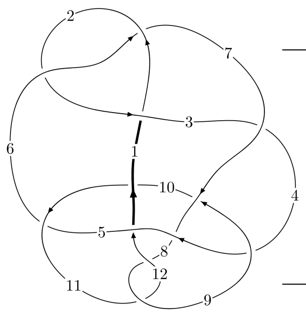
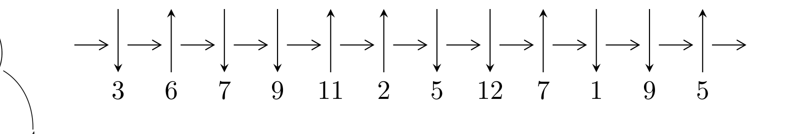
$12n_{0286}$ $(K12n_{0286})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle &-2.30879 \times 10^{95} u^{27} - 4.77843 \times 10^{95} u^{26} + \cdots + 2.74748 \times 10^{100} b + 7.48326 \times 10^{100},\\
&3.53819 \times 10^{99} u^{27} + 1.05291 \times 10^{100} u^{26} + \cdots + 2.89208 \times 10^{105} a - 7.68762 \times 10^{105},\\
&u^{28} + u^{27} + \cdots + 29042u + 105263\rangle\\
I_2^u = \langle &-597082u^{11} + 1807096u^{10} + \cdots + 894777b + 933761,\\
&-3081635u^{11} + 7464402u^{10} + \cdots + 894777a - 1553044,\\
&u^{12} - 2u^{11} - 2u^{10} + 10u^9 - 10u^8 - 22u^7 + 45u^6 + 78u^5 + 82u^4 + 52u^3 + 22u^2 + 6u + 1\rangle\\
I_3^u = \langle &b,\ a - 1,\ u^4 + u^3 + 2u^2 + 2u + 1\rangle\\
I_4^u = \langle &b,\ a - 1,\ u^2 - u + 1\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 46 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. $\boldsymbol{I_1^u = \langle -2.31 \times 10^{95} u^{27} - 4.78 \times 10^{95} u^{26} + \cdots + 2.75 \times 10^{100} b + 7.48 \times 10^{100},\ 3.54 \times 10^{99} u^{27} + 1.05 \times 10^{100} u^{26} + \cdots + 2.89 \times 10^{105} a - 7.69 \times 10^{105},\ u^{28} + u^{27} + \cdots + 29042u + 105263 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.22341 \times 10^{-6} u^{27} - 3.64067 \times 10^{-6} u^{26} + \cdots + 1.61930u + 2.65817 \\ 8.40330 \times 10^{-6} u^{27} + 0.0000173921 u^{26} + \cdots - 1.76837u - 2.72368 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1.22341 \times 10^{-6} u^{27} - 3.64067 \times 10^{-6} u^{26} + \cdots + 1.61930u + 2.65817 \\ 8.28315 \times 10^{-6} u^{27} + 0.0000219622 u^{26} + \cdots - 1.56939u - 2.46924 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 2.12062 \times 10^{-6} u^{27} + 0.0000167463 u^{26} + \cdots - 1.35559u - 0.0779815 \\ 8.91847 \times 10^{-6} u^{27} + 6.73686 \times 10^{-6} u^{26} + \cdots - 0.963436u - 1.82371 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.0000110391 u^{27} + 0.0000234832 u^{26} + \cdots - 2.31902u - 1.90169 \\ 8.91847 \times 10^{-6} u^{27} + 6.73686 \times 10^{-6} u^{26} + \cdots - 0.963436u - 1.82371 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0000405549 u^{27} + 0.0000479060 u^{26} + \cdots - 5.29456u - 0.938872 \\ -0.0000209981 u^{27} - 0.0000223788 u^{26} + \cdots + 0.490410u - 0.198573 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0000195568 u^{27} + 0.0000255272 u^{26} + \cdots - 4.80415u - 1.13744 \\ -0.0000209981 u^{27} - 0.0000223788 u^{26} + \cdots + 0.490410u - 0.198573 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2.70625 \times 10^{-6} u^{27} - 0.0000166750 u^{26} + \cdots + 3.86512u + 0.922256 \\ 0.0000108644 u^{27} + 0.0000140068 u^{26} + \cdots - 0.974007u + 1.33386 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0000225051 u^{27} - 0.0000303714 u^{26} + \cdots + 5.43569u + 0.658137 \\ 0.0000146235 u^{27} + 0.0000153805 u^{26} + \cdots - 0.424743u + 0.764753 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 5.66037 \times 10^{-6} u^{27} + 0.0000117298 u^{26} + \cdots - 1.06635u - 2.99223 \\ 6.60870 \times 10^{-6} u^{27} + 0.0000101990 u^{26} + \cdots - 0.224821u + 1.16081 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.0000493674u^{27} - 0.0000112265u^{26} + \cdots + 11.2065u + 0.643499$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} + 12u^{27} + \cdots + 19u + 4$
c_2, c_6	$u^{28} + 2u^{27} + \cdots + 5u + 2$
c_3	$u^{28} - 2u^{27} + \cdots + 64u + 16$
c_4	$u^{28} + u^{27} + \cdots - 122u + 17$
c_5	$u^{28} + u^{27} + \cdots - 68u + 17$
c_7	$u^{28} + u^{27} + \cdots + 29042u + 105263$
c_8, c_{11}	$u^{28} - 5u^{27} + \cdots + 613u + 1274$
c_9	$u^{28} + 13u^{27} + \cdots - 12374u + 2437$
c_{10}	$u^{28} - 7u^{27} + \cdots + 1306u + 37$
c_{12}	$u^{28} - 3u^{27} + \cdots + 180u + 73$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} + 8y^{27} + \cdots + 191y + 16$
c_2, c_6	$y^{28} + 12y^{27} + \cdots + 19y + 4$
c_3	$y^{28} + 4y^{27} + \cdots + 256y + 256$
c_4	$y^{28} + 49y^{27} + \cdots - 4718y + 289$
c_5	$y^{28} - 3y^{27} + \cdots - 1326y + 289$
c_7	$y^{28} + 89y^{27} + \cdots - 103896967394y + 11080299169$
c_8, c_{11}	$y^{28} + 51y^{27} + \cdots + 22472147y + 1623076$
c_9	$y^{28} - 61y^{27} + \cdots - 43826174y + 5938969$
c_{10}	$y^{28} + 41y^{27} + \cdots - 885642y + 1369$
c_{12}	$y^{28} - 69y^{27} + \cdots + 39870y + 5329$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.121690 + 0.166562I$ $a = -0.309380 + 0.530304I$ $b = 0.595060 + 0.738659I$	$-2.29476 - 5.76614I$	$-7.02724 + 7.83201I$
$u = 1.121690 - 0.166562I$ $a = -0.309380 - 0.530304I$ $b = 0.595060 - 0.738659I$	$-2.29476 + 5.76614I$	$-7.02724 - 7.83201I$
$u = -0.500208 + 0.695651I$ $a = 0.484337 - 0.272007I$ $b = -0.109132 - 0.472868I$	$0.024558 + 1.375320I$	$-0.33642 - 5.32848I$
$u = -0.500208 - 0.695651I$ $a = 0.484337 + 0.272007I$ $b = -0.109132 + 0.472868I$	$0.024558 - 1.375320I$	$-0.33642 + 5.32848I$
$u = -0.723454 + 0.279934I$ $a = -0.021317 - 0.702292I$ $b = 0.371378 - 0.564796I$	$-0.40304 + 1.51323I$	$-3.09504 - 4.74756I$
$u = -0.723454 - 0.279934I$ $a = -0.021317 + 0.702292I$ $b = 0.371378 + 0.564796I$	$-0.40304 - 1.51323I$	$-3.09504 + 4.74756I$
