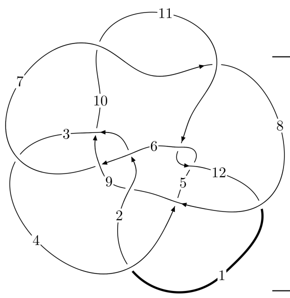
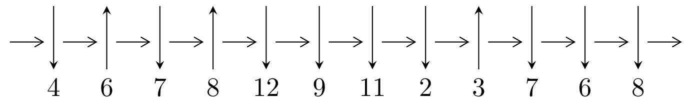
$12n_{0719}$ ($K12n_{0719}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -9.27341 \times 10^{166} u^{43} - 4.43348 \times 10^{165} u^{42} + \cdots + 8.47031 \times 10^{167} b + 9.37901 \times 10^{167}, \\
& -2.43777 \times 10^{167} u^{43} - 6.35520 \times 10^{166} u^{42} + \cdots + 8.47031 \times 10^{167} a - 2.63451 \times 10^{168}, \\
& u^{44} + 39u^{42} + \cdots - 4u - 1 \rangle \\
I_2^u = \langle & 479931u^{10} - 2120739u^9 + \cdots + 70976b - 1189615, \\
& -238887u^{10} + 992743u^9 + \cdots + 35488a + 973491, \\
& u^{11} - 4u^{10} + 6u^9 - 24u^8 + 41u^7 + 18u^6 + 16u^5 - 28u^4 - 73u^3 - 45u^2 - 11u - 1 \rangle \\
I_3^u = \langle & -7u^5 - 33u^4 - 82u^3 - 73u^2 + 23b - 11u - 13,\ 51u^5 + 247u^4 + 673u^3 + 798u^2 + 23a + 504u + 236, \\
& u^6 + 5u^5 + 14u^4 + 18u^3 + 13u^2 + 7u + 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 61 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. $\boldsymbol{I_1^u = \langle -9.27 \times 10^{166}u^{43} - 4.43 \times 10^{165}u^{42} + \cdots + 8.47 \times 10^{167}b + 9.38 \times 10^{167},\ -2.44 \times 10^{167}u^{43} - 6.36 \times 10^{166}u^{42} + \cdots + 8.47 \times 10^{167}a - 2.63 \times 10^{168},\ u^{44} + 39u^{42} + \cdots - 4u - 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.287802u^{43} + 0.0750292u^{42} + \cdots - 75.3078u + 3.11029 \\ 0.109481u^{43} + 0.00523414u^{42} + \cdots - 7.77140u - 1.10728 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.397283u^{43} + 0.0802633u^{42} + \cdots - 83.0792u + 2.00301 \\ 0.109481u^{43} + 0.00523414u^{42} + \cdots - 7.77140u - 1.10728 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.397283u^{43} + 0.0802633u^{42} + \cdots - 83.0792u + 2.00301 \\ 0.0983593u^{43} + 0.00483973u^{42} + \cdots - 7.05306u - 1.02702 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.470002u^{43} - 0.00424396u^{42} + \cdots + 29.0832u - 7.19779 \\ -0.112085u^{43} + 0.000633314u^{42} + \cdots + 12.6945u + 0.279509 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.102867u^{43} + 0.129659u^{42} + \cdots - 63.4031u - 16.1083 \\ -0.199965u^{43} + 0.0128457u^{42} + \cdots + 5.55859u - 0.338500 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.333819u^{43} + 0.00512371u^{42} + \cdots - 15.9017u + 9.48154 \\ 0.136183u^{43} - 0.000879747u^{42} + \cdots - 13.1815u - 0.283753 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.476846u^{43} - 0.199627u^{42} + \cdots + 108.229u + 16.5533 \\ 0.192885u^{43} - 0.0142872u^{42} + \cdots - 0.0996084u + 0.694413 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -1.09702u^{43} - 0.168014u^{42} + \cdots + 172.835u - 5.26974 \\ -0.161947u^{43} - 0.00324765u^{42} + \cdots + 21.6795u + 2.19727 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -1.65580u^{43} - 0.222262u^{42} + \cdots + 263.566u - 14.2425 \\ -0.361239u^{43} - 0.00429338u^{42} + \cdots + 33.9954u + 3.61276 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.617620u^{43} - 0.0398235u^{42} + \cdots + 49.7144u - 0.605176$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5, c_{11}	$u^{44} - u^{43} + \cdots - 22u - 1$
