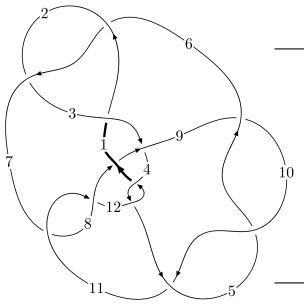
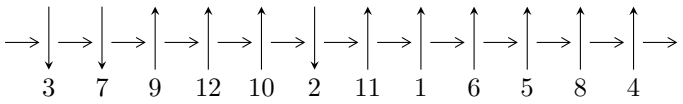
$12a_{0608}$ $(K12a_{0608})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -1.91359 \times 10^{294} u^{122} - 4.52981 \times 10^{294} u^{121} + \cdots + 3.88967 \times 10^{294} b - 2.98604 \times 10^{296}, \\ & - 9.79728 \times 10^{295} u^{122} - 2.24169 \times 10^{296} u^{121} + \cdots + 4.00636 \times 10^{296} a - 7.79915 \times 10^{297}, \\ & u^{123} + 3u^{122} + \cdots + 118u + 103 \rangle \\ I_2^u = \langle & 88u^{27} + 45u^{26} + \cdots + 23b - 99,\ -10u^{27} + 78u^{26} + \cdots + 23a - 144,\ u^{28} - 7u^{26} + \cdots - 8u^2 + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 151 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. $\boldsymbol{I_1^u = \langle -1.91 \times 10^{294} u^{122} - 4.53 \times 10^{294} u^{121} + \cdots + 3.89 \times 10^{294} b - 2.99 \times 10^{296},\ -9.80 \times 10^{295} u^{122} - 2.24 \times 10^{296} u^{121} + \cdots + 4.01 \times 10^{296} a - 7.80 \times 10^{297},\ u^{123} + 3u^{122} + \cdots + 118u + 103 \rangle}$

(i) Arc colorings

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

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

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

$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.244543u^{122} + 0.559534u^{121} + \cdots - 28.9145u + 19.4669 \\ 0.491968u^{122} + 1.16457u^{121} + \cdots + 4.25457u + 76.7685 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.06929u^{122} - 2.35492u^{121} + \cdots - 11.6245u - 175.307 \\ -0.153231u^{122} - 0.387862u^{121} + \cdots + 11.1290u - 2.47162 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.736511u^{122} + 1.72411u^{121} + \cdots - 24.6599u + 96.2354 \\ 0.491968u^{122} + 1.16457u^{121} + \cdots + 4.25457u + 76.7685 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.415775u^{122} + 0.783733u^{121} + \cdots + 11.3829u + 77.3969 \\ -0.364639u^{122} - 0.941621u^{121} + \cdots + 18.7141u - 45.2372 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.366534u^{122} + 0.922878u^{121} + \cdots - 25.4284u + 50.5634 \\ 0.319860u^{122} + 0.705880u^{121} + \cdots - 17.4424u + 46.0162 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.408604u^{122} + 0.923887u^{121} + \cdots - 20.1527u + 36.3808 \\ 0.573783u^{122} + 1.34367u^{121} + \cdots + 3.16407u + 79.2098 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.168150u^{122} + 0.451184u^{121} + \cdots + 10.0432u + 61.5193 \\ 0.0421304u^{122} + 0.0512572u^{121} + \cdots + 8.54951u + 21.5981 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0861323u^{122} + 0.301447u^{121} + \cdots - 68.2666u + 155.020$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{123} + 55u^{122} + \cdots + 363300u + 10609$
c_2, c_6	$u^{123} - 3u^{122} + \cdots + 118u - 103$
c_3	$u^{123} - u^{122} + \cdots + 87046u - 12899$
c_4, c_{12}	$u^{123} + 7u^{122} + \cdots - 111u - 43$
c_5, c_9, c_{10}	$u^{123} - u^{122} + \cdots + u - 19$
c_7, c_{11}	$u^{123} + 3u^{122} + \cdots - 752u - 187$
