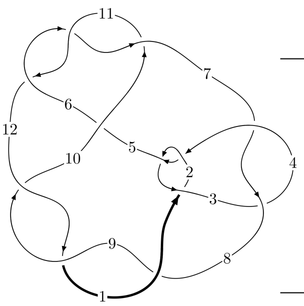
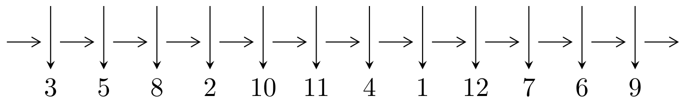
$12a_{0097}$ ($K12a_{0097}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I^u_1 = \langle & 2.27877 \times 10^{118} u^{70} - 1.71790 \times 10^{119} u^{69} + \cdots + 6.29616 \times 10^{119} b - 2.88028 \times 10^{119}, \\
& - 1.11155 \times 10^{119} u^{70} + 7.86535 \times 10^{119} u^{69} + \cdots + 4.40732 \times 10^{120} a + 1.25108 \times 10^{121}, \\
& u^{71} - 8u^{70} + \cdots - 336u + 49\rangle \\
I^u_2 = \langle & b,\ u^2 + a + 2,\ u^3 + 2u - 1\rangle \\
I^u_3 = \langle & b,\ -u^3 - u^2 + a - 2u - 2,\ u^4 + u^3 + 2u^2 + 2u + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 78 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. $\boldsymbol{I_1^u = \langle 2.28\times 10^{118}u^{70} - 1.72\times 10^{119}u^{69} + \cdots + 6.30\times 10^{119}b - 2.88\times 10^{119},\ -1.11\times 10^{119}u^{70} + 7.87\times 10^{119}u^{69} + \cdots + 4.41\times 10^{120}a + 1.25\times 10^{121},\ u^{71} - 8u^{70} + \cdots - 336u + 49\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0252206u^{70} - 0.178461u^{69} + \cdots + 12.8042u - 2.83865 \\ -0.0361930u^{70} + 0.272848u^{69} + \cdots - 10.0915u + 0.457467 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0109724u^{70} + 0.0943870u^{69} + \cdots + 2.71273u - 2.38119 \\ -0.0361930u^{70} + 0.272848u^{69} + \cdots - 10.0915u + 0.457467 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0289170u^{70} + 0.232103u^{69} + \cdots - 11.9842u - 0.213372 \\ -0.00325428u^{70} + 0.0204184u^{69} + \cdots + 4.10649u - 1.07519 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.0327771u^{70} - 0.219346u^{69} + \cdots + 20.2771u - 2.78303 \\ -0.00325428u^{70} + 0.0204184u^{69} + \cdots + 4.10649u - 1.07519 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0209275u^{70} + 0.142661u^{69} + \cdots + 14.5291u - 1.66013 \\ 0.0428700u^{70} - 0.321456u^{69} + \cdots + 8.23006u - 1.60608 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0175926u^{70} + 0.136899u^{69} + \cdots + 12.9847u - 2.05681 \\ 0.0348688u^{70} - 0.279866u^{69} + \cdots + 1.94984u + 0.536966 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0410166u^{70} - 0.324779u^{69} + \cdots + 25.3736u - 3.63534 \\ -0.0478328u^{70} + 0.393772u^{69} + \cdots - 12.0234u + 1.27819 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.0549660u^{70} + 0.494164u^{69} + \cdots - 79.5880u + 1.61216$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{71} + 30u^{70} + \cdots + 63u + 1$
c_2, c_4	$u^{71} - 8u^{70} + \cdots - u + 1$
c_3, c_7	$u^{71} + u^{70} + \cdots + 320u + 128$
c_5	$u^{71} - 2u^{70} + \cdots - 784u + 4360$
c_6, c_{10}, c_{11}	$u^{71} + 2u^{70} + \cdots + 4u + 1$