c_2	$u^{44} - 2u^{43} + \cdots + 544u + 64$
c_3	$u^{44} + 2u^{43} + \cdots + 68u - 52$
c_4	$u^{44} - 32u^{42} + \cdots + 6459u + 461$
c_6	$u^{44} - 5u^{42} + \cdots - 11u + 1$
c_7, c_{10}	$u^{44} + u^{43} + \cdots - 108u - 11$
c_8	$u^{44} + u^{43} + \cdots - 288u + 32$
c_9	$u^{44} - u^{43} + \cdots - 46u + 43$
c_{12}	$u^{44} + 39u^{42} + \cdots + 4u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_{11}	$y^{44} + 59y^{43} + \cdots + 50y + 1$
c_2	$y^{44} - 26y^{43} + \cdots - 246784y + 4096$
c_3	$y^{44} + 46y^{43} + \cdots - 55168y + 2704$
c_4	$y^{44} - 64y^{43} + \cdots - 67584469y + 212521$
c_6	$y^{44} - 10y^{43} + \cdots - 41y + 1$
c_7, c_{10}	$y^{44} + 7y^{43} + \cdots + 1822y + 121$
c_8	$y^{44} - 3y^{43} + \cdots - 139264y + 1024$
c_9	$y^{44} - 39y^{43} + \cdots - 62660y + 1849$
c_{12}	$y^{44} + 78y^{43} + \cdots + 108y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.653028+0.479211I$ $a=-0.78323+1.75591I$ $b=\ 0.0581394-0.0762256I$	$0.33032+4.70980I$	$-11.3107-11.5969I$
$u=-0.653028-0.479211I$ $a=-0.78323-1.75591I$ $b=\ 0.0581394+0.0762256I$	$0.33032-4.70980I$	$-11.3107+11.5969I$
$u=\ 0.027724+0.750161I$ $a=\ 0.567924+0.078651I$ $b=-0.974182+0.157306I$	$3.27845-3.12920I$	$-2.75319+2.59759I$
$u=\ 0.027724-0.750161I$ $a=\ 0.567924-0.078651I$ $b=-0.974182-0.157306I$	$3.27845+3.12920I$	$-2.75319-2.59759I$
$u=\ 0.670831+0.205742I$ $a=\ 0.836569+0.484990I$ $b=\ 0.185017+0.160225I$	$-1.208230-0.322851I$	$-9.94677+2.27028I$
$u=\ 0.670831-0.205742I$ $a=\ 0.836569-0.484990I$ $b=\ 0.185017-0.160225I$	$-1.208230+0.322851I$	$-9.94677-2.27028I$
$u=\ 1.31394$ $a=\ 0.393355$ $b=\ 0.433533$	-2.58215	0
$u=-1.31681$ $a=-0.520583$ $b=\ 0.478115$	-6.41728	0
$u=\ 0.021517+0.557538I$ $a=\ 1.282020+0.262721I$ $b=\ 0.233628+0.802395I$	$-0.05460-2.35319I$	$-7.41013+4.71617I$
$u=\ 0.021517-0.557538I$ $a=\ 1.282020-0.262721I$ $b=\ 0.233628-0.802395I$	$-0.05460+2.35319I$	$-7.41013-4.71617I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.489487+0.154722I$ $a=\ \ 1.56149-0.49207I$ $b=\ \ 0.215149+0.758157I$	$1.25902-2.03144I$	$-0.14682+4.37003I$
$u=-0.489487-0.154722I$ $a=\ \ 1.56149+0.49207I$ $b=\ \ 0.215149-0.758157I$	$1.25902+2.03144I$	$-0.14682-4.37003I$
$u=\ \ 0.473973$ $a=\ \ 2.83673$ $b=-0.506626$	-2.36937	1.94390
$u=\ \ 0.460603$ $a=\ \ 1.26886$ $b=\ \ 0.519451$	-1.16126	-8.98030
$u=\ \ 0.135939+0.415909I$ $a=-2.10897-1.43331I$ $b=\ \ 0.300845+1.228730I$	$-2.36079-2.76760I$	$-10.42789+3.67232I$
$u=\ \ 0.135939-0.415909I$ $a=-2.10897+1.43331I$ $b=\ \ 0.300845-1.228730I$	$-2.36079+2.76760I$	$-10.42789-3.67232I$
$u=-0.93702+1.28948I$ $a=-0.002221-0.962499I$ $b=\ \ 0.328930+1.368230I$	$3.52831-3.02493I$	0
$u=-0.93702-1.28948I$ $a=-0.002221+0.962499I$ $b=\ \ 0.328930-1.368230I$	$3.52831+3.02493I$	0
