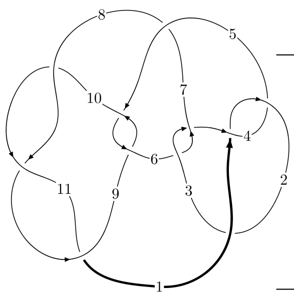
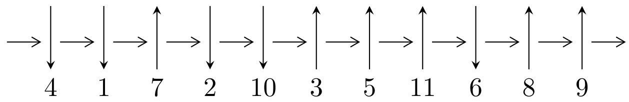
$11a_{15}$ $(K11a_{15})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle &-1.04308 \times 10^{20} u^{63} - 7.59004 \times 10^{20} u^{62} + \cdots + 3.96371 \times 10^{19} b + 2.83284 \times 10^{20}, \\ &-7.35239 \times 10^{20} u^{63} - 3.87644 \times 10^{21} u^{62} + \cdots + 7.92742 \times 10^{19} a + 5.92603 \times 10^{20}, \\ &u^{64} + 7u^{63} + \cdots - 13u - 1 \rangle \\ I_2^u = \langle &b - 1,\ u^4 + u^3 + a - u,\ u^6 + u^5 - u^4 - 2u^3 + u + 1 \rangle \\ I_3^u = \langle &a^3 + b + 1,\ a^5 + a^4 + a^3 + 2a^2 + a + 1,\ u - 1 \rangle \end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 75 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. $I_1^u = \langle -1.04 \times 10^{20}u^{63} - 7.59 \times 10^{20}u^{62} + \cdots + 3.96 \times 10^{19}b + 2.83 \times 10^{20},\ -7.35 \times 10^{20}u^{63} - 3.88 \times 10^{21}u^{62} + \cdots + 7.93 \times 10^{19}a + 5.93 \times 10^{20},\ u^{64} + 7u^{63} + \cdots - 13u - 1\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 9.27463u^{63} + 48.8992u^{62} + \cdots - 37.0886u - 7.47536 \\ 2.63156u^{63} + 19.1488u^{62} + \cdots - 70.8971u - 7.14695 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -5.65805u^{63} - 29.1771u^{62} + \cdots + 32.6675u + 8.99552 \\ 2.08876u^{63} + 9.72032u^{62} + \cdots + 23.9118u + 3.59970 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 4.89840u^{63} + 26.5797u^{62} + \cdots + 14.3202u + 4.18773 \\ 4.18435u^{63} + 30.2617u^{62} + \cdots - 83.2794u - 6.53051 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 2.16346u^{63} + 8.50706u^{62} + \cdots + 60.6164u + 7.93271 \\ 7.04006u^{63} + 48.8776u^{62} + \cdots - 118.375u - 9.20353 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -1.17863u^{63} - 5.74060u^{62} + \cdots + 14.7171u + 3.28124 \\ 3.74498u^{63} + 23.4799u^{62} + \cdots - 36.4181u - 2.38859 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -18.2987u^{63} - 107.518u^{62} + \cdots + 156.183u + 15.9335 \\ -6.10504u^{63} - 50.2563u^{62} + \cdots + 221.478u + 19.9762 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -18.2987u^{63} - 107.518u^{62} + \cdots + 156.183u + 15.9335 \\ -6.10504u^{63} - 50.2563u^{62} + \cdots + 221.478u + 19.9762 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{1545066059263505356 29}{990927368339855021 8}u^{63} + \frac{2873546855263844556609}{396370947335942008 72}u^{62} + \cdots + \frac{3763600436801685598541}{396370947335942008 72}u + \frac{5510087053575184057 65}{396370947335942008 72}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{64} - 7u^{63} + \cdots + 13u - 1$
