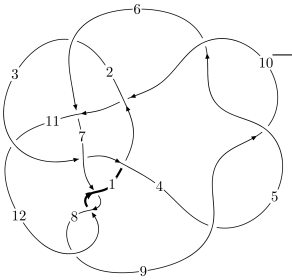
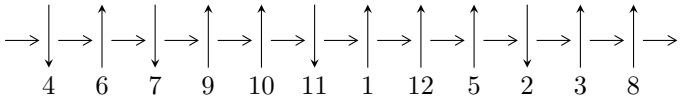
$12a_{0870}$ $(K12a_{0870})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -6.54960 \times 10^{370} u^{119} + 2.86117 \times 10^{370} u^{118} + \cdots + 1.62945 \times 10^{371} b - 1.98484 \times 10^{372},$$
$$-8.95643 \times 10^{372} u^{119} + 1.63636 \times 10^{373} u^{118} + \cdots + 1.62945 \times 10^{371} a - 6.28178 \times 10^{373},$$
$$u^{120} - 2u^{119} + \cdots + 39u - 1 \rangle$$
$$I_2^u = \langle 876u^{26} + 1025u^{25} + \cdots + 2461b - 1161,\ -u^{23} + u^{22} + \cdots + a + 5,\ u^{27} - u^{26} + \cdots + 10u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 147 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. $\boldsymbol{I_1^u = \langle -6.55 \times 10^{370} u^{119} + 2.86 \times 10^{370} u^{118} + \cdots + 1.63 \times 10^{371} b - 1.98 \times 10^{372},\ -8.96 \times 10^{372} u^{119} + 1.64 \times 10^{373} u^{118} + \cdots + 1.63 \times 10^{371} a - 6.28 \times 10^{373},\ u^{120} - 2u^{119} + \cdots + 39u - 1 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 54.9659u^{119} - 100.424u^{118} + \cdots - 11615.5u + 385.515 \\ 0.401951u^{119} - 0.175591u^{118} + \cdots - 227.860u + 12.1810 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 56.8121u^{119} - 104.056u^{118} + \cdots - 12159.2u + 407.204 \\ 0.590180u^{119} - 0.157202u^{118} + \cdots - 227.338u + 12.1203 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 33.1201u^{119} - 60.7925u^{118} + \cdots - 7301.06u + 249.734 \\ 2.18895u^{119} - 3.76307u^{118} + \cdots - 16.5883u - 3.37165 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 51.0385u^{119} - 90.7444u^{118} + \cdots - 8238.29u + 256.337 \\ -1.20417u^{119} + 2.82829u^{118} + \cdots + 732.655u - 28.8332 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 19.8253u^{119} - 40.2460u^{118} + \cdots - 9327.21u + 368.069 \\ 2.65349u^{119} - 4.92166u^{118} + \cdots - 696.236u + 27.8624 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 52.8259u^{119} - 96.9718u^{118} + \cdots - 11517.1u + 387.963 \\ 0.515629u^{119} + 0.0216045u^{118} + \cdots - 214.156u + 11.7777 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 25.1563u^{119} - 44.6996u^{118} + \cdots - 5453.41u + 212.193 \\ -6.89765u^{119} + 12.3493u^{118} + \cdots + 2103.98u - 78.2389 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 40.6118u^{119} - 72.5190u^{118} + \cdots - 6607.82u + 200.568$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{120} + 2u^{119} + \cdots - 340978u + 22627$
c_2	$u^{120} - 3u^{119} + \cdots + 52767u + 9067$
c_3	$u^{120} - 5u^{119} + \cdots - 58768u + 18208$
c_4, c_5, c_9	$u^{120} + 2u^{119} + \cdots - 39u - 1$
c_6	$u^{120} - 11u^{118} + \cdots + 29u + 1$
c_7, c_8, c_{12}	$u^{120} + 57u^{118} + \cdots + 179u + 43$
c_{10}	$u^{120} + 3u^{119} + \cdots + 1582u + 527$
