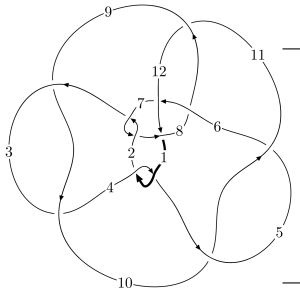
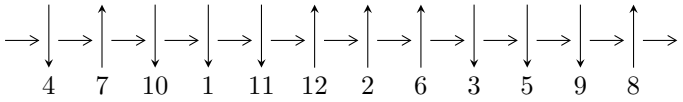
$12a_{1092}$ $(K12a_{1092})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle 2.78909 \times 10^{906} u^{150} + 1.77978 \times 10^{907} u^{149} + \cdots + 6.79585 \times 10^{909} b + 3.55880 \times 10^{912}, \\
&\quad - 2.72985 \times 10^{912} u^{150} - 1.18971 \times 10^{913} u^{149} + \cdots + 3.64126 \times 10^{915} a - 1.56273 \times 10^{918}, \\
&\quad u^{151} + 3u^{150} + \cdots - 129350u - 535807 \rangle \\
I_2^u &= \langle 1.73301 \times 10^{80} u^{53} - 1.72167 \times 10^{80} u^{52} + \cdots + 7.66015 \times 10^{80} b + 3.65973 \times 10^{81}, \\
&\quad 4.63544 \times 10^{81} u^{53} - 1.34440 \times 10^{82} u^{52} + \cdots + 8.42616 \times 10^{81} a + 9.73365 \times 10^{82},\ u^{54} - 2u^{53} + \cdots - 43u + \\
I_3^u &= \langle -282584245189 u^{23} - 141467030199 u^{22} + \cdots + 3582237958296 b + 1522929087540, \\
&\quad - 1250731616591 u^{23} - 362681281151 u^{22} + \cdots + 3582237958296 a + 7441470529330, \\
&\quad u^{24} - 6u^{22} + \cdots - 11u + 4 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 229 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. $\boldsymbol{I_1^u = \langle 2.79 \times 10^{906} u^{150} + 1.78 \times 10^{907} u^{149} + \cdots + 6.80 \times 10^{909} b + 3.56 \times 10^{912},\ -2.73 \times 10^{912} u^{150} - 1.19 \times 10^{913} u^{149} + \cdots + 3.64 \times 10^{915} a - 1.56 \times 10^{918},\ u^{151} + 3u^{150} + \cdots - 129350u - 535807 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.000749699u^{150} + 0.00326730u^{149} + \cdots + 363.834u + 429.173 \\ -0.000410410u^{150} - 0.00261892u^{149} + \cdots - 257.671u - 523.672 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.000150529u^{150} - 0.000418998u^{149} + \cdots - 47.7340u + 0.0445641 \\ 0.000645914u^{150} + 0.00293879u^{149} + \cdots + 332.117u + 373.399 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.000495385u^{150} + 0.00251979u^{149} + \cdots + 284.383u + 373.444 \\ 0.000645914u^{150} + 0.00293879u^{149} + \cdots + 332.117u + 373.399 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.000269832u^{150} - 0.00118694u^{149} + \cdots - 143.133u - 102.321 \\ -0.000513616u^{150} - 0.00166823u^{149} + \cdots - 213.719u - 8.85896 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.000393228u^{150} - 0.00161135u^{149} + \cdots - 206.157u - 152.825 \\ -0.000370259u^{150} - 0.00151256u^{149} + \cdots - 145.856u - 181.818 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.00100894u^{150} - 0.00351848u^{149} + \cdots - 414.637u - 216.564 \\ -0.000110272u^{150} - 0.0000858943u^{149} + \cdots + 7.81534u + 60.3391 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.000238467u^{150} - 0.00104981u^{149} + \cdots - 120.209u - 81.4658 \\ 0.000692938u^{150} + 0.00243784u^{149} + \cdots + 299.809u + 124.677 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.000237567u^{150} + 0.000270994u^{149} + \cdots + 60.1651u - 170.428 \\ -0.000358262u^{150} - 0.00110698u^{149} + \cdots - 153.461u + 24.8154 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.00312249u^{150} + 0.0113018u^{149} + \cdots + 1116.10u + 438.520$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{151} - 6u^{150} + \cdots + 570u + 89$
c_2, c_7	$u^{151} + u^{150} + \cdots - 1422u + 995$
c_3, c_9	$u^{151} + 25u^{150} + \cdots + 809488384u + 28909568$
c_5, c_{10}	$u^{151} - 3u^{150} + \cdots - 129350u + 535807$
c_6	$u^{151} + u^{150} + \cdots + 13u + 1$
c_8	$u^{151} + 29u^{150} + \cdots - 1060088u - 59168$
c_{11}	$u^{151} - 11u^{150} + \cdots + 13999u - 2101$
c_{12}	$u^{151} - 5u^{150} + \cdots + 5134178638u + 454373173$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{151} + 70y^{150} + \cdots + 148680y - 7921$
c_2, c_7	$y^{151} + 109y^{150} + \cdots - 58402276y - 990025$
c_3, c_9	$y^{151} - 79y^{150} + \cdots + 3044650659086336y - 835763121946624$
c_5, c_{10}	$y^{151} - 131y^{150} + \cdots + 3528966668166y - 287089141249$
c_6	$y^{151} - 9y^{150} + \cdots + 91y - 1$
c_8	$y^{151} - y^{150} + \cdots - 239762712768y - 3500852224$
c_{11}	$y^{151} - 49y^{150} + \cdots + 489292611y - 4414201$
c_{12}	$y^{151} + 11y^{150} + \cdots - 6.12 \times 10^{18}y - 2.06 \times 10^{17}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.989621+0.201988I$ $a=-1.330770-0.209572I$ $b=\ \ 1.031990-0.191384I$	$-5.97670+0.32378I$	0
$u=-0.989621-0.201988I$ $a=-1.330770+0.209572I$ $b=\ \ 1.031990+0.191384I$	$-5.97670-0.32378I$	0
$u=\ \ 0.195647+0.992750I$ $a=\ \ 0.101560+0.965208I$ $b=-1.021620+0.241159I$	$-4.65085-8.19139I$	0
$u=\ \ 0.195647-0.992750I$ $a=\ \ 0.101560-0.965208I$ $b=-1.021620-0.241159I$	$-4.65085+8.19139I$	0
