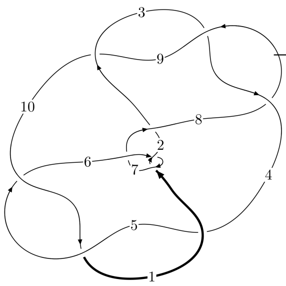
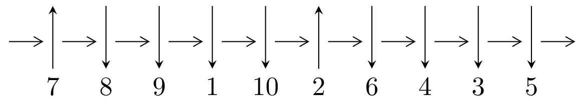
10_{74} $(K10a_{62})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle b - u,\ u^9 + 4u^7 + 3u^5 - 5u^3 + u^2 + 2a - 3u + 1,\ u^{10} - u^9 + 6u^8 - 6u^7 + 13u^6 - 13u^5 + 11u^4 - 10u^3 + 2u^2$$

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

$$I_3^u = \langle u^5 + 2u^3 - u^2 + b + 2u - 1,\ -u^5 + u^4 - 2u^3 + 2u^2 + a - 2u + 2,\ u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1\rangle$$

$$I_4^u = \langle b^2 + bu + u^2 + 1,\ -u^2 + a - u - 2,\ u^3 + u^2 + 2u + 1\rangle$$

$$I_5^u = \langle b - u,\ a + 2u + 2,\ u^3 + u^2 + 2u + 1\rangle$$

$$I_6^u = \langle b + u,\ a - u - 1,\ u^2 + 1\rangle$$

* 6 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 35 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.

$$I_1^u = \langle b-u,\ u^9+4u^7+3u^5-5u^3+u^2+2a-3u+1,\ u^{10}-u^9+\cdots+2u^2+1\rangle$$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{1}{2}u^9 - 2u^7 + \cdots + \frac{3}{2}u - \frac{1}{2} \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} \frac{1}{2}u^9 - u^8 + \cdots + \frac{1}{2}u + \frac{1}{2} \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -\frac{1}{2}u^9 - 2u^7 + \cdots + \frac{5}{2}u - \frac{1}{2} \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{1}{2}u^9 - u^8 + \cdots + \frac{1}{2}u + \frac{1}{2} \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -\frac{1}{2}u^9 - 3u^7 + \cdots + \frac{7}{2}u - \frac{1}{2} \\ -\frac{1}{2}u^9 - 3u^7 + \cdots + \frac{3}{2}u + \frac{1}{2} \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^8 - 2u^7 + 20u^6 - 10u^5 + 32u^4 - 20u^3 + 12u^2 - 14u - 8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{10} + 2u^9 + 4u^8 + 4u^7 + 5u^6 + 6u^5 + 7u^4 + 7u^3 + 5u^2 + 3u + 2$
c_2	$u^{10} - 2u^9 + u^8 - 4u^7 + 10u^6 - 2u^5 + 27u^4 - 66u^3 + 32u^2 + 4u + 8$
c_3, c_4, c_5 c_8, c_9, c_{10}	$u^{10} - u^9 + 6u^8 - 6u^7 + 13u^6 - 13u^5 + 11u^4 - 10u^3 + 2u^2 + 1$
c_7	$u^{10} + 4u^9 + 10u^8 + 14u^7 + 15u^6 + 10u^5 + 7u^4 + 5u^3 + 11u^2 + 11u + 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{10} + 4y^9 + 10y^8 + 14y^7 + 15y^6 + 10y^5 + 7y^4 + 5y^3 + 11y^2 + 11y + 4$
c_2	$y^{10} - 2y^9 + \cdots + 496y + 64$
c_3, c_4, c_5 c_8, c_9, c_{10}	$y^{10} + 11y^9 + \cdots + 4y + 1$
c_7	$y^{10} + 4y^9 + \cdots - 33y + 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.748770 + 0.138462I$ $a = 0.977962 + 0.048097I$ $b = 0.748770 + 0.138462I$	$-4.02991 - 3.81695I$	$-11.33347 + 4.73761I$
$u = 0.748770 - 0.138462I$ $a = 0.977962 - 0.048097I$ $b = 0.748770 - 0.138462I$	$-4.02991 + 3.81695I$	$-11.33347 - 4.73761I$
$u = 0.28433 + 1.41260I$ $a = 1.18060 - 2.05212I$ $b = 0.28433 + 1.41260I$	$8.47865 - 6.45670I$	$1.02275 + 3.64794I$
$u = 0.28433 - 1.41260I$ $a = 1.18060 + 2.05212I$ $b = 0.28433 - 1.41260I$	$8.47865 + 6.45670I$	$1.02275 - 3.64794I$
$u = -0.35489 + 1.40814I$ $a = -1.27311 - 1.80165I$ $b = -0.35489 + 1.40814I$	$5.86173 + 12.00600I$	$-2.08626 - 7.39232I$
$u = -0.35489 - 1.40814I$ $a = -1.27311 + 1.80165I$ $b = -0.35489 - 1.40814I$	$5.86173 - 12.00600I$	$-2.08626 + 7.39232I$
$u = 0.05139 + 1.48296I$ $a = 0.22617 - 2.44997I$ $b = 0.05139 + 1.48296I$	$11.63700 - 2.88363I$	$2.09026 + 2.85464I$
$u = 0.05139 - 1.48296I$ $a = 0.22617 + 2.44997I$ $b = 0.05139 - 1.48296I$	$11.63700 + 2.88363I$	$2.09026 - 2.85464I$
$u = -0.229588 + 0.355227I$ $a = -0.611625 + 0.659121I$ $b = -0.229588 + 0.355227I$	$-0.563291 + 1.057730I$	$-7.69328 - 6.23330I$
$u = -0.229588 - 0.355227I$ $a = -0.611625 - 0.659121I$ $b = -0.229588 - 0.355227I$	$-0.563291 - 1.057730I$	$-7.69328 + 6.23330I$

