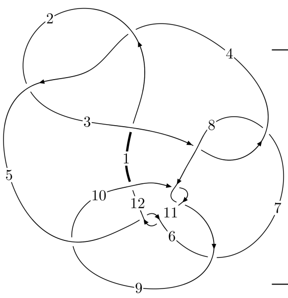
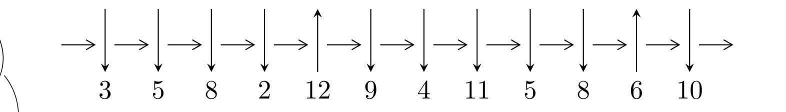
$12n_{0207}$ ($K12n_{0207}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$
\begin{aligned}
I_1^u &= \langle u^{17} + 6u^{16} + \cdots + b - u,\ u^{15} + 6u^{14} + \cdots + a - 2u,\ u^{18} + 7u^{17} + \cdots + u + 1\rangle \\
I_2^u &= \langle b,\ u^8 + 2u^7 - u^6 - 4u^5 - u^4 + 2u^3 + 2u^2 + a + 2u + 1,\ u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1\rangle \\
I_3^u &= \langle -2652a^8 + 26713b + \cdots - 65147a + 3162,\ a^9 + a^8 + 2a^7 + 19a^6 - 5a^5 + 15a^4 - 6a^3 + 4a^2 - a + 1, \\
&\quad\ u - 1\rangle \\
I_4^u &= \langle 87u^{17} + 355u^{16} + \cdots + 256b + 153,\ 33u^{17} + 85u^{16} + \cdots + 256a + 111,\ u^{18} + 4u^{17} + \cdots - 9u^2 + 1\rangle
\end{aligned}
$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 54 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.

$\boldsymbol{I_1^u = \langle u^{17}+6u^{16}+\cdots+b-u,\ u^{15}+6u^{14}+\cdots+a-2u,\ u^{18}+7u^{17}+\cdots+u+1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-u^{15}-6u^{14}+\cdots-2u^2+2u\\-u^{17}-6u^{16}+\cdots+4u^3+u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^{17}-6u^{16}+\cdots-2u^2+3u\\-u^{17}-6u^{16}+\cdots+4u^3+u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-u^3-2u^2+2\\u^3-u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u^5+2u^4-4u^2-u+2\\u^7+2u^6+u^5-2u^4-u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}u^{11}+4u^{10}+4u^9-8u^8-18u^7+24u^5+8u^4-15u^3-4u^2+4u\\u^{13}+4u^{12}+\cdots-2u^2+u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}u^{17}+6u^{16}+\cdots-u+2\\u^{17}+7u^{16}+\cdots-u+1\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-2u^{17}-13u^{16}+\cdots+4u-1\\-u^{17}-7u^{16}+\cdots+u-1\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^{15}-4u^{14}+\cdots-4u^2+4u\\-u^{15}-4u^{14}+\cdots-2u^2+u\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -8u^{17}-56u^{16}-160u^{15}-168u^{14}+176u^{13}+660u^{12}+460u^{11}-492u^{10}-880u^9-108u^8+496u^7+224u^6-96u^5-88u^4-52u^3-4u^2+8u-2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} + 11u^{17} + \cdots + 3u + 1$
c_2, c_4, c_8 c_{10}	$u^{18} - 7u^{17} + \cdots - u + 1$
c_3, c_7, c_9	$u^{18} + u^{17} + \cdots + u - 1$
c_5, c_{11}	$u^{18} + u^{17} + \cdots + 3u - 1$
c_6	$u^{18} - 5u^{17} + \cdots + 77u - 23$
c_{12}	$u^{18} - 3u^{17} + \cdots + 517u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{18} + 41y^{17} + \cdots - 47y + 1$
c_2, c_4, c_8 c_{10}	$y^{18} - 11y^{17} + \cdots - 3y + 1$
