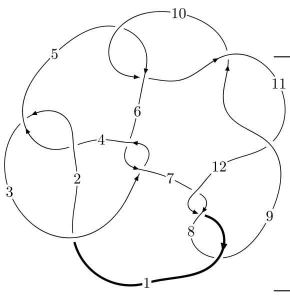
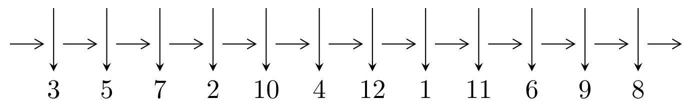
$12a_{0055}$ ($K12a_{0055}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -2.73784 \times 10^{105} u^{87} + 2.33065 \times 10^{106} u^{86} + \cdots + 1.32969 \times 10^{107} b + 6.87193 \times 10^{107}, \\ & -1.27360 \times 10^{106} u^{87} + 7.35251 \times 10^{105} u^{86} + \cdots + 2.65937 \times 10^{107} a + 7.67895 \times 10^{107}, \\ & u^{88} + 2u^{87} + \cdots + 12u - 8 \rangle \\ I_2^u = \langle & b+1,\ 2u^7 - u^6 - 3u^5 + 3u^4 + 4u^3 - 3u^2 + a - 2u + 4,\ u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1 \rangle \end{aligned}$$

$$I_1^v = \langle a,\ -v^2 + b - 3v + 1,\ v^3 + 2v^2 - 3v + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 99 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. $\boldsymbol{I_1^u = \langle -2.74 \times 10^{105} u^{87} + 2.33 \times 10^{106} u^{86} + \cdots + 1.33 \times 10^{107} b + 6.87 \times 10^{107},\ -1.27 \times 10^{106} u^{87} + 7.35 \times 10^{105} u^{86} + \cdots + 2.66 \times 10^{107} a + 7.68 \times 10^{107},\ u^{88} + 2u^{87} + \cdots + 12u - 8 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.0478909u^{87} - 0.0276475u^{86} + \cdots + 35.3569u - 2.88750 \\ 0.0205902u^{87} - 0.175279u^{86} + \cdots + 0.764280u - 5.16808 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.0684810u^{87} - 0.202926u^{86} + \cdots + 36.1212u - 8.05559 \\ 0.0205902u^{87} - 0.175279u^{86} + \cdots + 0.764280u - 5.16808 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1.39916u^{87} + 3.39018u^{86} + \cdots + 13.5712u + 13.1209 \\ -1.39649u^{87} - 3.74999u^{86} + \cdots - 0.897228u - 18.8300 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.408355u^{87} + 1.20087u^{86} + \cdots + 32.6967u - 0.441203 \\ -0.968270u^{87} - 2.08814u^{86} + \cdots - 0.974469u - 4.14421 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.00267385u^{87} - 0.359809u^{86} + \cdots + 12.6740u - 5.70909 \\ 1.24468u^{87} + 3.55177u^{86} + \cdots + 5.30050u + 15.9088 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^5 - u \\ -u^7 + u^5 - 2u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.290712u^{87} - 1.73558u^{86} + \cdots + 6.94662u - 12.1213 \\ 1.45970u^{87} + 4.30683u^{86} + \cdots + 8.54245u + 17.9540 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6.18054u^{87} + 14.8609u^{86} + \cdots + 127.311u + 12.9010$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{88} + 38u^{87} + \cdots + 101u + 1$
c_2, c_4	$u^{88} - 10u^{87} + \cdots - 7u + 1$
c_3, c_6	$u^{88} - 2u^{87} + \cdots + 128u - 256$
c_5, c_{10}	$u^{88} - 2u^{87} + \cdots - 12u - 8$
c_7, c_8, c_{12}	$u^{88} - 5u^{87} + \cdots + 8u + 1$
c_9, c_{11}	$u^{88} + 24u^{87} + \cdots + 1872u + 64$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{88} + 34y^{87} + \cdots - 4505y + 1$
c_2, c_4	$y^{88} - 38y^{87} + \cdots - 101y + 1$
