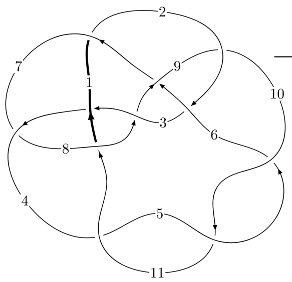
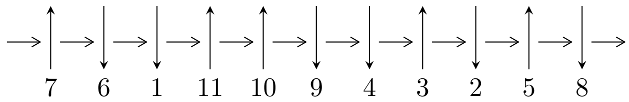
$11a_{352}$ ($K11a_{352}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$4{,}11 \underset{c_4}{\to} 5{,}8 \underset{c_{11}}{\longrightarrow} 1 \underset{c_3}{\longrightarrow} 3 \underset{c_8}{\longrightarrow} 9 \underset{c_7}{\longrightarrow} 7 \underset{c_{10}}{\to} 10 \underset{c_5}{\to} 6 \underset{c_2}{\longrightarrow} 2 \longrightarrow\!\!\!\!\to c_1, c_6, c_9$$

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

$$\begin{aligned}
I_1^u = \langle &-3u^9 + 16u^8 - 53u^7 + 124u^6 - 204u^5 + 242u^4 - 203u^3 + 82u^2 + 16b + 2u - 12,\\
&-3u^9 + 24u^8 - 101u^7 + 292u^6 - 620u^5 + 978u^4 - 1147u^3 + 970u^2 + 32a - 494u + 116,\\
&u^{10} - 6u^9 + 23u^8 - 62u^7 + 124u^6 - 190u^5 + 221u^4 - 188u^3 + 110u^2 - 40u + 8\rangle\\
I_2^u = \langle &au + b,\ -3u^6a + 2u^6 + \cdots - 12a + 17,\ u^7 - 4u^6 + 11u^5 - 20u^4 + 26u^3 - 23u^2 + 14u - 4\rangle\\
I_3^u = \langle &-1348740987753a^7u^3 + 686668738913a^6u^3 + \cdots - 41120280504a + 141432788735,\\
&-a^7u^3 - 4a^6u^3 + \cdots + 10a + 96,\ u^4 + u^3 + 3u^2 + 2u + 1\rangle\\
I_4^u = \langle &11a^3u^3 + 16u^3a^2 + \cdots - 5a - 3,\\
&a^3u^3 - u^3a^2 + a^4 + 2a^3u - 2u^3a - 2a^2u - 3u^2a - 2u^3 + a^2 - 5au - 2u^2 - 6a - 5u - 4,\\
&u^4 + u^3 + 3u^2 + 2u + 1\rangle\\
I_5^u = \langle &-u^{15} + u^{14} - 11u^{13} + 9u^{12} - 46u^{11} + 30u^{10} - 87u^9 + 44u^8 - 63u^7 + 24u^6 + u^5 + u^4 + 3u^2 + 2b - 9u + 3,\\
&-3u^{15} - 5u^{14} + \cdots + 10a - 45,\ u^{16} + 11u^{14} + 47u^{12} + 96u^{10} + 90u^8 + 26u^6 - u^4 + 8u^2 + 5\rangle\\
I_6^u = \langle &-u^3 - au - u^2 + b - 2u - 1,\ -u^3a - u^3 + a^2 - 2au - 2u + 1,\ u^4 + u^3 + 3u^2 + 2u + 1\rangle\\
I_7^u = \langle &u^3 - u^2 + b + 2u - 1,\ -u^3 + a - 2u,\ u^4 - u^3 + 3u^2 - 2u + 1\rangle
\end{aligned}$$

$$I_1^v = \langle a,\ b - 1,\ v + 1\rangle$$

* 8 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 101 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

I. $\boldsymbol{I^u_1 = \langle -3u^9 + 16u^8 + \cdots + 16b - 12,\ -3u^9 + 24u^8 + \cdots + 32a + 116,\ u^{10} - 6u^9 + \cdots - 40u + 8\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} \frac{3}{32}u^9 - \frac{3}{4}u^8 + \cdots + \frac{247}{16}u - \frac{29}{8} \\ \frac{3}{16}u^9 - u^8 + \cdots - \frac{1}{8}u + \frac{3}{4} \end{pmatrix}$$
$$a_1 = \begin{pmatrix} \frac{13}{32}u^9 - 2u^8 + \cdots + \frac{73}{16}u + \frac{1}{8} \\ -\frac{7}{16}u^9 + \frac{5}{2}u^8 + \cdots - \frac{123}{8}u + \frac{13}{4} \end{pmatrix}$$
$$a_3 = \begin{pmatrix} \frac{3}{32}u^9 - \frac{3}{4}u^8 + \cdots + \frac{167}{16}u - \frac{13}{8} \\ \frac{5}{16}u^9 - 2u^8 + \cdots + \frac{105}{8}u - \frac{11}{4} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{3}{32}u^9 - \frac{1}{2}u^8 + \cdots + \frac{55}{16}u - \frac{1}{8} \\ \frac{7}{16}u^9 - \frac{3}{2}u^8 + \cdots - \frac{5}{8}u + \frac{3}{4} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{9}{32}u^9 - \frac{7}{4}u^8 + \cdots + \frac{245}{16}u - \frac{23}{8} \\ \frac{3}{16}u^9 - u^8 + \cdots - \frac{1}{8}u + \frac{3}{4} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{5}{32}u^9 - \frac{3}{4}u^8 + \cdots + \frac{113}{16}u - \frac{11}{8} \\ -\frac{3}{16}u^9 + u^8 + \cdots + \frac{17}{8}u - \frac{3}{4} \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{5}{32}u^9 - \frac{3}{4}u^8 + \cdots + \frac{113}{16}u - \frac{11}{8} \\ -\frac{3}{16}u^9 + u^8 + \cdots + \frac{17}{8}u - \frac{3}{4} \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{3}{4}u^9 - 3u^8 + \frac{45}{4}u^7 - 24u^6 + 43u^5 - \frac{105}{2}u^4 + \frac{187}{4}u^3 - \frac{47}{2}u^2 - \frac{9}{2}u + 5$

in decimal forms when there is not enough margin.

