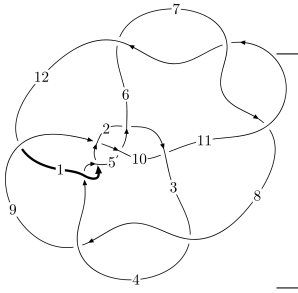
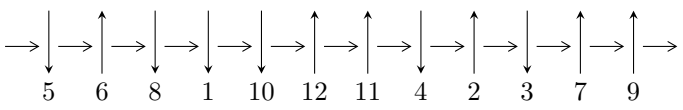
$12a_{1232}$ $(K12a_{1232})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 2.89325 \times 10^{306} u^{118} + 3.49433 \times 10^{305} u^{117} + \cdots + 7.17437 \times 10^{304} b - 1.65991 \times 10^{307}, \\ & 5.97626 \times 10^{306} u^{118} + 1.91269 \times 10^{306} u^{117} + \cdots + 7.17437 \times 10^{304} a - 2.59098 \times 10^{307}, \\ & u^{119} + 60 u^{117} + \cdots - 29u + 1 \rangle \\ I_2^u = \langle & 1182833 u^{25} - 1697022 u^{24} + \cdots + 999751 b + 1307016, \\ & 699334 u^{25} - 115279 u^{24} + \cdots + 999751 a - 710366,\ u^{26} - u^{25} + \cdots - 2u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 145 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. $\boldsymbol{I_1^u = \langle 2.89 \times 10^{306} u^{118} + 3.49 \times 10^{305} u^{117} + \cdots + 7.17 \times 10^{304} b - 1.66 \times 10^{307},\ 5.98 \times 10^{306} u^{118} + 1.91 \times 10^{306} u^{117} + \cdots + 7.17 \times 10^{304} a - 2.59 \times 10^{307},\ u^{119} + 60 u^{117} + \cdots - 29u + 1 \rangle}$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -83.3000u^{118} - 26.6600u^{117} + \cdots - 8081.92u + 361.144 \\ -40.3276u^{118} - 4.87057u^{117} + \cdots - 5447.13u + 231.367 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} -42.9724u^{118} - 21.7895u^{117} + \cdots - 2634.78u + 129.777 \\ -40.3276u^{118} - 4.87057u^{117} + \cdots - 5447.13u + 231.367 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -22.7499u^{118} - 16.3719u^{117} + \cdots - 809.600u + 57.3880 \\ -43.6735u^{118} - 5.12507u^{117} + \cdots - 5969.86u + 253.459 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 251.367u^{118} + 57.0280u^{117} + \cdots + 24863.9u - 978.564 \\ 11.0833u^{118} + 1.80824u^{117} + \cdots + 1574.85u - 65.1638 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -244.071u^{118} - 67.7073u^{117} + \cdots - 21891.1u + 883.760 \\ -33.8994u^{118} - 5.61169u^{117} + \cdots - 4226.54u + 172.113 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 233.063u^{118} + 65.0804u^{117} + \cdots + 20760.4u - 837.137 \\ 37.1734u^{118} + 5.78030u^{117} + \cdots + 4678.97u - 191.478 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 197.686u^{118} + 37.0655u^{117} + \cdots + 23253.8u - 939.916 \\ -16.1524u^{118} - 1.71445u^{117} + \cdots - 2346.84u + 105.264 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 181.233u^{118} + 10.2983u^{117} + \cdots + 32671.8u - 1505.80$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{119} - 3u^{118} + \cdots + 27u + 1$
c_2	$u^{119} - 2u^{118} + \cdots + 6606u + 599$
c_3, c_8	$u^{119} - 2u^{118} + \cdots + 4224u + 256$
c_5	$u^{119} - 2u^{118} + \cdots + 35541u - 6657$
c_6, c_7, c_{11}	$u^{119} + 60u^{117} + \cdots - 29u - 1$
c_9	$u^{119} - 2u^{118} + \cdots + 336u + 32$
c_{10}	$u^{119} - 3u^{118} + \cdots - 8551161u - 339289$