$u=-1.029590+0.146232I$ $a=\ \ 0.337774+0.748832I$ $b=-1.057260-0.016984I$	$-0.64871+4.01069I$	0
$u=-1.029590-0.146232I$ $a=\ \ 0.337774-0.748832I$ $b=-1.057260+0.016984I$	$-0.64871-4.01069I$	0
$u=\ \ 0.924459+0.487330I$ $a=\ \ 0.153325+0.004777I$ $b=-2.63013+1.23160I$	$-5.67979-7.53610I$	0
$u=\ \ 0.924459-0.487330I$ $a=\ \ 0.153325-0.004777I$ $b=-2.63013-1.23160I$	$-5.67979+7.53610I$	0
$u=-0.842144+0.619436I$ $a=-0.603416+0.781620I$ $b=\ \ 1.18333+0.95315I$	$3.29033+4.04562I$	0
$u=-0.842144-0.619436I$ $a=-0.603416-0.781620I$ $b=\ \ 1.18333-0.95315I$	$3.29033-4.04562I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.932288+0.136389I$ $a=\ \ 0.095187-1.404090I$ $b=\ \ 0.276146-1.320560I$	$-0.54133-3.45770I$	0
$u=-0.932288-0.136389I$ $a=\ \ 0.095187+1.404090I$ $b=\ \ 0.276146+1.320560I$	$-0.54133+3.45770I$	0
$u=-0.785433+0.512996I$ $a=\ \ 0.669447-0.703718I$ $b=-1.53714-0.24161I$	$3.43539+0.47178I$	0
$u=-0.785433-0.512996I$ $a=\ \ 0.669447+0.703718I$ $b=-1.53714+0.24161I$	$3.43539-0.47178I$	0
$u=-0.040993+0.918125I$ $a=-1.155170+0.309329I$ $b=\ \ 1.252510+0.591347I$	$4.02575-3.19914I$	0
$u=-0.040993-0.918125I$ $a=-1.155170-0.309329I$ $b=\ \ 1.252510-0.591347I$	$4.02575+3.19914I$	0
$u=-0.014299+0.917280I$ $a=\ \ 1.270090-0.264676I$ $b=-1.45701+0.52769I$	$2.48346-2.86698I$	0
$u=-0.014299-0.917280I$ $a=\ \ 1.270090+0.264676I$ $b=-1.45701-0.52769I$	$2.48346+2.86698I$	0
$u=\ \ 1.086560+0.180897I$ $a=\ \ 0.738300+0.773623I$ $b=-2.00520+1.01112I$	$-2.19680-2.99995I$	0
$u=\ \ 1.086560-0.180897I$ $a=\ \ 0.738300-0.773623I$ $b=-2.00520-1.01112I$	$-2.19680+2.99995I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.608640 + 0.648787I$ $a = 1.235550 + 0.508695I$ $b = -0.797078 - 0.409202I$	$1.65331 + 0.22737I$	0
$u = 0.608640 - 0.648787I$ $a = 1.235550 - 0.508695I$ $b = -0.797078 + 0.409202I$	$1.65331 - 0.22737I$	0
$u = 1.131570 + 0.079430I$ $a = 0.557842 + 0.718049I$ $b = -2.53566 - 0.62292I$	$-2.15261 - 2.28421I$	0
$u = 1.131570 - 0.079430I$ $a = 0.557842 - 0.718049I$ $b = -2.53566 + 0.62292I$	$-2.15261 + 2.28421I$	0
$u = -1.086910 + 0.325244I$ $a = -0.68020 + 1.38185I$ $b = 0.555995 + 1.041930I$	$0.11559 + 8.78908I$	0
$u = -1.086910 - 0.325244I$ $a = -0.68020 - 1.38185I$ $b = 0.555995 - 1.041930I$	$0.11559 - 8.78908I$	0
$u = -1.033810 + 0.478244I$ $a = 0.934375 - 0.280354I$ $b = -1.74148 - 0.45747I$	$-1.16547 + 7.92072I$	0
$u = -1.033810 - 0.478244I$ $a = 0.934375 + 0.280354I$ $b = -1.74148 + 0.45747I$	$-1.16547 - 7.92072I$	0
$u = -0.239480 + 0.797698I$ $a = -1.66465 - 0.06518I$ $b = 1.165070 - 0.290693I$	$1.84287 + 8.78656I$	0
$u = -0.239480 - 0.797698I$ $a = -1.66465 + 0.06518I$ $b = 1.165070 + 0.290693I$	$1.84287 - 8.78656I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.695070+0.939006I$ $a=\ \ 1.090170-0.024159I$ $b=-1.56812-0.52401I$	$0.79650+2.81303I$	0
$u=-0.695070-0.939006I$ $a=\ \ 1.090170+0.024159I$ $b=-1.56812+0.52401I$	$0.79650-2.81303I$	0
$u=\ \ 0.419965+1.101130I$ $a=\ \ 1.234950+0.047860I$ $b=-1.47189+0.37047I$	$1.81514-1.66518I$	0
$u=\ \ 0.419965-1.101130I$ $a=\ \ 1.234950-0.047860I$ $b=-1.47189-0.37047I$	$1.81514+1.66518I$	0
$u=\ \ 1.186160+0.018466I$ $a=-0.336979-0.813641I$ $b=\ \ 1.049530-0.539248I$	$-1.116100-0.815767I$	0
$u=\ \ 1.186160-0.018466I$ $a=-0.336979+0.813641I$ $b=\ \ 1.049530+0.539248I$	$-1.116100+0.815767I$	0
$u=\ \ 1.185190+0.081323I$ $a=-1.178090+0.567113I$ $b=\ \ 0.0118928-0.1371670I$	$-9.18886-1.94213I$	0
$u=\ \ 1.185190-0.081323I$ $a=-1.178090-0.567113I$ $b=\ \ 0.0118928+0.1371670I$	$-9.18886+1.94213I$	0
$u=\ \ 1.199840+0.016721I$ $a=\ \ 0.569267+0.694885I$ $b=-0.975285-0.617361I$	$-2.62660-2.23776I$	0
$u=\ \ 1.199840-0.016721I$ $a=\ \ 0.569267-0.694885I$ $b=-0.975285+0.617361I$	$-2.62660+2.23776I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.628319+1.025400I$ $a=\ \ 1.077340-0.573236I$ $b=-1.214200+0.231562I$	$1.58459-4.07369I$	0
$u=-0.628319-1.025400I$ $a=\ \ 1.077340+0.573236I$ $b=-1.214200-0.231562I$	$1.58459+4.07369I$	0
$u=\ \ 1.178530+0.265679I$ $a=-0.966890-0.906870I$ $b=\ \ 1.26949-1.06631I$	$-6.64560-10.08510I$	0
$u=\ \ 1.178530-0.265679I$ $a=-0.966890+0.906870I$ $b=\ \ 1.26949+1.06631I$	$-6.64560+10.08510I$	0
$u=\ \ 0.087688+0.785135I$ $a=\ \ 0.101352-1.238340I$ $b=\ \ 0.235453-0.079604I$	$-2.35988+3.71556I$	0
$u=\ \ 0.087688-0.785135I$ $a=\ \ 0.101352+1.238340I$ $b=\ \ 0.235453+0.079604I$	$-2.35988-3.71556I$	0
$u=-1.210980+0.022993I$ $a=\ \ 0.398547-0.779594I$ $b=-1.55343-2.07829I$	$-10.10550-1.91827I$	0
$u=-1.210980-0.022993I$ $a=\ \ 0.398547+0.779594I$ $b=-1.55343+2.07829I$	$-10.10550+1.91827I$	0
$u=-1.203270+0.220242I$ $a=-0.798951+0.893305I$ $b=\ \ 1.23314+1.07555I$	$-3.55896+5.56320I$	0
