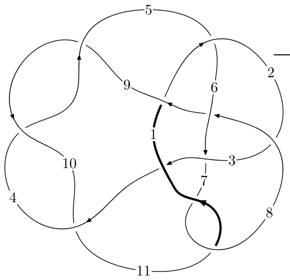
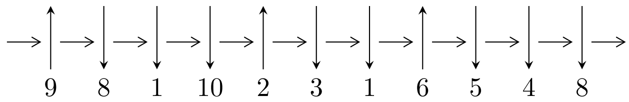
$11n_{161}$ ($K11n_{161}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & b - u,\ -32825u^{16} - 78351u^{15} + \cdots + 149349a + 108694, \\
& u^{17} + u^{16} - u^{15} - u^{14} + 9u^{13} + 7u^{12} - 5u^{11} - 2u^{10} + 18u^9 + 12u^8 - 4u^7 - 5u^6 + 5u^5 - u^4 - u^3 - u^2 + u - 1 \\
I_2^u = \langle & 1.70203 \times 10^{30}u^{23} + 4.57303 \times 10^{30}u^{22} + \cdots + 8.77268 \times 10^{30}b + 5.47196 \times 10^{31}, \\
& -6.45612 \times 10^{27}u^{23} - 1.61756 \times 10^{28}u^{22} + \cdots + 5.13568 \times 10^{28}a - 1.36907 \times 10^{29}, \\
& u^{24} + 3u^{23} + \cdots + 46u + 11\rangle \\
I_3^u = \langle & b + u,\ -14u^9 - u^8 + 16u^7 - 3u^6 - 69u^5 + 26u^4 + 25u^3 - 21u^2 + 5a - 20u - 12, \\
& u^{10} + u^9 - u^8 - u^7 + 5u^6 + 3u^5 - 3u^4 - u^3 + 3u^2 + 3u + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 51 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. $\boldsymbol{I_1^u = \langle b - u,\ -3.28 \times 10^4 u^{16} - 7.84 \times 10^4 u^{15} + \cdots + 1.49 \times 10^5 a + 1.09 \times 10^5,\ u^{17} + u^{16} + \cdots + u - 1 \rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.219787u^{16} + 0.524617u^{15} + \cdots + 1.20532u - 0.727785 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.219787u^{16} + 0.524617u^{15} + \cdots + 0.205324u - 0.727785 \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.966327u^{16} + 1.11448u^{15} + \cdots - 2.99444u + 1.19912 \\ -0.0803353u^{16} - 0.516903u^{15} + \cdots + 1.08504u - 0.304830 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.265559u^{16} + 0.586479u^{15} + \cdots + 3.63417u + 1.42934 \\ -0.537426u^{16} - 0.452303u^{15} + \cdots + 0.266865u - 0.452979 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.805657u^{16} + 0.0806701u^{15} + \cdots - 2.82436u + 0.589458 \\ -0.0803353u^{16} - 0.516903u^{15} + \cdots + 1.08504u - 0.304830 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.567001u^{16} + 0.839992u^{15} + \cdots + 3.95640u + 0.655438 \\ -0.544229u^{16} - 0.276594u^{15} + \cdots + 0.616234u - 0.500907 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.385085u^{16} - 0.447562u^{15} + \cdots - 3.26996u + 1.00962 \\ 0.245726u^{16} - 0.325151u^{15} + \cdots + 0.772131u - 0.412490 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.175562u^{16} + 1.94315u^{15} + \cdots + 2.59534u + 1.27888 \\ -0.301442u^{16} - 0.253514u^{15} + \cdots - 0.322225u + 0.773899 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.175562u^{16} + 1.94315u^{15} + \cdots + 2.59534u + 1.27888 \\ -0.301442u^{16} - 0.253514u^{15} + \cdots - 0.322225u + 0.773899 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{163298}{149349}u^{16} + \frac{580790}{149349}u^{15} + \cdots + \frac{328192}{149349}u - \frac{306609}{49783}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{17} - u^{16} + \cdots + u + 1$