c_8	$u^{123} + 2u^{122} + \cdots + 2u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{123} + 41y^{122} + \cdots + 2225325352y - 112550881$
c_2, c_6	$y^{123} - 55y^{122} + \cdots + 363300y - 10609$
c_3	$y^{123} + 27y^{122} + \cdots - 6188058542y - 166384201$
c_4, c_{12}	$y^{123} + 91y^{122} + \cdots - 18639y - 1849$
c_5, c_9, c_{10}	$y^{123} + 123y^{122} + \cdots - 47879y - 361$
c_7, c_{11}	$y^{123} - 69y^{122} + \cdots + 1826632y - 34969$
c_8	$y^{123} - 10y^{122} + \cdots + 136y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.787312+0.611782I$ $a=\ \ 1.347980-0.063462I$ $b=-0.704765+0.157248I$	$2.06112-0.67907I$	0
$u=-0.787312-0.611782I$ $a=\ \ 1.347980+0.063462I$ $b=-0.704765-0.157248I$	$2.06112+0.67907I$	0
$u=\ \ 0.948530+0.334543I$ $a=\ \ 1.52357+0.72529I$ $b=-1.032510+0.448117I$	$-2.63821+1.05482I$	0
$u=\ \ 0.948530-0.334543I$ $a=\ \ 1.52357-0.72529I$ $b=-1.032510-0.448117I$	$-2.63821-1.05482I$	0
$u=\ \ 0.407053+0.920884I$ $a=-0.282292+0.316166I$ $b=\ \ 0.397219-0.046853I$	$1.20818-4.13474I$	0
$u=\ \ 0.407053-0.920884I$ $a=-0.282292-0.316166I$ $b=\ \ 0.397219+0.046853I$	$1.20818+4.13474I$	0
$u=-0.515334+0.875291I$ $a=\ \ 0.506060-1.177120I$ $b=-0.15168+1.45970I$	$-7.77774-4.96669I$	0
$u=-0.515334-0.875291I$ $a=\ \ 0.506060+1.177120I$ $b=-0.15168-1.45970I$	$-7.77774+4.96669I$	0
$u=\ \ 0.742368+0.694050I$ $a=-1.144460-0.407527I$ $b=\ \ 0.473434-0.779230I$	$4.20707-2.00630I$	0
$u=\ \ 0.742368-0.694050I$ $a=-1.144460+0.407527I$ $b=\ \ 0.473434+0.779230I$	$4.20707+2.00630I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.899456 + 0.386524I$ $a = -1.205040 - 0.331370I$ $b = -0.07659 - 1.90314I$	$-11.55850 - 1.59415I$	0
$u = 0.899456 - 0.386524I$ $a = -1.205040 + 0.331370I$ $b = -0.07659 + 1.90314I$	$-11.55850 + 1.59415I$	0
$u = -0.940419 + 0.400277I$ $a = 2.58071 - 1.55175I$ $b = 0.022898 - 1.315310I$	$-4.61342 - 3.20939I$	0
$u = -0.940419 - 0.400277I$ $a = 2.58071 + 1.55175I$ $b = 0.022898 + 1.315310I$	$-4.61342 + 3.20939I$	0
$u = -0.547983 + 0.864160I$ $a = -0.831442 + 0.465828I$ $b = 0.716478 - 0.312874I$	$5.66260 - 2.23601I$	0
$u = -0.547983 - 0.864160I$ $a = -0.831442 - 0.465828I$ $b = 0.716478 + 0.312874I$	$5.66260 + 2.23601I$	0
$u = 0.499148 + 0.825004I$ $a = -1.173990 - 0.748238I$ $b = 0.899665 + 0.392483I$	$1.63268 + 7.95122I$	0
$u = 0.499148 - 0.825004I$ $a = -1.173990 + 0.748238I$ $b = 0.899665 - 0.392483I$	$1.63268 - 7.95122I$	0
$u = 1.003890 + 0.321587I$ $a = -0.164326 - 0.143765I$ $b = 0.175029 + 0.466402I$	$-1.66108 - 1.47407I$	0
$u = 1.003890 - 0.321587I$ $a = -0.164326 + 0.143765I$ $b = 0.175029 - 0.466402I$	$-1.66108 + 1.47407I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.042520+0.171631I$ $a=-0.238632-0.296052I$ $b=\ \ 0.433016-0.822238I$	$-5.79252-1.16404I$	0
$u=-1.042520-0.171631I$ $a=-0.238632+0.296052I$ $b=\ \ 0.433016+0.822238I$	$-5.79252+1.16404I$	0
$u=-0.945639+0.472768I$ $a=-1.54105+1.40262I$ $b=\ \ 0.13061+1.51319I$	$-3.11222+3.71000I$	0
$u=-0.945639-0.472768I$ $a=-1.54105-1.40262I$ $b=\ \ 0.13061-1.51319I$	$-3.11222-3.71000I$	0
