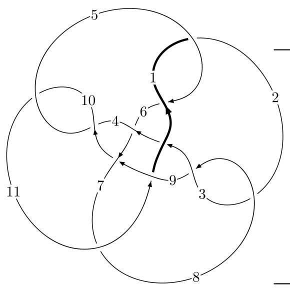
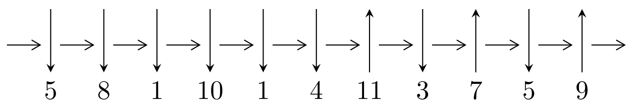
$11n_{173}$ ($K11n_{173}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 616u^{12} + 178u^{11} + \cdots + 1367b + 80,\ 654u^{12} - 388u^{11} + \cdots + 1367a + 1807,$$
$$u^{13} + 3u^{11} - 5u^{10} + 10u^9 - 14u^8 + 22u^7 - 29u^6 + 36u^5 - 32u^4 + 24u^3 - 11u^2 + 4u + 1\rangle$$
$$I_2^u = \langle -u^4 + u^2 + b - 1,\ a + u - 1,\ u^5 - u^3 - u^2 + u + 1\rangle$$
$$I_3^u = \langle -7.93323 \times 10^{30}u^{27} - 2.30191 \times 10^{31}u^{26} + \cdots + 1.77551 \times 10^{32}b - 1.02298 \times 10^{33},$$
$$5.27149 \times 10^{33}u^{27} + 4.23845 \times 10^{33}u^{26} + \cdots + 4.70510 \times 10^{34}a - 4.74518 \times 10^{34},\ u^{28} + 2u^{27} + \cdots + 16u +$$
$$I_4^u = \langle -89u^{13} + 200u^{12} + \cdots + 113b - 381,\ 134u^{13} - 503u^{12} + \cdots + 113a - 178,$$
$$u^{14} - 3u^{13} + 4u^{12} - 4u^{11} - u^{10} + 2u^9 - 2u^8 + u^7 + 13u^6 - 7u^5 + 22u^4 - u^3 + 8u^2 + 1\rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 60 representations.

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[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. $I_1^u = \langle 616u^{12} + 178u^{11} + \cdots + 1367b + 80,\ 654u^{12} - 388u^{11} + \cdots + 1367a + 1807,\ u^{13} + 3u^{11} + \cdots + 4u + 1\rangle$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.478420u^{12} + 0.283833u^{11} + \cdots + 4.18288u - 1.32187 \\ -0.450622u^{12} - 0.130212u^{11} + \cdots + 1.21507u - 0.0585223 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -0.384784u^{12} - 0.637162u^{11} + \cdots - 4.49817u + 1.19678 \\ -u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.384784u^{12} - 0.637162u^{11} + \cdots - 5.49817u + 1.19678 \\ -u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.513533u^{12} - 1.24579u^{11} + \cdots - 9.43672u + 1.60863 \\ 0.319678u^{12} + 0.238478u^{11} + \cdots - 1.62985u + 0.0285296 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.314557u^{12} + 0.422092u^{11} + \cdots + 4.74104u - 1.66423 \\ -0.286028u^{12} + 0.102414u^{11} + \cdots + 1.93197u + 0.0797366 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.228237u^{12} - 0.442575u^{11} + \cdots + 2.47257u - 2.95172 \\ 0.163862u^{12} + 0.138259u^{11} + \cdots + 0.558157u - 0.342356 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1.17776u^{12} - 0.931236u^{11} + \cdots + 0.425750u - 0.789320 \\ -0.514996u^{12} - 0.434528u^{11} + \cdots - 0.754206u - 0.352597 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.259693u^{12} - 1.50037u^{11} + \cdots - 5.35333u - 1.61814 \\ 0.193855u^{12} + 0.00731529u^{11} + \cdots - 1.93343u - 0.637162 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.259693u^{12} - 1.50037u^{11} + \cdots - 5.35333u - 1.61814 \\ 0.193855u^{12} + 0.00731529u^{11} + \cdots - 1.93343u - 0.637162 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{2267}{1367}u^{12} - \frac{1272}{1367}u^{11} - \frac{8216}{1367}u^{10} + \frac{5428}{1367}u^9 - \frac{22362}{1367}u^8 + \frac{19107}{1367}u^7 - \frac{40203}{1367}u^6 + \frac{45449}{1367}u^5 - \frac{57148}{1367}u^4 + \frac{42609}{1367}u^3 - \frac{31315}{1367}u^2 + \frac{5649}{1367}u - \frac{15793}{1367}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{13} + 8u^{12} + \cdots - 10u + 4$
c_2, c_4, c_8 c_{10}	$u^{13} - 8u^{11} + \cdots - 2u + 2$
c_3, c_6	$u^{13} - 2u^{12} + \cdots - 3u + 1$
c_7	$u^{13} - 10u^{12} + \cdots - 40u + 20$
c_9, c_{11}	$u^{13} + 3u^{11} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{13} - 16y^{12} + \cdots + 284y - 16$
c_2, c_4, c_8 c_{10}	$y^{13} - 16y^{12} + \cdots + 12y - 4$
c_3, c_6	$y^{13} - 24y^{12} + \cdots - 7y - 1$
c_7	$y^{13} - 2y^{12} + \cdots + 4440y - 400$
c_9, c_{11}	$y^{13} + 6y^{12} + \cdots + 38y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.949645 + 0.417400I$ $a = -0.333458 - 0.234834I$ $b = 0.346830 + 0.825972I$	$1.81165 + 1.04217I$	$4.67201 - 2.86908I$
$u = 0.949645 - 0.417400I$ $a = -0.333458 + 0.234834I$ $b = 0.346830 - 0.825972I$	$1.81165 - 1.04217I$	$4.67201 + 2.86908I$
$u = 0.654297 + 0.696942I$ $a = 0.22522 + 2.10852I$ $b = 0.476213 - 0.178047I$	$-13.48820 + 1.07762I$	$-12.25276 - 5.21840I$
$u = 0.654297 - 0.696942I$ $a = 0.22522 - 2.10852I$ $b = 0.476213 + 0.178047I$	$-13.48820 - 1.07762I$	$-12.25276 + 5.21840I$
$u = 0.326551 + 0.994649I$ $a = 0.241683 - 0.736746I$ $b = -0.03079 - 1.57197I$	$-4.25079 + 1.54146I$	$-6.85137 - 4.44536I$
$u = 0.326551 - 0.994649I$ $a = 0.241683 + 0.736746I$ $b = -0.03079 + 1.57197I$	$-4.25079 - 1.54146I$	$-6.85137 + 4.44536I$
$u = -0.003594 + 0.899426I$ $a = -1.89385 - 0.60583I$ $b = -0.370370 - 0.914227I$	$-5.78882 + 3.81724I$	$-10.21345 - 4.30874I$
$u = -0.003594 - 0.899426I$ $a = -1.89385 + 0.60583I$ $b = -0.370370 + 0.914227I$	$-5.78882 - 3.81724I$	$-10.21345 + 4.30874I$
$u = -0.80574 + 1.33514I$ $a = 1.031480 - 0.243645I$ $b = 0.01943 + 2.08470I$	$-7.16558 - 2.61229I$	$-10.71663 + 1.92921I$
$u = -0.80574 - 1.33514I$ $a = 1.031480 + 0.243645I$ $b = 0.01943 - 2.08470I$	$-7.16558 + 2.61229I$	$-10.71663 - 1.92921I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.04344 + 1.39492I$ $a = -1.146970 + 0.493456I$ $b = -0.74257 - 2.29110I$	$-16.7932 - 13.5804I$	$-9.69096 + 5.75208I$
$u = -1.04344 - 1.39492I$ $a = -1.146970 - 0.493456I$ $b = -0.74257 + 2.29110I$	$-16.7932 + 13.5804I$	$-9.69096 - 5.75208I$
$u = -0.155431$ $a = -2.24820$ $b = -0.397493$	-0.766508	-12.8940