c_{11}	$u^{120} + 3u^{119} + \cdots + 4239u - 3181$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{120} - 12y^{119} + \cdots - 60610138314y + 511981129$
c_2	$y^{120} - 37y^{119} + \cdots - 4553618133y + 82210489$
c_3	$y^{120} - 45y^{119} + \cdots - 6327045888y + 331531264$
c_4, c_5, c_9	$y^{120} - 128y^{119} + \cdots - 367y + 1$
c_6	$y^{120} - 22y^{119} + \cdots - 537y + 1$
c_7, c_8, c_{12}	$y^{120} + 114y^{119} + \cdots - 102991y + 1849$
c_{10}	$y^{120} + 31y^{119} + \cdots + 2355162y + 277729$
c_{11}	$y^{120} - 3y^{119} + \cdots - 363476617y + 10118761$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.478483 + 0.849417I$ $a = -0.767371 + 0.191220I$ $b = 0.550456 + 0.091495I$	$-0.61287 - 4.48013I$	0
$u = 0.478483 - 0.849417I$ $a = -0.767371 - 0.191220I$ $b = 0.550456 - 0.091495I$	$-0.61287 + 4.48013I$	0
$u = 0.575507 + 0.779779I$ $a = 0.173619 + 1.369450I$ $b = 0.216728 - 0.600397I$	$-0.33148 + 9.79234I$	0
$u = 0.575507 - 0.779779I$ $a = 0.173619 - 1.369450I$ $b = 0.216728 + 0.600397I$	$-0.33148 - 9.79234I$	0
$u = 0.273232 + 1.032380I$ $a = -0.463078 - 0.662791I$ $b = 0.075684 + 0.394031I$	$-1.98811 + 4.42294I$	0
$u = 0.273232 - 1.032380I$ $a = -0.463078 + 0.662791I$ $b = 0.075684 - 0.394031I$	$-1.98811 - 4.42294I$	0
$u = -0.518844 + 0.733055I$ $a = -0.269808 + 0.947950I$ $b = 0.123018 - 0.706042I$	$1.76059 - 2.74032I$	0
$u = -0.518844 - 0.733055I$ $a = -0.269808 - 0.947950I$ $b = 0.123018 + 0.706042I$	$1.76059 + 2.74032I$	0
$u = -0.622693 + 0.911978I$ $a = 0.189781 - 1.191170I$ $b = 0.382272 + 0.610684I$	$-6.5229 - 13.5895I$	0
$u = -0.622693 - 0.911978I$ $a = 0.189781 + 1.191170I$ $b = 0.382272 - 0.610684I$	$-6.5229 + 13.5895I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.753947+0.480130I$ $a=-0.780125+0.120594I$ $b=\ \ 0.966255-0.233013I$	$0.000609+0.829262I$	0
$u=-0.753947-0.480130I$ $a=-0.780125-0.120594I$ $b=\ \ 0.966255+0.233013I$	$0.000609-0.829262I$	0
$u=\ \ 0.909026+0.665065I$ $a=-0.003551-0.751036I$ $b=\ \ 0.040568+0.950919I$	$-2.61930+1.01094I$	0
$u=\ \ 0.909026-0.665065I$ $a=-0.003551+0.751036I$ $b=\ \ 0.040568-0.950919I$	$-2.61930-1.01094I$	0
$u=\ \ 1.079280+0.343096I$ $a=\ \ 0.866867-0.135791I$ $b=\ \ 0.558626-0.074170I$	$-4.49341-2.35363I$	0
$u=\ \ 1.079280-0.343096I$ $a=\ \ 0.866867+0.135791I$ $b=\ \ 0.558626+0.074170I$	$-4.49341+2.35363I$	0
$u=-0.708210+0.478105I$ $a=\ \ 1.41992+0.30534I$ $b=-0.673792+0.470912I$	$-7.25207+0.98951I$	0
$u=-0.708210-0.478105I$ $a=\ \ 1.41992-0.30534I$ $b=-0.673792-0.470912I$	$-7.25207-0.98951I$	0
$u=-0.830894+0.185761I$ $a=\ \ 1.169230+0.325097I$ $b=\ \ 0.248193-0.143424I$	$0.246168+0.061672I$	0
$u=-0.830894-0.185761I$ $a=\ \ 1.169230-0.325097I$ $b=\ \ 0.248193+0.143424I$	$0.246168-0.061672I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.452519+1.057460I$		
$a=$	$0.553440+0.331900I$	$-4.38678+5.06586I$	0
$b=$	$0.126470-0.168338I$		
$u=$	$0.452519-1.057460I$		
