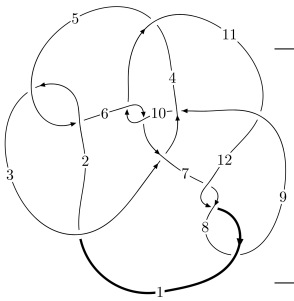
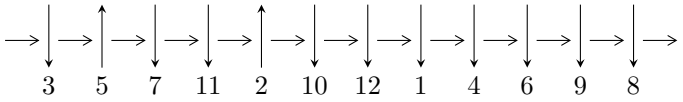
$12a_{0075}$ $(K12a_{0075})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle -1.19584 \times 10^{116} u^{105} + 1.86181 \times 10^{116} u^{104} + \cdots + 6.02649 \times 10^{115} b - 1.28219 \times 10^{116},$
$2.36470 \times 10^{115} u^{105} - 1.16324 \times 10^{116} u^{104} + \cdots + 6.02649 \times 10^{115} a - 3.33384 \times 10^{115},\ u^{106} - 3u^{105} + \cdots -$
$I_2^u = \langle au + b - a,\ 5a^2 + 3au + 4a + 3u + 5,\ u^2 + u - 1 \rangle$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 110 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. $\boldsymbol{I_1^u = \langle -1.20 \times 10^{116} u^{105} + 1.86 \times 10^{116} u^{104} + \cdots + 6.03 \times 10^{115} b - 1.28 \times 10^{116},\ 2.36 \times 10^{115} u^{105} - 1.16 \times 10^{116} u^{104} + \cdots + 6.03 \times 10^{115} a - 3.33 \times 10^{115},\ u^{106} - 3u^{105} + \cdots - 3u - 1 \rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.392385u^{105} + 1.93021u^{104} + \cdots + 0.146583u + 0.553198 \\ 1.98431u^{105} - 3.08938u^{104} + \cdots + 7.46686u + 2.12758 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 0.967277u^{105} - 1.56952u^{104} + \cdots + 2.76033u + 0.392588 \\ 3.35293u^{105} - 5.77616u^{104} + \cdots + 9.79544u + 2.36212 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -1.75036u^{105} + 3.98608u^{104} + \cdots + 1.82800u + 1.18803 \\ 1.69583u^{105} - 3.62423u^{104} + \cdots + 10.3896u + 2.74535 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.02981u^{105} - 1.60166u^{104} + \cdots + 2.72454u + 1.74180 \\ 0.684407u^{105} - 1.13507u^{104} + \cdots + 2.19871u + 0.520494 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^3 + 2u \\ -u^5 + u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -2.02491u^{105} + 4.32790u^{104} + \cdots - 0.782197u + 0.473046 \\ 0.486353u^{105} - 1.64209u^{104} + \cdots + 7.18736u + 2.04536 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.306755u^{105} - 0.586484u^{104} + \cdots + 12.5619u - 0.133826 \\ 3.87650u^{105} - 6.46536u^{104} + \cdots + 14.8476u + 3.23868 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -8.72998u^{105} + 16.9191u^{104} + \cdots - 32.7341u - 9.48349$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{106}+39u^{105}+\cdots-6871u+625$
c_2, c_5	$u^{106}+3u^{105}+\cdots+89u+25$
c_3	$25(25u^{106}-220u^{105}+\cdots-1.88460\times10^{7}u+6882857)$
c_4	$25(25u^{106}+135u^{105}+\cdots-2.32523\times10^{8}u-3.13965\times10^{7})$