c_{12}	$u^{119} + 30u^{117} + \cdots + 3540492u - 1096431$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{119} - 97y^{118} + \cdots - 215y - 1$
c_2	$y^{119} + 12y^{118} + \cdots - 5057068y - 358801$
c_3, c_8	$y^{119} - 92y^{118} + \cdots + 14237696y - 65536$
c_5	$y^{119} - 30y^{118} + \cdots + 3233514855y - 44315649$
c_6, c_7, c_{11}	$y^{119} + 120y^{118} + \cdots + 91y - 1$
c_9	$y^{119} + 32y^{118} + \cdots - 17664y - 1024$
c_{10}	$y^{119} - 59y^{118} + \cdots + 46085256831797y - 115117025521$
c_{12}	$y^{119} + 60y^{118} + \cdots - 19447210016610y - 1202160937761$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.591023+0.831885I$ $a=\ \ 0.047144+0.336442I$ $b=-1.01813-1.09825I$	$-8.32691-5.97177I$	0
$u=-0.591023-0.831885I$ $a=\ \ 0.047144-0.336442I$ $b=-1.01813+1.09825I$	$-8.32691+5.97177I$	0
$u=\ \ 0.929575+0.429042I$ $a=\ \ 0.278050-0.303252I$ $b=-0.021658-0.248649I$	$-2.48998+0.81239I$	0
$u=\ \ 0.929575-0.429042I$ $a=\ \ 0.278050+0.303252I$ $b=-0.021658+0.248649I$	$-2.48998-0.81239I$	0
$u=-0.878703+0.541598I$ $a=\ \ 0.859638+0.663822I$ $b=-1.10195+1.05798I$	$-8.0032-13.9385I$	0
$u=-0.878703-0.541598I$ $a=\ \ 0.859638-0.663822I$ $b=-1.10195-1.05798I$	$-8.0032+13.9385I$	0
$u=-1.040530+0.281693I$ $a=\ \ 1.41699+0.17592I$ $b=-1.71346+0.91872I$	$-6.32387+0.55372I$	0
$u=-1.040530-0.281693I$ $a=\ \ 1.41699-0.17592I$ $b=-1.71346-0.91872I$	$-6.32387-0.55372I$	0
$u=\ \ 0.759955+0.784286I$ $a=\ \ 0.189923+0.583218I$ $b=\ \ 0.454075+0.072889I$	$-3.85449+4.96150I$	0
$u=\ \ 0.759955-0.784286I$ $a=\ \ 0.189923-0.583218I$ $b=\ \ 0.454075-0.072889I$	$-3.85449-4.96150I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.938198+0.565758I$ $a=-0.840420-0.416741I$ $b=\ 1.01130-1.18706I$	$-2.40547-7.97541I$	0
$u=-0.938198-0.565758I$ $a=-0.840420+0.416741I$ $b=\ 1.01130+1.18706I$	$-2.40547+7.97541I$	0
$u=\ 0.254868+0.867341I$ $a=-0.662773-0.261601I$ $b=-0.910213+0.623377I$	$0.531296-1.118430I$	0
$u=\ 0.254868-0.867341I$ $a=-0.662773+0.261601I$ $b=-0.910213-0.623377I$	$0.531296+1.118430I$	0
$u=-0.860183+0.680504I$ $a=-0.271297+0.232206I$ $b=-0.816520-1.081920I$	$-8.36465+8.14127I$	0
$u=-0.860183-0.680504I$ $a=-0.271297-0.232206I$ $b=-0.816520+1.081920I$	$-8.36465-8.14127I$	0
$u=\ 0.514362+1.042610I$ $a=\ 0.762760+0.248966I$ $b=\ 0.376032-0.566846I$	$-3.91604+4.65546I$	0
$u=\ 0.514362-1.042610I$ $a=\ 0.762760-0.248966I$ $b=\ 0.376032+0.566846I$	$-3.91604-4.65546I$	0
$u=-0.831661$ $a=-0.447104$ $b=\ 0.545531$	1.62981	0
$u=\ 0.617128+0.557033I$ $a=-0.373648+1.101410I$ $b=\ 0.645942+0.638367I$	$-3.70214+3.85902I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.617128 - 0.557033I$ $a = -0.373648 - 1.101410I$ $b = 0.645942 - 0.638367I$	$-3.70214 - 3.85902I$	0
$u = 0.662911 + 0.486859I$ $a = 0.651270 - 0.915729I$ $b = -0.467298 - 0.951647I$	$-8.36947 + 5.21328I$	0
$u = 0.662911 - 0.486859I$ $a = 0.651270 + 0.915729I$ $b = -0.467298 + 0.951647I$	$-8.36947 - 5.21328I$	0