$a=$	$0.553440-0.331900I$	$-4.38678-5.06586I$	0
$b=$	$0.126470+0.168338I$		
$u=$	$1.149860+0.070091I$		
$a=$	$-0.006453+0.395205I$	$-3.75681-1.03419I$	0
$b=$	$1.15683-1.55091I$		
$u=$	$1.149860-0.070091I$		
$a=$	$-0.006453-0.395205I$	$-3.75681+1.03419I$	0
$b=$	$1.15683+1.55091I$		
$u=$	$0.151147+0.823040I$		
$a=$	$0.86443+1.24866I$	$-8.39973+2.22044I$	0
$b=$	$0.146533-0.137851I$		
$u=$	$0.151147-0.823040I$		
$a=$	$0.86443-1.24866I$	$-8.39973-2.22044I$	0
$b=$	$0.146533+0.137851I$		
$u=$	$-0.422357+0.704219I$		
$a=$	$0.820403-0.635098I$	$1.69314-1.85272I$	0
$b=$	$-0.023246+0.188752I$		
$u=$	$-0.422357-0.704219I$		
$a=$	$0.820403+0.635098I$	$1.69314+1.85272I$	0
$b=$	$-0.023246-0.188752I$		
$u=$	$-0.403079+0.670090I$		
$a=$	$0.41244-1.67380I$	$-1.01899-4.94043I$	0
$b=$	$0.048249+0.433133I$		
$u=$	$-0.403079-0.670090I$		
$a=$	$0.41244+1.67380I$	$-1.01899+4.94043I$	0
$b=$	$0.048249-0.433133I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.608246+1.086410I$ $a=-0.612090-0.173967I$ $b=\ \ 0.405539-0.264911I$	$-6.72107+7.19768I$	0
$u=-0.608246-1.086410I$ $a=-0.612090+0.173967I$ $b=\ \ 0.405539+0.264911I$	$-6.72107-7.19768I$	0
$u=\ \ 1.089660+0.606849I$ $a=-0.618763-0.132814I$ $b=\ \ 0.876160+0.605218I$	$-5.69944+2.78171I$	0
$u=\ \ 1.089660-0.606849I$ $a=-0.618763+0.132814I$ $b=\ \ 0.876160-0.605218I$	$-5.69944-2.78171I$	0
$u=-0.726933+0.067830I$ $a=\ \ 0.42675+1.56256I$ $b=\ \ 0.50877-1.86490I$	$-4.06221-5.35034I$	0
$u=-0.726933-0.067830I$ $a=\ \ 0.42675-1.56256I$ $b=\ \ 0.50877+1.86490I$	$-4.06221+5.35034I$	0
$u=-0.405015+0.588736I$ $a=-0.35512+1.98421I$ $b=-0.710110-0.653830I$	$-8.09284-4.73305I$	0
$u=-0.405015-0.588736I$ $a=-0.35512-1.98421I$ $b=-0.710110+0.653830I$	$-8.09284+4.73305I$	0
$u=\ \ 0.547603+0.454014I$ $a=\ \ 0.585941-0.526840I$ $b=\ \ 0.159576+0.709440I$	$-2.85217+1.79301I$	0
$u=\ \ 0.547603-0.454014I$ $a=\ \ 0.585941+0.526840I$ $b=\ \ 0.159576-0.709440I$	$-2.85217-1.79301I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.287130+0.226241I$ $a=\ \ 0.453160+1.250730I$ $b=-0.52610-2.67215I$	$-3.99178-5.99598I$	0
$u=-1.287130-0.226241I$ $a=\ \ 0.453160-1.250730I$ $b=-0.52610+2.67215I$	$-3.99178+5.99598I$	0
$u=\ \ 0.508195+0.415399I$ $a=\ \ 0.48567-1.88483I$ $b=-0.297989+0.609389I$	$-1.49358+2.77561I$	0
$u=\ \ 0.508195-0.415399I$ $a=\ \ 0.48567+1.88483I$ $b=-0.297989-0.609389I$	$-1.49358-2.77561I$	0
$u=\ \ 0.162960+0.630383I$ $a=\ \ 0.103205-0.977469I$ $b=-1.04484+0.96767I$	$-7.25062+5.95071I$	0
$u=\ \ 0.162960-0.630383I$ $a=\ \ 0.103205+0.977469I$ $b=-1.04484-0.96767I$	$-7.25062-5.95071I$	0
$u=-1.358730+0.031900I$ $a=-0.128589-0.355133I$ $b=\ \ 0.68025+1.82260I$	$2.80943-1.19492I$	0
$u=-1.358730-0.031900I$ $a=-0.128589+0.355133I$ $b=\ \ 0.68025-1.82260I$	$2.80943+1.19492I$	0
$u=\ \ 1.38527$ $a=\ \ 1.05701$ $b=-0.374028$	2.28263	0
