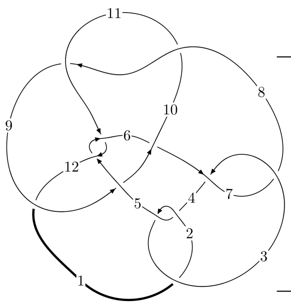
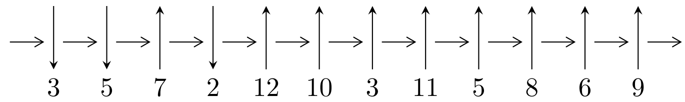
$12n_{0208}$ ($K12n_{0208}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I^u_1 = \langle 6.08795\times10^{88}u^{64} + 5.17375\times10^{89}u^{63} + \cdots + 3.20686\times10^{88}b - 2.93483\times10^{88},$$
$$4.89867\times10^{87}u^{64} + 3.97189\times10^{88}u^{63} + \cdots + 3.56318\times10^{87}a + 1.88337\times10^{88},\ u^{65} + 10u^{64} + \cdots - 11u -$$
$$I^u_2 = \langle -a^6 + 2a^4 - 3a^2 + b + 2,\ a^8 - a^7 - a^6 + 2a^5 + a^4 - 2a^3 + 2a - 1,\ u - 1\rangle$$
$$I^u_3 = \langle -u^5 - 4u^4 - 3u^3 + 2u^2 + 3b + 3u + 1,\ a,\ u^6 + u^5 - u^4 - 2u^3 + u + 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 79 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. $I^u_1 = \langle 6.09\times10^{88}u^{64}+5.17\times10^{89}u^{63}+\cdots+3.21\times10^{88}b-2.93\times10^{88},\ 4.90\times10^{87}u^{64}+3.97\times10^{88}u^{63}+\cdots+3.56\times10^{87}a+1.88\times10^{88},\ u^{65}+10u^{64}+\cdots-11u-1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^2+1\\-u^2\end{pmatrix}$$
$$a_4 = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-1.37480u^{64}-11.1470u^{63}+\cdots+1.59486u-5.28564\\-1.89841u^{64}-16.1334u^{63}+\cdots+13.3331u+0.915173\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-1.37480u^{64}-11.1470u^{63}+\cdots+1.59486u-5.28564\\-5.70850u^{64}-48.6155u^{63}+\cdots+40.5692u+3.51616\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-0.0863684u^{64}-0.904473u^{63}+\cdots-10.1953u+2.73218\\4.03669u^{64}+33.9170u^{63}+\cdots-25.9308u-2.40433\end{pmatrix}$$
$$a_6 = \begin{pmatrix}2.43925u^{64}+21.4354u^{63}+\cdots-19.0226u-2.35834\\-0.459002u^{64}-3.41692u^{63}+\cdots+0.298030u-0.146156\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-3.90567u^{64}-32.4081u^{63}+\cdots+19.3485u-1.64653\\3.74879u^{64}+31.7029u^{63}+\cdots-24.6208u-2.74300\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0.156882u^{64}+0.705201u^{63}+\cdots+5.27226u+4.38953\\6.31020u^{64}+53.4331u^{63}+\cdots-41.9173u-3.84100\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.156882u^{64}-0.705201u^{63}+\cdots-5.27226u-4.38953\\3.74879u^{64}+31.7029u^{63}+\cdots-24.6208u-2.74300\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 8.74709u^{64}+73.9059u^{63}+\cdots-57.9278u+8.32578$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{65} + 68u^{64} + \cdots + 59u + 1$
c_2, c_4	$u^{65} - 10u^{64} + \cdots - 11u + 1$
c_3, c_7	$u^{65} - 2u^{64} + \cdots + 640u - 256$
c_5, c_{11}	$u^{65} + 3u^{64} + \cdots + 3u + 1$
c_6	$9(9u^{65} + 18u^{64} + \cdots - 294572u - 29917)$