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^{10} + u^9 + 7u^8 + 4u^7 + 23u^6 + 9u^5 + 40u^4 + 9u^3 + 33u^2 + 2u + 10$
c_2, c_7, c_9 c_{11}	$u^{10} + u^9 - u^8 - 2u^7 + 5u^6 + 3u^5 - 3u^3 - u + 1$
c_3, c_6	$u^{10} - 9u^9 + \cdots - 15u + 11$
c_4, c_5, c_{10}	$u^{10} - 6u^9 + \cdots - 40u + 8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{10} + 13y^9 + \cdots + 656y + 100$
c_2, c_7, c_9 c_{11}	$y^{10} - 3y^9 + 15y^8 - 20y^7 + 43y^6 - 17y^5 + 12y^4 + 7y^3 - 6y^2 - y + 1$
c_3, c_6	$y^{10} + 3y^9 + \cdots + 1601y + 121$
c_4, c_5, c_{10}	$y^{10} + 10y^9 + \cdots + 160y + 64$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.827139 + 0.827690I$ $a = 0.124534 - 1.186260I$ $b = -1.084860 + 0.878124I$	$-3.86930 + 13.03600I$	$-4.42534 - 9.74427I$
$u = 0.827139 - 0.827690I$ $a = 0.124534 + 1.186260I$ $b = -1.084860 - 0.878124I$	$-3.86930 - 13.03600I$	$-4.42534 + 9.74427I$
$u = 1.231820 + 0.302946I$ $a = -0.687720 - 0.315351I$ $b = 0.751611 + 0.596797I$	$-2.14694 - 6.57736I$	$-5.40678 + 10.73292I$
$u = 1.231820 - 0.302946I$ $a = -0.687720 + 0.315351I$ $b = 0.751611 - 0.596797I$	$-2.14694 + 6.57736I$	$-5.40678 - 10.73292I$
$u = 0.314386 + 0.484120I$ $a = 0.850851 + 0.785005I$ $b = 0.112541 - 0.658708I$	$0.232399 + 1.335330I$	$1.84390 - 5.86434I$
$u = 0.314386 - 0.484120I$ $a = 0.850851 - 0.785005I$ $b = 0.112541 + 0.658708I$	$0.232399 - 1.335330I$	$1.84390 + 5.86434I$
$u = 0.25828 + 1.65152I$ $a = 0.458885 + 0.901810I$ $b = 1.37084 - 0.99078I$	$-12.0871 + 17.1582I$	$-6.40595 - 8.48495I$
$u = 0.25828 - 1.65152I$ $a = 0.458885 - 0.901810I$ $b = 1.37084 + 0.99078I$	$-12.0871 - 17.1582I$	$-6.40595 + 8.48495I$
$u = 0.36838 + 1.94011I$ $a = 0.003450 - 0.334444I$ $b = -0.650130 + 0.116508I$	$-9.27048 + 0.95500I$	$-15.6058 - 6.9472I$
$u = 0.36838 - 1.94011I$ $a = 0.003450 + 0.334444I$ $b = -0.650130 - 0.116508I$	$-9.27048 - 0.95500I$	$-15.6058 + 6.9472I$