c_2	$u^{17} - 2u^{15} + \cdots - u - 2$
c_3	$u^{17} - 14u^{16} + \cdots - 32u - 64$
c_4, c_9, c_{10}	$u^{17} + 9u^{16} + \cdots + 144u + 16$
c_6, c_7, c_{11}	$u^{17} + u^{16} + \cdots + u + 1$
c_8	$u^{17} + 12u^{16} + \cdots + 64u + 8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{17} - 3y^{16} + \cdots - y - 1$
c_2	$y^{17} - 4y^{16} + \cdots + 29y - 4$
c_3	$y^{17} - 14y^{16} + \cdots + 50688y - 4096$
c_4, c_9, c_{10}	$y^{17} + 15y^{16} + \cdots - 128y - 256$
c_6, c_7, c_{11}	$y^{17} - 23y^{16} + \cdots + 9y - 1$
c_8	$y^{17} + 4y^{16} + \cdots - 608y - 64$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.736595 + 0.759560I$ $a = -0.631113 + 0.062721I$ $b = -0.736595 + 0.759560I$	$-0.05757 - 2.36290I$	$-6.52154 + 3.94257I$
$u = -0.736595 - 0.759560I$ $a = -0.631113 - 0.062721I$ $b = -0.736595 - 0.759560I$	$-0.05757 + 2.36290I$	$-6.52154 - 3.94257I$
$u = -1.008910 + 0.431442I$ $a = -0.889354 - 0.979858I$ $b = -1.008910 + 0.431442I$	$1.14436 - 6.14847I$	$-1.51565 + 5.18000I$
$u = -1.008910 - 0.431442I$ $a = -0.889354 + 0.979858I$ $b = -1.008910 - 0.431442I$	$1.14436 + 6.14847I$	$-1.51565 - 5.18000I$
$u = -0.534388 + 0.570811I$ $a = -2.28268 + 0.49285I$ $b = -0.534388 + 0.570811I$	$-5.66005 - 1.97491I$	$-5.96248 + 6.00520I$
$u = -0.534388 - 0.570811I$ $a = -2.28268 - 0.49285I$ $b = -0.534388 - 0.570811I$	$-5.66005 + 1.97491I$	$-5.96248 - 6.00520I$
$u = 0.700751$ $a = 2.48391$ $b = 0.700751$	-3.84845	2.74050
$u = 0.902645 + 0.958889I$ $a = 1.194590 + 0.162669I$ $b = 0.902645 + 0.958889I$	$-6.98471 + 8.59095I$	$-7.08514 - 6.35872I$
$u = 0.902645 - 0.958889I$ $a = 1.194590 - 0.162669I$ $b = 0.902645 - 0.958889I$	$-6.98471 - 8.59095I$	$-7.08514 + 6.35872I$
$u = 0.482184 + 0.448786I$ $a = -1.16928 - 1.33243I$ $b = 0.482184 + 0.448786I$	$5.38217 + 1.40715I$	$-2.06078 - 4.92367I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.482184 - 0.448786I$ $a = -1.16928 + 1.33243I$ $b = 0.482184 - 0.448786I$	$5.38217 - 1.40715I$	$-2.06078 + 4.92367I$
$u = 0.175989 + 0.585685I$ $a = 0.864699 + 0.113620I$ $b = 0.175989 + 0.585685I$	$-0.850953 - 0.696665I$	$-8.07292 + 4.89884I$
$u = 0.175989 - 0.585685I$ $a = 0.864699 - 0.113620I$ $b = 0.175989 - 0.585685I$	$-0.850953 + 0.696665I$	$-8.07292 - 4.89884I$
$u = 1.14438 + 0.95543I$ $a = 0.540728 + 0.095251I$ $b = 1.14438 + 0.95543I$	$7.19647 + 4.49345I$	$-5.42758 + 0.47721I$
$u = 1.14438 - 0.95543I$ $a = 0.540728 - 0.095251I$ $b = 1.14438 - 0.95543I$	$7.19647 - 4.49345I$	$-5.42758 - 0.47721I$
$u = -1.27568 + 1.06823I$ $a = -0.869544 + 0.210846I$ $b = -1.27568 + 1.06823I$	$-0.71290 - 13.72760I$	$-3.72416 + 7.05259I$
$u = -1.27568 - 1.06823I$ $a = -0.869544 - 0.210846I$ $b = -1.27568 - 1.06823I$	$-0.71290 + 13.72760I$	$-3.72416 - 7.05259I$