$u = 0.600783 + 0.435618I$ $a = -0.863994 - 0.714884I$ $b = 0.764412 - 0.323762I$	$-3.61300 - 0.81317I$	$-11.74702 + 0.23139I$
$u = 0.600783 - 0.435618I$ $a = -0.863994 + 0.714884I$ $b = 0.764412 + 0.323762I$	$-3.61300 + 0.81317I$	$-11.74702 - 0.23139I$
$u = 0.647360 + 0.238923I$ $a = 0.876544 - 0.656944I$ $b = -0.330900 + 1.274360I$	$5.75419 - 1.55004I$	$3.99662 + 0.73447I$
$u = 0.647360 - 0.238923I$ $a = 0.876544 + 0.656944I$ $b = -0.330900 - 1.274360I$	$5.75419 + 1.55004I$	$3.99662 - 0.73447I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.055570 + 0.863909I$ $a = \quad 0.525304 - 0.025593I$ $b = -0.600723 - 0.856166I$	$0.042186 + 1.135200I$	$-1.07637 - 1.79124I$
$u = -1.055570 - 0.863909I$ $a = \quad 0.525304 + 0.025593I$ $b = -0.600723 + 0.856166I$	$0.042186 - 1.135200I$	$-1.07637 + 1.79124I$
$u = -0.501357 + 0.390582I$ $a = \quad 0.349177 + 0.948601I$ $b = -0.232725 - 1.265600I$	$4.40104 + 6.85882I$	$1.45906 - 6.07740I$
$u = -0.501357 - 0.390582I$ $a = \quad 0.349177 - 0.948601I$ $b = -0.232725 + 1.265600I$	$4.40104 - 6.85882I$	$1.45906 + 6.07740I$
$u = \quad 1.41576 + 0.06600I$ $a = \quad 0.768140 + 0.147819I$ $b = -0.65731 + 1.30176I$	$4.65876 + 1.17367I$	$4.17772 - 0.51764I$
$u = \quad 1.41576 - 0.06600I$ $a = \quad 0.768140 - 0.147819I$ $b = -0.65731 - 1.30176I$	$4.65876 - 1.17367I$	$4.17772 + 0.51764I$
$u = -1.94268 + 0.04442I$ $a = \quad 0.638810 - 0.235824I$ $b = -0.83183 - 1.35611I$	$2.41032 - 6.19363I$	$1.11878 + 5.14377I$
$u = -1.94268 - 0.04442I$ $a = \quad 0.638810 + 0.235824I$ $b = -0.83183 + 1.35611I$	$2.41032 + 6.19363I$	$1.11878 - 5.14377I$
$u = \quad 0.09793 + 2.80940I$ $a = \quad 0.136557 - 0.869531I$ $b = -0.31138 - 1.92352I$	$15.5072 + 3.1427I$	0
$u = \quad 0.09793 - 2.80940I$ $a = \quad 0.136557 + 0.869531I$ $b = -0.31138 + 1.92352I$	$15.5072 - 3.1427I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.07521 + 3.00511I$ $a = 0.107635 + 0.836138I$ $b = -0.29648 + 1.95384I$	$17.1357 + 2.5929I$	0
$u = -0.07521 - 3.00511I$ $a = 0.107635 - 0.836138I$ $b = -0.29648 - 1.95384I$	$17.1357 - 2.5929I$	0
$u = 0.39997 + 3.28123I$ $a = 0.128139 - 0.754642I$ $b = -0.33448 - 2.02071I$	$10.62630 - 4.32257I$	0
$u = 0.39997 - 3.28123I$ $a = 0.128139 + 0.754642I$ $b = -0.33448 + 2.02071I$	$10.62630 + 4.32257I$	0
$u = -0.08895 + 3.46874I$ $a = 0.063138 + 0.756807I$ $b = -0.26759 + 2.03266I$	$16.6423 + 6.6674I$	0
$u = -0.08895 - 3.46874I$ $a = 0.063138 - 0.756807I$ $b = -0.26759 - 2.03266I$	$16.6423 - 6.6674I$	0
$u = 0.10393 + 3.63119I$ $a = 0.052461 - 0.730571I$ $b = -0.25830 - 2.06254I$	$14.6448 - 12.3104I$	0
$u = 0.10393 - 3.63119I$ $a = 0.052461 + 0.730571I$ $b = -0.25830 + 2.06254I$	$14.6448 + 12.3104I$	0

II.
