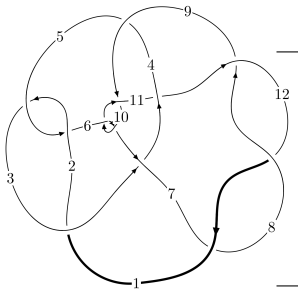
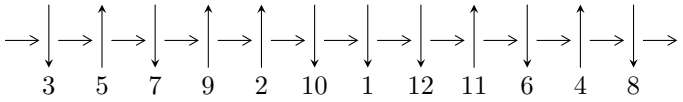
$12a_{0072}$ $(K12a_{0072})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.32959 \times 10^{206} u^{99} + 1.69512 \times 10^{207} u^{98} + \cdots + 6.75897 \times 10^{206} b + 1.91806 \times 10^{207}, \\ & -1.41888 \times 10^{207} u^{99} + 4.03733 \times 10^{207} u^{98} + \cdots + 1.35179 \times 10^{207} a + 1.32866 \times 10^{207}, \\ & u^{100} - 3u^{99} + \cdots - 3u + 1 \rangle \\ I_2^u = \langle & b - 2a,\ 9a^2 + 3a + 1,\ u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 102 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. $\boldsymbol{I_1^u = \langle -6.33 \times 10^{206} u^{99} + 1.70 \times 10^{207} u^{98} + \cdots + 6.76 \times 10^{206} b + 1.92 \times 10^{207},\ -1.42 \times 10^{207} u^{99} + 4.04 \times 10^{207} u^{98} + \cdots + 1.35 \times 10^{207} a + 1.33 \times 10^{207},\ u^{100} - 3u^{99} + \cdots - 3u + 1 \rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.04962u^{99} - 2.98664u^{98} + \cdots + 6.34730u - 0.982883 \\ 0.936471u^{99} - 2.50796u^{98} + \cdots + 6.62856u - 2.83779 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.98610u^{99} - 5.49460u^{98} + \cdots + 12.9759u - 3.82068 \\ 0.936471u^{99} - 2.50796u^{98} + \cdots + 6.62856u - 2.83779 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.70678u^{99} - 4.41746u^{98} + \cdots + 8.22720u - 1.90725 \\ 0.664511u^{99} - 1.72941u^{98} + \cdots + 7.22090u - 1.53859 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.63960u^{99} - 4.58407u^{98} + \cdots + 11.4770u - 3.31402 \\ 0.842942u^{99} - 2.32288u^{98} + \cdots + 5.17857u - 2.87068 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.299070u^{99} - 0.681394u^{98} + \cdots - 0.0995288u + 0.179816 \\ -0.174011u^{99} + 0.486273u^{98} + \cdots - 1.84111u + 0.551369 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.113513u^{99} - 0.283888u^{98} + \cdots + 0.301011u + 1.22509 \\ 0.161016u^{99} - 0.384450u^{98} + \cdots + 1.82572u - 0.0369255 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.564895u^{99} + 1.43061u^{98} + \cdots - 2.08996u + 0.587368 \\ -0.283434u^{99} + 0.817441u^{98} + \cdots - 2.41682u + 1.03126 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 5.15454u^{99} - 14.0100u^{98} + \cdots + 24.9994u + 1.17271$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{100} + 38u^{99} + \cdots + 2486u + 81$
c_2, c_5	$u^{100} + 2u^{99} + \cdots + 14u + 9$
c_3	$9(9u^{100} - 129u^{99} + \cdots + 1927454u + 1683748)$
c_4	$9(9u^{100} + 156u^{99} + \cdots + 48280u + 5821)$
c_6, c_{10}	$u^{100} + 3u^{99} + \cdots + 3u + 1$