c_8, c_9, c_{12}	$u^{71} - 8u^{70} + \cdots - 336u + 49$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{71} + 30y^{70} + \cdots + 3271y - 1$
c_2, c_4	$y^{71} - 30y^{70} + \cdots + 63y - 1$
c_3, c_7	$y^{71} + 45y^{70} + \cdots - 233472y - 16384$
c_5	$y^{71} + 36y^{70} + \cdots - 370918384y - 19009600$
c_6, c_{10}, c_{11}	$y^{71} + 68y^{70} + \cdots + 12y - 1$
c_8, c_9, c_{12}	$y^{71} + 80y^{70} + \cdots - 77420y - 2401$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.965089 + 0.222646I$ $a = -0.463055 + 0.146640I$ $b = -0.383523 - 1.048760I$	$2.17116 - 4.96264I$	0
$u = 0.965089 - 0.222646I$ $a = -0.463055 - 0.146640I$ $b = -0.383523 + 1.048760I$	$2.17116 + 4.96264I$	0
$u = 0.555630 + 0.843517I$ $a = -0.179841 - 0.287942I$ $b = -0.921031 + 0.373991I$	$3.18386 - 5.21037I$	0
$u = 0.555630 - 0.843517I$ $a = -0.179841 + 0.287942I$ $b = -0.921031 - 0.373991I$	$3.18386 + 5.21037I$	0
$u = -0.497939 + 0.886784I$ $a = -0.460887 - 0.886344I$ $b = -0.213854 + 1.051720I$	$2.29580 + 2.43328I$	0
$u = -0.497939 - 0.886784I$ $a = -0.460887 + 0.886344I$ $b = -0.213854 - 1.051720I$	$2.29580 - 2.43328I$	0
$u = 0.901281 + 0.483012I$ $a = 0.174621 - 0.074659I$ $b = -0.183485 + 0.929838I$	$2.82109 - 0.79303I$	0
$u = 0.901281 - 0.483012I$ $a = 0.174621 + 0.074659I$ $b = -0.183485 - 0.929838I$	$2.82109 + 0.79303I$	0
$u = -0.737991 + 0.797805I$ $a = 0.817472 + 0.829674I$ $b = 0.496722 - 1.174470I$	$0.78928 + 7.49831I$	0
$u = -0.737991 - 0.797805I$ $a = 0.817472 - 0.829674I$ $b = 0.496722 + 1.174470I$	$0.78928 - 7.49831I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.898468+0.151332I$ $a=0.0921622+0.0914888I$ $b=0.274475+1.005400I$	$-1.11803-2.10911I$	0
$u=-0.898468-0.151332I$ $a=0.0921622-0.0914888I$ $b=0.274475-1.005400I$	$-1.11803+2.10911I$	0
$u=0.519063+0.701175I$ $a=-0.45976+2.32557I$ $b=-0.267550-0.775200I$	$2.27830-2.99192I$	0
$u=0.519063-0.701175I$ $a=-0.45976-2.32557I$ $b=-0.267550+0.775200I$	$2.27830+2.99192I$	0
$u=0.542453+1.060010I$ $a=0.312954-1.139310I$ $b=0.336812+1.112900I$	$7.64845-5.36975I$	0
$u=0.542453-1.060010I$ $a=0.312954+1.139310I$ $b=0.336812-1.112900I$	$7.64845+5.36975I$	0
$u=-0.170069+1.204310I$ $a=-0.021614-0.362936I$ $b=-0.002806+0.626003I$	$2.50967+1.94105I$	0
$u=-0.170069-1.204310I$ $a=-0.021614+0.362936I$ $b=-0.002806-0.626003I$	$2.50967-1.94105I$	0
$u=0.345350+0.682566I$ $a=1.018120-0.634027I$ $b=0.044806+1.135950I$	$3.18971+0.88617I$	$-5.37424-3.34259I$
$u=0.345350-0.682566I$ $a=1.018120+0.634027I$ $b=0.044806-1.135950I$	$3.18971-0.88617I$	$-5.37424+3.34259I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.478584 + 0.568662I$ $a = 0.568000 - 0.216623I$ $b = 0.803895 + 0.353915I$	$-1.82493 + 2.59268I$	$-15.3769 - 7.2742I$
$u = -0.478584 - 0.568662I$ $a = 0.568000 + 0.216623I$ $b = 0.803895 - 0.353915I$	$-1.82493 - 2.59268I$	$-15.3769 + 7.2742I$