$\boldsymbol{I_2^u = \langle -5.97\times 10^5u^{11} + 1.81\times 10^6u^{10} + \cdots + 8.95\times 10^5b + 9.34\times 10^5,\ -3.08\times 10^6u^{11} + 7.46\times 10^6u^{10} + \cdots + 8.95\times 10^5a - 1.55\times 10^6,\ u^{12} - 2u^{11} + \cdots + 6u + 1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 3.44403u^{11} - 8.34219u^{10} + \cdots + 18.7046u + 1.73568 \\ 0.667297u^{11} - 2.01960u^{10} + \cdots - 4.48583u - 1.04357 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 3.44403u^{11} - 8.34219u^{10} + \cdots + 18.7046u + 1.73568 \\ 0.878181u^{11} - 2.42594u^{10} + \cdots + 0.794990u + 0.410573 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 2.27082u^{11} - 4.73048u^{10} + \cdots + 28.1706u + 3.21957 \\ 0.667297u^{11} - 2.01960u^{10} + \cdots - 4.48583u - 2.04357 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 2.93811u^{11} - 6.75008u^{10} + \cdots + 23.6848u + 1.17600 \\ 0.667297u^{11} - 2.01960u^{10} + \cdots - 4.48583u - 2.04357 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^{11} - 2u^{10} + \cdots + 22u + 6 \\ 1.45414u^{11} - 3.11917u^{10} + \cdots + 19.9285u + 3.44403 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 2.45414u^{11} - 5.11917u^{10} + \cdots + 41.9285u + 9.44403 \\ 1.45414u^{11} - 3.11917u^{10} + \cdots + 19.9285u + 3.44403 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.230870u^{11} - 0.441754u^{10} + \cdots + 7.11887u + 3.22327 \\ 0.230870u^{11} - 0.441754u^{10} + \cdots + 7.11887u + 2.22327 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^{11} - 2u^{10} + \cdots + 22u + 6 \\ 0.769130u^{11} - 1.55825u^{10} + \cdots + 14.8811u + 2.77673 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 2.27082u^{11} - 4.73048u^{10} + \cdots + 28.1706u + 3.21957 \\ 1.00165u^{11} - 2.54029u^{10} + \cdots + 1.93274u - 0.778272 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{2135288}{894777}u^{11} - \frac{2175584}{298259}u^{10} + \cdots - \frac{5146736}{298259}u - \frac{4858220}{894777}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1)^2$
c_2, c_6, c_8 c_{11}	$u^{12} + 3u^{10} + 5u^8 + 4u^6 + 2u^4 + u^2 + 1$
c_3	$u^{12} - u^{10} + 5u^8 + 6u^4 - 3u^2 + 1$
c_4, c_5	$(u^2 + 1)^6$
c_7	$u^{12} - 2u^{11} + \cdots + 6u + 1$
c_9	$u^{12} - 12u^{11} + \cdots - 116u + 17$
c_{10}	$u^{12} - 6u^{11} + \cdots + 2u + 1$
c_{12}	$u^{12} - 2u^{11} + \cdots - 56u + 17$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^6+y^5+5y^4+6y^2+3y+1)^2$
c_2, c_6, c_8 c_{11}	$(y^6+3y^5+5y^4+4y^3+2y^2+y+1)^2$
c_3	$(y^6-y^5+5y^4+6y^2-3y+1)^2$
c_4, c_5	$(y+1)^{12}$
c_7	$y^{12}-8y^{11}+\cdots+8y+1$
c_9	$y^{12}-6y^{11}+\cdots+620y+289$
