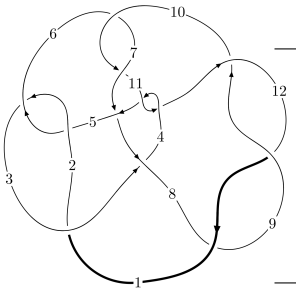
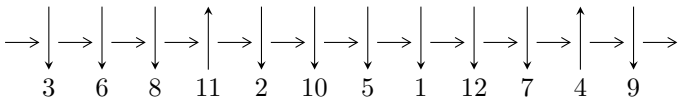
$12a_{0322}$ $(K12a_{0322})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -8.21898 \times 10^{219} u^{119} + 4.76957 \times 10^{220} u^{118} + \cdots + 4.63553 \times 10^{219} b + 9.71727 \times 10^{220},$$
$$-6.19206 \times 10^{220} u^{119} + 3.81909 \times 10^{221} u^{118} + \cdots + 3.24487 \times 10^{220} a + 1.01535 \times 10^{222},$$
$$u^{120} - 7u^{119} + \cdots - 322u + 28 \rangle$$
$$I_2^u = \langle 11u^{27} - 7u^{26} + \cdots + b + 9,\ 21u^{27} - 14u^{26} + \cdots + a + 26,\ u^{28} - 7u^{26} + \cdots - 7u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 148 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. $\boldsymbol{I_1^u = \langle -8.22 \times 10^{219} u^{119} + 4.77 \times 10^{220} u^{118} + \cdots + 4.64 \times 10^{219} b + 9.72 \times 10^{220},\ -6.19 \times 10^{220} u^{119} + 3.82 \times 10^{221} u^{118} + \cdots + 3.24 \times 10^{220} a + 1.02 \times 10^{222},\ u^{120} - 7u^{119} + \cdots - 322u + 28 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.90826u^{119} - 11.7696u^{118} + \cdots + 411.586u - 31.2907 \\ 1.77304u^{119} - 10.2892u^{118} + \cdots + 249.202u - 20.9626 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1.44392u^{119} - 9.00588u^{118} + \cdots + 407.842u - 43.3368 \\ 1.81874u^{119} - 11.5795u^{118} + \cdots + 548.122u - 51.0257 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.378475u^{119} - 1.79691u^{118} + \cdots - 126.882u + 17.7038 \\ 0.145425u^{119} - 0.0262595u^{118} + \cdots - 227.960u + 23.7574 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1.88512u^{119} - 11.3227u^{118} + \cdots + 402.195u - 41.9332 \\ 2.25994u^{119} - 13.8963u^{118} + \cdots + 542.476u - 49.6221 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.46394u^{119} - 9.13960u^{118} + \cdots + 425.876u - 45.4088 \\ 1.86261u^{119} - 11.8211u^{118} + \cdots + 537.652u - 50.5064 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.741655u^{119} + 4.42736u^{118} + \cdots - 216.390u + 18.8365 \\ -0.0128759u^{119} - 0.437223u^{118} + \cdots + 131.410u - 13.0382 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.550241u^{119} - 3.00283u^{118} + \cdots + 75.1762u - 3.88524 \\ -0.0827609u^{119} + 1.69612u^{118} + \cdots - 314.707u + 31.3255 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.89337u^{119} + 12.9136u^{118} + \cdots - 1169.14u + 100.982$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{120} + 49u^{119} + \cdots + 44492u + 784$
c_2, c_5	$u^{120} + 7u^{119} + \cdots + 322u + 28$
c_3	$u^{120} + u^{119} + \cdots + 3289256u - 546677$
c_4, c_{11}	$u^{120} - 3u^{119} + \cdots - 47904u + 17881$
c_6, c_{10}	$u^{120} - 3u^{119} + \cdots - 110801u - 32041$
c_7	$u^{120} - 3u^{119} + \cdots + 8809070u - 639127$
c_8, c_9, c_{12}	$u^{120} - 4u^{119} + \cdots - 116u + 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{120}+59y^{119}+\cdots-985957616y+614656$