$u=-1.59462+0.32915I$ $a=-0.203262+0.245637I$ $b=-0.113423-1.192920I$	$4.53063+4.34162I$	0
$u=-1.59462-0.32915I$ $a=-0.203262-0.245637I$ $b=-0.113423+1.192920I$	$4.53063-4.34162I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.221192 + 0.259639I$ $a = 1.096330 - 0.751243I$ $b = 0.691688 + 0.860912I$	$-0.63985 - 2.51667I$	$-0.25112 + 12.13395I$
$u = 0.221192 - 0.259639I$ $a = 1.096330 + 0.751243I$ $b = 0.691688 - 0.860912I$	$-0.63985 + 2.51667I$	$-0.25112 - 12.13395I$
$u = 1.79427 + 0.24600I$ $a = -0.388449 + 0.834790I$ $b = 0.170782 - 1.110490I$	$3.71457 - 3.73003I$	0
$u = 1.79427 - 0.24600I$ $a = -0.388449 - 0.834790I$ $b = 0.170782 + 1.110490I$	$3.71457 + 3.73003I$	0
$u = -0.132537 + 0.054215I$ $a = 7.14008 + 4.56284I$ $b = -0.667537 - 0.943356I$	$6.59035 - 2.00605I$	$-1.41219 + 2.45712I$
$u = -0.132537 - 0.054215I$ $a = 7.14008 - 4.56284I$ $b = -0.667537 + 0.943356I$	$6.59035 + 2.00605I$	$-1.41219 - 2.45712I$
$u = 0.0147871 + 0.1034350I$ $a = 3.52739 - 9.95970I$ $b = -0.846924 - 0.960944I$	$5.56957 - 9.21803I$	$-3.16193 + 6.85768I$
$u = 0.0147871 - 0.1034350I$ $a = 3.52739 + 9.95970I$ $b = -0.846924 + 0.960944I$	$5.56957 + 9.21803I$	$-3.16193 - 6.85768I$
$u = 1.12598 + 1.82301I$ $a = 0.258801 - 0.517356I$ $b = -0.280939 + 1.357240I$	$2.17978 + 2.84039I$	0
$u = 1.12598 - 1.82301I$ $a = 0.258801 + 0.517356I$ $b = -0.280939 - 1.357240I$	$2.17978 - 2.84039I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.02621 + 2.20554I$ $a = -0.367494 + 0.963515I$ $b = 0.01860 - 1.79839I$	$14.6659 - 2.9427I$	0
$u = -0.02621 - 2.20554I$ $a = -0.367494 - 0.963515I$ $b = 0.01860 + 1.79839I$	$14.6659 + 2.9427I$	0
$u = 0.19526 + 2.30945I$ $a = -0.025151 - 0.822816I$ $b = 0.15012 + 1.78556I$	$9.15531 - 5.87106I$	0
$u = 0.19526 - 2.30945I$ $a = -0.025151 + 0.822816I$ $b = 0.15012 - 1.78556I$	$9.15531 + 5.87106I$	0
$u = 0.07782 + 2.32588I$ $a = -0.276416 - 0.894062I$ $b = 0.00497 + 1.82063I$	$16.0678 - 3.9170I$	0
$u = 0.07782 - 2.32588I$ $a = -0.276416 + 0.894062I$ $b = 0.00497 - 1.82063I$	$16.0678 + 3.9170I$	0
$u = -0.38957 + 2.32401I$ $a = 0.028999 + 0.969270I$ $b = 0.02619 - 1.71994I$	$8.96812 + 2.93237I$	0
$u = -0.38957 - 2.32401I$ $a = 0.028999 - 0.969270I$ $b = 0.02619 + 1.71994I$	$8.96812 - 2.93237I$	0
$u = -0.12922 + 2.71476I$ $a = 0.127432 - 0.901567I$ $b = -0.27414 + 1.75440I$	$14.7550 + 13.7953I$	0
$u = -0.12922 - 2.71476I$ $a = 0.127432 + 0.901567I$ $b = -0.27414 - 1.75440I$	$14.7550 - 13.7953I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.07164 + 2.78151I$ $a = 0.159925 + 0.862115I$ $b = -0.25526 - 1.71524I$	$15.5530 - 5.8620I$	0
$u = -0.07164 - 2.78151I$ $a = 0.159925 - 0.862115I$ $b = -0.25526 + 1.71524I$	$15.5530 + 5.8620I$	0
$u = -0.32784 + 2.77330I$ $a = 0.079049 + 0.854859I$ $b = 0.06611 - 1.66236I$	$9.77050 + 3.12424I$	0
$u = -0.32784 - 2.77330I$ $a = 0.079049 - 0.854859I$ $b = 0.06611 + 1.66236I$	$9.77050 - 3.12424I$	0

II.

