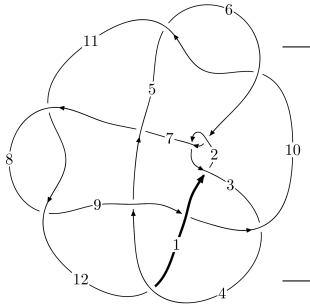
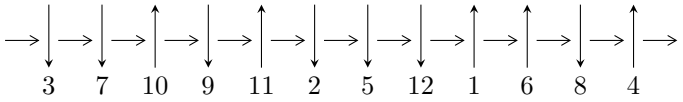
$12a_{0630}$ $(K12a_{0630})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -5.91340 \times 10^{369} u^{144} + 1.16876 \times 10^{370} u^{143} + \cdots + 1.70448 \times 10^{369} b + 2.22815 \times 10^{371}, \\ & -3.70382 \times 10^{371} u^{144} + 5.34656 \times 10^{371} u^{143} + \cdots + 7.32926 \times 10^{370} a + 3.08617 \times 10^{373}, \\ & u^{145} - u^{144} + \cdots + 111u + 43 \rangle \\ I_2^u = \langle & -47244u^{25} + 102u^{24} + \cdots + 21943b - 77421, \\ & 2102618u^{25} - 1405135u^{24} + \cdots + 416917a + 2687295,\ u^{26} - 5u^{24} + \cdots + 3u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 171 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. $\boldsymbol{I_1^u = \langle -5.91 \times 10^{369} u^{144} + 1.17 \times 10^{370} u^{143} + \cdots + 1.70 \times 10^{369} b + 2.23 \times 10^{371},\ -3.70 \times 10^{371} u^{144} + 5.35 \times 10^{371} u^{143} + \cdots + 7.33 \times 10^{370} a + 3.09 \times 10^{373},\ u^{145} - u^{144} + \cdots + 111u + 43 \rangle}$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 5.05348u^{144} - 7.29482u^{143} + \cdots - 1529.59u - 421.075 \\ 3.46933u^{144} - 6.85702u^{143} + \cdots - 527.016u - 130.724 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 13.2152u^{144} - 5.82712u^{143} + \cdots - 2009.43u - 616.681 \\ 4.92450u^{144} - 2.88311u^{143} + \cdots - 622.147u - 167.645 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 8.52281u^{144} - 14.1518u^{143} + \cdots - 2056.61u - 551.799 \\ 3.46933u^{144} - 6.85702u^{143} + \cdots - 527.016u - 130.724 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 3.01580u^{144} - 1.99190u^{143} + \cdots - 880.199u - 302.431 \\ 2.54787u^{144} - 4.15288u^{143} + \cdots - 58.9951u - 14.8841 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 5.82435u^{144} - 14.4755u^{143} + \cdots - 3307.07u - 852.613 \\ 1.30197u^{144} - 7.24708u^{143} + \cdots - 799.748u - 136.273 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 7.02548u^{144} - 13.0533u^{143} + \cdots - 1664.35u - 451.446 \\ 3.09963u^{144} - 6.81289u^{143} + \cdots - 527.426u - 116.601 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -3.17000u^{144} + 10.4896u^{143} + \cdots + 3245.66u + 880.087 \\ -1.49962u^{144} + 8.59243u^{143} + \cdots + 904.608u + 193.456 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.69384u^{144} + 23.7737u^{143} + \cdots + 1298.05u + 121.085$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{145} + 59u^{144} + \cdots - 292549u + 1849$
c_2, c_6	$u^{145} - u^{144} + \cdots + 111u + 43$
c_3	$u^{145} + 6u^{143} + \cdots - 200298u + 49447$
c_4	$u^{145} - 2u^{144} + \cdots + 13u - 1$
c_5, c_{10}	$u^{145} - 3u^{144} + \cdots + 85723u + 9799$
c_7	$u^{145} - 11u^{144} + \cdots - 3598960u + 268027$
c_8, c_{11}	$u^{145} - u^{144} + \cdots - 6u - 1$
c_9	$u^{145} + u^{144} + \cdots - 1852u - 8809$
c_{12}	$u^{145} + 12u^{144} + \cdots + 14475u + 983$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{145} + 45y^{144} + \cdots + 56069800047y - 3418801$
c_2, c_6	$y^{145} - 59y^{144} + \cdots - 292549y - 1849$
c_3	$y^{145} + 12y^{144} + \cdots + 12484646126y - 2445005809$
c_4	$y^{145} - 2y^{144} + \cdots - 995y - 1$
c_5, c_{10}	$y^{145} + 117y^{144} + \cdots - 14395117115y - 96020401$
c_7	$y^{145} - 47y^{144} + \cdots + 2169230447548y - 71838472729$