$u=-1.068950+0.027148I$ $a=-0.065840+0.370856I$ $b=-0.516622-0.708624I$	$-4.17554+6.43085I$	0
$u=-1.068950-0.027148I$ $a=-0.065840-0.370856I$ $b=-0.516622+0.708624I$	$-4.17554-6.43085I$	0
$u=\ \ 0.964494+0.465733I$ $a=\ \ 2.41393+0.37226I$ $b=-0.089867+1.348840I$	$-3.08837-1.58092I$	0
$u=\ \ 0.964494-0.465733I$ $a=\ \ 2.41393-0.37226I$ $b=-0.089867-1.348840I$	$-3.08837+1.58092I$	0
$u=-0.875483+0.638970I$ $a=-1.16011+1.11661I$ $b=\ \ 0.585032+0.257556I$	$1.80755+5.59259I$	0
$u=-0.875483-0.638970I$ $a=-1.16011-1.11661I$ $b=\ \ 0.585032-0.257556I$	$1.80755-5.59259I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.437385+0.992590I$ $a=-0.508035+0.885387I$ $b=\ \ 0.33220-1.49038I$	$-4.42863-12.37890I$	0
$u=-0.437385-0.992590I$ $a=-0.508035-0.885387I$ $b=\ \ 0.33220+1.49038I$	$-4.42863+12.37890I$	0
$u=\ \ 1.029890+0.363744I$ $a=-0.735917-0.877515I$ $b=\ \ 1.005630-0.051546I$	$-2.96783-3.24228I$	0
$u=\ \ 1.029890-0.363744I$ $a=-0.735917+0.877515I$ $b=\ \ 1.005630+0.051546I$	$-2.96783+3.24228I$	0
$u=-0.859174+0.266582I$ $a=-0.864643+1.047260I$ $b=-0.122746-1.028840I$	$-4.11003+6.16993I$	0
$u=-0.859174-0.266582I$ $a=-0.864643-1.047260I$ $b=-0.122746+1.028840I$	$-4.11003-6.16993I$	0
$u=\ \ 0.866442+0.686571I$ $a=\ \ 0.021204-0.798522I$ $b=-0.082816-0.345180I$	$3.81153-2.64755I$	0
$u=\ \ 0.866442-0.686571I$ $a=\ \ 0.021204+0.798522I$ $b=-0.082816+0.345180I$	$3.81153+2.64755I$	0
$u=-0.457246+0.766444I$ $a=\ \ 0.295154+1.361580I$ $b=\ \ 0.10777-1.49701I$	$-8.07051+1.26448I$	0
$u=-0.457246-0.766444I$ $a=\ \ 0.295154-1.361580I$ $b=\ \ 0.10777+1.49701I$	$-8.07051-1.26448I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.782458+0.421266I$ $a=\ \ 0.492123+0.259294I$ $b=-0.25826+1.42214I$	$-2.49887+0.02070I$	0
$u=-0.782458-0.421266I$ $a=\ \ 0.492123-0.259294I$ $b=-0.25826-1.42214I$	$-2.49887-0.02070I$	0
$u=\ \ 0.923397+0.629238I$ $a=\ \ 0.459018+0.164260I$ $b=-0.621856-0.578750I$	$3.64481-3.09137I$	0
$u=\ \ 0.923397-0.629238I$ $a=\ \ 0.459018-0.164260I$ $b=-0.621856+0.578750I$	$3.64481+3.09137I$	0
$u=\ \ 0.980910+0.535352I$ $a=-2.34185-1.18607I$ $b=\ \ 0.22577-1.42603I$	$-3.65229-8.55997I$	0
$u=\ \ 0.980910-0.535352I$ $a=-2.34185+1.18607I$ $b=\ \ 0.22577+1.42603I$	$-3.65229+8.55997I$	0
$u=\ \ 0.385592+1.050480I$ $a=-0.281760-0.585327I$ $b=\ \ 0.24772+1.43250I$	$0.06289+5.69076I$	0
$u=\ \ 0.385592-1.050480I$ $a=-0.281760+0.585327I$ $b=\ \ 0.24772-1.43250I$	$0.06289-5.69076I$	0
$u=\ \ 0.169806+0.859437I$ $a=\ \ 0.524015+0.315294I$ $b=\ \ 0.018135-1.235180I$	$-2.18571+2.40188I$	0
$u=\ \ 0.169806-0.859437I$ $a=\ \ 0.524015-0.315294I$ $b=\ \ 0.018135+1.235180I$	$-2.18571-2.40188I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.003390+0.537040I$ $a=-1.171840+0.574067I$ $b=\ \ 0.616372+0.213805I$	$-0.26082+4.36982I$	0
$u=-1.003390-0.537040I$ $a=-1.171840-0.574067I$ $b=\ \ 0.616372-0.213805I$	$-0.26082-4.36982I$	0
$u=\ \ 0.660571+0.541819I$ $a=\ \ 1.171540+0.572811I$ $b=-0.270269-1.340010I$	$-2.63800+4.19479I$	0
