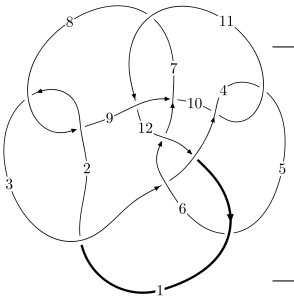
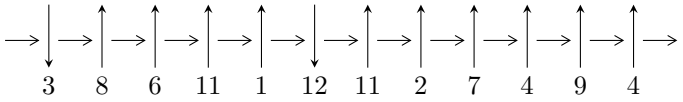
$12n_{0626}$ $(K12n_{0626})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle 6.45261 \times 10^{107} u^{44} - 2.43067 \times 10^{108} u^{43} + \cdots + 5.67762 \times 10^{109} b + 1.45136 \times 10^{110}, \\
&\quad - 1.02261 \times 10^{111} u^{44} + 3.49755 \times 10^{111} u^{43} + \cdots + 3.12269 \times 10^{112} a - 1.77035 \times 10^{113}, \\
&\quad u^{45} - 3u^{44} + \cdots - 216u - 50 \rangle \\
I_2^u &= \langle -1.57405 \times 10^{49} a u^{34} - 7.29045 \times 10^{49} u^{34} + \cdots - 1.01763 \times 10^{50} a - 5.06550 \times 10^{50}, \\
&\quad 4.89851 \times 10^{51} a u^{34} - 1.12145 \times 10^{52} u^{34} + \cdots + 3.20904 \times 10^{52} a - 7.96667 \times 10^{52},\ u^{35} + u^{34} + \cdots + 9u - 1 \rangle \\
I_3^u &= \langle 24290268766301 u^{37} - 28827427845386 u^{36} + \cdots + 64246238253402 b + 686511198649974, \\
&\quad - 193561107143803 u^{37} + 110734887539683 u^{36} + \cdots + 64246238253402 a - 901423536620652, \\
&\quad u^{38} + 5u^{36} + \cdots - 71u^2 + 6 \rangle
\end{aligned}$$

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

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 154 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. $\boldsymbol{I_1^u = \langle 6.45 \times 10^{107} u^{44} - 2.43 \times 10^{108} u^{43} + \cdots + 5.68 \times 10^{109} b + 1.45 \times 10^{110},\ -1.02 \times 10^{111} u^{44} + 3.50 \times 10^{111} u^{43} + \cdots + 3.12 \times 10^{112} a - 1.77 \times 10^{113},\ u^{45} - 3u^{44} + \cdots - 216u - 50 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0327477u^{44} - 0.112004u^{43} + \cdots + 14.6356u + 5.66930 \\ -0.0113650u^{44} + 0.0428114u^{43} + \cdots - 7.23755u - 2.55629 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.000138274u^{44} - 0.0215805u^{43} + \cdots + 48.5815u + 14.2524 \\ -0.00976057u^{44} + 0.0369257u^{43} + \cdots - 11.2636u - 3.57324 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0549640u^{44} - 0.133609u^{43} + \cdots - 78.7955u - 12.0431 \\ -0.0224776u^{44} + 0.0618353u^{43} + \cdots + 17.7539u + 2.20564 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0441127u^{44} - 0.154816u^{43} + \cdots + 21.8732u + 8.22559 \\ -0.0113650u^{44} + 0.0428114u^{43} + \cdots - 7.23755u - 2.55629 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0648870u^{44} + 0.178186u^{43} + \cdots + 48.2969u + 5.44301 \\ 0.0137612u^{44} - 0.0361735u^{43} + \cdots - 12.7428u - 1.63739 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0648870u^{44} + 0.178186u^{43} + \cdots + 48.2969u + 5.44301 \\ 0.00125770u^{44} + 0.00211282u^{43} + \cdots - 5.93985u - 0.813634 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0253004u^{44} + 0.110341u^{43} + \cdots - 46.4915u - 11.6489 \\ -0.00636661u^{44} + 0.0145163u^{43} + \cdots + 13.8908u + 2.19911 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0714648u^{44} + 0.204634u^{43} + \cdots + 46.2269u + 4.17282 \\ 0.0149532u^{44} - 0.0451343u^{43} + \cdots - 8.51402u + 0.0701677 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0618399u^{44} - 0.112199u^{43} + \cdots - 99.5480u - 9.36086$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{45} + 19u^{44} + \cdots + 296u - 100$
c_2, c_8	$u^{45} + 3u^{44} + \cdots - 44u - 10$
c_3, c_{11}	$u^{45} + u^{44} + \cdots + 5u - 1$
c_4, c_{10}	$u^{45} - 3u^{44} + \cdots - 216u - 50$
c_5, c_7	$u^{45} - u^{44} + \cdots + 11u - 143$
c_6	$u^{45} - 3u^{44} + \cdots + 8824u - 1928$
c_9, c_{12}	$u^{45} + 3u^{44} + \cdots + 33u - 16$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{45} + 15y^{44} + \cdots + 417216y - 10000$
c_2, c_8	$y^{45} + 19y^{44} + \cdots + 296y - 100$
c_3, c_{11}	$y^{45} - 7y^{44} + \cdots + 25y - 1$
