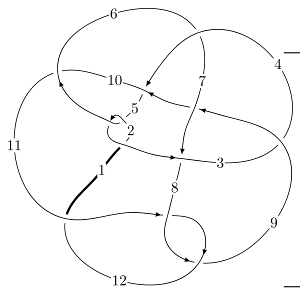
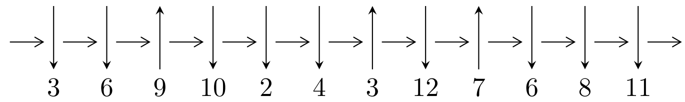
$12n_{0326}$ ($K12n_{0326}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 8.90151 \times 10^{60} u^{43} + 2.21948 \times 10^{61} u^{42} + \cdots + 6.59116 \times 10^{59} b + 1.58663 \times 10^{62}, \\
& -1.69548 \times 10^{62} u^{43} - 4.09643 \times 10^{62} u^{42} + \cdots + 5.93204 \times 10^{60} a - 2.58270 \times 10^{63},\ u^{44} + 3u^{43} + \cdots + 9u - \\
I_2^u = \langle & -u^{11} + 2u^{10} + u^9 - 2u^8 - 3u^7 + 2u^6 + 6u^4 - 8u^2 + b - u + 5, \\
& -3u^{11} + 4u^9 + 3u^8 - 3u^7 - 4u^6 - 8u^5 + 3u^4 + 10u^3 - u^2 + a - 5u - 1, \\
& u^{12} - 2u^{10} - u^9 + 2u^8 + 2u^7 + 2u^6 - 2u^5 - 5u^4 + u^3 + 4u^2 - 1 \rangle \\
I_3^u = \langle & u^4 + u^3 - 3u^2 + b - u + 2,\ u^5 + 3u^4 - 5u^2 + a - u + 3,\ u^6 + 2u^5 - 2u^4 - 3u^3 + 2u^2 + 2u - 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 62 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.
$\boldsymbol{I_1^u = \langle 8.90\times10^{60}u^{43}+2.22\times10^{61}u^{42}+\cdots+6.59\times10^{59}b+1.59\times10^{62},\ -1.70\times10^{62}u^{43}-4.10\times10^{62}u^{42}+\cdots+5.93\times10^{60}a-2.58\times10^{63},\ u^{44}+3u^{43}+\cdots+9u+9\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}28.5817u^{43}+69.0560u^{42}+\cdots-332.125u+435.381\\-13.5052u^{43}-33.6736u^{42}+\cdots+226.276u-240.720\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.201641u^{43}+0.460656u^{42}+\cdots+15.3420u+12.7889\\33.2391u^{43}+81.0853u^{42}+\cdots-419.984u+535.178\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-33.0375u^{43}-80.6247u^{42}+\cdots+435.326u-522.389\\33.2391u^{43}+81.0853u^{42}+\cdots-419.984u+535.178\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-29.6276u^{43}-73.3721u^{42}+\cdots+433.170u-489.585\\15.3508u^{43}+38.1625u^{42}+\cdots-238.731u+261.946\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-43.7966u^{43}-107.794u^{42}+\cdots+594.943u-730.873\\28.9508u^{43}+70.9233u^{42}+\cdots-380.679u+468.275\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-10.3769u^{43}-25.2409u^{42}+\cdots+146.290u-153.601\\26.2888u^{43}+64.0967u^{42}+\cdots-329.420u+421.797\end{pmatrix}$$
$$a_2 = \begin{pmatrix}27.7669u^{43}+67.8632u^{42}+\cdots-348.922u+460.619\\-6.20167u^{43}-15.7725u^{42}+\cdots+127.833u-117.848\end{pmatrix}$$