$u=-1.203270-0.220242I$ $a=-0.798951-0.893305I$ $b=\ \ 1.23314-1.07555I$	$-3.55896-5.56320I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.191840 + 0.289597I$ $a = -0.313367 - 0.780595I$ $b = 1.60916 - 0.38432I$	$0.176558 - 0.397747I$	0
$u = 1.191840 - 0.289597I$ $a = -0.313367 + 0.780595I$ $b = 1.60916 + 0.38432I$	$0.176558 + 0.397747I$	0
$u = -1.180870 + 0.334257I$ $a = -0.687722 - 0.516559I$ $b = 1.034490 - 0.173996I$	$-6.34709 - 0.01164I$	0
$u = -1.180870 - 0.334257I$ $a = -0.687722 + 0.516559I$ $b = 1.034490 + 0.173996I$	$-6.34709 + 0.01164I$	0
$u = -0.229732 + 0.730854I$ $a = -0.91153 + 1.14541I$ $b = 1.46688 - 0.17101I$	$-2.70877 - 7.53291I$	0
$u = -0.229732 - 0.730854I$ $a = -0.91153 - 1.14541I$ $b = 1.46688 + 0.17101I$	$-2.70877 + 7.53291I$	0
$u = 1.186400 + 0.364122I$ $a = 0.502048 - 0.437452I$ $b = -1.59308 + 0.10936I$	$-5.72474 - 7.93365I$	0
$u = 1.186400 - 0.364122I$ $a = 0.502048 + 0.437452I$ $b = -1.59308 - 0.10936I$	$-5.72474 + 7.93365I$	0
$u = 1.26871$ $a = 0.517408$ $b = 0.241829$	-3.38525	0
$u = -1.263770 + 0.123102I$ $a = -0.393794 + 0.673452I$ $b = 2.02171 + 0.17657I$	$-0.01782 + 1.69227I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.263770-0.123102I$ $a=-0.393794-0.673452I$ $b=\ \ 2.02171-0.17657I$	$-0.01782-1.69227I$	0
$u=\ \ 0.103548+0.715178I$ $a=\ \ 0.864427+1.076480I$ $b=-0.936398-0.457335I$	$-3.30497-2.46768I$	0
$u=\ \ 0.103548-0.715178I$ $a=\ \ 0.864427-1.076480I$ $b=-0.936398+0.457335I$	$-3.30497+2.46768I$	0
$u=-1.227180+0.387109I$ $a=\ \ 0.779630-0.661051I$ $b=-1.88535-1.29000I$	$-5.86046+11.71370I$	0
$u=-1.227180-0.387109I$ $a=\ \ 0.779630+0.661051I$ $b=-1.88535+1.29000I$	$-5.86046-11.71370I$	0
$u=\ \ 0.635202+0.316199I$ $a=\ \ 0.053034-1.161830I$ $b=\ \ 1.233790-0.169281I$	$-0.915896+0.914335I$	0
$u=\ \ 0.635202-0.316199I$ $a=\ \ 0.053034+1.161830I$ $b=\ \ 1.233790+0.169281I$	$-0.915896-0.914335I$	0
$u=-1.277450+0.233343I$ $a=\ \ 0.625894+0.527686I$ $b=\ \ 0.012172-0.347496I$	$-7.64715+5.75381I$	0
$u=-1.277450-0.233343I$ $a=\ \ 0.625894-0.527686I$ $b=\ \ 0.012172+0.347496I$	$-7.64715-5.75381I$	0
$u=\ \ 0.666922+0.200410I$ $a=\ \ 0.261037-1.159800I$ $b=\ \ 1.26351-0.81653I$	$-0.96603+1.13617I$	$12.53695+0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.666922 - 0.200410I$ $a = 0.261037 + 1.159800I$ $b = 1.26351 + 0.81653I$	$-0.96603 - 1.13617I$	$12.53695 + 0.I$
$u = 0.137805 + 0.680821I$ $a = 1.74045 + 0.11392I$ $b = -1.48404 + 0.43443I$	$3.41391 - 3.17991I$	$5.95844 + 8.12878I$
$u = 0.137805 - 0.680821I$ $a = 1.74045 - 0.11392I$ $b = -1.48404 - 0.43443I$	$3.41391 + 3.17991I$	$5.95844 - 8.12878I$
$u = 1.116370 + 0.736754I$ $a = -0.450058 - 0.847177I$ $b = 1.094290 - 0.246895I$	$-0.42705 - 4.70858I$	0
$u = 1.116370 - 0.736754I$ $a = -0.450058 + 0.847177I$ $b = 1.094290 + 0.246895I$	$-0.42705 + 4.70858I$	0
$u = 1.266710 + 0.463259I$ $a = -0.464537 - 0.479341I$ $b = 1.44687 - 0.31122I$	$-1.58687 - 2.36382I$	0
$u = 1.266710 - 0.463259I$ $a = -0.464537 + 0.479341I$ $b = 1.44687 + 0.31122I$	$-1.58687 + 2.36382I$	0
$u = -1.344700 + 0.117596I$ $a = -0.881978 + 0.016553I$ $b = 0.215971 - 0.056476I$	$-6.72520 + 1.37500I$	0
$u = -1.344700 - 0.117596I$ $a = -0.881978 - 0.016553I$ $b = 0.215971 + 0.056476I$	$-6.72520 - 1.37500I$	0
$u = 1.348120 + 0.072768I$ $a = -0.411708 + 0.644962I$ $b = 1.89920 + 1.58101I$	$-8.21282 + 4.76264I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.348120 - 0.072768I$ $a = -0.411708 - 0.644962I$ $b = 1.89920 - 1.58101I$	$-8.21282 - 4.76264I$	0
$u = -1.351950 + 0.017095I$ $a = -0.430479 - 0.932062I$ $b = 0.839409 - 0.751971I$	$-2.00215 - 5.67221I$	0
$u = -1.351950 - 0.017095I$ $a = -0.430479 + 0.932062I$ $b = 0.839409 + 0.751971I$	$-2.00215 + 5.67221I$	0
$u = 1.322100 + 0.303321I$ $a = -0.605950 - 0.791118I$ $b = 1.50324 - 1.59347I$	$-4.42620 - 9.52734I$	0
$u = 1.322100 - 0.303321I$ $a = -0.605950 + 0.791118I$ $b = 1.50324 + 1.59347I$	$-4.42620 + 9.52734I$	0
$u = -1.340000 + 0.231429I$ $a = -0.745977 + 0.744326I$ $b = 1.142940 + 0.832721I$	$-4.35348 + 5.51402I$	0
$u = -1.340000 - 0.231429I$ $a = -0.745977 - 0.744326I$ $b = 1.142940 - 0.832721I$	$-4.35348 - 5.51402I$	0
$u = -1.301210 + 0.454938I$ $a = 0.572759 - 0.516468I$ $b = -1.72100 - 0.34050I$	$0.02293 + 8.11047I$	0
$u = -1.301210 - 0.454938I$ $a = 0.572759 + 0.516468I$ $b = -1.72100 + 0.34050I$	$0.02293 - 8.11047I$	0
$u = -1.331420 + 0.368886I$ $a = -0.666291 + 0.871423I$ $b = 1.29321 + 1.21938I$	$-1.79274 + 7.42457I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.331420-0.368886I$ $a=-0.666291-0.871423I$ $b=1.29321-1.21938I$	$-1.79274-7.42457I$	0
$u=0.026405+0.616604I$ $a=1.45663+0.62859I$ $b=-1.62245-0.72311I$	$-0.20238+6.06846I$	$3.67652-7.39581I$