c_4, c_{10}	$y^{45} + 29y^{44} + \cdots - 66944y - 2500$
c_5, c_7	$y^{45} + 27y^{44} + \cdots - 283019y - 20449$
c_6	$y^{45} - 5y^{44} + \cdots + 32639808y - 3717184$
c_9, c_{12}	$y^{45} + 35y^{44} + \cdots - 6847y - 256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.982052 + 0.344463I$ $a = 0.897344 + 0.387946I$ $b = -0.088808 - 0.284640I$	$3.90111 + 0.24103I$	$11.14977 - 0.22983I$
$u = 0.982052 - 0.344463I$ $a = 0.897344 - 0.387946I$ $b = -0.088808 + 0.284640I$	$3.90111 - 0.24103I$	$11.14977 + 0.22983I$
$u = -0.972469 + 0.418664I$ $a = -0.875723 + 0.572022I$ $b = 0.215420 - 0.332153I$	$3.69660 - 5.52791I$	$11.56773 + 6.24960I$
$u = -0.972469 - 0.418664I$ $a = -0.875723 - 0.572022I$ $b = 0.215420 + 0.332153I$	$3.69660 + 5.52791I$	$11.56773 - 6.24960I$
$u = -0.268181 + 1.172890I$ $a = -1.099600 - 0.836869I$ $b = -1.32797 - 1.27587I$	$-4.61487 - 1.65819I$	$-5.41137 + 0.80754I$
$u = -0.268181 - 1.172890I$ $a = -1.099600 + 0.836869I$ $b = -1.32797 + 1.27587I$	$-4.61487 + 1.65819I$	$-5.41137 - 0.80754I$
$u = -0.133716 + 1.210450I$ $a = 0.46886 - 1.72677I$ $b = 1.06503 - 1.77331I$	$-1.11353 - 5.69606I$	$6.4348 + 13.2641I$
$u = -0.133716 - 1.210450I$ $a = 0.46886 + 1.72677I$ $b = 1.06503 + 1.77331I$	$-1.11353 + 5.69606I$	$6.4348 - 13.2641I$
$u = 0.133959 + 1.289230I$ $a = -0.30874 + 1.56623I$ $b = -0.35217 + 1.59122I$	$-3.03297 + 3.57228I$	$2.57196 - 5.14807I$
$u = 0.133959 - 1.289230I$ $a = -0.30874 - 1.56623I$ $b = -0.35217 - 1.59122I$	$-3.03297 - 3.57228I$	$2.57196 + 5.14807I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.381503+1.269590I$ $a=\ \ 0.440182+0.942074I$ $b=-0.322936+1.028520I$	$-3.88171+0.13510I$	$6.67770-1.97779I$
$u=-0.381503-1.269590I$ $a=\ \ 0.440182-0.942074I$ $b=-0.322936-1.028520I$	$-3.88171-0.13510I$	$6.67770+1.97779I$
$u=\ \ 0.018489+1.337230I$ $a=\ \ 0.584739+1.185070I$ $b=-0.133197+0.864237I$	$-2.93966+2.29015I$	$3.98465-3.47136I$
$u=\ \ 0.018489-1.337230I$ $a=\ \ 0.584739-1.185070I$ $b=-0.133197-0.864237I$	$-2.93966-2.29015I$	$3.98465+3.47136I$
$u=-0.537745+0.270263I$ $a=\ \ 1.193340-0.691780I$ $b=\ \ 0.823079+0.760072I$	$1.78194+3.46593I$	$14.6287-5.6907I$
$u=-0.537745-0.270263I$ $a=\ \ 1.193340+0.691780I$ $b=\ \ 0.823079-0.760072I$	$1.78194-3.46593I$	$14.6287+5.6907I$
$u=-0.06352+1.41822I$ $a=-0.577294+1.275210I$ $b=\ \ 0.084859+0.840729I$	$-4.25393-7.67261I$	$0.+9.08596I$
$u=-0.06352-1.41822I$ $a=-0.577294-1.275210I$ $b=\ \ 0.084859-0.840729I$	$-4.25393+7.67261I$	$0.-9.08596I$
$u=-0.481194+0.313751I$ $a=-0.59895+1.71117I$ $b=\ \ 0.662716-0.478922I$	$1.48372-3.19466I$	$14.2637+3.1183I$
$u=-0.481194-0.313751I$ $a=-0.59895-1.71117I$ $b=\ \ 0.662716+0.478922I$	$1.48372+3.19466I$	$14.2637-3.1183I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.45205 + 0.30573I$ $a = 0.189061 + 0.075403I$ $b = -0.202622 - 1.155420I$	$-1.85503 + 3.23232I$	0
$u = 1.45205 - 0.30573I$ $a = 0.189061 - 0.075403I$ $b = -0.202622 + 1.155420I$	$-1.85503 - 3.23232I$	0
$u = 0.11068 + 1.49218I$ $a = -0.362471 + 1.218380I$ $b = 0.021640 + 1.003810I$	$-8.41188 - 1.42060I$	0
$u = 0.11068 - 1.49218I$ $a = -0.362471 - 1.218380I$ $b = 0.021640 - 1.003810I$	$-8.41188 + 1.42060I$	0
$u = -0.352040 + 0.357974I$ $a = 0.018861 + 1.267180I$ $b = -0.675952 + 0.468271I$	$-2.55936 - 1.04400I$	$3.67071 + 4.11672I$
$u = -0.352040 - 0.357974I$ $a = 0.018861 - 1.267180I$ $b = -0.675952 - 0.468271I$	$-2.55936 + 1.04400I$	$3.67071 - 4.11672I$
$u = -1.46794 + 0.33452I$ $a = 0.1160420 + 0.0084688I$ $b = 0.584119 + 1.190960I$	$2.62425 + 5.00892I$	0
$u = -1.46794 - 0.33452I$ $a = 0.1160420 - 0.0084688I$ $b = 0.584119 - 1.190960I$	$2.62425 - 5.00892I$	0
$u = 0.457354$ $a = 0.515813$ $b = 0.287710$	0.695378	13.8950