II. $\boldsymbol{I_2^u = \langle 1.70 \times 10^{30} u^{23} + 4.57 \times 10^{30} u^{22} + \cdots + 8.77 \times 10^{30} b + 5.47 \times 10^{31},\ -6.46 \times 10^{27} u^{23} - 1.62 \times 10^{28} u^{22} + \cdots + 5.14 \times 10^{28} a - 1.37 \times 10^{29},\ u^{24} + 3u^{23} + \cdots + 46u + 11 \rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.125711u^{23} + 0.314966u^{22} + \cdots + 7.79270u + 2.66581 \\ -0.194014u^{23} - 0.521280u^{22} + \cdots - 10.4641u - 6.23750 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.319725u^{23} + 0.836246u^{22} + \cdots + 18.2568u + 8.90330 \\ -0.194014u^{23} - 0.521280u^{22} + \cdots - 10.4641u - 6.23750 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0116621u^{23} - 0.0806554u^{22} + \cdots + 4.00812u - 3.44719 \\ -0.175665u^{23} - 0.437895u^{22} + \cdots - 9.21681u - 2.60383 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.240478u^{23} - 0.644174u^{22} + \cdots - 11.8851u - 8.16867 \\ 0.0316958u^{23} + 0.103215u^{22} + \cdots + 0.735566u + 2.15396 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.190587u^{23} - 0.510517u^{22} + \cdots - 7.93355u - 4.80896 \\ -0.00326046u^{23} + 0.00803404u^{22} + \cdots - 0.724864u + 1.24206 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.190071u^{23} - 0.496722u^{22} + \cdots - 10.2408u - 5.16485 \\ 0.0231595u^{23} + 0.0870786u^{22} + \cdots + 0.354516u + 2.19543 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.148842u^{23} - 0.367537u^{22} + \cdots - 7.93760u - 2.89321 \\ -0.0152103u^{23} - 0.0113006u^{22} + \cdots - 2.00024u + 1.04689 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.240478u^{23} + 0.644174u^{22} + \cdots + 11.8851u + 8.16867 \\ -0.0504074u^{23} - 0.147452u^{22} + \cdots - 1.64431u - 3.00383 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.240478u^{23} + 0.644174u^{22} + \cdots + 11.8851u + 8.16867 \\ -0.0504074u^{23} - 0.147452u^{22} + \cdots - 1.64431u - 3.00383 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.802694u^{23} + 2.06436u^{22} + \cdots + 39.8732u + 14.4982$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{24} - 3u^{23} + \cdots - 46u + 11$
c_2	$u^{24} - u^{23} + \cdots - 178u + 59$
c_3	$(u^4 + 3u^3 + u^2 - 2u + 1)^6$
c_4, c_9, c_{10}	$(u^3 - u^2 + 2u - 1)^8$
c_6, c_7, c_{11}	$u^{24} - u^{23} + \cdots - 568u + 89$
c_8	$(u^4 - u^3 + u^2 + 1)^6$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{24} - 5y^{23} + \cdots - 1544y + 121$
c_2	$y^{24} - 9y^{23} + \cdots - 77232y + 3481$
c_3	$(y^4 - 7y^3 + 15y^2 - 2y + 1)^6$
c_4, c_9, c_{10}	$(y^3 + 3y^2 + 2y - 1)^8$
c_6, c_7, c_{11}	$y^{24} - 21y^{23} + \cdots - 204788y + 7921$
c_8	$(y^4 + y^3 + 3y^2 + 2y + 1)^6$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.726600 + 0.525022I$ $a = 0.174808 + 1.380500I$ $b = 0.834345 + 0.058079I$	$4.88007 + 0.33584I$	$-2.66351 + 0.41465I$