c_8, c_{11}	$y^{145} - 111y^{144} + \cdots + 244y - 1$
c_9	$y^{145} - 37y^{144} + \cdots + 6073711804y - 77598481$
c_{12}	$y^{145} + 30y^{144} + \cdots - 94703045y - 966289$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.877303 + 0.468272I$ $a = 1.57356 - 0.62205I$ $b = 0.29748 + 2.26551I$	$-2.78991 - 1.90964I$	0
$u = 0.877303 - 0.468272I$ $a = 1.57356 + 0.62205I$ $b = 0.29748 - 2.26551I$	$-2.78991 + 1.90964I$	0
$u = 0.882422 + 0.437768I$ $a = -0.321281 - 1.299260I$ $b = -0.06255 - 1.51339I$	$-8.61145 - 1.79826I$	0
$u = 0.882422 - 0.437768I$ $a = -0.321281 + 1.299260I$ $b = -0.06255 + 1.51339I$	$-8.61145 + 1.79826I$	0
$u = -0.815077 + 0.543750I$ $a = 1.70139 + 2.08254I$ $b = 0.93293 - 2.67151I$	$-3.68834 + 2.23519I$	0
$u = -0.815077 - 0.543750I$ $a = 1.70139 - 2.08254I$ $b = 0.93293 + 2.67151I$	$-3.68834 - 2.23519I$	0
$u = 0.876196 + 0.413458I$ $a = 2.72185 + 1.43346I$ $b = 0.122814 + 1.077590I$	$-4.68823 + 4.69132I$	0
$u = 0.876196 - 0.413458I$ $a = 2.72185 - 1.43346I$ $b = 0.122814 - 1.077590I$	$-4.68823 - 4.69132I$	0
$u = -0.590696 + 0.766056I$ $a = -1.44442 + 0.92272I$ $b = 1.169960 - 0.141258I$	$0.27031 - 7.86888I$	0
$u = -0.590696 - 0.766056I$ $a = -1.44442 - 0.92272I$ $b = 1.169960 + 0.141258I$	$0.27031 + 7.86888I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.956142 + 0.395396I$ $a = -1.136230 - 0.527024I$ $b = -0.094603 + 0.660999I$	$-4.86760 - 7.94659I$	0
$u = 0.956142 - 0.395396I$ $a = -1.136230 + 0.527024I$ $b = -0.094603 - 0.660999I$	$-4.86760 + 7.94659I$	0
$u = -0.599491 + 0.756559I$ $a = 1.33554 - 0.64310I$ $b = -0.896372 - 0.235830I$	$4.15674 - 3.15991I$	0
$u = -0.599491 - 0.756559I$ $a = 1.33554 + 0.64310I$ $b = -0.896372 + 0.235830I$	$4.15674 + 3.15991I$	0
$u = -0.390521 + 0.882567I$ $a = -0.594345 + 0.451423I$ $b = 0.382837 - 1.274910I$	$-1.26071 - 5.33735I$	0
$u = -0.390521 - 0.882567I$ $a = -0.594345 - 0.451423I$ $b = 0.382837 + 1.274910I$	$-1.26071 + 5.33735I$	0
$u = -0.801456 + 0.537667I$ $a = -0.017933 + 0.502510I$ $b = -0.325610 + 0.795147I$	$-1.55077 + 2.17680I$	0
$u = -0.801456 - 0.537667I$ $a = -0.017933 - 0.502510I$ $b = -0.325610 - 0.795147I$	$-1.55077 - 2.17680I$	0
$u = 0.901498 + 0.511632I$ $a = -1.07717 - 2.46541I$ $b = 2.53524 + 0.74110I$	$-3.05457 - 1.67010I$	0
$u = 0.901498 - 0.511632I$ $a = -1.07717 + 2.46541I$ $b = 2.53524 - 0.74110I$	$-3.05457 + 1.67010I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.533541+0.797556I$ $a=\ \ 0.71732-1.34689I$ $b=-0.58770+1.36493I$	$-5.88372-4.52346I$	0
$u=-0.533541-0.797556I$ $a=\ \ 0.71732+1.34689I$ $b=-0.58770-1.36493I$	$-5.88372+4.52346I$	0
$u=\ \ 0.583401+0.758857I$ $a=-1.145310-0.283574I$ $b=\ \ 0.791925-0.009498I$	$2.68264+1.06220I$	0
$u=\ \ 0.583401-0.758857I$ $a=-1.145310+0.283574I$ $b=\ \ 0.791925+0.009498I$	$2.68264-1.06220I$	0
$u=-0.888534+0.337951I$ $a=\ \ 0.211272-0.432260I$ $b=-0.634572+0.402280I$	$-1.54724+0.94745I$	0
$u=-0.888534-0.337951I$ $a=\ \ 0.211272+0.432260I$ $b=-0.634572-0.402280I$	$-1.54724-0.94745I$	0
$u=-0.537246+0.778939I$ $a=-1.014390-0.014558I$ $b=\ \ 0.447040+0.853657I$	$-0.02802+2.03103I$	0
$u=-0.537246-0.778939I$ $a=-1.014390+0.014558I$ $b=\ \ 0.447040-0.853657I$	$-0.02802-2.03103I$	0
$u=\ \ 0.850709+0.409603I$ $a=-2.41313-0.98350I$ $b=\ \ 0.195250-0.907862I$	$-0.162571+1.035960I$	0