c_8, c_{10}	$u^{65} + 8u^{64} + \cdots + 1080u + 81$
c_9	$u^{65} + 2u^{64} + \cdots - 19008u - 5184$
c_{12}	$9(9u^{65} + 42u^{64} + \cdots + 608293u + 315227)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{65} - 132y^{64} + \cdots + 7503y - 1$
c_2, c_4	$y^{65} - 68y^{64} + \cdots + 59y - 1$
c_3, c_7	$y^{65} + 48y^{64} + \cdots + 901120y - 65536$
c_5, c_{11}	$y^{65} + 37y^{64} + \cdots + 11y - 1$
c_6	$81(81y^{65} + 5796y^{64} + \cdots + 1.08032 \times 10^{10}y - 8.95027 \times 10^{8})$
c_8, c_{10}	$y^{65} - 30y^{64} + \cdots + 422172y - 6561$
c_9	$y^{65} + 36y^{64} + \cdots - 462827520y - 26873856$
c_{12}	$81(81y^{65} - 558y^{64} + \cdots - 1.06335 \times 10^{12}y - 9.93681 \times 10^{10})$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.456314 + 0.879364I$ $a = 1.131230 + 0.584791I$ $b = 1.72707 - 0.08743I$	$-5.91253 - 0.89151I$	0
$u = 0.456314 - 0.879364I$ $a = 1.131230 - 0.584791I$ $b = 1.72707 + 0.08743I$	$-5.91253 + 0.89151I$	0
$u = 0.999495 + 0.144370I$ $a = -0.300725 - 0.528299I$ $b = 0.76050 - 4.52365I$	$-0.766193 - 0.710691I$	0
$u = 0.999495 - 0.144370I$ $a = -0.300725 + 0.528299I$ $b = 0.76050 + 4.52365I$	$-0.766193 + 0.710691I$	0
$u = 0.926759 + 0.319800I$ $a = 0.034852 + 0.405826I$ $b = 0.504999 + 0.295737I$	$-1.70444 - 0.86317I$	0
$u = 0.926759 - 0.319800I$ $a = 0.034852 - 0.405826I$ $b = 0.504999 - 0.295737I$	$-1.70444 + 0.86317I$	0
$u = 0.675546 + 0.796801I$ $a = -0.79995 - 1.32569I$ $b = -1.84324 + 0.02675I$	$-6.56044 - 4.64446I$	0
$u = 0.675546 - 0.796801I$ $a = -0.79995 + 1.32569I$ $b = -1.84324 - 0.02675I$	$-6.56044 + 4.64446I$	0
$u = -0.467867 + 0.830676I$ $a = -0.486235 + 0.347007I$ $b = -0.515074 + 0.067949I$	$3.05269 - 0.72062I$	0
$u = -0.467867 - 0.830676I$ $a = -0.486235 - 0.347007I$ $b = -0.515074 - 0.067949I$	$3.05269 + 0.72062I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.08705$ $a = -0.457326$ $b = 2.56265$	-0.408756	0
$u = 0.455394 + 1.021320I$ $a = -0.764046 - 0.815756I$ $b = -1.49226 - 0.53436I$	$-0.92912 - 5.51849I$	0
$u = 0.455394 - 1.021320I$ $a = -0.764046 + 0.815756I$ $b = -1.49226 + 0.53436I$	$-0.92912 + 5.51849I$	0
$u = -0.968998 + 0.625550I$ $a = 0.061077 - 0.528566I$ $b = 0.485762 - 0.040171I$	$1.52187 + 6.09633I$	0
$u = -0.968998 - 0.625550I$ $a = 0.061077 + 0.528566I$ $b = 0.485762 + 0.040171I$	$1.52187 - 6.09633I$	0
$u = 0.527094 + 1.026630I$ $a = 0.794808 + 1.110310I$ $b = 1.76347 + 0.85154I$	$-4.34514 - 11.16830I$	0
$u = 0.527094 - 1.026630I$ $a = 0.794808 - 1.110310I$ $b = 1.76347 - 0.85154I$	$-4.34514 + 11.16830I$	0
$u = 0.857226 + 0.787857I$ $a = 0.559234 + 0.678465I$ $b = 1.170350 - 0.209373I$	$-2.21134 - 0.65096I$	0