$u=\ \ 1.396410+0.007950I$ $a=-0.577667+0.692521I$ $b=-0.48919-2.39754I$	$2.80753+2.62829I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.396410 - 0.007950I$ $a = -0.577667 - 0.692521I$ $b = -0.48919 + 2.39754I$	$2.80753 - 2.62829I$	0
$u = 1.402730 + 0.038408I$ $a = 0.63374 - 1.48215I$ $b = -0.66816 + 3.36307I$	$5.44161 + 3.32832I$	0
$u = 1.402730 - 0.038408I$ $a = 0.63374 + 1.48215I$ $b = -0.66816 - 3.36307I$	$5.44161 - 3.32832I$	0
$u = -1.406160 + 0.099173I$ $a = 1.014220 - 0.092722I$ $b = -0.270731 + 0.472154I$	$-1.96529 - 4.26450I$	0
$u = -1.406160 - 0.099173I$ $a = 1.014220 + 0.092722I$ $b = -0.270731 - 0.472154I$	$-1.96529 + 4.26450I$	0
$u = 1.404700 + 0.130601I$ $a = -0.108113 + 0.283629I$ $b = 0.58648 - 2.23100I$	$3.59810 + 5.30904I$	0
$u = 1.404700 - 0.130601I$ $a = -0.108113 - 0.283629I$ $b = 0.58648 + 2.23100I$	$3.59810 - 5.30904I$	0
$u = -1.401130 + 0.190037I$ $a = -0.079236 - 0.260877I$ $b = 0.72768 + 2.52738I$	$-2.21911 - 8.79214I$	0
$u = -1.401130 - 0.190037I$ $a = -0.079236 + 0.260877I$ $b = 0.72768 - 2.52738I$	$-2.21911 + 8.79214I$	0
$u = -0.223950 + 0.539425I$ $a = 0.376489 + 1.062640I$ $b = -0.784184 - 0.764176I$	$-1.58940 - 3.03839I$	$0. + 8.59848I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.223950-0.539425I$ $a=\ \ 0.376489-1.062640I$ $b=-0.784184+0.764176I$	$-1.58940+3.03839I$	$0.-8.59848I$
$u=-1.42603+0.04080I$ $a=-0.538009+0.495308I$ $b=-0.009278-1.061150I$	$3.54135-2.83450I$	0
$u=-1.42603-0.04080I$ $a=-0.538009-0.495308I$ $b=-0.009278+1.061150I$	$3.54135+2.83450I$	0
$u=-1.41717+0.23454I$ $a=-0.125846+0.883347I$ $b=\ \ 0.48427-2.14137I$	$5.82758-0.12145I$	0
$u=-1.41717-0.23454I$ $a=-0.125846-0.883347I$ $b=\ \ 0.48427+2.14137I$	$5.82758+0.12145I$	0
$u=-1.44781+0.02957I$ $a=\ \ 0.85478-1.42201I$ $b=-1.06793+3.33256I$	$6.68138-3.02805I$	0
$u=-1.44781-0.02957I$ $a=\ \ 0.85478+1.42201I$ $b=-1.06793-3.33256I$	$6.68138+3.02805I$	0
$u=\ \ 1.45894+0.10853I$ $a=\ \ 1.13982+1.10887I$ $b=-1.51407-2.79596I$	$0.31268+8.12438I$	0
$u=\ \ 1.45894-0.10853I$ $a=\ \ 1.13982-1.10887I$ $b=-1.51407+2.79596I$	$0.31268-8.12438I$	0
$u=-0.514478$ $a=\ \ 0.541958$ $b=\ \ 0.362022$	0.861482	11.4300

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.49675+0.06976I$ $a=-0.520851-0.716080I$ $b=-0.14152+2.61330I$	$7.58116-4.68582I$	0
$u=-1.49675-0.06976I$ $a=-0.520851+0.716080I$ $b=-0.14152-2.61330I$	$7.58116+4.68582I$	0
$u=1.48951+0.18039I$ $a=-0.361848+1.163260I$ $b=1.02518-3.44855I$	$-1.86405+7.47025I$	0
$u=1.48951-0.18039I$ $a=-0.361848-1.163260I$ $b=1.02518+3.44855I$	$-1.86405-7.47025I$	0
$u=1.48920+0.22925I$ $a=0.630966-1.058700I$ $b=-0.87163+2.67400I$	$5.17663+8.19160I$	0
$u=1.48920-0.22925I$ $a=0.630966+1.058700I$ $b=-0.87163-2.67400I$	$5.17663-8.19160I$	0
$u=-1.47417+0.34800I$ $a=-0.462583-0.762589I$ $b=0.23733+1.95877I$	$3.69434-9.18982I$	0
$u=-1.47417-0.34800I$ $a=-0.462583+0.762589I$ $b=0.23733-1.95877I$	$3.69434+9.18982I$	0