$u=\ \ 0.660571-0.541819I$ $a=\ \ 1.171540-0.572811I$ $b=-0.270269+1.340010I$	$-2.63800-4.19479I$	0
$u=-1.005150+0.553399I$ $a=\ \ 0.353317-0.779011I$ $b=-1.022200+0.905486I$	$-1.13521+6.72211I$	0
$u=-1.005150-0.553399I$ $a=\ \ 0.353317+0.779011I$ $b=-1.022200-0.905486I$	$-1.13521-6.72211I$	0
$u=-1.114370+0.289346I$ $a=\ \ 0.331211-0.959738I$ $b=\ \ 0.160740-1.382660I$	$-6.91836-0.04737I$	0
$u=-1.114370-0.289346I$ $a=\ \ 0.331211+0.959738I$ $b=\ \ 0.160740+1.382660I$	$-6.91836+0.04737I$	0
$u=\ \ 0.889597+0.768873I$ $a=\ \ 0.626789-0.957771I$ $b=\ \ 0.043016+0.993124I$	$-0.21937-2.90174I$	0
$u=\ \ 0.889597-0.768873I$ $a=\ \ 0.626789+0.957771I$ $b=\ \ 0.043016-0.993124I$	$-0.21937+2.90174I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.602560+0.561546I$ $a=-2.00071+0.52026I$ $b=\ \ 0.795831+0.968113I$	$0.10275-2.20920I$	0
$u=-0.602560-0.561546I$ $a=-2.00071-0.52026I$ $b=\ \ 0.795831-0.968113I$	$0.10275+2.20920I$	0
$u=-1.074070+0.485368I$ $a=-0.610249+0.910638I$ $b=\ \ 0.924230-0.351363I$	$-2.13614+3.57490I$	0
$u=-1.074070-0.485368I$ $a=-0.610249-0.910638I$ $b=\ \ 0.924230+0.351363I$	$-2.13614-3.57490I$	0
$u=\ \ 0.639090+0.504053I$ $a=\ \ 1.077930-0.580036I$ $b=-0.192648+0.630385I$	$-0.71618-1.90859I$	0
$u=\ \ 0.639090-0.504053I$ $a=\ \ 1.077930+0.580036I$ $b=-0.192648-0.630385I$	$-0.71618+1.90859I$	0
$u=-1.045760+0.568872I$ $a=\ \ 1.73537+0.12208I$ $b=-0.25881-1.60054I$	$-9.82983+3.72484I$	0
$u=-1.045760-0.568872I$ $a=\ \ 1.73537-0.12208I$ $b=-0.25881+1.60054I$	$-9.82983-3.72484I$	0
$u=\ \ 0.933199+0.740178I$ $a=\ \ 0.904231-0.486103I$ $b=-0.234717+0.833476I$	$-0.29508-2.93135I$	0
$u=\ \ 0.933199-0.740178I$ $a=\ \ 0.904231+0.486103I$ $b=-0.234717-0.833476I$	$-0.29508+2.93135I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.050600 + 0.576898I$ $a = -1.59175 - 0.34367I$ $b = 0.555747 - 0.459906I$	$-3.28631 - 7.76450I$	0
$u = 1.050600 - 0.576898I$ $a = -1.59175 + 0.34367I$ $b = 0.555747 + 0.459906I$	$-3.28631 + 7.76450I$	0
$u = 1.199430 + 0.018650I$ $a = -0.326384 + 0.958707I$ $b = 0.07865 + 1.59809I$	$-13.9909 + 2.9581I$	0
$u = 1.199430 - 0.018650I$ $a = -0.326384 - 0.958707I$ $b = 0.07865 - 1.59809I$	$-13.9909 - 2.9581I$	0
$u = -0.883489 + 0.823866I$ $a = 0.85913 + 1.40259I$ $b = -0.032006 - 1.331310I$	$0.14542 + 3.06178I$	0
$u = -0.883489 - 0.823866I$ $a = 0.85913 - 1.40259I$ $b = -0.032006 + 1.331310I$	$0.14542 - 3.06178I$	0
$u = 1.167860 + 0.351487I$ $a = 0.650199 + 0.290683I$ $b = 0.25318 + 1.56328I$	$-8.82881 + 0.83224I$	0
$u = 1.167860 - 0.351487I$ $a = 0.650199 - 0.290683I$ $b = 0.25318 - 1.56328I$	$-8.82881 - 0.83224I$	0
$u = -1.127710 + 0.480498I$ $a = -1.82337 + 0.51238I$ $b = 0.47357 + 1.49368I$	$-7.99189 + 8.84719I$	0
$u = -1.127710 - 0.480498I$ $a = -1.82337 - 0.51238I$ $b = 0.47357 - 1.49368I$	$-7.99189 - 8.84719I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.110470 + 0.559884I$ $a = -1.99586 - 0.47824I$ $b = 0.290942 - 1.342730I$	$-5.10181 - 7.59480I$	0
$u = 1.110470 - 0.559884I$ $a = -1.99586 + 0.47824I$ $b = 0.290942 + 1.342730I$	$-5.10181 + 7.59480I$	0