$u = 0.738278 + 1.040830I$ $a = -0.667814 + 1.062280I$ $b = -0.552812 - 1.199040I$	$5.84593 - 10.65120I$	0
$u = 0.738278 - 1.040830I$ $a = -0.667814 - 1.062280I$ $b = -0.552812 + 1.199040I$	$5.84593 + 10.65120I$	0
$u = 0.551600 + 0.463905I$ $a = -1.304920 + 0.339654I$ $b = -0.394465 - 1.185760I$	$2.25258 - 4.24592I$	$-7.24520 + 3.14949I$
$u = 0.551600 - 0.463905I$ $a = -1.304920 - 0.339654I$ $b = -0.394465 + 1.185760I$	$2.25258 + 4.24592I$	$-7.24520 - 3.14949I$
$u = 0.700493 + 0.073725I$ $a = -0.99238 - 1.19225I$ $b = -0.604080 + 0.530248I$	$0.487722 - 1.022320I$	$-13.68239 - 0.22891I$
$u = 0.700493 - 0.073725I$ $a = -0.99238 + 1.19225I$ $b = -0.604080 - 0.530248I$	$0.487722 + 1.022320I$	$-13.68239 + 0.22891I$
$u = -0.016841 + 0.702643I$ $a = -1.54871 - 1.43918I$ $b = -0.040877 + 1.295280I$	$9.32963 - 2.62843I$	$-1.88831 + 2.84842I$
$u = -0.016841 - 0.702643I$ $a = -1.54871 + 1.43918I$ $b = -0.040877 - 1.295280I$	$9.32963 + 2.62843I$	$-1.88831 - 2.84842I$

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.332568+0.605833I$ $a = -0.301092+0.636346I$ $b = 0.862872-0.007307I$	$4.21028-1.36691I$	$-5.92252+0.19732I$
$u = 0.332568-0.605833I$ $a = -0.301092-0.636346I$ $b = 0.862872+0.007307I$	$4.21028+1.36691I$	$-5.92252-0.19732I$
$u = 0.558598+0.272901I$ $a = -0.299568-0.501299I$ $b = 0.440934+0.406344I$	$3.36702-1.57403I$	$-6.09432+4.24770I$
$u = 0.558598-0.272901I$ $a = -0.299568+0.501299I$ $b = 0.440934-0.406344I$	$3.36702+1.57403I$	$-6.09432-4.24770I$
$u = -0.435436+0.347884I$ $a = 1.09728+2.39333I$ $b = 0.316131-0.580635I$	$-2.50844+0.67754I$	$-14.4694-9.3694I$
$u = -0.435436-0.347884I$ $a = 1.09728-2.39333I$ $b = 0.316131+0.580635I$	$-2.50844-0.67754I$	$-14.4694+9.3694I$
$u = 0.27752+1.42324I$ $a = 0.031422-0.333514I$ $b = -0.015427+0.624053I$	$8.54375-5.00674I$	0
$u = 0.27752-1.42324I$ $a = 0.031422+0.333514I$ $b = -0.015427-0.624053I$	$8.54375+5.00674I$	0
$u = -0.097939+0.485793I$ $a = 2.58622+1.57725I$ $b = 0.361070-1.308120I$	$8.54074+3.06263I$	$-3.03957-2.89556I$
$u = -0.097939-0.485793I$ $a = 2.58622-1.57725I$ $b = 0.361070+1.308120I$	$8.54074-3.06263I$	$-3.03957+2.89556I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.06886 + 1.50531I$ $a = 0.01135 + 2.28493I$ $b = 0.024006 - 1.065750I$	$3.67289 + 2.17680I$	0
$u = -0.06886 - 1.50531I$ $a = 0.01135 - 2.28493I$ $b = 0.024006 + 1.065750I$	$3.67289 - 2.17680I$	0
$u = 0.00316 + 1.51912I$ $a = 0.444013 - 0.011181I$ $b = -1.166440 + 0.191892I$	$5.33599 - 0.33795I$	0
$u = 0.00316 - 1.51912I$ $a = 0.444013 + 0.011181I$ $b = -1.166440 - 0.191892I$	$5.33599 + 0.33795I$	0
$u = -0.12329 + 1.54920I$ $a = -0.430159 - 0.078037I$ $b = 1.170270 + 0.230752I$	$5.25008 + 4.73327I$	0
$u = -0.12329 - 1.54920I$ $a = -0.430159 + 0.078037I$ $b = 1.170270 - 0.230752I$	$5.25008 - 4.73327I$	0
