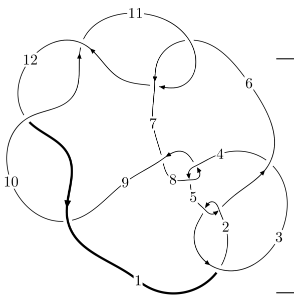
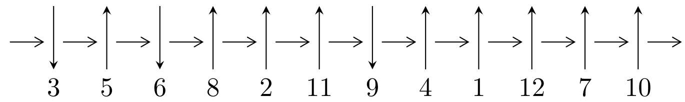
$12a_{0012}$ $(K12a_{0012})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 3u^{88} - 2u^{87} + \cdots + 2b - 4,\ -3u^{88} + 6u^{87} + \cdots + 2a - 5,\ u^{89} - 3u^{88} + \cdots + 3u^2 - 1 \rangle$$
$$I_2^u = \langle -u^2a - au + b,\ a^2 - au + u^2,\ u^3 + u^2 - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 95 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. $I_1^u =$
$$\langle 3u^{88}-2u^{87}+\cdots+2b-4,\ -3u^{88}+6u^{87}+\cdots+2a-5,\ u^{89}-3u^{88}+\cdots+3u^2-1\rangle$$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} \frac{3}{2}u^{88} - 3u^{87} + \cdots - \frac{11}{2}u^2 + \frac{5}{2} \\ -\frac{3}{2}u^{88} + u^{87} + \cdots + u + 2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 4u^{88} - 8u^{87} + \cdots - 10u^2 + 3 \\ -3u^{88} + \frac{1}{2}u^{87} + \cdots + \frac{7}{2}u + 4 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^4 - u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{2}u^{88} - u^{87} + \cdots - u + \frac{1}{2} \\ -\frac{1}{2}u^{88} + u^{87} + \cdots + \frac{1}{2}u^2 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 4u^{88} - 8u^{87} + \cdots - u + 1 \\ -2u^{88} + \frac{1}{2}u^{87} + \cdots + u^2 + \frac{9}{2}u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^6 + u^4 - 2u^2 + 1 \\ u^6 + u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{13} + 2u^{11} - 5u^9 + 6u^7 - 6u^5 + 4u^3 - u \\ u^{13} - u^{11} + 3u^9 - 2u^7 + 2u^5 - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{9}{2}u^{88} - 7u^{87} + \cdots + 10u + \frac{25}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{89} + 42u^{88} + \cdots + 31u - 1$
c_2, c_5	$u^{89} + 4u^{88} + \cdots - u - 1$
c_3	$u^{89} - 4u^{88} + \cdots + 14621u - 1153$
c_4, c_8	$u^{89} - u^{88} + \cdots + 224u - 64$
c_6, c_{11}	$u^{89} - 3u^{88} + \cdots + 3u^2 - 1$
c_7	$u^{89} + 35u^{88} + \cdots - 68608u - 4096$
c_9, c_{10}, c_{12}	$u^{89} - 23u^{88} + \cdots + 6u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{89}+14y^{88}+\cdots+1271y-1$
c_2, c_5	$y^{89}+42y^{88}+\cdots+31y-1$
c_3	$y^{89}-14y^{88}+\cdots+87088919y-1329409$
c_4, c_8	$y^{89}+35y^{88}+\cdots-68608y-4096$
c_6, c_{11}	$y^{89}-23y^{88}+\cdots+6y-1$
c_7	$y^{89}+27y^{88}+\cdots+739246080y-16777216$
c_9, c_{10}, c_{12}	$y^{89}+89y^{88}+\cdots+46y-1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.984195 + 0.195609I$ $a = 0.284066 + 0.070833I$ $b = -0.868179 - 0.697870I$	$3.78188 - 0.84858I$	0