$u=\ \ 0.850709-0.409603I$ $a=-2.41313+0.98350I$ $b=\ \ 0.195250+0.907862I$	$-0.162571-1.035960I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.823610 + 0.459896I$ $a = 2.48932 + 1.20710I$ $b = -1.45968 + 1.21878I$	$-2.72559 - 2.32796I$	0
$u = 0.823610 - 0.459896I$ $a = 2.48932 - 1.20710I$ $b = -1.45968 - 1.21878I$	$-2.72559 + 2.32796I$	0
$u = -0.923681 + 0.516547I$ $a = -0.971498 + 0.142711I$ $b = -0.160473 + 1.223340I$	$-1.81144 + 1.97771I$	0
$u = -0.923681 - 0.516547I$ $a = -0.971498 - 0.142711I$ $b = -0.160473 - 1.223340I$	$-1.81144 - 1.97771I$	0
$u = 0.920288 + 0.193098I$ $a = 1.68632 + 0.01894I$ $b = -0.142587 - 0.330023I$	$-4.69016 - 1.86889I$	0
$u = 0.920288 - 0.193098I$ $a = 1.68632 - 0.01894I$ $b = -0.142587 + 0.330023I$	$-4.69016 + 1.86889I$	0
$u = -0.933790 + 0.502928I$ $a = -1.92033 + 0.14167I$ $b = 0.74017 + 1.36721I$	$-2.36535 + 2.64438I$	0
$u = -0.933790 - 0.502928I$ $a = -1.92033 - 0.14167I$ $b = 0.74017 - 1.36721I$	$-2.36535 - 2.64438I$	0
$u = -0.752593 + 0.555151I$ $a = 1.27984 - 0.77388I$ $b = -0.508967 + 1.178150I$	$-3.18084 - 4.82889I$	0
$u = -0.752593 - 0.555151I$ $a = 1.27984 + 0.77388I$ $b = -0.508967 - 1.178150I$	$-3.18084 + 4.82889I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.962052 + 0.472393I$ $a = 0.947301 + 0.777991I$ $b = -0.562454 - 0.445089I$	$-0.68104 - 4.52796I$	0
$u = 0.962052 - 0.472393I$ $a = 0.947301 - 0.777991I$ $b = -0.562454 + 0.445089I$	$-0.68104 + 4.52796I$	0
$u = -0.927959 + 0.546717I$ $a = 1.78009 - 1.12219I$ $b = -0.298418 - 1.176200I$	$0.86132 + 5.50688I$	0
$u = -0.927959 - 0.546717I$ $a = 1.78009 + 1.12219I$ $b = -0.298418 + 1.176200I$	$0.86132 - 5.50688I$	0
$u = 0.862784 + 0.647529I$ $a = 1.79561 - 0.09259I$ $b = -0.892374 + 0.355456I$	$-0.531355 - 0.315150I$	0
$u = 0.862784 - 0.647529I$ $a = 1.79561 + 0.09259I$ $b = -0.892374 - 0.355456I$	$-0.531355 + 0.315150I$	0
$u = -0.929216 + 0.548488I$ $a = -2.50749 + 1.30313I$ $b = 0.403587 + 1.273580I$	$-3.74473 + 9.25981I$	0
$u = -0.929216 - 0.548488I$ $a = -2.50749 - 1.30313I$ $b = 0.403587 - 1.273580I$	$-3.74473 - 9.25981I$	0
$u = -0.494517 + 0.775236I$ $a = -0.835495 + 0.964740I$ $b = 0.314735 - 1.096590I$	$-1.40064 - 3.37965I$	0
$u = -0.494517 - 0.775236I$ $a = -0.835495 - 0.964740I$ $b = 0.314735 + 1.096590I$	$-1.40064 + 3.37965I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.745108+0.533031I$ $a=-0.819488+0.194889I$ $b=\ \ 0.469794-1.019830I$	$1.44540-1.12902I$	0
$u=-0.745108-0.533031I$ $a=-0.819488-0.194889I$ $b=\ \ 0.469794+1.019830I$	$1.44540+1.12902I$	0
$u=\ \ 0.846135+0.680949I$ $a=-0.87372-1.61086I$ $b=\ \ 0.781059+0.286696I$	$-0.46757-4.83298I$	0
$u=\ \ 0.846135-0.680949I$ $a=-0.87372+1.61086I$ $b=\ \ 0.781059-0.286696I$	$-0.46757+4.83298I$	0
$u=\ \ 0.497703+0.969609I$ $a=-0.577743-0.960777I$ $b=\ \ 0.50813+1.40818I$	$-4.5667+13.6860I$	0
$u=\ \ 0.497703-0.969609I$ $a=-0.577743+0.960777I$ $b=\ \ 0.50813-1.40818I$	$-4.5667-13.6860I$	0
$u=\ \ 0.899949+0.026109I$ $a=\ \ 0.053027-0.660507I$ $b=-0.781072+0.757559I$	$-5.11875-7.52260I$	0
$u=\ \ 0.899949-0.026109I$ $a=\ \ 0.053027+0.660507I$ $b=-0.781072-0.757559I$	$-5.11875+7.52260I$	0
$u=\ \ 0.454645+1.003910I$ $a=\ \ 0.531985+0.718314I$ $b=-0.456897-1.165380I$	$1.25234+8.01007I$	0
$u=\ \ 0.454645-1.003910I$ $a=\ \ 0.531985-0.718314I$ $b=-0.456897+1.165380I$	$1.25234-8.01007I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.755803 + 0.807073I$ $a = 0.674900 + 0.453063I$ $b = -0.504716 + 0.121288I$	$4.27938 - 2.56531I$	0