$u=-1.52450+0.10022I$ $a=-0.792506-1.004320I$ $b=1.45076+2.76776I$	$5.30025-4.55141I$	0
$u=-1.52450-0.10022I$ $a=-0.792506+1.004320I$ $b=1.45076-2.76776I$	$5.30025+4.55141I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.53217$ $a = -1.18540$ $b = 1.96526$	7.64836	0
$u = 1.53210 + 0.02964I$ $a = -0.479060 + 0.317483I$ $b = 0.124509 - 0.884896I$	$7.86979 + 0.12335I$	0
$u = 1.53210 - 0.02964I$ $a = -0.479060 - 0.317483I$ $b = 0.124509 + 0.884896I$	$7.86979 - 0.12335I$	0
$u = 1.50554 + 0.28596I$ $a = 0.061157 - 0.855092I$ $b = 0.05022 + 2.13935I$	$7.92931 + 5.62370I$	0
$u = 1.50554 - 0.28596I$ $a = 0.061157 + 0.855092I$ $b = 0.05022 - 2.13935I$	$7.92931 - 5.62370I$	0
$u = 1.53417 + 0.24470I$ $a = -0.503463 + 0.728796I$ $b = 0.26620 - 2.14771I$	$8.51879 + 6.31864I$	0
$u = 1.53417 - 0.24470I$ $a = -0.503463 - 0.728796I$ $b = 0.26620 + 2.14771I$	$8.51879 - 6.31864I$	0
$u = -0.300487 + 0.327946I$ $a = -3.37755 + 0.90478I$ $b = -0.708742 - 0.194143I$	$-5.53393 - 6.53521I$	$3.67968 + 12.27396I$
$u = -0.300487 - 0.327946I$ $a = -3.37755 - 0.90478I$ $b = -0.708742 + 0.194143I$	$-5.53393 + 6.53521I$	$3.67968 - 12.27396I$
$u = 0.378256 + 0.204106I$ $a = -0.07509 - 2.19627I$ $b = 0.661601 + 1.147620I$	$1.26755 + 3.68939I$	$14.1085 - 10.3901I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.378256 - 0.204106I$ $a = -0.07509 + 2.19627I$ $b = \ 0.661601 - 1.147620I$	$1.26755 - 3.68939I$	$14.1085 + 10.3901I$
$u = -1.57122 + 0.04726I$ $a = -0.307212 - 0.207910I$ $b = -0.291507 + 1.139090I$	$4.24494 - 3.07101I$	0
$u = -1.57122 - 0.04726I$ $a = -0.307212 + 0.207910I$ $b = -0.291507 - 1.139090I$	$4.24494 + 3.07101I$	0
$u = -1.55077 + 0.27155I$ $a = \ 0.592824 + 0.955113I$ $b = -0.86215 - 2.61379I$	$6.6116 - 13.6686I$	0
$u = -1.55077 - 0.27155I$ $a = \ 0.592824 - 0.955113I$ $b = -0.86215 + 2.61379I$	$6.6116 + 13.6686I$	0
$u = \ 0.278793 + 0.317350I$ $a = \ 1.47934 - 1.34726I$ $b = -0.733679 + 0.173179I$	$-1.93909 - 0.00308I$	$-2.97026 - 0.18245I$
$u = \ 0.278793 - 0.317350I$ $a = \ 1.47934 + 1.34726I$ $b = -0.733679 - 0.173179I$	$-1.93909 + 0.00308I$	$-2.97026 + 0.18245I$
$u = \ 1.58717 + 0.06407I$ $a = -0.455942 + 0.717978I$ $b = -0.03092 - 3.04427I$	$3.78088 + 6.13678I$	0
$u = \ 1.58717 - 0.06407I$ $a = -0.455942 - 0.717978I$ $b = -0.03092 + 3.04427I$	$3.78088 - 6.13678I$	0
$u = -1.56163 + 0.35751I$ $a = \ 0.111699 + 0.777832I$ $b = -0.14231 - 2.00720I$	$2.22591 - 10.12800I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.56163-0.35751I$ $a=\ \ 0.111699-0.777832I$ $b=-0.14231+2.00720I$	$2.22591+10.12800I$	0
$u=\ \ 1.58219+0.31731I$ $a=\ \ 0.541346-0.911805I$ $b=-0.85106+2.61130I$	$0.6367+18.1163I$	0
$u=\ \ 1.58219-0.31731I$ $a=\ \ 0.541346+0.911805I$ $b=-0.85106-2.61130I$	$0.6367-18.1163I$	0
$u=-1.61149+0.14863I$ $a=-0.574957-0.689378I$ $b=\ \ 0.53379+2.21130I$	$5.81944-3.80808I$	0
$u=-1.61149-0.14863I$ $a=-0.574957+0.689378I$ $b=\ \ 0.53379-2.21130I$	$5.81944+3.80808I$	0