$$a_1 = \begin{pmatrix}21.5652u^{43}+52.0907u^{42}+\cdots-221.089u+342.771\\-6.20167u^{43}-15.7725u^{42}+\cdots+127.833u-117.848\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}16.2299u^{43}+39.1273u^{42}+\cdots-179.657u+250.432\\-17.7450u^{43}-43.3750u^{42}+\cdots+235.483u-290.417\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -272.965u^{43}-664.404u^{42}+\cdots+3337.83u-4341.43$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{44} + 73u^{43} + \cdots + 218241u + 3025$
c_2, c_5	$u^{44} + u^{43} + \cdots + 969u + 55$
c_3	$u^{44} + 3u^{43} + \cdots + 9u + 9$
c_4	$u^{44} + u^{43} + \cdots + 279u - 9$
c_6	$u^{44} - 6u^{43} + \cdots - 13u + 1$
c_7	$u^{44} + 9u^{42} + \cdots + 186673u + 22591$
c_8, c_{11}	$u^{44} + u^{43} + \cdots + 15u + 1$
c_9	$u^{44} + 8u^{43} + \cdots + 32u - 320$
c_{10}	$u^{44} + 6u^{43} + \cdots - 2615847u - 617167$
c_{12}	$u^{44} + 33u^{43} + \cdots - 19u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{44} - 241y^{43} + \cdots - 12809738481y + 9150625$
c_2, c_5	$y^{44} - 73y^{43} + \cdots - 218241y + 3025$
c_3	$y^{44} - 15y^{43} + \cdots - 3087y + 81$
c_4	$y^{44} - 67y^{43} + \cdots - 87759y + 81$
c_6	$y^{44} + 2y^{43} + \cdots - 53y + 1$
c_7	$y^{44} + 18y^{43} + \cdots + 780779441y + 510353281$
c_8, c_{11}	$y^{44} - 33y^{43} + \cdots + 19y + 1$
c_9	$y^{44} + 10y^{43} + \cdots - 226304y + 102400$
c_{10}	$y^{44} - 126y^{43} + \cdots - 7475456601853y + 380895105889$
c_{12}	$y^{44} - 33y^{43} + \cdots + 1919y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.983764 + 0.010812I$ $a = 0.776164 + 0.657660I$ $b = 0.179807 + 0.453187I$	$3.13780 - 0.62989I$	$-60.10 - 0.363791I$
$u = 0.983764 - 0.010812I$ $a = 0.776164 - 0.657660I$ $b = 0.179807 - 0.453187I$	$3.13780 + 0.62989I$	$-60.10 + 0.363791I$
$u = -0.995926 + 0.212137I$ $a = -0.684047 - 0.862199I$ $b = 0.385428 - 1.153220I$	$2.87592 - 4.66795I$	$0. + 6.21159I$
$u = -0.995926 - 0.212137I$ $a = -0.684047 + 0.862199I$ $b = 0.385428 + 1.153220I$	$2.87592 + 4.66795I$	$0. - 6.21159I$
$u = 0.649512 + 0.810142I$ $a = 0.688692 - 1.067530I$ $b = -0.58720 - 2.06561I$	$-5.69369 + 0.31371I$	$-11.24262 + 0.I$
$u = 0.649512 - 0.810142I$ $a = 0.688692 + 1.067530I$ $b = -0.58720 + 2.06561I$	$-5.69369 - 0.31371I$	$-11.24262 + 0.I$
$u = 1.06624$ $a = -1.15866$ $b = -2.12618$	-8.79014	-10.1780
$u = 0.972073 + 0.504899I$ $a = 0.496608 + 0.409312I$ $b = 0.304186 + 0.282887I$	$1.39378 + 1.89935I$	0
$u = 0.972073 - 0.504899I$ $a = 0.496608 - 0.409312I$ $b = 0.304186 - 0.282887I$	$1.39378 - 1.89935I$	0