$u = 0.857226 - 0.787857I$ $a = 0.559234 - 0.678465I$ $b = 1.170350 + 0.209373I$	$-2.21134 + 0.65096I$	0
$u = -0.802152$ $a = 1.20099$ $b = -0.170389$	5.22479	24.0830

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.201410 + 0.069070I$ $a = 0.819602 - 0.047913I$ $b = 0.256683 + 1.354200I$	$-2.66486 - 2.32248I$	0
$u = 1.201410 - 0.069070I$ $a = 0.819602 + 0.047913I$ $b = 0.256683 - 1.354200I$	$-2.66486 + 2.32248I$	0
$u = 0.682090 + 0.350060I$ $a = -0.700589 + 0.542937I$ $b = 0.70615 + 2.83263I$	$-1.45078 + 0.59119I$	$2.85675 + 3.51070I$
$u = 0.682090 - 0.350060I$ $a = -0.700589 - 0.542937I$ $b = 0.70615 - 2.83263I$	$-1.45078 - 0.59119I$	$2.85675 - 3.51070I$
$u = 0.805635 + 0.937608I$ $a = -0.980560 - 0.441826I$ $b = -1.26976 + 0.73991I$	$-5.14289 + 4.65238I$	0
$u = 0.805635 - 0.937608I$ $a = -0.980560 + 0.441826I$ $b = -1.26976 - 0.73991I$	$-5.14289 - 4.65238I$	0
$u = -0.749176 + 0.103391I$ $a = -1.04340 - 1.06042I$ $b = 0.210161 - 0.079232I$	$1.17561 + 6.59366I$	$15.1731 - 8.7497I$
$u = -0.749176 - 0.103391I$ $a = -1.04340 + 1.06042I$ $b = 0.210161 + 0.079232I$	$1.17561 - 6.59366I$	$15.1731 + 8.7497I$
$u = 0.417480 + 0.517521I$ $a = -1.49219 + 1.44433I$ $b = 1.31694 + 1.34577I$	$-0.61197 - 3.88642I$	$5.46114 + 8.74938I$
$u = 0.417480 - 0.517521I$ $a = -1.49219 - 1.44433I$ $b = 1.31694 - 1.34577I$	$-0.61197 + 3.88642I$	$5.46114 - 8.74938I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.48357 + 0.08066I$ $a = -0.203578 - 0.981777I$ $b = -0.810009 - 0.273620I$	$-8.45370 + 1.77642I$	0
$u = 1.48357 - 0.08066I$ $a = -0.203578 + 0.981777I$ $b = -0.810009 + 0.273620I$	$-8.45370 - 1.77642I$	0
$u = -1.49118 + 0.02637I$ $a = -0.46060 + 1.34932I$ $b = 0.464845 - 0.172950I$	$-4.34300 + 1.86014I$	0
$u = -1.49118 - 0.02637I$ $a = -0.46060 - 1.34932I$ $b = 0.464845 + 0.172950I$	$-4.34300 - 1.86014I$	0
$u = 0.384990 + 0.309899I$ $a = 1.60352 - 0.03292I$ $b = -1.17235 - 0.91495I$	$1.19155 - 0.95389I$	$10.21513 + 0.37317I$
$u = 0.384990 - 0.309899I$ $a = 1.60352 + 0.03292I$ $b = -1.17235 + 0.91495I$	$1.19155 + 0.95389I$	$10.21513 - 0.37317I$
$u = -1.52385 + 0.08329I$ $a = -1.032020 + 0.513949I$ $b = 1.42841 - 0.28527I$	$-5.31966 + 2.30754I$	0
$u = -1.52385 - 0.08329I$ $a = -1.032020 - 0.513949I$ $b = 1.42841 + 0.28527I$	$-5.31966 - 2.30754I$	0
$u = -1.52244 + 0.13410I$ $a = 1.48434 + 0.04778I$ $b = -1.60893 + 0.57560I$	$-7.12119 + 6.12750I$	0
$u = -1.52244 - 0.13410I$ $a = 1.48434 - 0.04778I$ $b = -1.60893 - 0.57560I$	$-7.12119 - 6.12750I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.55086 + 0.16341I$ $a = -0.059513 + 0.770911I$ $b = 0.538883 + 0.255788I$	$-3.79735 - 2.57206I$	0