$u = 0.984195 - 0.195609I$ $a = 0.284066 - 0.070833I$ $b = -0.868179 + 0.697870I$	$3.78188 + 0.84858I$	0
$u = 0.939086 + 0.312963I$ $a = -1.39245 - 1.37113I$ $b = 0.291029 + 0.718996I$	$2.25621 + 6.04954I$	0
$u = 0.939086 - 0.312963I$ $a = -1.39245 + 1.37113I$ $b = 0.291029 - 0.718996I$	$2.25621 - 6.04954I$	0
$u = -0.946105 + 0.284359I$ $a = 0.0319019 - 0.1300720I$ $b = -0.790886 + 1.103430I$	$3.90708 - 4.17956I$	0
$u = -0.946105 - 0.284359I$ $a = 0.0319019 + 0.1300720I$ $b = -0.790886 - 1.103430I$	$3.90708 + 4.17956I$	0
$u = 0.944001 + 0.270938I$ $a = 1.034510 + 0.828787I$ $b = -0.365300 - 0.762985I$	$3.98448 + 1.20777I$	0
$u = 0.944001 - 0.270938I$ $a = 1.034510 - 0.828787I$ $b = -0.365300 + 0.762985I$	$3.98448 - 1.20777I$	0
$u = -0.669121 + 0.711417I$ $a = -1.38941 - 0.41251I$ $b = 0.750171 + 0.466489I$	$-4.15772 - 6.05772I$	0
$u = -0.669121 - 0.711417I$ $a = -1.38941 + 0.41251I$ $b = 0.750171 - 0.466489I$	$-4.15772 + 6.05772I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.012480 + 0.174891I$ $a = 0.102594 + 0.161802I$ $b = 1.26707 + 0.65083I$	$1.84877 - 5.70019I$	0
$u = 1.012480 - 0.174891I$ $a = 0.102594 - 0.161802I$ $b = 1.26707 - 0.65083I$	$1.84877 + 5.70019I$	0
$u = -0.955117 + 0.380078I$ $a = 0.089571 + 1.140090I$ $b = 0.447280 - 0.603455I$	$-1.84135 - 4.39709I$	0
$u = -0.955117 - 0.380078I$ $a = 0.089571 - 1.140090I$ $b = 0.447280 + 0.603455I$	$-1.84135 + 4.39709I$	0
$u = 0.956090 + 0.086124I$ $a = 0.184317 - 0.631357I$ $b = 0.612157 - 0.217712I$	$-0.213474 + 0.971536I$	0
$u = 0.956090 - 0.086124I$ $a = 0.184317 + 0.631357I$ $b = 0.612157 + 0.217712I$	$-0.213474 - 0.971536I$	0
$u = -0.992264 + 0.337163I$ $a = 0.678914 - 0.851212I$ $b = -0.177904 + 0.843661I$	$2.95432 - 6.73111I$	0
$u = -0.992264 - 0.337163I$ $a = 0.678914 + 0.851212I$ $b = -0.177904 - 0.843661I$	$2.95432 + 6.73111I$	0
$u = -0.917872 + 0.249970I$ $a = 0.374348 - 0.014019I$ $b = 1.22174 - 1.01315I$	$2.64050 + 0.85670I$	0
$u = -0.917872 - 0.249970I$ $a = 0.374348 + 0.014019I$ $b = 1.22174 + 1.01315I$	$2.64050 - 0.85670I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.010850+0.350168I$ $a=-0.94340+1.21684I$ $b=\ \ 0.007723-0.659253I$	$0.81793-11.84480I$	0
$u=-1.010850-0.350168I$ $a=-0.94340-1.21684I$ $b=\ \ 0.007723+0.659253I$	$0.81793+11.84480I$	0
$u=-0.891457+0.611031I$ $a=-1.070120-0.032846I$ $b=\ \ 0.140570+0.381892I$	$-4.10237-5.74107I$	0
$u=-0.891457-0.611031I$ $a=-1.070120+0.032846I$ $b=\ \ 0.140570-0.381892I$	$-4.10237+5.74107I$	0