II. $\boldsymbol{I_2^u = \langle au + b,\ -3u^6a + 2u^6 + \cdots - 12a + 17,\ u^7 - 4u^6 + \cdots + 14u - 4\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} a \\ -au \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{1}{2}u^6a + \frac{1}{4}u^6 + \cdots - 3a + 2 \\ -\frac{1}{2}u^6 + u^5 + \cdots + 2a - 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -\frac{1}{4}u^6 + \frac{1}{2}u^5 + \cdots - a - 1 \\ -u^5a + \frac{3}{2}u^6 + \cdots - \frac{15}{2}u + 3 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{1}{2}u^6a - \frac{1}{4}u^6 + \cdots + a - \frac{3}{2} \\ -u^6a + 3u^5a + \cdots - 2a - 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -au + a \\ -au \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{4}u^6 - \frac{1}{2}u^5 + \cdots - a + 2 \\ -\frac{1}{2}u^6 + u^5 + \cdots + \frac{5}{2}u - 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{4}u^6 - \frac{1}{2}u^5 + \cdots - a + 2 \\ -\frac{1}{2}u^6 + u^5 + \cdots + \frac{5}{2}u - 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 5u^6 - 13u^5 + 32u^4 - 44u^3 + 46u^2 - 32u + 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$(u^7 + u^5 + u^4 - u - 1)^2$
c_2, c_7, c_9 c_{11}	$u^{14} + u^{13} + \cdots + u + 1$
c_3, c_6	$u^{14} - 13u^{13} + \cdots - 329u + 47$
c_4, c_5, c_{10}	$(u^7 - 4u^6 + 11u^5 - 20u^4 + 26u^3 - 23u^2 + 14u - 4)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$(y^7 + 2y^6 + y^5 - 3y^4 - 2y^3 + 2y^2 + y - 1)^2$
c_2, c_7, c_9 c_{11}	$y^{14} - 5y^{13} + \cdots + y + 1$
c_3, c_6	$y^{14} - 3y^{13} + \cdots + 2397y + 2209$
c_4, c_5, c_{10}	$(y^7 + 6y^6 + 13y^5 + 16y^4 + 32y^3 + 39y^2 + 12y - 16)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.316075 + 1.084870I$ $a = 0.447890 + 1.041020I$ $b = 0.987810 - 0.814945I$	$-0.56973 + 3.46571I$	$1.80998 - 1.90405I$
$u = 0.316075 + 1.084870I$ $a = -0.468498 + 0.032326I$ $b = 0.183150 + 0.498043I$	$-0.56973 + 3.46571I$	$1.80998 - 1.90405I$
$u = 0.316075 - 1.084870I$ $a = 0.447890 - 1.041020I$ $b = 0.987810 + 0.814945I$	$-0.56973 - 3.46571I$	$1.80998 + 1.90405I$
$u = 0.316075 - 1.084870I$ $a = -0.468498 - 0.032326I$ $b = 0.183150 - 0.498043I$	$-0.56973 - 3.46571I$	$1.80998 + 1.90405I$
$u = 1.051270 + 0.735259I$ $a = -0.268053 + 0.911867I$ $b = 0.952255 - 0.761533I$	$-3.76584 + 3.52764I$	$-10.39771 - 1.47160I$
$u = 1.051270 + 0.735259I$ $a = 0.591875 - 0.190941I$ $b = -0.762614 - 0.234450I$	$-3.76584 + 3.52764I$	$-10.39771 - 1.47160I$
$u = 1.051270 - 0.735259I$ $a = -0.268053 - 0.911867I$ $b = 0.952255 + 0.761533I$	$-3.76584 - 3.52764I$	$-10.39771 + 1.47160I$
$u = 1.051270 - 0.735259I$ $a = 0.591875 + 0.190941I$ $b = -0.762614 + 0.234450I$	$-3.76584 - 3.52764I$	$-10.39771 + 1.47160I$
$u = 0.658991$ $a = 0.825920 + 1.123020I$ $b = -0.544274 - 0.740063I$	2.67359	5.12550
$u = 0.658991$ $a = 0.825920 - 1.123020I$ $b = -0.544274 + 0.740063I$	2.67359	5.12550

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.30316 + 1.67229I$ $a = -0.402520 - 0.858604I$ $b = -1.31381 + 0.93342I$	$-11.8056 + 8.5528I$	$-9.47503 - 5.91683I$
$u = 0.30316 + 1.67229I$ $a = 0.023386 + 0.600716I$ $b = 0.997484 - 0.221219I$	$-11.8056 + 8.5528I$	$-9.47503 - 5.91683I$
$u = 0.30316 - 1.67229I$ $a = -0.402520 + 0.858604I$ $b = -1.31381 - 0.93342I$	$-11.8056 - 8.5528I$	$-9.47503 + 5.91683I$
$u = 0.30316 - 1.67229I$ $a = 0.023386 - 0.600716I$ $b = 0.997484 + 0.221219I$	$-11.8056 - 8.5528I$	$-9.47503 + 5.91683I$