$u = 0.71712 + 1.42041I$ $a = -0.377061 + 0.827181I$ $b = 0.458019 + 1.197090I$	$-5.71574 + 4.33440I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.71712 - 1.42041I$ $a = -0.377061 - 0.827181I$ $b = 0.458019 - 1.197090I$	$-5.71574 - 4.33440I$	0
$u = 0.045115 + 0.375785I$ $a = 0.502574 - 0.452745I$ $b = -0.076285 + 0.710609I$	$1.59089 + 2.72032I$	$6.64779 - 2.49427I$
$u = 0.045115 - 0.375785I$ $a = 0.502574 + 0.452745I$ $b = -0.076285 - 0.710609I$	$1.59089 - 2.72032I$	$6.64779 + 2.49427I$
$u = 0.37049 + 1.59283I$ $a = -0.049575 - 1.215240I$ $b = -1.06311 - 1.54495I$	$-8.64456 + 9.60665I$	0
$u = 0.37049 - 1.59283I$ $a = -0.049575 + 1.215240I$ $b = -1.06311 + 1.54495I$	$-8.64456 - 9.60665I$	0
$u = -0.68867 + 1.49281I$ $a = -0.230013 - 1.255740I$ $b = 1.03402 - 1.44601I$	$-1.39112 - 12.65970I$	0
$u = -0.68867 - 1.49281I$ $a = -0.230013 + 1.255740I$ $b = 1.03402 + 1.44601I$	$-1.39112 + 12.65970I$	0
$u = 0.008729 + 0.329890I$ $a = 2.99643 + 1.73672I$ $b = -0.844063 - 0.436623I$	$0.04511 + 7.55751I$	$10.37988 - 8.84114I$
$u = 0.008729 - 0.329890I$ $a = 2.99643 - 1.73672I$ $b = -0.844063 + 0.436623I$	$0.04511 - 7.55751I$	$10.37988 + 8.84114I$
$u = 0.78407 + 1.59419I$ $a = 0.265720 - 1.158860I$ $b = -1.07883 - 1.42333I$	$-3.5107 + 18.8570I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.78407 - 1.59419I$ $a = \quad 0.265720 + 1.158860I$ $b = -1.07883 + 1.42333I$	$-3.5107 - 18.8570I$	0
$u = \quad 1.76555 + 0.27957I$ $a = -0.0198463 + 0.0768389I$ $b = -0.54488 + 1.32858I$	$0.87619 - 10.06840I$	0
$u = \quad 1.76555 - 0.27957I$ $a = -0.0198463 - 0.0768389I$ $b = -0.54488 - 1.32858I$	$0.87619 + 10.06840I$	0
$u = \quad 0.23000 + 2.00315I$ $a = -0.091790 + 0.847105I$ $b = \quad 0.11807 + 1.45362I$	$-7.19068 - 1.47568I$	0
$u = \quad 0.23000 - 2.00315I$ $a = -0.091790 - 0.847105I$ $b = \quad 0.11807 - 1.45362I$	$-7.19068 + 1.47568I$	0

II.

$\boldsymbol{I_2^u = \langle -1.57\times10^{49}au^{34}-7.29\times10^{49}u^{34}+\cdots-1.02\times10^{50}a-5.07\times10^{50},\ 4.90\times 10^{51}au^{34}-1.12\times10^{52}u^{34}+\cdots+3.21\times10^{52}a-7.97\times10^{52},\ u^{35}+u^{34}+\cdots+9u-1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$

$$a_1 = \begin{pmatrix}a\\0.0958186au^{34}+0.443798u^{34}+\cdots+0.619469a+3.08357\end{pmatrix}$$

$$a_5 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

$$a_6 = \begin{pmatrix}1.41657au^{34}-6.79284u^{34}+\cdots+9.76303a-47.0037\\0.132146au^{34}+1.39494u^{34}+\cdots+0.980193a+8.18591\end{pmatrix}$$

$$a_3 = \begin{pmatrix}1.32752au^{34}+6.79284u^{34}+\cdots+9.36987a+47.0037\\0.0201917au^{34}-4.25432u^{34}+\cdots+0.0958186a-28.9986\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-u\\u\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}-0.0958186au^{34}-0.443798u^{34}+\cdots+0.380531a-3.08357\\0.0958186au^{34}+0.443798u^{34}+\cdots+0.619469a+3.08357\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-0.619469au^{34}-9.76303u^{34}+\cdots-4.12036a-68.6369\\4.36514u^{34}+4.96123u^{33}+\cdots-73.0252u+29.8191\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-0.619469au^{34}-9.76303u^{34}+\cdots-4.12036a-68.6369\\0.0201917au^{34}+4.57371u^{34}+\cdots+0.0958186a+31.2357\end{pmatrix}$$

$$a_2 = \begin{pmatrix}1.55451au^{34}-2.98159u^{34}+\cdots+10.6192a-22.8488\\-0.180352au^{34}+0.0676458u^{34}+\cdots-1.24871a+0.423180\end{pmatrix}$$

$$a_9 = \begin{pmatrix}-0.980193au^{34}+u^{34}+\cdots-7.39826a+9\\0.110817au^{34}-0.212265u^{34}+\cdots+0.820472a-1.03387\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 3.08049u^{34}+3.61372u^{33}+\cdots-30.9682u+20.7546$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^{35}+17u^{34}+\cdots-405u-49)^2$
c_2, c_8	$(u^{35}-u^{34}+\cdots+13u-7)^2$
c_3, c_{11}	$u^{70}+5u^{69}+\cdots-787u+338$
c_4, c_{10}	$(u^{35}+u^{34}+\cdots+9u-1)^2$