c_3, c_6	$y^{88} + 54y^{87} + \cdots + 999424y + 65536$
c_5, c_{10}	$y^{88} - 24y^{87} + \cdots - 1872y + 64$
c_7, c_8, c_{12}	$y^{88} - 71y^{87} + \cdots + 62y + 1$
c_9, c_{11}	$y^{88} + 76y^{87} + \cdots - 105728y + 4096$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.392572 + 0.920696I$ $a = 0.031296 - 0.890953I$ $b = 0.670708 + 0.469662I$	$-1.30721 + 0.66243I$	0
$u = 0.392572 - 0.920696I$ $a = 0.031296 + 0.890953I$ $b = 0.670708 - 0.469662I$	$-1.30721 - 0.66243I$	0
$u = -0.887881 + 0.457891I$ $a = -0.090976 + 0.352185I$ $b = 0.479587 + 0.533093I$	$1.43432 + 2.39937I$	0
$u = -0.887881 - 0.457891I$ $a = -0.090976 - 0.352185I$ $b = 0.479587 - 0.533093I$	$1.43432 - 2.39937I$	0
$u = 0.203330 + 1.003580I$ $a = -0.381810 + 0.869323I$ $b = 0.991760 - 0.565904I$	$-2.39788 + 5.04856I$	0
$u = 0.203330 - 1.003580I$ $a = -0.381810 - 0.869323I$ $b = 0.991760 + 0.565904I$	$-2.39788 - 5.04856I$	0
$u = -0.958732 + 0.139931I$ $a = 0.735606 + 0.670342I$ $b = -0.335372 - 0.551660I$	$-5.40258 + 0.56073I$	0
$u = -0.958732 - 0.139931I$ $a = 0.735606 - 0.670342I$ $b = -0.335372 + 0.551660I$	$-5.40258 - 0.56073I$	0
$u = -0.862313 + 0.579468I$ $a = 0.321746 + 0.371790I$ $b = 0.515120 + 0.203414I$	$1.47628 + 2.33295I$	0
$u = -0.862313 - 0.579468I$ $a = 0.321746 - 0.371790I$ $b = 0.515120 - 0.203414I$	$1.47628 - 2.33295I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.947226 + 0.084231I$ $a = 1.94827 - 0.02918I$ $b = 0.941810 + 0.560456I$	$-0.97747 - 2.78041I$	$-12.00000 + 0.I$
$u = 0.947226 - 0.084231I$ $a = 1.94827 + 0.02918I$ $b = 0.941810 - 0.560456I$	$-0.97747 + 2.78041I$	$-12.00000 + 0.I$
$u = -1.000340 + 0.317524I$ $a = 1.70909 + 1.08359I$ $b = 1.024730 - 0.591282I$	$-0.03297 + 7.08755I$	0
$u = -1.000340 - 0.317524I$ $a = 1.70909 - 1.08359I$ $b = 1.024730 + 0.591282I$	$-0.03297 - 7.08755I$	0
$u = 1.044510 + 0.227043I$ $a = -0.930430 - 0.232517I$ $b = -1.224440 + 0.244106I$	$-8.09834 - 2.07994I$	0
$u = 1.044510 - 0.227043I$ $a = -0.930430 + 0.232517I$ $b = -1.224440 - 0.244106I$	$-8.09834 + 2.07994I$	0
$u = 0.870126 + 0.281441I$ $a = 0.615716 - 1.177220I$ $b = 0.759307 - 0.539626I$	$-0.37405 + 1.65782I$	$-12.00000 + 0.I$
$u = 0.870126 - 0.281441I$ $a = 0.615716 + 1.177220I$ $b = 0.759307 + 0.539626I$	$-0.37405 - 1.65782I$	$-12.00000 + 0.I$
$u = -1.058740 + 0.305027I$ $a = -0.70456 - 1.67547I$ $b = -1.073140 + 0.441465I$	$-7.60787 + 4.58396I$	0
$u = -1.058740 - 0.305027I$ $a = -0.70456 + 1.67547I$ $b = -1.073140 - 0.441465I$	$-7.60787 - 4.58396I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.753149 + 0.812851I$ $a = 0.009896 - 1.120230I$ $b = -1.306960 + 0.017227I$	$-1.25565 - 1.36378I$	0
$u = -0.753149 - 0.812851I$ $a = 0.009896 + 1.120230I$ $b = -1.306960 - 0.017227I$	$-1.25565 + 1.36378I$	0
$u = 1.038570 + 0.425588I$ $a = -0.126062 + 0.339240I$ $b = 0.227675 - 0.708873I$	$-3.58769 - 5.33790I$	0