II. $I_2^u = \langle -u^4 + u^2 + b - 1,\ a + u - 1,\ u^5 - u^3 - u^2 + u + 1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3u^3 - 3u^2 + u - 10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^5 - 3y^4 - 5y^3 - 3y^2 - 2y - 1$
c_2, c_4, c_8 c_{10}	$y^5 - 6y^4 + 13y^3 - 12y^2 + 4y - 1$
c_3, c_6	$y^5 - 4y^4 - 4y^3 - 9y^2 + 6y - 1$
c_7	$y^5 - 5y^4 - 12y^3 + 9y^2 + 91y - 121$
c_9, c_{11}	$y^5 - 2y^4 + 3y^3 - 3y^2 + 3y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.699311 + 0.811268I$ $a = 1.69931 - 0.81127I$ $b = -0.08973 + 1.51845I$	$-4.27168 - 5.69445I$	$-7.07561 + 6.18407I$
$u = -0.699311 - 0.811268I$ $a = 1.69931 + 0.81127I$ $b = -0.08973 - 1.51845I$	$-4.27168 + 5.69445I$	$-7.07561 - 6.18407I$
$u = 1.045750 + 0.405588I$ $a = -0.045747 - 0.405588I$ $b = 0.214528 + 0.727972I$	$1.28936 + 0.85728I$	$-9.85891 + 1.65248I$
$u = 1.045750 - 0.405588I$ $a = -0.045747 + 0.405588I$ $b = 0.214528 - 0.727972I$	$1.28936 - 0.85728I$	$-9.85891 - 1.65248I$
$u = -0.692872$ $a = 1.69287$ $b = 0.750397$	-13.7746	-13.1310

III. $\boldsymbol{I_3^u = \langle -7.93\times 10^{30}u^{27} - 2.30\times 10^{31}u^{26} + \cdots + 1.78\times 10^{32}b - 1.02\times 10^{33},\ 5.27\times 10^{33}u^{27} + 4.24\times 10^{33}u^{26} + \cdots + 4.71\times 10^{34}a - 4.75\times 10^{34},\ u^{28} + 2u^{27} + \cdots + 16u + 53\rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.112038u^{27} - 0.0900820u^{26} + \cdots - 11.0154u + 1.00852 \\ 0.0446814u^{27} + 0.129648u^{26} + \cdots - 2.93741u + 5.76160 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 0.0412335u^{27} + 0.151288u^{26} + \cdots + 0.947304u + 6.52946 \\ 0.0570546u^{27} + 0.0640613u^{26} + \cdots + 2.64220u - 0.694529 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0982881u^{27} + 0.215349u^{26} + \cdots + 3.58950u + 5.83493 \\ 0.0570546u^{27} + 0.0640613u^{26} + \cdots + 2.64220u - 0.694529 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.139493u^{27} - 0.00902673u^{26} + \cdots - 14.8255u + 7.85460 \\ 0.0820733u^{27} + 0.170760u^{26} + \cdots - 2.23022u + 6.62107 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.112897u^{27} - 0.126972u^{26} + \cdots - 10.1587u - 0.331526 \\ 0.0120291u^{27} + 0.0408066u^{26} + \cdots - 3.54568u + 3.89750 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.147589u^{27} + 0.261948u^{26} + \cdots + 0.542279u + 10.1056 \\ 0.137753u^{27} + 0.229592u^{26} + \cdots + 5.02332u + 5.68909 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.318579u^{27} - 0.451498u^{26} + \cdots - 21.0133u - 6.91766 \\ -0.0305242u^{27} + 0.0725772u^{26} + \cdots - 12.1016u + 8.59819 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00984630u^{27} - 0.0983526u^{26} + \cdots + 6.93307u - 6.10852 \\ 0.00262412u^{27} - 0.0638304u^{26} + \cdots + 3.31657u - 6.12608 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00984630u^{27} - 0.0983526u^{26} + \cdots + 6.93307u - 6.10852 \\ 0.00262412u^{27} - 0.0638304u^{26} + \cdots + 3.31657u - 6.12608 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.0687616u^{27} - 0.161087u^{26} + \cdots + 10.9847u - 14.9327$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^{14} - 3u^{13} + \cdots - 9u + 43)^2$
