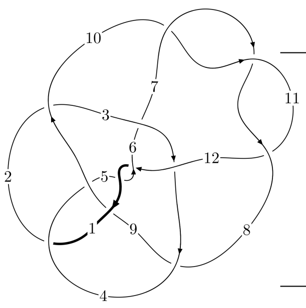
$12n_{0741}$ ($K12n_{0741}$)



A knot diagram[1]

Linearized knot diagam

$$\rightarrow \underset{4}{\downarrow} \rightarrow \underset{10}{\uparrow} \rightarrow \underset{12}{\downarrow} \rightarrow \underset{10}{\uparrow} \rightarrow \underset{1}{\downarrow} \rightarrow \underset{3}{\downarrow} \rightarrow \underset{11}{\uparrow} \rightarrow \underset{4}{\uparrow} \rightarrow \underset{1}{\uparrow} \rightarrow \underset{7}{\uparrow} \rightarrow \underset{8}{\uparrow} \rightarrow \underset{6}{\downarrow} \rightarrow$$

Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle -173u^{29} - 1170u^{28} + \cdots + 2b + 538,\ 777u^{29} + 5170u^{28} + \cdots + 4a - 2260,\ u^{30} + 8u^{29} + \cdots + 10u - 4\rangle \\
I_2^u &= \langle -8171u^8a^3 + 29276u^8a^2 + \cdots - 86275a - 355947,\ u^8a^3 + 2u^8a^2 + \cdots - 6a^2 + 20, \\
&\quad u^9 - u^8 - 4u^7 + 3u^6 + 5u^5 - u^4 - 2u^3 - 2u^2 + u - 1\rangle \\
I_3^u &= \langle -5u^{18} + 8u^{17} + \cdots + b + 4,\ 12u^{18} - 20u^{17} + \cdots + a - 7,\ u^{19} - 3u^{18} + \cdots - 3u + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 85 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. $\boldsymbol{I_1^u = \langle -173u^{29} - 1170u^{28} + \cdots + 2b + 538,\ 777u^{29} + 5170u^{28} + \cdots + 4a - 2260,\ u^{30} + 8u^{29} + \cdots + 10u - 4\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -\frac{777}{4}u^{29} - \frac{2585}{2}u^{28} + \cdots - \frac{7275}{4}u + 565 \\ \frac{173}{2}u^{29} + 585u^{28} + \cdots + \frac{1769}{2}u - 269 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -\frac{349}{4}u^{29} - \frac{1127}{2}u^{28} + \cdots - \frac{2739}{4}u + 219 \\ \frac{103}{2}u^{29} + 321u^{28} + \cdots + \frac{641}{2}u - 107 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -62.5000u^{29} - 410.500u^{28} + \cdots - 545.500u + 172.500 \\ \frac{73}{2}u^{29} + 244u^{28} + \cdots + \frac{697}{2}u - 108 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{73}{4}u^{29} - \frac{287}{2}u^{28} + \cdots - \frac{1355}{4}u + 95 \\ -\frac{35}{2}u^{29} - 99u^{28} + \cdots - \frac{51}{2}u + 17 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{557}{4}u^{29} + \frac{1839}{2}u^{28} + \cdots + \frac{5051}{4}u - 393 \\ -\frac{207}{2}u^{29} - 677u^{28} + \cdots - \frac{1797}{2}u + 281 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{107}{4}u^{29} + \frac{325}{2}u^{28} + \cdots + \frac{629}{4}u - 53 \\ -\frac{269}{2}u^{29} - 870u^{28} + \cdots - \frac{2183}{2}u + 349 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -36.5000u^{29} - 