c_2, c_5	$y^{120}-49y^{119}+\cdots-44492y+784$
c_3	$y^{120}+21y^{119}+\cdots+9174574703856y+298855742329$
c_4, c_{11}	$y^{120}+89y^{119}+\cdots-4994108976y+319730161$
c_6, c_{10}	$y^{120}-81y^{119}+\cdots+2923581045y+1026625681$
c_7	$y^{120}-33y^{119}+\cdots-17599469821274y+408483322129$
c_8, c_9, c_{12}	$y^{120}+118y^{119}+\cdots+1566y+49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.794130 + 0.592091I$ $a = -1.036180 + 0.139905I$ $b = -2.73059 + 1.18931I$	$5.76528 - 4.26197I$	0
$u = 0.794130 - 0.592091I$ $a = -1.036180 - 0.139905I$ $b = -2.73059 - 1.18931I$	$5.76528 + 4.26197I$	0
$u = -0.811711 + 0.559362I$ $a = 0.43814 + 1.54982I$ $b = -0.135332 + 0.657514I$	$-1.05368 - 2.08033I$	0
$u = -0.811711 - 0.559362I$ $a = 0.43814 - 1.54982I$ $b = -0.135332 - 0.657514I$	$-1.05368 + 2.08033I$	0
$u = 0.795910 + 0.567712I$ $a = 0.636281 + 0.221317I$ $b = 0.451032 - 0.933379I$	$-0.64341 - 1.79431I$	0
$u = 0.795910 - 0.567712I$ $a = 0.636281 - 0.221317I$ $b = 0.451032 + 0.933379I$	$-0.64341 + 1.79431I$	0
$u = 0.500076 + 0.838852I$ $a = -0.21069 + 1.40177I$ $b = 0.066259 - 0.537185I$	$-3.58790 + 7.84949I$	0
$u = 0.500076 - 0.838852I$ $a = -0.21069 - 1.40177I$ $b = 0.066259 + 0.537185I$	$-3.58790 - 7.84949I$	0
$u = -0.704119 + 0.669771I$ $a = 0.687117 - 0.261579I$ $b = 0.614214 - 0.164025I$	$2.81216 + 1.01478I$	0
$u = -0.704119 - 0.669771I$ $a = 0.687117 + 0.261579I$ $b = 0.614214 + 0.164025I$	$2.81216 - 1.01478I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.022580+0.152770I$ $a=-1.090080-0.430824I$ $b=-3.13345-0.41355I$	$-7.07823-1.36704I$	0
$u=-1.022580-0.152770I$ $a=-1.090080+0.430824I$ $b=-3.13345+0.41355I$	$-7.07823+1.36704I$	0
$u=0.876865+0.373837I$ $a=-1.10967+1.33609I$ $b=-1.79299+1.08629I$	$-2.47601+2.18680I$	0
$u=0.876865-0.373837I$ $a=-1.10967-1.33609I$ $b=-1.79299-1.08629I$	$-2.47601-2.18680I$	0
$u=0.522358+0.796481I$ $a=1.166810+0.561303I$ $b=1.068930+0.135249I$	$6.72132+5.58019I$	0
$u=0.522358-0.796481I$ $a=1.166810-0.561303I$ $b=1.068930-0.135249I$	$6.72132-5.58019I$	0
$u=-0.941729+0.027426I$ $a=-0.341445-0.791610I$ $b=0.100180-1.011340I$	$-4.48747-1.81759I$	0
$u=-0.941729-0.027426I$ $a=-0.341445+0.791610I$ $b=0.100180+1.011340I$	$-4.48747+1.81759I$	0
$u=-0.901163+0.562425I$ $a=1.59113-0.13593I$ $b=2.59861+0.39022I$	$-1.34992+6.56399I$	0
$u=-0.901163-0.562425I$ $a=1.59113+0.13593I$ $b=2.59861-0.39022I$	$-1.34992-6.56399I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.755449+0.535537I$ $a=\ \ 0.802382+0.494497I$ $b=\ \ 3.33001+0.42016I$	$5.39303-1.61910I$	0
$u=-0.755449-0.535537I$ $a=\ \ 0.802382-0.494497I$ $b=\ \ 3.33001-0.42016I$	$5.39303+1.61910I$	0
$u=-0.773230+0.493848I$ $a=-0.691757-0.832970I$ $b=-0.91976+1.11074I$	$-1.07276+1.31581I$	0
$u=-0.773230-0.493848I$ $a=-0.691757+0.832970I$ $b=-0.91976-1.11074I$	$-1.07276-1.31581I$	0