$u=-0.800386+0.753263I$ $a=\ \ 0.215588+0.897331I$ $b=\ \ 0.615256-0.454722I$	$-2.23330-1.98424I$	0
$u=-0.800386-0.753263I$ $a=\ \ 0.215588-0.897331I$ $b=\ \ 0.615256+0.454722I$	$-2.23330+1.98424I$	0
$u=-0.653820+0.533473I$ $a=\ \ 0.680786+0.229763I$ $b=\ \ 0.055291+0.139974I$	$-1.77091-1.96389I$	$2.42047+4.44234I$
$u=-0.653820-0.533473I$ $a=\ \ 0.680786-0.229763I$ $b=\ \ 0.055291-0.139974I$	$-1.77091+1.96389I$	$2.42047-4.44234I$
$u=-0.826529+0.827935I$ $a=-1.55195+1.53702I$ $b=\ \ 2.78350+0.57949I$	$-2.90898-0.83941I$	0
$u=-0.826529-0.827935I$ $a=-1.55195-1.53702I$ $b=\ \ 2.78350-0.57949I$	$-2.90898+0.83941I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.772339 + 0.290141I$ $a = 0.37290 - 1.61691I$ $b = -0.009613 + 0.717771I$	$-0.0039878 - 0.0448662I$	$5.32263 - 2.00027I$
$u = 0.772339 - 0.290141I$ $a = 0.37290 + 1.61691I$ $b = -0.009613 - 0.717771I$	$-0.0039878 + 0.0448662I$	$5.32263 + 2.00027I$
$u = 0.825260 + 0.836613I$ $a = 0.399010 - 1.091970I$ $b = 0.324884 + 0.701428I$	$-3.16103 - 2.10920I$	0
$u = 0.825260 - 0.836613I$ $a = 0.399010 + 1.091970I$ $b = 0.324884 - 0.701428I$	$-3.16103 + 2.10920I$	0
$u = 0.842049 + 0.823858I$ $a = -1.168440 + 0.518558I$ $b = 0.720294 - 0.819193I$	$-3.98819 + 3.19140I$	0
$u = 0.842049 - 0.823858I$ $a = -1.168440 - 0.518558I$ $b = 0.720294 + 0.819193I$	$-3.98819 - 3.19140I$	0
$u = -0.516247 + 0.636377I$ $a = -0.649421 + 0.541364I$ $b = 0.238133 - 0.874682I$	$-5.10938 + 1.20295I$	$-3.30682 - 0.49087I$
$u = -0.516247 - 0.636377I$ $a = -0.649421 - 0.541364I$ $b = 0.238133 + 0.874682I$	$-5.10938 - 1.20295I$	$-3.30682 + 0.49087I$
$u = -0.828598 + 0.851010I$ $a = 2.47396 - 2.06719I$ $b = -4.29930 - 1.01081I$	$-5.11393 + 3.82637I$	0
$u = -0.828598 - 0.851010I$ $a = 2.47396 + 2.06719I$ $b = -4.29930 + 1.01081I$	$-5.11393 - 3.82637I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.957326 + 0.706173I$ $a = 0.141941 + 1.214140I$ $b = 0.482793 - 0.912258I$	$-3.41751 + 0.66358I$	0
$u = -0.957326 - 0.706173I$ $a = 0.141941 - 1.214140I$ $b = 0.482793 + 0.912258I$	$-3.41751 - 0.66358I$	0
$u = 0.810066 + 0.871834I$ $a = -1.62312 - 1.44769I$ $b = 2.61132 - 0.61128I$	$-4.88917 - 4.94343I$	0
$u = 0.810066 - 0.871834I$ $a = -1.62312 + 1.44769I$ $b = 2.61132 + 0.61128I$	$-4.88917 + 4.94343I$	0
$u = 0.805965 + 0.882488I$ $a = 2.35286 + 1.59822I$ $b = -3.56104 + 1.09439I$	$-7.24505 - 10.18080I$	0
$u = 0.805965 - 0.882488I$ $a = 2.35286 - 1.59822I$ $b = -3.56104 - 1.09439I$	$-7.24505 + 10.18080I$	0