c_2	$u^{64} + 29u^{63} + \cdots + 37u + 1$
c_3, c_6	$u^{64} - 2u^{63} + \cdots - 128u + 32$
c_5, c_9	$u^{64} + 2u^{63} + \cdots + 128u - 64$
c_7	$u^{64} + 3u^{63} + \cdots - 2001u - 1609$
c_8, c_{10}, c_{11}	$u^{64} + 8u^{63} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{64} - 29y^{63} + \cdots - 37y + 1$
c_2	$y^{64} + 19y^{63} + \cdots - 3653y + 1$
c_3, c_6	$y^{64} - 36y^{63} + \cdots - 20992y + 1024$
c_5, c_9	$y^{64} + 42y^{63} + \cdots + 24576y + 4096$
c_7	$y^{64} - 37y^{63} + \cdots + 70611765y + 2588881$
c_8, c_{10}, c_{11}	$y^{64} - 64y^{63} + \cdots + 20y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.851015 + 0.553122I$ $a = 3.09153 + 1.65651I$ $b = -1.403090 + 0.050018I$	$3.26372 - 2.22000I$	0
$u = 0.851015 - 0.553122I$ $a = 3.09153 - 1.65651I$ $b = -1.403090 - 0.050018I$	$3.26372 + 2.22000I$	0
$u = -0.468773 + 0.906872I$ $a = 0.474383 - 0.050538I$ $b = -0.493081 + 0.851380I$	$5.97499 - 4.90532I$	0
$u = -0.468773 - 0.906872I$ $a = 0.474383 + 0.050538I$ $b = -0.493081 - 0.851380I$	$5.97499 + 4.90532I$	0
$u = 0.957619 + 0.369938I$ $a = -1.152950 - 0.390386I$ $b = 0.170773 - 0.218203I$	$-1.81999 - 1.29187I$	0
$u = 0.957619 - 0.369938I$ $a = -1.152950 + 0.390386I$ $b = 0.170773 + 0.218203I$	$-1.81999 + 1.29187I$	0
$u = -0.554715 + 0.872769I$ $a = 0.811122 - 0.142635I$ $b = -0.681254 - 0.756164I$	$6.56660 + 0.51971I$	0
$u = -0.554715 - 0.872769I$ $a = 0.811122 + 0.142635I$ $b = -0.681254 + 0.756164I$	$6.56660 - 0.51971I$	0
$u = -0.513391 + 0.900925I$ $a = 2.49041 + 0.02335I$ $b = -1.46519 + 0.07102I$	$8.42241 - 2.26761I$	0
$u = -0.513391 - 0.900925I$ $a = 2.49041 - 0.02335I$ $b = -1.46519 - 0.07102I$	$8.42241 + 2.26761I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.798906+0.537570I$ $a=\ \ 0.556103+0.446579I$ $b=-1.208400+0.288039I$	$2.82835+0.98333I$	$5.99923-3.36293I$
$u=-0.798906-0.537570I$ $a=\ \ 0.556103-0.446579I$ $b=-1.208400-0.288039I$	$2.82835-0.98333I$	$5.99923+3.36293I$
$u=\ \ 0.684326+0.663082I$ $a=-2.47318-0.47845I$ $b=\ \ 1.52333+0.22252I$	$8.25062+3.46517I$	$6.83292+0.I$
$u=\ \ 0.684326-0.663082I$ $a=-2.47318+0.47845I$ $b=\ \ 1.52333-0.22252I$	$8.25062-3.46517I$	$6.83292+0.I$
$u=-0.892560+0.567255I$ $a=\ \ 0.55087-1.60438I$ $b=-1.080850-0.394220I$	$2.50515+3.47504I$	0
$u=-0.892560-0.567255I$ $a=\ \ 0.55087+1.60438I$ $b=-1.080850+0.394220I$	$2.50515-3.47504I$	0
$u=-0.426816+0.971335I$ $a=-1.81629-0.41191I$ $b=\ \ 1.53562-0.30377I$	$12.5775-9.1285I$	0
$u=-0.426816-0.971335I$ $a=-1.81629+0.41191I$ $b=\ \ 1.53562+0.30377I$	$12.5775+9.1285I$	0