$u = 0.755803 - 0.807073I$ $a = 0.674900 - 0.453063I$ $b = -0.504716 - 0.121288I$	$4.27938 + 2.56531I$	0
$u = -0.988668 + 0.549145I$ $a = 1.92942 + 0.47745I$ $b = -0.093778 - 1.210400I$	$-7.58916 + 2.94599I$	0
$u = -0.988668 - 0.549145I$ $a = 1.92942 - 0.47745I$ $b = -0.093778 + 1.210400I$	$-7.58916 - 2.94599I$	0
$u = 1.131400 + 0.018140I$ $a = 0.075162 + 0.856351I$ $b = 0.32791 + 1.54096I$	$-11.62080 + 2.99703I$	0
$u = 1.131400 - 0.018140I$ $a = 0.075162 - 0.856351I$ $b = 0.32791 - 1.54096I$	$-11.62080 - 2.99703I$	0
$u = 0.860921 + 0.087614I$ $a = -0.808976 - 0.775104I$ $b = 0.674962 + 0.527357I$	$-0.76882 + 2.98750I$	0
$u = 0.860921 - 0.087614I$ $a = -0.808976 + 0.775104I$ $b = 0.674962 - 0.527357I$	$-0.76882 - 2.98750I$	0
$u = -1.13984$ $a = -0.114348$ $b = -0.461190$	-3.03955	0
$u = 1.155530 + 0.099526I$ $a = 0.147461 - 0.992916I$ $b = -0.141041 - 1.320740I$	$-6.72991 + 1.45384I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.155530 - 0.099526I$ $a = 0.147461 + 0.992916I$ $b = -0.141041 + 1.320740I$	$-6.72991 - 1.45384I$	0
$u = 1.144740 + 0.199411I$ $a = -0.35165 + 1.50440I$ $b = -0.043128 + 1.385020I$	$-9.40620 + 0.76476I$	0
$u = 1.144740 - 0.199411I$ $a = -0.35165 - 1.50440I$ $b = -0.043128 - 1.385020I$	$-9.40620 - 0.76476I$	0
$u = -0.485767 + 0.677712I$ $a = 0.218415 + 1.321570I$ $b = -0.176700 - 1.186180I$	$-6.17315 + 1.74985I$	0
$u = -0.485767 - 0.677712I$ $a = 0.218415 - 1.321570I$ $b = -0.176700 + 1.186180I$	$-6.17315 - 1.74985I$	0
$u = 0.935981 + 0.701600I$ $a = -0.903640 - 0.073609I$ $b = 0.657337 - 0.177243I$	$3.70490 - 3.08312I$	0
$u = 0.935981 - 0.701600I$ $a = -0.903640 + 0.073609I$ $b = 0.657337 + 0.177243I$	$3.70490 + 3.08312I$	0
$u = -0.461813 + 1.076340I$ $a = 0.123942 - 0.416815I$ $b = -0.222305 + 1.106570I$	$1.53986 - 0.40085I$	0
$u = -0.461813 - 1.076340I$ $a = 0.123942 + 0.416815I$ $b = -0.222305 - 1.106570I$	$1.53986 + 0.40085I$	0
$u = -0.424273 + 0.710187I$ $a = 1.050440 - 0.769200I$ $b = 0.116913 + 1.130750I$	$-4.75615 - 3.11449I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.424273-0.710187I$ $a=\ \ 1.050440+0.769200I$ $b=\ \ 0.116913-1.130750I$	$-4.75615+3.11449I$	0
$u=\ \ 0.878671+0.778101I$ $a=-0.235223+0.740583I$ $b=-0.016774-0.337626I$	$4.11715-2.92863I$	0
$u=\ \ 0.878671-0.778101I$ $a=-0.235223-0.740583I$ $b=-0.016774+0.337626I$	$4.11715+2.92863I$	0
$u=-1.131800+0.380914I$ $a=-0.420025-0.499001I$ $b=-0.0396237-0.1046570I$	$-4.53919-1.10559I$	0
$u=-1.131800-0.380914I$ $a=-0.420025+0.499001I$ $b=-0.0396237+0.1046570I$	$-4.53919+1.10559I$	0
$u=\ \ 0.428072+1.116620I$ $a=-0.239567+0.629532I$ $b=\ \ 0.184554-1.195220I$	$-4.80389-7.59082I$	0
$u=\ \ 0.428072-1.116620I$ $a=-0.239567-0.629532I$ $b=\ \ 0.184554+1.195220I$	$-4.80389+7.59082I$	0
$u=\ \ 0.244322+0.763715I$ $a=\ \ 0.600458+1.243630I$ $b=-0.51089-1.34454I$	$-6.54158+6.40521I$	0
$u=\ \ 0.244322-0.763715I$ $a=\ \ 0.600458-1.243630I$ $b=-0.51089+1.34454I$	$-6.54158-6.40521I$	0
$u=-1.028890+0.643542I$ $a=-0.951819+0.613503I$ $b=\ \ 1.090380-0.084335I$	$2.85419+8.48349I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.028890-0.643542I$ $a=-0.951819-0.613503I$ $b=\ \ 1.090380+0.084335I$	$2.85419-8.48349I$	0
$u=\ \ 1.026610+0.656866I$ $a=\ \ 0.913624+0.663245I$ $b=-0.869952+0.161082I$	$1.36684-6.43444I$	0