$u = 0.434198 + 0.618590I$ $a = 1.41844 + 0.70439I$ $b = -0.314285 - 0.489036I$	$-1.57370 + 3.01462I$	$4.59125 - 4.24141I$
$u = 0.434198 - 0.618590I$ $a = 1.41844 - 0.70439I$ $b = -0.314285 + 0.489036I$	$-1.57370 - 3.01462I$	$4.59125 + 4.24141I$
$u = 0.327812 + 0.669357I$ $a = 0.856891 + 0.912817I$ $b = -0.245218 - 1.287400I$	$-2.89276 + 2.80570I$	$3.21371 - 1.63988I$
$u = 0.327812 - 0.669357I$ $a = 0.856891 - 0.912817I$ $b = -0.245218 + 1.287400I$	$-2.89276 - 2.80570I$	$3.21371 + 1.63988I$
$u = 1.180670 + 0.436343I$ $a = -0.322934 + 0.042889I$ $b = 0.0067332 + 0.1318550I$	$-1.80294 - 1.34025I$	0
$u = 1.180670 - 0.436343I$ $a = -0.322934 - 0.042889I$ $b = 0.0067332 - 0.1318550I$	$-1.80294 + 1.34025I$	0
$u = 1.088750 + 0.642007I$ $a = 1.30896 + 0.59178I$ $b = -1.013580 + 0.497805I$	$-0.14887 - 13.43410I$	0
$u = 1.088750 - 0.642007I$ $a = 1.30896 - 0.59178I$ $b = -1.013580 - 0.497805I$	$-0.14887 + 13.43410I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.071670+0.673655I$ $a=\ \ 1.093560-0.442170I$ $b=-0.778925-0.479486I$	$4.06812+7.92542I$	0
$u=-1.071670-0.673655I$ $a=\ \ 1.093560+0.442170I$ $b=-0.778925+0.479486I$	$4.06812-7.92542I$	0
$u=-0.571980+0.454559I$ $a=\ \ 1.43695-0.31602I$ $b=-0.480902+0.025130I$	$1.042310-0.100714I$	$11.05953+0.92262I$
$u=-0.571980-0.454559I$ $a=\ \ 1.43695+0.31602I$ $b=-0.480902-0.025130I$	$1.042310+0.100714I$	$11.05953-0.92262I$
$u=-0.719247+0.031000I$ $a=\ \ 2.25126-0.47542I$ $b=-0.335275-0.453348I$	$0.559631-0.028225I$	$3.73353-0.43145I$
$u=-0.719247-0.031000I$ $a=\ \ 2.25126+0.47542I$ $b=-0.335275+0.453348I$	$0.559631+0.028225I$	$3.73353+0.43145I$
$u=\ \ 1.157130+0.565388I$ $a=-1.79624-0.50897I$ $b=\ \ 0.184128-1.295580I$	$-4.99442-7.50414I$	0
$u=\ \ 1.157130-0.565388I$ $a=-1.79624+0.50897I$ $b=\ \ 0.184128+1.295580I$	$-4.99442+7.50414I$	0
$u=-0.080053+0.706651I$ $a=\ \ 0.84526-1.32254I$ $b=-0.33809+1.42370I$	$-5.09434-4.55628I$	$2.46367+3.11245I$
$u=-0.080053-0.706651I$ $a=\ \ 0.84526+1.32254I$ $b=-0.33809-1.42370I$	$-5.09434+4.55628I$	$2.46367-3.11245I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.601004 + 0.369751I$ $a = 0.214027 - 1.384130I$ $b = -0.084763 + 1.173690I$	$-2.02990 - 2.08563I$	$5.03397 + 5.10620I$
$u = 0.601004 - 0.369751I$ $a = 0.214027 + 1.384130I$ $b = -0.084763 - 1.173690I$	$-2.02990 + 2.08563I$	$5.03397 - 5.10620I$
$u = -1.109200 + 0.675081I$ $a = -1.99957 - 0.13886I$ $b = 0.22139 + 1.48235I$	$-9.5852 + 10.7219I$	0
$u = -1.109200 - 0.675081I$ $a = -1.99957 + 0.13886I$ $b = 0.22139 - 1.48235I$	$-9.5852 - 10.7219I$	0
$u = -0.566260 + 1.196990I$ $a = -0.276390 - 0.583794I$ $b = 0.100971 + 1.374480I$	$-3.41479 + 5.75686I$	0
$u = -0.566260 - 1.196990I$ $a = -0.276390 + 0.583794I$ $b = 0.100971 - 1.374480I$	$-3.41479 - 5.75686I$	0
$u = -1.173470 + 0.678874I$ $a = 1.79527 - 0.22317I$ $b = -0.37084 - 1.54686I$	$-6.7118 + 18.4340I$	0
$u = -1.173470 - 0.678874I$ $a = 1.79527 + 0.22317I$ $b = -0.37084 + 1.54686I$	$-6.7118 - 18.4340I$	0
$u = 1.365480 + 0.021506I$ $a = 0.060189 - 0.750509I$ $b = -0.19493 - 1.52083I$	$-11.2418 + 9.1333I$	0