$u = -0.726600 - 0.525022I$ $a = 0.174808 - 1.380500I$ $b = 0.834345 - 0.058079I$	$4.88007 - 0.33584I$	$-2.66351 - 0.41465I$
$u = 0.834345 + 0.058079I$ $a = -1.09167 - 1.01623I$ $b = -0.726600 + 0.525022I$	$4.88007 + 0.33584I$	$-2.66351 + 0.41465I$
$u = 0.834345 - 0.058079I$ $a = -1.09167 + 1.01623I$ $b = -0.726600 - 0.525022I$	$4.88007 - 0.33584I$	$-2.66351 - 0.41465I$
$u = -0.951037 + 0.715358I$ $a = 1.032340 - 0.181700I$ $b = 0.649666 - 0.469539I$	$0.74248 - 3.16396I$	$-9.19277 + 2.56480I$
$u = -0.951037 - 0.715358I$ $a = 1.032340 + 0.181700I$ $b = 0.649666 + 0.469539I$	$0.74248 + 3.16396I$	$-9.19277 - 2.56480I$
$u = 0.649666 + 0.469539I$ $a = -1.52720 - 0.29894I$ $b = -0.951037 - 0.715358I$	$0.74248 + 3.16396I$	$-9.19277 - 2.56480I$
$u = 0.649666 - 0.469539I$ $a = -1.52720 + 0.29894I$ $b = -0.951037 + 0.715358I$	$0.74248 - 3.16396I$	$-9.19277 + 2.56480I$
$u = -0.238976 + 1.192720I$ $a = -0.637456 - 0.167240I$ $b = -1.72582 - 0.12950I$	$-2.12168 + 1.41302I$	$-6.31698 + 1.92930I$
$u = -0.238976 - 1.192720I$ $a = -0.637456 + 0.167240I$ $b = -1.72582 + 0.12950I$	$-2.12168 - 1.41302I$	$-6.31698 - 1.92930I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.168821 + 0.703789I$ $a = 1.081210 - 0.240521I$ $b = 1.26487 - 1.00614I$	$-6.25926 + 1.41510I$	$-12.84625 - 4.90874I$
$u = 0.168821 - 0.703789I$ $a = 1.081210 + 0.240521I$ $b = 1.26487 + 1.00614I$	$-6.25926 - 1.41510I$	$-12.84625 + 4.90874I$
$u = -0.939501 + 0.901901I$ $a = 0.956419 - 0.051833I$ $b = 1.53236 - 0.89026I$	$4.88007 - 5.99209I$	$-2.66351 + 5.54425I$
$u = -0.939501 - 0.901901I$ $a = 0.956419 + 0.051833I$ $b = 1.53236 + 0.89026I$	$4.88007 + 5.99209I$	$-2.66351 - 5.54425I$
$u = -0.369838 + 0.105617I$ $a = -1.39380 + 1.54969I$ $b = -0.99828 - 1.87172I$	$-2.12168 - 4.24323I$	$-6.31698 + 7.88819I$
$u = -0.369838 - 0.105617I$ $a = -1.39380 - 1.54969I$ $b = -0.99828 + 1.87172I$	$-2.12168 + 4.24323I$	$-6.31698 - 7.88819I$
$u = 1.26487 + 1.00614I$ $a = -0.107103 - 0.484305I$ $b = 0.168821 - 0.703789I$	$-6.25926 - 1.41510I$	$-12.84625 + 4.90874I$
$u = 1.26487 - 1.00614I$ $a = -0.107103 + 0.484305I$ $b = 0.168821 + 0.703789I$	$-6.25926 + 1.41510I$	$-12.84625 - 4.90874I$
$u = -1.72582 + 0.12950I$ $a = -0.171564 - 0.430263I$ $b = -0.238976 - 1.192720I$	$-2.12168 - 1.41302I$	$-6.31698 - 1.92930I$
$u = -1.72582 - 0.12950I$ $a = -0.171564 + 0.430263I$ $b = -0.238976 + 1.192720I$	$-2.12168 + 1.41302I$	$-6.31698 + 1.92930I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.53236 + 0.89026I$ $a = -0.673917 - 0.203172I$ $b = -0.939501 - 0.901901I$	$4.88007 + 5.99209I$	$-2.66351 - 5.54425I$
$u = \ \ 1.53236 - 0.89026I$ $a = -0.673917 + 0.203172I$ $b = -0.939501 + 0.901901I$	$4.88007 - 5.99209I$	$-2.66351 + 5.54425I$