249.500u^{28} + \cdots - 394.500u + 120.500 \\ \frac{71}{2}u^{29} + 241u^{28} + \cdots + \frac{747}{2}u - 114 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= 144u^{29} + 932u^{28} + 1166u^{27} - 3950u^{26} - 8068u^{25} + 10520u^{24} + 22058u^{23} - 31648u^{22} - 41053u^{21} + 75734u^{20} + 35810u^{19} - 138024u^{18} + 30849u^{17} + 178037u^{16} - 127069u^{15} - 106576u^{14} + 194708u^{13} - 23158u^{12} - 141581u^{11} + 93195u^{10} + 10441u^{9} - 78959u^{8} + 26181u^{7} - 2885u^{6} - 24227u^{5} + 9152u^{4} - 1810u^{3} - 3043u^{2} + 1148u - 374$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{30} - 20u^{29} + \cdots + 4520u - 448$
c_2, c_8	$u^{30} + u^{29} + \cdots - 24u + 5$
c_3, c_6	$u^{30} - u^{29} + \cdots + 12u - 1$
c_4, c_9	$u^{30} + 20u^{28} + \cdots - u + 1$
c_5, c_{12}	$u^{30} + 20u^{29} + \cdots - 6144u - 512$
c_7, c_{10}, c_{11}	$u^{30} - 8u^{29} + \cdots - 10u - 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{30} - 16y^{29} + \cdots - 8229568y + 200704$
c_2, c_8	$y^{30} - 3y^{29} + \cdots - 256y + 25$
c_3, c_6	$y^{30} + 7y^{29} + \cdots - 80y + 1$
c_4, c_9	$y^{30} + 40y^{29} + \cdots + 9y + 1$
c_5, c_{12}	$y^{30} + 14y^{29} + \cdots - 3407872y + 262144$
c_7, c_{10}, c_{11}	$y^{30} - 28y^{29} + \cdots + 100y + 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.727622 + 0.705125I$ $a = -0.641027 + 0.115701I$ $b = 0.687397 + 1.021870I$	$-2.97556 - 6.23052I$	$3.26934 + 3.73627I$
$u = 0.727622 - 0.705125I$ $a = -0.641027 - 0.115701I$ $b = 0.687397 - 1.021870I$	$-2.97556 + 6.23052I$	$3.26934 - 3.73627I$
$u = 0.407170 + 0.935936I$ $a = -0.438010 - 0.324040I$ $b = -0.682979 + 0.645597I$	$-7.02127 + 3.79327I$	$0.05806 - 6.52210I$
$u = 0.407170 - 0.935936I$ $a = -0.438010 + 0.324040I$ $b = -0.682979 - 0.645597I$	$-7.02127 - 3.79327I$	$0.05806 + 6.52210I$
$u = 0.427689 + 0.823483I$ $a = 0.796629 + 0.599604I$ $b = 0.96991 - 1.17666I$	$-3.86787 + 11.40560I$	$1.94326 - 7.48134I$
$u = 0.427689 - 0.823483I$ $a = 0.796629 - 0.599604I$ $b = 0.96991 + 1.17666I$	$-3.86787 - 11.40560I$	$1.94326 + 7.48134I$
$u = 1.005300 + 0.779911I$ $a = 0.231346 + 0.022494I$ $b = -0.272840 - 0.574864I$	$-5.41208 + 2.17475I$	$9.73919 + 5.03605I$
$u = 1.005300 - 0.779911I$ $a = 0.231346 - 0.022494I$ $b = -0.272840 + 0.574864I$	$-5.41208 - 2.17475I$	$9.73919 - 5.03605I$
$u = 1.313940 + 0.059506I$ $a = 0.372373 - 0.163949I$ $b = -1.166230 + 0.417498I$	$5.91755 + 3.45804I$	$11.41104 - 3.47795I$