$u = 1.365480 - 0.021506I$ $a = 0.060189 + 0.750509I$ $b = -0.19493 + 1.52083I$	$-11.2418 - 9.1333I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.192050 + 0.677817I$ $a = 1.55469 + 0.34247I$ $b = -0.28776 + 1.51874I$	$-2.42897 - 11.84450I$	0
$u = 1.192050 - 0.677817I$ $a = 1.55469 - 0.34247I$ $b = -0.28776 - 1.51874I$	$-2.42897 + 11.84450I$	0
$u = -1.41597 + 0.14452I$ $a = 0.086654 - 0.817722I$ $b = -0.06727 - 1.46117I$	$-7.57822 + 1.85934I$	0
$u = -1.41597 - 0.14452I$ $a = 0.086654 + 0.817722I$ $b = -0.06727 + 1.46117I$	$-7.57822 - 1.85934I$	0
$u = -0.214793 + 0.534884I$ $a = 1.87361 + 0.18083I$ $b = -0.762942 - 0.220779I$	$0.126458 + 0.501413I$	$6.99069 - 0.97875I$
$u = -0.214793 - 0.534884I$ $a = 1.87361 - 0.18083I$ $b = -0.762942 + 0.220779I$	$0.126458 - 0.501413I$	$6.99069 + 0.97875I$
$u = -1.31658 + 0.67345I$ $a = -0.997522 + 0.205714I$ $b = -0.002765 + 1.373410I$	$-6.18745 + 1.32084I$	0
$u = -1.31658 - 0.67345I$ $a = -0.997522 - 0.205714I$ $b = -0.002765 - 1.373410I$	$-6.18745 - 1.32084I$	0
$u = 0.497375 + 0.069997I$ $a = 2.44253 + 1.50473I$ $b = 0.220366 - 0.429480I$	$-1.30719 + 2.77377I$	$2.12105 - 5.40265I$
$u = 0.497375 - 0.069997I$ $a = 2.44253 - 1.50473I$ $b = 0.220366 + 0.429480I$	$-1.30719 - 2.77377I$	$2.12105 + 5.40265I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.477236$ $a=\ \ 1.85229$ $b=-0.355196$	0.885419	11.9600
$u=-1.22203+0.90973I$ $a=\ \ 0.851154+0.087020I$ $b=-0.07295-1.57142I$	$-8.03343+4.00605I$	0
$u=-1.22203-0.90973I$ $a=\ \ 0.851154-0.087020I$ $b=-0.07295+1.57142I$	$-8.03343-4.00605I$	0

II. $I_2^u = \langle 88u^{27} + 45u^{26} + \cdots + 23b - 99,\ -10u^{27} + 78u^{26} + \cdots + 23a - 144,\ u^{28} - 7u^{26} + \cdots - 8u^2 + 1\rangle$

(i) Arc colorings

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

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

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

$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.434783u^{27} - 3.39130u^{26} + \cdots + 3.04348u + 6.26087 \\ -3.82609u^{27} - 1.95652u^{26} + \cdots + 8.21739u + 4.30435 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -12.9565u^{27} + 3.26087u^{26} + \cdots + 14.3043u + 7.82609 \\ -3.82609u^{27} - 0.956522u^{26} + \cdots + 10.2174u - 0.695652 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -3.39130u^{27} - 5.34783u^{26} + \cdots + 11.2609u + 10.5652 \\ -3.82609u^{27} - 1.95652u^{26} + \cdots + 8.21739u + 4.30435 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.30435u^{27} - 4.82609u^{26} + \cdots + 0.869565u + 11.2174 \\ 7.69565u^{27} - 3.82609u^{26} + \cdots - 14.1304u + 4.21739 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 6.30435u^{27} - 1.17391u^{26} + \cdots - 21.8696u + 8.78261 \\ -4.26087u^{27} + 7.43478u^{26} + \cdots + 0.173913u - 5.95652 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.565217u^{27} - 2.39130u^{26} + \cdots + 4.04348u + 5.26087 \\ -3.82609u^{27} - 1.95652u^{26} + \cdots + 8.21739u + 4.30435 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 8.34783u^{27} + 0.0869565u^{26} + \cdots - 8.56522u - 3.39130 \\ -4.91304u^{27} + 3.52174u^{26} + \cdots + 7.60870u - 1.34783 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{424}{23}u^{27} + \frac{492}{23}u^{26} + \cdots - \frac{461}{23}u + \frac{247}{23}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 14u^{27} + \cdots - 16u + 1$
