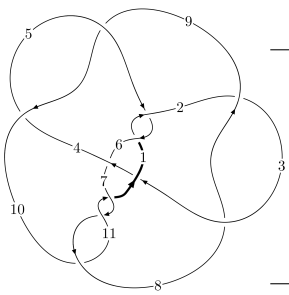
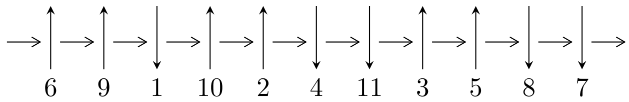
$11a_{280}$ ($K11a_{280}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 37345311u^{21} + 18480167u^{20} + \cdots + 14331796b - 87054847,\ a - 1,\ u^{22} + 9u^{20} + \cdots - 3u^2 + 1\rangle$$

$$\begin{aligned} I_2^u = \langle &-2105832678u^{17} + 16757581u^{16} + \cdots + 177085622289b - 38848951730,\\ &721895222078u^{17} - 1381269075020u^{16} + \cdots + 12944959033259a - 17573961275067,\\ &u^{18} + 5u^{16} + \cdots + 50u + 17\rangle \end{aligned}$$

$$\begin{aligned} I_3^u = \langle &6u^{11} + 12u^{10} + 38u^9 + 71u^8 + 111u^7 + 169u^6 + 154u^5 + 168u^4 + 93u^3 + 67u^2 + 11b + 26u + 19,\ a + 1,\\ &u^{12} + 6u^{10} + u^9 + 15u^8 + 4u^7 + 17u^6 + 6u^5 + 9u^4 + 4u^3 + 4u^2 + 1\rangle \end{aligned}$$

$$\begin{aligned} I_4^u = \langle &-1.19860 \times 10^{15}u^{23} + 6.59553 \times 10^{15}u^{22} + \cdots + 1.10953 \times 10^{17}b + 2.38445 \times 10^{17},\\ &6.76587 \times 10^{19}u^{23} - 7.15855 \times 10^{18}u^{22} + \cdots + 7.49046 \times 10^{20}a + 4.99902 \times 10^{21},\ u^{24} - u^{23} + \cdots - 188u + \end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 76 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. $\boldsymbol{I_1^u = \langle 3.73 \times 10^7 u^{21} + 1.85 \times 10^7 u^{20} + \cdots + 1.43 \times 10^7 b - 8.71 \times 10^7,\ a - 1,\ u^{22} + 9u^{20} + \cdots - 3u^2 + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -2.60577u^{21} - 1.28945u^{20} + \cdots + 13.4587u + 6.07425 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -2.60577u^{21} - 1.28945u^{20} + \cdots + 13.4587u + 7.07425 \\ -2.60577u^{21} - 1.28945u^{20} + \cdots + 13.4587u + 6.07425 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ -1.28945u^{21} - 0.754726u^{20} + \cdots + 7.07425u + 2.60577 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.192382u^{21} - 0.424472u^{20} + \cdots + 1.45999u + 1.31709 \\ 2.41338u^{21} + 0.864980u^{20} + \cdots - 11.9987u - 5.75715 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^2 + 1 \\ -3.36049u^{21} - 1.72488u^{20} + \cdots + 16.0645u + 7.36370 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.435428u^{21} + 0.0330632u^{20} + \cdots - 0.289452u - 0.754726 \\ -1.66963u^{21} - 0.847225u^{20} + \cdots + 8.79913u + 3.39356 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.125776u^{21} + 0.298531u^{20} + \cdots - 0.550624u + 0.520875 \\ -0.660480u^{21} - 0.405082u^{20} + \cdots + 5.84008u + 2.31835 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.125776u^{21} + 0.298531u^{20} + \cdots - 0.550624u + 0.520875 \\ -0.660480u^{21} - 0.405082u^{20} + \cdots + 5.84008u + 2.31835 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{30437693}{3582949}u^{21} - \frac{22461818}{3582949}u^{20} + \cdots + \frac{186266132}{3582949}u + \frac{101532156}{3582949}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{22} - 14u^{21} + \cdots - 1344u + 128$