$u=\ \ 0.773933+0.525049I$ $a=\ \ 0.224362+0.775639I$ $b=-0.586485-0.667589I$	$1.392230+0.239734I$	$4.64422+0.I$
$u=\ \ 0.773933-0.525049I$ $a=\ \ 0.224362-0.775639I$ $b=-0.586485+0.667589I$	$1.392230-0.239734I$	$4.64422+0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.926326 + 0.128275I$ $a = 0.70787 + 3.19878I$ $b = -0.967057 + 0.104240I$	$0.047902 - 0.498911I$	$2.1353 - 14.8724I$
$u = 0.926326 - 0.128275I$ $a = 0.70787 - 3.19878I$ $b = -0.967057 - 0.104240I$	$0.047902 + 0.498911I$	$2.1353 + 14.8724I$
$u = 0.912042 + 0.554130I$ $a = 1.43049 + 0.51144I$ $b = -0.469774 + 0.774809I$	$0.93426 - 4.62344I$	0
$u = 0.912042 - 0.554130I$ $a = 1.43049 - 0.51144I$ $b = -0.469774 - 0.774809I$	$0.93426 + 4.62344I$	0
$u = -0.965340 + 0.501059I$ $a = -0.068579 - 0.710395I$ $b = 0.040956 - 0.606385I$	$-1.01229 + 4.28688I$	0
$u = -0.965340 - 0.501059I$ $a = -0.068579 + 0.710395I$ $b = 0.040956 + 0.606385I$	$-1.01229 - 4.28688I$	0
$u = -0.796135 + 0.411444I$ $a = -0.560743 + 0.887793I$ $b = -0.166184 + 0.699479I$	$-0.262566 - 0.498963I$	$2.74689 - 0.51399I$
$u = -0.796135 - 0.411444I$ $a = -0.560743 - 0.887793I$ $b = -0.166184 - 0.699479I$	$-0.262566 + 0.498963I$	$2.74689 + 0.51399I$
$u = 1.090500 + 0.201214I$ $a = -0.486035 + 0.573321I$ $b = -0.004735 + 0.287127I$	$-2.28356 - 0.63564I$	0
$u = 1.090500 - 0.201214I$ $a = -0.486035 - 0.573321I$ $b = -0.004735 - 0.287127I$	$-2.28356 + 0.63564I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.457914 + 0.741659I$ $a = -0.755401 + 0.029158I$ $b = 0.358616 - 0.179646I$	$2.38826 - 1.27360I$	$1.00000 + 1.24138I$
$u = -0.457914 - 0.741659I$ $a = -0.755401 - 0.029158I$ $b = 0.358616 + 0.179646I$	$2.38826 + 1.27360I$	$1.00000 - 1.24138I$
$u = -0.656679 + 0.923424I$ $a = -2.02373 + 0.73995I$ $b = 1.58190 + 0.20504I$	$14.1398 + 3.9767I$	0
$u = -0.656679 - 0.923424I$ $a = -2.02373 - 0.73995I$ $b = 1.58190 - 0.20504I$	$14.1398 - 3.9767I$	0
$u = 0.968165 + 0.622296I$ $a = -2.05377 - 2.02763I$ $b = 1.51383 - 0.27793I$	$7.38800 - 8.47452I$	0
$u = 0.968165 - 0.622296I$ $a = -2.05377 + 2.02763I$ $b = 1.51383 + 0.27793I$	$7.38800 + 8.47452I$	0
$u = -0.814156 + 0.225854I$ $a = 0.488791 - 0.388735I$ $b = 1.388550 - 0.248297I$	$4.72329 - 3.85111I$	$9.95444 - 1.38614I$
$u = -0.814156 - 0.225854I$ $a = 0.488791 + 0.388735I$ $b = 1.388550 + 0.248297I$	$4.72329 + 3.85111I$	$9.95444 + 1.38614I$
$u = -1.102490 + 0.469558I$ $a = 0.183729 + 1.038150I$ $b = 1.304930 + 0.108429I$	$2.70253 + 6.62281I$	0
$u = -1.102490 - 0.469558I$ $a = 0.183729 - 1.038150I$ $b = 1.304930 - 0.108429I$	$2.70253 - 6.62281I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.078950 + 0.604214I$ $a = -0.829008 + 0.571399I$ $b = 0.382661 + 0.323178I$	$0.55603 + 6.40064I$	0