II. $I_2^u = \langle u^5 + 2u^3 + u^2 + b + u + 1,\ -u^7 - 3u^5 - 2u^4 - 2u^3 - 4u^2 + 2a - u - 1,\ u^8 + 3u^6 + 2u^5 + 2u^4 + 4u^3 + u^2 + u + 2\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.856926 + 0.228629I$ $a = 1.089410 + 0.290658I$ $b = 0.309502 - 1.349500I$	$0.66484 + 7.64338I$	$-5.77019 - 6.51087I$
$u = -0.856926 - 0.228629I$ $a = 1.089410 - 0.290658I$ $b = 0.309502 + 1.349500I$	$0.66484 - 7.64338I$	$-5.77019 + 6.51087I$
$u = 0.511330 + 0.719091I$ $a = -0.656772 + 0.923628I$ $b = 0.036094 - 1.304740I$	$4.26996 - 1.39709I$	$-0.22981 + 3.86736I$
$u = 0.511330 - 0.719091I$ $a = -0.656772 - 0.923628I$ $b = 0.036094 + 1.304740I$	$4.26996 + 1.39709I$	$-0.22981 - 3.86736I$
$u = 0.036094 + 1.304740I$ $a = -0.021186 + 0.765848I$ $b = 0.511330 - 0.719091I$	$4.26996 + 1.39709I$	$-0.22981 - 3.86736I$
$u = 0.036094 - 1.304740I$ $a = -0.021186 - 0.765848I$ $b = 0.511330 + 0.719091I$	$4.26996 - 1.39709I$	$-0.22981 + 3.86736I$
$u = 0.309502 + 1.349500I$ $a = -0.161456 + 0.703984I$ $b = -0.856926 - 0.228629I$	$0.66484 - 7.64338I$	$-5.77019 + 6.51087I$
$u = 0.309502 - 1.349500I$ $a = -0.161456 - 0.703984I$ $b = -0.856926 + 0.228629I$	$0.66484 + 7.64338I$	$-5.77019 - 6.51087I$

III. $\boldsymbol{I^u_3 = \langle u^5 + 2u^3 - u^2 + b + 2u - 1,\ -u^5 + u^4 - 2u^3 + 2u^2 + a - 2u + 2,\ u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.498832 + 1.001300I$ $a = 0.398606 + 0.800120I$ $b = -0.215080 - 1.307140I$	$3.02413 - 2.82812I$	$-2.49024 + 2.97945I$
$u = -0.498832 - 1.001300I$ $a = 0.398606 - 0.800120I$ $b = -0.215080 + 1.307140I$	$3.02413 + 2.82812I$	$-2.49024 - 2.97945I$
$u = 0.284920 + 1.115140I$ $a = -0.215080 + 0.841795I$ $b = -0.569840$	-1.11345	$-9.01951 + 0.I$
$u = 0.284920 - 1.115140I$ $a = -0.215080 - 0.841795I$ $b = -0.569840$	-1.11345	$-9.01951 + 0.I$
$u = 0.713912 + 0.305839I$ $a = -1.183530 + 0.507021I$ $b = -0.215080 - 1.307140I$	$3.02413 - 2.82812I$	$-2.49024 + 2.97945I$
$u = 0.713912 - 0.305839I$ $a = -1.183530 - 0.507021I$ $b = -0.215080 + 1.307140I$	$3.02413 + 2.82812I$	$-2.49024 - 2.97945I$