c_{10}	$y^{12}+8y^{11}+\cdots-8y+1$
c_{12}	$y^{12}+6y^{11}+\cdots-620y+289$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.140919+0.593678I$ $a=\ \ 0.372841-0.809839I$ $b=\ \ 0.664531+0.428243I$	$-1.89061+0.92430I$	$-5.71672-0.79423I$
$u=-0.140919-0.593678I$ $a=\ \ 0.372841+0.809839I$ $b=\ \ 0.664531-0.428243I$	$-1.89061-0.92430I$	$-5.71672+0.79423I$
$u=-0.409813+0.212587I$ $a=\ \ 1.22433+2.35408I$ $b=\ \ 0.295542+1.002190I$	$1.89061-0.92430I$	$1.71672+0.79423I$
$u=-0.409813-0.212587I$ $a=\ \ 1.22433-2.35408I$ $b=\ \ 0.295542-1.002190I$	$1.89061+0.92430I$	$1.71672-0.79423I$
$u=-0.126193+0.399916I$ $a=-1.77409-2.12563I$ $b=\ \ 0.558752-1.073950I$	$5.69302I$	$-2.00000-5.51057I$
$u=-0.126193-0.399916I$ $a=-1.77409+2.12563I$ $b=\ \ 0.558752+1.073950I$	$-5.69302I$	$-2.00000+5.51057I$
$u=-1.59457+0.37850I$ $a=\ \ 0.777546-0.627907I$ $b=-0.295542-1.002190I$	$1.89061-0.92430I$	$1.71672+0.79423I$
$u=-1.59457-0.37850I$ $a=\ \ 0.777546+0.627907I$ $b=-0.295542+1.002190I$	$1.89061+0.92430I$	$1.71672-0.79423I$
$u=\ \ 0.99741+1.92274I$ $a=\ \ 0.773186+0.178358I$ $b=-0.664531+0.428243I$	$-1.89061-0.92430I$	$-5.71672+0.79423I$
$u=\ \ 0.99741-1.92274I$ $a=\ \ 0.773186-0.178358I$ $b=-0.664531-0.428243I$	$-1.89061+0.92430I$	$-5.71672-0.79423I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 2.27409 + 0.71759I$ $a = 0.626193 + 0.487844I$ $b = -0.558752 + 1.073950I$	$5.69302I$	$-2.00000 - 5.51057I$
$u = 2.27409 - 0.71759I$ $a = 0.626193 - 0.487844I$ $b = -0.558752 - 1.073950I$	$-5.69302I$	$-2.00000 + 5.51057I$

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

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^2+1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^3+2u \\ u^3+u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2u^3-u^2-3u-1 \\ -u^3-u-1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.621744 + 0.440597I$ $a = \quad 1.00000$ $b = \quad 0$	$2.02988I$	$0. - 3.46410I$
$u = -0.621744 - 0.440597I$ $a = \quad 1.00000$ $b = \quad 0$	$-2.02988I$	$0. + 3.46410I$
$u = \quad 0.121744 + 1.306620I$ $a = \quad 1.00000$ $b = \quad 0$	$-2.02988I$	$0. + 3.46410I$
$u = \quad 0.121744 - 1.306620I$ $a = \quad 1.00000$ $b = \quad 0$	$2.02988I$	$0. - 3.46410I$

IV. $I^u_4 = \langle b,\ a-1,\ u^2-u+1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u-1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ u-1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ u-1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ u-1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u-1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 2u-1 \\ u-1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u \\ -u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u \\ u-1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u-1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_{10}	$u^2 + u + 1$