$u=0.026405-0.616604I$ $a=1.45663-0.62859I$ $b=-1.62245+0.72311I$	$-0.20238-6.06846I$	$3.67652+7.39581I$
$u=-0.517747+0.332482I$ $a=-0.603630+0.433052I$ $b=-0.498698-0.436422I$	$-0.28235+4.11135I$	$-4.20800-7.14416I$
$u=-0.517747-0.332482I$ $a=-0.603630-0.433052I$ $b=-0.498698+0.436422I$	$-0.28235-4.11135I$	$-4.20800+7.14416I$
$u=0.352455+0.502252I$ $a=0.95196+1.92702I$ $b=-0.856412-0.465099I$	$-4.07138+7.13413I$	$-5.64153-7.85475I$
$u=0.352455-0.502252I$ $a=0.95196-1.92702I$ $b=-0.856412+0.465099I$	$-4.07138-7.13413I$	$-5.64153+7.85475I$
$u=0.561878+0.180974I$ $a=0.582727+0.163441I$ $b=0.502900+0.322357I$	$-1.137050-0.709680I$	$-6.09225+1.45743I$
$u=0.561878-0.180974I$ $a=0.582727-0.163441I$ $b=0.502900-0.322357I$	$-1.137050+0.709680I$	$-6.09225-1.45743I$
$u=-0.240479+0.528061I$ $a=0.278878+0.438973I$ $b=-0.198193+0.249502I$	$1.26193-0.96699I$	$3.36748+0.94788I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.240479-0.528061I$ $a=\ \ 0.278878-0.438973I$ $b=-0.198193-0.249502I$	$1.26193+0.96699I$	$3.36748-0.94788I$
$u=\ \ 0.22398+1.40552I$ $a=-0.882443+0.308104I$ $b=\ \ 1.80574-0.35041I$	$-2.06865-13.83450I$	0
$u=\ \ 0.22398-1.40552I$ $a=-0.882443-0.308104I$ $b=\ \ 1.80574+0.35041I$	$-2.06865+13.83450I$	0
$u=\ \ 1.42459+0.06763I$ $a=-0.614236+0.328732I$ $b=-0.067413+0.198167I$	$-8.50745+4.93640I$	0
$u=\ \ 1.42459-0.06763I$ $a=-0.614236-0.328732I$ $b=-0.067413-0.198167I$	$-8.50745-4.93640I$	0
$u=-1.40351+0.37924I$ $a=-0.669391+0.614115I$ $b=\ \ 1.42576+0.39497I$	$-4.26323+6.00112I$	0
$u=-1.40351-0.37924I$ $a=-0.669391-0.614115I$ $b=\ \ 1.42576-0.39497I$	$-4.26323-6.00112I$	0
$u=\ \ 1.43301+0.37070I$ $a=\ \ 0.587857+0.631114I$ $b=-1.72880+0.15451I$	$-3.51012-13.13470I$	0
$u=\ \ 1.43301-0.37070I$ $a=\ \ 0.587857-0.631114I$ $b=-1.72880-0.15451I$	$-3.51012+13.13470I$	0
$u=\ \ 1.44117+0.35913I$ $a=\ \ 0.614950-0.387708I$ $b=-0.0649504-0.0856047I$	$-6.48069-7.66786I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.44117 - 0.35913I$ $a = 0.614950 + 0.387708I$ $b = -0.0649504 + 0.0856047I$	$-6.48069 + 7.66786I$	0
$u = -1.42027 + 0.45853I$ $a = 0.673911 + 0.617842I$ $b = -0.0913554 - 0.0274073I$	$-9.7118 + 13.4451I$	0
$u = -1.42027 - 0.45853I$ $a = 0.673911 - 0.617842I$ $b = -0.0913554 + 0.0274073I$	$-9.7118 - 13.4451I$	0
$u = -1.40105 + 0.53521I$ $a = 0.569791 - 0.489838I$ $b = -1.78754 - 1.86093I$	$-10.62830 + 7.42736I$	0
$u = -1.40105 - 0.53521I$ $a = 0.569791 + 0.489838I$ $b = -1.78754 + 1.86093I$	$-10.62830 - 7.42736I$	0
$u = 1.35137 + 0.65290I$ $a = -0.528261 + 0.791645I$ $b = -0.021432 + 0.178966I$	$-10.06200 - 3.93216I$	0
$u = 1.35137 - 0.65290I$ $a = -0.528261 - 0.791645I$ $b = -0.021432 - 0.178966I$	$-10.06200 + 3.93216I$	0
$u = -0.20719 + 1.48996I$ $a = -0.710545 - 0.222258I$ $b = 2.00454 + 0.39262I$	$1.42160 + 6.81005I$	0
$u = -0.20719 - 1.48996I$ $a = -0.710545 + 0.222258I$ $b = 2.00454 - 0.39262I$	$1.42160 - 6.81005I$	0
$u = 0.021373 + 0.487123I$ $a = -0.03131 + 1.52211I$ $b = 1.47558 + 0.53439I$	$-6.84707 - 1.57322I$	$-11.20662 + 3.99424I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.021373 - 0.487123I$ $a = -0.03131 - 1.52211I$ $b = 1.47558 - 0.53439I$	$-6.84707 + 1.57322I$	$-11.20662 - 3.99424I$
$u = 0.423933 + 0.232833I$ $a = 1.197130 + 0.084477I$ $b = 0.221878 + 0.656554I$	$-1.24682 - 1.15343I$	$-2.63294 + 5.49737I$
$u = 0.423933 - 0.232833I$ $a = 1.197130 - 0.084477I$ $b = 0.221878 - 0.656554I$	$-1.24682 + 1.15343I$	$-2.63294 - 5.49737I$
$u = -1.52130 + 0.01187I$ $a = 0.262601 + 0.518135I$ $b = -0.081759 - 0.535539I$	$-10.73120 - 5.55715I$	0
$u = -1.52130 - 0.01187I$ $a = 0.262601 - 0.518135I$ $b = -0.081759 + 0.535539I$	$-10.73120 + 5.55715I$	0
$u = -0.452519 + 0.091194I$ $a = -0.89989 + 1.51014I$ $b = -0.666509 - 0.341622I$	$-0.23151 + 4.11735I$	$-4.65728 - 6.18703I$
$u = -0.452519 - 0.091194I$ $a = -0.89989 - 1.51014I$ $b = -0.666509 + 0.341622I$	$-0.23151 - 4.11735I$	$-4.65728 + 6.18703I$
$u = 0.49169 + 1.46138I$ $a = 0.544485 + 0.566434I$ $b = -1.49887 + 0.03397I$	$-4.49884 + 3.03697I$	0
$u = 0.49169 - 1.46138I$ $a = 0.544485 - 0.566434I$ $b = -1.49887 - 0.03397I$	$-4.49884 - 3.03697I$	0
$u = 1.56061 + 0.10706I$ $a = -0.116307 + 0.246242I$ $b = 0.016091 - 0.478918I$	$-7.80280 - 5.42649I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.56061 - 0.10706I$ $a = -0.116307 - 0.246242I$ $b = 0.016091 + 0.478918I$	$-7.80280 + 5.42649I$	0
$u = 1.49158 + 0.57501I$ $a = 0.659165 + 0.548921I$ $b = -1.71740 + 1.40334I$	$-3.8756 - 13.7118I$	0
$u = 1.49158 - 0.57501I$ $a = 0.659165 - 0.548921I$ $b = -1.71740 - 1.40334I$	$-3.8756 + 13.7118I$	0
$u = -0.221972 + 0.322484I$ $a = 1.93378 - 1.50615I$ $b = -1.41122 - 0.44461I$	$3.31418 - 0.17339I$	$5.19920 - 0.83619I$