$u=\ \ 1.026610-0.656866I$ $a=\ \ 0.913624-0.663245I$ $b=-0.869952-0.161082I$	$1.36684+6.43444I$	0
$u=-1.034120+0.650749I$ $a=\ \ 1.33656-0.79607I$ $b=-1.341430-0.290208I$	$-1.06692+13.24390I$	0
$u=-1.034120-0.650749I$ $a=\ \ 1.33656+0.79607I$ $b=-1.341430+0.290208I$	$-1.06692-13.24390I$	0
$u=-1.036470+0.657233I$ $a=\ \ 0.321897-0.048454I$ $b=-0.506509+0.536543I$	$-1.50778+3.44001I$	0
$u=-1.036470-0.657233I$ $a=\ \ 0.321897+0.048454I$ $b=-0.506509-0.536543I$	$-1.50778-3.44001I$	0
$u=-0.193897+0.747769I$ $a=-0.123482-0.749627I$ $b=\ \ 0.435742-0.052047I$	$-1.46409+5.31554I$	0
$u=-0.193897-0.747769I$ $a=-0.123482+0.749627I$ $b=\ \ 0.435742+0.052047I$	$-1.46409-5.31554I$	0
$u=-1.085880+0.602466I$ $a=-2.19257+0.10567I$ $b=\ \ 0.057030+1.145030I$	$-6.65585+8.17696I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.085880-0.602466I$ $a=-2.19257-0.10567I$ $b=\ \ 0.057030-1.145030I$	$-6.65585-8.17696I$	0
$u=-1.223920+0.212916I$ $a=\ \ 0.551654-0.417509I$ $b=\ \ 0.25742-1.44087I$	$-11.26070-3.15369I$	0
$u=-1.223920-0.212916I$ $a=\ \ 0.551654+0.417509I$ $b=\ \ 0.25742+1.44087I$	$-11.26070+3.15369I$	0
$u=\ \ 1.115420+0.555165I$ $a=-1.73493-0.44082I$ $b=\ \ 0.60801-1.52221I$	$-9.0018-11.2591I$	0
$u=\ \ 1.115420-0.555165I$ $a=-1.73493+0.44082I$ $b=\ \ 0.60801+1.52221I$	$-9.0018+11.2591I$	0
$u=-1.080100+0.638350I$ $a=\ \ 1.93828-0.18969I$ $b=-0.432637-1.192120I$	$-3.13151+8.73787I$	0
$u=-1.080100-0.638350I$ $a=\ \ 1.93828+0.18969I$ $b=-0.432637+1.192120I$	$-3.13151-8.73787I$	0
$u=-1.069400+0.657510I$ $a=-2.10266+0.16500I$ $b=\ \ 0.67842+1.48081I$	$-7.47993+10.00560I$	0
$u=-1.069400-0.657510I$ $a=-2.10266-0.16500I$ $b=\ \ 0.67842-1.48081I$	$-7.47993-10.00560I$	0
$u=\ \ 0.883864+0.898384I$ $a=\ \ 0.571431-0.953075I$ $b=-0.069957+1.059620I$	$-2.26175-3.27409I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.883864 - 0.898384I$ $a = 0.571431 + 0.953075I$ $b = -0.069957 - 1.059620I$	$-2.26175 + 3.27409I$	0
$u = 1.164450 + 0.485011I$ $a = 1.37316 + 0.66631I$ $b = -0.466417 + 1.117420I$	$-3.73784 - 5.50971I$	0
$u = 1.164450 - 0.485011I$ $a = 1.37316 - 0.66631I$ $b = -0.466417 - 1.117420I$	$-3.73784 + 5.50971I$	0
$u = -0.988653 + 0.792948I$ $a = 1.065560 + 0.651378I$ $b = -0.062276 - 1.351850I$	$-6.85521 + 3.07643I$	0
$u = -0.988653 - 0.792948I$ $a = 1.065560 - 0.651378I$ $b = -0.062276 + 1.351850I$	$-6.85521 - 3.07643I$	0
$u = 0.169671 + 1.284080I$ $a = -0.129964 - 0.341110I$ $b = 0.041536 + 0.984754I$	$0.805604 + 0.098939I$	0
$u = 0.169671 - 1.284080I$ $a = -0.129964 + 0.341110I$ $b = 0.041536 - 0.984754I$	$0.805604 - 0.098939I$	0
$u = -0.501630 + 0.485784I$ $a = -0.584767 - 1.282520I$ $b = -0.198643 + 0.984576I$	$-1.35909 + 1.35048I$	0
$u = -0.501630 - 0.485784I$ $a = -0.584767 + 1.282520I$ $b = -0.198643 - 0.984576I$	$-1.35909 - 1.35048I$	0
$u = 1.301010 + 0.171769I$ $a = -0.226228 - 1.015520I$ $b = -0.143960 - 1.260500I$	$-6.90597 + 2.14069I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.301010 - 0.171769I$ $a = -0.226228 + 1.015520I$ $b = -0.143960 + 1.260500I$	$-6.90597 - 2.14069I$	0
$u = -1.149280 + 0.638413I$ $a = 1.66792 - 0.61998I$ $b = -0.38156 - 1.38786I$	$-3.53535 + 10.94670I$	0
$u = -1.149280 - 0.638413I$ $a = 1.66792 + 0.61998I$ $b = -0.38156 + 1.38786I$	$-3.53535 - 10.94670I$	0
$u = -1.318610 + 0.046130I$ $a = 0.097757 - 0.707765I$ $b = -0.28782 - 1.43342I$	$-11.6336 + 11.0456I$	0