$\boldsymbol{I_2^u = \langle 4.80\times 10^5 u^{10} - 2.12\times 10^6 u^9 + \cdots + 7.10\times 10^4 b - 1.19\times 10^6,\ -2.39\times 10^5 u^{10} + 9.93\times 10^5 u^9 + \cdots + 3.55\times 10^4 a + 9.73\times 10^5,\ u^{11} - 4u^{10} + \cdots - 11u - 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 6.73149u^{10} - 27.9740u^9 + \cdots - 221.023u - 27.4316 \\ -6.76188u^{10} + 29.8797u^9 + \cdots + 142.163u + 16.7608 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.0303906u^{10} + 1.90562u^9 + \cdots - 78.8596u - 10.6707 \\ -6.76188u^{10} + 29.8797u^9 + \cdots + 142.163u + 16.7608 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.0303906u^{10} + 1.90562u^9 + \cdots - 78.8596u - 10.6707 \\ -8.06267u^{10} + 35.7716u^9 + \cdots + 161.757u + 18.5449 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -11.1264u^{10} + 48.7428u^9 + \cdots + 260.727u + 35.5197 \\ -7.45591u^{10} + 33.4040u^9 + \cdots + 137.150u + 15.0996 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -5.52166u^{10} + 23.6000u^9 + \cdots + 159.059u + 22.6573 \\ 1.66821u^{10} - 7.26548u^9 + \cdots - 38.1666u - 4.78324 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 5.52166u^{10} - 23.6000u^9 + \cdots - 159.059u - 22.6573 \\ 5.60475u^{10} - 25.1429u^9 + \cdots - 101.667u - 10.8624 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.691854u^{10} - 2.26038u^9 + \cdots - 49.0295u - 6.10828 \\ -4.45455u^{10} + 19.7759u^9 + \cdots + 90.5815u + 10.4505 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.722019u^{10} + 5.76214u^9 + \cdots - 106.881u - 20.0806 \\ -9.39040u^{10} + 41.6118u^9 + \cdots + 192.292u + 23.0600 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 2.25640u^{10} - 8.91251u^9 + \cdots - 104.377u - 18.8743 \\ 3.11448u^{10} - 14.0435u^9 + \cdots - 53.7697u - 5.09808 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{337445}{17744}u^{10} - \frac{1511195}{17744}u^9 + \frac{2742643}{17744}u^8 - \frac{9383585}{17744}u^7 + \frac{4567969}{4436}u^6 - \frac{1254329}{8872}u^5 + \frac{3112763}{8872}u^4 - \frac{6155547}{8872}u^3 - \frac{18822875}{17744}u^2 - \frac{366794}{1109}u - \frac{635379}{17744}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{11}	$u^{11}+7u^9+18u^7+u^6+22u^5+5u^4+14u^3+6u^2+4u+1$
c_2	$u^{11}-3u^{10}+\cdots-47u+101$
c_3	$u^{11}-u^{10}+\cdots+22u+4$
c_4	$u^{11}-u^{10}+u^9-6u^8+3u^7+3u^6+29u^5+27u^4+28u^3-u^2-6u-7$
c_5	$u^{11}+7u^9+18u^7-u^6+22u^5-5u^4+14u^3-6u^2+4u-1$
c_6	$u^{11}-2u^{10}+7u^8-7u^7-5u^6+15u^5-7u^4-7u^3+10u^2-5u+1$