$u = 0.15624 + 1.55244I$ $a = -0.48688 + 1.73940I$ $b = -0.61601 - 1.36943I$	$9.10594 - 6.74702I$	0
$u = 0.15624 - 1.55244I$ $a = -0.48688 - 1.73940I$ $b = -0.61601 + 1.36943I$	$9.10594 + 6.74702I$	0
$u = -0.04061 + 1.56679I$ $a = 0.47782 + 1.82859I$ $b = 0.61104 - 1.39480I$	$15.6993 + 3.6198I$	0
$u = -0.04061 - 1.56679I$ $a = 0.47782 - 1.82859I$ $b = 0.61104 + 1.39480I$	$15.6993 - 3.6198I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.08851 + 1.58806I$ $a = -0.499554 + 0.013294I$ $b = 1.192900 + 0.167411I$	$11.75780 - 2.86927I$	0
$u = 0.08851 - 1.58806I$ $a = -0.499554 - 0.013294I$ $b = 1.192900 - 0.167411I$	$11.75780 + 2.86927I$	0
$u = 0.07767 + 1.59080I$ $a = 0.31543 - 1.81519I$ $b = 0.36546 + 1.43425I$	$10.92660 - 0.53406I$	0
$u = 0.07767 - 1.59080I$ $a = 0.31543 + 1.81519I$ $b = 0.36546 - 1.43425I$	$10.92660 + 0.53406I$	0
$u = 0.14393 + 1.59724I$ $a = -0.01779 + 2.26870I$ $b = -0.048367 - 1.098220I$	$10.02040 - 5.42403I$	0
$u = 0.14393 - 1.59724I$ $a = -0.01779 - 2.26870I$ $b = -0.048367 + 1.098220I$	$10.02040 + 5.42403I$	0
$u = 0.00999 + 1.62086I$ $a = -0.32346 - 1.87968I$ $b = -0.35353 + 1.46380I$	$17.4703 - 2.6861I$	0
$u = 0.00999 - 1.62086I$ $a = -0.32346 + 1.87968I$ $b = -0.35353 - 1.46380I$	$17.4703 + 2.6861I$	0
$u = -0.15869 + 1.63585I$ $a = -0.25913 - 1.78272I$ $b = -0.39647 + 1.42419I$	$10.77460 + 5.03788I$	0
$u = -0.15869 - 1.63585I$ $a = -0.25913 + 1.78272I$ $b = -0.39647 - 1.42419I$	$10.77460 - 5.03788I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.23701+1.62979I$ $a=\ 0.42275+1.68597I$ $b=\ 0.63809-1.35812I$	$8.8506+11.2317I$	0
$u=-0.23701-1.62979I$ $a=\ 0.42275-1.68597I$ $b=\ 0.63809+1.35812I$	$8.8506-11.2317I$	0
$u=\ 0.17330+1.64014I$ $a=\ 0.465694-0.121420I$ $b=-1.196240+0.249549I$	$11.58050-8.05691I$	0
$u=\ 0.17330-1.64014I$ $a=\ 0.465694+0.121420I$ $b=-1.196240-0.249549I$	$11.58050+8.05691I$	0
$u=-0.313436$ $a=\ 0.420211$ $b=-0.362858$	-0.621610	-15.9200
$u=\ 0.050078+0.277688I$ $a=-0.89153+1.57529I$ $b=-0.664853+0.126557I$	$-0.930568-0.261352I$	$-10.83012-1.62800I$
$u=\ 0.050078-0.277688I$ $a=-0.89153-1.57529I$ $b=-0.664853-0.126557I$	$-0.930568+0.261352I$	$-10.83012+1.62800I$
$u=\ 0.18363+1.71053I$ $a=\ 0.20893-1.79674I$ $b=\ 0.42095+1.43650I$	$17.1323-8.4610I$	0
$u=\ 0.18363-1.71053I$ $a=\ 0.20893+1.79674I$ $b=\ 0.42095-1.43650I$	$17.1323+8.4610I$	0
$u=\ 0.24399+1.71973I$ $a=-0.36048+1.69027I$ $b=-0.65719-1.36333I$	$15.1368-14.7023I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.24399 - 1.71973I$ $a = -0.36048 - 1.69027I$ $b = -0.65719 + 1.36333I$	$15.1368 + 14.7023I$	0

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -u^2 - 3u - 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^3$
c_3, c_7	u^3
c_4	$(u+1)^3$
c_5	u^3-3u^2+5u-2
c_6, c_8, c_9	u^3+2u-1
c_{10}, c_{11}, c_{12}	u^3+2u+1