$u = 1.038570 - 0.425588I$ $a = -0.126062 - 0.339240I$ $b = 0.227675 + 0.708873I$	$-3.58769 + 5.33790I$	0
$u = -0.822672 + 0.764737I$ $a = -0.560044 - 1.062490I$ $b = 1.088910 + 0.759677I$	$4.24766 - 1.27868I$	0
$u = -0.822672 - 0.764737I$ $a = -0.560044 + 1.062490I$ $b = 1.088910 - 0.759677I$	$4.24766 + 1.27868I$	0
$u = 0.814865 + 0.778282I$ $a = 0.11774 + 2.41231I$ $b = -0.830940 - 0.592246I$	$0.329058 - 0.951263I$	0
$u = 0.814865 - 0.778282I$ $a = 0.11774 - 2.41231I$ $b = -0.830940 + 0.592246I$	$0.329058 + 0.951263I$	0
$u = 0.754800 + 0.876512I$ $a = 1.11868 - 1.17948I$ $b = -0.868291 + 0.595565I$	$0.20885 + 3.75440I$	0
$u = 0.754800 - 0.876512I$ $a = 1.11868 + 1.17948I$ $b = -0.868291 - 0.595565I$	$0.20885 - 3.75440I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.794082 + 0.262125I$ $a = -1.46161 + 2.25876I$ $b = -0.977760 - 0.341426I$	$-2.28886 - 2.45162I$	$-16.2110 + 6.3903I$
$u = 0.794082 - 0.262125I$ $a = -1.46161 - 2.25876I$ $b = -0.977760 + 0.341426I$	$-2.28886 + 2.45162I$	$-16.2110 - 6.3903I$
$u = -0.852305 + 0.811962I$ $a = 1.07072 + 1.14717I$ $b = -0.811618 - 0.630399I$	$4.01818 + 0.54192I$	0
$u = -0.852305 - 0.811962I$ $a = 1.07072 - 1.14717I$ $b = -0.811618 + 0.630399I$	$4.01818 - 0.54192I$	0
$u = 0.886190 + 0.782136I$ $a = -0.057066 + 0.858549I$ $b = -1.336480 + 0.029864I$	$2.31687 - 2.94399I$	0
$u = 0.886190 - 0.782136I$ $a = -0.057066 - 0.858549I$ $b = -1.336480 - 0.029864I$	$2.31687 + 2.94399I$	0
$u = 0.790264 + 0.884911I$ $a = -0.576247 + 1.018820I$ $b = 1.111540 - 0.727657I$	$7.85733 + 5.61860I$	0
$u = 0.790264 - 0.884911I$ $a = -0.576247 - 1.018820I$ $b = 1.111540 + 0.727657I$	$7.85733 - 5.61860I$	0
$u = -0.881857 + 0.797266I$ $a = -0.10968 + 1.44896I$ $b = 0.605815 - 0.957019I$	$5.72724 + 4.97749I$	0
$u = -0.881857 - 0.797266I$ $a = -0.10968 - 1.44896I$ $b = 0.605815 + 0.957019I$	$5.72724 - 4.97749I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.933371 + 0.742677I$ $a = 0.74662 + 2.29509I$ $b = 1.113350 - 0.705726I$	$3.90440 + 6.99279I$	0
$u = -0.933371 - 0.742677I$ $a = 0.74662 - 2.29509I$ $b = 1.113350 + 0.705726I$	$3.90440 - 6.99279I$	0
$u = -0.897183 + 0.796476I$ $a = -1.216610 - 0.564361I$ $b = 0.532139 + 0.928269I$	$5.68216 + 1.00101I$	0
$u = -0.897183 - 0.796476I$ $a = -1.216610 + 0.564361I$ $b = 0.532139 - 0.928269I$	$5.68216 - 1.00101I$	0
$u = 0.942078 + 0.752491I$ $a = 1.01680 - 1.12508I$ $b = -0.759566 + 0.665808I$	$-0.06234 - 4.83478I$	0
$u = 0.942078 - 0.752491I$ $a = 1.01680 + 1.12508I$ $b = -0.759566 - 0.665808I$	$-0.06234 + 4.83478I$	0
$u = 0.422280 + 0.670799I$ $a = 0.704032 - 0.641404I$ $b = 0.214950 + 0.166258I$	$-1.40337 + 0.92720I$	$-8.23175 - 0.58902I$
$u = 0.422280 - 0.670799I$ $a = 0.704032 + 0.641404I$ $b = 0.214950 - 0.166258I$	$-1.40337 - 0.92720I$	$-8.23175 + 0.58902I$