$u = 0.026248 + 1.183780I$ $a = 1.42598 + 0.72188I$ $b = -0.136361 - 0.409768I$	$-7.35451 - 5.52858I$	0
$u = 0.026248 - 1.183780I$ $a = 1.42598 - 0.72188I$ $b = -0.136361 + 0.409768I$	$-7.35451 + 5.52858I$	0
$u = 0.503026 + 0.641170I$ $a = 0.00117 - 1.61623I$ $b = -0.931842 - 0.533648I$	$-6.66685 + 3.36692I$	0
$u = 0.503026 - 0.641170I$ $a = 0.00117 + 1.61623I$ $b = -0.931842 + 0.533648I$	$-6.66685 - 3.36692I$	0
$u = -0.481513 + 1.086760I$ $a = -0.030737 - 0.313607I$ $b = 0.601979 - 0.325771I$	$-1.54373 - 4.64229I$	0
$u = -0.481513 - 1.086760I$ $a = -0.030737 + 0.313607I$ $b = 0.601979 + 0.325771I$	$-1.54373 + 4.64229I$	0
$u = -0.910620 + 0.774844I$ $a = 0.347935 - 0.275750I$ $b = 0.65714 + 1.37806I$	$-2.92800 + 1.74319I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.910620-0.774844I$ $a=\ \ 0.347935+0.275750I$ $b=\ \ 0.65714-1.37806I$	$-2.92800-1.74319I$	0
$u=\ \ 0.134503+0.759809I$ $a=-1.048930-0.154825I$ $b=\ \ 0.334044+0.899616I$	$-1.51344-1.60308I$	0
$u=\ \ 0.134503-0.759809I$ $a=-1.048930+0.154825I$ $b=\ \ 0.334044-0.899616I$	$-1.51344+1.60308I$	0
$u=-0.651277+0.410844I$ $a=\ \ 0.121534+0.601571I$ $b=-0.672685+0.188026I$	$0.31785-2.06901I$	0
$u=-0.651277-0.410844I$ $a=\ \ 0.121534-0.601571I$ $b=-0.672685-0.188026I$	$0.31785+2.06901I$	0
$u=\ \ 0.637309+0.424902I$ $a=-0.773608+0.372483I$ $b=-0.298804+0.749974I$	$-8.28201-0.92421I$	0
$u=\ \ 0.637309-0.424902I$ $a=-0.773608-0.372483I$ $b=-0.298804-0.749974I$	$-8.28201+0.92421I$	0
$u=\ \ 0.368271+0.658976I$ $a=\ \ 0.943588+0.048235I$ $b=\ \ 0.861584-0.736406I$	$-2.98116-5.40207I$	0
$u=\ \ 0.368271-0.658976I$ $a=\ \ 0.943588-0.048235I$ $b=\ \ 0.861584+0.736406I$	$-2.98116+5.40207I$	0
$u=-0.241125+1.258970I$ $a=-0.564327-0.615697I$ $b=\ \ 0.744666-0.214876I$	$-1.98462-3.32511I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.241125-1.258970I$ $a=-0.564327+0.615697I$ $b=\ \ 0.744666+0.214876I$	$-1.98462+3.32511I$	0
$u=\ \ 0.605698+0.366147I$ $a=-0.861264+0.880738I$ $b=\ \ 1.04506+0.98985I$	$-2.03512+8.97085I$	0
$u=\ \ 0.605698-0.366147I$ $a=-0.861264-0.880738I$ $b=\ \ 1.04506-0.98985I$	$-2.03512-8.97085I$	0
$u=-0.166818+1.294900I$ $a=\ \ 1.151150+0.222395I$ $b=-0.712514+0.315471I$	$-6.06217-4.53983I$	0
$u=-0.166818-1.294900I$ $a=\ \ 1.151150-0.222395I$ $b=-0.712514-0.315471I$	$-6.06217+4.53983I$	0
$u=-0.120884+1.327580I$ $a=-0.35980-1.40170I$ $b=\ \ 0.217292-0.220142I$	$-2.23327-2.51869I$	0
$u=-0.120884-1.327580I$ $a=-0.35980+1.40170I$ $b=\ \ 0.217292+0.220142I$	$-2.23327+2.51869I$	0
$u=\ \ 0.571093+0.340077I$ $a=\ \ 1.053790-0.767289I$ $b=-1.10538-0.88887I$	$1.94608+4.33794I$	0
$u=\ \ 0.571093-0.340077I$ $a=\ \ 1.053790+0.767289I$ $b=-1.10538+0.88887I$	$1.94608-4.33794I$	0
$u=-0.057455+1.348540I$ $a=\ \ 0.02930+1.77735I$ $b=\ \ 0.214941+0.235472I$	$-5.78869+0.62760I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.057455-1.348540I$ $a=\ \ 0.02930-1.77735I$ $b=\ \ 0.214941-0.235472I$	$-5.78869-0.62760I$	0