$u = 1.313940 - 0.059506I$ $a = 0.372373 + 0.163949I$ $b = -1.166230 - 0.417498I$	$5.91755 - 3.45804I$	$11.41104 + 3.47795I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.31986$ $a = -0.423063$ $b = 1.29538$	2.18151	4.39970
$u = -0.654747$ $a = -0.472043$ $b = -0.106707$	0.896294	12.8060
$u = 0.039034 + 0.641181I$ $a = 0.279594 - 0.811369I$ $b = -0.457242 - 0.493923I$	$2.19604 - 1.41771I$	$2.97939 + 4.71269I$
$u = 0.039034 - 0.641181I$ $a = 0.279594 + 0.811369I$ $b = -0.457242 + 0.493923I$	$2.19604 + 1.41771I$	$2.97939 - 4.71269I$
$u = -1.359280 + 0.360594I$ $a = 0.830579 - 0.466140I$ $b = -0.008753 + 0.681742I$	$6.54442 - 2.48074I$	$9.12565 + 0.I$
$u = -1.359280 - 0.360594I$ $a = 0.830579 + 0.466140I$ $b = -0.008753 - 0.681742I$	$6.54442 + 2.48074I$	$9.12565 + 0.I$
$u = -1.41614 + 0.09837I$ $a = -0.21812 - 1.68007I$ $b = 0.429262 + 0.934517I$	$4.01008 - 2.17507I$	0
$u = -1.41614 - 0.09837I$ $a = -0.21812 + 1.68007I$ $b = 0.429262 - 0.934517I$	$4.01008 + 2.17507I$	0
$u = -1.43489 + 0.15441I$ $a = 0.22751 + 2.33475I$ $b = -0.81061 - 1.33560I$	$9.21909 - 5.77084I$	0
$u = -1.43489 - 0.15441I$ $a = 0.22751 - 2.33475I$ $b = -0.81061 + 1.33560I$	$9.21909 + 5.77084I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.340842 + 0.386198I$ $a = -0.70853 - 1.64819I$ $b = -0.852307 + 0.967588I$	$3.46376 + 3.69110I$	$-2.17441 - 2.03577I$
$u = 0.340842 - 0.386198I$ $a = -0.70853 + 1.64819I$ $b = -0.852307 - 0.967588I$	$3.46376 - 3.69110I$	$-2.17441 + 2.03577I$
$u = -1.49409 + 0.30547I$ $a = 0.16084 - 1.98951I$ $b = 1.10456 + 1.38075I$	$2.3325 - 15.5061I$	0
$u = -1.49409 - 0.30547I$ $a = 0.16084 + 1.98951I$ $b = 1.10456 - 1.38075I$	$2.3325 + 15.5061I$	0
$u = -1.49706 + 0.34161I$ $a = -0.064520 + 1.358570I$ $b = -0.885003 - 0.896360I$	$-0.89522 - 8.36672I$	0
$u = -1.49706 - 0.34161I$ $a = -0.064520 - 1.358570I$ $b = -0.885003 + 0.896360I$	$-0.89522 + 8.36672I$	0
$u = -1.57559 + 0.10910I$ $a = -0.517743 + 1.206130I$ $b = 0.180303 - 1.201000I$	$5.04077 + 3.42733I$	0
$u = -1.57559 - 0.10910I$ $a = -0.517743 - 1.206130I$ $b = 0.180303 + 1.201000I$	$5.04077 - 3.42733I$	0
$u = 0.182909 + 0.333059I$ $a = 0.38663 + 1.56291I$ $b = 0.670201 - 0.340664I$	$-1.174400 + 0.676840I$	$-4.63993 - 2.36566I$
$u = 0.182909 - 0.333059I$ $a = 0.38663 - 1.56291I$ $b = 0.670201 + 0.340664I$	$-1.174400 - 0.676840I$	$-4.63993 + 2.36566I$