$u = 1.55086 - 0.16341I$ $a = -0.059513 - 0.770911I$ $b = 0.538883 - 0.255788I$	$-3.79735 + 2.57206I$	0
$u = -1.53316 + 0.36124I$ $a = 0.156811 + 0.866115I$ $b = -1.71885 + 0.05723I$	$-12.27680 + 5.48243I$	0
$u = -1.53316 - 0.36124I$ $a = 0.156811 - 0.866115I$ $b = -1.71885 - 0.05723I$	$-12.27680 - 5.48243I$	0
$u = -1.59050 + 0.05802I$ $a = 0.423270 - 0.120131I$ $b = -3.06479 + 0.46878I$	$-9.22847 + 0.59840I$	0
$u = -1.59050 - 0.05802I$ $a = 0.423270 + 0.120131I$ $b = -3.06479 - 0.46878I$	$-9.22847 - 0.59840I$	0
$u = 1.60342 + 0.11053I$ $a = 0.272856 - 0.890825I$ $b = -0.447120 - 0.410542I$	$-7.04530 - 8.03742I$	0
$u = 1.60342 - 0.11053I$ $a = 0.272856 + 0.890825I$ $b = -0.447120 + 0.410542I$	$-7.04530 + 8.03742I$	0
$u = -1.56938 + 0.38944I$ $a = -0.329304 - 0.941370I$ $b = 1.79802 - 0.50487I$	$-7.46828 + 10.68780I$	0
$u = -1.56938 - 0.38944I$ $a = -0.329304 + 0.941370I$ $b = 1.79802 + 0.50487I$	$-7.46828 - 10.68780I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.61283+0.24938I$ $a=-0.355232-1.312240I$ $b=\ \ 1.67813+0.08130I$	$-14.1808+8.5511I$	0
$u=-1.61283-0.24938I$ $a=-0.355232+1.312240I$ $b=\ \ 1.67813-0.08130I$	$-14.1808-8.5511I$	0
$u=-1.59165+0.38058I$ $a=\ \ 0.364333+1.077600I$ $b=-2.06415+0.66485I$	$-11.1904+16.3453I$	0
$u=-1.59165-0.38058I$ $a=\ \ 0.364333-1.077600I$ $b=-2.06415-0.66485I$	$-11.1904-16.3453I$	0
$u=-1.63466+0.20895I$ $a=\ \ 0.388083+0.905964I$ $b=-1.42883+0.12631I$	$-10.53090+4.21781I$	0
$u=-1.63466-0.20895I$ $a=\ \ 0.388083-0.905964I$ $b=-1.42883-0.12631I$	$-10.53090-4.21781I$	0
$u=\ \ 0.191133+0.275831I$ $a=\ \ 2.96128+1.01345I$ $b=-0.373282-0.817737I$	$1.45815-1.19485I$	$9.19775+4.74594I$
$u=\ \ 0.191133-0.275831I$ $a=\ \ 2.96128-1.01345I$ $b=-0.373282+0.817737I$	$1.45815+1.19485I$	$9.19775-4.74594I$
$u=-0.295126+0.054794I$ $a=\ \ 2.87388-2.22523I$ $b=\ \ 0.487604-0.180053I$	$-2.55567-2.51492I$	$6.71386+3.00902I$
$u=-0.295126-0.054794I$ $a=\ \ 2.87388+2.22523I$ $b=\ \ 0.487604+0.180053I$	$-2.55567+2.51492I$	$6.71386-3.00902I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.70229 + 0.22811I$ $a = -0.005540 - 0.755493I$ $b = 1.037080 + 0.107357I$	$-13.75280 - 0.18156I$	0
$u = -1.70229 - 0.22811I$ $a = -0.005540 + 0.755493I$ $b = 1.037080 - 0.107357I$	$-13.75280 + 0.18156I$	0
$u = -0.052582 + 0.159560I$ $a = -5.33288 - 2.93386I$ $b = -0.380996 + 0.381397I$	$1.04936 + 1.32007I$	$10.95788 - 0.41796I$
$u = -0.052582 - 0.159560I$ $a = -5.33288 + 2.93386I$ $b = -0.380996 - 0.381397I$	$1.04936 - 1.32007I$	$10.95788 + 0.41796I$
$u = -0.110381$ $a = -4.90925$ $b = -0.349777$	0.709590	14.3470

II.