III. $\boldsymbol{I^u_3 = \langle -1.35\times10^{12}a^7u^3 + 6.87\times10^{11}a^6u^3 + \cdots - 4.11\times10^{10}a + 1.41\times 10^{11},\ -a^7u^3 - 4a^6u^3 + \cdots + 10a + 96,\ u^4 + u^3 + 3u^2 + 2u + 1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_8 = \begin{pmatrix}a\\2.06795a^7u^3 - 1.05283a^6u^3 + \cdots + 0.0630474a - 0.216851\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-a^2u\\0.566545a^7u^3 - 0.144764a^6u^3 + \cdots + 0.0887731a + 1.58851\end{pmatrix}$$
$$a_3 = \begin{pmatrix}0.0804851a^7u^3 + 0.514618a^6u^3 + \cdots - 1.21468a + 1.08057\\0.476938a^7u^3 + 1.22479a^6u^3 + \cdots + 0.337460a + 1.73643\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0.353631a^7u^3 - 0.0766819a^6u^3 + \cdots - 1.06770a - 1.03933\\0.277128a^7u^3 + 0.0000142253a^6u^3 + \cdots - 0.621680a + 0.912067\end{pmatrix}$$
$$a_7 = \begin{pmatrix}2.06795a^7u^3 - 1.05283a^6u^3 + \cdots + 1.06305a - 0.216851\\2.06795a^7u^3 - 1.05283a^6u^3 + \cdots + 0.0630474a - 0.216851\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-u\\u^3 + u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u^2 + 1\\u^3 + u^2 + 2u + 1\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1.50926a^7u^3 + 1.35905a^6u^3 + \cdots - 0.618723a + 0.472347\\2.16896a^7u^3 + 0.686316a^6u^3 + \cdots + 0.397134a + 1.30453\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1.50926a^7u^3 + 1.35905a^6u^3 + \cdots - 0.618723a + 0.472347\\2.16896a^7u^3 + 0.686316a^6u^3 + \cdots + 0.397134a + 1.30453\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -\frac{1367231366824}{326106026089}a^7u^3 - \frac{1370870830584}{326106026089}a^6u^3 + \cdots - \frac{3308821571992}{326106026089}a - \frac{4028263148378}{326106026089}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$(u^{16} - u^{15} + \cdots - 24u + 79)^2$
c_2, c_7, c_9 c_{11}	$u^{32} - u^{31} + \cdots + 400u + 361$
c_3, c_6	$(u^4 + u^3 - 2u + 1)^8$
c_4, c_5, c_{10}	$(u^4 + u^3 + 3u^2 + 2u + 1)^8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$(y^{16} + 19y^{15} + \cdots + 44612y + 6241)^2$
c_2, c_7, c_9 c_{11}	$y^{32} - 11y^{31} + \cdots - 2524550y + 130321$
c_3, c_6	$(y^4 - y^3 + 6y^2 - 4y + 1)^8$
c_4, c_5, c_{10}	$(y^4 + 5y^3 + 7y^2 + 2y + 1)^8$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.395123 + 0.506844I$ $a = -0.112909 - 0.977468I$ $b = -1.11104 + 1.26776I$	$-3.07886 - 5.47487I$	$-10.1733 + 11.8369I$
$u = -0.395123 + 0.506844I$ $a = -1.186440 - 0.577565I$ $b = 1.053440 - 0.202017I$	$-3.07886 + 2.64466I$	$-10.17326 - 2.01946I$
$u = -0.395123 + 0.506844I$ $a = 0.57298 + 1.37827I$ $b = 0.830529 - 0.979145I$	$-3.07886 + 2.64466I$	$-10.17326 - 2.01946I$
$u = -0.395123 + 0.506844I$ $a = 1.25572 + 1.09950I$ $b = -0.761526 + 0.373132I$	$-3.07886 + 2.64466I$	$-10.17326 - 2.01946I$
$u = -0.395123 + 0.506844I$ $a = -0.40614 - 1.88973I$ $b = 1.073750 + 0.876252I$	$-3.07886 - 5.47487I$	$-10.1733 + 11.8369I$
$u = -0.395123 + 0.506844I$ $a = 1.99615 + 0.08248I$ $b = 0.924966 + 0.254177I$	$-3.07886 + 2.64466I$	$-10.17326 - 2.01946I$
$u = -0.395123 + 0.506844I$ $a = -0.04809 + 2.15599I$ $b = -1.118270 - 0.540827I$	$-3.07886 - 5.47487I$	$-10.1733 + 11.8369I$
$u = -0.395123 + 0.506844I$ $a = -2.61870 - 0.15060I$ $b = -0.540037 - 0.328993I$	$-3.07886 - 5.47487I$	$-10.1733 + 11.8369I$
$u = -0.395123 - 0.506844I$ $a = -0.112909 + 0.977468I$ $b = -1.11104 - 1.26776I$	$-3.07886 + 5.47487I$	$-10.1733 - 11.8369I$
$u = -0.395123 - 0.506844I$ $a = -1.186440 + 0.577565I$ $b = 1.053440 + 0.202017I$	$-3.07886 - 2.64466I$	$-10.17326 + 2.01946I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.395123-0.506844I$ $a=\ \ 0.57298-1.37827I$ $b=\ \ 0.830529+0.979145I$	$-3.07886-2.64466I$	$-10.17326+2.01946I$
$u=-0.395123-0.506844I$ $a=\ \ 1.25572-1.09950I$ $b=-0.761526-0.373132I$	$-3.07886-2.64466I$	$-10.17326+2.01946I$
$u=-0.395123-0.506844I$ $a=-0.40614+1.88973I$ $b=\ \ 1.073750-0.876252I$	$-3.07886+5.47487I$	$-10.1733-11.8369I$
$u=-0.395123-0.506844I$ $a=\ \ 1.99615-0.08248I$ $b=\ \ 0.924966-0.254177I$	$-3.07886-2.64466I$	$-10.17326+2.01946I$
$u=-0.395123-0.506844I$ $a=-0.04809-2.15599I$ $b=-1.118270+0.540827I$	$-3.07886+5.47487I$	$-10.1733-11.8369I$
$u=-0.395123-0.506844I$ $a=-2.61870+0.15060I$ $b=-0.540037+0.328993I$	$-3.07886+5.47487I$	$-10.1733-11.8369I$
$u=-0.10488+1.55249I$ $a=-0.391799+0.880227I$ $b=-1.41214-1.21990I$	$-10.08060-7.22373I$	$-13.8267+9.4930I$
$u=-0.10488+1.55249I$ $a=\ \ 0.140656-0.862399I$ $b=\ \ 0.811814+0.187323I$	$-10.08060+0.89580I$	$-13.8267-4.3634I$
$u=-0.10488+1.55249I$ $a=\ \ 0.721035-0.958305I$ $b=\ \ 1.32546+0.70058I$	$-10.08060-7.22373I$	$-13.8267+9.4930I$
$u=-0.10488+1.55249I$ $a=-1.074960-0.865228I$ $b=-0.825212+0.300777I$	$-10.08060+0.89580I$	$-13.8267-4.3634I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.10488+1.55249I$ $a=-0.228603-0.516097I$ $b=-1.45600+1.57813I$	$-10.08060+0.89580I$	$-13.8267-4.3634I$
$u=-0.10488+1.55249I$ $a=-0.084947+0.528649I$ $b=-1.324120-0.308813I$	$-10.08060+0.89580I$	$-13.8267-4.3634I$
$u=-0.10488+1.55249I$ $a=0.069010+0.388237I$ $b=1.41842-2.08296I$	$-10.08060-7.22373I$	$-13.8267+9.4930I$
$u=-0.10488+1.55249I$ $a=1.39703+0.81926I$ $b=0.609972-0.066421I$	$-10.08060-7.22373I$	$-13.8267+9.4930I$
$u=-0.10488-1.55249I$ $a=-0.391799-0.880227I$ $b=-1.41214+1.21990I$	$-10.08060+7.22373I$	$-13.8267-9.4930I$
$u=-0.10488-1.55249I$ $a=0.140656+0.862399I$ $b=0.811814-0.187323I$	$-10.08060-0.89580I$	$-13.8267+4.3634I$
$u=-0.10488-1.55249I$ $a=0.721035+0.958305I$ $b=1.32546-0.70058I$	$-10.08060+7.22373I$	$-13.8267-9.4930I$
$u=-0.10488-1.55249I$ $a=-1.074960+0.865228I$ $b=-0.825212-0.300777I$	$-10.08060-0.89580I$	$-13.8267+4.3634I$
$u=-0.10488-1.55249I$ $a=-0.228603+0.516097I$ $b=-1.45600-1.57813I$	$-10.08060-0.89580I$	$-13.8267+4.3634I$
$u=-0.10488-1.55249I$ $a=-0.084947-0.528649I$ $b=-1.324120+0.308813I$	$-10.08060-0.89580I$	$-13.8267+4.3634I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.10488 - 1.55249I$ $a = 0.069010 - 0.388237I$ $b = 1.41842 + 2.08296I$	$-10.08060 + 7.22373I$	$-13.8267 - 9.4930I$
$u = -0.10488 - 1.55249I$ $a = 1.39703 - 0.81926I$ $b = 0.609972 + 0.066421I$	$-10.08060 + 7.22373I$	$-13.8267 - 9.4930I$