c_3, c_7, c_9	$y^{18} + 21y^{17} + \cdots - 7y + 1$
c_5, c_{11}	$y^{18} + 13y^{17} + \cdots - 43y + 1$
c_6	$y^{18} + y^{17} + \cdots - 5331y + 529$
c_{12}	$y^{18} + 29y^{17} + \cdots - 268915y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.944628$ $a = -5.10321$ $b = -0.318928$	-3.03100	-72.2820
$u = \ \ 1.090030 + 0.138340I$ $a = \ \ 0.85982 + 4.45023I$ $b = \ \ 0.344494 - 0.511075I$	$-5.78192 - 0.83339I$	$-4.3200 - 13.4737I$
$u = \ \ 1.090030 - 0.138340I$ $a = \ \ 0.85982 - 4.45023I$ $b = \ \ 0.344494 + 0.511075I$	$-5.78192 + 0.83339I$	$-4.3200 + 13.4737I$
$u = -1.074780 + 0.345327I$ $a = -0.427778 + 0.032515I$ $b = -0.557323 + 0.726879I$	$-5.49927 + 7.93492I$	$-11.8455 - 13.1993I$
$u = -1.074780 - 0.345327I$ $a = -0.427778 - 0.032515I$ $b = -0.557323 - 0.726879I$	$-5.49927 - 7.93492I$	$-11.8455 + 13.1993I$
$u = -0.771241 + 0.273342I$ $a = \ \ 0.446361 - 0.431948I$ $b = \ \ 0.136626 - 0.709955I$	$0.64686 + 2.83787I$	$0.86568 - 9.86296I$
$u = -0.771241 - 0.273342I$ $a = \ \ 0.446361 + 0.431948I$ $b = \ \ 0.136626 + 0.709955I$	$0.64686 - 2.83787I$	$0.86568 + 9.86296I$
$u = \ \ 0.681784 + 0.343900I$ $a = \ \ 0.43124 - 1.72853I$ $b = -0.781322 + 0.060789I$	$-3.91966 - 2.10303I$	$-13.59813 + 2.08848I$
$u = \ \ 0.681784 - 0.343900I$ $a = \ \ 0.43124 + 1.72853I$ $b = -0.781322 - 0.060789I$	$-3.91966 + 2.10303I$	$-13.59813 - 2.08848I$
$u = \ \ 0.466479$ $a = -0.766868$ $b = \ \ 0.604129$	-1.09450	-7.23730

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.123110 + 0.372790I$ $a = -1.26837 + 1.31989I$ $b = 0.367491 + 0.554636I$	$-0.53975 - 1.77290I$	$-3.88757 + 3.00933I$
$u = -0.123110 - 0.372790I$ $a = -1.26837 - 1.31989I$ $b = 0.367491 - 0.554636I$	$-0.53975 + 1.77290I$	$-3.88757 - 3.00933I$
$u = -1.28135 + 1.04067I$ $a = 0.956293 + 0.739630I$ $b = 0.74883 - 1.97520I$	$9.51613 + 3.71804I$	$-9.22156 - 1.51475I$
$u = -1.28135 - 1.04067I$ $a = 0.956293 - 0.739630I$ $b = 0.74883 + 1.97520I$	$9.51613 - 3.71804I$	$-9.22156 + 1.51475I$
$u = -1.33771 + 1.06945I$ $a = -0.924080 - 0.832513I$ $b = -0.83783 + 2.05810I$	$13.3797 + 9.0997I$	$-6.48039 - 4.12934I$
$u = -1.33771 - 1.06945I$ $a = -0.924080 + 0.832513I$ $b = -0.83783 - 2.05810I$	$13.3797 - 9.0997I$	$-6.48039 + 4.12934I$
$u = -1.38917 + 1.06637I$ $a = 0.861553 + 0.883276I$ $b = 0.93643 - 2.07951I$	$9.0651 + 14.3484I$	$-9.75296 - 6.52825I$
$u = -1.38917 - 1.06637I$ $a = 0.861553 - 0.883276I$ $b = 0.93643 + 2.07951I$	$9.0651 - 14.3484I$	$-9.75296 + 6.52825I$

II.