$u = -1.318610 - 0.046130I$ $a = 0.097757 + 0.707765I$ $b = -0.28782 + 1.43342I$	$-11.6336 - 11.0456I$	0
$u = 1.144990 + 0.696831I$ $a = 1.81221 + 0.24061I$ $b = -0.54895 + 1.49666I$	$-6.5752 - 19.7560I$	0
$u = 1.144990 - 0.696831I$ $a = 1.81221 - 0.24061I$ $b = -0.54895 - 1.49666I$	$-6.5752 + 19.7560I$	0
$u = 1.165280 + 0.691305I$ $a = -1.55872 - 0.29980I$ $b = 0.525792 - 1.296030I$	$-0.9503 - 14.1294I$	0
$u = 1.165280 - 0.691305I$ $a = -1.55872 + 0.29980I$ $b = 0.525792 + 1.296030I$	$-0.9503 + 14.1294I$	0
$u = -0.625616 + 0.155840I$ $a = 1.49878 + 1.37817I$ $b = 0.856010 - 0.911674I$	$-4.15812 + 2.21857I$	$-10.23270 - 1.29777I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.625616-0.155840I$ $a=\ 1.49878-1.37817I$ $b=\ 0.856010+0.911674I$	$-4.15812-2.21857I$	$-10.23270+1.29777I$
$u=-1.159520+0.702607I$ $a=-1.293500+0.281093I$ $b=\ 0.318924+1.288230I$	$-0.64888+6.67031I$	0
$u=-1.159520-0.702607I$ $a=-1.293500-0.281093I$ $b=\ 0.318924-1.288230I$	$-0.64888-6.67031I$	0
$u=\ 0.184247+0.611629I$ $a=-1.013330+0.435423I$ $b=\ 0.315888+0.182820I$	$1.35447+1.08178I$	$4.62061-1.33344I$
$u=\ 0.184247-0.611629I$ $a=-1.013330-0.435423I$ $b=\ 0.315888-0.182820I$	$1.35447-1.08178I$	$4.62061+1.33344I$
$u=-1.399140+0.066227I$ $a=-0.100625+0.513907I$ $b=\ 0.124507+1.236640I$	$-6.01900+4.79075I$	0
$u=-1.399140-0.066227I$ $a=-0.100625-0.513907I$ $b=\ 0.124507-1.236640I$	$-6.01900-4.79075I$	0
$u=\ 1.274040+0.584375I$ $a=-0.971022-0.227923I$ $b=-0.005336-1.197860I$	$-7.82918+1.23942I$	0
$u=\ 1.274040-0.584375I$ $a=-0.971022+0.227923I$ $b=-0.005336+1.197860I$	$-7.82918-1.23942I$	0
$u=\ 1.29492+0.66770I$ $a=\ 1.012120+0.307481I$ $b=-0.272649+1.028880I$	$-2.82654-6.55379I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.29492 - 0.66770I$ $a = 1.012120 - 0.307481I$ $b = -0.272649 - 1.028880I$	$-2.82654 + 6.55379I$	0
$u = -0.134665 + 0.516314I$ $a = -1.127400 - 0.395684I$ $b = 0.368115 + 0.849144I$	$-0.33270 + 1.63320I$	$-1.58301 - 6.19915I$
$u = -0.134665 - 0.516314I$ $a = -1.127400 + 0.395684I$ $b = 0.368115 - 0.849144I$	$-0.33270 - 1.63320I$	$-1.58301 + 6.19915I$
$u = 0.0006764 + 0.1050580I$ $a = 7.24749 - 4.20866I$ $b = -0.800432 - 0.053864I$	$-2.64673 - 1.18438I$	$-3.88156 + 0.65811I$
$u = 0.0006764 - 0.1050580I$ $a = 7.24749 + 4.20866I$ $b = -0.800432 + 0.053864I$	$-2.64673 + 1.18438I$	$-3.88156 - 0.65811I$

II. $\boldsymbol{I_2^u = \langle -47244u^{25} + 102u^{24} + \cdots + 21943b - 77421,\ 2.10 \times 10^6 u^{25} - 1.41 \times 10^6 u^{24} + \cdots + 4.17 \times 10^5 a + 2.69 \times 10^6,\ u^{26} - 5u^{24} + \cdots + 3u + 1\rangle}$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -5.04325u^{25} + 3.37030u^{24} + \cdots - 16.9290u - 6.44564 \\ 2.15303u^{25} - 0.00464841u^{24} + \cdots + 4.48722u + 3.52828 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3.83626u^{25} - 2.78883u^{24} + \cdots + 9.50178u + 3.33817 \\ -1.60418u^{25} + 1.18609u^{24} + \cdots - 5.22510u - 3.43029 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2.89022u^{25} + 3.36565u^{24} + \cdots - 12.4418u - 2.91736 \\ 2.15303u^{25} - 0.00464841u^{24} + \cdots + 4.48722u + 3.52828 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 5.37258u^{25} - 2.09059u^{24} + \cdots + 8.04034u + 7.15637 \\ u^{25} - 5u^{23} + \cdots - 2u - 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -5.55267u^{25} + 1.69373u^{24} + \cdots - 6.43436u - 4.63244 \\ 