c_5, c_7	$u^{70}+2u^{69}+\cdots+625113u+75346$
c_6	$(u^{35}-4u^{33}+\cdots+10u-1)^2$
c_9, c_{12}	$u^{70}+8u^{69}+\cdots+10573u+7727$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^{35}+9y^{34}+\cdots-10317y-2401)^2$
c_2, c_8	$(y^{35}+17y^{34}+\cdots-405y-49)^2$
c_3, c_{11}	$y^{70}-33y^{69}+\cdots-4966725y+114244$
c_4, c_{10}	$(y^{35}+25y^{34}+\cdots+53y-1)^2$
c_5, c_7	$y^{70}-34y^{69}+\cdots+95484723835y+5677019716$
c_6	$(y^{35}-8y^{34}+\cdots-34y-1)^2$
c_9, c_{12}	$y^{70}-16y^{69}+\cdots+1891683685y+59706529$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.122175 + 0.986614I$ $a = 0.582179 - 0.688338I$ $b = -0.900472 - 0.553302I$	$-1.55635 + 4.47504I$	$1.34280 - 7.96658I$
$u = 0.122175 + 0.986614I$ $a = 0.76307 + 1.63237I$ $b = 0.314080 + 1.149240I$	$-1.55635 + 4.47504I$	$1.34280 - 7.96658I$
$u = 0.122175 - 0.986614I$ $a = 0.582179 + 0.688338I$ $b = -0.900472 + 0.553302I$	$-1.55635 - 4.47504I$	$1.34280 + 7.96658I$
$u = 0.122175 - 0.986614I$ $a = 0.76307 - 1.63237I$ $b = 0.314080 - 1.149240I$	$-1.55635 - 4.47504I$	$1.34280 + 7.96658I$
$u = -0.986091 + 0.308478I$ $a = 0.323626 - 0.149701I$ $b = -0.312187 + 1.052900I$	$-2.68277 + 3.53319I$	$3.87375 - 3.61929I$
$u = -0.986091 + 0.308478I$ $a = -0.009681 - 0.269791I$ $b = -0.756261 - 0.798331I$	$-2.68277 + 3.53319I$	$3.87375 - 3.61929I$
$u = -0.986091 - 0.308478I$ $a = 0.323626 + 0.149701I$ $b = -0.312187 - 1.052900I$	$-2.68277 - 3.53319I$	$3.87375 + 3.61929I$
$u = -0.986091 - 0.308478I$ $a = -0.009681 + 0.269791I$ $b = -0.756261 + 0.798331I$	$-2.68277 - 3.53319I$	$3.87375 + 3.61929I$
$u = 0.828222$ $a = 0.300662 + 0.115629I$ $b = 0.375408 - 0.648173I$	0.343351	9.69750
$u = 0.828222$ $a = 0.300662 - 0.115629I$ $b = 0.375408 + 0.648173I$	0.343351	9.69750

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.396765+1.108360I$ $a=-0.887638-0.628092I$ $b=-0.751428-0.613802I$	$-4.24240-1.50990I$	$8.8808+16.4628I$
$u=-0.396765+1.108360I$ $a=-1.131370+0.343875I$ $b=-2.18711-0.71208I$	$-4.24240-1.50990I$	$8.8808+16.4628I$
$u=-0.396765-1.108360I$ $a=-0.887638+0.628092I$ $b=-0.751428+0.613802I$	$-4.24240+1.50990I$	$8.8808-16.4628I$
$u=-0.396765-1.108360I$ $a=-1.131370-0.343875I$ $b=-2.18711+0.71208I$	$-4.24240+1.50990I$	$8.8808-16.4628I$
$u=-0.139847+1.201950I$ $a=0.574461+0.251080I$ $b=1.90213+0.43070I$	$1.53141-2.94190I$	$13.20720+3.19373I$
$u=-0.139847+1.201950I$ $a=0.53860-1.38331I$ $b=0.693129-0.806116I$	$1.53141-2.94190I$	$13.20720+3.19373I$
$u=-0.139847-1.201950I$ $a=0.574461-0.251080I$ $b=1.90213-0.43070I$	$1.53141+2.94190I$	$13.20720-3.19373I$
$u=-0.139847-1.201950I$ $a=0.53860+1.38331I$ $b=0.693129+0.806116I$	$1.53141+2.94190I$	$13.20720-3.19373I$
$u=0.078064+1.285270I$ $a=0.029464+1.200230I$ $b=0.10096+1.70807I$	$0.13057+2.97268I$	$14.4575-1.7124I$
$u=0.078064+1.285270I$ $a=0.25391-1.49964I$ $b=-0.093566-0.382690I$	$0.13057+2.97268I$	$14.4575-1.7124I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.078064 - 1.285270I$ $a = 0.029464 - 1.200230I$ $b = 0.10096 - 1.70807I$	$0.13057 - 2.97268I$	$14.4575 + 1.7124I$
$u = 0.078064 - 1.285270I$ $a = 0.25391 + 1.49964I$ $b = -0.093566 + 0.382690I$	$0.13057 - 2.97268I$	$14.4575 + 1.7124I$
$u = 0.362335 + 1.321800I$ $a = -0.641012 + 0.802633I$ $b = -0.167993 + 1.339300I$	$-2.66413 - 1.60535I$	$5.78287 + 1.84520I$
$u = 0.362335 + 1.321800I$ $a = -0.438948 - 0.459649I$ $b = 1.135110 - 0.524610I$	$-2.66413 - 1.60535I$	$5.78287 + 1.84520I$
$u = 0.362335 - 1.321800I$ $a = -0.641012 - 0.802633I$ $b = -0.167993 - 1.339300I$	$-2.66413 + 1.60535I$	$5.78287 - 1.84520I$
$u = 0.362335 - 1.321800I$ $a = -0.438948 + 0.459649I$ $b = 1.135110 + 0.524610I$	$-2.66413 + 1.60535I$	$5.78287 - 1.84520I$