$u=\ \ 1.008900+0.403302I$ $a=\ \ 1.24638-0.80340I$ $b=\ \ 2.06463-0.73656I$	$-6.67226-1.10006I$	0
$u=\ \ 1.008900-0.403302I$ $a=\ \ 1.24638+0.80340I$ $b=\ \ 2.06463+0.73656I$	$-6.67226+1.10006I$	0
$u=-0.614899+0.899173I$ $a=-0.812781+0.037535I$ $b=-0.927483+0.068797I$	$9.37495-0.63348I$	0
$u=-0.614899-0.899173I$ $a=-0.812781-0.037535I$ $b=-0.927483-0.068797I$	$9.37495+0.63348I$	0
$u=\ \ 0.801649+0.737933I$ $a=-0.132730+1.004280I$ $b=\ \ 0.791265+0.400595I$	$5.97079+0.59954I$	0
$u=\ \ 0.801649-0.737933I$ $a=-0.132730-1.004280I$ $b=\ \ 0.791265-0.400595I$	$5.97079-0.59954I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.086340+0.086609I$ $a=\ \ 0.308477+1.178510I$ $b=\ \ 0.032988+0.864068I$	$1.33369-4.02049I$	0
$u=-1.086340-0.086609I$ $a=\ \ 0.308477-1.178510I$ $b=\ \ 0.032988-0.864068I$	$1.33369+4.02049I$	0
$u=\ \ 0.898897+0.621029I$ $a=-0.300747+0.963948I$ $b=\ \ 0.481448-0.329020I$	$5.41777-0.53995I$	0
$u=\ \ 0.898897-0.621029I$ $a=-0.300747-0.963948I$ $b=\ \ 0.481448+0.329020I$	$5.41777+0.53995I$	0
$u=-0.956773+0.537580I$ $a=-0.961289-0.377593I$ $b=-2.89827+0.02050I$	$-1.73966+2.88185I$	0
$u=-0.956773-0.537580I$ $a=-0.961289+0.377593I$ $b=-2.89827-0.02050I$	$-1.73966-2.88185I$	0
$u=\ \ 1.034960+0.368403I$ $a=\ \ 1.008420-0.115464I$ $b=\ \ 2.61007-0.63339I$	$-2.79017-2.83849I$	0
$u=\ \ 1.034960-0.368403I$ $a=\ \ 1.008420+0.115464I$ $b=\ \ 2.61007+0.63339I$	$-2.79017+2.83849I$	0
$u=\ \ 0.919120+0.621003I$ $a=-0.137088-0.539200I$ $b=-0.936045-0.724378I$	$-1.08242-2.93367I$	0
$u=\ \ 0.919120-0.621003I$ $a=-0.137088+0.539200I$ $b=-0.936045+0.724378I$	$-1.08242+2.93367I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.622283 + 0.636232I$ $a = 0.522471 - 1.276800I$ $b = -0.266368 + 0.869075I$	$-3.01210 + 2.31388I$	0
$u = 0.622283 - 0.636232I$ $a = 0.522471 + 1.276800I$ $b = -0.266368 - 0.869075I$	$-3.01210 - 2.31388I$	0
$u = -0.952840 + 0.579752I$ $a = 0.449554 + 0.608808I$ $b = 0.28964 - 1.39826I$	$4.71169 + 6.11608I$	0
$u = -0.952840 - 0.579752I$ $a = 0.449554 - 0.608808I$ $b = 0.28964 + 1.39826I$	$4.71169 - 6.11608I$	0
$u = 1.107490 + 0.133676I$ $a = -0.110679 - 0.528564I$ $b = 0.349142 + 0.391332I$	$2.29239 + 0.22974I$	0
$u = 1.107490 - 0.133676I$ $a = -0.110679 + 0.528564I$ $b = 0.349142 - 0.391332I$	$2.29239 - 0.22974I$	0
$u = -0.764512 + 0.816894I$ $a = 0.530413 + 0.721861I$ $b = -0.466501 + 0.530723I$	$4.85027 - 2.59051I$	0
$u = -0.764512 - 0.816894I$ $a = 0.530413 - 0.721861I$ $b = -0.466501 - 0.530723I$	$4.85027 + 2.59051I$	0
$u = 0.622798 + 0.935690I$ $a = -0.679220 + 0.683589I$ $b = -0.596800 - 0.335157I$	$-3.02138 - 3.95990I$	0
$u = 0.622798 - 0.935690I$ $a = -0.679220 - 0.683589I$ $b = -0.596800 + 0.335157I$	$-3.02138 + 3.95990I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.860655+0.725454I$ $a=-0.652310-0.482964I$ $b=\ \ 0.139036-1.231600I$	$-0.29667+2.76262I$	0