$u=-0.636266+0.018138I$ $a=-1.194210-0.458376I$ $b=\ \ 0.565733+0.080646I$	$1.85506+0.08588I$	0
$u=-0.636266-0.018138I$ $a=-1.194210+0.458376I$ $b=\ \ 0.565733-0.080646I$	$1.85506-0.08588I$	0
$u=-0.021921+1.412250I$ $a=-0.69650-3.75238I$ $b=-0.72366-3.51990I$	$-8.25856+0.30428I$	0
$u=-0.021921-1.412250I$ $a=-0.69650+3.75238I$ $b=-0.72366+3.51990I$	$-8.25856-0.30428I$	0
$u=-0.258157+0.517897I$ $a=-0.314448+0.579498I$ $b=-0.540503+0.493848I$	$0.062363-1.273300I$	0
$u=-0.258157-0.517897I$ $a=-0.314448-0.579498I$ $b=-0.540503-0.493848I$	$0.062363+1.273300I$	0
$u=\ \ 0.04031+1.42700I$ $a=\ \ 0.929315+0.791738I$ $b=\ \ 1.68565+0.62103I$	$-7.25607-0.01809I$	0
$u=\ \ 0.04031-1.42700I$ $a=\ \ 0.929315-0.791738I$ $b=\ \ 1.68565-0.62103I$	$-7.25607+0.01809I$	0
$u=\ \ 0.05079+1.43415I$ $a=\ \ 0.184273-0.284520I$ $b=-1.217520-0.235372I$	$-4.69275+3.59509I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.05079 - 1.43415I$ $a = 0.184273 + 0.284520I$ $b = -1.217520 + 0.235372I$	$-4.69275 - 3.59509I$	0
$u = 0.01595 + 1.44083I$ $a = 1.61897 - 1.36902I$ $b = 1.96434 - 1.03754I$	$-7.70307 + 0.43252I$	0
$u = 0.01595 - 1.44083I$ $a = 1.61897 + 1.36902I$ $b = 1.96434 + 1.03754I$	$-7.70307 - 0.43252I$	0
$u = 0.05041 + 1.44086I$ $a = -0.689485 - 0.103391I$ $b = 1.084470 + 0.136647I$	$-9.32231 + 7.31791I$	0
$u = 0.05041 - 1.44086I$ $a = -0.689485 + 0.103391I$ $b = 1.084470 - 0.136647I$	$-9.32231 - 7.31791I$	0
$u = 0.557225$ $a = 0.0193469$ $b = -1.31410$	-4.86433	2.86400
$u = -0.22188 + 1.42957I$ $a = -0.118268 + 1.125370I$ $b = -0.625169 + 0.517732I$	$-5.55217 - 5.25684I$	0
$u = -0.22188 - 1.42957I$ $a = -0.118268 - 1.125370I$ $b = -0.625169 - 0.517732I$	$-5.55217 + 5.25684I$	0
$u = 0.04350 + 1.45713I$ $a = -0.63772 + 1.50879I$ $b = -1.082230 + 0.548323I$	$-13.38820 + 0.81730I$	0
$u = 0.04350 - 1.45713I$ $a = -0.63772 - 1.50879I$ $b = -1.082230 - 0.548323I$	$-13.38820 - 0.81730I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.528301$ $a = 0.390274$ $b = 0.830129$	-2.57760	-9.17750
$u = -0.03806 + 1.47195I$ $a = -0.45788 + 1.74878I$ $b = -0.500311 + 1.271440I$	$-6.29840 - 2.04801I$	0
$u = -0.03806 - 1.47195I$ $a = -0.45788 - 1.74878I$ $b = -0.500311 - 1.271440I$	$-6.29840 + 2.04801I$	0
$u = 0.16944 + 1.46677I$ $a = 0.29323 + 1.73137I$ $b = 1.41944 + 0.86687I$	$-8.31951 + 2.00416I$	0
$u = 0.16944 - 1.46677I$ $a = 0.29323 - 1.73137I$ $b = 1.41944 - 0.86687I$	$-8.31951 - 2.00416I$	0
$u = 0.17918 + 1.46604I$ $a = -0.36401 - 1.98590I$ $b = -1.30593 - 1.21078I$	$-3.97415 + 7.00684I$	0
$u = 0.17918 - 1.46604I$ $a = -0.36401 + 1.98590I$ $b = -1.30593 + 1.21078I$	$-3.97415 - 7.00684I$	0
$u = 0.19485 + 1.46412I$ $a = 0.27613 + 2.10943I$ $b = 1.16791 + 1.31696I$	$-7.9944 + 11.8379I$	0
$u = 0.19485 - 1.46412I$ $a = 0.27613 - 2.10943I$ $b = 1.16791 - 1.31696I$	$-7.9944 - 11.8379I$	0