$u = -0.221972 - 0.322484I$ $a = 1.93378 + 1.50615I$ $b = -1.41122 + 0.44461I$	$3.31418 + 0.17339I$	$5.19920 + 0.83619I$
$u = -1.51370 + 0.57178I$ $a = 0.731304 - 0.540077I$ $b = -1.81834 - 1.21173I$	$-7.4956 + 20.6334I$	0
$u = -1.51370 - 0.57178I$ $a = 0.731304 + 0.540077I$ $b = -1.81834 + 1.21173I$	$-7.4956 - 20.6334I$	0
$u = -1.59809 + 0.35010I$ $a = 0.244082 + 0.485375I$ $b = 0.207672 + 0.051096I$	$-11.60660 + 3.02641I$	0
$u = -1.59809 - 0.35010I$ $a = 0.244082 - 0.485375I$ $b = 0.207672 - 0.051096I$	$-11.60660 - 3.02641I$	0
$u = 1.66903 + 0.00947I$ $a = -0.372767 + 0.521914I$ $b = 0.554735 - 0.138348I$	$-8.12071 + 0.05756I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.66903 - 0.00947I$ $a = -0.372767 - 0.521914I$ $b = 0.554735 + 0.138348I$	$-8.12071 - 0.05756I$	0
$u = 0.146949 + 0.294093I$ $a = 3.30081 + 0.29583I$ $b = -0.066100 + 0.467977I$	$0.26390 - 2.58724I$	$-2.45185 + 7.71917I$
$u = 0.146949 - 0.294093I$ $a = 3.30081 - 0.29583I$ $b = -0.066100 - 0.467977I$	$0.26390 + 2.58724I$	$-2.45185 - 7.71917I$
$u = 1.52987 + 0.72491I$ $a = -0.748445 - 0.432351I$ $b = 1.80741 - 1.11732I$	$-8.31101 - 11.29300I$	0
$u = 1.52987 - 0.72491I$ $a = -0.748445 + 0.432351I$ $b = 1.80741 + 1.11732I$	$-8.31101 + 11.29300I$	0
$u = -1.82271 + 0.17464I$ $a = -0.094534 + 0.264656I$ $b = 1.025390 + 0.727058I$	$-6.10859 - 2.77337I$	0
$u = -1.82271 - 0.17464I$ $a = -0.094534 - 0.264656I$ $b = 1.025390 - 0.727058I$	$-6.10859 + 2.77337I$	0
$u = -1.78794 + 0.56607I$ $a = -0.453249 + 0.519386I$ $b = 1.49953 + 1.67761I$	$-2.89566 + 6.30471I$	0
$u = -1.78794 - 0.56607I$ $a = -0.453249 - 0.519386I$ $b = 1.49953 - 1.67761I$	$-2.89566 - 6.30471I$	0
$u = 2.22546 + 1.00168I$ $a = 0.020391 + 0.422713I$ $b = -0.626720 + 1.183580I$	$-6.23265 + 4.55035I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$2.22546-1.00168I$		
$a=$	$0.020391-0.422713I$	$-6.23265-4.55035I$	0
$b=$	$-0.626720-1.183580I$		

II. $I_2^u =$
$\langle \mathbf{1.73\times10^{80}u^{53}-1.72\times10^{80}u^{52}+\cdots+7.66\times10^{80}b+3.66\times10^{81},\ 4.64\times10^{81}u^{53}-1.34\times10^{82}u^{52}+\cdots+8.43\times10^{81}a+9.73\times10^{82},\ u^{54}-2u^{53}+\cdots-43u+11}\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.550125u^{53} + 1.59550u^{52} + \cdots + 75.8369u - 11.5517 \\ -0.226238u^{53} + 0.224757u^{52} + \cdots + 22.7969u - 4.77763 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0179852u^{53} - 0.220241u^{52} + \cdots + 8.91263u - 5.48036 \\ -0.559122u^{53} + 1.48374u^{52} + \cdots + 49.8553u - 8.31330 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.577107u^{53} + 1.26350u^{52} + \cdots + 58.7680u - 13.7937 \\ -0.559122u^{53} + 1.48374u^{52} + \cdots + 49.8553u - 8.31330 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.01420u^{53} + 2.83380u^{52} + \cdots + 56.3665u - 6.85048 \\ -0.866129u^{53} + 2.50276u^{52} + \cdots + 66.4864u - 14.0988 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.0432115u^{53} + 0.378779u^{52} + \cdots + 28.3933u - 7.22391 \\ 0.237289u^{53} - 0.775323u^{52} + \cdots - 28.4938u + 4.96330 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.123822u^{53} - 0.319543u^{52} + \cdots - 43.2630u + 10.3572 \\ 0.0480234u^{53} - 0.0717246u^{52} + \cdots + 13.4747u - 1.55193 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.22376u^{53} - 3.16315u^{52} + \cdots - 50.5427u + 14.6313 \\ -0.991266u^{53} + 2.26787u^{52} + \cdots + 78.9799u - 15.5513 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.149293u^{53} + 0.465092u^{52} + \cdots - 7.46212u + 5.90278 \\ -1.33911u^{53} + 3.88609u^{52} + \cdots + 93.3289u - 19.8243 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 18.2365u^{53} - 51.8074u^{52} + \cdots - 935.221u + 187.588$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{54} - 7u^{53} + \cdots + u + 1$
c_2	$u^{54} + 23u^{52} + \cdots + u + 1$
c_3	$u^{54} - 11u^{52} + \cdots + 2u + 1$
c_4	$u^{54} + 7u^{53} + \cdots - u + 1$
c_5	$u^{54} + 2u^{53} + \cdots + 43u + 11$
c_6	$u^{54} - 4u^{52} + \cdots + 22u + 1$
c_7	$u^{54} + 23u^{52} + \cdots - u + 1$
c_8	$u^{54} + 6u^{53} + \cdots + 11u^2 + 1$
c_9	$u^{54} - 11u^{52} + \cdots - 2u + 1$
c_{10}	$u^{54} - 2u^{53} + \cdots - 43u + 11$
c_{11}	$u^{54} + 8u^{53} + \cdots + 10u + 1$
c_{12}	$u^{54} - 10u^{52} + \cdots + 53u + 25$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{54} + 23y^{53} + \cdots + 51y + 1$
c_2, c_7	$y^{54} + 46y^{53} + \cdots + 43y + 1$
c_3, c_9	$y^{54} - 22y^{53} + \cdots - 42y + 1$
c_5, c_{10}	$y^{54} - 50y^{53} + \cdots + 1605y + 121$
c_6	$y^{54} - 8y^{53} + \cdots - 172y + 1$
c_8	$y^{54} - 22y^{53} + \cdots + 22y + 1$