c_7, c_8, c_{12}	$u^{100} - 3u^{99} + \cdots - 3u + 1$
c_9	$u^{100} - 39u^{99} + \cdots - 7u + 1$
c_{11}	$u^{100} - 5u^{99} + \cdots - 216u + 108$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{100}+50y^{99}+\cdots+2843042y+6561$
c_2, c_5	$y^{100}+38y^{99}+\cdots+2486y+81$
c_3	81 $\cdot(81y^{100}+5517y^{99}+\cdots+95872846757236y+2835007327504)$
c_4	$81(81y^{100}+1278y^{99}+\cdots-3.67849\times10^{8}y+3.38840\times10^{7})$
c_6, c_{10}	$y^{100}+39y^{99}+\cdots+7y+1$
c_7, c_8, c_{12}	$y^{100}+99y^{99}+\cdots+7y+1$
c_9	$y^{100}+31y^{99}+\cdots-145y+1$
c_{11}	$y^{100}-15y^{99}+\cdots-266328y+11664$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.806473 + 0.591389I$ $a = -0.534727 + 0.504038I$ $b = -0.94326 - 1.23691I$	$0.3575 - 14.2046I$	0
$u = 0.806473 - 0.591389I$ $a = -0.534727 - 0.504038I$ $b = -0.94326 + 1.23691I$	$0.3575 + 14.2046I$	0
$u = -0.546043 + 0.809650I$ $a = -0.134535 + 0.328605I$ $b = 1.080430 + 0.135935I$	$-3.71729 + 3.01524I$	0
$u = -0.546043 - 0.809650I$ $a = -0.134535 - 0.328605I$ $b = 1.080430 - 0.135935I$	$-3.71729 - 3.01524I$	0
$u = -0.819790 + 0.617909I$ $a = 0.443599 + 0.442074I$ $b = 0.913739 - 1.027520I$	$-1.74024 + 8.28061I$	0
$u = -0.819790 - 0.617909I$ $a = 0.443599 - 0.442074I$ $b = 0.913739 + 1.027520I$	$-1.74024 - 8.28061I$	0
$u = 0.885531 + 0.541350I$ $a = 0.577249 + 0.387777I$ $b = -0.476099 + 0.963566I$	$0.14133 + 8.65432I$	0
$u = 0.885531 - 0.541350I$ $a = 0.577249 - 0.387777I$ $b = -0.476099 - 0.963566I$	$0.14133 - 8.65432I$	0
$u = 0.768075 + 0.699611I$ $a = 0.405219 - 0.220532I$ $b = 0.219659 + 0.995918I$	$5.59331 - 0.24478I$	0
$u = 0.768075 - 0.699611I$ $a = 0.405219 + 0.220532I$ $b = 0.219659 - 0.995918I$	$5.59331 + 0.24478I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.894618 + 0.554353I$ $a = -0.541190 + 0.182357I$ $b = -0.413795 - 0.978910I$	$5.03594 - 5.50250I$	0
$u = 0.894618 - 0.554353I$ $a = -0.541190 - 0.182357I$ $b = -0.413795 + 0.978910I$	$5.03594 + 5.50250I$	0
$u = 0.689565 + 0.613665I$ $a = 0.257348 - 0.659662I$ $b = 0.754718 + 1.002490I$	$2.15199 - 8.54454I$	0
$u = 0.689565 - 0.613665I$ $a = 0.257348 + 0.659662I$ $b = 0.754718 - 1.002490I$	$2.15199 + 8.54454I$	0
$u = -0.649060 + 0.632624I$ $a = -0.124977 - 0.526204I$ $b = -0.646398 + 0.806683I$	$-0.00478 + 3.13265I$	0
$u = -0.649060 - 0.632624I$ $a = -0.124977 + 0.526204I$ $b = -0.646398 - 0.806683I$	$-0.00478 - 3.13265I$	0
$u = 0.809148 + 0.358489I$ $a = -0.579234 - 0.298804I$ $b = 0.309286 - 0.515151I$	$1.38927 + 3.67810I$	0
$u = 0.809148 - 0.358489I$ $a = -0.579234 + 0.298804I$ $b = 0.309286 + 0.515151I$	$1.38927 - 3.67810I$	0
$u = -1.008300 + 0.535583I$ $a = -0.303715 + 0.325379I$ $b = 0.342553 + 0.714358I$	$-2.13845 - 2.44995I$	0