c_6, c_{10}	$u^{106}+3u^{105}+\cdots+u-1$
c_7, c_8, c_{12}	$u^{106}+3u^{105}+\cdots+3u-1$
c_9	$u^{106}+u^{105}+\cdots-19600u-2000$
c_{11}	$u^{106}-9u^{105}+\cdots-363165u+47311$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{106}+59y^{105}+\cdots-405121891y+390625$
c_2, c_5	$y^{106}+39y^{105}+\cdots-6871y+625$
c_3	625 $\cdot(625y^{106}+15400y^{105}+\cdots+710061743809250y+47373720482449)$
c_4	$625(625y^{106}+44975y^{105}+\cdots+2.18081\times10^{16}y+9.85742\times10^{14})$
c_6, c_{10}	$y^{106}+67y^{105}+\cdots-19y+1$
c_7, c_8, c_{12}	$y^{106}-93y^{105}+\cdots-19y+1$
c_9	$y^{106}+25y^{105}+\cdots+144720000y+4000000$
c_{11}	$y^{106}+23y^{105}+\cdots-76748887567y+2238330721$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.920780+0.466753I$ $a=\ \ 0.756321+0.442832I$ $b=\ \ 1.67086+0.83902I$	$4.62802-9.62359I$	0
$u=-0.920780-0.466753I$ $a=\ \ 0.756321-0.442832I$ $b=\ \ 1.67086-0.83902I$	$4.62802+9.62359I$	0
$u=-0.816204+0.487065I$ $a=\ \ 0.215861+0.609548I$ $b=\ \ 0.208363+1.133060I$	$5.34115+2.64856I$	0
$u=-0.816204-0.487065I$ $a=\ \ 0.215861-0.609548I$ $b=\ \ 0.208363-1.133060I$	$5.34115-2.64856I$	0
$u=-0.977481+0.406392I$ $a=-0.818336-0.402034I$ $b=-1.75031-0.94474I$	$5.97827-3.64428I$	0
$u=-0.977481-0.406392I$ $a=-0.818336+0.402034I$ $b=-1.75031+0.94474I$	$5.97827+3.64428I$	0
$u=-0.938198+0.491834I$ $a=-0.214075-0.753717I$ $b=-0.421332-1.338260I$	$4.64585+8.16774I$	0
$u=-0.938198-0.491834I$ $a=-0.214075+0.753717I$ $b=-0.421332+1.338260I$	$4.64585-8.16774I$	0
$u=\ \ 0.924351+0.524938I$ $a=-0.498824+0.328883I$ $b=-1.017210+0.528817I$	$0.18493+3.46058I$	0
$u=\ \ 0.924351-0.524938I$ $a=-0.498824-0.328883I$ $b=-1.017210-0.528817I$	$0.18493-3.46058I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.227735+0.861289I$ $a=-0.698764-1.084020I$ $b=-0.0737764+0.0351104I$	$6.87458-3.38819I$	0
$u=-0.227735-0.861289I$ $a=-0.698764+1.084020I$ $b=-0.0737764-0.0351104I$	$6.87458+3.38819I$	0
$u=0.247091+0.846456I$ $a=0.10106+1.53739I$ $b=-0.0499682-0.0331869I$	$2.29410-8.26425I$	0
$u=0.247091-0.846456I$ $a=0.10106-1.53739I$ $b=-0.0499682+0.0331869I$	$2.29410+8.26425I$	0
$u=-0.298736+0.824933I$ $a=0.743857+0.952433I$ $b=0.0751467+0.0605634I$	$7.03208+1.99143I$	0
$u=-0.298736-0.824933I$ $a=0.743857-0.952433I$ $b=0.0751467-0.0605634I$	$7.03208-1.99143I$	0
$u=1.033590+0.457122I$ $a=0.473569-0.383473I$ $b=1.066440-0.713288I$	$0.83815-1.62864I$	0
$u=1.033590-0.457122I$ $a=0.473569+0.383473I$ $b=1.066440+0.713288I$	$0.83815+1.62864I$	0
$u=-0.240768+0.824283I$ $a=-0.11553+2.24441I$ $b=-0.0145449-0.0728026I$	$6.7575+14.2182I$	0