$u = 0.23174 + 1.41839I$ $a = 0.758833 - 0.408790I$ $b = -0.976834 - 0.169918I$	$-0.81863 + 2.60111I$	$13.7993 + 4.7460I$
$u = 0.23174 + 1.41839I$ $a = 0.313108 + 1.168680I$ $b = 0.335578 + 1.268760I$	$-0.81863 + 2.60111I$	$13.7993 + 4.7460I$
$u = 0.23174 - 1.41839I$ $a = 0.758833 + 0.408790I$ $b = -0.976834 + 0.169918I$	$-0.81863 - 2.60111I$	$13.7993 - 4.7460I$
$u = 0.23174 - 1.41839I$ $a = 0.313108 - 1.168680I$ $b = 0.335578 - 1.268760I$	$-0.81863 - 2.60111I$	$13.7993 - 4.7460I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.66653 + 1.30929I$ $a = 0.444844 - 0.721904I$ $b = -0.534035 - 0.891882I$	$-2.98334 + 5.43570I$	$8.00000 + 0.I$
$u = 0.66653 + 1.30929I$ $a = -0.31156 + 1.41548I$ $b = 0.90010 + 1.29402I$	$-2.98334 + 5.43570I$	$8.00000 + 0.I$
$u = 0.66653 - 1.30929I$ $a = 0.444844 + 0.721904I$ $b = -0.534035 + 0.891882I$	$-2.98334 - 5.43570I$	$8.00000 + 0.I$
$u = 0.66653 - 1.30929I$ $a = -0.31156 - 1.41548I$ $b = 0.90010 - 1.29402I$	$-2.98334 - 5.43570I$	$8.00000 + 0.I$
$u = -1.47037 + 0.12982I$ $a = -1.58687 - 0.24850I$ $b = 1.49658 - 0.23084I$	$6.52279 - 1.14319I$	$8.0000 - 12.7886I$
$u = -1.47037 + 0.12982I$ $a = -0.0710353 + 0.0682410I$ $b = 0.428181 + 0.300914I$	$6.52279 - 1.14319I$	$8.0000 - 12.7886I$
$u = -1.47037 - 0.12982I$ $a = -1.58687 + 0.24850I$ $b = 1.49658 + 0.23084I$	$6.52279 + 1.14319I$	$8.0000 + 12.7886I$
$u = -1.47037 - 0.12982I$ $a = -0.0710353 - 0.0682410I$ $b = 0.428181 - 0.300914I$	$6.52279 + 1.14319I$	$8.0000 + 12.7886I$
$u = 0.245407 + 0.458419I$ $a = 0.54395 - 1.75933I$ $b = 1.002270 - 0.148814I$	$3.19287 - 1.90206I$	$11.14226 + 4.07695I$
$u = 0.245407 + 0.458419I$ $a = 1.22736 - 1.77188I$ $b = -1.116590 - 0.014897I$	$3.19287 - 1.90206I$	$11.14226 + 4.07695I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.245407 - 0.458419I$ $a = 0.54395 + 1.75933I$ $b = 1.002270 + 0.148814I$	$3.19287 + 1.90206I$	$11.14226 - 4.07695I$
$u = 0.245407 - 0.458419I$ $a = 1.22736 + 1.77188I$ $b = -1.116590 + 0.014897I$	$3.19287 + 1.90206I$	$11.14226 - 4.07695I$
$u = 0.23477 + 1.48829I$ $a = -0.236746 - 1.162590I$ $b = -0.668132 - 0.889707I$	$-1.25551 + 8.87249I$	$0. - 8.86121I$
$u = 0.23477 + 1.48829I$ $a = -0.434625 + 0.395783I$ $b = -1.99829 + 0.79541I$	$-1.25551 + 8.87249I$	$0. - 8.86121I$
$u = 0.23477 - 1.48829I$ $a = -0.236746 + 1.162590I$ $b = -0.668132 + 0.889707I$	$-1.25551 - 8.87249I$	$0. + 8.86121I$
$u = 0.23477 - 1.48829I$ $a = -0.434625 - 0.395783I$ $b = -1.99829 - 0.79541I$	$-1.25551 - 8.87249I$	$0. + 8.86121I$
$u = 1.56254 + 0.00406I$ $a = 1.41351 - 0.06592I$ $b = -1.73935 - 0.27949I$	$5.52620 - 2.95010I$	$0. + 8.72441I$
$u = 1.56254 + 0.00406I$ $a = 0.159345 + 0.107098I$ $b = -0.068679 + 0.333255I$	$5.52620 - 2.95010I$	$0. + 8.72441I$
$u = 1.56254 - 0.00406I$ $a = 1.41351 + 0.06592I$ $b = -1.73935 + 0.27949I$	$5.52620 + 2.95010I$	$0. - 8.72441I$
$u = 1.56254 - 0.00406I$ $a = 0.159345 - 0.107098I$ $b = -0.068679 - 0.333255I$	$5.52620 + 2.95010I$	$0. - 8.72441I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.11131+1.60139I$ $a=-0.307301+1.022180I$ $b=-0.356340+1.331780I$	$-1.65142-6.94317I$	0
$u=-0.11131+1.60139I$ $a=-0.633853-0.338866I$ $b=\ \ 1.156250-0.216455I$	$-1.65142-6.94317I$	0
$u=-0.11131-1.60139I$ $a=-0.307301-1.022180I$ $b=-0.356340-1.331780I$	$-1.65142+6.94317I$	0
$u=-0.11131-1.60139I$ $a=-0.633853+0.338866I$ $b=\ \ 1.156250+0.216455I$	$-1.65142+6.94317I$	0
$u=-0.87193+1.38649I$ $a=-0.402673-0.661450I$ $b=\ \ 0.540404-1.042830I$	$-5.21900-10.67790I$	0
$u=-0.87193+1.38649I$ $a=\ \ 0.478540+1.263030I$ $b=-1.10306+1.20383I$	$-5.21900-10.67790I$	0
$u=-0.87193-1.38649I$ $a=-0.402673+0.661450I$ $b=\ \ 0.540404+1.042830I$	$-5.21900+10.67790I$	0
$u=-0.87193-1.38649I$ $a=\ \ 0.478540-1.263030I$ $b=-1.10306-1.20383I$	$-5.21900+10.67790I$	0