c_2, c_4, c_8 c_{10}	$u^{28} - u^{27} + \cdots - 10u + 5$
c_3, c_6	$u^{28} - 3u^{27} + \cdots + 67u + 71$
c_7	$(u^{14} + 4u^{13} + \cdots + 10u + 25)^2$
c_9, c_{11}	$u^{28} + 2u^{27} + \cdots + 16u + 53$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{14} - 23y^{13} + \cdots + 7573y + 1849)^2$
c_2, c_4, c_8 c_{10}	$y^{28} - 23y^{27} + \cdots + 790y + 25$
c_3, c_6	$y^{28} - 39y^{27} + \cdots - 40699y + 5041$
c_7	$(y^{14} + 12y^{13} + \cdots - 900y + 625)^2$
c_9, c_{11}	$y^{28} + 4y^{27} + \cdots + 5998y + 2809$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.584190 + 0.830454I$ $a = -0.230171 + 0.016365I$ $b = -0.120673 + 0.549343I$	$-2.45167 - 0.19028I$	$-7.59069 - 0.07427I$
$u = -0.584190 - 0.830454I$ $a = -0.230171 - 0.016365I$ $b = -0.120673 - 0.549343I$	$-2.45167 + 0.19028I$	$-7.59069 + 0.07427I$
$u = -0.189224 + 0.962916I$ $a = -1.81744 - 0.19971I$ $b = 0.015564 - 0.852076I$	$-6.04992 - 4.80511I$	$-11.59839 + 3.59136I$
$u = -0.189224 - 0.962916I$ $a = -1.81744 + 0.19971I$ $b = 0.015564 + 0.852076I$	$-6.04992 + 4.80511I$	$-11.59839 - 3.59136I$
$u = -0.579209 + 0.947954I$ $a = -0.979797 + 0.974887I$ $b = -0.149625 - 0.259516I$	$-8.72421 - 2.38151I$	$-11.54622 - 4.13808I$
$u = -0.579209 - 0.947954I$ $a = -0.979797 - 0.974887I$ $b = -0.149625 + 0.259516I$	$-8.72421 + 2.38151I$	$-11.54622 + 4.13808I$
$u = 0.069986 + 0.864215I$ $a = 1.70791 - 0.59133I$ $b = 0.019429 - 0.811599I$	$-2.45167 + 0.19028I$	$-7.59069 + 0.07427I$
$u = 0.069986 - 0.864215I$ $a = 1.70791 + 0.59133I$ $b = 0.019429 + 0.811599I$	$-2.45167 - 0.19028I$	$-7.59069 - 0.07427I$
$u = -0.998105 + 0.539137I$ $a = 0.556120 - 0.028718I$ $b = -0.270263 + 0.404856I$	$-0.77359 - 4.74950I$	$-0.89732 + 5.36294I$
$u = -0.998105 - 0.539137I$ $a = 0.556120 + 0.028718I$ $b = -0.270263 - 0.404856I$	$-0.77359 + 4.74950I$	$-0.89732 - 5.36294I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.358359+1.130590I$ $a=\ \ 0.132188+0.113341I$ $b=-0.21610-1.47756I$	$-10.59290-5.53516I$	$-10.41956+3.78484I$
$u=-0.358359-1.130590I$ $a=\ \ 0.132188-0.113341I$ $b=-0.21610+1.47756I$	$-10.59290+5.53516I$	$-10.41956-3.78484I$
$u=-0.412188+0.675927I$ $a=-1.94357-2.32635I$ $b=\ \ 0.57652-1.49217I$	$-8.72421+2.38151I$	$-11.54622+4.13808I$
$u=-0.412188-0.675927I$ $a=-1.94357+2.32635I$ $b=\ \ 0.57652+1.49217I$	$-8.72421-2.38151I$	$-11.54622-4.13808I$
$u=\ \ 0.570770+1.172340I$ $a=\ \ 1.060560+0.334570I$ $b=-0.224953-0.214426I$	$-15.2043+3.9716I$	$-10.71811-2.64104I$
