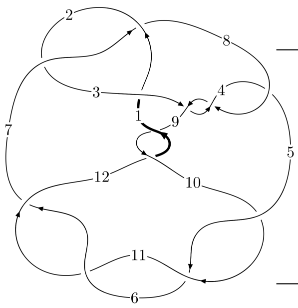
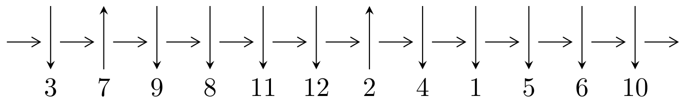
$12a_{0563}$ ($K12a_{0563}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -3.21428 \times 10^{21} u^{47} + 3.07657 \times 10^{21} u^{46} + \cdots + 1.91294 \times 10^{22} b + 2.10944 \times 10^{22}, \\
& 8.01226 \times 10^{20} u^{47} - 8.31592 \times 10^{20} u^{46} + \cdots + 9.56472 \times 10^{20} a + 3.53130 \times 10^{21},\ u^{48} - u^{47} + \cdots + u + 2\rangle \\
I_2^u = \langle & -u^2 + b,\ a - 1,\ u^{18} + 6u^{16} + \cdots + u - 1\rangle \\
I_3^u = \langle & b + 1,\ a^4 + a^3 u - 4a^3 - 3a^2 u + 5a^2 + 3au - 2a - u + 1,\ u^2 + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 74 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.

$\boldsymbol{I_1^u = \langle -3.21\times 10^{21}u^{47} + 3.08\times 10^{21}u^{46} + \cdots + 1.91\times 10^{22}b + 2.11\times 10^{22},\ 8.01\times 10^{20}u^{47} - 8.32\times 10^{20}u^{46} + \cdots + 9.56\times 10^{20}a + 3.53\times 10^{21},\ u^{48} - u^{47} + \cdots + u + 2\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.837689u^{47} + 0.869438u^{46} + \cdots + 13.2059u - 3.69201 \\ 0.168028u^{47} - 0.160829u^{46} + \cdots - 1.56252u - 1.10272 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -0.669662u^{47} + 0.708609u^{46} + \cdots + 11.6434u - 4.79473 \\ 0.168028u^{47} - 0.160829u^{46} + \cdots - 1.56252u - 1.10272 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.573968u^{47} + 0.0603230u^{46} + \cdots + 9.04562u + 5.11395 \\ 0.0433537u^{47} + 0.0687272u^{46} + \cdots - 4.47263u + 1.08386 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.775286u^{47} + 0.102961u^{46} + \cdots + 16.4932u + 5.06341 \\ 0.115161u^{47} - 0.190045u^{46} + \cdots - 4.11240u + 0.828323 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.519611u^{47} + 0.601722u^{46} + \cdots + 25.7485u + 2.68654 \\ -0.0513589u^{47} - 0.116669u^{46} + \cdots - 1.89721u + 1.51116 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1.34327u^{47} + 1.07781u^{46} + \cdots + 27.0507u + 5.07361 \\ -0.273830u^{47} + 0.198143u^{46} + \cdots + 3.26013u - 0.158606 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.33343u^{47} - 1.45372u^{46} + \cdots - 17.4102u - 8.92856 \\ 0.00796109u^{47} + 0.0832675u^{46} + \cdots - 0.966904u + 0.230758 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{27465448057329986227}{27804404382329290780}u^{47} - \frac{17226494872797 89829}{2780440438232929078}u^{46} + \cdots - \frac{77699278601670560451 1}{27804404382329290780}u - \frac{19834723239096113556 7}{13902202191164645390}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{48} + 17u^{47} + \cdots + 35u + 4$
c_2, c_7	$u^{48} + u^{47} + \cdots - 3u + 2$
c_3, c_4, c_8	$u^{48} + u^{47} + \cdots - u + 2$
c_5, c_6, c_{10} c_{11}	$u^{48} - 2u^{47} + \cdots + u + 2$