$u = -1.010890 + 0.500581I$ $a = 0.0078406 + 0.1363720I$ $b = -0.020428 - 0.546085I$	$0.33573 - 4.72377I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.010890 - 0.500581I$ $a = 0.0078406 - 0.1363720I$ $b = -0.020428 + 0.546085I$	$0.33573 + 4.72377I$	0
$u = -0.660411 + 0.938330I$ $a = 0.703141 + 0.601609I$ $b = -0.80986 + 1.28827I$	$-2.22612 + 0.56711I$	0
$u = -0.660411 - 0.938330I$ $a = 0.703141 - 0.601609I$ $b = -0.80986 - 1.28827I$	$-2.22612 - 0.56711I$	0
$u = 1.057930 + 0.650598I$ $a = -0.899709 + 0.653233I$ $b = 0.83419 + 2.06344I$	$-4.35874 + 5.22725I$	0
$u = 1.057930 - 0.650598I$ $a = -0.899709 - 0.653233I$ $b = 0.83419 - 2.06344I$	$-4.35874 - 5.22725I$	0
$u = -0.820834 + 0.933777I$ $a = -1.161680 - 0.646565I$ $b = 0.541938 - 1.130020I$	$-15.6870 - 0.6720I$	0
$u = -0.820834 - 0.933777I$ $a = -1.161680 + 0.646565I$ $b = 0.541938 + 1.130020I$	$-15.6870 + 0.6720I$	0
$u = -1.050360 + 0.680819I$ $a = -0.518016 - 0.831087I$ $b = 0.75737 - 2.31620I$	$-0.97641 - 6.41642I$	0
$u = -1.050360 - 0.680819I$ $a = -0.518016 + 0.831087I$ $b = 0.75737 + 2.31620I$	$-0.97641 + 6.41642I$	0
$u = -0.484046 + 0.563326I$ $a = 0.363504 + 0.096522I$ $b = -0.396795 + 0.188011I$	$-1.234310 + 0.383646I$	$-8.59433 - 2.13005I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.484046 - 0.563326I$ $a = 0.363504 - 0.096522I$ $b = -0.396795 - 0.188011I$	$-1.234310 - 0.383646I$	$-8.59433 + 2.13005I$
$u = 0.804579 + 0.967738I$ $a = -0.798757 - 0.489353I$ $b = -0.453409 - 0.664044I$	$-11.28860 - 0.64983I$	0
$u = 0.804579 - 0.967738I$ $a = -0.798757 + 0.489353I$ $b = -0.453409 + 0.664044I$	$-11.28860 + 0.64983I$	0
$u = -0.652932 + 0.251845I$ $a = 0.54350 + 1.32899I$ $b = 0.639215 + 0.232761I$	$1.23289 - 4.62902I$	$-5.84465 + 4.14155I$
$u = -0.652932 - 0.251845I$ $a = 0.54350 - 1.32899I$ $b = 0.639215 - 0.232761I$	$1.23289 + 4.62902I$	$-5.84465 - 4.14155I$
$u = 0.670851$ $a = 2.40416$ $b = -2.11628$	-10.5877	8.90790
$u = -1.048190 + 0.837144I$ $a = 0.484292 + 1.026390I$ $b = -0.06811 + 2.25749I$	$-14.9574 - 5.9017I$	0
$u = -1.048190 - 0.837144I$ $a = 0.484292 - 1.026390I$ $b = -0.06811 - 2.25749I$	$-14.9574 + 5.9017I$	0
$u = -0.651141$ $a = 1.08862$ $b = -0.346698$	-1.21790	-7.98940
$u = 1.060320 + 0.850355I$ $a = -0.636937 - 0.700265I$ $b = -0.449291 - 0.476529I$	$-10.46950 + 7.35029I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.060320 - 0.850355I$ $a = -0.636937 + 0.700265I$ $b = -0.449291 + 0.476529I$	$-10.46950 - 7.35029I$	0