$u=-0.240768-0.824283I$ $a=-0.11553-2.24441I$ $b=-0.0145449+0.0728026I$	$6.7575-14.2182I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.176145 + 0.826629I$ $a = -0.19465 - 1.56583I$ $b = -0.0147810 + 0.0663483I$	$3.47417 - 2.93643I$	0
$u = \quad 0.176145 - 0.826629I$ $a = -0.19465 + 1.56583I$ $b = -0.0147810 - 0.0663483I$	$3.47417 + 2.93643I$	0
$u = -0.201809 + 0.810263I$ $a = \quad 0.25899 - 2.31993I$ $b = \quad 0.0826196 + 0.0079760I$	$8.38154 + 8.04428I$	0
$u = -0.201809 - 0.810263I$ $a = \quad 0.25899 + 2.31993I$ $b = \quad 0.0826196 - 0.0079760I$	$8.38154 - 8.04428I$	0
$u = -1.229020 + 0.096341I$ $a = \quad 1.38458 + 0.97450I$ $b = \quad 2.16417 + 2.69342I$	$-1.87389 - 3.46118I$	0
$u = -1.229020 - 0.096341I$ $a = \quad 1.38458 - 0.97450I$ $b = \quad 2.16417 - 2.69342I$	$-1.87389 + 3.46118I$	0
$u = \quad 1.213650 + 0.223425I$ $a = -0.56429 + 1.79185I$ $b = \quad 0.25920 + 2.81657I$	$1.71141 + 1.82395I$	0
$u = \quad 1.213650 - 0.223425I$ $a = -0.56429 - 1.79185I$ $b = \quad 0.25920 - 2.81657I$	$1.71141 - 1.82395I$	0
$u = -1.255290 + 0.208643I$ $a = \quad 1.39629 + 1.06735I$ $b = \quad 1.84758 + 1.17794I$	$-2.11051 - 0.26400I$	0
$u = -1.255290 - 0.208643I$ $a = \quad 1.39629 - 1.06735I$ $b = \quad 1.84758 - 1.17794I$	$-2.11051 + 0.26400I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.247200+0.267682I$ $a=-1.48534+0.10267I$ $b=-3.21531-0.89282I$	$3.36411+1.60041I$	0
$u=-1.247200-0.267682I$ $a=-1.48534-0.10267I$ $b=-3.21531+0.89282I$	$3.36411-1.60041I$	0
$u=1.264040+0.253171I$ $a=0.462400-0.833389I$ $b=1.51601-1.67220I$	$-1.28635-2.01710I$	0
$u=1.264040-0.253171I$ $a=0.462400+0.833389I$ $b=1.51601+1.67220I$	$-1.28635+2.01710I$	0
$u=1.268280+0.250780I$ $a=0.098698-1.002360I$ $b=1.28889-2.03570I$	$-1.34820-1.94886I$	0
$u=1.268280-0.250780I$ $a=0.098698+1.002360I$ $b=1.28889+2.03570I$	$-1.34820+1.94886I$	0
$u=-0.024764+0.706428I$ $a=1.67877-2.77309I$ $b=0.552628-0.369872I$	$7.11485+1.92573I$	$4.79150-3.14409I$
$u=-0.024764-0.706428I$ $a=1.67877+2.77309I$ $b=0.552628+0.369872I$	$7.11485-1.92573I$	$4.79150+3.14409I$
$u=0.537218+0.456113I$ $a=-0.641691-0.044249I$ $b=-0.736942+0.156147I$	$-2.77183-1.23439I$	$-14.2698+2.5822I$
$u=0.537218-0.456113I$ $a=-0.641691+0.044249I$ $b=-0.736942-0.156147I$	$-2.77183+1.23439I$	$-14.2698-2.5822I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.195119+0.675153I$ $a=-0.05646+2.99264I$ $b=\ \ 0.068082+0.310570I$	$0.61895+6.15524I$	$-6.03024-8.70363I$
$u=-0.195119-0.675153I$ $a=-0.05646-2.99264I$ $b=\ \ 0.068082-0.310570I$	$0.61895-6.15524I$	$-6.03024+8.70363I$