c_7	$u^{11}+6u^{10}+\cdots+2u+1$
c_8	$u^{11}-3u^9-u^8+3u^7+2u^6-2u^5+u^3-u^2+1$
c_9	$u^{11}-u^9-u^8+2u^6+2u^5-3u^4-u^3+3u^2-1$
c_{10}	$u^{11}-6u^{10}+\cdots+2u-1$
c_{12}	$u^{11}-4u^{10}+\cdots-11u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_{11}	$y^{11} + 14y^{10} + \cdots + 4y - 1$
c_2	$y^{11} - 5y^{10} + \cdots - 1427y - 10201$
c_3	$y^{11} + 13y^{10} + \cdots + 156y - 16$
c_4	$y^{11} + y^{10} + \cdots + 22y - 49$
c_6	$y^{11} - 4y^{10} + \cdots + 5y - 1$
c_7, c_{10}	$y^{11} - 6y^{10} + \cdots + 2y - 1$
c_8	$y^{11} - 6y^{10} + \cdots + 2y - 1$
c_9	$y^{11} - 2y^{10} + \cdots + 6y - 1$
c_{12}	$y^{11} - 4y^{10} + \cdots + 31y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.220751 + 1.034860I$ $a = 1.083470 - 0.902408I$ $b = -0.146555 + 1.398110I$	$-1.22111 + 1.62586I$	$-4.59364 - 0.34038I$
$u = -0.220751 - 1.034860I$ $a = 1.083470 + 0.902408I$ $b = -0.146555 - 1.398110I$	$-1.22111 - 1.62586I$	$-4.59364 + 0.34038I$
$u = 1.51215$ $a = 0.674582$ $b = -0.287899$	-6.03089	0.409510
$u = -0.460304 + 0.019735I$ $a = 0.349750 + 0.389318I$ $b = 0.585282 + 0.924323I$	$-0.87162 - 2.16835I$	$-10.04732 - 2.60427I$
$u = -0.460304 - 0.019735I$ $a = 0.349750 - 0.389318I$ $b = 0.585282 - 0.924323I$	$-0.87162 + 2.16835I$	$-10.04732 + 2.60427I$
$u = -0.224917 + 0.097237I$ $a = 4.05209 - 4.10027I$ $b = -0.209535 + 0.545606I$	$0.76129 - 4.28079I$	$-1.91886 + 3.11496I$
$u = -0.224917 - 0.097237I$ $a = 4.05209 + 4.10027I$ $b = -0.209535 - 0.545606I$	$0.76129 + 4.28079I$	$-1.91886 - 3.11496I$
$u = -0.55730 + 2.45122I$ $a = 0.097167 + 0.873801I$ $b = 0.02440 - 1.69392I$	$9.41812 + 3.72319I$	$-2.84715 - 8.70383I$
$u = -0.55730 - 2.45122I$ $a = 0.097167 - 0.873801I$ $b = 0.02440 + 1.69392I$	$9.41812 - 3.72319I$	$-2.84715 + 8.70383I$
$u = 2.70719 + 0.06892I$ $a = 0.080229 + 0.646110I$ $b = -0.109646 - 1.218970I$	$3.15344 - 5.47871I$	$-5.29777 + 8.13210I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 2.70719 - 0.06892I$		
$a = 0.080229 - 0.646110I$	$3.15344 + 5.47871I$	$-5.29777 - 8.13210I$
$b = -0.109646 + 1.218970I$		

III. $I_3^u = \langle -7u^5 - 33u^4 + \cdots + 23b - 13,\ 51u^5 + 247u^4 + \cdots + 23a + 236,\ u^6 + 5u^5 + 14u^4 + 18u^3 + 13u^2 + 7u + 1\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -2.21739u^5 - 10.7391u^4 + \cdots - 21.9130u - 10.2609 \\ 0.304348u^5 + 1.43478u^4 + \cdots + 0.478261u + 0.565217 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.91304u^5 - 9.30435u^4 + \cdots - 21.4348u - 