c_2	$u^{28} - 7u^{26} + \cdots - 8u^2 + 1$
c_3	$u^{28} + 4u^{26} + \cdots - 2u + 1$
c_4	$u^{28} + 14u^{26} + \cdots + u + 3$
c_5	$u^{28} + 16u^{26} + \cdots + u + 1$
c_6	$u^{28} - 7u^{26} + \cdots - 8u^2 + 1$
c_7	$u^{28} - 4u^{27} + \cdots - 4u + 1$
c_8	$u^{28} + u^{27} + \cdots + 2u^2 + 1$
c_9, c_{10}	$u^{28} + 16u^{26} + \cdots - u + 1$
c_{11}	$u^{28} + 4u^{27} + \cdots + 4u + 1$
c_{12}	$u^{28} + 14u^{26} + \cdots - u + 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} + 14y^{27} + \cdots + 4y^2 + 1$
c_2, c_6	$y^{28} - 14y^{27} + \cdots - 16y + 1$
c_3	$y^{28} + 8y^{27} + \cdots - 2y + 1$
c_4, c_{12}	$y^{28} + 28y^{27} + \cdots + 167y + 9$
c_5, c_9, c_{10}	$y^{28} + 32y^{27} + \cdots + 11y + 1$
c_7, c_{11}	$y^{28} - 24y^{27} + \cdots - 28y + 1$
c_8	$y^{28} - 9y^{27} + \cdots + 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.915167+0.306798I$ $a=\ 1.314090-0.376918I$ $b=\ 0.04802-1.85125I$	$-11.84290+1.28681I$	$-6.01173+4.88233I$
$u=-0.915167-0.306798I$ $a=\ 1.314090+0.376918I$ $b=\ 0.04802+1.85125I$	$-11.84290-1.28681I$	$-6.01173-4.88233I$
$u=-0.691639+0.777864I$ $a=-0.350646-0.392835I$ $b=-0.310148+0.468429I$	$0.53145+3.71930I$	$4.55046-6.69924I$
$u=-0.691639-0.777864I$ $a=-0.350646+0.392835I$ $b=-0.310148-0.468429I$	$0.53145-3.71930I$	$4.55046+6.69924I$
$u=\ 0.432723+0.827633I$ $a=-0.041836-0.321263I$ $b=-0.133766+1.289080I$	$-2.53211-5.32903I$	$6.12582+4.95903I$
$u=\ 0.432723-0.827633I$ $a=-0.041836+0.321263I$ $b=-0.133766-1.289080I$	$-2.53211+5.32903I$	$6.12582-4.95903I$
$u=\ 1.011290+0.423393I$ $a=-0.713876-1.070590I$ $b=\ 0.718901+0.516702I$	$-2.27853-5.05967I$	$3.47459+6.66316I$
$u=\ 1.011290-0.423393I$ $a=-0.713876+1.070590I$ $b=\ 0.718901-0.516702I$	$-2.27853+5.05967I$	$3.47459-6.66316I$
$u=\ 0.872702+0.686844I$ $a=-0.185565-0.657965I$ $b=-0.044753-0.637567I$	$3.35795-2.64859I$	$-1.69884+2.56363I$
$u=\ 0.872702-0.686844I$ $a=-0.185565+0.657965I$ $b=-0.044753+0.637567I$	$3.35795+2.64859I$	$-1.69884-2.56363I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.876358+0.765551I$ $a=\ \ 0.92195+1.58625I$ $b=-0.020666-1.224370I$	$1.10467+2.89033I$	$11.40955-2.13475I$
$u=-0.876358-0.765551I$ $a=\ \ 0.92195-1.58625I$ $b=-0.020666+1.224370I$	$1.10467-2.89033I$	$11.40955+2.13475I$
$u=-0.792613+0.235951I$ $a=\ \ 2.12050+0.25249I$ $b=-0.278257-0.359878I$	$0.641193+0.799954I$	$5.77042-9.13013I$
$u=-0.792613-0.235951I$ $a=\ \ 2.12050-0.25249I$ $b=-0.278257+0.359878I$	$0.641193-0.799954I$	$5.77042+9.13013I$
$u=\ \ 0.725232+0.348379I$ $a=\ \ 2.44478+1.12149I$ $b=-0.600308+0.657620I$	$-1.18482+1.75585I$	$2.86033+0.77633I$
