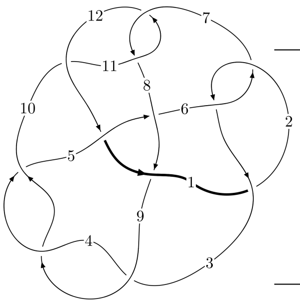
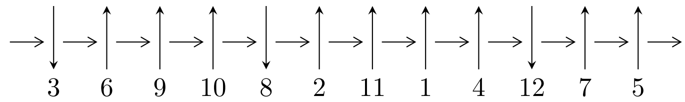
$12a_{0386}$ ($K12a_{0386}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$
\begin{aligned}
I_1^u &= \langle b-u,\ -13623u^{25}-12794u^{24}+\cdots+24374a+5797,\ u^{26}-u^{25}+\cdots+2u-1\rangle \\
I_2^u &= \langle 7.39786\times 10^{132}u^{91}+1.99769\times 10^{133}u^{90}+\cdots+5.07101\times 10^{132}b-1.01915\times 10^{133}, \\
&\quad -1.78004\times 10^{132}u^{91}+4.64745\times 10^{131}u^{90}+\cdots+2.53550\times 10^{132}a-2.75480\times 10^{133}, \\
&\quad u^{92}+2u^{91}+\cdots+41u+2\rangle \\
I_3^u &= \langle b+u,\ u^{11}+u^{10}+2u^9+u^8+3u^7+3u^6+2u^5+u^4+3u^2+a, \\
&\quad u^{12}+u^{11}+3u^{10}+2u^9+6u^8+4u^7+7u^6+3u^5+6u^4+3u^3+3u^2+u+1\rangle \\
I_4^u &= \langle -u^{11}-u^{10}-3u^9-2u^8-6u^7-4u^6-7u^5-4u^4-6u^3-2u^2+b-3u-1, \\
&\quad u^{11}+u^{10}+2u^9+u^8+3u^7+3u^6+2u^5+2u^4+u^2+a+1, \\
&\quad u^{12}+u^{11}+3u^{10}+2u^9+6u^8+4u^7+7u^6+4u^5+6u^4+2u^3+3u^2+u+1\rangle
\end{aligned}
$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 142 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.

$$\boldsymbol{I_1^u = \langle b-u,\ -13623u^{25}-12794u^{24}+\cdots+24374a+5797,\ u^{26}-u^{25}+\cdots+2u-1\rangle}$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5+u^3+u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.558915u^{25}+0.524904u^{24}+\cdots-3.21010u-0.237835 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.558915u^{25}+0.524904u^{24}+\cdots-4.21010u-0.237835 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -1.08382u^{25}+0.646673u^{24}+\cdots+1.35567u+0.441085 \\ -u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.785263u^{25}+0.970296u^{24}+\cdots+2.12210u-0.0820546 \\ -0.102035u^{25}-0.0894396u^{24}+\cdots+0.193608u+0.103758 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.677936u^{25}+0.0100927u^{24}+\cdots-0.814967u+1.36490 \\ 0.140108u^{25}+0.375728u^{24}+\cdots+1.05502u-0.948265 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.996061u^{25}-0.753754u^{24}+\cdots-5.81882u+0.845983 \\ u^3+u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.294617u^{25}+0.430130u^{24}+\cdots+4.05239u-0.322844 \\ 0.102035u^{25}+0.0894396u^{24}+\cdots-0.193608u-0.103758 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{26279}{12187}u^{25} - \frac{14751}{12187}u^{24} + \cdots - \frac{2321}{12187}u + \frac{143807}{12187}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{26}+11u^{25}+\cdots-8u+1$
c_2, c_6, c_7 c_{11}	$u^{26}-u^{25}+\cdots+2u-1$
c_3, c_4, c_9	$u^{26}+11u^{25}+\cdots-8u-32$
c_5	$u^{26}-24u^{25}+\cdots-29184u+2048$
c_8, c_{12}	$u^{26}-6u^{24}+\cdots+u-2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{26} + 15y^{25} + \cdots - 156y + 1$
c_2, c_6, c_7 c_{11}	$y^{26} + 11y^{25} + \cdots - 8y + 1$
c_3, c_4, c_9	$y^{26} - 25y^{25} + \cdots - 1344y + 1024$
c_5	$y^{26} + 58y^{24} + \cdots - 138674176y + 4194304$
c_8, c_{12}	$y^{26} - 12y^{25} + \cdots + 63y + 4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.807615+0.620588I$ $a=-1.41594+0.44568I$ $b=-0.807615+0.620588I$	$4.61940+2.42366I$	$11.49135-1.87928I$