$u = 0.28158 + 1.46280I$ $a = -0.745256 + 1.108810I$ $b = 0.116123 + 0.770788I$	$-14.2158 + 2.5074I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.28158 - 1.46280I$ $a = -0.745256 - 1.108810I$ $b = 0.116123 - 0.770788I$	$-14.2158 - 2.5074I$	0
$u = 0.415476 + 0.247825I$ $a = -1.013440 - 0.324156I$ $b = 0.953135 + 0.672474I$	$-1.89504 - 1.11164I$	$1.40333 + 1.47744I$
$u = 0.415476 - 0.247825I$ $a = -1.013440 + 0.324156I$ $b = 0.953135 - 0.672474I$	$-1.89504 + 1.11164I$	$1.40333 - 1.47744I$
$u = 0.23466 + 1.50340I$ $a = 0.27500 - 1.83384I$ $b = -0.545370 - 1.149990I$	$-14.8499 + 8.5093I$	0
$u = 0.23466 - 1.50340I$ $a = 0.27500 + 1.83384I$ $b = -0.545370 + 1.149990I$	$-14.8499 - 8.5093I$	0
$u = -0.474600 + 0.055730I$ $a = 2.06366 - 1.96246I$ $b = -0.297864 + 0.331525I$	$-1.89244 - 2.16716I$	$2.30593 + 6.36380I$
$u = -0.474600 - 0.055730I$ $a = 2.06366 + 1.96246I$ $b = -0.297864 - 0.331525I$	$-1.89244 + 2.16716I$	$2.30593 - 6.36380I$
$u = 0.407149 + 0.233846I$ $a = -2.38663 + 0.94353I$ $b = 1.029560 + 0.497453I$	$-2.62653 - 0.30445I$	$-6.95283 - 7.49302I$
$u = 0.407149 - 0.233846I$ $a = -2.38663 - 0.94353I$ $b = 1.029560 - 0.497453I$	$-2.62653 + 0.30445I$	$-6.95283 + 7.49302I$
$u = -0.01331 + 1.53266I$ $a = 0.70207 - 1.39377I$ $b = 0.683472 - 0.957463I$	$-10.39010 - 4.77458I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.01331-1.53266I$ $a=\ \ 0.70207+1.39377I$ $b=\ \ 0.683472+0.957463I$	$-10.39010+4.77458I$	0
$u=\ \ 0.22101+1.52748I$ $a=\ \ 0.01541+1.66790I$ $b=\ \ 0.700855+0.919045I$	$-10.52310+6.99423I$	0
$u=\ \ 0.22101-1.52748I$ $a=\ \ 0.01541-1.66790I$ $b=\ \ 0.700855-0.919045I$	$-10.52310-6.99423I$	0
$u=\ \ 0.18883+1.55710I$ $a=-0.33907-1.67862I$ $b=-0.862950-0.758452I$	$-13.9494+6.0462I$	0
$u=\ \ 0.18883-1.55710I$ $a=-0.33907+1.67862I$ $b=-0.862950+0.758452I$	$-13.9494-6.0462I$	0
$u=\ \ 0.31565+1.54001I$ $a=\ \ 0.231980-0.980002I$ $b=-0.340835-0.610925I$	$-8.96711+5.30293I$	0
$u=\ \ 0.31565-1.54001I$ $a=\ \ 0.231980+0.980002I$ $b=-0.340835+0.610925I$	$-8.96711-5.30293I$	0
$u=-0.30992+1.55607I$ $a=\ \ 0.02307+1.74012I$ $b=-1.31776+1.13652I$	$-14.8309-18.2934I$	0
$u=-0.30992-1.55607I$ $a=\ \ 0.02307-1.74012I$ $b=-1.31776-1.13652I$	$-14.8309+18.2934I$	0
$u=-0.16255+1.58538I$ $a=-0.87747-1.33760I$ $b=-0.92126-1.73717I$	$-16.2984-8.6510I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.16255-1.58538I$ $a=-0.87747+1.33760I$ $b=-0.92126+1.73717I$	$-16.2984+8.6510I$	0
$u=-0.31935+1.57309I$ $a=-0.03812-1.63961I$ $b=1.33515-1.22468I$	$-9.3806-12.5591I$	0
$u=-0.31935-1.57309I$ $a=-0.03812+1.63961I$ $b=1.33515+1.22468I$	$-9.3806+12.5591I$	0
$u=0.26564+1.60378I$ $a=0.212361+1.045510I$ $b=0.584964+0.515464I$	$-11.6412+8.8735I$	0
$u=0.26564-1.60378I$ $a=0.212361-1.045510I$ $b=0.584964-0.515464I$	$-11.6412-8.8735I$	0
$u=-0.41085+1.58525I$ $a=0.12577+1.53275I$ $b=-1.84219+1.27507I$	$-12.44770-4.97409I$	0
$u=-0.41085-1.58525I$ $a=0.12577-1.53275I$ $b=-1.84219-1.27507I$	$-12.44770+4.97409I$	0