II. $\boldsymbol{I_2^u = \langle -8171a^3u^8 + 2.93\times 10^4a^2u^8 + \cdots - 8.63\times 10^4a - 3.56\times 10^5,\ u^8a^3 + 2u^8a^2 + \cdots - 6a^2 + 20,\ u^9 - u^8 + \cdots + u - 1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} a \\ 0.0368350a^3u^8 - 0.131977a^2u^8 + \cdots + 0.388929a + 1.60462 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.0970216a^3u^8 - 0.329653a^2u^8 + \cdots + 0.730934a - 0.927002 \\ 0.349200a^3u^8 + 0.466016a^2u^8 + \cdots + 0.921213a + 2.65521 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.0154895a^3u^8 + 0.0725160a^2u^8 + \cdots + 0.0316192a + 1.77573 \\ -0.451609a^3u^8 - 0.579330a^2u^8 + \cdots - 0.740857a - 1.41865 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.182183a^3u^8 + 0.0979592a^2u^8 + \cdots - 0.599584a + 1.10198 \\ -0.416915a^3u^8 - 0.0688284a^2u^8 + \cdots - 2.38249a - 2.38081 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.261826a^3u^8 + 0.0418299a^2u^8 + \cdots - 0.0522569a + 0.418560 \\ -0.514004a^3u^8 - 0.178193a^2u^8 + \cdots - 1.59989a - 2.14677 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.0970216a^3u^8 - 0.329653a^2u^8 + \cdots + 0.730934a - 0.927002 \\ 0.133857a^3u^8 + 0.197677a^2u^8 + \cdots + 0.657995a + 2.53162 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.235697a^3u^8 - 0.0385841a^2u^8 + \cdots - 0.288364a - 1.35213 \\ -0.0885780a^3u^8 + 0.0969539a^2u^8 + \cdots - 2.45381a + 2.63002 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{156832}{221827}u^8a^3 + \frac{113420}{221827}u^8a^2 + \cdots + \frac{193092}{221827}a - \frac{704302}{221827}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^9 + 7u^8 + 16u^7 + 7u^6 - 19u^5 - 11u^4 + 20u^3 + 6u^2 - 11u + 3)^4$
c_2, c_8	$u^{36} - u^{35} + \cdots - 8292u + 619$
c_3, c_6	$u^{36} + 7u^{35} + \cdots + 244u + 193$
c_4, c_9	$u^{36} - u^{35} + \cdots - 520u + 2089$
c_5, c_{12}	$(u^2 - u + 1)^{18}$
c_7, c_{10}, c_{11}	$(u^9 + u^8 - 4u^7 - 3u^6 + 5u^5 + u^4 - 2u^3 + 2u^2 + u + 1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^9 - 17y^8 + \cdots + 85y - 9)^4$
c_2, c_8	$y^{36} + 11y^{35} + \cdots - 41360324y + 383161$
c_3, c_6	$y^{36} + 11y^{35} + \cdots - 118980y + 37249$
c_4, c_9	$y^{36} + 35y^{35} + \cdots + 136249928y + 4363921$
c_5, c_{12}	$(y^2 + y + 1)^{18}$
c_7, c_{10}, c_{11}	$(y^9 - 9y^8 + 32y^7 - 55y^6 + 45y^5 - 19y^4 + 16y^3 - 10y^2 - 3y - 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.482242 + 0.666986I$ $a = -0.829276 - 0.258734I$ $b = 0.030585 - 0.881502I$	$2.12882 - 0.18400I$	$2.24115 - 0.41812I$
$u = -0.482242 + 0.666986I$ $a = -0.693533 + 0.971150I$ $b = -0.702014 - 0.777525I$	$2.12882 - 4.24376I$	$2.24115 + 6.51008I$
$u = -0.482242 + 0.666986I$ $a = 0.579089 - 0.313786I$ $b = 0.638098 + 1.236810I$	$2.12882 - 4.24376I$	$2.24115 + 6.51008I$