$u=-0.807615-0.620588I$ $a=-1.41594-0.44568I$ $b=-0.807615-0.620588I$	$4.61940-2.42366I$	$11.49135+1.87928I$
$u=0.685911+0.758379I$ $a=1.50210+1.14201I$ $b=0.685911+0.758379I$	$2.96984+2.94472I$	$13.74154-2.94116I$
$u=0.685911-0.758379I$ $a=1.50210-1.14201I$ $b=0.685911-0.758379I$	$2.96984-2.94472I$	$13.74154+2.94116I$
$u=0.329454+0.917116I$ $a=2.49009-1.59537I$ $b=0.329454+0.917116I$	$-2.86243+2.69103I$	$3.21966-6.77085I$
$u=0.329454-0.917116I$ $a=2.49009+1.59537I$ $b=0.329454-0.917116I$	$-2.86243-2.69103I$	$3.21966+6.77085I$
$u=-0.664437+0.829427I$ $a=-3.39426-0.66607I$ $b=-0.664437+0.829427I$	$9.68736-2.24802I$	$12.39075+4.49177I$
$u=-0.664437-0.829427I$ $a=-3.39426+0.66607I$ $b=-0.664437-0.829427I$	$9.68736+2.24802I$	$12.39075-4.49177I$
$u=-0.144028+1.075630I$ $a=-0.93960-1.40239I$ $b=-0.144028+1.075630I$	$-5.86362+0.20015I$	$-4.19232-0.64656I$
$u=-0.144028-1.075630I$ $a=-0.93960+1.40239I$ $b=-0.144028-1.075630I$	$-5.86362-0.20015I$	$-4.19232+0.64656I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.941091 + 0.622014I$ $a = 1.67976 + 0.31359I$ $b = 0.941091 + 0.622014I$	$12.33100 - 5.65494I$	$13.25979 + 1.47273I$
$u = 0.941091 - 0.622014I$ $a = 1.67976 - 0.31359I$ $b = 0.941091 - 0.622014I$	$12.33100 + 5.65494I$	$13.25979 - 1.47273I$
$u = -0.718112 + 0.900060I$ $a = -2.12467 + 0.83966I$ $b = -0.718112 + 0.900060I$	$9.28845 - 8.45450I$	$12.1791 + 8.6146I$
$u = -0.718112 - 0.900060I$ $a = -2.12467 - 0.83966I$ $b = -0.718112 - 0.900060I$	$9.28845 + 8.45450I$	$12.1791 - 8.6146I$
$u = 0.643874 + 0.975926I$ $a = 2.71464 - 1.15433I$ $b = 0.643874 + 0.975926I$	$1.56867 + 7.39409I$	$9.80460 - 8.29279I$
$u = 0.643874 - 0.975926I$ $a = 2.71464 + 1.15433I$ $b = 0.643874 - 0.975926I$	$1.56867 - 7.39409I$	$9.80460 + 8.29279I$
$u = 0.043255 + 1.216790I$ $a = 0.450845 - 0.826169I$ $b = 0.043255 + 1.216790I$	$-1.24232 - 2.12927I$	$4.01236 + 3.25160I$
$u = 0.043255 - 1.216790I$ $a = 0.450845 + 0.826169I$ $b = 0.043255 - 1.216790I$	$-1.24232 + 2.12927I$	$4.01236 - 3.25160I$
$u = 0.186488 + 0.738957I$ $a = -0.359062 - 0.571045I$ $b = 0.186488 + 0.738957I$	$-1.43325 + 1.76515I$	$5.03671 - 5.93425I$
$u = 0.186488 - 0.738957I$ $a = -0.359062 + 0.571045I$ $b = 0.186488 - 0.738957I$	$-1.43325 - 1.76515I$	$5.03671 + 5.93425I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.688964 + 1.070760I$ $a = -2.23446 - 0.81457I$ $b = -0.688964 + 1.070760I$	$1.85165 - 13.77330I$	$6.97647 + 10.67636I$
$u = -0.688964 - 1.070760I$ $a = -2.23446 + 0.81457I$ $b = -0.688964 - 1.070760I$	$1.85165 + 13.77330I$	$6.97647 - 10.67636I$
$u = 0.752694 + 1.118140I$ $a = 2.15761 - 0.51442I$ $b = 0.752694 + 1.118140I$	$9.2507 + 18.1776I$	$9.30289 - 9.71516I$
$u = 0.752694 - 1.118140I$ $a = 2.15761 + 0.51442I$ $b = 0.752694 - 1.118140I$	$9.2507 - 18.1776I$	$9.30289 + 9.71516I$
$u = -0.417843$ $a = 3.42500$ $b = -0.417843$	7.84141	10.0650
$u = 0.298624$ $a = -0.479073$ $b = 0.298624$	0.653973	15.4890