c_2, c_4, c_8 c_9	$u^{22} + 9u^{20} + \cdots - 3u^2 + 1$
c_3, c_6	$u^{22} - u^{21} + \cdots + 3u + 1$
c_7, c_{10}, c_{11}	$u^{22} - 9u^{21} + \cdots - 88u + 8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{22} + 14y^{21} + \cdots + 20480y + 16384$
c_2, c_4, c_8 c_9	$y^{22} + 18y^{21} + \cdots - 6y + 1$
c_3, c_6	$y^{22} + 5y^{21} + \cdots + 11y + 1$
c_7, c_{10}, c_{11}	$y^{22} + 21y^{21} + \cdots + 224y + 64$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.767600 + 0.519015I$ $a = 1.00000$ $b = -0.721664 - 0.260594I$	$6.82374 - 0.02012I$	$7.10708 - 2.25648I$
$u = 0.767600 - 0.519015I$ $a = 1.00000$ $b = -0.721664 + 0.260594I$	$6.82374 + 0.02012I$	$7.10708 + 2.25648I$
$u = -0.020372 + 1.119260I$ $a = 1.00000$ $b = -1.15684 + 1.18640I$	$-0.15255 + 1.75803I$	$3.02278 - 3.33932I$
$u = -0.020372 - 1.119260I$ $a = 1.00000$ $b = -1.15684 - 1.18640I$	$-0.15255 - 1.75803I$	$3.02278 + 3.33932I$
$u = -0.440574 + 0.756721I$ $a = 1.00000$ $b = 0.232862 + 1.365440I$	$1.47923 - 2.31516I$	$0.190328 - 0.743726I$
$u = -0.440574 - 0.756721I$ $a = 1.00000$ $b = 0.232862 - 1.365440I$	$1.47923 + 2.31516I$	$0.190328 + 0.743726I$
$u = 0.202451 + 1.186340I$ $a = 1.00000$ $b = -1.37277 - 0.52957I$	$-3.56765 + 4.49595I$	$-1.80270 - 7.56758I$
$u = 0.202451 - 1.186340I$ $a = 1.00000$ $b = -1.37277 + 0.52957I$	$-3.56765 - 4.49595I$	$-1.80270 + 7.56758I$
$u = -0.699025 + 0.302848I$ $a = 1.00000$ $b = -0.492780 - 1.057530I$	$4.51267 + 4.47073I$	$3.53570 - 1.33986I$
$u = -0.699025 - 0.302848I$ $a = 1.00000$ $b = -0.492780 + 1.057530I$	$4.51267 - 4.47073I$	$3.53570 + 1.33986I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.375582 + 1.259580I$ $a = \quad 1.00000$ $b = -1.201050 + 0.354294I$	$2.08640 - 9.42284I$	$1.11756 + 6.83027I$
$u = -0.375582 - 1.259580I$ $a = \quad 1.00000$ $b = -1.201050 - 0.354294I$	$2.08640 + 9.42284I$	$1.11756 - 6.83027I$
$u = \quad 0.408516 + 1.337620I$ $a = \quad 1.00000$ $b = -0.49290 - 1.67050I$	$-8.96137 + 5.23240I$	$-4.36005 - 4.78438I$
$u = \quad 0.408516 - 1.337620I$ $a = \quad 1.00000$ $b = -0.49290 + 1.67050I$	$-8.96137 - 5.23240I$	$-4.36005 + 4.78438I$
$u = -0.408610 + 0.359797I$ $a = \quad 1.00000$ $b = -0.421704 + 0.476349I$	$0.735294 - 0.892872I$	$5.94617 + 4.93873I$
$u = -0.408610 - 0.359797I$ $a = \quad 1.00000$ $b = -0.421704 - 0.476349I$	$0.735294 + 0.892872I$	$5.94617 - 4.93873I$
$u = \quad 0.468145 + 0.007430I$ $a = \quad 1.00000$ $b = -0.420259 - 0.946349I$	$-0.61105 + 2.59129I$	$5.45931 - 3.44339I$