$u = -0.945920 + 0.743098I$ $a = -0.836389 - 0.374659I$ $b = 0.673558 + 1.024450I$	$-1.79139 - 3.70694I$	0
$u = -0.945920 - 0.743098I$ $a = -0.836389 + 0.374659I$ $b = 0.673558 - 1.024450I$	$-1.79139 + 3.70694I$	0
$u = -0.866941 + 0.836286I$ $a = 2.44062 + 0.04037I$ $b = -1.89080 - 3.09001I$	$-6.74064 - 3.43706I$	0
$u = -0.866941 - 0.836286I$ $a = 2.44062 - 0.04037I$ $b = -1.89080 + 3.09001I$	$-6.74064 + 3.43706I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.831113 + 0.876310I$ $a = 1.51874 + 0.10090I$ $b = -1.25014 + 1.92549I$	$-9.88374 - 2.08759I$	0
$u = 0.831113 - 0.876310I$ $a = 1.51874 - 0.10090I$ $b = -1.25014 - 1.92549I$	$-9.88374 + 2.08759I$	0
$u = 0.942881 + 0.793885I$ $a = 0.244590 - 1.237230I$ $b = 0.419746 + 0.906708I$	$-3.67541 + 2.86361I$	0
$u = 0.942881 - 0.793885I$ $a = 0.244590 + 1.237230I$ $b = 0.419746 - 0.906708I$	$-3.67541 - 2.86361I$	0
$u = -0.930101 + 0.813617I$ $a = 0.06817 - 2.29904I$ $b = -3.08373 + 2.03710I$	$-6.54245 - 2.71731I$	0
$u = -0.930101 - 0.813617I$ $a = 0.06817 + 2.29904I$ $b = -3.08373 - 2.03710I$	$-6.54245 + 2.71731I$	0
$u = -0.953878 + 0.790823I$ $a = -1.68540 + 1.40666I$ $b = 3.26711 + 0.64952I$	$-2.51595 - 5.21699I$	0
$u = -0.953878 - 0.790823I$ $a = -1.68540 - 1.40666I$ $b = 3.26711 - 0.64952I$	$-2.51595 + 5.21699I$	0
$u = 0.908323 + 0.851107I$ $a = -1.55606 - 1.35708I$ $b = 2.78869 - 0.48366I$	$-9.19375 + 3.15888I$	0
$u = 0.908323 - 0.851107I$ $a = -1.55606 + 1.35708I$ $b = 2.78869 + 0.48366I$	$-9.19375 - 3.15888I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.958134 + 0.795019I$ $a = -0.913730 + 0.566872I$ $b = 0.677571 - 1.009680I$	$-2.74969 + 8.20421I$	0
$u = 0.958134 - 0.795019I$ $a = -0.913730 - 0.566872I$ $b = 0.677571 + 1.009680I$	$-2.74969 - 8.20421I$	0
$u = 0.899654 + 0.869048I$ $a = 1.33039 + 2.02355I$ $b = -3.61876 - 0.43635I$	$-12.74330 - 1.02952I$	0
$u = 0.899654 - 0.869048I$ $a = 1.33039 - 2.02355I$ $b = -3.61876 + 0.43635I$	$-12.74330 + 1.02952I$	0
$u = -0.962482 + 0.804421I$ $a = 2.23438 - 2.28958I$ $b = -4.75869 - 0.68092I$	$-4.69683 - 9.99405I$	0
$u = -0.962482 - 0.804421I$ $a = 2.23438 + 2.28958I$ $b = -4.75869 + 0.68092I$	$-4.69683 + 9.99405I$	0
$u = 0.926091 + 0.858251I$ $a = 2.20383 + 1.17824I$ $b = -3.17389 + 1.66679I$	$-12.6600 + 7.4254I$	0
$u = 0.926091 - 0.858251I$ $a = 2.20383 - 1.17824I$ $b = -3.17389 - 1.66679I$	$-12.6600 - 7.4254I$	0
$u = 0.982575 + 0.806408I$ $a = -1.56913 - 1.42962I$ $b = 3.21737 - 0.34502I$	$-4.34954 + 11.17710I$	0