$u = -0.482242 + 0.666986I$ $a = 0.317204 - 0.169060I$ $b = -0.396381 + 0.596506I$	$2.12882 - 0.18400I$	$2.24115 - 0.41812I$
$u = -0.482242 - 0.666986I$ $a = -0.829276 + 0.258734I$ $b = 0.030585 + 0.881502I$	$2.12882 + 0.18400I$	$2.24115 + 0.41812I$
$u = -0.482242 - 0.666986I$ $a = -0.693533 - 0.971150I$ $b = -0.702014 + 0.777525I$	$2.12882 + 4.24376I$	$2.24115 - 6.51008I$
$u = -0.482242 - 0.666986I$ $a = 0.579089 + 0.313786I$ $b = 0.638098 - 1.236810I$	$2.12882 + 4.24376I$	$2.24115 - 6.51008I$
$u = -0.482242 - 0.666986I$ $a = 0.317204 + 0.169060I$ $b = -0.396381 - 0.596506I$	$2.12882 + 0.18400I$	$2.24115 + 0.41812I$
$u = 1.28056$ $a = 0.24822 + 2.48346I$ $b = 0.425790 - 0.000287I$	$-2.09801 + 2.02988I$	$-0.33330 - 3.46410I$
$u = 1.28056$ $a = 0.24822 - 2.48346I$ $b = 0.425790 + 0.000287I$	$-2.09801 - 2.02988I$	$-0.33330 + 3.46410I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.28056$ $a = -0.65036 + 3.17999I$ $b = 0.74862 - 2.03443I$	$-2.09801 - 2.02988I$	$-0.33330 + 3.46410I$
$u = 1.28056$ $a = -0.65036 - 3.17999I$ $b = 0.74862 + 2.03443I$	$-2.09801 + 2.02988I$	$-0.33330 - 3.46410I$
$u = -1.380230 + 0.162431I$ $a = -1.051670 + 0.187613I$ $b = -0.693072 - 0.293619I$	$0.22800 - 5.44061I$	$3.88238 + 7.86053I$
$u = -1.380230 + 0.162431I$ $a = 0.207018 - 1.238430I$ $b = 1.253150 + 0.213191I$	$0.227995 - 1.380850I$	$3.88238 + 0.93232I$
$u = -1.380230 + 0.162431I$ $a = 0.96217 - 1.48521I$ $b = -1.05706 + 1.47865I$	$0.227995 - 1.380850I$	$3.88238 + 0.93232I$
$u = -1.380230 + 0.162431I$ $a = -1.89166 + 0.16166I$ $b = 2.06020 - 0.72212I$	$0.22800 - 5.44061I$	$3.88238 + 7.86053I$
$u = -1.380230 - 0.162431I$ $a = -1.051670 - 0.187613I$ $b = -0.693072 + 0.293619I$	$0.22800 + 5.44061I$	$3.88238 - 7.86053I$
$u = -1.380230 - 0.162431I$ $a = 0.207018 + 1.238430I$ $b = 1.253150 - 0.213191I$	$0.227995 + 1.380850I$	$3.88238 - 0.93232I$
$u = -1.380230 - 0.162431I$ $a = 0.96217 + 1.48521I$ $b = -1.05706 - 1.47865I$	$0.227995 + 1.380850I$	$3.88238 - 0.93232I$
$u = -1.380230 - 0.162431I$ $a = -1.89166 - 0.16166I$ $b = 2.06020 + 0.72212I$	$0.22800 + 5.44061I$	$3.88238 - 7.86053I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.230908 + 0.456719I$ $a = -0.700916 + 0.499752I$ $b = -0.37028 - 1.40207I$	$-4.89942 - 0.92019I$	$-1.44626 - 2.77537I$
$u = 0.230908 + 0.456719I$ $a = 0.730726 + 0.224850I$ $b = 1.44747 + 0.99796I$	$-4.89942 + 3.13958I$	$-1.44626 - 9.70357I$
$u = 0.230908 + 0.456719I$ $a = 3.16147 + 0.79514I$ $b = 1.048700 - 0.338629I$	$-4.89942 - 0.92019I$	$-1.44626 - 2.77537I$
$u = 0.230908 + 0.456719I$ $a = -3.08241 + 1.25861I$ $b = -0.279189 + 0.459914I$	$-4.89942 + 3.13958I$	$-1.44626 - 9.70357I$