$u = \quad 0.468145 - 0.007430I$ $a = \quad 1.00000$ $b = -0.420259 + 0.946349I$	$-0.61105 - 2.59129I$	$5.45931 + 3.44339I$
$u = -0.50268 + 1.47148I$ $a = \quad 1.00000$ $b = -0.48500 + 1.56416I$	$-10.0188 - 10.9083I$	$-4.45406 + 7.18292I$
$u = -0.50268 - 1.47148I$ $a = \quad 1.00000$ $b = -0.48500 - 1.56416I$	$-10.0188 + 10.9083I$	$-4.45406 - 7.18292I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.60013 + 1.53489I$ $a = 1.00000$ $b = -0.46789 - 1.52014I$	$-3.8405 + 15.3110I$	$-0.76212 - 7.48531I$
$u = 0.60013 - 1.53489I$ $a = 1.00000$ $b = -0.46789 + 1.52014I$	$-3.8405 - 15.3110I$	$-0.76212 + 7.48531I$

II. $I_2^u =$ $\langle -2.11\times10^{9}u^{17}+1.68\times10^{7}u^{16}+\cdots+1.77\times10^{10}b-3.88\times10^{10},\ 7.22\times10^{11}u^{17}-1.38\times10^{12}u^{16}+\cdots+1.29\times10^{13}a-1.76\times10^{13},\ u^{18}+5u^{16}+\cdots+50u+17\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-0.0557665u^{17}+0.106703u^{16}+\cdots+0.722131u+1.35759\\0.118916u^{17}-0.000946298u^{16}+\cdots+6.12291u+2.19379\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0.0631496u^{17}+0.105757u^{16}+\cdots+6.84504u+3.55139\\0.118916u^{17}-0.000946298u^{16}+\cdots+6.12291u+2.19379\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0.130783u^{17}-0.0146315u^{16}+\cdots+6.70179u+1.56799\\0.0513201u^{17}-0.0379460u^{16}+\cdots+0.584746u-1.26324\end{pmatrix}$$
$$a_1 = \begin{pmatrix}0.188268u^{17}-0.0221695u^{16}+\cdots+11.5572u+3.70897\\0.113960u^{17}-0.0734896u^{16}+\cdots+2.32962u-0.591198\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-0.107317u^{17}+0.0530305u^{16}+\cdots-3.48734u-0.130270\\-0.0319178u^{17}+0.00397222u^{16}+\cdots-1.09097u+0.444642\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-u\\u^3+u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0.177385u^{17}-0.0241995u^{16}+\cdots+7.23582u+1.00022\\0.0170138u^{17}+0.0119503u^{16}+\cdots+0.364535u-0.858135\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0.0390174u^{17}+0.163125u^{16}+\cdots+11.0037u+5.75564\\0.0837045u^{17}+0.0724798u^{16}+\cdots+9.54514u+3.51844\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0.0390174u^{17}+0.163125u^{16}+\cdots+11.0037u+5.75564\\0.0837045u^{17}+0.0724798u^{16}+\cdots+9.54514u+3.51844\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -\frac{51417446992}{761468178427}u^{17} - \frac{67393412288}{761468178427}u^{16} + \cdots + \frac{1217139205928}{761468178427}u + \frac{1642023548414}{761468178427}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^3 + u^2 + 2u + 1)^6$
c_2, c_4, c_8 c_9	$u^{18} + 5u^{16} + \cdots - 50u + 17$
c_3, c_6	$u^{18} - 2u^{17} + \cdots + 4u + 1$