c_{11}	$y^{54} - 32y^{53} + \cdots - 44y + 1$
c_{12}	$y^{54} - 20y^{53} + \cdots + 2341y + 625$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.513264 + 0.851420I$ $a = 1.292820 + 0.192167I$ $b = -1.40319 + 0.42051I$	$2.40516 - 2.00233I$	0
$u = 0.513264 - 0.851420I$ $a = 1.292820 - 0.192167I$ $b = -1.40319 - 0.42051I$	$2.40516 + 2.00233I$	0
$u = 0.520338 + 0.842383I$ $a = 0.850067 + 0.491839I$ $b = -1.36979 + 1.23055I$	$1.66717 - 4.10008I$	0
$u = 0.520338 - 0.842383I$ $a = 0.850067 - 0.491839I$ $b = -1.36979 - 1.23055I$	$1.66717 + 4.10008I$	0
$u = 0.905335 + 0.358617I$ $a = -1.147580 + 0.114594I$ $b = 1.62523 - 0.21126I$	$-7.24367 + 0.28503I$	$-13.59848 + 0.I$
$u = 0.905335 - 0.358617I$ $a = -1.147580 - 0.114594I$ $b = 1.62523 + 0.21126I$	$-7.24367 - 0.28503I$	$-13.59848 + 0.I$
$u = -0.920400 + 0.488314I$ $a = 0.406915 - 0.270376I$ $b = -3.12743 - 1.55706I$	$-5.51858 + 7.77375I$	0
$u = -0.920400 - 0.488314I$ $a = 0.406915 + 0.270376I$ $b = -3.12743 + 1.55706I$	$-5.51858 - 7.77375I$	0
$u = 0.847239 + 0.436210I$ $a = -0.464072 - 1.282730I$ $b = 0.368635 - 0.318087I$	$1.61241 - 3.03624I$	0
$u = 0.847239 - 0.436210I$ $a = -0.464072 + 1.282730I$ $b = 0.368635 + 0.318087I$	$1.61241 + 3.03624I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.307707+0.833393I$ $a=\ \ 1.36517-0.53263I$ $b=-1.202610+0.435267I$	$1.69841-3.37164I$	$-2.85777+1.55400I$
$u=-0.307707-0.833393I$ $a=\ \ 1.36517+0.53263I$ $b=-1.202610-0.435267I$	$1.69841+3.37164I$	$-2.85777-1.55400I$
$u=-0.845157+0.253248I$ $a=-1.58494-0.56416I$ $b=\ \ 0.932686-0.134820I$	$-5.48624+1.19435I$	$-2.00000-5.45166I$
$u=-0.845157-0.253248I$ $a=-1.58494+0.56416I$ $b=\ \ 0.932686+0.134820I$	$-5.48624-1.19435I$	$-2.00000+5.45166I$
$u=-1.143780+0.080707I$ $a=-0.551587+0.709573I$ $b=\ \ 2.36650-0.58212I$	$-2.17626+2.28358I$	0
$u=-1.143780-0.080707I$ $a=-0.551587-0.709573I$ $b=\ \ 2.36650+0.58212I$	$-2.17626-2.28358I$	0
$u=-0.785428+0.267544I$ $a=-1.03335+1.62154I$ $b=\ \ 0.129745+0.230870I$	$0.57451+7.95216I$	$-2.79100-4.69254I$
$u=-0.785428-0.267544I$ $a=-1.03335-1.62154I$ $b=\ \ 0.129745-0.230870I$	$0.57451-7.95216I$	$-2.79100+4.69254I$
$u=\ \ 0.843779+0.844916I$ $a=-0.480044-0.639216I$ $b=\ \ 1.051340-0.185788I$	$1.61046-3.49589I$	0
$u=\ \ 0.843779-0.844916I$ $a=-0.480044+0.639216I$ $b=\ \ 1.051340+0.185788I$	$1.61046+3.49589I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.798902 + 0.897914I$ $a = -0.627733 - 0.144717I$ $b = 2.29217 - 1.42304I$	$-6.69034 + 0.65393I$	0
$u = 0.798902 - 0.897914I$ $a = -0.627733 + 0.144717I$ $b = 2.29217 + 1.42304I$	$-6.69034 - 0.65393I$	0
$u = -0.766486 + 0.218999I$ $a = -0.231244 - 1.061100I$ $b = -1.54496 - 0.66009I$	$-1.09803 - 1.18802I$	$-41.2107 + 31.8350I$
$u = -0.766486 - 0.218999I$ $a = -0.231244 + 1.061100I$ $b = -1.54496 + 0.66009I$	$-1.09803 + 1.18802I$	$-41.2107 - 31.8350I$
$u = 0.701033 + 0.368068I$ $a = 0.917468 + 0.820643I$ $b = -1.45447 + 0.14120I$	$2.75129 - 1.38409I$	$-0.48611 + 4.81272I$
$u = 0.701033 - 0.368068I$ $a = 0.917468 - 0.820643I$ $b = -1.45447 - 0.14120I$	$2.75129 + 1.38409I$	$-0.48611 - 4.81272I$
$u = 1.202480 + 0.185419I$ $a = -0.269522 - 0.755757I$ $b = 1.80557 - 0.52640I$	$0.740937 - 0.742057I$	0
$u = 1.202480 - 0.185419I$ $a = -0.269522 + 0.755757I$ $b = 1.80557 + 0.52640I$	$0.740937 + 0.742057I$	0
$u = 1.134380 + 0.480878I$ $a = 0.793331 + 0.273271I$ $b = -1.60013 + 0.39042I$	$-0.96727 - 7.37052I$	0
$u = 1.134380 - 0.480878I$ $a = 0.793331 - 0.273271I$ $b = -1.60013 - 0.39042I$	$-0.96727 + 7.37052I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.180880 + 0.355202I$ $a = -0.883023 - 0.792969I$ $b = 1.44896 - 1.21000I$	$-5.93629 - 9.95696I$	0
$u = 1.180880 - 0.355202I$ $a = -0.883023 + 0.792969I$ $b = 1.44896 + 1.21000I$	$-5.93629 + 9.95696I$	0
$u = 0.377090 + 0.614727I$ $a = -0.54485 - 1.42542I$ $b = 0.627947 - 0.144354I$	$1.28831 + 3.08932I$	$3.51721 - 2.10970I$
$u = 0.377090 - 0.614727I$ $a = -0.54485 + 1.42542I$ $b = 0.627947 + 0.144354I$	$1.28831 - 3.08932I$	$3.51721 + 2.10970I$
$u = -1.285380 + 0.155885I$ $a = -1.146280 - 0.114113I$ $b = 0.244928 - 0.009434I$	$-7.32951 + 0.73051I$	0
$u = -1.285380 - 0.155885I$ $a = -1.146280 + 0.114113I$ $b = 0.244928 + 0.009434I$	$-7.32951 - 0.73051I$	0
$u = 1.307960 + 0.241833I$ $a = -0.835523 + 0.478162I$ $b = 0.0077967 - 0.0366431I$	$-8.79510 - 3.05397I$	0
$u = 1.307960 - 0.241833I$ $a = -0.835523 - 0.478162I$ $b = 0.0077967 + 0.0366431I$	$-8.79510 + 3.05397I$	0
$u = -1.300590 + 0.351004I$ $a = -0.663439 + 0.934394I$ $b = 1.20078 + 1.22527I$	$-1.92735 + 7.69663I$	0
$u = -1.300590 - 0.351004I$ $a = -0.663439 - 0.934394I$ $b = 1.20078 - 1.22527I$	$-1.92735 - 7.69663I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.529623+0.219189I$ $a=\ \ 0.12929-1.99166I$ $b=-0.414650-1.085820I$	$0.05724-2.06956I$	$-8.10093-3.92762I$