$u = -0.99828 + 1.87172I$ $a = \ \ 0.221577 - 0.306137I$ $b = -0.369838 - 0.105617I$	$-2.12168 + 4.24323I$	$-5.00000 - 7.88819I$
$u = -0.99828 - 1.87172I$ $a = \ \ 0.221577 + 0.306137I$ $b = -0.369838 + 0.105617I$	$-2.12168 - 4.24323I$	$-5.00000 + 7.88819I$

III. $I_3^u = \langle b+u,\ -14u^9 - u^8 + \cdots + 5a - 12,\ u^{10} + u^9 + \cdots + 3u + 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{14}{5}u^9 + \frac{1}{5}u^8 + \cdots + 4u + \frac{12}{5} \\ -u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{14}{5}u^9 + \frac{1}{5}u^8 + \cdots + 5u + \frac{12}{5} \\ -u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -\frac{6}{5}u^9 - \frac{4}{5}u^8 + \cdots - 2u - \frac{13}{5} \\ \frac{11}{5}u^9 + \frac{4}{5}u^8 + \cdots + 6u + \frac{13}{5} \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -\frac{29}{5}u^9 - \frac{11}{5}u^8 + \cdots - 15u - \frac{42}{5} \\ -2u^9 - u^8 + 3u^7 + u^6 - 11u^5 - u^4 + 8u^3 - 2u^2 - 6u - 3 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} \frac{16}{5}u^9 + \frac{4}{5}u^8 + \cdots + 8u + \frac{13}{5} \\ \frac{11}{5}u^9 + \frac{4}{5}u^8 + \cdots + 6u + \frac{13}{5} \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -\frac{28}{5}u^9 - \frac{12}{5}u^8 + \cdots - 16u - \frac{39}{5} \\ -\frac{6}{5}u^9 - \frac{4}{5}u^8 + \cdots - 5u - \frac{13}{5} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{18}{5}u^9 + \frac{7}{5}u^8 + \cdots + 10u + \frac{14}{5} \\ \frac{9}{5}u^9 + \frac{6}{5}u^8 + \cdots + 5u + \frac{12}{5} \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -\frac{12}{5}u^9 + \frac{2}{5}u^8 + \cdots - 3u - \frac{11}{5} \\ -\frac{1}{5}u^9 + \frac{1}{5}u^8 + \cdots + u - \frac{3}{5} \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -\frac{12}{5}u^9 + \frac{2}{5}u^8 + \cdots - 3u - \frac{11}{5} \\ -\frac{1}{5}u^9 + \frac{1}{5}u^8 + \cdots + u - \frac{3}{5} \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= \frac{34}{5}u^9 + \frac{16}{5}u^8 - \frac{56}{5}u^7 - \frac{17}{5}u^6 + \frac{184}{5}u^5 + \frac{9}{5}u^4 - 31u^3 + \frac{31}{5}u^2 + 18u + \frac{42}{5}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{10} - 3y^9 + 13y^8 - 23y^7 + 45y^6 - 51y^5 + 49y^4 - 27y^3 + 9y^2 - 3y + 1$
c_2	$y^{10} - 4y^9 + 12y^8 - 8y^7 + 4y^6 + 30y^5 - 8y^4 + 23y^3 + 24y^2 + 16y + 25$
c_3	$y^{10} - 7y^9 + \cdots + 246y + 25$
c_4, c_9, c_{10}	$y^{10} + 12y^9 + \cdots - 4y + 1$
c_6, c_7, c_{11}	$y^{10} - 7y^9 + 17y^8 - 10y^7 - 14y^6 - y^5 + 12y^4 + 21y^3 + 18y^2 + 7y + 1$
c_8	$y^{10} + 3y^9 + \cdots + 6y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.914248 + 0.570518I$ $a = -1.119990 - 0.219282I$ $b = -0.914248 - 0.570518I$	$1.60755 + 3.42301I$	$1.79285 - 5.67056I$
$u = 0.914248 - 0.570518I$ $a = -1.119990 + 0.219282I$ $b = -0.914248 + 0.570518I$	$1.60755 - 3.42301I$	$1.79285 + 5.67056I$
$u = -0.727640 + 0.146538I$ $a = 0.66217 + 1.95900I$ $b = 0.727640 - 0.146538I$	$6.16667 + 0.45837I$	$4.93396 + 0.07525I$