c_7, c_{10}, c_{11}	$(u^3 + 2u - 1)^6$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^3 + 3y^2 + 2y - 1)^6$
c_2, c_4, c_8 c_9	$y^{18} + 10y^{17} + \cdots + 968y + 289$
c_3, c_6	$y^{18} + 2y^{17} + \cdots + 8y + 1$
c_7, c_{10}, c_{11}	$(y^3 + 4y^2 + 4y - 1)^6$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.487685+0.847949I$ $a=\ \ 0.746708+0.050102I$ $b=\ \ 0.215080+1.307140I$	$1.48181-2.30982I$	$-0.191821+0.229571I$
$u=-0.487685-0.847949I$ $a=\ \ 0.746708-0.050102I$ $b=\ \ 0.215080-1.307140I$	$1.48181+2.30982I$	$-0.191821-0.229571I$
$u=\ \ 0.640673+0.946857I$ $a=-0.281235+0.667073I$ $b=\ \ 0.569840$	$5.61939+5.13794I$	$6.33744-3.20902I$
$u=\ \ 0.640673-0.946857I$ $a=-0.281235-0.667073I$ $b=\ \ 0.569840$	$5.61939-5.13794I$	$6.33744+3.20902I$
$u=-0.811802+0.161086I$ $a=-0.536626-1.272850I$ $b=\ \ 0.569840$	$5.61939+5.13794I$	$6.33744-3.20902I$
$u=-0.811802-0.161086I$ $a=-0.536626+1.272850I$ $b=\ \ 0.569840$	$5.61939-5.13794I$	$6.33744+3.20902I$
$u=-0.287016+1.229120I$ $a=-0.369488-1.198520I$ $b=\ \ 0.215080-1.307140I$	$1.48181-7.96606I$	$-0.19182+6.18847I$
$u=-0.287016-1.229120I$ $a=-0.369488+1.198520I$ $b=\ \ 0.215080+1.307140I$	$1.48181+7.96606I$	$-0.19182-6.18847I$
$u=-0.406642+0.608737I$ $a=\ \ 1.333210-0.089454I$ $b=\ \ 0.215080+1.307140I$	$1.48181-2.30982I$	$-0.191821+0.229571I$
$u=-0.406642-0.608737I$ $a=\ \ 1.333210+0.089454I$ $b=\ \ 0.215080-1.307140I$	$1.48181+2.30982I$	$-0.191821-0.229571I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.171130 + 1.267460I$ $a = -0.964193 - 0.265202I$ $b = 0.569840$	-4.60855	$-5.61636 + 0.I$
$u = 0.171130 - 1.267460I$ $a = -0.964193 + 0.265202I$ $b = 0.569840$	-4.60855	$-5.61636 + 0.I$
$u = 0.264938 + 1.312560I$ $a = -1.306010 + 0.241327I$ $b = 0.215080 + 1.307140I$	$-8.74613 + 2.82812I$	$-12.14562 - 2.97945I$
$u = 0.264938 - 1.312560I$ $a = -1.306010 - 0.241327I$ $b = 0.215080 - 1.307140I$	$-8.74613 - 2.82812I$	$-12.14562 + 2.97945I$
$u = 1.57917 + 0.11015I$ $a = -0.234896 - 0.761944I$ $b = 0.215080 + 1.307140I$	$1.48181 + 7.96606I$	$-0.19182 - 6.18847I$
$u = 1.57917 - 0.11015I$ $a = -0.234896 + 0.761944I$ $b = 0.215080 - 1.307140I$	$1.48181 - 7.96606I$	$-0.19182 + 6.18847I$
$u = -0.66277 + 1.65028I$ $a = -0.740410 + 0.136814I$ $b = 0.215080 - 1.307140I$	$-8.74613 - 2.82812I$	$-12.14562 + 2.97945I$
$u = -0.66277 - 1.65028I$ $a = -0.740410 - 0.136814I$ $b = 0.215080 + 1.307140I$	$-8.74613 + 2.82812I$	$-12.14562 - 2.97945I$