$u = 0.841271 + 0.874220I$ $a = -0.05629 - 1.46245I$ $b = 0.555731 + 0.949544I$	$9.56149 - 0.50937I$	0
$u = 0.841271 - 0.874220I$ $a = -0.05629 + 1.46245I$ $b = 0.555731 - 0.949544I$	$9.56149 + 0.50937I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.925474+0.790304I$ $a=\ \ 0.08043-2.24661I$ $b=-0.884202+0.625072I$	$3.79156+5.46140I$	0
$u=-0.925474-0.790304I$ $a=\ \ 0.08043+2.24661I$ $b=-0.884202-0.625072I$	$3.79156-5.46140I$	0
$u=-1.220990+0.093727I$ $a=\ \ 0.893667+0.033167I$ $b=\ \ 0.943866+0.417931I$	$-7.95540-1.57335I$	0
$u=-1.220990-0.093727I$ $a=\ \ 0.893667-0.033167I$ $b=\ \ 0.943866-0.417931I$	$-7.95540+1.57335I$	0
$u=-0.794180+0.936665I$ $a=-0.00264+1.47095I$ $b=\ \ 0.507424-0.936810I$	$5.50773-3.95377I$	0
$u=-0.794180-0.936665I$ $a=-0.00264-1.47095I$ $b=\ \ 0.507424+0.936810I$	$5.50773+3.95377I$	0
$u=-0.088205+0.759173I$ $a=\ \ 1.39479+1.62378I$ $b=-1.025110-0.260624I$	$-4.33853-0.93069I$	$-17.4874-0.5005I$
$u=-0.088205-0.759173I$ $a=\ \ 1.39479-1.62378I$ $b=-1.025110+0.260624I$	$-4.33853+0.93069I$	$-17.4874+0.5005I$
$u=-0.758355+0.979789I$ $a=-0.587135-0.981162I$ $b=\ \ 1.128270+0.699547I$	$3.60923-9.94654I$	0
$u=-0.758355-0.979789I$ $a=-0.587135+0.981162I$ $b=\ \ 1.128270-0.699547I$	$3.60923+9.94654I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.985719 + 0.755243I$ $a = -0.071592 - 0.666243I$ $b = -1.357700 - 0.065878I$	$-1.95959 + 7.25560I$	0
$u = -0.985719 - 0.755243I$ $a = -0.071592 + 0.666243I$ $b = -1.357700 + 0.065878I$	$-1.95959 - 7.25560I$	0
$u = 1.180680 + 0.413243I$ $a = 1.03880 - 1.13972I$ $b = 1.094140 + 0.563802I$	$-5.89137 - 10.06180I$	0
$u = 1.180680 - 0.413243I$ $a = 1.03880 + 1.13972I$ $b = 1.094140 - 0.563802I$	$-5.89137 + 10.06180I$	0
$u = 1.078160 + 0.638701I$ $a = 0.332709 - 0.353621I$ $b = 0.716392 - 0.192203I$	$-3.33914 - 6.07366I$	0
$u = 1.078160 - 0.638701I$ $a = 0.332709 + 0.353621I$ $b = 0.716392 + 0.192203I$	$-3.33914 + 6.07366I$	0
$u = -0.365420 + 0.646101I$ $a = -0.146644 + 1.102250I$ $b = 0.746131 - 0.685305I$	$3.13319 + 1.58793I$	$-4.36565 - 2.62454I$
$u = -0.365420 - 0.646101I$ $a = -0.146644 - 1.102250I$ $b = 0.746131 + 0.685305I$	$3.13319 - 1.58793I$	$-4.36565 + 2.62454I$
$u = 0.963850 + 0.822645I$ $a = -1.090440 + 0.696675I$ $b = 0.499212 - 0.961407I$	$9.17313 - 5.78375I$	0
$u = 0.963850 - 0.822645I$ $a = -1.090440 - 0.696675I$ $b = 0.499212 + 0.961407I$	$9.17313 + 5.78375I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.710725+0.142036I$ $a=-2.49015-0.07252I$ $b=-1.090730-0.165721I$	$-2.74417+0.55471I$	$-16.6137-8.8786I$
$u=-0.710725-0.142036I$ $a=-2.49015+0.07252I$ $b=-1.090730+0.165721I$	$-2.74417-0.55471I$	$-16.6137+8.8786I$
$u=1.008330+0.782072I$ $a=0.05748+2.13739I$ $b=-0.926480-0.640157I$	$-0.57700-9.90939I$	0
$u=1.008330-0.782072I$ $a=0.05748-2.13739I$ $b=-0.926480+0.640157I$	$-0.57700+9.90939I$	0
$u=0.998606+0.799996I$ $a=0.54095-2.15791I$ $b=1.142060+0.706012I$	$7.20070-11.86680I$	0