$u=\ \ 0.099550+0.357549I$ $a=\ \ 3.40084+0.11744I$ $b=-0.248238-0.018140I$	$0.88539-2.49245I$	$5.66668-8.97113I$
$u=\ \ 0.099550-0.357549I$ $a=\ \ 3.40084-0.11744I$ $b=-0.248238+0.018140I$	$0.88539+2.49245I$	$5.66668+8.97113I$
$u=\ \ 0.101994+0.343208I$ $a=-1.20311+2.17941I$ $b=-1.238800-0.141228I$	$-6.99324+2.77055I$	$-5.62527-0.64142I$
$u=\ \ 0.101994-0.343208I$ $a=-1.20311-2.17941I$ $b=-1.238800+0.141228I$	$-6.99324-2.77055I$	$-5.62527+0.64142I$
$u=\ \ 0.292276$ $a=\ \ 3.35108$ $b=-0.876008$	-2.02587	-4.65530

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.64029 + 0.47997I$ $a = -0.137601 + 0.403951I$ $b = 0.272214 - 0.727372I$	$2.24875 + 2.24460I$	0
$u = 1.64029 - 0.47997I$ $a = -0.137601 - 0.403951I$ $b = 0.272214 + 0.727372I$	$2.24875 - 2.24460I$	0
$u = -1.70288 + 0.23941I$ $a = -0.224031 - 0.359461I$ $b = 0.281094 + 0.872760I$	$6.55479 - 0.50923I$	0
$u = -1.70288 - 0.23941I$ $a = -0.224031 + 0.359461I$ $b = 0.281094 - 0.872760I$	$6.55479 + 0.50923I$	0
$u = 0.228090 + 0.011956I$ $a = -1.75274 - 6.49706I$ $b = -0.469492 + 0.140074I$	$1.05035 + 2.70090I$	$19.6362 - 8.3426I$
$u = 0.228090 - 0.011956I$ $a = -1.75274 + 6.49706I$ $b = -0.469492 - 0.140074I$	$1.05035 - 2.70090I$	$19.6362 + 8.3426I$
$u = 1.85001 + 0.09441I$ $a = -0.233906 + 0.296921I$ $b = 0.397230 - 0.943654I$	$2.25853 - 1.14063I$	0
$u = 1.85001 - 0.09441I$ $a = -0.233906 - 0.296921I$ $b = 0.397230 + 0.943654I$	$2.25853 + 1.14063I$	0
$u = 0.0774794 + 0.0096003I$ $a = -4.34810 - 8.06868I$ $b = 1.26231 - 0.68018I$	$-1.83651 - 2.54010I$	$7.94659 + 0.05997I$
$u = 0.0774794 - 0.0096003I$ $a = -4.34810 + 8.06868I$ $b = 1.26231 + 0.68018I$	$-1.83651 + 2.54010I$	$7.94659 - 0.05997I$

II. $I_2^u = \langle 876u^{26} + 1025u^{25} + \cdots + 2461b - 1161,\ -u^{23} + u^{22} + \cdots + a + 5,\ u^{27} - u^{26} + \cdots + 10u^2 + 1\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} u^{23} - u^{22} + \cdots + 4u - 5 \\ -0.355953u^{26} - 0.416497u^{25} + \cdots - 0.316538u + 0.471759 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.355953u^{26} + 0.583503u^{25} + \cdots + 3.68346u - 4.52824 \\ 0.0589191u^{26} - 1.62170u^{25} + \cdots - 0.672491u + 0.699309 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2u^{26} + 2u^{25} + \cdots - 20u - 2 \\ -0.611134u^{26} + 0.896790u^{25} + \cdots + 1.56156u + 0.0154409 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.26209u^{26} + 2.73100u^{25} + \cdots - 17.2844u + 7.26859 \\ -0.194636u^{26} - 0.877286u^{25} + \cdots + 1.77326u + 0.131247 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.386022u^{26} + 0.107680u^{25} + \cdots - 7.31816u - 2.96099 \\ -0.189760u^{26} + 0.416091u^{25} + \cdots + 1.47623u - 0.203982 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.351077u^{26} + 0.876879u^{25} + \cdots + 3.38643u - 5.86347 \\ 0.0540431u^{26} - 