III. $\boldsymbol{I_3^u = \langle 6u^{11} + 12u^{10} + \cdots + 11b + 19,\ a + 1,\ u^{12} + 6u^{10} + \cdots + 4u^2 + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1 \\ -0.545455u^{11} - 1.09091u^{10} + \cdots - 2.36364u - 1.72727 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.545455u^{11} - 1.09091u^{10} + \cdots - 2.36364u - 2.72727 \\ -0.545455u^{11} - 1.09091u^{10} + \cdots - 2.36364u - 1.72727 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ 1.09091u^{11} + 0.181818u^{10} + \cdots + 2.72727u - 0.545455 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.454545u^{11} + 1.90909u^{10} + \cdots + 4.63636u + 4.27273 \\ -0.0909091u^{11} + 0.818182u^{10} + \cdots + 2.27273u + 1.54545 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^2 - 1 \\ -0.727273u^{11} - 0.454545u^{10} + \cdots - 1.81818u - 0.636364 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.636364u^{11} + 0.272727u^{10} + \cdots + 2.09091u + 0.181818 \\ 0.909091u^{11} - 0.181818u^{10} + \cdots + 2.27273u - 0.454545 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.18182u^{11} - 1.36364u^{10} + \cdots - 3.45455u - 1.90909 \\ -0.454545u^{11} - 0.909091u^{10} + \cdots - 1.63636u - 0.272727 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.18182u^{11} - 1.36364u^{10} + \cdots - 3.45455u - 1.90909 \\ -0.454545u^{11} - 0.909091u^{10} + \cdots - 1.63636u - 0.272727 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= \frac{68}{11}u^{11} + \frac{26}{11}u^{10} + \frac{394}{11}u^9 + \frac{174}{11}u^8 + \frac{939}{11}u^7 + \frac{368}{11}u^6 + 81u^5 + \frac{144}{11}u^4 + \frac{163}{11}u^3 - \frac{183}{11}u^2 - \frac{17}{11}u - \frac{111}{11}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{12} + u^{11} + \cdots + u + 2$
c_2, c_9	$u^{12} + 6u^{10} + u^9 + 15u^8 + 4u^7 + 17u^6 + 6u^5 + 9u^4 + 4u^3 + 4u^2 + 1$
c_3, c_6	$u^{12} + u^{11} + 7u^8 + 8u^7 + 2u^6 + 7u^4 + 7u^3 + 3u^2 + u + 1$
c_4, c_8	$u^{12} + 6u^{10} - u^9 + 15u^8 - 4u^7 + 17u^6 - 6u^5 + 9u^4 - 4u^3 + 4u^2 + 1$
c_5	$u^{12} - u^{11} + \cdots - u + 2$
c_7	$u^{12} - 2u^{11} + \cdots + 5u^2 + 1$
c_{10}, c_{11}	$u^{12} + 2u^{11} + \cdots + 5u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{12} + 11y^{11} + \cdots + 23y + 4$
c_2, c_4, c_8 c_9	$y^{12} + 12y^{11} + \cdots + 8y + 1$
c_3, c_6	$y^{12} - y^{11} + \cdots + 5y + 1$
c_7, c_{10}, c_{11}	$y^{12} + 14y^{11} + \cdots + 10y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.353153 + 0.740023I$ $a = -1.00000$ $b = -0.68102 + 1.43177I$	$1.75746 + 2.66133I$	$12.8054 - 12.9695I$
$u = 0.353153 - 0.740023I$ $a = -1.00000$ $b = -0.68102 - 1.43177I$	$1.75746 - 2.66133I$	$12.8054 + 12.9695I$
$u = -0.584665 + 0.421028I$ $a = -1.00000$ $b = -0.304944 + 0.791823I$	$3.88659 - 5.94873I$	$0.46248 + 5.63778I$
$u = -0.584665 - 0.421028I$ $a = -1.00000$ $b = -0.304944 - 0.791823I$	$3.88659 + 5.94873I$	$0.46248 - 5.63778I$
$u = -0.064712 + 1.283160I$ $a = -1.00000$ $b = 0.542055 + 0.545095I$	$-1.86805 - 1.05670I$	$-2.71042 + 0.18734I$