$u=\ \ 0.570770-1.172340I$ $a=\ \ 1.060560-0.334570I$ $b=-0.224953+0.214426I$	$-15.2043-3.9716I$	$-10.71811+2.64104I$
$u=-0.905713+0.967441I$ $a=\ \ 1.44298-1.00864I$ $b=\ \ 0.70117+1.92457I$	$-6.04992-4.80511I$	$-11.59839+3.59136I$
$u=-0.905713-0.967441I$ $a=\ \ 1.44298+1.00864I$ $b=\ \ 0.70117-1.92457I$	$-6.04992+4.80511I$	$-11.59839-3.59136I$
$u=\ \ 0.643586+1.170970I$ $a=-1.45530-0.21856I$ $b=-0.55150+1.53777I$	$-0.77359+4.74950I$	$-0.89732-5.36294I$
$u=\ \ 0.643586-1.170970I$ $a=-1.45530+0.21856I$ $b=-0.55150-1.53777I$	$-0.77359-4.74950I$	$-0.89732+5.36294I$

Solutions to I_3^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.412432 + 0.193729I$ $a = -0.741642 - 0.146832I$ $b = 0.093330 + 1.298980I$	$2.67330 + 1.05149I$	$1.77030 - 7.85829I$
$u = 0.412432 - 0.193729I$ $a = -0.741642 + 0.146832I$ $b = 0.093330 - 1.298980I$	$2.67330 - 1.05149I$	$1.77030 + 7.85829I$
$u = 1.63897 + 0.02744I$ $a = -0.646267 - 0.284696I$ $b = 2.54792 + 0.58842I$	$2.67330 + 1.05149I$	$1.77030 - 7.85829I$
$u = 1.63897 - 0.02744I$ $a = -0.646267 + 0.284696I$ $b = 2.54792 - 0.58842I$	$2.67330 - 1.05149I$	$1.77030 + 7.85829I$
$u = -1.63324 + 1.14769I$ $a = -0.616837 + 0.451371I$ $b = 0.72750 - 3.04503I$	$-15.2043 + 3.9716I$	$-10.71811 - 2.64104I$
$u = -1.63324 - 1.14769I$ $a = -0.616837 - 0.451371I$ $b = 0.72750 + 3.04503I$	$-15.2043 - 3.9716I$	$-10.71811 + 2.64104I$
$u = 1.32448 + 1.58910I$ $a = 0.908615 + 0.412051I$ $b = 0.85169 - 3.21610I$	$-10.59290 + 5.53516I$	$-10.41956 - 3.78484I$
$u = 1.32448 - 1.58910I$ $a = 0.908615 - 0.412051I$ $b = 0.85169 + 3.21610I$	$-10.59290 - 5.53516I$	$-10.41956 + 3.78484I$

IV. $I_4^u = \langle -89u^{13} + 200u^{12} + \cdots + 113b - 381,\ 134u^{13} - 503u^{12} + \cdots + 113a - 178,\ u^{14} - 3u^{13} + \cdots + 8u^2 + 1\rangle$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.18584u^{13} + 4.45133u^{12} + \cdots - 8.74336u + 1.57522 \\ 0.787611u^{13} - 1.76991u^{12} + \cdots + 2.15044u + 3.37168 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -2.44248u^{13} + 7.64602u^{12} + \cdots - 9.76991u - 0.725664 \\ 0.840708u^{13} - 2.32743u^{12} + \cdots + 1.36283u - 0.221239 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.60177u^{13} + 5.31858u^{12} + \cdots - 8.40708u - 0.946903 \\ 0.840708u^{13} - 2.32743u^{12} + \cdots + 1.36283u - 0.221239 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.02655u^{13} - 3.77876u^{12} + \cdots + 8.10619u - 4.79646 \\ -1.26549u^{13} + 2.78761u^{12} + \cdots - 0.0619469u - 1.03540 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.601770u^{13} + 3.31858u^{12} + \cdots - 5.40708u + 4.05310 \\ 0.433628u^{13} - 1.05310u^{12} + \cdots + 2.73451u + 3.99115 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.22124u^{13} - 