=-1.076670-0.546759I$	$-0.782529+1.065850I$	$-2.95105-0.35875I$
$u=-0.316671-0.434852I$ $a=\ \ 1.41976+1.57779I$ $b=-1.076670+0.546759I$	$-0.782529-1.065850I$	$-2.95105+0.35875I$
$u=\ \ 1.40310+0.41281I$ $a=\ \ 0.022975-1.042370I$ $b=\ \ 1.58930+0.62087I$	$-8.17000-9.69978I$	0
$u=\ \ 1.40310-0.41281I$ $a=\ \ 0.022975+1.042370I$ $b=\ \ 1.58930-0.62087I$	$-8.17000+9.69978I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.49434 + 0.04435I$ $a = 0.319282 - 0.688916I$ $b = 0.350000 + 0.566175I$	$-0.47769 - 2.08395I$	0
$u = -1.49434 - 0.04435I$ $a = 0.319282 + 0.688916I$ $b = 0.350000 - 0.566175I$	$-0.47769 + 2.08395I$	0
$u = -0.154819 + 0.470368I$ $a = 0.002200 - 1.341380I$ $b = -0.762695 + 0.579511I$	$1.82625 + 2.21677I$	$-1.73188 - 4.68950I$
$u = -0.154819 - 0.470368I$ $a = 0.002200 + 1.341380I$ $b = -0.762695 - 0.579511I$	$1.82625 - 2.21677I$	$-1.73188 + 4.68950I$
$u = -1.58930 + 0.62087I$ $a = 0.057376 - 0.891861I$ $b = -1.40310 + 0.41281I$	$-8.17000 + 9.69978I$	0
$u = -1.58930 - 0.62087I$ $a = 0.057376 + 0.891861I$ $b = -1.40310 - 0.41281I$	$-8.17000 - 9.69978I$	0
$u = 2.83805 + 2.46715I$ $a = -0.168774 - 0.226636I$ $b = 1.084950 + 0.073103I$	$-1.83976 - 0.26235I$	0
$u = 2.83805 - 2.46715I$ $a = -0.168774 + 0.226636I$ $b = 1.084950 - 0.073103I$	$-1.83976 + 0.26235I$	0

III. $\boldsymbol{I_3^u =}$
$\boldsymbol{\langle b+u,\ u^7-u^6-4u^5+3u^4+5u^3-4u^2+a+1,\ u^8-4u^6+6u^4-u^3-3u^2+u+1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^7+u^6+4u^5-3u^4-5u^3+4u^2-1 \\ -u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u \\ -u^3+u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^7+u^6+4u^5-3u^4-5u^3+4u^2-u-1 \\ -u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^7-3u^5+u^4+3u^3-4u^2+2 \\ -u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^7+u^6+4u^5-3u^4-5u^3+5u^2+u-2 \\ u^6+u^5-3u^4-2u^3+3u^2+u-1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -2u^7+7u^5-8u^3+3u^2+2u-1 \\ u^4+u^3-u^2-u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^6+u^5-2u^4-u^3+2u^2-2u-1 \\ u^7+u^6-3u^5-3u^4+3u^3+3u^2-2u-1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^7+u^6+4u^5-4u^4-5u^3+7u^2+u-3 \\ u^5-2u^3+u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^7+u^6+4u^5-4u^4-5u^3+7u^2+u-3 \\ u^5-2u^3+u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 7u^7+u^6-22u^5-2u^4+23u^3-5u^2-u-9$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^8 - 4u^6 + 6u^4 + u^3 - 3u^2 - u + 1$
c_2, c_5	$u^8 - 4u^6 + 6u^4 - u^3 - 3u^2 + u + 1$
c_3	$u^8 - 2u^6 - u^5 + 16u^4 + 32u^3 + 24u^2 + 8u + 1$
c_4, c_8	$u^8 - u^7 + 4u^6 - 3u^5 + 6u^4 - 3u^3 + 3u^2 - u + 1$
c_6	$u^8 + 2u^7 + 5u^6 + 2u^5 + 4u^4 - 2u^3 + u^2 - u + 1$
c_7, c_{11}	$u^8 + u^7 + 4u^6 + 3u^5 + 6u^4 + 3u^3 + 3u^2 + u + 1$
c_9	$u^8 - 2u^7 + 5u^6 - 2u^5 + 4u^4 + 2u^3 + u^2 + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_{10}	$y^8 - 8y^7 + 28y^6 - 54y^5 + 62y^4 - 45y^3 + 23y^2 - 7y + 1$
c_3	$y^8 - 4y^7 + 36y^6 - 17y^5 + 226y^4 - 244y^3 + 96y^2 - 16y + 1$