$u = -1.008300 - 0.535583I$ $a = -0.303715 - 0.325379I$ $b = 0.342553 - 0.714358I$	$-2.13845 + 2.44995I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.123120+0.241416I$ $a=\ 0.293122-0.183192I$ $b=\ 0.193002-0.431935I$	$-1.60583+1.75045I$	0
$u=-1.123120-0.241416I$ $a=\ 0.293122+0.183192I$ $b=\ 0.193002+0.431935I$	$-1.60583-1.75045I$	0
$u=\ 0.451232+0.718097I$ $a=\ 0.307351+0.358342I$ $b=-1.189450+0.478819I$	$-2.96850+2.69519I$	0
$u=\ 0.451232-0.718097I$ $a=\ 0.307351-0.358342I$ $b=-1.189450-0.478819I$	$-2.96850-2.69519I$	0
$u=\ 0.019026+1.254550I$ $a=-1.084100-0.131474I$ $b=\ 0.989260+0.438692I$	$4.17823+1.48003I$	0
$u=\ 0.019026-1.254550I$ $a=-1.084100+0.131474I$ $b=\ 0.989260-0.438692I$	$4.17823-1.48003I$	0
$u=-0.656590+0.303405I$ $a=\ 0.585961+1.279240I$ $b=\ 0.951241-0.257563I$	$-5.16257+1.14229I$	$-8.90976+0.I$
$u=-0.656590-0.303405I$ $a=\ 0.585961-1.279240I$ $b=\ 0.951241+0.257563I$	$-5.16257-1.14229I$	$-8.90976+0.I$
$u=\ 0.607078+0.333879I$ $a=-0.85250+1.51795I$ $b=-1.071550-0.481802I$	$-4.10701-6.45308I$	$-6.41998+8.18062I$
$u=\ 0.607078-0.333879I$ $a=-0.85250-1.51795I$ $b=-1.071550+0.481802I$	$-4.10701+6.45308I$	$-6.41998-8.18062I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.171606+1.299010I$ $a=\ \ 0.401831+0.840841I$ $b=-0.312547-0.178701I$	$1.77774+2.26138I$	0
$u=-0.171606-1.299010I$ $a=\ \ 0.401831-0.840841I$ $b=-0.312547+0.178701I$	$1.77774-2.26138I$	0
$u=-0.498222+0.336771I$ $a=\ \ 0.354034-0.361091I$ $b=-0.423586+0.190215I$	$-1.025080+0.904940I$	$-5.26396-3.56513I$
$u=-0.498222-0.336771I$ $a=\ \ 0.354034+0.361091I$ $b=-0.423586-0.190215I$	$-1.025080-0.904940I$	$-5.26396+3.56513I$
$u=\ \ 0.033414+1.403500I$ $a=-0.60353+5.96754I$ $b=-0.00932-5.56780I$	$4.81821-4.08298I$	0
$u=\ \ 0.033414-1.403500I$ $a=-0.60353-5.96754I$ $b=-0.00932+5.56780I$	$4.81821+4.08298I$	0
$u=\ \ 0.09550+1.42643I$ $a=-0.16996+2.14660I$ $b=-0.56310-1.42628I$	$5.06416-3.99388I$	0
$u=\ \ 0.09550-1.42643I$ $a=-0.16996-2.14660I$ $b=-0.56310+1.42628I$	$5.06416+3.99388I$	0
$u=-0.18451+1.42346I$ $a=-0.31012+1.66932I$ $b=\ \ 0.541640-0.505034I$	$0.35816+4.08264I$	0
$u=-0.18451-1.42346I$ $a=-0.31012-1.66932I$ $b=\ \ 0.541640+0.505034I$	$0.35816-4.08264I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.00319+1.43777I$ $a=-6.87530-4.92737I$ $b=\ \ 7.47001+5.24272I$	$4.99345-0.06600I$	0
$u=-0.00319-1.43777I$ $a=-6.87530+4.92737I$ $b=\ \ 7.47001-5.24272I$	$4.99345+0.06600I$	0
$u=\ \ 0.039633+0.553022I$ $a=-0.87889-1.95381I$ $b=\ \ 0.208141+0.832840I$	$3.05240+1.32386I$	$8.90398-1.32443I$
$u=\ \ 0.039633-0.553022I$ $a=-0.87889+1.95381I$ $b=\ \ 0.208141-0.832840I$	$3.05240-1.32386I$	$8.90398+1.32443I$