2.82301u^{12} + \cdots + 0.884956u + 3.36283 \\ 1.00885u^{13} - 3.59292u^{12} + \cdots + 4.03540u - 0.265487 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -4.58407u^{13} + 16.1327u^{12} + \cdots - 24.3363u + 3.52212 \\ -0.212389u^{13} + 1.23009u^{12} + \cdots - 5.84956u + 3.37168 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.70796u^{13} + 4.43363u^{12} + \cdots + 0.168142u - 3.76106 \\ -0.823009u^{13} + 2.14159u^{12} + \cdots - 2.29204u - 2.30973 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.70796u^{13} + 4.43363u^{12} + \cdots + 0.168142u - 3.76106 \\ -0.823009u^{13} + 2.14159u^{12} + \cdots - 2.29204u - 2.30973 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{42}{113}u^{13} - \frac{102}{113}u^{12} - \frac{84}{113}u^{11} + \frac{236}{113}u^{10} - \frac{569}{113}u^9 + \frac{340}{113}u^8 + \frac{417}{113}u^7 + \frac{22}{113}u^6 + \frac{1511}{113}u^5 + \frac{1086}{113}u^4 + \frac{350}{113}u^3 + \frac{2192}{113}u^2 - \frac{849}{113}u - \frac{1034}{113}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^7 + 2u^6 + u^5 + 2u^4 + u^3 - 2u^2 - 1)^2$
c_2, c_{10}	$u^{14} - 3u^{12} + \cdots + 2u + 2$
c_3, c_6	$u^{14} + 8u^{13} + \cdots + 23u + 17$
c_4, c_8	$u^{14} - 3u^{12} + \cdots - 2u + 2$
c_5	$(u^7 - 2u^6 + u^5 - 2u^4 + u^3 + 2u^2 + 1)^2$
c_7	$(u^7 - u^6 + u^5 - 3u^4 + 2u^3 + 2u^2 + u - 1)^2$
c_9, c_{11}	$u^{14} - 3u^{13} + \cdots + 8u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^7 - 2y^6 - 5y^5 + 6y^4 + 13y^3 - 4y - 1)^2$
c_2, c_4, c_8 c_{10}	$y^{14} - 6y^{13} + \cdots - 32y + 4$
c_3, c_6	$y^{14} - 16y^{13} + \cdots - 1889y + 289$
c_7	$(y^7 + y^6 - y^5 + y^4 + 16y^3 - 6y^2 + 5y - 1)^2$
c_9, c_{11}	$y^{14} - y^{13} + \cdots + 16y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.222980 + 1.103480I$ $a = 0.714846 - 1.000800I$ $b = 0.621624 - 1.229020I$	-5.45029	$-12.49575 + 0.I$
$u = -0.222980 - 1.103480I$ $a = 0.714846 + 1.000800I$ $b = 0.621624 + 1.229020I$	-5.45029	$-12.49575 + 0.I$
$u = -1.119060 + 0.443308I$ $a = -0.158358 + 0.073033I$ $b = -0.636639 - 0.251429I$	$-1.53052 - 4.84436I$	$-11.44020 + 5.79651I$
$u = -1.119060 - 0.443308I$ $a = -0.158358 - 0.073033I$ $b = -0.636639 + 0.251429I$	$-1.53052 + 4.84436I$	$-11.44020 - 5.79651I$
$u = 0.525099 + 1.185640I$ $a = 1.165850 + 0.707967I$ $b = 0.736311 - 0.401224I$	$-8.72501 + 3.10373I$	$-11.79285 - 6.01633I$
$u = 0.525099 - 1.185640I$ $a = 1.165850 - 0.707967I$ $b = 0.736311 + 0.401224I$	$-8.72501 - 3.10373I$	$-11.79285 + 6.01633I$
$u = 0.594473 + 1.187010I$ $a = -1.44607 - 0.16012I$ $b = -0.58093 + 1.29906I$	$-1.53052 + 4.84436I$	$-11.44020 - 5.79651I$
$u = 0.594473 - 1.187010I$ $a = -1.44607 + 0.16012I$ $b = -0.58093 - 1.29906I$	$-1.53052 - 4.84436I$	$-11.44020 + 5.79651I$