$u=-1.281160+0.235497I$ $a=-1.58663-2.87932I$ $b=-3.86609-3.92554I$	$-1.37188+4.62252I$	0
$u=-1.281160-0.235497I$ $a=-1.58663+2.87932I$ $b=-3.86609+3.92554I$	$-1.37188-4.62252I$	0
$u=\ \ 0.087086+0.690259I$ $a=-2.39632+1.47958I$ $b=-0.867733+0.153468I$	$5.07026-5.13999I$	$0.90064+7.96283I$
$u=\ \ 0.087086-0.690259I$ $a=-2.39632-1.47958I$ $b=-0.867733-0.153468I$	$5.07026+5.13999I$	$0.90064-7.96283I$
$u=-1.280280+0.255973I$ $a=-1.01304-1.56925I$ $b=-1.94256-2.34069I$	$-1.39796+4.72699I$	0
$u=-1.280280-0.255973I$ $a=-1.01304+1.56925I$ $b=-1.94256+2.34069I$	$-1.39796-4.72699I$	0
$u=\ \ 1.299580+0.126286I$ $a=-0.399923+0.915096I$ $b=-1.08930+2.40719I$	$-4.66876+0.64884I$	0
$u=\ \ 1.299580-0.126286I$ $a=-0.399923-0.915096I$ $b=-1.08930-2.40719I$	$-4.66876-0.64884I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.281020 + 0.281013I$ $a = 1.12025 - 1.86438I$ $b = 1.19218 - 3.55348I$	$3.05890 - 5.49746I$	0
$u = 1.281020 - 0.281013I$ $a = 1.12025 + 1.86438I$ $b = 1.19218 + 3.55348I$	$3.05890 + 5.49746I$	0
$u = 0.266672 + 0.630663I$ $a = 0.03752 + 1.81979I$ $b = 0.118614 + 0.177319I$	$-1.85345 - 2.28906I$	$-11.72961 + 3.90510I$
$u = 0.266672 - 0.630663I$ $a = 0.03752 - 1.81979I$ $b = 0.118614 - 0.177319I$	$-1.85345 + 2.28906I$	$-11.72961 - 3.90510I$
$u = 0.005642 + 0.679539I$ $a = -0.41275 - 2.03681I$ $b = -0.256213 + 0.339588I$	$2.58364 - 1.36274I$	$-4.32616 + 4.41390I$
$u = 0.005642 - 0.679539I$ $a = -0.41275 + 2.03681I$ $b = -0.256213 - 0.339588I$	$2.58364 + 1.36274I$	$-4.32616 - 4.41390I$
$u = 0.000823 + 0.666898I$ $a = -0.15641 - 2.28476I$ $b = -0.417983 + 0.545250I$	$2.56510 - 1.37327I$	$-5.21577 + 4.42829I$
$u = 0.000823 - 0.666898I$ $a = -0.15641 + 2.28476I$ $b = -0.417983 - 0.545250I$	$2.56510 + 1.37327I$	$-5.21577 - 4.42829I$
$u = -1.322160 + 0.193322I$ $a = -3.61754 + 2.44355I$ $b = -4.72764 + 6.36461I$	$-1.48967 + 0.94902I$	0
$u = -1.322160 - 0.193322I$ $a = -3.61754 - 2.44355I$ $b = -4.72764 - 6.36461I$	$-1.48967 - 0.94902I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.323800 + 0.259025I$ $a = -0.158106 + 0.512436I$ $b = -1.28919 + 1.62239I$	$-2.97042 - 6.53501I$	0
$u = 1.323800 - 0.259025I$ $a = -0.158106 - 0.512436I$ $b = -1.28919 - 1.62239I$	$-2.97042 + 6.53501I$	0
$u = -1.319530 + 0.282088I$ $a = 1.044800 - 0.788163I$ $b = 2.89802 - 0.54779I$	$0.65423 + 8.67007I$	0
$u = -1.319530 - 0.282088I$ $a = 1.044800 + 0.788163I$ $b = 2.89802 + 0.54779I$	$0.65423 - 8.67007I$	0