$u = 0.982575 - 0.806408I$ $a = -1.56913 + 1.42962I$ $b = 3.21737 + 0.34502I$	$-4.34954 - 11.17710I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.973466 + 0.819696I$ $a = 0.16054 + 1.43750I$ $b = -2.24771 - 1.27213I$	$-9.43596 + 8.37985I$	0
$u = 0.973466 - 0.819696I$ $a = 0.16054 - 1.43750I$ $b = -2.24771 + 1.27213I$	$-9.43596 - 8.37985I$	0
$u = 0.990000 + 0.809599I$ $a = 1.79298 + 2.17207I$ $b = -4.21652 + 0.13308I$	$-6.6675 + 16.4559I$	0
$u = 0.990000 - 0.809599I$ $a = 1.79298 - 2.17207I$ $b = -4.21652 - 0.13308I$	$-6.6675 - 16.4559I$	0
$u = -0.150757 + 0.682122I$ $a = -1.46918 - 0.43941I$ $b = 0.496150 - 0.695454I$	$-1.91804 + 8.20078I$	$0.63570 - 6.56551I$
$u = -0.150757 - 0.682122I$ $a = -1.46918 + 0.43941I$ $b = 0.496150 + 0.695454I$	$-1.91804 - 8.20078I$	$0.63570 + 6.56551I$
$u = -0.246131 + 0.627367I$ $a = -1.055150 - 0.559293I$ $b = 0.862529 + 0.232798I$	$-4.05476 + 0.74742I$	$-3.00857 - 0.36398I$
$u = -0.246131 - 0.627367I$ $a = -1.055150 + 0.559293I$ $b = 0.862529 - 0.232798I$	$-4.05476 - 0.74742I$	$-3.00857 + 0.36398I$
$u = -0.139471 + 0.635853I$ $a = 1.39651 + 0.34800I$ $b = -0.294766 + 0.248460I$	$0.29648 + 3.27892I$	$3.84119 - 2.78924I$
$u = -0.139471 - 0.635853I$ $a = 1.39651 - 0.34800I$ $b = -0.294766 - 0.248460I$	$0.29648 - 3.27892I$	$3.84119 + 2.78924I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.646770$ $a = 0.860949$ $b = -0.235839$	0.883017	11.7070
$u = 0.482237 + 0.354828I$ $a = -2.04164 + 1.20936I$ $b = 0.972083 - 0.349406I$	$-0.87269 + 2.73014I$	$2.40287 - 5.98665I$
$u = 0.482237 - 0.354828I$ $a = -2.04164 - 1.20936I$ $b = 0.972083 + 0.349406I$	$-0.87269 - 2.73014I$	$2.40287 + 5.98665I$
$u = -0.566823 + 0.093243I$ $a = 0.204694 + 1.214440I$ $b = 0.399147 + 1.066770I$	$0.65478 - 2.26477I$	$-1.92948 + 7.19355I$
$u = -0.566823 - 0.093243I$ $a = 0.204694 - 1.214440I$ $b = 0.399147 - 1.066770I$	$0.65478 + 2.26477I$	$-1.92948 - 7.19355I$
$u = -0.017736 + 0.501459I$ $a = 1.67869 - 0.08674I$ $b = -0.134465 - 0.518010I$	$1.29764 + 1.42827I$	$5.30898 - 3.39968I$
$u = -0.017736 - 0.501459I$ $a = 1.67869 + 0.08674I$ $b = -0.134465 + 0.518010I$	$1.29764 - 1.42827I$	$5.30898 + 3.39968I$
$u = 0.136537 + 0.480189I$ $a = -2.20688 + 0.22311I$ $b = 0.516448 + 0.846415I$	$-0.07110 - 3.07726I$	$2.85853 + 2.35963I$
$u = 0.136537 - 0.480189I$ $a = -2.20688 - 0.22311I$ $b = 0.516448 - 0.846415I$	$-0.07110 + 3.07726I$	$2.85853 - 2.35963I$