$u = 0.230908 - 0.456719I$ $a = -0.700916 - 0.499752I$ $b = -0.37028 + 1.40207I$	$-4.89942 + 0.92019I$	$-1.44626 + 2.77537I$
$u = 0.230908 - 0.456719I$ $a = 0.730726 - 0.224850I$ $b = 1.44747 - 0.99796I$	$-4.89942 - 3.13958I$	$-1.44626 + 9.70357I$
$u = 0.230908 - 0.456719I$ $a = 3.16147 - 0.79514I$ $b = 1.048700 + 0.338629I$	$-4.89942 + 0.92019I$	$-1.44626 + 2.77537I$
$u = 0.230908 - 0.456719I$ $a = -3.08241 - 1.25861I$ $b = -0.279189 - 0.459914I$	$-4.89942 - 3.13958I$	$-1.44626 + 9.70357I$
$u = 1.49128 + 0.23430I$ $a = 0.510760 + 1.162850I$ $b = -0.059502 - 0.853778I$	$8.52641 + 3.47060I$	$5.48937 + 0.49112I$
$u = 1.49128 + 0.23430I$ $a = -0.362517 - 1.301200I$ $b = -0.612207 + 1.221860I$	$8.52641 + 3.47060I$	$5.48937 + 0.49112I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.49128 + 0.23430I$ $a = -0.11348 - 1.82407I$ $b = -0.792237 + 0.983649I$	$8.52641 + 7.53037I$	$5.48937 - 6.43708I$
$u = 1.49128 + 0.23430I$ $a = 0.15917 + 2.02163I$ $b = 0.80933 - 1.74941I$	$8.52641 + 7.53037I$	$5.48937 - 6.43708I$
$u = 1.49128 - 0.23430I$ $a = 0.510760 - 1.162850I$ $b = -0.059502 + 0.853778I$	$8.52641 - 3.47060I$	$5.48937 - 0.49112I$
$u = 1.49128 - 0.23430I$ $a = -0.362517 + 1.301200I$ $b = -0.612207 - 1.221860I$	$8.52641 - 3.47060I$	$5.48937 - 0.49112I$
$u = 1.49128 - 0.23430I$ $a = -0.11348 + 1.82407I$ $b = -0.792237 - 0.983649I$	$8.52641 - 7.53037I$	$5.48937 + 6.43708I$
$u = 1.49128 - 0.23430I$ $a = 0.15917 - 2.02163I$ $b = 0.80933 + 1.74941I$	$8.52641 - 7.53037I$	$5.48937 + 6.43708I$

III. $\boldsymbol{I^u_3 =}$
$\boldsymbol{\langle -5u^{18}+8u^{17}+\cdots+b+4,\ 12u^{18}-20u^{17}+\cdots+a-7,\ u^{19}-3u^{18}+\cdots-3u+1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-12u^{18}+20u^{17}+\cdots-27u+7\\5u^{18}-8u^{17}+\cdots+7u-4\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-5u^{18}+8u^{17}+\cdots-16u+2\\u^{17}-u^{16}+\cdots-7u^2-2u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-7u^{18}+13u^{17}+\cdots-19u+7\\2u^{18}-3u^{17}+\cdots+2u-1\end{pmatrix}$$
$$a_1 = \begin{pmatrix}10u^{18}-17u^{17}+\cdots+24u-6\\-5u^{18}+8u^{17}+\cdots-6u+4\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-12u^{18}+20u^{17}+\cdots-29u+8\\7u^{18}-11u^{17}+\cdots+11u-6\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}u^{16}-u^{15}+\cdots-7u-2\\-7u^{18}+12u^{17}+\cdots-13u+5\end{pmatrix}$$
$$a_9 = \begin{pmatrix}u^{18}+u^{17}+\cdots-8u+4\\-u^{18}+2u^{17}+\cdots-2u+2\end{pmatrix}$$

(ii) Obstruction class $=1$