$u = -0.080355 + 0.638344I$ $a = 0.19992 + 1.73379I$ $b = 0.768705 - 0.119150I$	$1.45803 + 3.26115I$	$-7.40974 - 2.73081I$
$u = -0.080355 - 0.638344I$ $a = 0.19992 - 1.73379I$ $b = 0.768705 + 0.119150I$	$1.45803 - 3.26115I$	$-7.40974 + 2.73081I$
$u = 1.373020 + 0.179579I$ $a = -1.165500 - 0.355208I$ $b = -1.54451 - 0.77366I$	$-1.81444 - 3.41016I$	0
$u = 1.373020 - 0.179579I$ $a = -1.165500 + 0.355208I$ $b = -1.54451 + 0.77366I$	$-1.81444 + 3.41016I$	0
$u = -1.39188$ $a = 0.642376$ $b = 0.308644$	-6.33392	0
$u = 1.369870 + 0.279288I$ $a = -1.35602 + 1.41036I$ $b = -2.49059 + 3.14102I$	$-4.33462 - 9.64645I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.369870 - 0.279288I$ $a = -1.35602 - 1.41036I$ $b = -2.49059 - 3.14102I$	$-4.33462 + 9.64645I$	0
$u = 1.404170 + 0.077311I$ $a = 0.146052 - 0.488550I$ $b = -0.685818 - 0.143496I$	$-7.04492 + 1.96557I$	0
$u = 1.404170 - 0.077311I$ $a = 0.146052 + 0.488550I$ $b = -0.685818 + 0.143496I$	$-7.04492 - 1.96557I$	0
$u = -1.39021 + 0.26231I$ $a = 0.93525 + 1.13077I$ $b = 1.62632 + 2.28679I$	$-7.09179 + 5.58629I$	0
$u = -1.39021 - 0.26231I$ $a = 0.93525 - 1.13077I$ $b = 1.62632 - 2.28679I$	$-7.09179 - 5.58629I$	0
$u = -1.37311 + 0.34471I$ $a = -0.769327 - 1.093390I$ $b = -1.58734 - 2.10730I$	$-1.41878 + 7.14733I$	0
$u = -1.37311 - 0.34471I$ $a = -0.769327 + 1.093390I$ $b = -1.58734 + 2.10730I$	$-1.41878 - 7.14733I$	0
$u = -0.532398 + 0.225330I$ $a = 1.150140 + 0.477582I$ $b = 1.007550 + 0.815024I$	$-1.07296 - 3.04928I$	$-11.29523 + 2.98969I$
$u = -0.532398 - 0.225330I$ $a = 1.150140 - 0.477582I$ $b = 1.007550 - 0.815024I$	$-1.07296 + 3.04928I$	$-11.29523 - 2.98969I$
$u = 1.38546 + 0.33854I$ $a = 1.21145 - 1.40603I$ $b = 2.35484 - 2.72340I$	$3.35713 - 12.19010I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.38546 - 0.33854I$ $a = 1.21145 + 1.40603I$ $b = 2.35484 + 2.72340I$	$3.35713 + 12.19010I$	0
$u = 1.39852 + 0.37613I$ $a = 0.725149 - 0.316400I$ $b = 1.55261 - 0.68190I$	$1.73619 - 1.07513I$	0
$u = 1.39852 - 0.37613I$ $a = 0.725149 + 0.316400I$ $b = 1.55261 + 0.68190I$	$1.73619 + 1.07513I$	0
$u = 1.40763 + 0.34067I$ $a = -1.21520 + 1.37151I$ $b = -2.48837 + 2.66444I$	$1.5237 - 18.4250I$	0
$u = 1.40763 - 0.34067I$ $a = -1.21520 - 1.37151I$ $b = -2.48837 - 2.66444I$	$1.5237 + 18.4250I$	0
$u = 1.45256 + 0.06034I$ $a = -0.559577 - 0.364250I$ $b = -0.347311 - 0.174242I$	$-1.99478 - 3.94780I$	0
$u = 1.45256 - 0.06034I$ $a = -0.559577 + 0.364250I$ $b = -0.347311 + 0.174242I$	$-1.99478 + 3.94780I$	0
$u = -1.41155 + 0.35078I$ $a = 0.797419 + 1.028650I$ $b = 1.67070 + 2.07683I$	$-2.96797 + 12.58110I$	0