$u=-0.49788+1.61012I$ $a=-0.311048-0.789120I$ $b=\ \ 0.253542-0.891638I$	$-8.09778-2.45577I$	0
$u=-0.49788+1.61012I$ $a=\ \ 0.129952+1.184880I$ $b=-1.06396+1.72980I$	$-8.09778-2.45577I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.49788-1.61012I$ $a=-0.311048+0.789120I$ $b=\ \ 0.253542+0.891638I$	$-8.09778+2.45577I$	0
$u=-0.49788-1.61012I$ $a=\ \ 0.129952-1.184880I$ $b=-1.06396-1.72980I$	$-8.09778+2.45577I$	0
$u=-0.088118+0.149852I$ $a=\ \ 0.33309-2.06906I$ $b=\ \ 1.243760+0.402683I$	$5.31617+1.46739I$	$2.24063+6.21713I$
$u=-0.088118+0.149852I$ $a=\ \ 10.6816-11.5410I$ $b=\ \ 0.235948-0.724246I$	$5.31617+1.46739I$	$2.24063+6.21713I$
$u=-0.088118-0.149852I$ $a=\ \ 0.33309+2.06906I$ $b=\ \ 1.243760-0.402683I$	$5.31617-1.46739I$	$2.24063-6.21713I$
$u=-0.088118-0.149852I$ $a=\ \ 10.6816+11.5410I$ $b=\ \ 0.235948+0.724246I$	$5.31617-1.46739I$	$2.24063-6.21713I$
$u=\ \ 0.144643+0.006325I$ $a=\ \ 2.37387+1.10720I$ $b=-1.226470-0.510677I$	$4.66730+7.46710I$	$-2.03060-2.52158I$
$u=\ \ 0.144643+0.006325I$ $a=\ \ 1.1804+20.8132I$ $b=-0.092665+0.683797I$	$4.66730+7.46710I$	$-2.03060-2.52158I$
$u=\ \ 0.144643-0.006325I$ $a=\ \ 2.37387-1.10720I$ $b=-1.226470+0.510677I$	$4.66730-7.46710I$	$-2.03060+2.52158I$
$u=\ \ 0.144643-0.006325I$ $a=\ \ 1.1804-20.8132I$ $b=-0.092665-0.683797I$	$4.66730-7.46710I$	$-2.03060+2.52158I$

III. $I_3^u = \langle 2.43\times 10^{13}u^{37} - 2.88\times 10^{13}u^{36} + \cdots + 6.42\times 10^{13}b + 6.87\times 10^{14},\ -1.94\times 10^{14}u^{37} + 1.11\times 10^{14}u^{36} + \cdots + 6.42\times 10^{13}a - 9.01\times 10^{14},\ u^{38} + 5u^{36} + \cdots - 71u^2 + 6\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 3.01280u^{37} - 1.72360u^{36} + \cdots - 58.9003u + 14.0308 \\ -0.378081u^{37} + 0.448702u^{36} + \cdots + 6.74398u - 10.6856 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 3.32307u^{37} - 0.184882u^{36} + \cdots - 63.9677u + 20.0354 \\ -0.479845u^{37} - 0.378081u^{36} + \cdots - 0.344018u + 6.74398 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2.78639u^{37} - 0.796764u^{36} + \cdots + 50.3434u + 2.24838 \\ 2.17230u^{37} + 1.06709u^{36} + \cdots - 24.7164u - 20.3453 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 3.39088u^{37} - 2.17230u^{36} + \cdots - 65.6443u + 24.7164 \\ -0.378081u^{37} + 0.448702u^{36} + \cdots + 6.74398u - 10.6856 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0573364u^{37} + 0.534502u^{36} + \cdots + 24.9253u - 11.3328 \\ -1.72360u^{37} - 0.912583u^{36} + \cdots + 14.0308u + 18.0768 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0573364u^{37} + 0.534502u^{36} + \cdots + 24.9253u - 11.3328 \\ -2.20345u^{37} - 0.981646u^{36} + \cdots + 13.6867u + 21.2838 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2.19500u^{37} + 1.44104u^{36} + \cdots + 35.4543u - 40.0548 \\ 0.626832u^{37} - 0.891527u^{36} + \cdots + 0.626809u + 27.6898 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.12400u^{37} + 0.479845u^{36} + \cdots + 12.9875u + 0.344018 \\ 0.139363u^{37} - 0.376224u^{36} + \cdots + 1.55622u + 13.3778 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= -\frac{60222003814599}{10707706375567}u^{36} - \frac{927366664244716}{32123119126701}u^{34} + \cdots - \frac{31107186917052254}{32123119126701}u^2 + \frac{1491502287952988}{10707706375567}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^{19} - 10u^{18} + \cdots + 43u - 6)^2$
c_2, c_8	$u^{38} + 10u^{36} + \cdots + 43u^2 + 6$
c_3	$u^{38} + 12u^{37} + \cdots + 14u + 1$
c_4, c_{10}	$u^{38} + 5u^{36} + \cdots - 71u^2 + 6$
c_5	$u^{38} - u^{37} + \cdots + 172u + 47$
c_6	$u^{38} - 3u^{36} + \cdots + 547u^2 + 96$
c_7	$u^{38} + u^{37} + \cdots - 172u + 47$
c_9	$u^{38} + 5u^{37} + \cdots - u + 1$
c_{11}	$u^{38} - 12u^{37} + \cdots - 14u + 1$