c_4, c_7, c_8 c_{11}	$y^8 + 7y^7 + 22y^6 + 39y^5 + 42y^4 + 29y^3 + 15y^2 + 5y + 1$
c_6, c_9	$y^8 + 6y^7 + 25y^6 + 46y^5 + 40y^4 + 18y^3 + 5y^2 + y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.637594 + 0.491904I$ $a = 0.269821 - 0.686725I$ $b = -0.637594 - 0.491904I$	$3.58036 - 6.89137I$	$-7.40021 + 6.36507I$
$u = 0.637594 - 0.491904I$ $a = 0.269821 + 0.686725I$ $b = -0.637594 + 0.491904I$	$3.58036 + 6.89137I$	$-7.40021 - 6.36507I$
$u = 1.350130 + 0.230207I$ $a = -0.520365 + 1.298460I$ $b = -1.350130 - 0.230207I$	$-7.12528 - 4.91384I$	$-15.9725 + 5.8373I$
$u = 1.350130 - 0.230207I$ $a = -0.520365 - 1.298460I$ $b = -1.350130 + 0.230207I$	$-7.12528 + 4.91384I$	$-15.9725 - 5.8373I$
$u = -0.603955 + 0.161841I$ $a = 0.880661 - 0.975730I$ $b = 0.603955 - 0.161841I$	$-1.17049 - 1.46276I$	$-13.60538 + 3.21811I$
$u = -0.603955 - 0.161841I$ $a = 0.880661 + 0.975730I$ $b = 0.603955 + 0.161841I$	$-1.17049 + 1.46276I$	$-13.60538 - 3.21811I$
$u = -1.38377 + 0.43339I$ $a = -0.130117 + 0.725566I$ $b = 1.38377 - 0.43339I$	$-1.86433 + 0.65741I$	$-7.52191 - 0.35368I$
$u = -1.38377 - 0.43339I$ $a = -0.130117 - 0.725566I$ $b = 1.38377 + 0.43339I$	$-1.86433 - 0.65741I$	$-7.52191 + 0.35368I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$(u^8 - 4u^6 + 6u^4 + u^3 - 3u^2 - u + 1)(u^{18} - 9u^{16} + \cdots + 2u - 1)$ $\cdot (u^{48} - 3u^{47} + \cdots + 2258u + 319)$
c_2, c_5	$(u^8 - 4u^6 + 6u^4 - u^3 - 3u^2 + u + 1)(u^{18} - 9u^{16} + \cdots + 2u - 1)$ $\cdot (u^{48} - 3u^{47} + \cdots + 2258u + 319)$
c_3	$(u^8 - 2u^6 - u^5 + 16u^4 + 32u^3 + 24u^2 + 8u + 1)$ $\cdot (u^{18} - 17u^{17} + \cdots + 640u - 64)(u^{24} + 4u^{23} + \cdots + 2u + 1)^2$
c_4, c_8	$(u^8 - u^7 + \cdots - u + 1)(u^{18} - u^{17} + \cdots + 4u + 1)$ $\cdot (u^{48} - 5u^{47} + \cdots + 314u + 61)$
c_6	$(u^8 + 2u^7 + 5u^6 + 2u^5 + 4u^4 - 2u^3 + u^2 - u + 1)$ $\cdot (u^{18} + 11u^{17} + \cdots + 208u + 16)(u^{24} - 4u^{23} + \cdots - 2u + 1)^2$
c_7, c_{11}	$(u^8 + u^7 + \cdots + u + 1)(u^{18} - u^{17} + \cdots + 4u + 1)$ $\cdot (u^{48} - 5u^{47} + \cdots + 314u + 61)$
c_9	$(u^8 - 2u^7 + 5u^6 - 2u^5 + 4u^4 + 2u^3 + u^2 + u + 1)$ $\cdot (u^{18} + 11u^{17} + \cdots + 208u + 16)(u^{24} - 4u^{23} + \cdots - 2u + 1)^2$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_{10}	$(y^8 - 8y^7 + 28y^6 - 54y^5 + 62y^4 - 45y^3 + 23y^2 - 7y + 1)$ $\cdot (y^{18} - 18y^{17} + \cdots + 6y + 1)(y^{48} - 37y^{47} + \cdots + 318056y + 101761)$
c_3	$(y^8 - 4y^7 + 36y^6 - 17y^5 + 226y^4 - 244y^3 + 96y^2 - 16y + 1)$ $\cdot (y^{18} - 3y^{17} + \cdots - 24576y + 4096)(y^{24} + 6y^{23} + \cdots + 8y + 1)^2$
c_4, c_7, c_8 c_{11}	$(y^8 + 7y^7 + 22y^6 + 39y^5 + 42y^4 + 29y^3 + 15y^2 + 5y + 1)$ $\cdot (y^{18} + 13y^{17} + \cdots - 14y + 1)(y^{48} + 31y^{47} + \cdots - 55164y + 3721)$
c_6, c_9	$(y^8 + 6y^7 + 25y^6 + 46y^5 + 40y^4 + 18y^3 + 5y^2 + y + 1)$ $\cdot (y^{18} + 11y^{17} + \cdots - 12160y + 256)(y^{24} + 20y^{23} + \cdots + 52y + 1)^2$