$u = -0.064712 - 1.283160I$ $a = -1.00000$ $b = 0.542055 - 0.545095I$	$-1.86805 + 1.05670I$	$-2.71042 - 0.18734I$
$u = 0.201550 + 0.519773I$ $a = -1.00000$ $b = -0.483540 - 0.658126I$	$-1.60251 + 2.75174I$	$-4.88343 - 6.08146I$
$u = 0.201550 - 0.519773I$ $a = -1.00000$ $b = -0.483540 + 0.658126I$	$-1.60251 - 2.75174I$	$-4.88343 + 6.08146I$
$u = -0.42250 + 1.38326I$ $a = -1.00000$ $b = 0.250152 - 1.336200I$	$-7.83316 - 2.65596I$	$-1.52426 + 0.93584I$
$u = -0.42250 - 1.38326I$ $a = -1.00000$ $b = 0.250152 + 1.336200I$	$-7.83316 + 2.65596I$	$-1.52426 - 0.93584I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.51717 + 1.54995I$ $a = -1.00000$ $b = 0.177296 + 1.218930I$	$-4.20993 + 3.36477I$	$-1.14978 - 1.06937I$
$u = 0.51717 - 1.54995I$ $a = -1.00000$ $b = 0.177296 - 1.218930I$	$-4.20993 - 3.36477I$	$-1.14978 + 1.06937I$

IV. $\boldsymbol{I^u_4 = \langle -1.20\times 10^{15}u^{23} + 6.60\times 10^{15}u^{22} + \cdots + 1.11\times 10^{17}b + 2.38\times 10^{17},\ 6.77\times 10^{19}u^{23} - 7.16\times 10^{18}u^{22} + \cdots + 7.49\times 10^{20}a + 5.00\times 10^{21},\ u^{24} - u^{23} + \cdots - 188u + 43\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.0903265u^{23} + 0.00955690u^{22} + \cdots + 16.8092u - 6.67385 \\ 0.0108028u^{23} - 0.0594442u^{22} + \cdots + 8.04468u - 2.14906 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.0795237u^{23} - 0.0498873u^{22} + \cdots + 24.8539u - 8.82291 \\ 0.0108028u^{23} - 0.0594442u^{22} + \cdots + 8.04468u - 2.14906 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.0548672u^{23} - 0.158796u^{22} + \cdots + 35.2329u - 8.35726 \\ -0.162059u^{23} + 0.221193u^{22} + \cdots - 5.49296u - 0.358870 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.0246027u^{23} - 0.123036u^{22} + \cdots + 37.7004u - 9.02318 \\ -0.0329485u^{23} + 0.0473687u^{22} + \cdots + 5.64183u - 1.96121 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.249442u^{23} - 0.673491u^{22} + \cdots + 65.4921u - 13.1533 \\ -0.127630u^{23} - 0.280631u^{22} + \cdots + 50.5898u - 11.2434 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.151470u^{23} - 0.000506225u^{22} + \cdots + 28.6722u - 7.97711 \\ -0.193270u^{23} + 0.267635u^{22} + \cdots - 14.6835u + 1.91355 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.274885u^{23} - 0.492041u^{22} + \cdots + 41.2304u - 8.05206 \\ 0.0166130u^{23} - 0.260145u^{22} + \cdots + 41.2683u - 8.45437 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.274885u^{23} - 0.492041u^{22} + \cdots + 41.2304u - 8.05206 \\ 0.0166130u^{23} - 0.260145u^{22} + \cdots + 41.2683u - 8.45437 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{901134440831258928}{174196649575105981 09}u^{23} + \frac{9229142131207094064}{17419664957510598109}u^{22} + \cdots - \frac{15827410680900181723 2}{17419664957510598109}u - \frac{28047718789326057950}{17419664957510598109}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^3 + u^2 + 2u + 1)^8$