1.23144u^{25} - 1.06057u^{24} + \cdots + 4.79396u + 2.84654 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -4.63895u^{25} + 3.26592u^{24} + \cdots - 16.7292u - 6.59576 \\ 1.08140u^{25} + 0.609044u^{24} + \cdots + 1.39856u + 1.64147 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -4.97845u^{25} + 1.53970u^{24} + \cdots - 4.98950u - 3.54636 \\ 0.383091u^{25} - 0.689295u^{24} + \cdots + 3.77549u + 1.73269 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{781139}{416917}u^{25} + \frac{2572408}{416917}u^{24} + \cdots - \frac{9097869}{416917}u + \frac{706034}{416917}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26} - 10u^{25} + \cdots - 11u + 1$
c_2	$u^{26} - 5u^{24} + \cdots - 3u + 1$
c_3	$u^{26} + u^{25} + \cdots + 9u^2 + 1$
c_4	$u^{26} - 3u^{25} + \cdots + 3u + 1$
c_5	$u^{26} - 4u^{25} + \cdots + 5u + 1$
c_6	$u^{26} - 5u^{24} + \cdots + 3u + 1$
c_7	$u^{26} + 2u^{25} + \cdots - 6u + 1$
c_8	$u^{26} + 4u^{25} + \cdots - 48u + 11$
c_9	$u^{26} - 8u^{25} + \cdots - 6u + 1$
c_{10}	$u^{26} + 4u^{25} + \cdots - 5u + 1$
c_{11}	$u^{26} - 4u^{25} + \cdots + 48u + 11$
c_{12}	$u^{26} - u^{25} + \cdots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{26} + 2y^{25} + \cdots + 13y + 1$
c_2, c_6	$y^{26} - 10y^{25} + \cdots - 11y + 1$
c_3	$y^{26} - 3y^{25} + \cdots + 18y + 1$
c_4	$y^{26} + 3y^{25} + \cdots + 15y + 1$
c_5, c_{10}	$y^{26} + 30y^{25} + \cdots + 19y + 1$
c_7	$y^{26} - 14y^{25} + \cdots + 20y + 1$
c_8, c_{11}	$y^{26} - 18y^{25} + \cdots - 2524y + 121$
c_9	$y^{26} - 16y^{25} + \cdots - 8y + 1$
c_{12}	$y^{26} - y^{25} + \cdots + 21y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.888819 + 0.477021I$ $a = 1.87404 - 1.92505I$ $b = 1.05848 + 2.94546I$	$-2.98236 - 1.91346I$	$-46.3739 + 16.8381I$
$u = 0.888819 - 0.477021I$ $a = 1.87404 + 1.92505I$ $b = 1.05848 - 2.94546I$	$-2.98236 + 1.91346I$	$-46.3739 - 16.8381I$
$u = 0.950096 + 0.105300I$ $a = -1.04556 + 1.51711I$ $b = 0.02606 + 1.44483I$	$-9.64169 - 0.45913I$	$-12.29896 + 1.25151I$
$u = 0.950096 - 0.105300I$ $a = -1.04556 - 1.51711I$ $b = 0.02606 - 1.44483I$	$-9.64169 + 0.45913I$	$-12.29896 - 1.25151I$
$u = -0.836394 + 0.408225I$ $a = -0.815560 + 1.062110I$ $b = 1.47946 - 0.31985I$	$-3.43715 + 2.67047I$	$-5.84555 - 1.97710I$
$u = -0.836394 - 0.408225I$ $a = -0.815560 - 1.062110I$ $b = 1.47946 + 0.31985I$	$-3.43715 - 2.67047I$	$-5.84555 + 1.97710I$
$u = -0.898480 + 0.151100I$ $a = -0.768484 - 0.604284I$ $b = -0.424965 - 0.048012I$	$-3.73699 - 0.15470I$	$-8.21916 - 0.36868I$
$u = -0.898480 - 0.151100I$ $a = -0.768484 + 0.604284I$ $b = -0.424965 + 0.048012I$	$-3.73699 + 0.15470I$	$-8.21916 + 0.36868I$
$u = 0.854020 + 0.778894I$ $a = 0.217068 + 0.603355I$ $b = -0.124533 + 0.392694I$	$-0.50120 - 2.95395I$	$3.00831 + 6.26428I$
$u = 0.854020 - 0.778894I$ $a = 0.217068 - 0.603355I$ $b = -0.124533 - 0.392694I$	$-0.50120 + 2.95395I$	$3.00831 - 6.26428I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.876887 + 0.801384I$ $a = 0.289341 - 0.701787I$ $b = -0.023613 + 0.462798I$	$3.94649 - 2.99509I$	$-22.5732 + 10.2806I$
$u = 0.876887 - 0.801384I$ $a = 0.289341 + 0.701787I$ $b = -0.023613 - 0.462798I$	$3.94649 + 2.99509I$	$-22.5732 - 10.2806I$
$u = -1.065380 + 0.581347I$ $a = 2.24859 - 0.73998I$ $b = -0.468902 - 1.235170I$	$-5.20411 + 10.51370I$	$-7.64573 - 10.23724I$
$u = -1.065380 - 0.581347I$ $a = 2.24859 + 0.73998I$ $b = -0.468902 + 1.235170I$	$-5.20411 - 10.51370I$	$-7.64573 + 10.23724I$