(iii) Cusp Shapes $= u^{17}-3u^{16}-3u^{15}+15u^{14}-2u^{13}-23u^{12}+12u^{11}+6u^{10}-5u^9+5u^8-3u^7+7u^6-12u^5-2u^4+19u^3-3u^2-5u$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{19} - 15u^{18} + \cdots + 29u - 13$
c_2, c_8	$u^{19} - u^{18} + \cdots + 18u - 5$
c_3, c_6	$u^{19} + u^{18} + \cdots + 6u + 1$
c_4, c_9	$u^{19} + 8u^{17} + \cdots + u + 1$
c_5	$u^{19} - u^{18} + \cdots - 4u + 5$
c_7	$u^{19} - 3u^{18} + \cdots - 3u + 1$
c_{10}, c_{11}	$u^{19} + 3u^{18} + \cdots - 3u - 1$
c_{12}	$u^{19} + u^{18} + \cdots - 4u - 5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{19} - 19y^{18} + \cdots - 745y - 169$
c_2, c_8	$y^{19} + 9y^{18} + \cdots + 744y - 25$
c_3, c_6	$y^{19} + 7y^{18} + \cdots + 4y - 1$
c_4, c_9	$y^{19} + 16y^{18} + \cdots + 7y - 1$
c_5, c_{12}	$y^{19} + 13y^{18} + \cdots - 204y - 25$
c_7, c_{10}, c_{11}	$y^{19} - 19y^{18} + \cdots + 5y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.845692 + 0.661557I$ $a = -0.153266 - 0.466031I$ $b = -0.300237 - 0.194675I$	$-5.74523 + 2.61792I$	$0.07093 - 6.33010I$
$u = 0.845692 - 0.661557I$ $a = -0.153266 + 0.466031I$ $b = -0.300237 + 0.194675I$	$-5.74523 - 2.61792I$	$0.07093 + 6.33010I$
$u = -0.395840 + 0.806578I$ $a = -0.545217 - 0.152245I$ $b = 0.166562 - 0.802834I$	$3.24781 - 0.29442I$	$10.76895 + 0.40021I$
$u = -0.395840 - 0.806578I$ $a = -0.545217 + 0.152245I$ $b = 0.166562 + 0.802834I$	$3.24781 + 0.29442I$	$10.76895 - 0.40021I$
$u = -0.835448$ $a = 0.437061$ $b = -0.670199$	0.213591	-1.61190
$u = -1.161770 + 0.148655I$ $a = -0.301539 - 0.268731I$ $b = 0.883412 + 0.519992I$	$4.96317 - 3.33168I$	$2.78254 + 2.68060I$
$u = -1.161770 - 0.148655I$ $a = -0.301539 + 0.268731I$ $b = 0.883412 - 0.519992I$	$4.96317 + 3.33168I$	$2.78254 - 2.68060I$
$u = -0.498260 + 0.534494I$ $a = 0.570176 - 0.933196I$ $b = 0.733079 + 1.038500I$	$4.15390 - 3.99094I$	$9.36572 + 6.29710I$
$u = -0.498260 - 0.534494I$ $a = 0.570176 + 0.933196I$ $b = 0.733079 - 1.038500I$	$4.15390 + 3.99094I$	$9.36572 - 6.29710I$
$u = 1.328220 + 0.037070I$ $a = 0.59090 - 2.97401I$ $b = -0.439409 + 1.256160I$	$-1.08200 - 1.51093I$	$7.95202 - 0.16487I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.328220 - 0.037070I$ $a = 0.59090 + 2.97401I$ $b = -0.439409 - 1.256160I$	$-1.08200 + 1.51093I$	$7.95202 + 0.16487I$
$u = -1.406710 + 0.134721I$ $a = 0.358797 - 0.109163I$ $b = -1.152130 + 0.551928I$	$0.54391 - 3.84947I$	$6.11362 + 2.50531I$
$u = -1.406710 - 0.134721I$ $a = 0.358797 + 0.109163I$ $b = -1.152130 - 0.551928I$	$0.54391 + 3.84947I$	$6.11362 - 2.50531I$