$u = -1.078950 - 0.604214I$ $a = -0.829008 - 0.571399I$ $b = 0.382661 - 0.323178I$	$0.55603 - 6.40064I$	0
$u = 1.190520 + 0.380856I$ $a = 0.168620 - 1.294890I$ $b = 1.380510 - 0.021197I$	$2.11698 - 1.35062I$	0
$u = 1.190520 - 0.380856I$ $a = 0.168620 + 1.294890I$ $b = 1.380510 + 0.021197I$	$2.11698 + 1.35062I$	0
$u = 1.27051$ $a = 0.853993$ $b = -1.36931$	1.81885	0
$u = 1.269650 + 0.066401I$ $a = -0.275750 - 1.025770I$ $b = -0.479663 - 0.698680I$	$-0.29295 + 2.27028I$	0
$u = 1.269650 - 0.066401I$ $a = -0.275750 + 1.025770I$ $b = -0.479663 + 0.698680I$	$-0.29295 - 2.27028I$	0
$u = -1.078140 + 0.686845I$ $a = -0.219031 - 0.278038I$ $b = -0.763986 + 0.723012I$	$4.97472 + 5.25194I$	0
$u = -1.078140 - 0.686845I$ $a = -0.219031 + 0.278038I$ $b = -0.763986 - 0.723012I$	$4.97472 - 5.25194I$	0
$u = -1.037310 + 0.770242I$ $a = -1.42167 + 0.83458I$ $b = 1.59003 - 0.15683I$	$12.97910 + 2.20987I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.037310 - 0.770242I$ $a = -1.42167 - 0.83458I$ $b = 1.59003 + 0.15683I$	$12.97910 - 2.20987I$	0
$u = 0.016268 + 0.696606I$ $a = -1.34669 + 0.52337I$ $b = 1.41254 - 0.07728I$	$5.65313 - 2.65309I$	$8.42225 + 3.34216I$
$u = 0.016268 - 0.696606I$ $a = -1.34669 - 0.52337I$ $b = 1.41254 + 0.07728I$	$5.65313 + 2.65309I$	$8.42225 - 3.34216I$
$u = -1.109430 + 0.686273I$ $a = 1.83349 - 1.64073I$ $b = -1.46331 - 0.12160I$	$6.60913 + 8.11292I$	0
$u = -1.109430 - 0.686273I$ $a = 1.83349 + 1.64073I$ $b = -1.46331 + 0.12160I$	$6.60913 - 8.11292I$	0
$u = -1.131050 + 0.671760I$ $a = 1.043840 - 0.815468I$ $b = -0.438312 - 0.882770I$	$3.96365 + 10.71220I$	0
$u = -1.131050 - 0.671760I$ $a = 1.043840 + 0.815468I$ $b = -0.438312 + 0.882770I$	$3.96365 - 10.71220I$	0
$u = -1.172420 + 0.678120I$ $a = -1.26144 + 1.95035I$ $b = 1.51825 + 0.32917I$	$10.2926 + 15.1288I$	0
$u = -1.172420 - 0.678120I$ $a = -1.26144 - 1.95035I$ $b = 1.51825 - 0.32917I$	$10.2926 - 15.1288I$	0
$u = 1.350730 + 0.109045I$ $a = -0.034825 + 0.580788I$ $b = 1.50631 + 0.25249I$	$6.16621 + 5.77451I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.350730 - 0.109045I$ $a = -0.034825 - 0.580788I$ $b = 1.50631 - 0.25249I$	$6.16621 - 5.77451I$	0
$u = -0.004404 + 0.249946I$ $a = -1.65033 - 0.59592I$ $b = -0.278953 + 0.383140I$	$0.309124 - 1.130770I$	$3.85993 + 6.08046I$
$u = -0.004404 - 0.249946I$ $a = -1.65033 + 0.59592I$ $b = -0.278953 - 0.383140I$	$0.309124 + 1.130770I$	$3.85993 - 6.08046I$
$u = -0.133522$ $a = -5.10635$ $b = -1.14767$	2.19568	3.71440