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^3$
c_3, c_7	y^3
c_5	$y^3 + y^2 + 13y - 4$
c_6, c_8, c_9 c_{10}, c_{11}, c_{12}	$y^3 + 4y^2 + 4y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.22670 + 1.46771I$ $a = 0.102785 + 0.665457I$ $b = 0$	$7.79580 + 5.13794I$	$-11.21712 - 3.73768I$
$u = -0.22670 - 1.46771I$ $a = 0.102785 - 0.665457I$ $b = 0$	$7.79580 - 5.13794I$	$-11.21712 + 3.73768I$
$u = 0.453398$ $a = -2.20557$ $b = 0$	-2.43213	-15.5660

III. $\boldsymbol{I^u_3 = \langle b,\ -u^3 - u^2 + a - 2u - 2,\ u^4 + u^3 + 2u^2 + 2u + 1\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^3 + u^2 + 2u + 2 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^3 + u^2 + 2u + 2 \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^3 + u^2 + 2u + 2 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ -u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^2 + 1 \\ -u^3 - 2u - 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 + u^2 + 2u + 2 \\ -u^3 - 2u - 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^3 + 2u + 1 \\ u^3 + u^2 + u + 2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2u^3 + 2u^2 - u - 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^4$
c_3, c_7	y^4
c_5	$(y^2+y+1)^2$
c_6, c_8, c_9 c_{10}, c_{11}, c_{12}	$y^4+3y^3+2y^2+1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.621744 + 0.440597I$ $a = 1.070700 + 0.758745I$ $b = 0$	$1.64493 + 2.02988I$	$-11.23686 - 2.38721I$
$u = -0.621744 - 0.440597I$ $a = 1.070700 - 0.758745I$ $b = 0$	$1.64493 - 2.02988I$	$-11.23686 + 2.38721I$
$u = 0.121744 + 1.306620I$ $a = -0.070696 + 0.758745I$ $b = 0$	$1.64493 - 2.02988I$	$-14.2631 + 3.6750I$
$u = 0.121744 - 1.306620I$ $a = -0.070696 - 0.758745I$ $b = 0$	$1.64493 + 2.02988I$	$-14.2631 - 3.6750I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^7)(u^{71}+30u^{70}+\cdots+63u+1)$
c_2	$((u-1)^7)(u^{71}-8u^{70}+\cdots-u+1)$
c_3, c_7	$u^7(u^{71}+u^{70}+\cdots+320u+128)$
c_4	$((u+1)^7)(u^{71}-8u^{70}+\cdots-u+1)$
c_5	$((u^2+u+1)^2)(u^3-3u^2+5u-2)(u^{71}-2u^{70}+\cdots-784u+4360)$
c_6	$(u^3+2u-1)(u^4+u^3+2u^2+2u+1)(u^{71}+2u^{70}+\cdots+4u+1)$
c_8, c_9	$(u^3+2u-1)(u^4+u^3+2u^2+2u+1)(u^{71}-8u^{70}+\cdots-336u+49)$
c_{10}, c_{11}	$(u^3+2u+1)(u^4-u^3+2u^2-2u+1)(u^{71}+2u^{70}+\cdots+4u+1)$
c_{12}	$(u^3+2u+1)(u^4-u^3+2u^2-2u+1)(u^{71}-8u^{70}+\cdots-336u+49)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^7)(y^{71}+30y^{70}+\cdots+3271y-1)$
c_2, c_4	$((y-1)^7)(y^{71}-30y^{70}+\cdots+63y-1)$
c_3, c_7	$y^7(y^{71}+45y^{70}+\cdots-233472y-16384)$
c_5	$(y^2+y+1)^2(y^3+y^2+13y-4)$ $\cdot(y^{71}+36y^{70}+\cdots-370918384y-19009600)$
c_6, c_{10}, c_{11}	$(y^3+4y^2+4y-1)(y^4+3y^3+2y^2+1)(y^{71}+68y^{70}+\cdots+12y-1)$
c_8, c_9, c_{12}	$(y^3+4y^2+4y-1)(y^4+3y^3+2y^2+1)$ $\cdot(y^{71}+80y^{70}+\cdots-77420y-2401)$