$u = 1.48263 + 0.20775I$ $a = 0.05248 + 2.08255I$ $b = 0.81500 - 1.42175I$	$10.53760 + 6.80667I$	$10.97954 - 4.95231I$
$u = 1.48263 - 0.20775I$ $a = 0.05248 - 2.08255I$ $b = 0.81500 + 1.42175I$	$10.53760 - 6.80667I$	$10.97954 + 4.95231I$
$u = 1.50740 + 0.26923I$ $a = -0.551403 - 1.163060I$ $b = -0.249129 + 1.104390I$	$9.55521 + 4.20504I$	$12.20929 - 4.02195I$
$u = 1.50740 - 0.26923I$ $a = -0.551403 + 1.163060I$ $b = -0.249129 - 1.104390I$	$9.55521 - 4.20504I$	$12.20929 + 4.02195I$
$u = 0.216351 + 0.218987I$ $a = -3.73945 - 1.53970I$ $b = -0.622048 - 0.799440I$	$-4.89702 + 2.21165I$	$-1.43665 - 0.97531I$
$u = 0.216351 - 0.218987I$ $a = -3.73945 + 1.53970I$ $b = -0.622048 + 0.799440I$	$-4.89702 - 2.21165I$	$-1.43665 + 0.97531I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^9+7u^8+16u^7+7u^6-19u^5-11u^4+20u^3+6u^2-11u+3)^4$ $\cdot(u^{19}-15u^{18}+\cdots+29u-13)(u^{30}-20u^{29}+\cdots+4520u-448)$
c_2, c_8	$(u^{19}-u^{18}+\cdots+18u-5)(u^{30}+u^{29}+\cdots-24u+5)$ $\cdot(u^{36}-u^{35}+\cdots-8292u+619)$
c_3, c_6	$(u^{19}+u^{18}+\cdots+6u+1)(u^{30}-u^{29}+\cdots+12u-1)$ $\cdot(u^{36}+7u^{35}+\cdots+244u+193)$
c_4, c_9	$(u^{19}+8u^{17}+\cdots+u+1)(u^{30}+20u^{28}+\cdots-u+1)$ $\cdot(u^{36}-u^{35}+\cdots-520u+2089)$
c_5	$((u^2-u+1)^{18})(u^{19}-u^{18}+\cdots-4u+5)$ $\cdot(u^{30}+20u^{29}+\cdots-6144u-512)$
c_7	$(u^9+u^8-4u^7-3u^6+5u^5+u^4-2u^3+2u^2+u+1)^4$ $\cdot(u^{19}-3u^{18}+\cdots-3u+1)(u^{30}-8u^{29}+\cdots-10u-4)$
c_{10}, c_{11}	$(u^9+u^8-4u^7-3u^6+5u^5+u^4-2u^3+2u^2+u+1)^4$ $\cdot(u^{19}+3u^{18}+\cdots-3u-1)(u^{30}-8u^{29}+\cdots-10u-4)$
c_{12}	$((u^2-u+1)^{18})(u^{19}+u^{18}+\cdots-4u-5)$ $\cdot(u^{30}+20u^{29}+\cdots-6144u-512)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^9 - 17y^8 + \cdots + 85y - 9)^4)(y^{19} - 19y^{18} + \cdots - 745y - 169)$ $\cdot (y^{30} - 16y^{29} + \cdots - 8229568y + 200704)$
c_2, c_8	$(y^{19} + 9y^{18} + \cdots + 744y - 25)(y^{30} - 3y^{29} + \cdots - 256y + 25)$ $\cdot (y^{36} + 11y^{35} + \cdots - 41360324y + 383161)$
c_3, c_6	$(y^{19} + 7y^{18} + \cdots + 4y - 1)(y^{30} + 7y^{29} + \cdots - 80y + 1)$ $\cdot (y^{36} + 11y^{35} + \cdots - 118980y + 37249)$
c_4, c_9	$(y^{19} + 16y^{18} + \cdots + 7y - 1)(y^{30} + 40y^{29} + \cdots + 9y + 1)$ $\cdot (y^{36} + 35y^{35} + \cdots + 136249928y + 4363921)$
c_5, c_{12}	$((y^2 + y + 1)^{18})(y^{19} + 13y^{18} + \cdots - 204y - 25)$ $\cdot (y^{30} + 14y^{29} + \cdots - 3407872y + 262144)$
c_7, c_{10}, c_{11}	$(y^9 - 9y^8 + 32y^7 - 55y^6 + 45y^5 - 19y^4 + 16y^3 - 10y^2 - 3y - 1)^4$ $\cdot (y^{19} - 19y^{18} + \cdots + 5y - 1)(y^{30} - 28y^{29} + \cdots + 100y + 16)$