II. $I^u_2 = \langle b-1,\ u^4+u^3+a-u,\ u^6+u^5-u^4-2u^3+u+1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.002190 + 0.295542I$ $a = -0.23185 - 1.65564I$ $b = 1.00000$	$-0.245672 - 0.924305I$	$-1.66012 + 2.42665I$
$u = 1.002190 - 0.295542I$ $a = -0.23185 + 1.65564I$ $b = 1.00000$	$-0.245672 + 0.924305I$	$-1.66012 - 2.42665I$
$u = -0.428243 + 0.664531I$ $a = -0.659772 + 0.298454I$ $b = 1.00000$	$3.53554 - 0.92430I$	$8.55174 + 0.47256I$
$u = -0.428243 - 0.664531I$ $a = -0.659772 - 0.298454I$ $b = 1.00000$	$3.53554 + 0.92430I$	$8.55174 - 0.47256I$
$u = -1.073950 + 0.558752I$ $a = -0.108378 + 0.818891I$ $b = 1.00000$	$1.64493 + 5.69302I$	$3.10838 - 3.92918I$
$u = -1.073950 - 0.558752I$ $a = -0.108378 - 0.818891I$ $b = 1.00000$	$1.64493 - 5.69302I$	$3.10838 + 3.92918I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 5a^4 + 5a^3 + 7a + 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 0.428550 + 1.039280I$ $b = 0.309916 + 0.549911I$	$-1.31583 + 1.53058I$	$-1.49901 - 3.45976I$
$u = 1.00000$ $a = 0.428550 - 1.039280I$ $b = 0.309916 - 0.549911I$	$-1.31583 - 1.53058I$	$-1.49901 + 3.45976I$
$u = 1.00000$ $a = -0.276511 + 0.728237I$ $b = -1.41878 + 0.21917I$	$4.22763 - 4.40083I$	$2.37737 + 5.82971I$
$u = 1.00000$ $a = -0.276511 - 0.728237I$ $b = -1.41878 - 0.21917I$	$4.22763 + 4.40083I$	$2.37737 - 5.82971I$
$u = 1.00000$ $a = -1.30408$ $b = 1.21774$	0.756147	-3.75670

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^5)(u^6+u^5+\cdots+u+1)(u^{64}-7u^{63}+\cdots+13u-1)$
c_2	$(u+1)^5(u^6+3u^5+5u^4+4u^3+2u^2+u+1)$ $\cdot(u^{64}+29u^{63}+\cdots+37u+1)$
c_3	$u^5(u^6-u^5+\cdots-u+1)(u^{64}-2u^{63}+\cdots-128u+32)$
c_4	$((u+1)^5)(u^6-u^5+\cdots-u+1)(u^{64}-7u^{63}+\cdots+13u-1)$
c_5	$u^6(u^5+u^4+\cdots+u+1)(u^{64}+2u^{63}+\cdots+128u-64)$
c_6	$u^5(u^6+u^5+\cdots+u+1)(u^{64}-2u^{63}+\cdots-128u+32)$
c_7	$(u^5-3u^4+4u^3-u^2-u+1)(u^6-3u^5+5u^4-4u^3+2u^2-u+1)$ $\cdot(u^{64}+3u^{63}+\cdots-2001u-1609)$
c_8	$((u+1)^6)(u^5-u^4+\cdots+u+1)(u^{64}+8u^{63}+\cdots+4u+1)$
c_9	$u^6(u^5-u^4+\cdots+u-1)(u^{64}+2u^{63}+\cdots+128u-64)$
c_{10}, c_{11}	$((u-1)^6)(u^5+u^4+\cdots+u-1)(u^{64}+8u^{63}+\cdots+4u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y-1)^5(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{64}-29y^{63}+\cdots-37y+1)$
c_2	$((y-1)^5)(y^6+y^5+\cdots+3y+1)(y^{64}+19y^{63}+\cdots-3653y+1)$
c_3, c_6	$y^5(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{64}-36y^{63}+\cdots-20992y+1024)$
c_5, c_9	$y^6(y^5+3y^4+\cdots-y-1)(y^{64}+42y^{63}+\cdots+24576y+4096)$
c_7	$(y^5-y^4+8y^3-3y^2+3y-1)(y^6+y^5+5y^4+6y^2+3y+1)$ $\cdot(y^{64}-37y^{63}+\cdots+70611765y+2588881)$
c_8, c_{10}, c_{11}	$((y-1)^6)(y^5-5y^4+\cdots-y-1)(y^{64}-64y^{63}+\cdots+20y+1)$