$u=-0.22405+1.63859I$ $a=-0.612798-0.975425I$ $b=-0.49612-1.37066I$	$-16.2469+4.0696I$	0
$u=-0.22405-1.63859I$ $a=-0.612798+0.975425I$ $b=-0.49612+1.37066I$	$-16.2469-4.0696I$	0
$u=-0.17895+1.64890I$ $a=0.599878+1.274540I$ $b=0.50996+1.83509I$	$-11.42610-2.22065I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.17895-1.64890I$ $a=\ \ 0.599878-1.274540I$ $b=\ \ 0.50996-1.83509I$	$-11.42610+2.22065I$	0
$u=-0.163226+0.233600I$ $a=\ \ 0.647394-0.912052I$ $b=\ \ 0.23639-1.44563I$	$-3.02302+0.92759I$	$-16.4734+13.4457I$
$u=-0.163226-0.233600I$ $a=\ \ 0.647394+0.912052I$ $b=\ \ 0.23639+1.44563I$	$-3.02302-0.92759I$	$-16.4734-13.4457I$
$u=\ \ 0.223493+0.145601I$ $a=\ \ 3.91291+2.79472I$ $b=-0.731943-0.378521I$	$0.63117+2.73482I$	$4.06228-7.56761I$
$u=\ \ 0.223493-0.145601I$ $a=\ \ 3.91291-2.79472I$ $b=-0.731943+0.378521I$	$0.63117-2.73482I$	$4.06228+7.56761I$
$u=\ \ 0.186898+0.120104I$ $a=-5.16636-6.62078I$ $b=\ \ 0.688517+0.325209I$	$-3.96488+6.53995I$	$4.08042-8.20161I$
$u=\ \ 0.186898-0.120104I$ $a=-5.16636+6.62078I$ $b=\ \ 0.688517-0.325209I$	$-3.96488-6.53995I$	$4.08042+8.20161I$
$u=\ \ 0.193994$ $a=-7.22223$ $b=-0.820442$	-8.08181	-11.4190
$u=\ \ 0.155376$ $a=\ \ 2.35334$ $b=\ \ 1.49630$	-2.45224	-30.3120

II. $\boldsymbol{I_2^u = \langle 1.18\times 10^6 u^{25} - 1.70\times 10^6 u^{24} + \cdots + 1.00\times 10^6 b + 1.31\times 10^6,\ 6.99\times 10^5 u^{25} - 1.15\times 10^5 u^{24} + \cdots + 1.00\times 10^6 a - 7.10\times 10^5,\ u^{26} - u^{25} + \cdots - 2u - 1\rangle}$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.699508u^{25} + 0.115308u^{24} + \cdots + 2.44780u + 0.710543 \\ -1.18313u^{25} + 1.69744u^{24} + \cdots + 0.755925u - 1.30734 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 0.483619u^{25} - 1.58214u^{24} + \cdots + 1.69188u + 2.01788 \\ -1.18313u^{25} + 1.69744u^{24} + \cdots + 0.755925u - 1.30734 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.34719u^{25} + 1.12802u^{24} + \cdots + 2.92028u + 0.855845 \\ -0.872567u^{25} + 1.32808u^{24} + \cdots + 0.999658u - 1.43425 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.692340u^{25} + 1.51595u^{24} + \cdots + 4.24471u + 0.476967 \\ -0.312059u^{25} + 0.234258u^{24} + \cdots + 2.42780u + 0.800910 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.31393u^{25} - 0.798396u^{24} + \cdots + 10.0988u + 5.81141 \\ 0.109095u^{25} - 0.0590167u^{24} + \cdots + 2.33029u + 0.702249 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.399081u^{25} - 1.97885u^{24} + \cdots + 8.79390u + 5.58117 \\ -0.310036u^{25} + 1.13491u^{24} + \cdots + 2.22230u + 0.190208 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.70690u^{25} + 1.91267u^{24} + \cdots + 4.45269u - 0.655580 \\ -0.312059u^{25} + 0.234258u^{24} + \cdots + 0.427805u - 0.199090 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{5221017}{999751}u^{25} + \frac{13972069}{999751}u^{24} + \cdots - \frac{8621882}{999751}u - \frac{13731564}{999751}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26}+4u^{25}+\cdots+2u-1$