$$\boldsymbol{I_2^u = \langle b,\ u^8+2u^7+\cdots+a+1,\ u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1\rangle}$$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^8+u^7+2u^6+u^5-3u^4-5u^3+2u^2+3u-5$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^9$
c_3, c_7	u^9
c_4	$(u+1)^9$
c_5	$u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1$
c_6	$u^9-5u^8+12u^7-15u^6+9u^5+u^4-4u^3+2u^2+u-1$
c_8	$u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1$
c_9, c_{12}	$u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1$
c_{10}	$u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1$
c_{11}	$u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^9$
c_3, c_7	y^9
c_5, c_{11}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_6	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$
c_8, c_{10}	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$
c_9, c_{12}	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.772920 + 0.510351I$ $a = 0.483566 - 0.305056I$ $b = 0$	$0.13850 + 2.09337I$	$-6.02684 - 1.69698I$
$u = -0.772920 - 0.510351I$ $a = 0.483566 + 0.305056I$ $b = 0$	$0.13850 - 2.09337I$	$-6.02684 + 1.69698I$
$u = 0.825933$ $a = -3.56378$ $b = 0$	-2.84338	-3.87310
$u = 1.173910 + 0.391555I$ $a = 1.23246 + 1.62704I$ $b = 0$	$-6.01628 - 1.33617I$	$-16.4774 + 4.4812I$
$u = 1.173910 - 0.391555I$ $a = 1.23246 - 1.62704I$ $b = 0$	$-6.01628 + 1.33617I$	$-16.4774 - 4.4812I$
$u = -0.141484 + 0.739668I$ $a = -1.022450 + 0.246780I$ $b = 0$	$-2.26187 - 2.45442I$	$-8.53903 + 2.82066I$
$u = -0.141484 - 0.739668I$ $a = -1.022450 - 0.246780I$ $b = 0$	$-2.26187 + 2.45442I$	$-8.53903 - 2.82066I$
$u = -1.172470 + 0.500383I$ $a = -0.411691 + 0.129409I$ $b = 0$	$-5.24306 + 7.08493I$	$-9.02021 - 2.94778I$
$u = -1.172470 - 0.500383I$ $a = -0.411691 - 0.129409I$ $b = 0$	$-5.24306 - 7.08493I$	$-9.02021 + 2.94778I$

III.

$\boldsymbol{I_3^u = \langle -2652a^8 + 26713b + \cdots - 65147a + 3162,\ a^9 + a^8 + \cdots - a + 1,\ u - 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} a \\ 0.0992775a^8 - 0.0110059a^7 + \cdots + 2.43878a - 0.118369 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0992775a^8 - 0.0110059a^7 + \cdots + 3.43878a - 0.118369 \\ 0.0992775a^8 - 0.0110059a^7 + \cdots + 2.43878a - 0.118369 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.110283a^8 + 0.0737469a^7 + \cdots + 0.0190918a + 1.09928 \\ 0.235690a^8 + 0.0462696a^7 + \cdots - 0.0895444a + 0.334369 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.235690a^8 + 0.0462696a^7 + \cdots - 0.0895444a + 0.334369 \\ 0.361098a^8 + 0.0187923a^7 + \cdots - 0.198181a - 0.430539 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.895893a^8 + 0.647288a^7 + \cdots + 0.918841a - 1.22203 \\ 1.03171a^8 + 0.767978a^7 + \cdots + 1.14806a - 1.23011 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.32041a^8 + 1.20204a^7 + \cdots + 3.01677a - 1.11279 \\ 1.32041a^8 + 1.20204a^7 + \cdots + 3.01677a - 1.11279 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.32041a^8 + 1.20204a^7 + \cdots + 4.01677a - 1.11279 \\ 1.32041a^8 + 1.20204a^7 + \cdots + 3.01677a - 