$u = -0.727640 - 0.146538I$ $a = 0.66217 - 1.95900I$ $b = 0.727640 + 0.146538I$	$6.16667 - 0.45837I$	$4.93396 - 0.07525I$
$u = 0.914629 + 0.935183I$ $a = -0.112008 - 0.341459I$ $b = -0.914629 - 0.935183I$	$-2.02274 - 3.06369I$	$-5.25989 + 0.93808I$
$u = 0.914629 - 0.935183I$ $a = -0.112008 + 0.341459I$ $b = -0.914629 + 0.935183I$	$-2.02274 + 3.06369I$	$-5.25989 - 0.93808I$
$u = -0.380408 + 0.491558I$ $a = 0.39322 - 1.67428I$ $b = 0.380408 - 0.491558I$	$-5.23124 + 0.62784I$	$-5.27518 + 0.19626I$
$u = -0.380408 - 0.491558I$ $a = 0.39322 + 1.67428I$ $b = 0.380408 + 0.491558I$	$-5.23124 - 0.62784I$	$-5.27518 - 0.19626I$
$u = -1.22083 + 0.93479I$ $a = 0.676610 - 0.110678I$ $b = 1.22083 - 0.93479I$	$7.70444 - 5.09459I$	$1.80827 + 6.72626I$
$u = -1.22083 - 0.93479I$ $a = 0.676610 + 0.110678I$ $b = 1.22083 + 0.93479I$	$7.70444 + 5.09459I$	$1.80827 - 6.72626I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^{10}+u^9-u^8-u^7+5u^6+3u^5-3u^4-u^3+3u^2+3u+1)$ $\cdot(u^{17}-u^{16}+\cdots+u+1)(u^{24}-3u^{23}+\cdots-46u+11)$
c_2	$(u^{10}-2u^8+4u^6+2u^5+4u^4+5u^3+2u^2+2u+5)$ $\cdot(u^{17}-2u^{15}+\cdots-u-2)(u^{24}-u^{23}+\cdots-178u+59)$
c_3	$((u^4+3u^3+u^2-2u+1)^6)(u^{10}+7u^9+\cdots+8u+5)$ $\cdot(u^{17}-14u^{16}+\cdots-32u-64)$
c_4	$(u^3-u^2+2u-1)^8(u^{10}+6u^8-u^7+12u^6-3u^5+8u^4-u^3+2u+1)$ $\cdot(u^{17}+9u^{16}+\cdots+144u+16)$
c_6, c_{11}	$(u^{10}-u^9-3u^8+4u^7-u^5+4u^4-3u^3+4u^2-u+1)$ $\cdot(u^{17}+u^{16}+\cdots+u+1)(u^{24}-u^{23}+\cdots-568u+89)$
c_7	$(u^{10}+u^9-3u^8-4u^7+u^5+4u^4+3u^3+4u^2+u+1)$ $\cdot(u^{17}+u^{16}+\cdots+u+1)(u^{24}-u^{23}+\cdots-568u+89)$
c_8	$(u^4-u^3+u^2+1)^6$ $\cdot(u^{10}-3u^9+6u^8-6u^7+6u^6-6u^5+9u^4-6u^3+3u^2+1)$ $\cdot(u^{17}+12u^{16}+\cdots+64u+8)$
c_9, c_{10}	$(u^3-u^2+2u-1)^8(u^{10}+6u^8+u^7+12u^6+3u^5+8u^4+u^3-2u+1)$ $\cdot(u^{17}+9u^{16}+\cdots+144u+16)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{10} - 3y^9 + 13y^8 - 23y^7 + 45y^6 - 51y^5 + 49y^4 - 27y^3 + 9y^2 - 3y + 1)$ $\cdot (y^{17} - 3y^{16} + \cdots - y - 1)(y^{24} - 5y^{23} + \cdots - 1544y + 121)$
c_2	$(y^{10} - 4y^9 + 12y^8 - 8y^7 + 4y^6 + 30y^5 - 8y^4 + 23y^3 + 24y^2 + 16y + 25)$ $\cdot (y^{17} - 4y^{16} + \cdots + 29y - 4)(y^{24} - 9y^{23} + \cdots - 77232y + 3481)$
c_3	$((y^4 - 7y^3 + 15y^2 - 2y + 1)^6)(y^{10} - 7y^9 + \cdots + 246y + 25)$ $\cdot (y^{17} - 14y^{16} + \cdots + 50688y - 4096)$
c_4, c_9, c_{10}	$((y^3 + 3y^2 + 2y - 1)^8)(y^{10} + 12y^9 + \cdots - 4y + 1)$ $\cdot (y^{17} + 15y^{16} + \cdots - 128y - 256)$
c_6, c_7, c_{11}	$(y^{10} - 7y^9 + 17y^8 - 10y^7 - 14y^6 - y^5 + 12y^4 + 21y^3 + 18y^2 + 7y + 1)$ $\cdot (y^{17} - 23y^{16} + \cdots + 9y - 1)(y^{24} - 21y^{23} + \cdots - 204788y + 7921)$
c_8	$((y^4 + y^3 + 3y^2 + 2y + 1)^6)(y^{10} + 3y^9 + \cdots + 6y + 1)$ $\cdot (y^{17} + 4y^{16} + \cdots - 608y - 64)$