$u = 0.919976 + 1.023950I$ $a = 0.546144 - 0.830602I$ $b = -0.86441 - 1.77933I$	$-4.52279 + 6.69405I$	0
$u = 0.919976 - 1.023950I$ $a = 0.546144 + 0.830602I$ $b = -0.86441 + 1.77933I$	$-4.52279 - 6.69405I$	0
$u = -0.582341$ $a = -1.15614$ $b = -1.48403$	-2.44265	5.79850
$u = -0.545744$ $a = 1.19923$ $b = -3.94886$	-6.50431	-21.3880
$u = -0.70181 + 1.29455I$ $a = -0.760731 - 0.722556I$ $b = 0.44712 - 1.62807I$	$-16.5470 + 6.4689I$	0
$u = -0.70181 - 1.29455I$ $a = -0.760731 + 0.722556I$ $b = 0.44712 + 1.62807I$	$-16.5470 - 6.4689I$	0
$u = -1.23575 + 0.88133I$ $a = 0.521632 + 0.894334I$ $b = -0.61086 + 2.31759I$	$-14.7157 - 14.1505I$	0
$u = -1.23575 - 0.88133I$ $a = 0.521632 - 0.894334I$ $b = -0.61086 - 2.31759I$	$-14.7157 + 14.1505I$	0
$u = 0.298088 + 0.083893I$ $a = -2.74531 + 3.08989I$ $b = 0.155988 + 0.909226I$	$0.144274 + 0.902896I$	$-6.75614 - 2.40130I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.298088 - 0.083893I$ $a = -2.74531 - 3.08989I$ $b = 0.155988 - 0.909226I$	$0.144274 - 0.902896I$	$-6.75614 + 2.40130I$
$u = 1.34675 + 1.16951I$ $a = -0.459956 + 0.487071I$ $b = 0.60751 + 1.79387I$	$-3.83190 + 1.09484I$	0
$u = 1.34675 - 1.16951I$ $a = -0.459956 - 0.487071I$ $b = 0.60751 - 1.79387I$	$-3.83190 - 1.09484I$	0
$u = -1.82155$ $a = 0.356733$ $b = -2.16268$	-2.68064	0

II.
$\boldsymbol{I_2^u = \langle -u^{11}+2u^{10}+\cdots+b+5,\ -3u^{11}+4u^9+\cdots+a-1,\ u^{12}-2u^{10}+\cdots+4u^2-1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}3u^{11}-4u^9-3u^8+3u^7+4u^6+8u^5-3u^4-10u^3+u^2+5u+1\\u^{11}-2u^{10}-u^9+2u^8+3u^7-2u^6-6u^4+8u^2+u-5\end{pmatrix}$$
$$a_8 = \begin{pmatrix}u^{11}+2u^{10}-2u^9-5u^8+5u^6+6u^5+3u^4-8u^3-9u^2+5u+5\\-2u^{10}+3u^8+2u^7-3u^6-3u^5-5u^4+3u^3+8u^2-u-5\end{pmatrix}$$
$$a_7 = \begin{pmatrix}u^{11}+4u^{10}+\cdots+6u+10\\-2u^{10}+3u^8+2u^7-3u^6-3u^5-5u^4+3u^3+8u^2-u-5\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}19u^{11}+6u^{10}+\cdots+46u+22\\-10u^{11}-u^{10}+\cdots-23u-6\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-22u^{11}-19u^{10}+\cdots-68u-45\\6u^{11}+10u^{10}+\cdots+23u+23\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u^{11}+3u^{10}-2u^9-7u^8-u^7+7u^6+8u^5+5u^4-10u^3-15u^2+6u+9\\-u^{10}+2u^8+u^7-2u^6-2u^5-2u^4+2u^3+5u^2-u-4\end{pmatrix}$$
$$a_2 = \begin{pmatrix}6u^{11}+9u^{10}+\cdots+23u+22\\-u^{11}-4u^{10}+\cdots-6u-11\end{pmatrix}$$