1.11279 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.760079a^8 + 0.526598a^7 + \cdots + 0.689627a - 1.21394 \\ 0.895893a^8 + 0.647288a^7 + \cdots + 0.918841a - 1.22203 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= \frac{20687}{26713}a^8 + \frac{30282}{26713}a^7 + \frac{57293}{26713}a^6 + \frac{423871}{26713}a^5 + \frac{90930}{26713}a^4 + \frac{389154}{26713}a^3 + \frac{110924}{26713}a^2 - \frac{5178}{26713}a - \frac{181861}{26713}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^9 - 5u^8 + 12u^7 - 15u^6 + 9u^5 + u^4 - 4u^3 + 2u^2 + u - 1$
c_2	$u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1$
c_3	$u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1$
c_4	$u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1$
c_5	$u^9 - 3u^8 + 8u^7 - 13u^6 + 17u^5 - 17u^4 + 12u^3 - 6u^2 + u + 1$
c_6	$u^9 - 2u^8 + 5u^7 - 22u^6 + 52u^5 - 63u^4 + 41u^3 - 10u^2 - 2u + 1$
c_7	$u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1$
c_8	$(u - 1)^9$
c_9	u^9
c_{10}	$(u + 1)^9$
c_{11}	$u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1$
c_{12}	$u^9 - 3u^8 + 3u^7 + 2u^6 + u^5 + 9u^4 + 3u^3 + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$
c_2, c_4	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$
c_3, c_7	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_5, c_{11}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_6	$y^9 + 6y^8 + \cdots + 24y - 1$
c_8, c_{10}	$(y-1)^9$
c_9	y^9
c_{12}	$y^9 - 3y^8 + 23y^7 + 62y^6 - 13y^5 - 57y^4 + 9y^3 - 6y^2 + 4y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -0.037875 + 0.791187I$ $b = -0.628449 + 0.875112I$	$-2.26187 + 2.45442I$	$-8.53903 - 2.82066I$
$u = 1.00000$ $a = -0.037875 - 0.791187I$ $b = -0.628449 - 0.875112I$	$-2.26187 - 2.45442I$	$-8.53903 + 2.82066I$
$u = 1.00000$ $a = 0.417942 + 0.357732I$ $b = 0.728966 + 0.986295I$	$-5.24306 - 7.08493I$	$-9.02021 + 2.94778I$
$u = 1.00000$ $a = 0.417942 - 0.357732I$ $b = 0.728966 - 0.986295I$	$-5.24306 + 7.08493I$	$-9.02021 - 2.94778I$
$u = 1.00000$ $a = -0.218072 + 0.482572I$ $b = -0.140343 + 0.966856I$	$0.13850 + 2.09337I$	$-6.02684 - 1.69698I$
$u = 1.00000$ $a = -0.218072 - 0.482572I$ $b = -0.140343 - 0.966856I$	$0.13850 - 2.09337I$	$-6.02684 + 1.69698I$
$u = 1.00000$ $a = 0.80973 + 2.39258I$ $b = 0.796005 - 0.733148I$	$-6.01628 - 1.33617I$	$-16.4774 + 4.4812I$
$u = 1.00000$ $a = 0.80973 - 2.39258I$ $b = 0.796005 + 0.733148I$	$-6.01628 + 1.33617I$	$-16.4774 - 4.4812I$
$u = 1.00000$ $a = -2.94345$ $b = -0.512358$	-2.84338	-3.87310

IV. $\boldsymbol{I_4^u = \langle 87u^{17} + 355u^{16} + \cdots + 256b + 153,\ 33u^{17} + 85u^{16} + \cdots + 256a + 111,\ u^{18} + 4u^{17} + \cdots - 9u^2 + 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.128906u^{17} - 0.332031u^{16} + \cdots - 8.87109u - 0.433594 \\ -0.339844u^{17} - 1.38672u^{16} + \cdots + 1.46484u - 0.597656 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.468750u^{17} - 1.71875u^{16} + \cdots - 7.40625u - 1.03125 \\ -0.339844u^{17} - 1.38672u^{16} + \cdots + 1.46484u - 0.597656 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0507813u^{17} - 