$u=-0.860655-0.725454I$ $a=-0.652310+0.482964I$ $b=\ \ 0.139036+1.231600I$	$-0.29667-2.76262I$	0
$u=-0.379745+0.786895I$ $a=\ \ 0.144930+1.215850I$ $b=\ \ 0.204977-0.548207I$	$0.75442-2.79835I$	0
$u=-0.379745-0.786895I$ $a=\ \ 0.144930-1.215850I$ $b=\ \ 0.204977+0.548207I$	$0.75442+2.79835I$	0
$u=\ \ 0.544571+0.988118I$ $a=\ \ 0.109348-1.307700I$ $b=-0.107162+0.411685I$	$2.87853+11.94920I$	0
$u=\ \ 0.544571-0.988118I$ $a=\ \ 0.109348+1.307700I$ $b=-0.107162-0.411685I$	$2.87853-11.94920I$	0
$u=\ \ 0.572654+0.657256I$ $a=-0.918894-0.645090I$ $b=-0.672223-0.010990I$	$0.06888+2.49159I$	0
$u=\ \ 0.572654-0.657256I$ $a=-0.918894+0.645090I$ $b=-0.672223+0.010990I$	$0.06888-2.49159I$	0
$u=-1.037000+0.451230I$ $a=-1.47342+0.12448I$ $b=-2.64551-0.23711I$	$-6.42153+5.29428I$	0
$u=-1.037000-0.451230I$ $a=-1.47342-0.12448I$ $b=-2.64551+0.23711I$	$-6.42153-5.29428I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.950352+0.641394I$ $a=-0.272614+0.563073I$ $b=-0.309383+0.312781I$	$2.07781+4.07753I$	0
$u=-0.950352-0.641394I$ $a=-0.272614-0.563073I$ $b=-0.309383-0.312781I$	$2.07781-4.07753I$	0
$u=0.918739+0.696205I$ $a=-0.980866-0.088202I$ $b=-1.50296+0.86093I$	$5.60147-6.06685I$	0
$u=0.918739-0.696205I$ $a=-0.980866+0.088202I$ $b=-1.50296-0.86093I$	$5.60147+6.06685I$	0
$u=1.003780+0.616583I$ $a=1.091870-0.197147I$ $b=3.15550-0.68952I$	$-4.15865-7.26170I$	0
$u=1.003780-0.616583I$ $a=1.091870+0.197147I$ $b=3.15550+0.68952I$	$-4.15865+7.26170I$	0
$u=-0.527331+1.056560I$ $a=-0.052343-0.958618I$ $b=-0.009228+0.755850I$	$7.57521-5.16330I$	0
$u=-0.527331-1.056560I$ $a=-0.052343+0.958618I$ $b=-0.009228-0.755850I$	$7.57521+5.16330I$	0
$u=1.010590+0.613047I$ $a=0.498677+0.841419I$ $b=0.931083+0.758716I$	$-1.20483-7.46238I$	0
$u=1.010590-0.613047I$ $a=0.498677-0.841419I$ $b=0.931083-0.758716I$	$-1.20483+7.46238I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.077489+0.796750I$ $a=-0.24472+1.81974I$ $b=-0.108308+0.309518I$	$0.842040+0.218659I$	0
$u=-0.077489-0.796750I$ $a=-0.24472-1.81974I$ $b=-0.108308-0.309518I$	$0.842040-0.218659I$	0
$u=1.146540+0.376005I$ $a=-1.337790+0.388782I$ $b=-2.22294+0.56183I$	$-2.93736-4.08892I$	0
$u=1.146540-0.376005I$ $a=-1.337790-0.388782I$ $b=-2.22294-0.56183I$	$-2.93736+4.08892I$	0
$u=-1.208590+0.007327I$ $a=1.117550+0.297675I$ $b=2.78666+0.25946I$	$-9.67452-5.84411I$	0
$u=-1.208590-0.007327I$ $a=1.117550-0.297675I$ $b=2.78666-0.25946I$	$-9.67452+5.84411I$	0
$u=0.716398+0.321337I$ $a=-1.71073-0.13704I$ $b=-1.209250-0.019460I$	$-2.05269-5.09445I$	0
$u=0.716398-0.321337I$ $a=-1.71073+0.13704I$ $b=-1.209250+0.019460I$	$-2.05269+5.09445I$	0
$u=-0.966448+0.750480I$ $a=0.735650+0.336987I$ $b=0.83498+1.25832I$	$4.22919+8.45993I$	0
$u=-0.966448-0.750480I$ $a=0.735650-0.336987I$ $b=0.83498-1.25832I$	$4.22919-8.45993I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.175750+0.450060I$ $a=\ \ 1.44318-0.00301I$ $b=\ \ 2.56049+0.14637I$	$-2.47631+4.23288I$	0