$$a_1 = \begin{pmatrix}5u^{11}+5u^{10}+\cdots+17u+11\\-u^{11}-4u^{10}+\cdots-6u-11\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-u^{11}-u^{10}+3u^9+2u^8-2u^7-4u^6-3u^5+9u^3+u^2-6u-2\\2u^{11}-3u^9-2u^8+3u^7+3u^6+5u^5-3u^4-8u^3+u^2+6u\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= -16u^{11}-7u^{10}+23u^9+24u^8-14u^7-27u^6-48u^5-u^4+62u^3+12u^2-37u-17$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{12} - 12u^{11} + \cdots + 4u^2 + 1$
c_2	$u^{12} + 8u^{11} + \cdots + 4u + 1$
c_3	$u^{12} - 2u^{10} - u^9 + 2u^8 + 2u^7 + 2u^6 - 2u^5 - 5u^4 + u^3 + 4u^2 - 1$
c_4	$u^{12} - 4u^{10} + u^9 + 5u^8 - 2u^7 - 2u^6 + 2u^5 - 2u^4 - u^3 + 2u^2 - 1$
c_5	$u^{12} - 8u^{11} + \cdots - 4u + 1$
c_6	$u^{12} + 4u^{11} + \cdots + 4u + 1$
c_7	$u^{12} - 9u^{10} + \cdots + 2u + 1$
c_8	$u^{12} - 4u^{10} + 2u^9 + 8u^8 - 5u^7 - 9u^6 + 7u^5 + 6u^4 - 5u^3 - 3u^2 + 2u + 1$
c_9	$u^{12} + 3u^{11} + \cdots - 65u - 85$
c_{10}	$u^{12} + u^{11} + \cdots + 9u^2 - 1$
c_{11}	$u^{12} - 4u^{10} - 2u^9 + 8u^8 + 5u^7 - 9u^6 - 7u^5 + 6u^4 + 5u^3 - 3u^2 - 2u + 1$
c_{12}	$u^{12} + 8u^{11} + \cdots + 10u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{12} - 68y^{11} + \cdots + 8y + 1$
c_2, c_5	$y^{12} - 12y^{11} + \cdots + 4y^2 + 1$
c_3	$y^{12} - 4y^{11} + \cdots - 8y + 1$
c_4	$y^{12} - 8y^{11} + \cdots - 4y + 1$
c_6	$y^{12} + 2y^{11} + \cdots - 8y + 1$
c_7	$y^{12} - 18y^{11} + \cdots + 2y + 1$
c_8, c_{11}	$y^{12} - 8y^{11} + \cdots - 10y + 1$
c_9	$y^{12} - 11y^{11} + \cdots + 21275y + 7225$
c_{10}	$y^{12} - 45y^{11} + \cdots - 18y + 1$
c_{12}	$y^{12} - 16y^{10} + \cdots - 18y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.939264 + 0.357334I$ $a = -0.418150 + 0.917072I$ $b = 0.047162 + 0.521207I$	$1.64330 + 5.76877I$	$-4.39799 - 10.10477I$
$u = 0.939264 - 0.357334I$ $a = -0.418150 - 0.917072I$ $b = 0.047162 - 0.521207I$	$1.64330 - 5.76877I$	$-4.39799 + 10.10477I$
$u = -0.802928 + 0.320018I$ $a = 1.45891 - 0.33944I$ $b = -0.553518 + 0.244868I$	$0.590771 - 0.195986I$	$-4.01333 + 2.47510I$
$u = -0.802928 - 0.320018I$ $a = 1.45891 + 0.33944I$ $b = -0.553518 - 0.244868I$	$0.590771 + 0.195986I$	$-4.01333 - 2.47510I$
$u = -0.138543 + 1.147500I$ $a = 0.313010 + 0.802430I$ $b = -0.53359 + 1.50616I$	$-2.74984 + 0.99574I$	$-16.1761 - 0.4700I$
$u = -0.138543 - 1.147500I$ $a = 0.313010 - 0.802430I$ $b = -0.53359 - 1.50616I$	$-2.74984 - 0.99574I$	$-16.1761 + 0.4700I$
$u = 1.104550 + 0.506014I$ $a = 0.646485 + 0.051170I$ $b = 0.573229 + 0.016403I$	$0.23184 + 3.78473I$	$-8.37575 - 0.92241I$
$u = 1.104550 - 0.506014I$ $a = 0.646485 - 0.051170I$ $b = 0.573229 - 0.016403I$	$0.23184 - 3.78473I$	$-8.37575 + 0.92241I$