c_2	$u^{26}-5u^{25}+\cdots-3u+1$
c_3	$u^{26}+u^{25}+\cdots+3u+1$
c_4	$u^{26}-4u^{25}+\cdots-2u-1$
c_5	$u^{26}-u^{25}+\cdots-6u^2+1$
c_6, c_7	$u^{26}-u^{25}+\cdots-2u-1$
c_8	$u^{26}-u^{25}+\cdots-3u+1$
c_9	$u^{26}-u^{25}+\cdots+13u^2-1$
c_{10}	$u^{26}+u^{24}+\cdots+2u-1$
c_{11}	$u^{26}+u^{25}+\cdots+2u-1$
c_{12}	$u^{26}+3u^{25}+\cdots-3u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{26} - 24y^{25} + \cdots + 14y + 1$
c_2	$y^{26} + 5y^{25} + \cdots - 13y + 1$
c_3, c_8	$y^{26} - 7y^{25} + \cdots - 15y + 1$
c_5	$y^{26} - y^{25} + \cdots - 12y + 1$
c_6, c_7, c_{11}	$y^{26} + 25y^{25} + \cdots + 4y + 1$
c_9	$y^{26} + 21y^{25} + \cdots - 26y + 1$
c_{10}	$y^{26} + 2y^{25} + \cdots - 14y + 1$
c_{12}	$y^{26} + 21y^{25} + \cdots + 65y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.943663$ $a = -1.74187$ $b = \ 1.68335$	-6.46795	-10.5950
$u = -0.262117 + 0.794880I$ $a = \ 1.206650 - 0.607794I$ $b = \ 0.636935 + 0.707784I$	$-0.29611 + 1.84881I$	$-2.20099 - 5.13154I$
$u = -0.262117 - 0.794880I$ $a = \ 1.206650 + 0.607794I$ $b = \ 0.636935 - 0.707784I$	$-0.29611 - 1.84881I$	$-2.20099 + 5.13154I$
$u = -0.427225 + 1.116590I$ $a = -0.552298 - 0.157514I$ $b = \ 0.432472 - 0.380122I$	$-2.00627 - 4.23987I$	$-6.89686 + 3.43816I$
$u = -0.427225 - 1.116590I$ $a = -0.552298 + 0.157514I$ $b = \ 0.432472 + 0.380122I$	$-2.00627 + 4.23987I$	$-6.89686 - 3.43816I$
$u = \ 0.736758 + 0.948318I$ $a = -0.111244 - 0.374605I$ $b = -0.430583 - 0.402133I$	$-4.15027 + 5.36590I$	$-6.6302 - 15.0637I$
$u = \ 0.736758 - 0.948318I$ $a = -0.111244 + 0.374605I$ $b = -0.430583 + 0.402133I$	$-4.15027 - 5.36590I$	$-6.6302 + 15.0637I$
$u = -0.798164$ $a = -0.720467$ $b = \ 0.451395$	1.31350	-10.8780
$u = -0.042885 + 1.222100I$ $a = \ 1.67307 + 0.59418I$ $b = -0.768144 + 0.390201I$	$-6.94373 - 6.67014I$	$-4.82849 + 8.01150I$
$u = -0.042885 - 1.222100I$ $a = \ 1.67307 - 0.59418I$ $b = -0.768144 - 0.390201I$	$-6.94373 + 6.67014I$	$-4.82849 - 8.01150I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.178950+1.217590I$ $a=-0.818036-0.682512I$ $b=\ \ 0.772257-0.348218I$	$-1.91082-3.72292I$	$-0.00835+12.45701I$
$u=-0.178950-1.217590I$ $a=-0.818036+0.682512I$ $b=\ \ 0.772257+0.348218I$	$-1.91082+3.72292I$	$-0.00835-12.45701I$
$u=-0.189668+1.303550I$ $a=\ \ 0.008222+0.447989I$ $b=-0.934613-0.264739I$	$-6.27743-3.06539I$	$-6.85778+2.47354I$
$u=-0.189668-1.303550I$ $a=\ \ 0.008222-0.447989I$ $b=-0.934613+0.264739I$	$-6.27743+3.06539I$	$-6.85778-2.47354I$
$u=\ \ 0.582028+0.253462I$ $a=-0.0563762+0.0530277I$ $b=-0.945003+0.308953I$	$-2.17597+0.05862I$	$6.50604-2.22033I$
$u=\ \ 0.582028-0.253462I$ $a=-0.0563762-0.0530277I$ $b=-0.945003-0.308953I$	$-2.17597-0.05862I$	$6.50604+2.22033I$