$u = -0.153533 + 0.473920I$ $a = -3.47416 - 2.94650I$ $b = 0.38762 - 1.68131I$	$-8.72501 + 3.10373I$	$-11.79285 - 6.01633I$
$u = -0.153533 - 0.473920I$ $a = -3.47416 + 2.94650I$ $b = 0.38762 + 1.68131I$	$-8.72501 - 3.10373I$	$-11.79285 + 6.01633I$

Solutions to I^u_4	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.082843 + 0.472693I$ $a = -0.662827 - 0.167108I$ $b = -0.05161 + 1.42362I$	$2.28861 - 0.77726I$	$-13.51907 - 2.44765I$
$u = 0.082843 - 0.472693I$ $a = -0.662827 + 0.167108I$ $b = -0.05161 - 1.42362I$	$2.28861 + 0.77726I$	$-13.51907 + 2.44765I$
$u = 1.79315 + 0.00147I$ $a = -0.639276 + 0.400787I$ $b = 3.02363 - 1.09128I$	$2.28861 - 0.77726I$	$-13.51907 - 2.44765I$
$u = 1.79315 - 0.00147I$ $a = -0.639276 - 0.400787I$ $b = 3.02363 + 1.09128I$	$2.28861 + 0.77726I$	$-13.51907 + 2.44765I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^5-3u^4+3u^3-3u^2+2u-1)(u^7+2u^6+u^5+2u^4+u^3-2u^2-1)^2$ $\cdot(u^{13}+8u^{12}+\cdots-10u+4)(u^{14}-3u^{13}+\cdots-9u+43)^2$
c_2, c_{10}	$(u^5-3u^3+2u-1)(u^{13}-8u^{11}+\cdots-2u+2)(u^{14}-3u^{12}+\cdots+2u+2)$ $\cdot(u^{28}-u^{27}+\cdots-10u+5)$
c_3, c_6	$(u^5-2u^3-5u^2-4u-1)(u^{13}-2u^{12}+\cdots-3u+1)$ $\cdot(u^{14}+8u^{13}+\cdots+23u+17)(u^{28}-3u^{27}+\cdots+67u+71)$
c_4, c_8	$(u^5-3u^3+2u+1)(u^{13}-8u^{11}+\cdots-2u+2)(u^{14}-3u^{12}+\cdots-2u+2)$ $\cdot(u^{28}-u^{27}+\cdots-10u+5)$
c_5	$(u^5+3u^4+3u^3+3u^2+2u+1)(u^7-2u^6+u^5-2u^4+u^3+2u^2+1)^2$ $\cdot(u^{13}+8u^{12}+\cdots-10u+4)(u^{14}-3u^{13}+\cdots-9u+43)^2$
c_7	$(u^5+u^4-2u^3-9u^2-17u-11)$ $\cdot(u^7-u^6+u^5-3u^4+2u^3+2u^2+u-1)^2$ $\cdot(u^{13}-10u^{12}+\cdots-40u+20)(u^{14}+4u^{13}+\cdots+10u+25)^2$
c_9, c_{11}	$(u^5-u^3-u^2+u+1)(u^{13}+3u^{11}+\cdots+4u+1)$ $\cdot(u^{14}-3u^{13}+\cdots+8u^2+1)(u^{28}+2u^{27}+\cdots+16u+53)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^5 - 3y^4 - 5y^3 - 3y^2 - 2y - 1)$ $\cdot (y^7 - 2y^6 - 5y^5 + 6y^4 + 13y^3 - 4y - 1)^2$ $\cdot (y^{13} - 16y^{12} + \cdots + 284y - 16)(y^{14} - 23y^{13} + \cdots + 7573y + 1849)^2$
c_2, c_4, c_8 c_{10}	$(y^5 - 6y^4 + 13y^3 - 12y^2 + 4y - 1)(y^{13} - 16y^{12} + \cdots + 12y - 4)$ $\cdot (y^{14} - 6y^{13} + \cdots - 32y + 4)(y^{28} - 23y^{27} + \cdots + 790y + 25)$
c_3, c_6	$(y^5 - 4y^4 - 4y^3 - 9y^2 + 6y - 1)(y^{13} - 24y^{12} + \cdots - 7y - 1)$ $\cdot (y^{14} - 16y^{13} + \cdots - 1889y + 289)$ $\cdot (y^{28} - 39y^{27} + \cdots - 40699y + 5041)$
c_7	$(y^5 - 5y^4 - 12y^3 + 9y^2 + 91y - 121)$ $\cdot (y^7 + y^6 - y^5 + y^4 + 16y^3 - 6y^2 + 5y - 1)^2$ $\cdot (y^{13} - 2y^{12} + \cdots + 4440y - 400)(y^{14} + 12y^{13} + \cdots - 900y + 625)^2$
c_9, c_{11}	$(y^5 - 2y^4 + 3y^3 - 3y^2 + 3y - 1)(y^{13} + 6y^{12} + \cdots + 38y - 1)$ $\cdot (y^{14} - y^{13} + \cdots + 16y + 1)(y^{28} + 4y^{27} + \cdots + 5998y + 2809)$