$u = -1.024920 + 0.684264I$ $a = -0.502733 - 0.780812I$ $b = 1.01990 - 2.38727I$	$-1.11487 - 7.34151I$	$-7.49483 + 10.36656I$
$u = -1.024920 - 0.684264I$ $a = -0.502733 + 0.780812I$ $b = 1.01990 + 2.38727I$	$-1.11487 + 7.34151I$	$-7.49483 - 10.36656I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.747167$ $a = -0.620955$ $b = -3.77110$	-6.12374	0.401760
$u = 0.592318$ $a = 2.62591$ $b = -2.33528$	-10.8179	-26.4860

III. $\boldsymbol{I_3^u = \langle u^4 + u^3 - 3u^2 + b - u + 2,\ u^5 + 3u^4 - 5u^2 + a - u + 3,\ u^6 + 2u^5 - 2u^4 - 3u^3 + 2u^2 + 2u - 1\rangle}$

(i) Arc colorings

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

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

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

$$a_{12} = \begin{pmatrix} -u^5 - 3u^4 + 5u^2 + u - 3 \\ -u^4 - u^3 + 3u^2 + u - 2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^5 + 2u^4 - u^3 - u^2 + u + 1 \\ u^5 + 2u^4 - u^3 - u^2 + u + 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ u^5 + 2u^4 - u^3 - u^2 + u + 1 \end{pmatrix}$$

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

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

$$a_6 = \begin{pmatrix} u^5 + 2u^4 - u^3 - u^2 + u + 1 \\ 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^5 - 2u^4 + u^3 + u^2 - u \\ -1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^5 - 2u^4 + u^3 + u^2 - u - 1 \\ -1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^5 - 3u^4 - u^3 + 3u^2 + 2u - 2 \\ -u^4 - 2u^3 + u^2 + 2u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -7u^5 - 20u^4 + 9u^3 + 27u^2 - 5u - 24$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y-1)^6$
c_3, c_4	$y^6 - 8y^5 + 20y^4 - 27y^3 + 20y^2 - 8y + 1$
c_6, c_7	$y^6 + 3y^5 + 4y^4 - 3y^3 - 15y^2 - 14y + 1$
c_8, c_{11}	$(y^3 - y^2 + 2y - 1)^2$
c_9	y^6
c_{10}, c_{12}	$(y^3 + 3y^2 + 2y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.869124 + 0.347901I$ $a = 1.165820 + 0.390359I$ $b = 0.394534 + 0.648615I$	$1.37919 - 2.82812I$	$-7.23838 + 1.20354I$
$u = 0.869124 - 0.347901I$ $a = 1.165820 - 0.390359I$ $b = 0.394534 - 0.648615I$	$1.37919 + 2.82812I$	$-7.23838 - 1.20354I$
$u = -0.991685 + 0.396961I$ $a = -0.503465 - 0.952639I$ $b = -0.06982 - 1.77317I$	$1.37919 - 2.82812I$	$-5.72688 + 3.54360I$
$u = -0.991685 - 0.396961I$ $a = -0.503465 + 0.952639I$ $b = -0.06982 + 1.77317I$	$1.37919 + 2.82812I$	$-5.72688 - 3.54360I$