$u = -1.41155 - 0.35078I$ $a = 0.797419 - 1.028650I$ $b = 1.67070 - 2.07683I$	$-2.96797 - 12.58110I$	0
$u = -1.46566 + 0.09901I$ $a = -0.313535 - 0.288969I$ $b = 0.158697 - 0.309296I$	$-9.31891 + 3.12487I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.46566-0.09901I$ $a=-0.313535+0.288969I$ $b=\ \ 0.158697+0.309296I$	$-9.31891-3.12487I$	0
$u=\ \ 1.44204+0.34403I$ $a=-0.748462+0.232440I$ $b=-1.50858+0.58148I$	$1.47688-6.23987I$	0
$u=\ \ 1.44204-0.34403I$ $a=-0.748462-0.232440I$ $b=-1.50858-0.58148I$	$1.47688+6.23987I$	0
$u=\ \ 1.50724+0.01696I$ $a=\ \ 0.439244+0.262390I$ $b=\ \ 0.169307-0.194292I$	$-3.58319-9.03555I$	0
$u=\ \ 1.50724-0.01696I$ $a=\ \ 0.439244-0.262390I$ $b=\ \ 0.169307+0.194292I$	$-3.58319+9.03555I$	0
$u=-0.243074+0.382168I$ $a=\ \ 1.45223-0.64890I$ $b=-0.581368+0.506050I$	$3.17428+1.16632I$	$-5.18255-5.32989I$
$u=-0.243074-0.382168I$ $a=\ \ 1.45223+0.64890I$ $b=-0.581368-0.506050I$	$3.17428-1.16632I$	$-5.18255+5.32989I$
$u=\ \ 0.130352+0.432714I$ $a=\ \ 3.17054-1.05121I$ $b=-1.001500+0.836246I$	$3.00363+1.49026I$	$-10.08071-1.95304I$
$u=\ \ 0.130352-0.432714I$ $a=\ \ 3.17054+1.05121I$ $b=-1.001500-0.836246I$	$3.00363-1.49026I$	$-10.08071+1.95304I$
$u=\ \ 0.398116$ $a=-0.179777$ $b=\ \ 0.395924$	-0.655557	-14.9730

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.63360+0.01594I$ $a=-0.0217600-0.0644053I$ $b=\ \ 0.064850+0.130093I$	$-8.81403-2.11872I$	0
$u=-1.63360-0.01594I$ $a=-0.0217600+0.0644053I$ $b=\ \ 0.064850-0.130093I$	$-8.81403+2.11872I$	0
$u=\ \ 0.302956+0.142061I$ $a=-3.33583-1.44267I$ $b=\ \ 0.698699-0.891430I$	$2.18318-3.32244I$	$-9.60296+3.16320I$
$u=\ \ 0.302956-0.142061I$ $a=-3.33583+1.44267I$ $b=\ \ 0.698699+0.891430I$	$2.18318+3.32244I$	$-9.60296-3.16320I$
$u=-0.199739+0.122555I$ $a=\ \ 0.08224+3.53502I$ $b=\ \ 0.252902+0.540317I$	$-0.31670-1.81249I$	$-1.61690+1.68681I$
$u=-0.199739-0.122555I$ $a=\ \ 0.08224-3.53502I$ $b=\ \ 0.252902-0.540317I$	$-0.31670+1.81249I$	$-1.61690-1.68681I$

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

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} a \\ -au + a \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u + 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u + 1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ u - 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -au + 2a \\ -3au + 2a \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ -u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ -2u + 2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -au + 2a \\ -7au + 5a \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -au + 2a + u + 1 \\ -3au + 2a + \frac{8}{5}u - \frac{1}{5} \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{387}{5}au - \frac{259}{5}a - \frac{3}{5}u - 15$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^2-u+1)^2$