$u=0.998606-0.799996I$ $a=0.54095+2.15791I$ $b=1.142060-0.706012I$	$7.20070+11.86680I$	0
$u=-1.021860+0.824555I$ $a=-0.979873-0.762766I$ $b=0.466549+0.980590I$	$4.77490+10.43370I$	0
$u=-1.021860-0.824555I$ $a=-0.979873+0.762766I$ $b=0.466549-0.980590I$	$4.77490-10.43370I$	0
$u=-0.199533+0.630090I$ $a=-0.349695-1.014370I$ $b=0.931055+0.671220I$	$2.58372-3.65091I$	$-4.88024+4.09202I$
$u=-0.199533-0.630090I$ $a=-0.349695+1.014370I$ $b=0.931055-0.671220I$	$2.58372+3.65091I$	$-4.88024-4.09202I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.059800 + 0.822621I$ $a = 0.44539 + 2.02899I$ $b = 1.162810 - 0.698617I$	$2.6344 + 16.5403I$	0
$u = -1.059800 - 0.822621I$ $a = 0.44539 - 2.02899I$ $b = 1.162810 + 0.698617I$	$2.6344 - 16.5403I$	0
$u = 0.646965 + 0.080521I$ $a = -0.343025 - 1.213620I$ $b = 0.873530 + 0.830831I$	$0.75119 - 3.07502I$	$-19.2370 + 4.9728I$
$u = 0.646965 - 0.080521I$ $a = -0.343025 + 1.213620I$ $b = 0.873530 - 0.830831I$	$0.75119 + 3.07502I$	$-19.2370 - 4.9728I$
$u = 0.549522$ $a = 0.875721$ $b = -0.119846$	-0.718836	-14.1050
$u = 0.317305 + 0.268219I$ $a = 1.79149 - 0.55439I$ $b = -0.724370 + 0.147571I$	$-0.979988 + 0.105759I$	$-9.79769 + 1.06695I$
$u = 0.317305 - 0.268219I$ $a = 1.79149 + 0.55439I$ $b = -0.724370 - 0.147571I$	$-0.979988 - 0.105759I$	$-9.79769 - 1.06695I$
$u = -0.344030$ $a = -11.6544$ $b = -0.902968$	-2.97247	-58.0340

II. $I_2^u = \langle b+1,\ 2u^7 - u^6 - 3u^5 + 3u^4 + 4u^3 - 3u^2 + a - 2u + 4,\ u^8 - u^7 - u^6 + 2u^5 + u^4 - 2u^3 + 2u - 1\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -2u^7 + u^6 + 3u^5 - 3u^4 - 4u^3 + 3u^2 + 2u - 4 \\ -1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -2u^7 + u^6 + 3u^5 - 3u^4 - 4u^3 + 3u^2 + 2u - 5 \\ -1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -2u^7 + u^6 + 3u^5 - 3u^4 - 4u^3 + 3u^2 + 2u - 4 \\ -1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^5 - u \\ -u^7 + u^5 - 2u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^5 + u \\ u^5 - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 2u^7 - 2u^6 + 4u^4 + 3u^3 - u^2 - 13$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^8$
c_3, c_6	y^8
c_5, c_{10}	$y^8 - 3y^7 + 7y^6 - 10y^5 + 11y^4 - 10y^3 + 6y^2 - 4y + 1$
c_7, c_8, c_{12}	$y^8 - 7y^7 + 19y^6 - 22y^5 + 3y^4 + 14y^3 - 6y^2 - 4y + 1$
c_9, c_{11}	$y^8 + 5y^7 + 11y^6 + 6y^5 - 17y^4 - 34y^3 - 22y^2 - 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.570868 + 0.730671I$ $a = 0.281371 + 1.128550I$ $b = -1.00000$	$-2.68559 + 1.13123I$	$-17.2624 - 0.2227I$
$u = 0.570868 - 0.730671I$ $a = 0.281371 - 1.128550I$ $b = -1.00000$	$-2.68559 - 1.13123I$	$-17.2624 + 0.2227I$
$u = -0.855237 + 0.665892I$ $a = -0.208670 - 0.825203I$ $b = -1.00000$	$0.51448 + 2.57849I$	$-14.1288 - 3.8797I$
$u = -0.855237 - 0.665892I$ $a = -0.208670 + 0.825203I$ $b = -1.00000$	$0.51448 - 2.57849I$	$-14.1288 + 3.8797I$