0.160156u^{16} + \cdots - 5.93359u + 2.94141 \\ -0.226563u^{17} - 0.765625u^{16} + \cdots - 3.55469u - 0.328125 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.242188u^{17} - 0.812500u^{16} + \cdots - 9.53906u + 2.65625 \\ -0.277344u^{17} - 0.964844u^{16} + \cdots - 3.36328u - 0.441406 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.812500u^{17} + 3.19531u^{16} + \cdots - 0.437500u + 3.36719 \\ 0.0351563u^{17} + 0.121094u^{16} + \cdots - 4.28516u + 1.14453 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.128906u^{17} + 0.332031u^{16} + \cdots + 8.87109u + 0.433594 \\ 0.183594u^{17} + 0.667969u^{16} + \cdots - 0.433594u + 0.128906 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0 \\ -0.183594u^{17} - 0.667969u^{16} + \cdots + 0.433594u - 0.128906 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} 0.714844u^{17} + 2.70703u^{16} + \cdots - 1.21484u + 3.40234 \\ -0.0625000u^{17} - 0.367188u^{16} + \cdots - 5.06250u + 1.17969 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{43}{128}u^{17} - \frac{91}{64}u^{16} + \cdots + \frac{75}{128}u - \frac{619}{64}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} - 10u^{17} + \cdots + 18u + 1$
c_2, c_4, c_8 c_{10}	$u^{18} - 4u^{17} + \cdots - 9u^2 + 1$
c_3, c_7, c_9	$u^{18} + u^{17} + \cdots + 1024u + 512$
c_5, c_{11}	$(u^9 + u^8 + 4u^7 + 3u^6 + 5u^5 + 3u^4 - 3u - 1)^2$
c_6	$u^{18} - 3u^{17} + \cdots + 3241u + 1303$
c_{12}	$u^{18} + 4u^{17} + \cdots + 1179u - 199$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{18} + 38y^{17} + \cdots - 206y + 1$
c_2, c_4, c_8 c_{10}	$y^{18} + 10y^{17} + \cdots - 18y + 1$
c_3, c_7, c_9	$y^{18} + 39y^{17} + \cdots - 262144y + 262144$
c_5, c_{11}	$(y^9 + 7y^8 + 20y^7 + 25y^6 + y^5 - 31y^4 - 24y^3 + 6y^2 + 9y - 1)^2$
c_6	$y^{18} + 33y^{17} + \cdots - 7027677y + 1697809$
c_{12}	$y^{18} + 40y^{17} + \cdots - 5352529y + 39601$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.292342 + 0.889650I$ $a = 0.150415 + 1.204670I$ $b = 1.52260 - 1.29705I$	$0.11314 + 3.86354I$	$-7.87583 - 4.20503I$
$u = -0.292342 - 0.889650I$ $a = 0.150415 - 1.204670I$ $b = 1.52260 + 1.29705I$	$0.11314 - 3.86354I$	$-7.87583 + 4.20503I$
$u = -0.167320 + 1.143090I$ $a = -0.144832 - 0.989456I$ $b = -0.96197 + 1.32057I$	3.85626	$-3.50861 + 0.I$
$u = -0.167320 - 1.143090I$ $a = -0.144832 + 0.989456I$ $b = -0.96197 - 1.32057I$	3.85626	$-3.50861 + 0.I$
$u = 0.673526$ $a = -0.538185$ $b = 0.433195$	-1.08370	-8.12940
$u = 1.255930 + 0.512460I$ $a = 0.105046 - 0.414131I$ $b = -0.200843 + 0.459012I$	$-4.49282 - 1.55423I$	$-10.08319 + 1.78109I$
$u = 1.255930 - 0.512460I$ $a = 0.105046 + 0.414131I$ $b = -0.200843 - 0.459012I$	$-4.49282 + 1.55423I$	$-10.08319 - 1.78109I$
$u = 0.095228 + 1.376890I$ $a = 0.102057 + 0.817363I$ $b = 0.595275 - 1.147110I$	$0.11314 - 3.86354I$	$-7.87583 + 4.20503I$
$u = 0.095228 - 1.376890I$ $a = 0.102057 - 0.817363I$ $b = 0.595275 + 1.147110I$	$0.11314 + 3.86354I$	$-7.87583 - 4.20503I$
$u = -1.04620 + 1.32365I$ $a = -0.622785 - 0.838280I$ $b = 0.01330 + 2.66058I$	$10.52390 + 4.99486I$	$-8.55415 - 3.07435I$