c_9, c_{12}	$u^{48} - 8u^{47} + \cdots - 7639u + 1016$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{48} + 37y^{47} + \cdots + 12799y + 16$
c_2, c_7	$y^{48} + 17y^{47} + \cdots + 35y + 4$
c_3, c_4, c_8	$y^{48} + 53y^{47} + \cdots - 237y + 4$
c_5, c_6, c_{10} c_{11}	$y^{48} - 52y^{47} + \cdots + 19y + 4$
c_9, c_{12}	$y^{48} + 32y^{47} + \cdots - 318369y + 1032256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.279405 + 0.971105I$ $a = 0.633756 + 0.239746I$ $b = 0.165180 + 0.161172I$	$-4.68544 + 3.19221I$	$-6.37639 - 4.16497I$
$u = -0.279405 - 0.971105I$ $a = 0.633756 - 0.239746I$ $b = 0.165180 - 0.161172I$	$-4.68544 - 3.19221I$	$-6.37639 + 4.16497I$
$u = 0.881286 + 0.378029I$ $a = -0.468437 + 0.143230I$ $b = -0.67254 - 1.34172I$	$-5.10511 - 9.85415I$	$-11.23414 + 7.48976I$
$u = 0.881286 - 0.378029I$ $a = -0.468437 - 0.143230I$ $b = -0.67254 + 1.34172I$	$-5.10511 + 9.85415I$	$-11.23414 - 7.48976I$
$u = -0.845379 + 0.414724I$ $a = -0.399315 - 0.163435I$ $b = -0.586845 + 1.279740I$	$1.89498 + 7.08453I$	$-7.53014 - 8.63075I$
$u = -0.845379 - 0.414724I$ $a = -0.399315 + 0.163435I$ $b = -0.586845 - 1.279740I$	$1.89498 - 7.08453I$	$-7.53014 + 8.63075I$
$u = -0.757362 + 0.544501I$ $a = -0.177555 - 0.142317I$ $b = -0.315094 + 1.121340I$	$-3.80725 + 0.44416I$	$-9.21656 - 2.62442I$
$u = -0.757362 - 0.544501I$ $a = -0.177555 + 0.142317I$ $b = -0.315094 - 1.121340I$	$-3.80725 - 0.44416I$	$-9.21656 + 2.62442I$
$u = 0.801878 + 0.461107I$ $a = -0.308887 + 0.177382I$ $b = -0.484403 - 1.202350I$	$2.31942 - 3.03168I$	$-5.96588 + 2.35658I$
$u = 0.801878 - 0.461107I$ $a = -0.308887 - 0.177382I$ $b = -0.484403 + 1.202350I$	$2.31942 + 3.03168I$	$-5.96588 - 2.35658I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.094584 + 0.916633I$ $a = 0.842564 - 0.081921I$ $b = -0.0039149 - 0.0498200I$	$1.88453 - 1.52925I$	$-1.27440 + 5.26025I$
$u = 0.094584 - 0.916633I$ $a = 0.842564 + 0.081921I$ $b = -0.0039149 + 0.0498200I$	$1.88453 + 1.52925I$	$-1.27440 - 5.26025I$
$u = 0.019449 + 1.296200I$ $a = 0.96626 + 1.66275I$ $b = -0.218022 - 0.686915I$	$-4.87695 + 2.29360I$	0
$u = 0.019449 - 1.296200I$ $a = 0.96626 - 1.66275I$ $b = -0.218022 + 0.686915I$	$-4.87695 - 2.29360I$	0
$u = 0.662333 + 0.127045I$ $a = -0.823194 + 0.695101I$ $b = -1.028930 - 0.838109I$	$-10.70200 - 3.57800I$	$-16.9686 + 4.2625I$
$u = 0.662333 - 0.127045I$ $a = -0.823194 - 0.695101I$ $b = -1.028930 + 0.838109I$	$-10.70200 + 3.57800I$	$-16.9686 - 4.2625I$
$u = -0.027632 + 1.374070I$ $a = 0.60190 - 1.62387I$ $b = -0.134767 + 0.924503I$	$3.01436 - 0.56771I$	0
$u = -0.027632 - 1.374070I$ $a = 0.60190 + 1.62387I$ $b = -0.134767 - 0.924503I$	$3.01436 + 0.56771I$	0
$u = 0.218315 + 1.358270I$ $a = 0.09353 + 2.15802I$ $b = -0.696041 - 1.142180I$	$-5.99306 - 6.70057I$	0
$u = 0.218315 - 1.358270I$ $a = 0.09353 - 2.15802I$ $b = -0.696041 + 1.142180I$	$-5.99306 + 6.70057I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.574563+0.232091I$ $a=-0.449839-0.845197I$ $b=-0.830134+0.745730I$	$-2.99542+2.92052I$	$-16.1336-6.6064I$