$u = -1.09818$ $a = -0.829189$ $b = -1.00000$	-8.14766	-19.7220
$u = 1.031810 + 0.655470I$ $a = -0.284386 + 0.605794I$ $b = -1.00000$	$-4.02461 - 6.44354I$	$-19.1410 + 6.6674I$
$u = 1.031810 - 0.655470I$ $a = -0.284386 - 0.605794I$ $b = -1.00000$	$-4.02461 + 6.44354I$	$-19.1410 - 6.6674I$
$u = 0.603304$ $a = -2.74744$ $b = -1.00000$	-2.48997	-12.2140

III. $I_1^v = \langle a,\ -v^2 + b - 3v + 1,\ v^3 + 2v^2 - 3v + 1\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0 \\ v^2 + 3v - 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} v^2 + 3v - 1 \\ v^2 + 3v - 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} v^2 + 3v - 1 \\ -v^2 - 2v + 3 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -2v^2 - 5v + 4 \\ -2v^2 - 5v + 3 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -v^2 - 3v + 1 \\ v^2 + 2v - 3 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -v^2 - 2v + 1 \\ v^2 + 2v - 3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 2v^2 + 5v - 11$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_6	$y^3 + 3y^2 + 2y - 1$
c_2, c_4	$y^3 - y^2 + 2y - 1$
c_5, c_9, c_{10} c_{11}	y^3
c_7, c_8, c_{12}	$(y-1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 0.539798 + 0.182582I$ $a = 0$ $b = 0.877439 + 0.744862I$	$1.37919 - 2.82812I$	$-7.78492 + 1.30714I$
$v = 0.539798 - 0.182582I$ $a = 0$ $b = 0.877439 - 0.744862I$	$1.37919 + 2.82812I$	$-7.78492 - 1.30714I$
$v = -3.07960$ $a = 0$ $b = -0.754878$	-2.75839	-7.43020

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^8)(u^3-u^2+2u-1)(u^{88}+38u^{87}+\cdots+101u+1)$
c_2	$((u-1)^8)(u^3+u^2-1)(u^{88}-10u^{87}+\cdots-7u+1)$
c_3	$u^8(u^3-u^2+2u-1)(u^{88}-2u^{87}+\cdots+128u-256)$
c_4	$((u+1)^8)(u^3-u^2+1)(u^{88}-10u^{87}+\cdots-7u+1)$
c_5	$u^3(u^8-u^7+\cdots+2u-1)(u^{88}-2u^{87}+\cdots-12u-8)$
c_6	$u^8(u^3+u^2+2u+1)(u^{88}-2u^{87}+\cdots+128u-256)$
c_7, c_8	$((u-1)^3)(u^8+u^7+\cdots+2u-1)(u^{88}-5u^{87}+\cdots+8u+1)$
c_9	$u^3(u^8-3u^7+7u^6-10u^5+11u^4-10u^3+6u^2-4u+1)$ $\cdot(u^{88}+24u^{87}+\cdots+1872u+64)$
c_{10}	$u^3(u^8+u^7+\cdots-2u-1)(u^{88}-2u^{87}+\cdots-12u-8)$
c_{11}	$u^3(u^8+3u^7+7u^6+10u^5+11u^4+10u^3+6u^2+4u+1)$ $\cdot(u^{88}+24u^{87}+\cdots+1872u+64)$
c_{12}	$((u+1)^3)(u^8-u^7+\cdots-2u-1)(u^{88}-5u^{87}+\cdots+8u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^8)(y^3+3y^2+2y-1)(y^{88}+34y^{87}+\cdots-4505y+1)$
c_2, c_4	$((y-1)^8)(y^3-y^2+2y-1)(y^{88}-38y^{87}+\cdots-101y+1)$
c_3, c_6	$y^8(y^3+3y^2+2y-1)(y^{88}+54y^{87}+\cdots+999424y+65536)$
c_5, c_{10}	$y^3(y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1)$ $\cdot(y^{88}-24y^{87}+\cdots-1872y+64)$
c_7, c_8, c_{12}	$(y-1)^3(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot(y^{88}-71y^{87}+\cdots+62y+1)$
c_9, c_{11}	$y^3(y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1)$ $\cdot(y^{88}+76y^{87}+\cdots-105728y+4096)$