$u=\ \ 0.17302+1.44365I$ $a=\ \ 0.35297+1.97037I$ $b=-0.722497-0.658580I$	$1.62877-9.18771I$	0
$u=\ \ 0.17302-1.44365I$ $a=\ \ 0.35297-1.97037I$ $b=-0.722497+0.658580I$	$1.62877+9.18771I$	0
$u=\ \ 0.119986+0.523502I$ $a=-2.31040-1.46234I$ $b=\ \ 0.419804+0.403800I$	$2.69979-4.51496I$	$7.09912+8.71486I$
$u=\ \ 0.119986-0.523502I$ $a=-2.31040+1.46234I$ $b=\ \ 0.419804-0.403800I$	$2.69979+4.51496I$	$7.09912-8.71486I$
$u=\ \ 0.08012+1.46212I$ $a=-0.15853+1.60878I$ $b=-0.920375-1.029570I$	$5.28720-4.03509I$	0
$u=\ \ 0.08012-1.46212I$ $a=-0.15853-1.60878I$ $b=-0.920375+1.029570I$	$5.28720+4.03509I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.327534+0.422907I$ $a=\ 3.02963+0.59585I$ $b=\ 0.203105-0.967372I$	$0.55061+6.78066I$	$0.71844-12.16639I$
$u=-0.327534-0.422907I$ $a=\ 3.02963-0.59585I$ $b=\ 0.203105+0.967372I$	$0.55061-6.78066I$	$0.71844+12.16639I$
$u=-0.01975+1.47692I$ $a=\ 0.19520-1.62972I$ $b=-0.16784+1.64542I$	$4.98587+2.32048I$	0
$u=-0.01975-1.47692I$ $a=\ 0.19520+1.62972I$ $b=-0.16784-1.64542I$	$4.98587-2.32048I$	0
$u=-0.08443+1.48407I$ $a=\ 0.81270+1.47878I$ $b=\ 0.612753-0.888020I$	$6.82785+8.20158I$	0
$u=-0.08443-1.48407I$ $a=\ 0.81270-1.47878I$ $b=\ 0.612753+0.888020I$	$6.82785-8.20158I$	0
$u=-0.05536+1.48957I$ $a=\ 0.614448+0.218579I$ $b=\ 0.671449-0.182815I$	$8.32673+2.34943I$	0
$u=-0.05536-1.48957I$ $a=\ 0.614448-0.218579I$ $b=\ 0.671449+0.182815I$	$8.32673-2.34943I$	0
$u=-0.01932+1.49247I$ $a=\ 0.04141-1.45901I$ $b=\ 0.561884+1.107640I$	$7.27858+1.64673I$	0
$u=-0.01932-1.49247I$ $a=\ 0.04141+1.45901I$ $b=\ 0.561884-1.107640I$	$7.27858-1.64673I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.355798 + 0.346776I$ $a = -2.41660 + 0.66213I$ $b = -0.528640 - 0.898385I$	$-0.61317 - 2.59078I$	$-2.75725 + 6.50369I$
$u = 0.355798 - 0.346776I$ $a = -2.41660 - 0.66213I$ $b = -0.528640 + 0.898385I$	$-0.61317 + 2.59078I$	$-2.75725 - 6.50369I$
$u = -0.203929 + 0.451228I$ $a = 2.87535 - 0.41860I$ $b = -0.101648 - 0.254594I$	$1.93480 + 1.43759I$	$5.05470 - 4.70720I$
$u = -0.203929 - 0.451228I$ $a = 2.87535 + 0.41860I$ $b = -0.101648 + 0.254594I$	$1.93480 - 1.43759I$	$5.05470 + 4.70720I$
$u = 0.03128 + 1.50599I$ $a = -0.79227 - 1.27582I$ $b = -0.227575 + 0.639490I$	$9.38796 - 5.04495I$	0
$u = 0.03128 - 1.50599I$ $a = -0.79227 + 1.27582I$ $b = -0.227575 - 0.639490I$	$9.38796 + 5.04495I$	0
$u = 0.01153 + 1.50911I$ $a = -0.32993 - 1.96421I$ $b = -0.085234 + 1.070560I$	$9.82439 + 1.13815I$	0
$u = 0.01153 - 1.50911I$ $a = -0.32993 + 1.96421I$ $b = -0.085234 - 1.070560I$	$9.82439 - 1.13815I$	0