c_2, c_4, c_8 c_9	$u^{24} + u^{23} + \cdots + 188u + 43$
c_3, c_6	$u^{24} - 5u^{23} + \cdots - 16u + 1$
c_7, c_{10}, c_{11}	$(u^4 + u^3 + 2u^2 + 2u + 1)^6$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^3+3y^2+2y-1)^8$
c_2, c_4, c_8 c_9	$y^{24}+25y^{23}+\cdots-5588y+1849$
c_3, c_6	$y^{24}-7y^{23}+\cdots-64y+1$
c_7, c_{10}, c_{11}	$(y^4+3y^3+2y^2+1)^6$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.176624 + 1.067610I$ $a = -1.80748 - 0.07001I$ $b = 0.215080 - 1.307140I$	$-4.66906 - 0.79824I$	$-3.50976 - 0.48465I$
$u = -0.176624 - 1.067610I$ $a = -1.80748 + 0.07001I$ $b = 0.215080 + 1.307140I$	$-4.66906 + 0.79824I$	$-3.50976 + 0.48465I$
$u = -0.337989 + 0.848465I$ $a = -0.033948 - 0.493146I$ $b = 0.569840$	$-0.53148 - 2.02988I$	$3.01951 + 3.46410I$
$u = -0.337989 - 0.848465I$ $a = -0.033948 + 0.493146I$ $b = 0.569840$	$-0.53148 + 2.02988I$	$3.01951 - 3.46410I$
$u = -0.418722 + 1.110050I$ $a = -1.122680 + 0.469087I$ $b = 0.569840$	$-0.53148 - 2.02988I$	$3.01951 + 3.46410I$
$u = -0.418722 - 1.110050I$ $a = -1.122680 - 0.469087I$ $b = 0.569840$	$-0.53148 + 2.02988I$	$3.01951 - 3.46410I$
$u = 0.786120 + 0.023283I$ $a = 0.05462 - 1.60499I$ $b = 0.215080 + 1.307140I$	$-4.66906 + 0.79824I$	$-3.50976 + 0.48465I$
$u = 0.786120 - 0.023283I$ $a = 0.05462 + 1.60499I$ $b = 0.215080 - 1.307140I$	$-4.66906 - 0.79824I$	$-3.50976 - 0.48465I$
$u = -1.239540 + 0.226298I$ $a = -0.307239 + 0.978244I$ $b = 0.215080 - 1.307140I$	$-4.66906 - 4.85801I$	$-3.50976 + 6.44355I$
$u = -1.239540 - 0.226298I$ $a = -0.307239 - 0.978244I$ $b = 0.215080 + 1.307140I$	$-4.66906 + 4.85801I$	$-3.50976 - 6.44355I$

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.080309 + 1.260450I$ $a = 0.021180 - 0.622334I$ $b = 0.215080 - 1.307140I$	$-4.66906 - 0.79824I$	$-3.50976 - 0.48465I$
$u = 0.080309 - 1.260450I$ $a = 0.021180 + 0.622334I$ $b = 0.215080 + 1.307140I$	$-4.66906 + 0.79824I$	$-3.50976 + 0.48465I$
$u = 0.159459 + 1.282100I$ $a = -0.292231 + 0.930458I$ $b = 0.215080 + 1.307140I$	$-4.66906 + 4.85801I$	$-3.50976 - 6.44355I$
$u = 0.159459 - 1.282100I$ $a = -0.292231 - 0.930458I$ $b = 0.215080 - 1.307140I$	$-4.66906 - 4.85801I$	$-3.50976 + 6.44355I$
$u = -0.05062 + 1.44264I$ $a = -0.758336 + 0.316854I$ $b = 0.569840$	$-0.53148 + 2.02988I$	$3.01951 - 3.46410I$
$u = -0.05062 - 1.44264I$ $a = -0.758336 - 0.316854I$ $b = 0.569840$	$-0.53148 - 2.02988I$	$3.01951 + 3.46410I$