IV. $I^u_4 =$
$\langle 11a^3u^3+16u^3a^2+\cdots-5a-3,\ a^3u^3-u^3a^2+\cdots-6a-4,\ u^4+u^3+3u^2+2u+1\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_8 = \begin{pmatrix}a\\-0.354839a^3u^3-0.516129a^2u^3+\cdots+0.161290a+0.0967742\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-a^2u\\-0.193548a^3u^3+0.354839a^2u^3+\cdots-0.548387a-0.129032\end{pmatrix}$$
$$a_3 = \begin{pmatrix}0.129032a^3u^3+0.0967742a^2u^3+\cdots-0.967742a+0.419355\\-0.193548a^3u^3+0.354839a^2u^3+\cdots-0.548387a+0.870968\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-0.612903a^3u^3-0.709677a^2u^3+\cdots+1.09677a+0.258065\\-0.967742a^3u^3-1.22581a^2u^3+\cdots+0.258065a+1.35484\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-0.354839a^3u^3-0.516129a^2u^3+\cdots+1.16129a+0.0967742\\-0.354839a^3u^3-0.516129a^2u^3+\cdots+0.161290a+0.0967742\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-u\\u^3+u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u^2+1\\u^3+u^2+2u+1\end{pmatrix}$$
$$a_2 = \begin{pmatrix}0.129032a^3u^3+0.0967742a^2u^3+\cdots-0.967742a+0.419355\\-0.193548a^3u^3+0.354839a^2u^3+\cdots-1.54839a+0.870968\end{pmatrix}$$
$$a_2 = \begin{pmatrix}0.129032a^3u^3+0.0967742a^2u^3+\cdots-0.967742a+0.419355\\-0.193548a^3u^3+0.354839a^2u^3+\cdots-1.54839a+0.870968\end{pmatrix}$$

(ii) Obstruction class $=-1$

(iii) Cusp Shapes $=\frac{48}{31}a^3u^3+\frac{168}{31}a^3u^2-\frac{88}{31}u^3a^2+\frac{192}{31}a^3u+\frac{64}{31}a^2u^2+\frac{32}{31}u^3a+\frac{80}{31}a^3-\frac{104}{31}a^2u+\frac{112}{31}u^2a+\frac{44}{31}u^3-\frac{64}{31}a^2+\frac{128}{31}au+\frac{92}{31}u^2+\frac{136}{31}a+\frac{52}{31}u+\frac{94}{31}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^{16} + 3u^{15} + \cdots + 48u + 13$
c_2, c_7, c_9 c_{11}	$u^{16} + u^{15} + \cdots - 6u + 1$
c_3, c_6	$(u^2 + u + 1)^8$
c_4, c_5, c_{10}	$(u^4 + u^3 + 3u^2 + 2u + 1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{16} - 9y^{15} + \cdots + 244y + 169$
c_2, c_7, c_9 c_{11}	$y^{16} - 5y^{15} + \cdots - 12y + 1$
c_3, c_6	$(y^2 + y + 1)^8$
c_4, c_5, c_{10}	$(y^4 + 5y^3 + 7y^2 + 2y + 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.395123 + 0.506844I$ $a = -0.403594 + 1.336030I$ $b = -1.31743 - 0.78795I$	$0.21101 - 5.47487I$	$1.82674 + 11.83695I$
$u = -0.395123 + 0.506844I$ $a = -0.473603 - 0.227839I$ $b = \quad 0.750541 - 0.814864I$	$0.21101 + 2.64466I$	$1.82674 - 2.01946I$
$u = -0.395123 + 0.506844I$ $a = \quad 1.71802 + 0.14148I$ $b = -0.302610 + 0.150019I$	$0.21101 + 2.64466I$	$1.82674 - 2.01946I$
$u = -0.395123 + 0.506844I$ $a = -0.29340 - 2.37055I$ $b = \quad 0.517688 + 0.732455I$	$0.21101 - 5.47487I$	$1.82674 + 11.83695I$
$u = -0.395123 - 0.506844I$ $a = -0.403594 - 1.336030I$ $b = -1.31743 + 0.78795I$	$0.21101 + 5.47487I$	$1.82674 - 11.83695I$
$u = -0.395123 - 0.506844I$ $a = -0.473603 + 0.227839I$ $b = \quad 0.750541 + 0.814864I$	$0.21101 - 2.64466I$	$1.82674 + 2.01946I$
$u = -0.395123 - 0.506844I$ $a = \quad 1.71802 - 0.14148I$ $b = -0.302610 - 0.150019I$	$0.21101 - 2.64466I$	$1.82674 + 2.01946I$
$u = -0.395123 - 0.506844I$ $a = -0.29340 + 2.37055I$ $b = \quad 0.517688 - 0.732455I$	$0.21101 + 5.47487I$	$1.82674 - 11.83695I$
$u = -0.10488 + 1.55249I$ $a = \quad 0.640303 - 0.455342I$ $b = \quad 1.85487 + 0.75978I$	$-6.79074 - 7.22373I$	$-1.82674 + 9.49300I$
$u = -0.10488 + 1.55249I$ $a = -0.406825 + 1.222250I$ $b = -0.639763 - 1.041820I$	$-6.79074 - 7.22373I$	$-1.82674 + 9.49300I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.10488+1.55249I$ $a=-0.655651+0.264242I$ $b=-0.704770+0.147728I$	$-6.79074+0.89580I$	$-1.82674-4.36340I$
$u=-0.10488+1.55249I$ $a=-0.125250-0.445499I$ $b=\ \ 0.341471+1.045610I$	$-6.79074+0.89580I$	$-1.82674-4.36340I$
$u=-0.10488-1.55249I$ $a=\ \ 0.640303+0.455342I$ $b=\ \ 1.85487-0.75978I$	$-6.79074+7.22373I$	$-1.82674-9.49300I$
$u=-0.10488-1.55249I$ $a=-0.406825-1.222250I$ $b=-0.639763+1.041820I$	$-6.79074+7.22373I$	$-1.82674-9.49300I$
$u=-0.10488-1.55249I$ $a=-0.655651-0.264242I$ $b=-0.704770-0.147728I$	$-6.79074-0.89580I$	$-1.82674+4.36340I$
$u=-0.10488-1.55249I$ $a=-0.125250+0.445499I$ $b=\ \ 0.341471-1.045610I$	$-6.79074-0.89580I$	$-1.82674+4.36340I$