IV. $\boldsymbol{I_4^u = \langle b^2 + bu + u^2 + 1,\ -u^2 + a - u - 2,\ u^3 + u^2 + 2u + 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^2 - 4u - 10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.215080 + 1.307140I$ $a = \quad 0.122561 + 0.744862I$ $b = -0.498832 - 1.001300I$	$3.02413 + 2.82812I$	$-2.49024 - 2.97945I$
$u = -0.215080 + 1.307140I$ $a = \quad 0.122561 + 0.744862I$ $b = \quad 0.713912 - 0.305839I$	$3.02413 + 2.82812I$	$-2.49024 - 2.97945I$
$u = -0.215080 - 1.307140I$ $a = \quad 0.122561 - 0.744862I$ $b = -0.498832 + 1.001300I$	$3.02413 - 2.82812I$	$-2.49024 + 2.97945I$
$u = -0.215080 - 1.307140I$ $a = \quad 0.122561 - 0.744862I$ $b = \quad 0.713912 + 0.305839I$	$3.02413 - 2.82812I$	$-2.49024 + 2.97945I$
$u = -0.569840$ $a = \quad 1.75488$ $b = \quad 0.284920 + 1.115140I$	-1.11345	-9.01950
$u = -0.569840$ $a = \quad 1.75488$ $b = \quad 0.284920 - 1.115140I$	-1.11345	-9.01950

V. $I_5^u = \langle b - u,\ a + 2u + 2,\ u^3 + u^2 + 2u + 1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^2 - 4u - 10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.215080+1.307140I$ $a=-1.56984-2.61428I$ $b=-0.215080+1.307140I$	$3.02413+2.82812I$	$-2.49024-2.97945I$
$u=-0.215080-1.307140I$ $a=-1.56984+2.61428I$ $b=-0.215080-1.307140I$	$3.02413-2.82812I$	$-2.49024+2.97945I$
$u=-0.569840$ $a=-0.860319$ $b=-0.569840$	-1.11345	-9.01950

VI. $I_6^u = \langle b+u,\ a-u-1,\ u^2+1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_5, c_6, c_8 c_9, c_{10}	$(y+1)^2$
c_2	y^2
c_7	$(y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_6^u		$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$1.000000I$		
$a =$	$1.00000 + 1.00000I$	1.64493	-4.00000
$b =$	$-1.000000I$		
$u =$	$-1.000000I$		
$a =$	$1.00000 - 1.00000I$	1.64493	-4.00000
$b =$	$1.000000I$		

VII. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u^2+1)(u^3+u^2+2u+1)(u^4+u^2+u+1)^2$ $\cdot (u^6-u^5+2u^4-2u^3+2u^2-2u+1)^2$ $\cdot (u^{10}+2u^9+4u^8+4u^7+5u^6+6u^5+7u^4+7u^3+5u^2+3u+2)$
c_2	$u^2(u^3-u^2+1)^5(u^4+3u^3+4u^2+3u+2)^2$ $\cdot (u^{10}-2u^9+u^8-4u^7+10u^6-2u^5+27u^4-66u^3+32u^2+4u+8)$
c_3, c_4, c_5 c_8, c_9, c_{10}	$(u^2+1)(u^3+u^2+2u+1)^3(u^6-u^5+2u^4-2u^3+2u^2-2u+1)$ $\cdot (u^8+3u^6+2u^5+2u^4+4u^3+u^2+u+2)$ $\cdot (u^{10}-u^9+6u^8-6u^7+13u^6-13u^5+11u^4-10u^3+2u^2+1)$
c_7	$(u+1)^2(u^3+3u^2+2u-1)(u^4+2u^3+3u^2+u+1)^2$ $\cdot (u^6+3u^5+4u^4+2u^3+1)^2$ $\cdot (u^{10}+4u^9+10u^8+14u^7+15u^6+10u^5+7u^4+5u^3+11u^2+11u+4)$

VIII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y+1)^2(y^3+3y^2+2y-1)(y^4+2y^3+3y^2+y+1)^2$ $\cdot (y^6+3y^5+4y^4+2y^3+1)^2$ $\cdot (y^{10}+4y^9+10y^8+14y^7+15y^6+10y^5+7y^4+5y^3+11y^2+11y+4)$
c_2	$y^2(y^3-y^2+2y-1)^5(y^4-y^3+2y^2+7y+4)^2$ $\cdot (y^{10}-2y^9+\cdots+496y+64)$
c_3, c_4, c_5 c_8, c_9, c_{10}	$(y+1)^2(y^3+3y^2+2y-1)^3(y^6+3y^5+4y^4+2y^3+1)$ $\cdot (y^8+6y^7+13y^6+10y^5-2y^4-4y^3+y^2+3y+4)$ $\cdot (y^{10}+11y^9+\cdots+4y+1)$
c_7	$(y-1)^2(y^3-5y^2+10y-1)(y^4+2y^3+7y^2+5y+1)^2$ $\cdot ((y^6-y^5+4y^4-2y^3+8y^2+1)^2)(y^{10}+4y^9+\cdots-33y+16)$