$u=-0.529623-0.219189I$ $a=\ \ 0.12929+1.99166I$ $b=-0.414650+1.085820I$	$0.05724+2.06956I$	$-8.10093+3.92762I$
$u=\ \ 1.47300+0.18170I$ $a=-0.053112+0.214121I$ $b=-1.021490-0.420576I$	$-10.79270-4.22100I$	0
$u=\ \ 1.47300-0.18170I$ $a=-0.053112-0.214121I$ $b=-1.021490+0.420576I$	$-10.79270+4.22100I$	0
$u=-1.57402+0.06312I$ $a=\ \ 0.072567-0.276090I$ $b=\ \ 0.239863+0.307641I$	$-7.65036+5.68483I$	0
$u=-1.57402-0.06312I$ $a=\ \ 0.072567+0.276090I$ $b=\ \ 0.239863-0.307641I$	$-7.65036-5.68483I$	0
$u=-1.65681+0.15965I$ $a=-0.411443+0.718033I$ $b=\ \ 1.02338+1.45480I$	$-2.94099+5.69409I$	0
$u=-1.65681-0.15965I$ $a=-0.411443-0.718033I$ $b=\ \ 1.02338-1.45480I$	$-2.94099-5.69409I$	0
$u=\ \ 0.079752+0.173311I$ $a=\ \ 2.44878+4.11086I$ $b=-1.32414-0.51916I$	$-0.97877+5.85605I$	$-6.47573-5.70957I$
$u=\ \ 0.079752-0.173311I$ $a=\ \ 2.44878-4.11086I$ $b=-1.32414+0.51916I$	$-0.97877-5.85605I$	$-6.47573+5.70957I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.71479+0.76883I$ $a=-0.140529+0.242303I$ $b=\ \ 2.07200+0.85827I$	$-6.93734-2.60765I$	0
$u=-1.71479-0.76883I$ $a=-0.140529-0.242303I$ $b=\ \ 2.07200-0.85827I$	$-6.93734+2.60765I$	0
$u=\ \ 1.94475+0.75377I$ $a=-0.026328+0.481634I$ $b=-0.474679+0.860294I$	$-5.95914+4.44953I$	0
$u=\ \ 1.94475-0.75377I$ $a=-0.026328-0.481634I$ $b=-0.474679-0.860294I$	$-5.95914-4.44953I$	0

III. $I_3^u = \langle -2.83 \times 10^{11} u^{23} - 1.41 \times 10^{11} u^{22} + \cdots + 3.58 \times 10^{12} b + 1.52 \times 10^{12},\ -1.25 \times 10^{12} u^{23} - 3.63 \times 10^{11} u^{22} + \cdots + 3.58 \times 10^{12} a + 7.44 \times 10^{12},\ u^{24} - 6u^{22} + \cdots - 11u + 4 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.349148u^{23} + 0.101244u^{22} + \cdots + 1.54795u - 2.07732 \\ 0.0788848u^{23} + 0.0394912u^{22} + \cdots + 1.94085u - 0.425133 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.210090u^{23} - 0.0166354u^{22} + \cdots + 0.711291u + 3.36471 \\ -1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.210090u^{23} - 0.0166354u^{22} + \cdots + 0.711291u + 2.36471 \\ -1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.210090u^{23} - 0.0166354u^{22} + \cdots + 0.711291u + 3.36471 \\ -1 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.907446u^{23} + 0.403734u^{22} + \cdots + 4.60492u - 6.59575 \\ 0.00128654u^{23} + 0.0895527u^{22} + \cdots + 0.657372u + 1.06654 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.15809u^{23} - 0.708044u^{22} + \cdots - 9.01786u + 4.06432 \\ 0.794958u^{23} + 0.308564u^{22} + \cdots + 7.00034u - 5.15190 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.985990u^{23} + 0.311762u^{22} + \cdots + 10.0275u - 8.70490 \\ -0.0223595u^{23} + 0.0493149u^{22} + \cdots + 0.177550u + 0.971459 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0673366u^{23} - 0.0741766u^{22} + \cdots + 1.03385u + 2.93996 \\ -0.195658u^{23} + 0.0276195u^{22} + \cdots - 1.52653u - 0.345083 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$$= \frac{592306411436}{447779744787}u^{23} + \frac{330514764860}{447779744787}u^{22} + \cdots + \frac{5706913716904}{447779744787}u - \frac{8023392787270}{447779744787}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{24} + 2u^{22} + \cdots - 11u + 4$
c_2, c_7	$u^{24} + 6u^{22} + \cdots - 3u + 2$
c_3, c_9	$(u-1)^{24}$
c_5, c_{10}	$u^{24} - 6u^{22} + \cdots + 11u + 4$
c_6	$u^{24} + 2u^{22} + \cdots + u + 2$
c_8	$(u^4 - u^3 + u^2 + 1)^6$
c_{11}	$u^{24} - 2u^{22} + \cdots - 7u + 4$
c_{12}	$u^{24} + 4u^{22} + \cdots + 63u + 22$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{24} + 4y^{23} + \cdots + 143y + 16$
c_2, c_7	$y^{24} + 12y^{23} + \cdots + 83y + 4$
c_3, c_9	$(y-1)^{24}$
c_5, c_{10}	$y^{24} - 12y^{23} + \cdots - 17y + 16$
c_6	$y^{24} + 4y^{23} + \cdots - 29y + 4$
c_8	$(y^4 + y^3 + 3y^2 + 2y + 1)^6$
c_{11}	$y^{24} - 4y^{23} + \cdots - 249y + 16$
c_{12}	$y^{24} + 8y^{23} + \cdots + 123y + 484$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.566967+0.797510I$ $a=-0.254364+1.178600I$ $b=\ \ 0.746620+0.184913I$	$0.21101-3.16396I$	$-6.17326+2.56480I$
$u=-0.566967-0.797510I$ $a=-0.254364-1.178600I$ $b=\ \ 0.746620-0.184913I$	$0.21101+3.16396I$	$-6.17326-2.56480I$
$u=-0.598167+0.875289I$ $a=-0.139230+0.358000I$ $b=\ \ 2.33096+0.40014I$	$-6.79074-1.41510I$	$-9.82674+4.90874I$
$u=-0.598167-0.875289I$ $a=-0.139230-0.358000I$ $b=\ \ 2.33096-0.40014I$	$-6.79074+1.41510I$	$-9.82674-4.90874I$
$u=\ \ 0.965098+0.508059I$ $a=\ \ 0.680988+0.833237I$ $b=-0.75785+1.55446I$	$0.21101-3.16396I$	$-6.17326+2.56480I$