c_2	$(u^2+u+1)^2$
c_3	$25(25u^4-25u^3+20u^2-5u+1)$
c_4	$25(25u^4+5u^2+1)$
c_6, c_7, c_8	$(u^2+u-1)^2$
c_9	u^4
c_{10}, c_{12}	$(u^2-u-1)^2$
c_{11}	$(u^2+3u+1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y^2+y+1)^2$
c_3	$625(625y^4+375y^3+200y^2+15y+1)$
c_4	$625(25y^2+5y+1)^2$
c_6, c_7, c_8 c_{10}, c_{12}	$(y^2-3y+1)^2$
c_9	y^4
c_{11}	$(y^2-7y+1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.618034$ $a = -0.585410 + 1.013960I$ $b = -0.223607 + 0.387298I$	$-0.98696 + 2.02988I$	$-13.05016 - 4.01951I$
$u = \quad 0.618034$ $a = -0.585410 - 1.013960I$ $b = -0.223607 - 0.387298I$	$-0.98696 - 2.02988I$	$-13.05016 + 4.01951I$
$u = -1.61803$ $a = \quad 0.085410 + 0.147935I$ $b = \quad 0.223607 + 0.387298I$	$-8.88264 - 2.02988I$	$-29.1498 - 26.1898I$
$u = -1.61803$ $a = \quad 0.085410 - 0.147935I$ $b = \quad 0.223607 - 0.387298I$	$-8.88264 + 2.02988I$	$-29.1498 + 26.1898I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^2)(u^{106}+39u^{105}+\cdots-6871u+625)$
c_2	$((u^2+u+1)^2)(u^{106}+3u^{105}+\cdots+89u+25)$
c_3	$625(25u^4-25u^3+20u^2-5u+1)$ $\cdot(25u^{106}-220u^{105}+\cdots-18846012u+6882857)$
c_4	$625(25u^4+5u^2+1)$ $\cdot(25u^{106}+135u^{105}+\cdots-232522967u-31396523)$
c_5	$((u^2-u+1)^2)(u^{106}+3u^{105}+\cdots+89u+25)$
c_6	$((u^2+u-1)^2)(u^{106}+3u^{105}+\cdots+u-1)$
c_7, c_8	$((u^2+u-1)^2)(u^{106}+3u^{105}+\cdots+3u-1)$
c_9	$u^4(u^{106}+u^{105}+\cdots-19600u-2000)$
c_{10}	$((u^2-u-1)^2)(u^{106}+3u^{105}+\cdots+u-1)$
c_{11}	$((u^2+3u+1)^2)(u^{106}-9u^{105}+\cdots-363165u+47311)$
c_{12}	$((u^2-u-1)^2)(u^{106}+3u^{105}+\cdots+3u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^2)(y^{106}+59y^{105}+\cdots-4.05122\times10^8y+390625)$
c_2, c_5	$((y^2+y+1)^2)(y^{106}+39y^{105}+\cdots-6871y+625)$
c_3	$390625(625y^4+375y^3+200y^2+15y+1)$ $\cdot(625y^{106}+15400y^{105}+\cdots+710061743809250y+47373720482449)$
c_4	$390625(25y^2+5y+1)^2$ $\cdot(625y^{106}+4.50\times10^4y^{105}+\cdots+2.18\times10^{16}y+9.86\times10^{14})$
c_6, c_{10}	$((y^2-3y+1)^2)(y^{106}+67y^{105}+\cdots-19y+1)$
c_7, c_8, c_{12}	$((y^2-3y+1)^2)(y^{106}-93y^{105}+\cdots-19y+1)$
c_9	$y^4(y^{106}+25y^{105}+\cdots+1.44720\times10^8y+4000000)$
c_{11}	$((y^2-7y+1)^2)(y^{106}+23y^{105}+\cdots-7.67489\times10^{10}y+2.23833\times10^9)$