1.91508u^{25} + \cdots - 0.375457u + 1.03454 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.479074u^{26} + 0.324258u^{25} + \cdots - 3.43356u + 4.31369 \\ -0.459163u^{26} - 0.292970u^{25} + \cdots + 1.13734u + 0.0674523 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{12592}{2461}u^{26} - \frac{19237}{2461}u^{25} + \cdots + \frac{135304}{2461}u - \frac{21577}{2461}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{27} - 9u^{26} + \cdots - 23u + 5$
c_2	$u^{27} - 2u^{26} + \cdots - 8u + 1$
c_3	$u^{27} + 6u^{26} + \cdots - 3u - 1$
c_4, c_5	$u^{27} - u^{26} + \cdots + 10u^2 + 1$
c_6	$u^{27} - u^{26} + \cdots + 3u^2 - 1$
c_7, c_8	$u^{27} - u^{26} + \cdots - 4u + 1$
c_9	$u^{27} + u^{26} + \cdots - 10u^2 - 1$
c_{10}	$u^{27} + 8u^{25} + \cdots + u + 1$
c_{11}	$u^{27} - 4u^{26} + \cdots - 10u + 1$
c_{12}	$u^{27} + u^{26} + \cdots - 4u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{27} + 9y^{26} + \cdots + 299y - 25$
c_2	$y^{27} - 12y^{26} + \cdots + 18y - 1$
c_3	$y^{27} - 12y^{26} + \cdots + 5y - 1$
c_4, c_5, c_9	$y^{27} - 35y^{26} + \cdots - 20y - 1$
c_6	$y^{27} - 9y^{26} + \cdots + 6y - 1$
c_7, c_8, c_{12}	$y^{27} + 27y^{26} + \cdots - 4y - 1$
c_{10}	$y^{27} + 16y^{26} + \cdots + 3y - 1$
c_{11}	$y^{27} + 6y^{26} + \cdots + 54y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.04037$ $a=\ \ 1.00683$ $b=\ \ 0.461390$	-0.193338	-7.35220
$u=\ \ 1.046140+0.167242I$ $a=\ \ 0.892888+0.037138I$ $b=\ \ 0.755789-0.659272I$	$-4.88119-1.69827I$	$-3.22981-1.29555I$
$u=\ \ 1.046140-0.167242I$ $a=\ \ 0.892888-0.037138I$ $b=\ \ 0.755789+0.659272I$	$-4.88119+1.69827I$	$-3.22981+1.29555I$
$u=\ \ 0.863500+0.358505I$ $a=\ \ 0.704974-0.270269I$ $b=-1.172410-0.471449I$	$-5.71340+3.66027I$	$1.22444-5.57779I$
$u=\ \ 0.863500-0.358505I$ $a=\ \ 0.704974+0.270269I$ $b=-1.172410+0.471449I$	$-5.71340-3.66027I$	$1.22444+5.57779I$
$u=-0.818683$ $a=\ \ 1.12201$ $b=-1.26578$	-0.989388	3.10950
$u=\ \ 0.331803+0.542375I$ $a=-0.340293-1.064430I$ $b=\ \ 0.702391+0.950397I$	$-2.34297+3.05528I$	$0.15934-7.37026I$
$u=\ \ 0.331803-0.542375I$ $a=-0.340293+1.064430I$ $b=\ \ 0.702391-0.950397I$	$-2.34297-3.05528I$	$0.15934+7.37026I$
$u=-0.062264+0.582429I$ $a=-1.210470+0.301418I$ $b=-0.282936+0.802285I$	$-5.99912+5.64859I$	$0.18026-4.57488I$
$u=-0.062264-0.582429I$ $a=-1.210470-0.301418I$ $b=-0.282936-0.802285I$	$-5.99912-5.64859I$	$0.18026+4.57488I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.43730+0.15602I$ $a=\ 0.131402-1.054020I$ $b=\ 0.04363+3.39054I$	$-1.04909-8.01206I$	$4.70351+7.32753I$
$u=-1.43730-0.15602I$ $a=\ 0.131402+1.054020I$ $b=\ 0.04363-3.39054I$	$-1.04909+8.01206I$	$4.70351-7.32753I$
$u=\ 1.46754+0.10111I$ $a=-0.431281+1.334100I$ $b=\ 0.74561-3.28486I$	$6.09621+4.29868I$	$10.84353-6.97371I$
$u=\ 1.46754-0.10111I$ $a=-0.431281-1.334100I$ $b=\ 0.74561+3.28486I$	$6.09621-4.29868I$	$10.84353+6.97371I$