V. $I_5^u =$
$\langle -u^{15}+u^{14}+\cdots+2b+3,\ -3u^{15}-5u^{14}+\cdots+10a-45,\ u^{16}+11u^{14}+\cdots+8u^2+5\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} \frac{3}{10}u^{15} + \frac{1}{2}u^{14} + \cdots + \frac{9}{10}u + \frac{9}{2} \\ \frac{1}{2}u^{15} - \frac{1}{2}u^{14} + \cdots + \frac{9}{2}u - \frac{3}{2} \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.800000u^{15} - 8.30000u^{13} + \cdots - 4.90000u - 1.50000 \\ \frac{1}{2}u^{14} - \frac{1}{2}u^{13} + \cdots - \frac{1}{2}u + 4 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -\frac{4}{5}u^{15} + \frac{1}{2}u^{14} + \cdots - \frac{59}{10}u + \frac{3}{2} \\ \frac{1}{2}u^{14} - u^{13} + \cdots - \frac{7}{2}u + 4 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{3}{10}u^{15} + \frac{33}{10}u^{13} + \cdots + \frac{7}{5}u + \frac{5}{2} \\ \frac{1}{2}u^{15} - u^{14} + \cdots + 5u - 4 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{4}{5}u^{15} + \frac{83}{10}u^{13} + \cdots + \frac{27}{5}u + 3 \\ \frac{1}{2}u^{15} - \frac{1}{2}u^{14} + \cdots + \frac{9}{2}u - \frac{3}{2} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.300000u^{15} - 3.80000u^{13} + \cdots - 3.90000u + 0.500000 \\ \frac{1}{2}u^{15} + \frac{9}{2}u^{13} + \cdots + \frac{3}{2}u + 4 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.300000u^{15} - 3.80000u^{13} + \cdots - 3.90000u + 0.500000 \\ \frac{1}{2}u^{15} + \frac{9}{2}u^{13} + \cdots + \frac{3}{2}u + 4 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -7u^{14} - 70u^{12} - 261u^{10} - 429u^8 - 256u^6 + 13u^4 - 18u^2 - 47$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^{16} + 5u^{14} + 16u^{12} + 29u^{10} + 32u^8 + 25u^6 + 21u^4 + 17u^2 + 5$
c_2, c_9	$u^{16} + 2u^{15} + \cdots + 5u + 1$
c_3	$u^{16} + 6u^{15} + \cdots - u + 1$
c_4, c_5, c_{10}	$u^{16} + 11u^{14} + 47u^{12} + 96u^{10} + 90u^8 + 26u^6 - u^4 + 8u^2 + 5$
c_6	$u^{16} - 6u^{15} + \cdots + u + 1$
c_7, c_{11}	$u^{16} - 2u^{15} + \cdots - 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$(y^8+5y^7+16y^6+29y^5+32y^4+25y^3+21y^2+17y+5)^2$
c_2, c_7, c_9 c_{11}	$y^{16}-6y^{15}+\cdots-3y+1$
c_3, c_6	$y^{16}+2y^{15}+\cdots-9y+1$
c_4, c_5, c_{10}	$(y^8+11y^7+47y^6+96y^5+90y^4+26y^3-y^2+8y+5)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.061345 + 0.846216I$ $a = 0.269977 + 0.738240I$ $b = -0.608149 + 0.273746I$	$-1.34598 + 4.15746I$	$-5.62925 - 7.50254I$
$u = 0.061345 - 0.846216I$ $a = 0.269977 - 0.738240I$ $b = -0.608149 - 0.273746I$	$-1.34598 - 4.15746I$	$-5.62925 + 7.50254I$
$u = -0.061345 + 0.846216I$ $a = 0.74103 - 1.31833I$ $b = 1.070140 + 0.707942I$	$-1.34598 - 4.15746I$	$-5.62925 + 7.50254I$
$u = -0.061345 - 0.846216I$ $a = 0.74103 + 1.31833I$ $b = 1.070140 - 0.707942I$	$-1.34598 + 4.15746I$	$-5.62925 - 7.50254I$
$u = 0.628232 + 0.289290I$ $a = -0.634558 - 0.611524I$ $b = -0.221742 - 0.567751I$	$-2.66853 + 4.46324I$	$-5.70149 - 4.65131I$
$u = 0.628232 - 0.289290I$ $a = -0.634558 + 0.611524I$ $b = -0.221742 + 0.567751I$	$-2.66853 - 4.46324I$	$-5.70149 + 4.65131I$
$u = -0.628232 + 0.289290I$ $a = -0.91910 - 1.42941I$ $b = 0.990925 + 0.632113I$	$-2.66853 - 4.46324I$	$-5.70149 + 4.65131I$
$u = -0.628232 - 0.289290I$ $a = -0.91910 + 1.42941I$ $b = 0.990925 - 0.632113I$	$-2.66853 + 4.46324I$	$-5.70149 - 4.65131I$
$u = 1.54123I$ $a = -0.322714 + 0.635595I$ $b = -0.979599 - 0.497378I$	-8.98222	-7.40510
$u = -1.54123I$ $a = -0.322714 - 0.635595I$ $b = -0.979599 + 0.497378I$	-8.98222	-7.40510