$u = -0.573675 + 0.533486I$ $a = -1.98979 + 1.09796I$ $b = 0.452445 - 1.071470I$	$-3.60075 - 5.88926I$	$-4.37844 + 7.44246I$
$u = -0.573675 - 0.533486I$ $a = -1.98979 - 1.09796I$ $b = 0.452445 + 1.071470I$	$-3.60075 + 5.88926I$	$-4.37844 - 7.44246I$
$u = 0.376160 + 0.638213I$ $a = 0.498647 - 0.199528I$ $b = 0.272548 - 1.021790I$	$-3.48727 - 6.71278I$	$-3.23759 + 5.40958I$
$u = 0.376160 - 0.638213I$ $a = 0.498647 + 0.199528I$ $b = 0.272548 + 1.021790I$	$-3.48727 + 6.71278I$	$-3.23759 - 5.40958I$
$u = -0.145387 + 1.257280I$ $a = 0.126642 - 0.395433I$ $b = -0.118773 + 1.029560I$	$0.734680 - 0.498319I$	$-4.5995 + 13.5897I$
$u = -0.145387 - 1.257280I$ $a = 0.126642 + 0.395433I$ $b = -0.118773 - 1.029560I$	$0.734680 + 0.498319I$	$-4.5995 - 13.5897I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.301540 + 0.265390I$ $a = -0.277022 - 0.926764I$ $b = -0.137045 - 1.234660I$	$-7.20108 + 2.53953I$	$-10.4085 - 10.4959I$
$u = 1.301540 - 0.265390I$ $a = -0.277022 + 0.926764I$ $b = -0.137045 + 1.234660I$	$-7.20108 - 2.53953I$	$-10.4085 + 10.4959I$
$u = -1.240980 + 0.617037I$ $a = -1.186400 + 0.393675I$ $b = 0.281250 + 1.055900I$	$-3.07979 + 6.40019I$	$-14.1041 - 4.4422I$
$u = -1.240980 - 0.617037I$ $a = -1.186400 - 0.393675I$ $b = 0.281250 - 1.055900I$	$-3.07979 - 6.40019I$	$-14.1041 + 4.4422I$
$u = -0.487226 + 0.239105I$ $a = 2.32849 - 0.59807I$ $b = -0.272412 + 0.733672I$	$0.35774 - 2.28279I$	$0.17642 + 4.90888I$
$u = -0.487226 - 0.239105I$ $a = 2.32849 + 0.59807I$ $b = -0.272412 - 0.733672I$	$0.35774 + 2.28279I$	$0.17642 - 4.90888I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{26}-10u^{25}+\cdots-11u+1)(u^{145}+59u^{144}+\cdots-292549u+1849)$
c_2	$(u^{26}-5u^{24}+\cdots-3u+1)(u^{145}-u^{144}+\cdots+111u+43)$
c_3	$(u^{26}+u^{25}+\cdots+9u^2+1)(u^{145}+6u^{143}+\cdots-200298u+49447)$
c_4	$(u^{26}-3u^{25}+\cdots+3u+1)(u^{145}-2u^{144}+\cdots+13u-1)$
c_5	$(u^{26}-4u^{25}+\cdots+5u+1)(u^{145}-3u^{144}+\cdots+85723u+9799)$
c_6	$(u^{26}-5u^{24}+\cdots+3u+1)(u^{145}-u^{144}+\cdots+111u+43)$
c_7	$(u^{26}+2u^{25}+\cdots-6u+1)(u^{145}-11u^{144}+\cdots-3598960u+268027)$
c_8	$(u^{26}+4u^{25}+\cdots-48u+11)(u^{145}-u^{144}+\cdots-6u-1)$
c_9	$(u^{26}-8u^{25}+\cdots-6u+1)(u^{145}+u^{144}+\cdots-1852u-8809)$
c_{10}	$(u^{26}+4u^{25}+\cdots-5u+1)(u^{145}-3u^{144}+\cdots+85723u+9799)$
c_{11}	$(u^{26}-4u^{25}+\cdots+48u+11)(u^{145}-u^{144}+\cdots-6u-1)$
c_{12}	$(u^{26}-u^{25}+\cdots-u+1)(u^{145}+12u^{144}+\cdots+14475u+983)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{26}+2y^{25}+\cdots+13y+1)$ $\cdot(y^{145}+45y^{144}+\cdots+56069800047y-3418801)$
c_2, c_6	$(y^{26}-10y^{25}+\cdots-11y+1)(y^{145}-59y^{144}+\cdots-292549y-1849)$
c_3	$(y^{26}-3y^{25}+\cdots+18y+1)$ $\cdot(y^{145}+12y^{144}+\cdots+12484646126y-2445005809)$
c_4	$(y^{26}+3y^{25}+\cdots+15y+1)(y^{145}-2y^{144}+\cdots-995y-1)$
c_5, c_{10}	$(y^{26}+30y^{25}+\cdots+19y+1)$ $\cdot(y^{145}+117y^{144}+\cdots-14395117115y-96020401)$
c_7	$(y^{26}-14y^{25}+\cdots+20y+1)$ $\cdot(y^{145}-47y^{144}+\cdots+2169230447548y-71838472729)$
c_8, c_{11}	$(y^{26}-18y^{25}+\cdots-2524y+121)(y^{145}-111y^{144}+\cdots+244y-1)$
c_9	$(y^{26}-16y^{25}+\cdots-8y+1)$ $\cdot(y^{145}-37y^{144}+\cdots+6073711804y-77598481)$
c_{12}	$(y^{26}-y^{25}+\cdots+21y+1)$ $\cdot(y^{145}+30y^{144}+\cdots-94703045y-966289)$