$u = 0.452937$ $a = -1.66663$ $b = -1.06662$	-2.75839	-20.8640
$u = -2.20781$ $a = 0.341912$ $b = -2.58282$	-2.75839	-86.2050

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^6)(u^{12}-12u^{11}+\cdots+4u^2+1)$ $\cdot(u^{44}+73u^{43}+\cdots+218241u+3025)$
c_2	$((u-1)^6)(u^{12}+8u^{11}+\cdots+4u+1)(u^{44}+u^{43}+\cdots+969u+55)$
c_3	$(u^6+2u^5-2u^4-3u^3+2u^2+2u-1)$ $\cdot(u^{12}-2u^{10}-u^9+2u^8+2u^7+2u^6-2u^5-5u^4+u^3+4u^2-1)$ $\cdot(u^{44}+3u^{43}+\cdots+9u+9)$
c_4	$(u^6+2u^5-2u^4-3u^3+2u^2+2u-1)$ $\cdot(u^{12}-4u^{10}+u^9+5u^8-2u^7-2u^6+2u^5-2u^4-u^3+2u^2-1)$ $\cdot(u^{44}+u^{43}+\cdots+279u-9)$
c_5	$((u+1)^6)(u^{12}-8u^{11}+\cdots-4u+1)(u^{44}+u^{43}+\cdots+969u+55)$
c_6	$(u^6+3u^5+\cdots+2u-1)(u^{12}+4u^{11}+\cdots+4u+1)$ $\cdot(u^{44}-6u^{43}+\cdots-13u+1)$
c_7	$(u^6+3u^5+\cdots+2u-1)(u^{12}-9u^{10}+\cdots+2u+1)$ $\cdot(u^{44}+9u^{42}+\cdots+186673u+22591)$
c_8	$(u^3+u^2-1)^2$ $\cdot(u^{12}-4u^{10}+2u^9+8u^8-5u^7-9u^6+7u^5+6u^4-5u^3-3u^2+2u+1)$ $\cdot(u^{44}+u^{43}+\cdots+15u+1)$
c_9	$u^6(u^{12}+3u^{11}+\cdots-65u-85)(u^{44}+8u^{43}+\cdots+32u-320)$
c_{10}	$((u^3+u^2+2u+1)^2)(u^{12}+u^{11}+\cdots+9u^2-1)$ $\cdot(u^{44}+6u^{43}+\cdots-2615847u-617167)$
c_{11}	$(u^3-u^2+1)^2$ $\cdot(u^{12}-4u^{10}-2u^9+8u^8+5u^7-9u^6-7u^5+6u^4+5u^3-3u^2-2u+1)$ $\cdot(u^{44}+u^{43}+\cdots+15u+1)$
c_{12}	$((u^3+u^2+2u+1)^2)(u^{12}+8u^{11}+\cdots+10u+1)$ $\cdot(u^{44}+33u^{43}+\cdots-19u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^6)(y^{12}-68y^{11}+\cdots+8y+1)$ $\cdot(y^{44}-241y^{43}+\cdots-12809738481y+9150625)$
c_2, c_5	$((y-1)^6)(y^{12}-12y^{11}+\cdots+4y^2+1)$ $\cdot(y^{44}-73y^{43}+\cdots-218241y+3025)$
c_3	$(y^6-8y^5+\cdots-8y+1)(y^{12}-4y^{11}+\cdots-8y+1)$ $\cdot(y^{44}-15y^{43}+\cdots-3087y+81)$
c_4	$(y^6-8y^5+\cdots-8y+1)(y^{12}-8y^{11}+\cdots-4y+1)$ $\cdot(y^{44}-67y^{43}+\cdots-87759y+81)$
c_6	$(y^6+3y^5+\cdots-14y+1)(y^{12}+2y^{11}+\cdots-8y+1)$ $\cdot(y^{44}+2y^{43}+\cdots-53y+1)$
c_7	$(y^6+3y^5+\cdots-14y+1)(y^{12}-18y^{11}+\cdots+2y+1)$ $\cdot(y^{44}+18y^{43}+\cdots+780779441y+510353281)$
c_8, c_{11}	$((y^3-y^2+2y-1)^2)(y^{12}-8y^{11}+\cdots-10y+1)$ $\cdot(y^{44}-33y^{43}+\cdots+19y+1)$
c_9	$y^6(y^{12}-11y^{11}+\cdots+21275y+7225)$ $\cdot(y^{44}+10y^{43}+\cdots-226304y+102400)$
c_{10}	$((y^3+3y^2+2y-1)^2)(y^{12}-45y^{11}+\cdots-18y+1)$ $\cdot(y^{44}-126y^{43}+\cdots-7475456601853y+380895105889)$
c_{12}	$((y^3+3y^2+2y-1)^2)(y^{12}-16y^{10}+\cdots-18y+1)$ $\cdot(y^{44}-33y^{43}+\cdots+1919y+1)$