Solutions to I_5^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.11611 + 1.54836I$ $a = 0.610395 - 0.450323I$ $b = 0.768136 + 0.892821I$	$-9.31190 + 6.71368I$	$-4.58299 - 3.37058I$
$u = 0.11611 - 1.54836I$ $a = 0.610395 + 0.450323I$ $b = 0.768136 - 0.892821I$	$-9.31190 - 6.71368I$	$-4.58299 + 3.37058I$
$u = -0.11611 + 1.54836I$ $a = -0.537297 + 0.905219I$ $b = -1.33922 - 0.93704I$	$-9.31190 - 6.71368I$	$-4.58299 + 3.37058I$
$u = -0.11611 - 1.54836I$ $a = -0.537297 - 0.905219I$ $b = -1.33922 + 0.93704I$	$-9.31190 + 6.71368I$	$-4.58299 - 3.37058I$
$u = 1.74759I$ $a = -0.207724 + 0.389388I$ $b = -0.680492 - 0.363016I$	-8.77819	-7.76740
$u = -1.74759I$ $a = -0.207724 - 0.389388I$ $b = -0.680492 + 0.363016I$	-8.77819	-7.76740

VI. $\boldsymbol{I_6^u =}$
$\boldsymbol{\langle -u^3-au-u^2+b-2u-1,\ -u^3a-u^3+a^2-2au-2u+1,\ u^4+u^3+3u^2+2u+1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^3+4u^2+12u-6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$(y^4 + y^3 + 3y^2 + 2y + 1)^2$
c_2, c_7, c_9 c_{11}	$y^8 - 5y^7 + 30y^6 - 68y^5 + 119y^4 - 127y^3 + 83y^2 - 29y + 4$
c_3, c_6	$(y - 1)^8$
c_4, c_5, c_{10}	$(y^4 + 5y^3 + 7y^2 + 2y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_6^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.395123 + 0.506844I$ $a = -0.570974 - 0.808855I$ $b = 0.987376 + 0.750545I$	$-3.07886 - 1.41510I$	$-10.17326 + 4.90874I$
$u = -0.395123 + 0.506844I$ $a = 0.02355 + 1.92973I$ $b = -0.635568 - 0.030203I$	$-3.07886 - 1.41510I$	$-10.17326 + 4.90874I$
$u = -0.395123 - 0.506844I$ $a = -0.570974 + 0.808855I$ $b = 0.987376 - 0.750545I$	$-3.07886 + 1.41510I$	$-10.17326 - 4.90874I$
$u = -0.395123 - 0.506844I$ $a = 0.02355 - 1.92973I$ $b = -0.635568 + 0.030203I$	$-3.07886 + 1.41510I$	$-10.17326 - 4.90874I$
$u = -0.10488 + 1.55249I$ $a = 0.729106 - 1.111840I$ $b = 0.797853 + 0.337246I$	$-10.08060 - 3.16396I$	$-13.82674 + 2.56480I$
$u = -0.10488 + 1.55249I$ $a = -0.181683 + 0.526191I$ $b = -1.64966 - 1.24854I$	$-10.08060 - 3.16396I$	$-13.82674 + 2.56480I$
$u = -0.10488 - 1.55249I$ $a = 0.729106 + 1.111840I$ $b = 0.797853 - 0.337246I$	$-10.08060 + 3.16396I$	$-13.82674 - 2.56480I$
$u = -0.10488 - 1.55249I$ $a = -0.181683 - 0.526191I$ $b = -1.64966 + 1.24854I$	$-10.08060 + 3.16396I$	$-13.82674 - 2.56480I$