c_2, c_4, c_5 c_6, c_7, c_9 c_{12}	$u^2 - u + 1$
c_8, c_{11}	u^2

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_5, c_6 c_7, c_9, c_{10} c_{12}	$y^2 + y + 1$
c_8, c_{11}	y^2

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.500000 + 0.866025I$		
$a =$	1.00000	$2.02988I$	$0. - 3.46410I$
$b =$	0		
$u =$	$0.500000 - 0.866025I$		
$a =$	1.00000	$-2.02988I$	$0. + 3.46410I$
$b =$	0		

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^2+u+1)^3(u^6-3u^5+5u^4-4u^3+2u^2-u+1)^2$ $\cdot(u^{28}+12u^{27}+\cdots+19u+4)$
c_2, c_6	$(u^2-u+1)^3(u^{12}+3u^{10}+5u^8+4u^6+2u^4+u^2+1)$ $\cdot(u^{28}+2u^{27}+\cdots+5u+2)$
c_3	$(u^2+u+1)^3(u^{12}-u^{10}+5u^8+6u^4-3u^2+1)$ $\cdot(u^{28}-2u^{27}+\cdots+64u+16)$
c_4	$(u^2+1)^6(u^2-u+1)(u^4+u^3+2u^2+2u+1)$ $\cdot(u^{28}+u^{27}+\cdots-122u+17)$
c_5	$((u^2+1)^6)(u^2-u+1)(u^4+u^3+\cdots+2u+1)(u^{28}+u^{27}+\cdots-68u+17)$
c_7	$(u^2-u+1)(u^4+u^3+2u^2+2u+1)(u^{12}-2u^{11}+\cdots+6u+1)$ $\cdot(u^{28}+u^{27}+\cdots+29042u+105263)$
c_8, c_{11}	$u^6(u^{12}+3u^{10}+5u^8+4u^6+2u^4+u^2+1)$ $\cdot(u^{28}-5u^{27}+\cdots+613u+1274)$
c_9	$(u^2-u+1)(u^4-3u^3+2u^2+1)(u^{12}-12u^{11}+\cdots-116u+17)$ $\cdot(u^{28}+13u^{27}+\cdots-12374u+2437)$
c_{10}	$(u^2+u+1)(u^4+3u^3+2u^2+1)(u^{12}-6u^{11}+\cdots+2u+1)$ $\cdot(u^{28}-7u^{27}+\cdots+1306u+37)$
c_{12}	$(u^2-u+1)(u^4+u^3+2u^2+2u+1)(u^{12}-2u^{11}+\cdots-56u+17)$ $\cdot(u^{28}-3u^{27}+\cdots+180u+73)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^2+y+1)^3(y^6+y^5+5y^4+6y^2+3y+1)^2$ $\cdot(y^{28}+8y^{27}+\cdots+191y+16)$
c_2, c_6	$(y^2+y+1)^3(y^6+3y^5+5y^4+4y^3+2y^2+y+1)^2$ $\cdot(y^{28}+12y^{27}+\cdots+19y+4)$
c_3	$(y^2+y+1)^3(y^6-y^5+5y^4+6y^2-3y+1)^2$ $\cdot(y^{28}+4y^{27}+\cdots+256y+256)$
c_4	$(y+1)^{12}(y^2+y+1)(y^4+3y^3+2y^2+1)$ $\cdot(y^{28}+49y^{27}+\cdots-4718y+289)$
c_5	$(y+1)^{12}(y^2+y+1)(y^4+3y^3+2y^2+1)$ $\cdot(y^{28}-3y^{27}+\cdots-1326y+289)$
c_7	$(y^2+y+1)(y^4+3y^3+2y^2+1)(y^{12}-8y^{11}+\cdots+8y+1)$ $\cdot(y^{28}+89y^{27}+\cdots-103896967394y+11080299169)$
c_8, c_{11}	$y^6(y^6+3y^5+5y^4+4y^3+2y^2+y+1)^2$ $\cdot(y^{28}+51y^{27}+\cdots+22472147y+1623076)$
c_9	$(y^2+y+1)(y^4-5y^3+\cdots+4y+1)(y^{12}-6y^{11}+\cdots+620y+289)$ $\cdot(y^{28}-61y^{27}+\cdots-43826174y+5938969)$
c_{10}	$(y^2+y+1)(y^4-5y^3+\cdots+4y+1)(y^{12}+8y^{11}+\cdots-8y+1)$ $\cdot(y^{28}+41y^{27}+\cdots-885642y+1369)$
c_{12}	$(y^2+y+1)(y^4+3y^3+2y^2+1)(y^{12}+6y^{11}+\cdots-620y+289)$ $\cdot(y^{28}-69y^{27}+\cdots+39870y+5329)$