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^8$
c_3, c_7	y^8
c_5, c_{11}	$y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1$
c_6, c_8, c_{10}	$y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1$
c_9, c_{12}	$y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 0.570868 + 0.730671I$ $b = -0.89335 + 2.72444I$	$-0.604279 - 1.131230I$	$6.13774 + 5.30650I$
$u = 1.00000$ $a = 0.570868 - 0.730671I$ $b = -0.89335 - 2.72444I$	$-0.604279 + 1.131230I$	$6.13774 - 5.30650I$
$u = 1.00000$ $a = -0.855237 + 0.665892I$ $b = 0.195703 - 0.910609I$	$-3.80435 - 2.57849I$	$-1.88107 + 3.45077I$
$u = 1.00000$ $a = -0.855237 - 0.665892I$ $b = 0.195703 + 0.910609I$	$-3.80435 + 2.57849I$	$-1.88107 - 3.45077I$
$u = 1.00000$ $a = -1.09818$ $b = 0.463171$	4.85780	0.988100
$u = 1.00000$ $a = 1.031810 + 0.655470I$ $b = -0.471534 - 0.216354I$	$0.73474 + 6.44354I$	$-1.17016 - 2.68172I$
$u = 1.00000$ $a = 1.031810 - 0.655470I$ $b = -0.471534 + 0.216354I$	$0.73474 - 6.44354I$	$-1.17016 + 2.68172I$
$u = 1.00000$ $a = 0.603304$ $b = -1.12481$	-0.799899	1.83890

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

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2+1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ -u^3+u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ \frac{1}{3}u^5+\frac{4}{3}u^4+\cdots-u-\frac{1}{3} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ \frac{1}{3}u^5+\frac{4}{3}u^4+\cdots-u-\frac{1}{3} \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^2+1 \\ \frac{7}{9}u^5+\frac{14}{9}u^4+\cdots-\frac{11}{9}u-\frac{5}{9} \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^5-2u^3+u \\ \frac{4}{3}u^5+\frac{4}{9}u^4+\cdots+\frac{10}{9}u-\frac{1}{9} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^5-2u^3+u \\ u^5-u^3+u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -2u^5+3u^3-2u \\ -\frac{2}{3}u^5+\frac{4}{3}u^4+\cdots-2u-\frac{1}{3} \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 2u^5-3u^3+2u \\ u^5-u^3+u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{1}{9}u^5+\frac{25}{9}u^4+\frac{4}{3}u^3-\frac{53}{9}u^2-\frac{4}{3}u+\frac{116}{9}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1$
c_2, c_7	$u^6 + u^5 - u^4 - 2u^3 + u + 1$
c_3, c_4	$u^6 - u^5 - u^4 + 2u^3 - u + 1$
c_6	$9(9u^6 + 12u^5 + 2u^4 - u^3 + 4u^2 + 4u + 1)$
c_8	$(u+1)^6$
c_9	u^6
c_{10}	$(u-1)^6$
c_{11}	$u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1$
c_{12}	$9(9u^6 - 30u^5 + 41u^4 - 30u^3 + 15u^2 - 5u + 1)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_{11}	$y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1$
c_2, c_3, c_4 c_7	$y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1$
c_6	$81(81y^6 - 108y^5 + 100y^4 - 63y^3 + 28y^2 - 8y + 1)$
c_8, c_{10}	$(y-1)^6$
c_9	y^6
c_{12}	$81(81y^6 - 162y^5 + 151y^4 + 48y^3 + 7y^2 + 5y + 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.002190 + 0.295542I$ $a = 0$ $b = -0.49282 + 2.03411I$	$-0.245672 - 0.924305I$	$8.52440 + 0.42550I$