$u = -0.20056 + 1.44305I$ $a = -1.134580 - 0.586767I$ $b = 0.215080 - 1.307140I$	$-4.66906 - 4.85801I$	$-3.50976 + 6.44355I$
$u = -0.20056 - 1.44305I$ $a = -1.134580 + 0.586767I$ $b = 0.215080 + 1.307140I$	$-4.66906 + 4.85801I$	$-3.50976 - 6.44355I$
$u = 0.429892 + 0.137875I$ $a = -0.13893 + 2.01823I$ $b = 0.569840$	$-0.53148 - 2.02988I$	$3.01951 + 3.46410I$
$u = 0.429892 - 0.137875I$ $a = -0.13893 - 2.01823I$ $b = 0.569840$	$-0.53148 + 2.02988I$	$3.01951 - 3.46410I$

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.07429 + 1.51957I$ $a = -0.695394 - 0.359636I$ $b = 0.215080 + 1.307140I$	$-4.66906 + 4.85801I$	$-3.50976 - 6.44355I$
$u = 1.07429 - 1.51957I$ $a = -0.695394 + 0.359636I$ $b = 0.215080 - 1.307140I$	$-4.66906 - 4.85801I$	$-3.50976 + 6.44355I$
$u = 0.39398 + 1.91732I$ $a = -0.552427 - 0.021396I$ $b = 0.215080 + 1.307140I$	$-4.66906 + 0.79824I$	$-3.50976 + 0.48465I$
$u = 0.39398 - 1.91732I$ $a = -0.552427 + 0.021396I$ $b = 0.215080 - 1.307140I$	$-4.66906 - 0.79824I$	$-3.50976 - 0.48465I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^3+u^2+2u+1)^{14})(u^{12}+u^{11}+\cdots+u+2)$ $\cdot(u^{22}-14u^{21}+\cdots-1344u+128)$
c_2, c_9	$(u^{12}+6u^{10}+u^9+15u^8+4u^7+17u^6+6u^5+9u^4+4u^3+4u^2+1)$ $\cdot(u^{18}+5u^{16}+\cdots-50u+17)(u^{22}+9u^{20}+\cdots-3u^2+1)$ $\cdot(u^{24}+u^{23}+\cdots+188u+43)$
c_3, c_6	$(u^{12}+u^{11}+7u^8+8u^7+2u^6+7u^4+7u^3+3u^2+u+1)$ $\cdot(u^{18}-2u^{17}+\cdots+4u+1)(u^{22}-u^{21}+\cdots+3u+1)$ $\cdot(u^{24}-5u^{23}+\cdots-16u+1)$
c_4, c_8	$(u^{12}+6u^{10}-u^9+15u^8-4u^7+17u^6-6u^5+9u^4-4u^3+4u^2+1)$ $\cdot(u^{18}+5u^{16}+\cdots-50u+17)(u^{22}+9u^{20}+\cdots-3u^2+1)$ $\cdot(u^{24}+u^{23}+\cdots+188u+43)$
c_5	$((u^3+u^2+2u+1)^{14})(u^{12}-u^{11}+\cdots-u+2)$ $\cdot(u^{22}-14u^{21}+\cdots-1344u+128)$
c_7	$((u^3+2u-1)^6)(u^4+u^3+2u^2+2u+1)^6(u^{12}-2u^{11}+\cdots+5u^2+1)$ $\cdot(u^{22}-9u^{21}+\cdots-88u+8)$
c_{10}, c_{11}	$((u^3+2u-1)^6)(u^4+u^3+2u^2+2u+1)^6(u^{12}+2u^{11}+\cdots+5u^2+1)$ $\cdot(u^{22}-9u^{21}+\cdots-88u+8)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$((y^3 + 3y^2 + 2y - 1)^{14})(y^{12} + 11y^{11} + \cdots + 23y + 4)$ $\cdot (y^{22} + 14y^{21} + \cdots + 20480y + 16384)$
c_2, c_4, c_8 c_9	$(y^{12} + 12y^{11} + \cdots + 8y + 1)(y^{18} + 10y^{17} + \cdots + 968y + 289)$ $\cdot (y^{22} + 18y^{21} + \cdots - 6y + 1)(y^{24} + 25y^{23} + \cdots - 5588y + 1849)$
c_3, c_6	$(y^{12} - y^{11} + \cdots + 5y + 1)(y^{18} + 2y^{17} + \cdots + 8y + 1)$ $\cdot (y^{22} + 5y^{21} + \cdots + 11y + 1)(y^{24} - 7y^{23} + \cdots - 64y + 1)$
c_7, c_{10}, c_{11}	$(y^3 + 4y^2 + 4y - 1)^6(y^4 + 3y^3 + 2y^2 + 1)^6$ $\cdot (y^{12} + 14y^{11} + \cdots + 10y + 1)(y^{22} + 21y^{21} + \cdots + 224y + 64)$