VII. $I^u_7 = \langle u^3 - u^2 + b + 2u - 1,\ -u^3 + a - 2u,\ u^4 - u^3 + 3u^2 - 2u + 1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^3 + 4u^2 - 12u + 6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_7 c_8, c_9, c_{11}	$y^4 + y^3 + 3y^2 + 2y + 1$
c_3, c_6	y^4
c_4, c_5, c_{10}	$y^4 + 5y^3 + 7y^2 + 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_7^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.395123 + 0.506844I$ $a = 0.547424 + 1.120870I$ $b = 0.351808 - 0.720342I$	$0.21101 + 1.41510I$	$1.82674 - 4.90874I$
$u = 0.395123 - 0.506844I$ $a = 0.547424 - 1.120870I$ $b = 0.351808 + 0.720342I$	$0.21101 - 1.41510I$	$1.82674 + 4.90874I$
$u = 0.10488 + 1.55249I$ $a = -0.547424 - 0.585652I$ $b = -0.851808 + 0.911292I$	$-6.79074 + 3.16396I$	$-1.82674 - 2.56480I$
$u = 0.10488 - 1.55249I$ $a = -0.547424 + 0.585652I$ $b = -0.851808 - 0.911292I$	$-6.79074 - 3.16396I$	$-1.82674 + 2.56480I$

VIII. $I_1^v = \langle a,\ b-1,\ v+1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_5 c_8, c_{10}	u
c_2, c_6, c_9	$u - 1$
c_3, c_7, c_{11}	$u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_5 c_8, c_{10}	y
c_2, c_3, c_6 c_7, c_9, c_{11}	$y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = -1.00000$ $a = 0$ $b = 1.00000$	-3.28987	-12.0000

IX. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_8	$u(u^4-u^3+u^2+1)^3(u^7+u^5+u^4-u-1)^2$ $\cdot(u^{10}+u^9+7u^8+4u^7+23u^6+9u^5+40u^4+9u^3+33u^2+2u+10)$ $\cdot(u^{16}+5u^{14}+16u^{12}+29u^{10}+32u^8+25u^6+21u^4+17u^2+5)$ $\cdot((u^{16}-u^{15}+\cdots-24u+79)^2)(u^{16}+3u^{15}+\cdots+48u+13)$
c_2, c_9	$(u-1)(u^4-u^3+u^2+1)(u^8-u^7+\cdots-u+2)$ $\cdot(u^{10}+u^9+\cdots-u+1)(u^{14}+u^{13}+\cdots+u+1)$ $\cdot(u^{16}+u^{15}+\cdots-6u+1)(u^{16}+2u^{15}+\cdots+5u+1)$ $\cdot(u^{32}-u^{31}+\cdots+400u+361)$
c_3	$u^4(u+1)^9(u^2+u+1)^8(u^4+u^3-2u+1)^8$ $\cdot(u^{10}-9u^9+\cdots-15u+11)(u^{14}-13u^{13}+\cdots-329u+47)$ $\cdot(u^{16}+6u^{15}+\cdots-u+1)$
c_4, c_5, c_{10}	$u(u^4-u^3+3u^2-2u+1)(u^4+u^3+3u^2+2u+1)^{14}$ $\cdot(u^7-4u^6+11u^5-20u^4+26u^3-23u^2+14u-4)^2$ $\cdot(u^{10}-6u^9+\cdots-40u+8)$ $\cdot(u^{16}+11u^{14}+47u^{12}+96u^{10}+90u^8+26u^6-u^4+8u^2+5)$
c_6	$u^4(u-1)(u+1)^8(u^2+u+1)^8(u^4+u^3-2u+1)^8$ $\cdot(u^{10}-9u^9+\cdots-15u+11)(u^{14}-13u^{13}+\cdots-329u+47)$ $\cdot(u^{16}-6u^{15}+\cdots+u+1)$
c_7, c_{11}	$(u+1)(u^4-u^3+u^2+1)(u^8-u^7+\cdots-u+2)$ $\cdot(u^{10}+u^9+\cdots-u+1)(u^{14}+u^{13}+\cdots+u+1)$ $\cdot(u^{16}-2u^{15}+\cdots-5u+1)(u^{16}+u^{15}+\cdots-6u+1)$ $\cdot(u^{32}-u^{31}+\cdots+400u+361)$

X. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y(y^4+y^3+3y^2+2y+1)^3(y^7+2y^6+y^5-3y^4-2y^3+2y^2+y-1)^2$ $\cdot\,(y^8+5y^7+16y^6+29y^5+32y^4+25y^3+21y^2+17y+5)^2$ $\cdot\,(y^{10}+13y^9+\cdots+656y+100)(y^{16}-9y^{15}+\cdots+244y+169)$ $\cdot\,(y^{16}+19y^{15}+\cdots+44612y+6241)^2$
c_2, c_7, c_9 c_{11}	$(y-1)(y^4+y^3+3y^2+2y+1)$ $\cdot\,(y^8-5y^7+30y^6-68y^5+119y^4-127y^3+83y^2-29y+4)$ $\cdot\,(y^{10}-3y^9+15y^8-20y^7+43y^6-17y^5+12y^4+7y^3-6y^2-y+1)$ $\cdot\,(y^{14}-5y^{13}+\cdots+y+1)(y^{16}-6y^{15}+\cdots-3y+1)$ $\cdot\,(y^{16}-5y^{15}+\cdots-12y+1)(y^{32}-11y^{31}+\cdots-2524550y+130321)$
c_3, c_6	$y^4(y-1)^9(y^2+y+1)^8(y^4-y^3+6y^2-4y+1)^8$ $\cdot\,(y^{10}+3y^9+\cdots+1601y+121)(y^{14}-3y^{13}+\cdots+2397y+2209)$ $\cdot\,(y^{16}+2y^{15}+\cdots-9y+1)$
c_4, c_5, c_{10}	$y(y^4+5y^3+7y^2+2y+1)^{15}$ $\cdot\,(y^7+6y^6+13y^5+16y^4+32y^3+39y^2+12y-16)^2$ $\cdot\,(y^8+11y^7+47y^6+96y^5+90y^4+26y^3-y^2+8y+5)^2$ $\cdot\,(y^{10}+10y^9+\cdots+160y+64)$