$u = 1.002190 - 0.295542I$ $a = 0$ $b = -0.49282 - 2.03411I$	$-0.245672 + 0.924305I$	$8.52440 - 0.42550I$
$u = -0.428243 + 0.664531I$ $a = 0$ $b = 0.384438 + 0.080017I$	$3.53554 - 0.92430I$	$14.9081 + 3.3454I$
$u = -0.428243 - 0.664531I$ $a = 0$ $b = 0.384438 - 0.080017I$	$3.53554 + 0.92430I$	$14.9081 - 3.3454I$
$u = -1.073950 + 0.558752I$ $a = 0$ $b = -0.391622 - 0.105509I$	$1.64493 + 5.69302I$	$7.23419 + 3.25470I$
$u = -1.073950 - 0.558752I$ $a = 0$ $b = -0.391622 + 0.105509I$	$1.64493 - 5.69302I$	$7.23419 - 3.25470I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^8(u^6-3u^5+5u^4-4u^3+2u^2-u+1)$ $\cdot(u^{65}+68u^{64}+\cdots+59u+1)$
c_2	$((u-1)^8)(u^6+u^5+\cdots+u+1)(u^{65}-10u^{64}+\cdots-11u+1)$
c_3	$u^8(u^6-u^5+\cdots-u+1)(u^{65}-2u^{64}+\cdots+640u-256)$
c_4	$((u+1)^8)(u^6-u^5+\cdots-u+1)(u^{65}-10u^{64}+\cdots-11u+1)$
c_5	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)$ $\cdot(u^8+3u^7+7u^6+10u^5+11u^4+10u^3+6u^2+4u+1)$ $\cdot(u^{65}+3u^{64}+\cdots+3u+1)$
c_6	$81(9u^6+12u^5+2u^4-u^3+4u^2+4u+1)$ $\cdot(u^8-u^7-3u^6+2u^5+3u^4-2u-1)$ $\cdot(9u^{65}+18u^{64}+\cdots-294572u-29917)$
c_7	$u^8(u^6+u^5+\cdots+u+1)(u^{65}-2u^{64}+\cdots+640u-256)$
c_8	$(u+1)^6(u^8-u^7-3u^6+2u^5+3u^4-2u-1)$ $\cdot(u^{65}+8u^{64}+\cdots+1080u+81)$
c_9	$u^6(u^8-u^7-u^6+2u^5+u^4-2u^3+2u-1)$ $\cdot(u^{65}+2u^{64}+\cdots-19008u-5184)$
c_{10}	$(u-1)^6(u^8+u^7-3u^6-2u^5+3u^4+2u-1)$ $\cdot(u^{65}+8u^{64}+\cdots+1080u+81)$
c_{11}	$(u^6+3u^5+5u^4+4u^3+2u^2+u+1)$ $\cdot(u^8-3u^7+7u^6-10u^5+11u^4-10u^3+6u^2-4u+1)$ $\cdot(u^{65}+3u^{64}+\cdots+3u+1)$
c_{12}	$81(9u^6-30u^5+41u^4-30u^3+15u^2-5u+1)$ $\cdot(u^8-u^7-u^6+2u^5+u^4-2u^3+2u-1)$ $\cdot(9u^{65}+42u^{64}+\cdots+608293u+315227)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^8)(y^6+y^5+\cdots+3y+1)(y^{65}-132y^{64}+\cdots+7503y-1)$
c_2, c_4	$(y-1)^8(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot\,(y^{65}-68y^{64}+\cdots+59y-1)$
c_3, c_7	$y^8(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot\,(y^{65}+48y^{64}+\cdots+901120y-65536)$
c_5, c_{11}	$(y^6+y^5+5y^4+6y^2+3y+1)$ $\cdot\,(y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1)$ $\cdot\,(y^{65}+37y^{64}+\cdots+11y-1)$
c_6	$6561(81y^6-108y^5+100y^4-63y^3+28y^2-8y+1)$ $\cdot\,(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot\,(81y^{65}+5796y^{64}+\cdots+10803168570y-895026889)$
c_8, c_{10}	$(y-1)^6(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot\,(y^{65}-30y^{64}+\cdots+422172y-6561)$
c_9	$y^6(y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1)$ $\cdot\,(y^{65}+36y^{64}+\cdots-462827520y-26873856)$
c_{12}	$6561(81y^6-162y^5+151y^4+48y^3+7y^2+5y+1)$ $\cdot\,(y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1)$ $\cdot\,(81y^{65}-558y^{64}+\cdots-1063347056943y-99368061529)$