$u=-1.175750-0.450060I$ $a=\ \ 1.44318+0.00301I$ $b=\ \ 2.56049-0.14637I$	$-2.47631-4.23288I$	0
$u=\ \ 1.080030+0.647397I$ $a=-0.471017-1.051610I$ $b=-0.868852-0.834680I$	$5.04528-11.02900I$	0
$u=\ \ 1.080030-0.647397I$ $a=-0.471017+1.051610I$ $b=-0.868852+0.834680I$	$5.04528+11.02900I$	0
$u=-1.095400+0.623315I$ $a=\ \ 0.965172+0.211241I$ $b=\ \ 2.67918+0.12256I$	$-1.26703+8.06534I$	0
$u=-1.095400-0.623315I$ $a=\ \ 0.965172-0.211241I$ $b=\ \ 2.67918-0.12256I$	$-1.26703-8.06534I$	0
$u=\ \ 1.27157$ $a=-0.897925$ $b=-2.60589$	-5.07839	0
$u=\ \ 1.090890+0.662481I$ $a=-1.133620+0.170602I$ $b=-2.92856+0.42650I$	$-5.3505-13.4421I$	0
$u=\ \ 1.090890-0.662481I$ $a=-1.133620-0.170602I$ $b=-2.92856-0.42650I$	$-5.3505+13.4421I$	0
$u=\ \ 0.440478+1.209800I$ $a=\ \ 0.483244-0.827372I$ $b=\ \ 0.485341+0.413522I$	$2.09189-5.37526I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.440478 - 1.209800I$ $a = 0.483244 + 0.827372I$ $b = 0.485341 - 0.413522I$	$2.09189 + 5.37526I$	0
$u = 0.694130 + 0.155166I$ $a = 0.629469 - 0.483057I$ $b = -0.325515 + 0.095039I$	$-1.130740 - 0.057247I$	$-6.19583 - 1.04594I$
$u = 0.694130 - 0.155166I$ $a = 0.629469 + 0.483057I$ $b = -0.325515 - 0.095039I$	$-1.130740 + 0.057247I$	$-6.19583 + 1.04594I$
$u = -1.073550 + 0.721250I$ $a = 0.099374 - 0.729669I$ $b = 0.228563 - 0.382128I$	$7.95621 + 6.61583I$	0
$u = -1.073550 - 0.721250I$ $a = 0.099374 + 0.729669I$ $b = 0.228563 + 0.382128I$	$7.95621 - 6.61583I$	0
$u = -0.703529 + 0.055166I$ $a = 1.17165 + 1.11505I$ $b = 1.064580 + 0.239864I$	$2.00066 - 2.73260I$	$2.52280 + 4.22916I$
$u = -0.703529 - 0.055166I$ $a = 1.17165 - 1.11505I$ $b = 1.064580 - 0.239864I$	$2.00066 + 2.73260I$	$2.52280 - 4.22916I$
$u = -0.660045 + 0.172832I$ $a = -1.07697 - 1.29046I$ $b = 0.308962 - 0.774356I$	$-4.71647 - 2.02134I$	$-14.9131 + 5.4596I$
$u = -0.660045 - 0.172832I$ $a = -1.07697 + 1.29046I$ $b = 0.308962 + 0.774356I$	$-4.71647 + 2.02134I$	$-14.9131 - 5.4596I$
$u = 1.136770 + 0.725645I$ $a = 1.143050 - 0.143379I$ $b = 2.76538 - 0.38775I$	$1.0308 - 18.1820I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.136770 - 0.725645I$ $a = 1.143050 + 0.143379I$ $b = 2.76538 + 0.38775I$	$1.0308 + 18.1820I$	0
$u = 0.967628 + 0.945915I$ $a = 0.460685 - 0.501451I$ $b = 0.630580 + 0.435757I$	$0.71880 - 3.29093I$	0
$u = 0.967628 - 0.945915I$ $a = 0.460685 + 0.501451I$ $b = 0.630580 - 0.435757I$	$0.71880 + 3.29093I$	0
$u = -1.350430 + 0.109621I$ $a = -1.096880 + 0.210583I$ $b = -2.62257 + 0.16937I$	$-4.72155 + 9.45612I$	0
$u = -1.350430 - 0.109621I$ $a = -1.096880 - 0.210583I$ $b = -2.62257 - 0.16937I$	$-4.72155 - 9.45612I$	0
$u = 0.195074 + 0.613711I$ $a = -0.513090 - 0.129913I$ $b = 0.254576 + 1.365830I$	$5.78993 - 3.08770I$	$0.92553 + 1.70472I$
$u = 0.195074 - 0.613711I$ $a = -0.513090 + 0.129913I$ $b = 0.254576 - 1.365830I$	$5.78993 + 3.08770I$	$0.92553 - 1.70472I$