$u=-0.574563-0.232091I$ $a=-0.449839+0.845197I$ $b=-0.830134-0.745730I$	$-2.99542-2.92052I$	$-16.1336+6.6064I$
$u=-0.17592+1.40998I$ $a=0.17221-1.93269I$ $b=-0.509228+1.232380I$	$2.29935+5.57635I$	0
$u=-0.17592-1.40998I$ $a=0.17221+1.93269I$ $b=-0.509228-1.232380I$	$2.29935-5.57635I$	0
$u=0.09301+1.43048I$ $a=0.33273+1.72234I$ $b=-0.243029-1.177930I$	$5.11959-2.66046I$	0
$u=0.09301-1.43048I$ $a=0.33273-1.72234I$ $b=-0.243029+1.177930I$	$5.11959+2.66046I$	0
$u=0.328252+0.355874I$ $a=0.529736+1.011980I$ $b=-0.606974-0.412729I$	$-0.575619-1.189230I$	$-7.30572+5.21199I$
$u=0.328252-0.355874I$ $a=0.529736-1.011980I$ $b=-0.606974+0.412729I$	$-0.575619+1.189230I$	$-7.30572-5.21199I$
$u=0.33907+1.49289I$ $a=-0.27071+1.81325I$ $b=-0.88608-1.67141I$	$0.9224-14.2869I$	0
$u=0.33907-1.49289I$ $a=-0.27071-1.81325I$ $b=-0.88608+1.67141I$	$0.9224+14.2869I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.31588 + 1.50354I$ $a = -0.22485 - 1.79337I$ $b = -0.80439 + 1.67797I$	$8.10317 + 11.31590I$	0
$u = -0.31588 - 1.50354I$ $a = -0.22485 + 1.79337I$ $b = -0.80439 - 1.67797I$	$8.10317 - 11.31590I$	0
$u = 0.28776 + 1.51291I$ $a = -0.17153 + 1.77103I$ $b = -0.70857 - 1.67398I$	$8.73649 - 7.00574I$	0
$u = 0.28776 - 1.51291I$ $a = -0.17153 - 1.77103I$ $b = -0.70857 + 1.67398I$	$8.73649 + 7.00574I$	0
$u = -0.23601 + 1.52628I$ $a = 0.268656 + 1.050800I$ $b = 0.809501 - 0.930896I$	$3.13587 + 8.05851I$	0
$u = -0.23601 - 1.52628I$ $a = 0.268656 - 1.050800I$ $b = 0.809501 + 0.930896I$	$3.13587 - 8.05851I$	0
$u = -0.24303 + 1.52669I$ $a = -0.09228 - 1.72690I$ $b = -0.55642 + 1.66139I$	$2.98841 + 4.04672I$	0
$u = -0.24303 - 1.52669I$ $a = -0.09228 + 1.72690I$ $b = -0.55642 - 1.66139I$	$2.98841 - 4.04672I$	0
$u = 0.20089 + 1.53586I$ $a = 0.267467 - 1.098980I$ $b = 0.735565 + 1.017990I$	$10.08960 - 5.05548I$	0
$u = 0.20089 - 1.53586I$ $a = 0.267467 + 1.098980I$ $b = 0.735565 - 1.017990I$	$10.08960 + 5.05548I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.16329 + 1.54443I$ $a = 0.262928 + 1.151930I$ $b = 0.650504 - 1.106080I$	$10.46800 + 0.72296I$	0
$u = -0.16329 - 1.54443I$ $a = 0.262928 - 1.151930I$ $b = 0.650504 + 1.106080I$	$10.46800 - 0.72296I$	0
$u = 0.11419 + 1.55675I$ $a = 0.245810 - 1.222640I$ $b = 0.537126 + 1.223150I$	$4.35322 + 2.28070I$	0
$u = 0.11419 - 1.55675I$ $a = 0.245810 + 1.222640I$ $b = 0.537126 - 1.223150I$	$4.35322 - 2.28070I$	0
$u = 0.276434 + 0.095381I$ $a = -2.68244 - 2.75338I$ $b = -1.136770 + 0.255170I$	$-8.62006 - 3.30984I$	$-17.2557 + 2.3212I$
$u = 0.276434 - 0.095381I$ $a = -2.68244 + 2.75338I$ $b = -1.136770 - 0.255170I$	$-8.62006 + 3.30984I$	$-17.2557 - 2.3212I$
$u = -0.198964 + 0.041420I$ $a = -0.39851 - 4.51714I$ $b = -0.975718 + 0.209762I$	$-1.51896 - 1.35228I$	$-14.3368 + 4.1508I$