II. $\boldsymbol{I_2^u = \langle -u^2a - au + b,\ a^2 - au + u^2,\ u^3 + u^2 - 1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} a \\ u^2a + au \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ u^2 + u - 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0 \\ au + a \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^2 - u + 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} a \\ u^2a + au - u^2 - u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ au + a \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 2u^2a + 2au + u^2 - a + 6u + 7$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_5	$(y^2+y+1)^3$
c_4, c_7, c_8	y^6
c_6, c_{11}	$(y^3-y^2+2y-1)^2$
c_9, c_{10}, c_{12}	$(y^3+3y^2+2y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.877439 + 0.744862I$ $a = -1.083790 - 0.387453I$ $b = 0.500000 + 0.866025I$	$-3.02413 - 4.85801I$	$4.03424 + 5.28153I$
$u = -0.877439 + 0.744862I$ $a = 0.206350 + 1.132320I$ $b = 0.500000 - 0.866025I$	$-3.02413 - 0.79824I$	$2.74410 + 0.29766I$
$u = -0.877439 - 0.744862I$ $a = -1.083790 + 0.387453I$ $b = 0.500000 - 0.866025I$	$-3.02413 + 4.85801I$	$4.03424 - 5.28153I$
$u = -0.877439 - 0.744862I$ $a = 0.206350 - 1.132320I$ $b = 0.500000 + 0.866025I$	$-3.02413 + 0.79824I$	$2.74410 - 0.29766I$
$u = 0.754878$ $a = 0.377439 + 0.653743I$ $b = 0.500000 + 0.866025I$	$1.11345 - 2.02988I$	$12.72167 + 1.07831I$
$u = 0.754878$ $a = 0.377439 - 0.653743I$ $b = 0.500000 - 0.866025I$	$1.11345 + 2.02988I$	$12.72167 - 1.07831I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^3)(u^{89}+42u^{88}+\cdots+31u-1)$
c_2	$((u^2+u+1)^3)(u^{89}+4u^{88}+\cdots-u-1)$
c_3	$((u^2-u+1)^3)(u^{89}-4u^{88}+\cdots+14621u-1153)$
c_4, c_8	$u^6(u^{89}-u^{88}+\cdots+224u-64)$
c_5	$((u^2-u+1)^3)(u^{89}+4u^{88}+\cdots-u-1)$
c_6	$((u^3-u^2+1)^2)(u^{89}-3u^{88}+\cdots+3u^2-1)$
c_7	$u^6(u^{89}+35u^{88}+\cdots-68608u-4096)$
c_9, c_{10}	$((u^3+u^2+2u+1)^2)(u^{89}-23u^{88}+\cdots+6u-1)$
c_{11}	$((u^3+u^2-1)^2)(u^{89}-3u^{88}+\cdots+3u^2-1)$
c_{12}	$((u^3-u^2+2u-1)^2)(u^{89}-23u^{88}+\cdots+6u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^3)(y^{89}+14y^{88}+\cdots+1271y-1)$
c_2, c_5	$((y^2+y+1)^3)(y^{89}+42y^{88}+\cdots+31y-1)$
c_3	$((y^2+y+1)^3)(y^{89}-14y^{88}+\cdots+8.70889\times 10^7 y-1329409)$
c_4, c_8	$y^6(y^{89}+35y^{88}+\cdots-68608y-4096)$
c_6, c_{11}	$((y^3-y^2+2y-1)^2)(y^{89}-23y^{88}+\cdots+6y-1)$
c_7	$y^6(y^{89}+27y^{88}+\cdots+7.39246\times 10^8 y-1.67772\times 10^7)$
c_9, c_{10}, c_{12}	$((y^3+3y^2+2y-1)^2)(y^{89}+89y^{88}+\cdots+46y-1)$