$u = -1.152100 + 0.741685I$ $a = -0.898263 - 0.140497I$ $b = -2.60841 - 0.20294I$	$5.62024 + 11.59990I$	0
$u = -1.152100 - 0.741685I$ $a = -0.898263 + 0.140497I$ $b = -2.60841 + 0.20294I$	$5.62024 - 11.59990I$	0
$u = 1.205030 + 0.669031I$ $a = -0.754265 + 0.388060I$ $b = -2.05625 + 0.20526I$	$-4.97040 - 2.42339I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.205030 - 0.669031I$ $a = -0.754265 - 0.388060I$ $b = -2.05625 - 0.20526I$	$-4.97040 + 2.42339I$	0
$u = 1.11740 + 0.90714I$ $a = 0.580724 - 0.395613I$ $b = 1.92278 - 0.01409I$	$0.33213 - 3.94288I$	0
$u = 1.11740 - 0.90714I$ $a = 0.580724 + 0.395613I$ $b = 1.92278 + 0.01409I$	$0.33213 + 3.94288I$	0
$u = 0.382040 + 0.407746I$ $a = 0.485352 + 0.660044I$ $b = -0.106165 - 0.505429I$	$-0.554187 - 1.270860I$	$-5.62089 + 5.07499I$
$u = 0.382040 - 0.407746I$ $a = 0.485352 - 0.660044I$ $b = -0.106165 + 0.505429I$	$-0.554187 + 1.270860I$	$-5.62089 - 5.07499I$
$u = 1.51444 + 0.46755I$ $a = 0.760992 - 0.166869I$ $b = 2.31142 - 0.10041I$	$-1.71995 - 1.83130I$	0
$u = 1.51444 - 0.46755I$ $a = 0.760992 + 0.166869I$ $b = 2.31142 + 0.10041I$	$-1.71995 + 1.83130I$	0
$u = 0.045642 + 0.379691I$ $a = 1.51813 - 3.01413I$ $b = 0.492405 - 0.351687I$	$-4.27910 - 1.96842I$	$-12.93862 + 1.10790I$
$u = 0.045642 - 0.379691I$ $a = 1.51813 + 3.01413I$ $b = 0.492405 + 0.351687I$	$-4.27910 + 1.96842I$	$-12.93862 - 1.10790I$
$u = 0.159452$ $a = 4.64892$ $b = -0.390195$	-0.986368	-9.85060

II. $I_2^u =$
$\langle 11u^{27}-7u^{26}+\cdots+b+9,\ 21u^{27}-14u^{26}+\cdots+a+26,\ u^{28}-7u^{26}+\cdots-7u^2+1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-21u^{27}+14u^{26}+\cdots+27u-26\\-11u^{27}+7u^{26}+\cdots+8u-9\end{pmatrix}$$
$$a_7 = \begin{pmatrix}7u^{27}-6u^{26}+\cdots-7u+6\\7u^{27}-5u^{26}+\cdots-4u+9\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-8u^{27}-6u^{26}+\cdots+53u-25\\-20u^{27}+7u^{26}+\cdots+48u-31\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^2+1\\-u^4\end{pmatrix}$$
$$a_5 = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}10u^{27}-10u^{26}+\cdots-7u+7\\10u^{27}-9u^{26}+\cdots-4u+10\end{pmatrix}$$
$$a_9 = \begin{pmatrix}7u^{27}-5u^{26}+\cdots-12u+6\\11u^{27}-8u^{26}+\cdots-10u+13\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-32u^{27}+27u^{26}+\cdots+39u-38\\-31u^{27}+26u^{26}+\cdots+30u-32\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}5u^{27}+2u^{26}+\cdots-36u+22\\8u^{27}-4u^{26}+\cdots-24u+18\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= 44u^{27}-36u^{26}-279u^{25}+230u^{24}+1045u^{23}-866u^{22}-2680u^{21}+2324u^{20}+5347u^{19}-4756u^{18}-8553u^{17}+7595u^{16}+11289u^{15}-9642u^{14}-12168u^{13}+9845u^{12}+10726u^{11}-8146u^{10}-7608u^9+5266u^8+4146u^7-2623u^6-1545u^5+981u^4+347u^3-263u^2-32u+24$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 14u^{27} + \cdots - 14u + 1$
c_2	$u^{28} - 7u^{26} + \cdots - 7u^2 + 1$