$u=\ \ 0.965098-0.508059I$ $a=\ \ 0.680988-0.833237I$ $b=-0.75785-1.55446I$	$0.21101+3.16396I$	$-6.17326-2.56480I$
$u=-0.838278+0.736657I$ $a=-0.269328+0.917006I$ $b=\ \ 0.690209+0.153755I$	$0.21101+3.16396I$	$-6.17326-2.56480I$
$u=-0.838278-0.736657I$ $a=-0.269328-0.917006I$ $b=\ \ 0.690209-0.153755I$	$0.21101-3.16396I$	$-6.17326+2.56480I$
$u=\ \ 1.098340+0.200791I$ $a=-0.152688-1.383980I$ $b=\ \ 0.033168-1.355480I$	$0.21101-3.16396I$	$-6.17326+2.56480I$
$u=\ \ 1.098340-0.200791I$ $a=-0.152688+1.383980I$ $b=\ \ 0.033168+1.355480I$	$0.21101+3.16396I$	$-6.17326-2.56480I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.207080+0.155647I$ $a=-1.196280-0.104376I$ $b=\ \ 0.145957-0.100571I$	$-6.79074+1.41510I$	$-9.82674-4.90874I$
$u=-1.207080-0.155647I$ $a=-1.196280+0.104376I$ $b=\ \ 0.145957+0.100571I$	$-6.79074-1.41510I$	$-9.82674+4.90874I$
$u=\ \ 1.241040+0.328127I$ $a=-0.826955-0.629031I$ $b=\ \ 1.22692-1.17406I$	$-6.79074-1.41510I$	$-9.82674+4.90874I$
$u=\ \ 1.241040-0.328127I$ $a=-0.826955+0.629031I$ $b=\ \ 1.22692+1.17406I$	$-6.79074+1.41510I$	$-9.82674-4.90874I$
$u=-1.399590+0.038848I$ $a=-0.806035+0.188058I$ $b=\ \ 0.342008+0.055209I$	$-6.79074+1.41510I$	$-9.82674-4.90874I$
$u=-1.399590-0.038848I$ $a=-0.806035-0.188058I$ $b=\ \ 0.342008-0.055209I$	$-6.79074-1.41510I$	$-9.82674+4.90874I$
$u=-0.74864+1.21082I$ $a=\ \ 0.286192-0.472824I$ $b=-1.51561-0.41628I$	$0.21101+3.16396I$	$-6.17326-2.56480I$
$u=-0.74864-1.21082I$ $a=\ \ 0.286192+0.472824I$ $b=-1.51561+0.41628I$	$0.21101-3.16396I$	$-6.17326+2.56480I$
$u=\ \ 0.534164+0.138697I$ $a=-1.94599+0.92781I$ $b=\ \ 1.243940+0.359071I$	$-6.79074-1.41510I$	$-9.82674+4.90874I$
$u=\ \ 0.534164-0.138697I$ $a=-1.94599-0.92781I$ $b=\ \ 1.243940-0.359071I$	$-6.79074+1.41510I$	$-9.82674-4.90874I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.090441 + 0.441116I$ $a = 2.42885 - 0.73333I$ $b = -0.793466 + 0.656134I$	$0.21101 - 3.16396I$	$-6.17326 + 2.56480I$
$u = 0.090441 - 0.441116I$ $a = 2.42885 + 0.73333I$ $b = -0.793466 - 0.656134I$	$0.21101 + 3.16396I$	$-6.17326 - 2.56480I$
$u = 1.42963 + 1.14762I$ $a = -0.430153 - 0.219592I$ $b = 2.30715 - 1.97161I$	$-6.79074 + 1.41510I$	$-9.82674 - 4.90874I$
$u = 1.42963 - 1.14762I$ $a = -0.430153 + 0.219592I$ $b = 2.30715 + 1.97161I$	$-6.79074 - 1.41510I$	$-9.82674 + 4.90874I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{24}+2u^{22}+\cdots-11u+4)(u^{54}-7u^{53}+\cdots+u+1)$ $\cdot(u^{151}-6u^{150}+\cdots+570u+89)$
c_2	$(u^{24}+6u^{22}+\cdots-3u+2)(u^{54}+23u^{52}+\cdots+u+1)$ $\cdot(u^{151}+u^{150}+\cdots-1422u+995)$
c_3	$((u-1)^{24})(u^{54}-11u^{52}+\cdots+2u+1)$ $\cdot(u^{151}+25u^{150}+\cdots+809488384u+28909568)$
c_4	$(u^{24}+2u^{22}+\cdots-11u+4)(u^{54}+7u^{53}+\cdots-u+1)$ $\cdot(u^{151}-6u^{150}+\cdots+570u+89)$
c_5	$(u^{24}-6u^{22}+\cdots+11u+4)(u^{54}+2u^{53}+\cdots+43u+11)$ $\cdot(u^{151}-3u^{150}+\cdots-129350u+535807)$
c_6	$(u^{24}+2u^{22}+\cdots+u+2)(u^{54}-4u^{52}+\cdots+22u+1)$ $\cdot(u^{151}+u^{150}+\cdots+13u+1)$
c_7	$(u^{24}+6u^{22}+\cdots-3u+2)(u^{54}+23u^{52}+\cdots-u+1)$ $\cdot(u^{151}+u^{150}+\cdots-1422u+995)$
c_8	$((u^4-u^3+u^2+1)^6)(u^{54}+6u^{53}+\cdots+11u^2+1)$ $\cdot(u^{151}+29u^{150}+\cdots-1060088u-59168)$
c_9	$((u-1)^{24})(u^{54}-11u^{52}+\cdots-2u+1)$ $\cdot(u^{151}+25u^{150}+\cdots+809488384u+28909568)$
c_{10}	$(u^{24}-6u^{22}+\cdots+11u+4)(u^{54}-2u^{53}+\cdots-43u+11)$ $\cdot(u^{151}-3u^{150}+\cdots-129350u+535807)$
c_{11}	$(u^{24}-2u^{22}+\cdots-7u+4)(u^{54}+8u^{53}+\cdots+10u+1)$ $\cdot(u^{151}-11u^{150}+\cdots+13999u-2101)$
c_{12}	$(u^{24}+4u^{22}+\cdots+63u+22)(u^{54}-10u^{52}+\cdots+53u+25)$ $\cdot(u^{151}-5u^{150}+\cdots+5134178638u+454373173)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{24}+4y^{23}+\cdots+143y+16)(y^{54}+23y^{53}+\cdots+51y+1)$ $\cdot(y^{151}+70y^{150}+\cdots+148680y-7921)$
c_2, c_7	$(y^{24}+12y^{23}+\cdots+83y+4)(y^{54}+46y^{53}+\cdots+43y+1)$ $\cdot(y^{151}+109y^{150}+\cdots-58402276y-990025)$
c_3, c_9	$((y-1)^{24})(y^{54}-22y^{53}+\cdots-42y+1)$ $\cdot(y^{151}-79y^{150}+\cdots+3044650659086336y-835763121946624)$
c_5, c_{10}	$(y^{24}-12y^{23}+\cdots-17y+16)(y^{54}-50y^{53}+\cdots+1605y+121)$ $\cdot(y^{151}-131y^{150}+\cdots+3528966668166y-287089141249)$
c_6	$(y^{24}+4y^{23}+\cdots-29y+4)(y^{54}-8y^{53}+\cdots-172y+1)$ $\cdot(y^{151}-9y^{150}+\cdots+91y-1)$
c_8	$((y^4+y^3+3y^2+2y+1)^6)(y^{54}-22y^{53}+\cdots+22y+1)$ $\cdot(y^{151}-y^{150}+\cdots-239762712768y-3500852224)$
c_{11}	$(y^{24}-4y^{23}+\cdots-249y+16)(y^{54}-32y^{53}+\cdots-44y+1)$ $\cdot(y^{151}-49y^{150}+\cdots+489292611y-4414201)$
c_{12}	$(y^{24}+8y^{23}+\cdots+123y+484)(y^{54}-20y^{53}+\cdots+2341y+625)$ $\cdot(y^{151}+11y^{150}+\cdots-6.12\times10^{18}y-2.06\times10^{17})$