c_{12}	$u^{38} - 5u^{37} + \cdots + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^{19}+6y^{18}+\cdots-215y-36)^2$
c_2, c_8	$(y^{19}+10y^{18}+\cdots+43y+6)^2$
c_3, c_{11}	$y^{38}-24y^{37}+\cdots-26y+1$
c_4, c_{10}	$(y^{19}+5y^{18}+\cdots-71y+6)^2$
c_5, c_7	$y^{38}-27y^{37}+\cdots+12622y+2209$
c_6	$(y^{19}-3y^{18}+\cdots+547y+96)^2$
c_9, c_{12}	$y^{38}-13y^{37}+\cdots-21y+1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.368536 + 1.093010I$ $a = -0.986741 + 0.631954I$ $b = -0.940577 + 0.679042I$	$-4.21942 + 1.26411I$	$12.1206 + 15.2461I$
$u = 0.368536 - 1.093010I$ $a = -0.986741 - 0.631954I$ $b = -0.940577 - 0.679042I$	$-4.21942 - 1.26411I$	$12.1206 - 15.2461I$
$u = -0.368536 + 1.093010I$ $a = -1.394300 + 0.011872I$ $b = -2.13686 - 1.19210I$	$-4.21942 - 1.26411I$	$12.1206 - 15.2461I$
$u = -0.368536 - 1.093010I$ $a = -1.394300 - 0.011872I$ $b = -2.13686 + 1.19210I$	$-4.21942 + 1.26411I$	$12.1206 + 15.2461I$
$u = -0.013881 + 1.164430I$ $a = -0.230677 - 1.137970I$ $b = 0.942976 - 0.768703I$	$-0.60660 - 4.23103I$	$10.84352 + 5.49488I$
$u = -0.013881 - 1.164430I$ $a = -0.230677 + 1.137970I$ $b = 0.942976 + 0.768703I$	$-0.60660 + 4.23103I$	$10.84352 - 5.49488I$
$u = 0.013881 + 1.164430I$ $a = 0.56219 + 1.35923I$ $b = 0.40374 + 1.44459I$	$-0.60660 + 4.23103I$	$10.84352 - 5.49488I$
$u = 0.013881 - 1.164430I$ $a = 0.56219 - 1.35923I$ $b = 0.40374 - 1.44459I$	$-0.60660 - 4.23103I$	$10.84352 + 5.49488I$
$u = -0.759283 + 0.094992I$ $a = 0.730936 + 1.201440I$ $b = 0.431216 - 0.484111I$	$0.16259 - 3.72611I$	$6.99269 + 5.17162I$
$u = -0.759283 - 0.094992I$ $a = 0.730936 - 1.201440I$ $b = 0.431216 + 0.484111I$	$0.16259 + 3.72611I$	$6.99269 - 5.17162I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.759283 + 0.094992I$ $a = 0.436068 + 0.675604I$ $b = -0.738626 - 0.833855I$	$0.16259 + 3.72611I$	$6.99269 - 5.17162I$
$u = 0.759283 - 0.094992I$ $a = 0.436068 - 0.675604I$ $b = -0.738626 + 0.833855I$	$0.16259 - 3.72611I$	$6.99269 + 5.17162I$
$u = 0.119211 + 1.305140I$ $a = 0.510570 + 1.206620I$ $b = 0.242071 + 1.162830I$	$-1.09905 + 3.04243I$	$5.98833 - 7.64000I$
$u = 0.119211 - 1.305140I$ $a = 0.510570 - 1.206620I$ $b = 0.242071 - 1.162830I$	$-1.09905 - 3.04243I$	$5.98833 + 7.64000I$
$u = -0.119211 + 1.305140I$ $a = -0.791102 - 0.160934I$ $b = 0.921216 - 0.192699I$	$-1.09905 - 3.04243I$	$5.98833 + 7.64000I$
$u = -0.119211 - 1.305140I$ $a = -0.791102 + 0.160934I$ $b = 0.921216 + 0.192699I$	$-1.09905 + 3.04243I$	$5.98833 - 7.64000I$
$u = -1.397230 + 0.042898I$ $a = 0.050699 + 0.243992I$ $b = 0.379606 + 0.024239I$	$5.81015 - 2.87084I$	$23.5562 + 1.4672I$
$u = -1.397230 - 0.042898I$ $a = 0.050699 - 0.243992I$ $b = 0.379606 - 0.024239I$	$5.81015 + 2.87084I$	$23.5562 - 1.4672I$
$u = 1.397230 + 0.042898I$ $a = 1.61376 - 0.00003I$ $b = -1.62179 + 0.34327I$	$5.81015 + 2.87084I$	$23.5562 - 1.4672I$
$u = 1.397230 - 0.042898I$ $a = 1.61376 + 0.00003I$ $b = -1.62179 - 0.34327I$	$5.81015 - 2.87084I$	$23.5562 + 1.4672I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.562133 + 0.095497I$ $a = 0.177386 - 0.049756I$ $b = -1.134900 - 0.504327I$	$4.96687 + 7.56367I$	$22.5743 - 10.6396I$
$u = 0.562133 - 0.095497I$ $a = 0.177386 + 0.049756I$ $b = -1.134900 + 0.504327I$	$4.96687 - 7.56367I$	$22.5743 + 10.6396I$
$u = -0.562133 + 0.095497I$ $a = -1.22829 + 4.81684I$ $b = -0.071224 - 0.508369I$	$4.96687 - 7.56367I$	$22.5743 + 10.6396I$
$u = -0.562133 - 0.095497I$ $a = -1.22829 - 4.81684I$ $b = -0.071224 + 0.508369I$	$4.96687 + 7.56367I$	$22.5743 - 10.6396I$
$u = 0.07040 + 1.43087I$ $a = 0.448064 + 0.297197I$ $b = -1.095240 + 0.082567I$	$-2.58584 + 7.60431I$	$5.46655 - 8.14788I$
$u = 0.07040 - 1.43087I$ $a = 0.448064 - 0.297197I$ $b = -1.095240 - 0.082567I$	$-2.58584 - 7.60431I$	$5.46655 + 8.14788I$