$u=\ \ 0.725232-0.348379I$ $a=\ \ 2.44478-1.12149I$ $b=-0.600308-0.657620I$	$-1.18482-1.75585I$	$2.86033-0.77633I$
$u=-1.091580+0.500735I$ $a=-2.22274+0.92875I$ $b=\ \ 0.278546+1.320190I$	$-5.34404+8.60711I$	$-0.70812-11.02230I$
$u=-1.091580-0.500735I$ $a=-2.22274-0.92875I$ $b=\ \ 0.278546-1.320190I$	$-5.34404-8.60711I$	$-0.70812+11.02230I$
$u=-1.124270+0.494821I$ $a=-0.416217+0.360770I$ $b=\ \ 0.510017+0.131165I$	$-1.39313+1.57288I$	$8.43595-4.38584I$
$u=-1.124270-0.494821I$ $a=-0.416217-0.360770I$ $b=\ \ 0.510017-0.131165I$	$-1.39313-1.57288I$	$8.43595+4.38584I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.202310 + 0.304809I$ $a = 0.584754 + 0.812487I$ $b = 0.13513 + 1.40947I$	$-6.19136 + 0.59628I$	$2.45660 - 2.03049I$
$u = 1.202310 - 0.304809I$ $a = 0.584754 - 0.812487I$ $b = 0.13513 - 1.40947I$	$-6.19136 - 0.59628I$	$2.45660 + 2.03049I$
$u = -0.562984 + 0.396371I$ $a = 2.03466 - 1.32651I$ $b = -0.227724 + 1.238680I$	$-3.44400 - 4.66789I$	$0.91589 + 5.91609I$
$u = -0.562984 - 0.396371I$ $a = 2.03466 + 1.32651I$ $b = -0.227724 - 1.238680I$	$-3.44400 + 4.66789I$	$0.91589 - 5.91609I$
$u = 0.599089 + 0.115219I$ $a = 1.93413 - 0.42370I$ $b = -0.173110 - 1.310390I$	$-2.88560 + 1.01731I$	$1.33365 - 1.59890I$
$u = 0.599089 - 0.115219I$ $a = 1.93413 + 0.42370I$ $b = -0.173110 + 1.310390I$	$-2.88560 - 1.01731I$	$1.33365 + 1.59890I$
$u = 1.21127 + 0.83460I$ $a = -0.923981 + 0.029523I$ $b = 0.09811 - 1.57477I$	$-8.01715 - 3.84216I$	$3.0854 - 16.7816I$
$u = 1.21127 - 0.83460I$ $a = -0.923981 - 0.029523I$ $b = 0.09811 + 1.57477I$	$-8.01715 + 3.84216I$	$3.0854 + 16.7816I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{28}-14u^{27}+\cdots-16u+1)(u^{123}+55u^{122}+\cdots+363300u+10609)$
c_2	$(u^{28}-7u^{26}+\cdots-8u^2+1)(u^{123}-3u^{122}+\cdots+118u-103)$
c_3	$(u^{28}+4u^{26}+\cdots-2u+1)(u^{123}-u^{122}+\cdots+87046u-12899)$
c_4	$(u^{28}+14u^{26}+\cdots+u+3)(u^{123}+7u^{122}+\cdots-111u-43)$
c_5	$(u^{28}+16u^{26}+\cdots+u+1)(u^{123}-u^{122}+\cdots+u-19)$
c_6	$(u^{28}-7u^{26}+\cdots-8u^2+1)(u^{123}-3u^{122}+\cdots+118u-103)$
c_7	$(u^{28}-4u^{27}+\cdots-4u+1)(u^{123}+3u^{122}+\cdots-752u-187)$
c_8	$(u^{28}+u^{27}+\cdots+2u^2+1)(u^{123}+2u^{122}+\cdots+2u-1)$
c_9, c_{10}	$(u^{28}+16u^{26}+\cdots-u+1)(u^{123}-u^{122}+\cdots+u-19)$
c_{11}	$(u^{28}+4u^{27}+\cdots+4u+1)(u^{123}+3u^{122}+\cdots-752u-187)$
c_{12}	$(u^{28}+14u^{26}+\cdots-u+3)(u^{123}+7u^{122}+\cdots-111u-43)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{28}+14y^{27}+\cdots+4y^2+1)$ $\cdot(y^{123}+41y^{122}+\cdots+2225325352y-112550881)$
c_2, c_6	$(y^{28}-14y^{27}+\cdots-16y+1)(y^{123}-55y^{122}+\cdots+363300y-10609)$
c_3	$(y^{28}+8y^{27}+\cdots-2y+1)$ $\cdot(y^{123}+27y^{122}+\cdots-6188058542y-166384201)$
c_4, c_{12}	$(y^{28}+28y^{27}+\cdots+167y+9)(y^{123}+91y^{122}+\cdots-18639y-1849)$
c_5, c_9, c_{10}	$(y^{28}+32y^{27}+\cdots+11y+1)(y^{123}+123y^{122}+\cdots-47879y-361)$
c_7, c_{11}	$(y^{28}-24y^{27}+\cdots-28y+1)$ $\cdot(y^{123}-69y^{122}+\cdots+1826632y-34969)$
c_8	$(y^{28}-9y^{27}+\cdots+4y+1)(y^{123}-10y^{122}+\cdots+136y-1)$