9.69565 \\ 0.304348u^5 + 1.43478u^4 + \cdots + 0.478261u + 0.565217 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.91304u^5 - 9.30435u^4 + \cdots - 21.4348u - 9.69565 \\ 0.0869565u^5 + 0.695652u^4 + \cdots + 0.565217u + 0.304348 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.608696u^5 - 2.86957u^4 + \cdots - 8.95652u - 4.13043 \\ -0.0869565u^5 + 0.304348u^4 + \cdots + 3.43478u + 0.695652 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.391304u^5 - 1.13043u^4 + \cdots + 3.95652u + 2.13043 \\ -1.17391u^5 - 5.39130u^4 + \cdots - 9.13043u - 1.60870 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^5 + 5u^4 + 14u^3 + 18u^2 + 13u + 7 \\ -0.391304u^5 - 2.13043u^4 + \cdots - 4.04348u - 0.869565 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u^5 - 5u^4 - 14u^3 - 18u^2 - 13u - 7 \\ 0.391304u^5 + 2.13043u^4 + \cdots + 5.04348u + 0.869565 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.608696u^5 - 2.86957u^4 + \cdots - 8.95652u - 4.13043 \\ -0.0869565u^5 + 0.304348u^4 + \cdots + 3.43478u + 0.695652 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{16}{23}u^5 - \frac{33}{23}u^4 - \frac{220}{23}u^3 - \frac{809}{23}u^2 - \frac{563}{23}u - \frac{542}{23}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{11}	$(u^3 - u^2 + 2u - 1)^2$
c_2	u^6
c_3	$(u^3 + u^2 - 1)^2$
c_4	$u^6 + 2u^5 - 2u^3 + 2u^2 - 3u - 7$
c_5	$(u^3 + u^2 + 2u + 1)^2$
c_6	$u^6 - 3u^5 + 2u^4 + u^3 + u^2 - 2u - 1$
c_7	$(u - 1)^6$
c_8, c_9	$u^6 - 4u^4 - u^3 + 4u^2 - 1$
c_{10}	$(u + 1)^6$
c_{12}	$u^6 + 5u^5 + 14u^4 + 18u^3 + 13u^2 + 7u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_{11}	$(y^3 + 3y^2 + 2y - 1)^2$
c_2	y^6
c_3	$(y^3 - y^2 + 2y - 1)^2$
c_4	$y^6 - 4y^5 + 12y^4 - 6y^3 - 8y^2 - 37y + 49$
c_6	$y^6 - 5y^5 + 12y^4 - 11y^3 + y^2 - 6y + 1$
c_7, c_{10}	$(y - 1)^6$
c_8, c_9	$y^6 - 8y^5 + 24y^4 - 35y^3 + 24y^2 - 8y + 1$
c_{12}	$y^6 + 3y^5 + 42y^4 - 28y^3 - 55y^2 - 23y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.211786 + 0.750504I$ $a = 0.999155 + 0.334189I$ $b = 0.215080 - 1.307140I$	$1.37919 + 2.82812I$	$-3.91642 - 4.54590I$
$u = -0.211786 - 0.750504I$ $a = 0.999155 - 0.334189I$ $b = 0.215080 + 1.307140I$	$1.37919 - 2.82812I$	$-3.91642 + 4.54590I$
$u = -1.23104$ $a = 0.329355$ $b = 0.569840$	-2.75839	-34.1530
$u = -0.199118$ $a = -7.05839$ $b = 0.569840$	-2.75839	-20.0130
$u = -1.57313 + 2.05765I$ $a = -0.134639 - 0.607788I$ $b = 0.215080 + 1.307140I$	$1.37919 - 2.82812I$	$-11.50056 + 1.38392I$