$u = -0.029724 + 0.477256I$ $a = 1.37517 - 0.57850I$ $b = -0.051368 + 0.680823I$	$0.81594 + 1.38660I$	$1.38598 - 4.17847I$
$u = -0.029724 - 0.477256I$ $a = 1.37517 + 0.57850I$ $b = -0.051368 - 0.680823I$	$0.81594 - 1.38660I$	$1.38598 + 4.17847I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.461839 + 0.022500I$ $a = -0.597939 - 0.071742I$ $b = 0.582563 + 0.589739I$	$0.74581 + 2.82348I$	$-4.53636 - 4.83171I$
$u = 0.461839 - 0.022500I$ $a = -0.597939 + 0.071742I$ $b = 0.582563 - 0.589739I$	$0.74581 - 2.82348I$	$-4.53636 + 4.83171I$
$u = 0.22904 + 1.55802I$ $a = -0.14484 - 1.83803I$ $b = 0.87787 + 1.48851I$	$9.3010 - 11.9435I$	0
$u = 0.22904 - 1.55802I$ $a = -0.14484 + 1.83803I$ $b = 0.87787 - 1.48851I$	$9.3010 + 11.9435I$	0
$u = -0.22129 + 1.56137I$ $a = 0.16999 - 1.66534I$ $b = -0.82156 + 1.38958I$	$7.22649 + 6.39687I$	0
$u = -0.22129 - 1.56137I$ $a = 0.16999 + 1.66534I$ $b = -0.82156 - 1.38958I$	$7.22649 - 6.39687I$	0
$u = 0.27624 + 1.56195I$ $a = 0.09685 + 1.90101I$ $b = -1.21047 - 1.59852I$	$7.3991 - 18.1926I$	0
$u = 0.27624 - 1.56195I$ $a = 0.09685 - 1.90101I$ $b = -1.21047 + 1.59852I$	$7.3991 + 18.1926I$	0
$u = 0.29885 + 1.56500I$ $a = -0.19914 + 1.43204I$ $b = -0.80085 - 1.28979I$	$11.9803 - 9.8409I$	0
$u = 0.29885 - 1.56500I$ $a = -0.19914 - 1.43204I$ $b = -0.80085 + 1.28979I$	$11.9803 + 9.8409I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.27816+1.56968I$ $a=-0.17140+1.70664I$ $b=1.21269-1.40668I$	$5.40752+12.32690I$	0
$u=-0.27816-1.56968I$ $a=-0.17140-1.70664I$ $b=1.21269+1.40668I$	$5.40752-12.32690I$	0
$u=0.23215+1.57892I$ $a=0.15758-1.52468I$ $b=0.60684+1.43631I$	$13.08780-3.85885I$	0
$u=0.23215-1.57892I$ $a=0.15758+1.52468I$ $b=0.60684-1.43631I$	$13.08780+3.85885I$	0
$u=0.248024+0.314394I$ $a=0.760188+0.656839I$ $b=-0.21625+2.01249I$	$-0.535608+0.453177I$	$4.48452+9.14316I$
$u=0.248024-0.314394I$ $a=0.760188-0.656839I$ $b=-0.21625-2.01249I$	$-0.535608-0.453177I$	$4.48452-9.14316I$
$u=0.38199+1.55907I$ $a=-0.254235+0.592400I$ $b=-0.460504-0.568839I$	$7.37607-0.99312I$	0
$u=0.38199-1.55907I$ $a=-0.254235-0.592400I$ $b=-0.460504+0.568839I$	$7.37607+0.99312I$	0
$u=0.321418+0.223961I$ $a=-1.97865+0.14679I$ $b=-0.733646-0.883833I$	$-0.35523-2.56098I$	$1.68467+6.23098I$
$u=0.321418-0.223961I$ $a=-1.97865-0.14679I$ $b=-0.733646+0.883833I$	$-0.35523+2.56098I$	$1.68467-6.23098I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.373148+0.039107I$ $a=\ \ 0.625428+0.426014I$ $b=-0.14835+1.85095I$	$0.650874+0.228088I$	$-12.35292+1.32556I$
$u=-0.373148-0.039107I$ $a=\ \ 0.625428-0.426014I$ $b=-0.14835-1.85095I$	$0.650874-0.228088I$	$-12.35292-1.32556I$
$u=-0.305575+0.209808I$ $a=-0.338043+0.740708I$ $b=\ \ 0.09441+2.44525I$	$0.05200-4.62844I$	$-4.93644-10.66132I$