c_3	$u^{28} - 4u^{26} + \cdots - 6u + 1$
c_4	$u^{28} + 14u^{26} + \cdots - 2u + 1$
c_5	$u^{28} - 7u^{26} + \cdots - 7u^2 + 1$
c_6	$u^{28} + 4u^{27} + \cdots + u + 1$
c_7	$u^{28} + 6u^{27} + \cdots + 4u + 1$
c_8, c_9	$u^{28} - 3u^{27} + \cdots + 10u^2 + 1$
c_{10}	$u^{28} - 4u^{27} + \cdots - u + 1$
c_{11}	$u^{28} + 14u^{26} + \cdots + 2u + 1$
c_{12}	$u^{28} + 3u^{27} + \cdots + 10u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} + 14y^{27} + \cdots + 22y + 1$
c_2, c_5	$y^{28} - 14y^{27} + \cdots - 14y + 1$
c_3	$y^{28} - 8y^{27} + \cdots - 10y + 1$
c_4, c_{11}	$y^{28} + 28y^{27} + \cdots + 38y + 1$
c_6, c_{10}	$y^{28} - 22y^{27} + \cdots - 25y + 1$
c_7	$y^{28} - 2y^{27} + \cdots + 88y^2 + 1$
c_8, c_9, c_{12}	$y^{28} + 29y^{27} + \cdots + 20y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.706701+0.716899I$ $a=-0.102563-0.600190I$ $b=\ \ 1.44237-0.26513I$	$6.43940-2.37940I$	$-2.37700+2.25279I$
$u=-0.706701-0.716899I$ $a=-0.102563+0.600190I$ $b=\ \ 1.44237+0.26513I$	$6.43940+2.37940I$	$-2.37700-2.25279I$
$u=\ \ 0.718124+0.740337I$ $a=-0.788492+0.528954I$ $b=-0.387215-0.255973I$	$-2.98909-3.38234I$	$-12.05254+0.45693I$
$u=\ \ 0.718124-0.740337I$ $a=-0.788492-0.528954I$ $b=-0.387215+0.255973I$	$-2.98909+3.38234I$	$-12.05254-0.45693I$
$u=\ \ 0.915118+0.103319I$ $a=\ \ 0.779774-0.990552I$ $b=\ \ 0.994399-0.282028I$	$1.54534+2.57825I$	$-13.53771+1.02492I$
$u=\ \ 0.915118-0.103319I$ $a=\ \ 0.779774+0.990552I$ $b=\ \ 0.994399+0.282028I$	$1.54534-2.57825I$	$-13.53771-1.02492I$
$u=-0.864125+0.667301I$ $a=\ \ 0.367005+0.243795I$ $b=-0.551476+1.276770I$	$0.63860+2.58484I$	$-1.35673-2.83169I$
$u=-0.864125-0.667301I$ $a=\ \ 0.367005-0.243795I$ $b=-0.551476-1.276770I$	$0.63860-2.58484I$	$-1.35673+2.83169I$
$u=-1.026350+0.428145I$ $a=\ \ 1.336690-0.045888I$ $b=\ \ 2.79611+0.37219I$	$-5.70170+4.73286I$	$-10.95152-3.12854I$
$u=-1.026350-0.428145I$ $a=\ \ 1.336690+0.045888I$ $b=\ \ 2.79611-0.37219I$	$-5.70170-4.73286I$	$-10.95152+3.12854I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.057150+0.361718I$ $a=-1.65675+0.23711I$ $b=-2.66296+0.02914I$	$-3.53913+5.88320I$	$-13.8678-7.1785I$
$u=-1.057150-0.361718I$ $a=-1.65675-0.23711I$ $b=-2.66296-0.02914I$	$-3.53913-5.88320I$	$-13.8678+7.1785I$
$u=-0.988495+0.684689I$ $a=-0.524180+0.106244I$ $b=-0.87095-1.13264I$	$5.57997+7.77976I$	$-4.95934-6.93937I$
$u=-0.988495-0.684689I$ $a=-0.524180-0.106244I$ $b=-0.87095+1.13264I$	$5.57997-7.77976I$	$-4.95934+6.93937I$
$u=-0.704088+0.370257I$ $a=\ \ 0.76108+1.29251I$ $b=-0.489361+0.183527I$	$-4.49557-1.33302I$	$-11.01547-4.40294I$
$u=-0.704088-0.370257I$ $a=\ \ 0.76108-1.29251I$ $b=-0.489361-0.183527I$	$-4.49557+1.33302I$	$-11.01547+4.40294I$
$u=-0.737988+0.257469I$ $a=-1.07122-1.74542I$ $b=-0.502952-1.115910I$	$-2.22679-3.19640I$	$-11.28614+5.21476I$
$u=-0.737988-0.257469I$ $a=-1.07122+1.74542I$ $b=-0.502952+1.115910I$	$-2.22679+3.19640I$	$-11.28614-5.21476I$