II. $I_2^u = \langle 7.40 \times 10^{132} u^{91} + 2.00 \times 10^{133} u^{90} + \cdots + 5.07 \times 10^{132} b - 1.02 \times 10^{133},\ -1.78 \times 10^{132} u^{91} + 4.65 \times 10^{131} u^{90} + \cdots + 2.54 \times 10^{132} a - 2.75 \times 10^{133},\ u^{92} + 2u^{91} + \cdots + 41u + 2 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.702046u^{91} - 0.183295u^{90} + \cdots + 154.391u + 10.8649 \\ -1.45885u^{91} - 3.93944u^{90} + \cdots + 25.5277u + 2.00976 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 2.16090u^{91} + 3.75615u^{90} + \cdots + 128.863u + 8.85514 \\ -1.45885u^{91} - 3.93944u^{90} + \cdots + 25.5277u + 2.00976 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -3.09629u^{91} - 8.80027u^{90} + \cdots - 2.33000u + 4.74136 \\ -2.50890u^{91} - 5.76206u^{90} + \cdots + 44.4508u + 2.16426 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -7.54762u^{91} - 19.0382u^{90} + \cdots + 155.289u + 12.3751 \\ -4.02479u^{91} - 7.82729u^{90} + \cdots + 170.044u + 8.14333 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 2.83666u^{91} + 4.59685u^{90} + \cdots + 45.4045u + 9.16643 \\ -1.97405u^{91} - 5.81218u^{90} + \cdots + 0.126535u + 1.64984 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -4.87434u^{91} - 12.3841u^{90} + \cdots + 343.215u + 9.88688 \\ -1.98056u^{91} - 4.31566u^{90} + \cdots + 93.1840u + 3.95306 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -1.99202u^{91} + 0.293742u^{90} + \cdots + 406.348u + 22.5493 \\ 4.42433u^{91} + 15.5293u^{90} + \cdots + 114.784u + 5.48884 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -11.6941u^{91} - 28.4552u^{90} + \cdots + 63.6053u + 5.57785$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{92} + 32u^{91} + \cdots - 225u + 4$
c_2, c_6, c_7 c_{11}	$u^{92} + 2u^{91} + \cdots + 41u + 2$
c_3, c_4, c_9	$(u^{46} - 5u^{45} + \cdots - u + 1)^2$
c_5	$(u^{46} + 11u^{45} + \cdots - 11u - 1)^2$
c_8, c_{12}	$u^{92} - 5u^{91} + \cdots - 169896u + 138881$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{92} + 60y^{91} + \cdots + 881743y + 16$
c_2, c_6, c_7 c_{11}	$y^{92} + 32y^{91} + \cdots - 225y + 4$
c_3, c_4, c_9	$(y^{46} - 51y^{45} + \cdots - 43y + 1)^2$
c_5	$(y^{46} + 11y^{45} + \cdots + y + 1)^2$
c_8, c_{12}	$y^{92} - 31y^{91} + \cdots - 535870573466y + 19287932161$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.384275 + 0.922259I$ $a = -0.196400 - 0.647605I$ $b = -0.107571 + 0.785518I$	$-1.49826 + 1.86565I$	0
$u = 0.384275 - 0.922259I$ $a = -0.196400 + 0.647605I$ $b = -0.107571 - 0.785518I$	$-1.49826 - 1.86565I$	0
$u = 0.104954 + 0.988208I$ $a = 0.06006 + 1.83739I$ $b = 0.527133 - 0.897374I$	$-1.74949 - 1.99664I$	0
$u = 0.104954 - 0.988208I$ $a = 0.06006 - 1.83739I$ $b = 0.527133 + 0.897374I$	$-1.74949 + 1.99664I$	0
$u = 0.672129 + 0.755146I$ $a = -0.97156 + 1.44268I$ $b = -1.199970 + 0.386947I$	$10.12620 + 0.27578I$	0
$u = 0.672129 - 0.755146I$ $a = -0.97156 - 1.44268I$ $b = -1.199970 - 0.386947I$	$10.12620 - 0.27578I$	0
$u = -0.845063 + 0.559528I$ $a = -1.40890 - 0.46109I$ $b = -0.693227 - 1.033110I$	$3.38247 + 8.06038I$	0
$u = -0.845063 - 0.559528I$ $a = -1.40890 + 0.46109I$ $b = -0.693227 + 1.033110I$	$3.38247 - 8.06038I$	0