$u = -0.07040 + 1.43087I$ $a = -0.472121 + 1.169250I$ $b = -0.294525 + 1.029090I$	$-2.58584 - 7.60431I$	$5.46655 + 8.14788I$
$u = -0.07040 - 1.43087I$ $a = -0.472121 - 1.169250I$ $b = -0.294525 - 1.029090I$	$-2.58584 + 7.60431I$	$5.46655 - 8.14788I$
$u = -1.45503 + 0.04243I$ $a = -1.64584 + 0.02145I$ $b = 1.43982 + 0.16028I$	$6.54210 + 1.44717I$	$14.2109 - 13.0887I$
$u = -1.45503 - 0.04243I$ $a = -1.64584 - 0.02145I$ $b = 1.43982 - 0.16028I$	$6.54210 - 1.44717I$	$14.2109 + 13.0887I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.45503 + 0.04243I$ $a = 0.168020 + 0.166232I$ $b = -0.362779 + 0.013140I$	$6.54210 - 1.44717I$	$14.2109 + 13.0887I$
$u = 1.45503 - 0.04243I$ $a = 0.168020 - 0.166232I$ $b = -0.362779 - 0.013140I$	$6.54210 + 1.44717I$	$14.2109 - 13.0887I$
$u = 0.504819 + 0.158284I$ $a = 3.15850 + 3.82239I$ $b = 0.256978 - 0.566965I$	$5.57840 + 1.68245I$	$21.0505 - 8.6684I$
$u = 0.504819 - 0.158284I$ $a = 3.15850 - 3.82239I$ $b = 0.256978 + 0.566965I$	$5.57840 - 1.68245I$	$21.0505 + 8.6684I$
$u = -0.504819 + 0.158284I$ $a = -0.072394 - 0.241315I$ $b = 1.143790 - 0.355417I$	$5.57840 - 1.68245I$	$21.0505 + 8.6684I$
$u = -0.504819 - 0.158284I$ $a = -0.072394 + 0.241315I$ $b = 1.143790 + 0.355417I$	$5.57840 + 1.68245I$	$21.0505 - 8.6684I$
$u = 1.74570I$ $a = -0.034725 + 1.007300I$ $b = -0.264899 + 1.262950I$	-7.71427	0
$u = -1.74570I$ $a = -0.034725 - 1.007300I$ $b = -0.264899 - 1.262950I$	-7.71427	0

IV. $I_1^v = \langle a,\ b-1,\ v+1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v = -1.00000$ $a = 0$ $b = 1.00000$	3.28987	12.0000

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u(u^{19}-10u^{18}+\cdots+43u-6)^2(u^{35}+17u^{34}+\cdots-405u-49)^2$ $\cdot(u^{45}+19u^{44}+\cdots+296u-100)$
c_2, c_8	$u(u^{35}-u^{34}+\cdots+13u-7)^2(u^{38}+10u^{36}+\cdots+43u^2+6)$ $\cdot(u^{45}+3u^{44}+\cdots-44u-10)$
c_3	$(u+1)(u^{38}+12u^{37}+\cdots+14u+1)(u^{45}+u^{44}+\cdots+5u-1)$ $\cdot(u^{70}+5u^{69}+\cdots-787u+338)$
c_4, c_{10}	$u(u^{35}+u^{34}+\cdots+9u-1)^2(u^{38}+5u^{36}+\cdots-71u^2+6)$ $\cdot(u^{45}-3u^{44}+\cdots-216u-50)$
c_5	$(u-1)(u^{38}-u^{37}+\cdots+172u+47)(u^{45}-u^{44}+\cdots+11u-143)$ $\cdot(u^{70}+2u^{69}+\cdots+625113u+75346)$
c_6	$u(u^{35}-4u^{33}+\cdots+10u-1)^2(u^{38}-3u^{36}+\cdots+547u^2+96)$ $\cdot(u^{45}-3u^{44}+\cdots+8824u-1928)$
c_7	$(u+1)(u^{38}+u^{37}+\cdots-172u+47)(u^{45}-u^{44}+\cdots+11u-143)$ $\cdot(u^{70}+2u^{69}+\cdots+625113u+75346)$
c_9	$(u-1)(u^{38}+5u^{37}+\cdots-u+1)(u^{45}+3u^{44}+\cdots+33u-16)$ $\cdot(u^{70}+8u^{69}+\cdots+10573u+7727)$
c_{11}	$(u-1)(u^{38}-12u^{37}+\cdots-14u+1)(u^{45}+u^{44}+\cdots+5u-1)$ $\cdot(u^{70}+5u^{69}+\cdots-787u+338)$
c_{12}	$(u+1)(u^{38}-5u^{37}+\cdots+u+1)(u^{45}+3u^{44}+\cdots+33u-16)$ $\cdot(u^{70}+8u^{69}+\cdots+10573u+7727)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y(y^{19}+6y^{18}+\cdots-215y-36)^2$ $\cdot(y^{35}+9y^{34}+\cdots-10317y-2401)^2$ $\cdot(y^{45}+15y^{44}+\cdots+417216y-10000)$
c_2, c_8	$y(y^{19}+10y^{18}+\cdots+43y+6)^2(y^{35}+17y^{34}+\cdots-405y-49)^2$ $\cdot(y^{45}+19y^{44}+\cdots+296y-100)$
c_3, c_{11}	$(y-1)(y^{38}-24y^{37}+\cdots-26y+1)(y^{45}-7y^{44}+\cdots+25y-1)$ $\cdot(y^{70}-33y^{69}+\cdots-4966725y+114244)$
c_4, c_{10}	$y(y^{19}+5y^{18}+\cdots-71y+6)^2(y^{35}+25y^{34}+\cdots+53y-1)^2$ $\cdot(y^{45}+29y^{44}+\cdots-66944y-2500)$
c_5, c_7	$(y-1)(y^{38}-27y^{37}+\cdots+12622y+2209)$ $\cdot(y^{45}+27y^{44}+\cdots-283019y-20449)$ $\cdot(y^{70}-34y^{69}+\cdots+95484723835y+5677019716)$
c_6	$y(y^{19}-3y^{18}+\cdots+547y+96)^2(y^{35}-8y^{34}+\cdots-34y-1)^2$ $\cdot(y^{45}-5y^{44}+\cdots+32639808y-3717184)$
c_9, c_{12}	$(y-1)(y^{38}-13y^{37}+\cdots-21y+1)(y^{45}+35y^{44}+\cdots-6847y-256)$ $\cdot(y^{70}-16y^{69}+\cdots+1891683685y+59706529)$