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.04620 - 1.32365I$ $a = -0.622785 + 0.838280I$ $b = 0.01330 - 2.66058I$	$10.52390 - 4.99486I$	$-8.55415 + 3.07435I$
$u = -0.156952 + 0.191508I$ $a = 0.57547 - 2.26873I$ $b = -1.015350 - 0.875548I$	$-4.49282 + 1.55423I$	$-10.08319 - 1.78109I$
$u = -0.156952 - 0.191508I$ $a = 0.57547 + 2.26873I$ $b = -1.015350 + 0.875548I$	$-4.49282 - 1.55423I$	$-10.08319 + 1.78109I$
$u = -1.06998 + 1.41248I$ $a = 0.603827 + 0.797115I$ $b = -0.12400 - 2.50290I$	14.5478	$-5.33565 + 0.I$
$u = -1.06998 - 1.41248I$ $a = 0.603827 - 0.797115I$ $b = -0.12400 + 2.50290I$	14.5478	$-5.33565 + 0.I$
$u = 0.195082$ $a = -1.85810$ $b = 0.606622$	-1.08370	-8.12940
$u = -1.05267 + 1.50913I$ $a = -0.571061 - 0.768659I$ $b = 0.15107 + 2.32872I$	$10.52390 - 4.99486I$	$-8.55415 + 3.07435I$
$u = -1.05267 - 1.50913I$ $a = -0.571061 + 0.768659I$ $b = 0.15107 - 2.32872I$	$10.52390 + 4.99486I$	$-8.55415 - 3.07435I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^9(u^9-5u^8+12u^7-15u^6+9u^5+u^4-4u^3+2u^2+u-1)$ $\cdot(u^{18}-10u^{17}+\cdots+18u+1)(u^{18}+11u^{17}+\cdots+3u+1)$
c_2, c_8	$(u-1)^9(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{18}-7u^{17}+\cdots-u+1)(u^{18}-4u^{17}+\cdots-9u^2+1)$
c_3	$u^9(u^9+u^8+\cdots+u-1)(u^{18}+u^{17}+\cdots+u-1)$ $\cdot(u^{18}+u^{17}+\cdots+1024u+512)$
c_4, c_{10}	$(u+1)^9(u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1)$ $\cdot(u^{18}-7u^{17}+\cdots-u+1)(u^{18}-4u^{17}+\cdots-9u^2+1)$
c_5, c_{11}	$(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^9+u^8+4u^7+3u^6+5u^5+3u^4-3u-1)^2$ $\cdot(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{18}+u^{17}+\cdots+3u-1)$
c_6	$(u^9-5u^8+12u^7-15u^6+9u^5+u^4-4u^3+2u^2+u-1)$ $\cdot(u^9-2u^8+5u^7-22u^6+52u^5-63u^4+41u^3-10u^2-2u+1)$ $\cdot(u^{18}-5u^{17}+\cdots+77u-23)(u^{18}-3u^{17}+\cdots+3241u+1303)$
c_7, c_9	$u^9(u^9-u^8+\cdots+u+1)(u^{18}+u^{17}+\cdots+u-1)$ $\cdot(u^{18}+u^{17}+\cdots+1024u+512)$
c_{12}	$(u^9-3u^8+3u^7+2u^6+u^5+9u^4+3u^3+2u+1)$ $\cdot(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot(u^{18}-3u^{17}+\cdots+517u-1)(u^{18}+4u^{17}+\cdots+1179u-199)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^9(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(y^{18}+38y^{17}+\cdots-206y+1)(y^{18}+41y^{17}+\cdots-47y+1)$
c_2, c_4, c_8 c_{10}	$(y-1)^9(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{18}-11y^{17}+\cdots-3y+1)(y^{18}+10y^{17}+\cdots-18y+1)$
c_3, c_7, c_9	$y^9(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{18}+21y^{17}+\cdots-7y+1)(y^{18}+39y^{17}+\cdots-262144y+262144)$
c_5, c_{11}	$(y^9+7y^8+20y^7+25y^6+y^5-31y^4-24y^3+6y^2+9y-1)^2$ $\cdot(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)^2$ $\cdot(y^{18}+13y^{17}+\cdots-43y+1)$
c_6	$(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(y^9+6y^8+\cdots+24y-1)(y^{18}+y^{17}+\cdots-5331y+529)$ $\cdot(y^{18}+33y^{17}+\cdots-7027677y+1697809)$
c_{12}	$(y^9-3y^8+23y^7+62y^6-13y^5-57y^4+9y^3-6y^2+4y-1)$ $\cdot(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{18}+29y^{17}+\cdots-268915y+1)$ $\cdot(y^{18}+40y^{17}+\cdots-5352529y+39601)$