$u = -0.198964 - 0.041420I$ $a = -0.39851 + 4.51714I$ $b = -0.975718 - 0.209762I$	$-1.51896 + 1.35228I$	$-14.3368 - 4.1508I$

II. $I_2^u = \langle -u^2 + b,\ a - 1,\ u^{18} + 6u^{16} + \cdots + u - 1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^5 - u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{11} - 4u^9 - 6u^7 - 6u^5 - 5u^3 - 2u \\ -u^{13} - 5u^{11} - 9u^9 - 8u^7 - 6u^5 - 3u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^8 + 3u^6 + 3u^4 + 2u^2 + 1 \\ u^8 + 2u^6 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^{17} + 6u^{15} + 15u^{13} + 22u^{11} + 23u^9 + 18u^7 + 10u^5 + 4u^3 + u \\ u^{17} + 5u^{15} + 9u^{13} + 8u^{11} + 5u^9 + 2u^7 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -4u^{12} - 16u^{10} - 4u^9 - 24u^8 - 12u^7 - 24u^6 - 12u^5 - 20u^4 - 8u^3 - 8u^2 - 4u - 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} + 12u^{17} + \cdots - 5u + 1$
c_2, c_3, c_4 c_7, c_8	$u^{18} + 6u^{16} + \cdots - u - 1$
c_5, c_6, c_{10} c_{11}	$(u^6 + u^5 - 3u^4 - 2u^3 + 2u^2 - u - 1)^3$
c_9, c_{12}	$(u^6 - u^5 + 3u^4 - 2u^3 + 2u^2 - u - 1)^3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{18} - 12y^{17} + \cdots - 57y + 1$
c_2, c_3, c_4 c_7, c_8	$y^{18} + 12y^{17} + \cdots - 5y + 1$
c_5, c_6, c_{10} c_{11}	$(y^6 - 7y^5 + 17y^4 - 16y^3 + 6y^2 - 5y + 1)^3$
c_9, c_{12}	$(y^6 + 5y^5 + 9y^4 + 4y^3 - 6y^2 - 5y + 1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.637469 + 0.735789I$ $a = 1.00000$ $b = -0.135019 - 0.938086I$	$2.96024 - 1.97241I$	$-4.57572 + 3.68478I$
$u = -0.637469 - 0.735789I$ $a = 1.00000$ $b = -0.135019 + 0.938086I$	$2.96024 + 1.97241I$	$-4.57572 - 3.68478I$
$u = 0.639652 + 0.826288I$ $a = 1.00000$ $b = -0.273597 + 1.057070I$	$-3.69558 + 4.59213I$	$-8.58114 - 3.20482I$
$u = 0.639652 - 0.826288I$ $a = 1.00000$ $b = -0.273597 - 1.057070I$	$-3.69558 - 4.59213I$	$-8.58114 + 3.20482I$
$u = -0.182330 + 1.048680I$ $a = 1.00000$ $b = -1.066490 - 0.382411I$	-0.738851	$-13.41678 + 0.I$
$u = -0.182330 - 1.048680I$ $a = 1.00000$ $b = -1.066490 + 0.382411I$	-0.738851	$-13.41678 + 0.I$
$u = 0.667042 + 0.642083I$ $a = 1.00000$ $b = 0.032675 + 0.856592I$	$2.96024 - 1.97241I$	$-4.57572 + 3.68478I$
$u = 0.667042 - 0.642083I$ $a = 1.00000$ $b = 0.032675 - 0.856592I$	$2.96024 + 1.97241I$	$-4.57572 - 3.68478I$
$u = -0.724676 + 0.565991I$ $a = 1.00000$ $b = 0.204809 - 0.820320I$	$-3.69558 + 4.59213I$	$-8.58114 - 3.20482I$
$u = -0.724676 - 0.565991I$ $a = 1.00000$ $b = 0.204809 + 0.820320I$	$-3.69558 - 4.59213I$	$-8.58114 + 3.20482I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.313436 + 1.137860I$ $a = 1.00000$ $b = -1.196490 + 0.713294I$	-7.66009	$-12.26950 + 0.I$
$u = 0.313436 - 1.137860I$ $a = 1.00000$ $b = -1.196490 - 0.713294I$	-7.66009	$-12.26950 + 0.I$
$u = -0.626873$ $a = 1.00000$ $b = 0.392969$	-7.66009	-12.2690
$u = -0.029572 + 1.377870I$ $a = 1.00000$ $b = -1.89766 - 0.08149I$	$2.96024 + 1.97241I$	$-4.57572 - 3.68478I$