$u=\ \ 0.737780+0.222485I$ $a=-0.795526+0.493914I$ $b=-0.311528-1.023530I$	$-1.94292-0.62697I$	$-14.8683+1.0163I$
$u=\ \ 0.737780-0.222485I$ $a=-0.795526-0.493914I$ $b=-0.311528+1.023530I$	$-1.94292+0.62697I$	$-14.8683-1.0163I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.137430 + 0.537627I$ $a = -0.886224 + 0.394814I$ $b = -2.22498 + 0.42430I$	$-4.66089 - 1.99657I$	$-12.16305 - 1.57416I$
$u = 1.137430 - 0.537627I$ $a = -0.886224 - 0.394814I$ $b = -2.22498 - 0.42430I$	$-4.66089 + 1.99657I$	$-12.16305 + 1.57416I$
$u = 0.816729 + 0.991195I$ $a = 0.715758 - 0.481142I$ $b = 1.173860 + 0.196254I$	$0.98244 - 4.82413I$	$-8.48994 + 7.47474I$
$u = 0.816729 - 0.991195I$ $a = 0.715758 + 0.481142I$ $b = 1.173860 - 0.196254I$	$0.98244 + 4.82413I$	$-8.48994 - 7.47474I$
$u = 0.400681 + 0.395040I$ $a = 1.003930 - 0.632238I$ $b = 0.04899 + 2.22748I$	$5.05540 - 3.21461I$	$-10.56109 + 2.81442I$
$u = 0.400681 - 0.395040I$ $a = 1.003930 + 0.632238I$ $b = 0.04899 - 2.22748I$	$5.05540 + 3.21461I$	$-10.56109 - 2.81442I$
$u = 1.35904 + 0.56479I$ $a = 0.860726 - 0.298307I$ $b = 2.04569 - 0.14889I$	$-1.26479 - 2.16877I$	$-7.01334 + 4.60309I$
$u = 1.35904 - 0.56479I$ $a = 0.860726 + 0.298307I$ $b = 2.04569 + 0.14889I$	$-1.26479 + 2.16877I$	$-7.01334 - 4.60309I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{28}-14u^{27}+\cdots-14u+1)(u^{120}+49u^{119}+\cdots+44492u+784)$
c_2	$(u^{28}-7u^{26}+\cdots-7u^2+1)(u^{120}+7u^{119}+\cdots+322u+28)$
c_3	$(u^{28}-4u^{26}+\cdots-6u+1)(u^{120}+u^{119}+\cdots+3289256u-546677)$
c_4	$(u^{28}+14u^{26}+\cdots-2u+1)(u^{120}-3u^{119}+\cdots-47904u+17881)$
c_5	$(u^{28}-7u^{26}+\cdots-7u^2+1)(u^{120}+7u^{119}+\cdots+322u+28)$
c_6	$(u^{28}+4u^{27}+\cdots+u+1)(u^{120}-3u^{119}+\cdots-110801u-32041)$
c_7	$(u^{28}+6u^{27}+\cdots+4u+1)(u^{120}-3u^{119}+\cdots+8809070u-639127)$
c_8, c_9	$(u^{28}-3u^{27}+\cdots+10u^2+1)(u^{120}-4u^{119}+\cdots-116u+7)$
c_{10}	$(u^{28}-4u^{27}+\cdots-u+1)(u^{120}-3u^{119}+\cdots-110801u-32041)$
c_{11}	$(u^{28}+14u^{26}+\cdots+2u+1)(u^{120}-3u^{119}+\cdots-47904u+17881)$
c_{12}	$(u^{28}+3u^{27}+\cdots+10u^2+1)(u^{120}-4u^{119}+\cdots-116u+7)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{28}+14y^{27}+\cdots+22y+1)$ $\cdot(y^{120}+59y^{119}+\cdots-985957616y+614656)$
c_2, c_5	$(y^{28}-14y^{27}+\cdots-14y+1)(y^{120}-49y^{119}+\cdots-44492y+784)$
c_3	$(y^{28}-8y^{27}+\cdots-10y+1)$ $\cdot(y^{120}+21y^{119}+\cdots+9174574703856y+298855742329)$
c_4, c_{11}	$(y^{28}+28y^{27}+\cdots+38y+1)$ $\cdot(y^{120}+89y^{119}+\cdots-4994108976y+319730161)$
c_6, c_{10}	$(y^{28}-22y^{27}+\cdots-25y+1)$ $\cdot(y^{120}-81y^{119}+\cdots+2923581045y+1026625681)$
c_7	$(y^{28}-2y^{27}+\cdots+88y^2+1)$ $\cdot(y^{120}-33y^{119}+\cdots-17599469821274y+408483322129)$
c_8, c_9, c_{12}	$(y^{28}+29y^{27}+\cdots+20y+1)(y^{120}+118y^{119}+\cdots+1566y+49)$