$u=-0.305575-0.209808I$ $a=-0.338043-0.740708I$ $b=\ \ 0.09441-2.44525I$	$0.05200+4.62844I$	$-4.93644+10.66132I$
$u=-0.32708+1.60854I$ $a=-0.082890+0.881250I$ $b=\ \ 0.863080-0.709104I$	$5.16223+7.23356I$	0
$u=-0.32708-1.60854I$ $a=-0.082890-0.881250I$ $b=\ \ 0.863080+0.709104I$	$5.16223-7.23356I$	0
$u=-0.19350+1.63913I$ $a=\ \ 0.098376-0.982820I$ $b=-0.603961+1.102340I$	$5.97742+2.31934I$	0
$u=-0.19350-1.63913I$ $a=\ \ 0.098376+0.982820I$ $b=-0.603961-1.102340I$	$5.97742-2.31934I$	0
$u=\ \ 0.27866+1.65228I$ $a=\ \ 0.269982-0.752919I$ $b=\ \ 0.336410+1.033640I$	$7.41573+4.03195I$	0
$u=\ \ 0.27866-1.65228I$ $a=\ \ 0.269982+0.752919I$ $b=\ \ 0.336410-1.033640I$	$7.41573-4.03195I$	0

II. $I_2^u = \langle b-2a,\ 9a^2+3a+1,\ u-1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{116}{3}a - \frac{53}{9}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^2 - u + 1$
c_2	$u^2 + u + 1$
c_3	$9(9u^2 - 6u + 4)$
c_4	$9(9u^2 - 3u + 1)$
c_6, c_7, c_8 c_9	$(u-1)^2$
c_{10}, c_{12}	$(u+1)^2$
c_{11}	u^2

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$y^2 + y + 1$
c_3	$81(81y^2 + 36y + 16)$
c_4	$81(81y^2 + 9y + 1)$
c_6, c_7, c_8 c_9, c_{10}, c_{12}	$(y-1)^2$
c_{11}	y^2

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.00000$ $a = -0.166667 + 0.288675I$ $b = -0.333333 + 0.577350I$	$-1.64493 + 2.02988I$	$0.55556 - 11.16211I$
$u = \quad 1.00000$ $a = -0.166667 - 0.288675I$ $b = -0.333333 - 0.577350I$	$-1.64493 - 2.02988I$	$0.55556 + 11.16211I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^2-u+1)(u^{100}+38u^{99}+\cdots+2486u+81)$
c_2	$(u^2+u+1)(u^{100}+2u^{99}+\cdots+14u+9)$
c_3	$81(9u^2-6u+4)(9u^{100}-129u^{99}+\cdots+1927454u+1683748)$
c_4	$81(9u^2-3u+1)(9u^{100}+156u^{99}+\cdots+48280u+5821)$
c_5	$(u^2-u+1)(u^{100}+2u^{99}+\cdots+14u+9)$
c_6	$((u-1)^2)(u^{100}+3u^{99}+\cdots+3u+1)$
c_7, c_8	$((u-1)^2)(u^{100}-3u^{99}+\cdots-3u+1)$
c_9	$((u-1)^2)(u^{100}-39u^{99}+\cdots-7u+1)$
c_{10}	$((u+1)^2)(u^{100}+3u^{99}+\cdots+3u+1)$
c_{11}	$u^2(u^{100}-5u^{99}+\cdots-216u+108)$
c_{12}	$((u+1)^2)(u^{100}-3u^{99}+\cdots-3u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^2+y+1)(y^{100}+50y^{99}+\cdots+2843042y+6561)$
c_2, c_5	$(y^2+y+1)(y^{100}+38y^{99}+\cdots+2486y+81)$
c_3	$6561(81y^2+36y+16)$ $\cdot(81y^{100}+5517y^{99}+\cdots+95872846757236y+2835007327504)$
c_4	$6561(81y^2+9y+1)$ $\cdot(81y^{100}+1278y^{99}+\cdots-367849434y+33884041)$
c_6, c_{10}	$((y-1)^2)(y^{100}+39y^{99}+\cdots+7y+1)$
c_7, c_8, c_{12}	$((y-1)^2)(y^{100}+99y^{99}+\cdots+7y+1)$
c_9	$((y-1)^2)(y^{100}+31y^{99}+\cdots-145y+1)$
c_{11}	$y^2(y^{100}-15y^{99}+\cdots-266328y+11664)$