$u = -0.029572 - 1.377870I$ $a = 1.00000$ $b = -1.89766 + 0.08149I$	$2.96024 - 1.97241I$	$-4.57572 + 3.68478I$
$u = 0.085024 + 1.392280I$ $a = 1.00000$ $b = -1.93121 + 0.23675I$	$-3.69558 - 4.59213I$	$-8.58114 + 3.20482I$
$u = 0.085024 - 1.392280I$ $a = 1.00000$ $b = -1.93121 - 0.23675I$	$-3.69558 + 4.59213I$	$-8.58114 - 3.20482I$
$u = 0.364659$ $a = 1.00000$ $b = 0.132976$	-0.738851	-13.4170

III. $I_3^u = \langle b+1,\ a^3u - 3a^2u + \cdots - 2a + 1,\ u^2+1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4a^2 - 4au + 8a + 4u - 12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^8$
c_2, c_3, c_4 c_7, c_8	$(u^2+1)^4$
c_5, c_6, c_{10} c_{11}	$u^8 - 5u^6 + 7u^4 - 2u^2 + 1$
c_9	$(u^4+u^3+u^2+1)^2$
c_{12}	$(u^4-u^3+u^2+1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^8$
c_2, c_3, c_4 c_7, c_8	$(y+1)^8$
c_5, c_6, c_{10} c_{11}	$(y^4 - 5y^3 + 7y^2 - 2y + 1)^2$
c_9, c_{12}	$(y^4 + y^3 + 3y^2 + 2y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = 0.088708 - 0.851808I$ $b = -1.00000$	$-6.79074 + 3.16396I$	$-11.82674 - 2.56480I$
$u = 1.000000I$ $a = 0.279658 + 0.351808I$ $b = -1.00000$	$0.21101 - 1.41510I$	$-8.17326 + 4.90874I$
$u = 1.000000I$ $a = 1.72034 + 0.35181I$ $b = -1.00000$	$0.21101 + 1.41510I$	$-8.17326 - 4.90874I$
$u = 1.000000I$ $a = 1.91129 - 0.85181I$ $b = -1.00000$	$-6.79074 - 3.16396I$	$-11.82674 + 2.56480I$
$u = -1.000000I$ $a = 0.088708 + 0.851808I$ $b = -1.00000$	$-6.79074 - 3.16396I$	$-11.82674 + 2.56480I$
$u = -1.000000I$ $a = 0.279658 - 0.351808I$ $b = -1.00000$	$0.21101 + 1.41510I$	$-8.17326 - 4.90874I$
$u = -1.000000I$ $a = 1.72034 - 0.35181I$ $b = -1.00000$	$0.21101 - 1.41510I$	$-8.17326 + 4.90874I$
$u = -1.000000I$ $a = 1.91129 + 0.85181I$ $b = -1.00000$	$-6.79074 + 3.16396I$	$-11.82674 - 2.56480I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^8)(u^{18}+12u^{17}+\cdots-5u+1)(u^{48}+17u^{47}+\cdots+35u+4)$
c_2, c_7	$((u^2+1)^4)(u^{18}+6u^{16}+\cdots-u-1)(u^{48}+u^{47}+\cdots-3u+2)$
c_3, c_4, c_8	$((u^2+1)^4)(u^{18}+6u^{16}+\cdots-u-1)(u^{48}+u^{47}+\cdots-u+2)$
c_5, c_6, c_{10} c_{11}	$(u^6+u^5-3u^4-2u^3+2u^2-u-1)^3(u^8-5u^6+7u^4-2u^2+1)$ $\cdot(u^{48}-2u^{47}+\cdots+u+2)$
c_9	$(u^4+u^3+u^2+1)^2(u^6-u^5+3u^4-2u^3+2u^2-u-1)^3$ $\cdot(u^{48}-8u^{47}+\cdots-7639u+1016)$
c_{12}	$(u^4-u^3+u^2+1)^2(u^6-u^5+3u^4-2u^3+2u^2-u-1)^3$ $\cdot(u^{48}-8u^{47}+\cdots-7639u+1016)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^8)(y^{18}-12y^{17}+\cdots-57y+1)$ $\cdot\,(y^{48}+37y^{47}+\cdots+12799y+16)$
c_2, c_7	$((y+1)^8)(y^{18}+12y^{17}+\cdots-5y+1)(y^{48}+17y^{47}+\cdots+35y+4)$
c_3, c_4, c_8	$((y+1)^8)(y^{18}+12y^{17}+\cdots-5y+1)(y^{48}+53y^{47}+\cdots-237y+4)$
c_5, c_6, c_{10} c_{11}	$(y^4-5y^3+7y^2-2y+1)^2(y^6-7y^5+17y^4-16y^3+6y^2-5y+1)^3$ $\cdot\,(y^{48}-52y^{47}+\cdots+19y+4)$
c_9, c_{12}	$(y^4+y^3+3y^2+2y+1)^2(y^6+5y^5+9y^4+4y^3-6y^2-5y+1)^3$ $\cdot\,(y^{48}+32y^{47}+\cdots-318369y+1032256)$