$u = -1.57313 - 2.05765I$ $a = -0.134639 + 0.607788I$ $b = 0.215080 - 1.307140I$	$1.37919 + 2.82812I$	$-11.50056 - 1.38392I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{11}	$(u^3 - u^2 + 2u - 1)^2$ $\cdot (u^{11} + 7u^9 + 18u^7 + u^6 + 22u^5 + 5u^4 + 14u^3 + 6u^2 + 4u + 1)$ $\cdot (u^{44} - u^{43} + \cdots - 22u - 1)$
c_2	$u^6(u^{11} - 3u^{10} + \cdots - 47u + 101)(u^{44} - 2u^{43} + \cdots + 544u + 64)$
c_3	$((u^3 + u^2 - 1)^2)(u^{11} - u^{10} + \cdots + 22u + 4)(u^{44} + 2u^{43} + \cdots + 68u - 52)$
c_4	$(u^6 + 2u^5 - 2u^3 + 2u^2 - 3u - 7)$ $\cdot (u^{11} - u^{10} + u^9 - 6u^8 + 3u^7 + 3u^6 + 29u^5 + 27u^4 + 28u^3 - u^2 - 6u - 7)$ $\cdot (u^{44} - 32u^{42} + \cdots + 6459u + 461)$
c_5	$(u^3 + u^2 + 2u + 1)^2$ $\cdot (u^{11} + 7u^9 + 18u^7 - u^6 + 22u^5 - 5u^4 + 14u^3 - 6u^2 + 4u - 1)$ $\cdot (u^{44} - u^{43} + \cdots - 22u - 1)$
c_6	$(u^6 - 3u^5 + 2u^4 + u^3 + u^2 - 2u - 1)$ $\cdot (u^{11} - 2u^{10} + 7u^8 - 7u^7 - 5u^6 + 15u^5 - 7u^4 - 7u^3 + 10u^2 - 5u + 1)$ $\cdot (u^{44} - 5u^{42} + \cdots - 11u + 1)$
c_7	$((u - 1)^6)(u^{11} + 6u^{10} + \cdots + 2u + 1)(u^{44} + u^{43} + \cdots - 108u - 11)$
c_8	$(u^6 - 4u^4 - u^3 + 4u^2 - 1)(u^{11} - 3u^9 + \cdots - u^2 + 1)$ $\cdot (u^{44} + u^{43} + \cdots - 288u + 32)$
c_9	$(u^6 - 4u^4 - u^3 + 4u^2 - 1)(u^{11} - u^9 + \cdots + 3u^2 - 1)$ $\cdot (u^{44} - u^{43} + \cdots - 46u + 43)$
c_{10}	$((u + 1)^6)(u^{11} - 6u^{10} + \cdots + 2u - 1)(u^{44} + u^{43} + \cdots - 108u - 11)$
c_{12}	$(u^6 + 5u^5 + \cdots + 7u + 1)(u^{11} - 4u^{10} + \cdots - 11u - 1)$ $\cdot (u^{44} + 39u^{42} + \cdots + 4u - 1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_{11}	$((y^3+3y^2+2y-1)^2)(y^{11}+14y^{10}+\cdots+4y-1)$ $\cdot(y^{44}+59y^{43}+\cdots+50y+1)$
c_2	$y^6(y^{11}-5y^{10}+\cdots-1427y-10201)$ $\cdot(y^{44}-26y^{43}+\cdots-246784y+4096)$
c_3	$((y^3-y^2+2y-1)^2)(y^{11}+13y^{10}+\cdots+156y-16)$ $\cdot(y^{44}+46y^{43}+\cdots-55168y+2704)$
c_4	$(y^6-4y^5+\cdots-37y+49)(y^{11}+y^{10}+\cdots+22y-49)$ $\cdot(y^{44}-64y^{43}+\cdots-67584469y+212521)$
c_6	$(y^6-5y^5+\cdots-6y+1)(y^{11}-4y^{10}+\cdots+5y-1)$ $\cdot(y^{44}-10y^{43}+\cdots-41y+1)$
c_7, c_{10}	$((y-1)^6)(y^{11}-6y^{10}+\cdots+2y-1)(y^{44}+7y^{43}+\cdots+1822y+121)$
c_8	$(y^6-8y^5+\cdots-8y+1)(y^{11}-6y^{10}+\cdots+2y-1)$ $\cdot(y^{44}-3y^{43}+\cdots-139264y+1024)$
c_9	$(y^6-8y^5+\cdots-8y+1)(y^{11}-2y^{10}+\cdots+6y-1)$ $\cdot(y^{44}-39y^{43}+\cdots-62660y+1849)$
c_{12}	$(y^6+3y^5+\cdots-23y+1)(y^{11}-4y^{10}+\cdots+31y-1)$ $\cdot(y^{44}+78y^{43}+\cdots+108y+1)$