$u=-0.01677+1.42907I$ $a=-1.36555+3.39416I$ $b=-1.54172+3.09921I$	$-8.10928+0.28326I$	$-6.3171+26.2657I$
$u=-0.01677-1.42907I$ $a=-1.36555-3.39416I$ $b=-1.54172-3.09921I$	$-8.10928-0.28326I$	$-6.3171-26.2657I$
$u=\ \ 0.028959+0.564258I$ $a=-2.77914-0.23608I$ $b=-0.634395-0.458952I$	$-4.55240+6.43356I$	$-9.62563-6.14441I$
$u=\ \ 0.028959-0.564258I$ $a=-2.77914+0.23608I$ $b=-0.634395+0.458952I$	$-4.55240-6.43356I$	$-9.62563+6.14441I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.32913 + 1.53078I$ $a = -0.14874 + 1.51913I$ $b = 1.27469 + 0.92809I$	$-11.90070 + 4.72608I$	$-4.74884 - 1.80377I$
$u = 0.32913 - 1.53078I$ $a = -0.14874 - 1.51913I$ $b = 1.27469 - 0.92809I$	$-11.90070 - 4.72608I$	$-4.74884 + 1.80377I$
$u = 0.19195 + 1.56700I$ $a = -0.255553 - 1.353580I$ $b = -0.434170 - 0.756346I$	$-12.3990 + 8.2757I$	$-10.18523 - 5.61464I$
$u = 0.19195 - 1.56700I$ $a = -0.255553 + 1.353580I$ $b = -0.434170 + 0.756346I$	$-12.3990 - 8.2757I$	$-10.18523 + 5.61464I$
$u = -0.323951 + 0.201932I$ $a = 1.93017 + 0.80624I$ $b = -0.995098 + 0.915085I$	$-2.49812 + 0.92147I$	$-6.47033 + 0.38560I$
$u = -0.323951 - 0.201932I$ $a = 1.93017 - 0.80624I$ $b = -0.995098 - 0.915085I$	$-2.49812 - 0.92147I$	$-6.47033 - 0.38560I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{26}+4u^{25}+\cdots+2u-1)(u^{119}-3u^{118}+\cdots+27u+1)$
c_2	$(u^{26}-5u^{25}+\cdots-3u+1)(u^{119}-2u^{118}+\cdots+6606u+599)$
c_3	$(u^{26}+u^{25}+\cdots+3u+1)(u^{119}-2u^{118}+\cdots+4224u+256)$
c_4	$(u^{26}-4u^{25}+\cdots-2u-1)(u^{119}-3u^{118}+\cdots+27u+1)$
c_5	$(u^{26}-u^{25}+\cdots-6u^2+1)(u^{119}-2u^{118}+\cdots+35541u-6657)$
c_6, c_7	$(u^{26}-u^{25}+\cdots-2u-1)(u^{119}+60u^{117}+\cdots-29u-1)$
c_8	$(u^{26}-u^{25}+\cdots-3u+1)(u^{119}-2u^{118}+\cdots+4224u+256)$
c_9	$(u^{26}-u^{25}+\cdots+13u^2-1)(u^{119}-2u^{118}+\cdots+336u+32)$
c_{10}	$(u^{26}+u^{24}+\cdots+2u-1)(u^{119}-3u^{118}+\cdots-8551161u-339289)$
c_{11}	$(u^{26}+u^{25}+\cdots+2u-1)(u^{119}+60u^{117}+\cdots-29u-1)$
c_{12}	$(u^{26}+3u^{25}+\cdots-3u-1)$ $\cdot(u^{119}+30u^{117}+\cdots+3540492u-1096431)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{26} - 24y^{25} + \cdots + 14y + 1)(y^{119} - 97y^{118} + \cdots - 215y - 1)$
c_2	$(y^{26} + 5y^{25} + \cdots - 13y + 1)$ $\cdot (y^{119} + 12y^{118} + \cdots - 5057068y - 358801)$
c_3, c_8	$(y^{26} - 7y^{25} + \cdots - 15y + 1)$ $\cdot (y^{119} - 92y^{118} + \cdots + 14237696y - 65536)$
c_5	$(y^{26} - y^{25} + \cdots - 12y + 1)$ $\cdot (y^{119} - 30y^{118} + \cdots + 3233514855y - 44315649)$
c_6, c_7, c_{11}	$(y^{26} + 25y^{25} + \cdots + 4y + 1)(y^{119} + 120y^{118} + \cdots + 91y - 1)$
c_9	$(y^{26} + 21y^{25} + \cdots - 26y + 1)(y^{119} + 32y^{118} + \cdots - 17664y - 1024)$
c_{10}	$(y^{26} + 2y^{25} + \cdots - 14y + 1)$ $\cdot (y^{119} - 59y^{118} + \cdots + 46085256831797y - 115117025521)$
c_{12}	$(y^{26} + 21y^{25} + \cdots + 65y + 1)$ $\cdot (y^{119} + 60y^{118} + \cdots - 19447210016610y - 1202160937761)$