$u=-1.49372+0.16382I$ $a=-0.147075-0.821976I$ $b=\ 0.02017+1.93693I$	$5.99585+0.71384I$	$7.85879-3.32419I$
$u=-1.49372-0.16382I$ $a=-0.147075+0.821976I$ $b=\ 0.02017-1.93693I$	$5.99585-0.71384I$	$7.85879+3.32419I$
$u=\ 1.51363+0.10854I$ $a=-0.535985+0.852440I$ $b=\ 0.30674-2.72303I$	$6.72576+5.09394I$	$6.38078-6.96229I$
$u=\ 1.51363-0.10854I$ $a=-0.535985-0.852440I$ $b=\ 0.30674+2.72303I$	$6.72576-5.09394I$	$6.38078+6.96229I$
$u=-0.189461+0.443325I$ $a=-1.25671+1.53682I$ $b=\ 0.381122-0.650257I$	$0.65631-3.30219I$	$4.57851+5.52655I$
$u=-0.189461-0.443325I$ $a=-1.25671-1.53682I$ $b=\ 0.381122+0.650257I$	$0.65631+3.30219I$	$4.57851-5.52655I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.55311+0.11619I$ $a=-0.485422-0.593375I$ $b=-0.21323+2.47022I$	$4.34497-5.16743I$	$5.50887+4.11121I$
$u=-1.55311-0.11619I$ $a=-0.485422+0.593375I$ $b=-0.21323-2.47022I$	$4.34497+5.16743I$	$5.50887-4.11121I$
$u=-0.028142+0.338012I$ $a=-4.04976+0.71658I$ $b=\ \ 0.071120-0.252532I$	$0.73097-2.76572I$	$-7.8057+13.6184I$
$u=-0.028142-0.338012I$ $a=-4.04976-0.71658I$ $b=\ \ 0.071120+0.252532I$	$0.73097+2.76572I$	$-7.8057-13.6184I$
$u=-1.68862$ $a=-0.411896$ $b=\ \ 0.501218$	6.64754	11.8770
$u=\ \ 1.81521+0.23291I$ $a=-0.130732+0.149843I$ $b=-0.206407-0.444927I$	$2.57291+1.76236I$	0
$u=\ \ 1.81521-0.23291I$ $a=-0.130732-0.149843I$ $b=-0.206407+0.444927I$	$2.57291-1.76236I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{27}-9u^{26}+\cdots-23u+5)(u^{120}+2u^{119}+\cdots-340978u+22627)$
c_2	$(u^{27}-2u^{26}+\cdots-8u+1)(u^{120}-3u^{119}+\cdots+52767u+9067)$
c_3	$(u^{27}+6u^{26}+\cdots-3u-1)(u^{120}-5u^{119}+\cdots-58768u+18208)$
c_4, c_5	$(u^{27}-u^{26}+\cdots+10u^2+1)(u^{120}+2u^{119}+\cdots-39u-1)$
c_6	$(u^{27}-u^{26}+\cdots+3u^2-1)(u^{120}-11u^{118}+\cdots+29u+1)$
c_7, c_8	$(u^{27}-u^{26}+\cdots-4u+1)(u^{120}+57u^{118}+\cdots+179u+43)$
c_9	$(u^{27}+u^{26}+\cdots-10u^2-1)(u^{120}+2u^{119}+\cdots-39u-1)$
c_{10}	$(u^{27}+8u^{25}+\cdots+u+1)(u^{120}+3u^{119}+\cdots+1582u+527)$
c_{11}	$(u^{27}-4u^{26}+\cdots-10u+1)(u^{120}+3u^{119}+\cdots+4239u-3181)$
c_{12}	$(u^{27}+u^{26}+\cdots-4u-1)(u^{120}+57u^{118}+\cdots+179u+43)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{27}+9y^{26}+\cdots+299y-25)$ $\cdot(y^{120}-12y^{119}+\cdots-60610138314y+511981129)$
c_2	$(y^{27}-12y^{26}+\cdots+18y-1)$ $\cdot(y^{120}-37y^{119}+\cdots-4553618133y+82210489)$
c_3	$(y^{27}-12y^{26}+\cdots+5y-1)$ $\cdot(y^{120}-45y^{119}+\cdots-6327045888y+331531264)$
c_4, c_5, c_9	$(y^{27}-35y^{26}+\cdots-20y-1)(y^{120}-128y^{119}+\cdots-367y+1)$
c_6	$(y^{27}-9y^{26}+\cdots+6y-1)(y^{120}-22y^{119}+\cdots-537y+1)$
c_7, c_8, c_{12}	$(y^{27}+27y^{26}+\cdots-4y-1)(y^{120}+114y^{119}+\cdots-102991y+1849)$
c_{10}	$(y^{27}+16y^{26}+\cdots+3y-1)$ $\cdot(y^{120}+31y^{119}+\cdots+2355162y+277729)$
c_{11}	$(y^{27}+6y^{26}+\cdots+54y-1)$ $\cdot(y^{120}-3y^{119}+\cdots-363476617y+10118761)$