$u = 0.894041 + 0.372500I$ $a = -1.172930 + 0.459245I$ $b = -0.633260 + 0.846876I$	$3.07336 - 0.96915I$	0
$u = 0.894041 - 0.372500I$ $a = -1.172930 - 0.459245I$ $b = -0.633260 - 0.846876I$	$3.07336 + 0.96915I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.527133 + 0.897374I$ $a = -1.08952 + 1.37635I$ $b = 0.104954 - 0.988208I$	$-1.74949 + 1.99664I$	0
$u = 0.527133 - 0.897374I$ $a = -1.08952 - 1.37635I$ $b = 0.104954 + 0.988208I$	$-1.74949 - 1.99664I$	0
$u = 0.657222 + 0.697436I$ $a = 1.98616 - 0.38406I$ $b = 0.671820 - 0.937942I$	$2.42160 - 2.30364I$	0
$u = 0.657222 - 0.697436I$ $a = 1.98616 + 0.38406I$ $b = 0.671820 + 0.937942I$	$2.42160 + 2.30364I$	0
$u = -0.641745 + 0.838715I$ $a = 1.44102 + 0.26317I$ $b = 0.917442 - 0.560673I$	$3.10180 - 4.01845I$	0
$u = -0.641745 - 0.838715I$ $a = 1.44102 - 0.26317I$ $b = 0.917442 + 0.560673I$	$3.10180 + 4.01845I$	0
$u = -0.633260 + 0.846876I$ $a = 0.670798 + 0.938661I$ $b = 0.894041 + 0.372500I$	$3.07336 - 0.96915I$	0
$u = -0.633260 - 0.846876I$ $a = 0.670798 - 0.938661I$ $b = 0.894041 - 0.372500I$	$3.07336 + 0.96915I$	0
$u = 0.138860 + 1.051530I$ $a = -0.181379 - 0.286249I$ $b = -0.517894 + 0.472786I$	$-1.73726 + 1.92631I$	0
$u = 0.138860 - 1.051530I$ $a = -0.181379 + 0.286249I$ $b = -0.517894 - 0.472786I$	$-1.73726 - 1.92631I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.651474 + 0.855223I$ $a = -0.722091 + 1.065280I$ $b = -0.87344 + 1.16989I$	$7.65487 - 2.41625I$	0
$u = 0.651474 - 0.855223I$ $a = -0.722091 - 1.065280I$ $b = -0.87344 - 1.16989I$	$7.65487 + 2.41625I$	0
$u = 0.917442 + 0.560673I$ $a = -1.41331 - 0.26957I$ $b = -0.641745 - 0.838715I$	$3.10180 + 4.01845I$	0
$u = 0.917442 - 0.560673I$ $a = -1.41331 + 0.26957I$ $b = -0.641745 + 0.838715I$	$3.10180 - 4.01845I$	0
$u = 0.647081 + 0.859138I$ $a = -2.46993 + 0.50078I$ $b = -0.83829 - 1.22663I$	$7.64236 + 7.46930I$	0
$u = 0.647081 - 0.859138I$ $a = -2.46993 - 0.50078I$ $b = -0.83829 + 1.22663I$	$7.64236 - 7.46930I$	0
$u = 0.668613 + 0.872921I$ $a = -0.516254 + 0.171332I$ $b = -0.0592993 + 0.0462954I$	$1.01357 + 2.58423I$	0
$u = 0.668613 - 0.872921I$ $a = -0.516254 - 0.171332I$ $b = -0.0592993 - 0.0462954I$	$1.01357 - 2.58423I$	0
$u = -0.737043 + 0.826535I$ $a = -0.63108 - 2.02908I$ $b = -0.669007 - 0.884235I$	$9.51681 + 2.91709I$	0
$u = -0.737043 - 0.826535I$ $a = -0.63108 + 2.02908I$ $b = -0.669007 + 0.884235I$	$9.51681 - 2.91709I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.669007 + 0.884235I$ $a = -1.86616 - 1.01078I$ $b = -0.737043 - 0.826535I$	$9.51681 - 2.91709I$	0
$u = -0.669007 - 0.884235I$ $a = -1.86616 + 1.01078I$ $b = -0.737043 + 0.826535I$	$9.51681 + 2.91709I$	0
$u = -0.568462 + 0.683326I$ $a = 0.734078 + 0.955365I$ $b = 0.770591 + 1.030330I$	$1.73892 + 2.14972I$	0
$u = -0.568462 - 0.683326I$ $a = 0.734078 - 0.955365I$ $b = 0.770591 - 1.030330I$	$1.73892 - 2.14972I$	0
$u = 0.773550 + 0.436944I$ $a = 0.292921 + 0.784690I$ $b = -0.243248 + 1.241290I$	$4.40684 - 4.36446I$	0
$u = 0.773550 - 0.436944I$ $a = 0.292921 - 0.784690I$ $b = -0.243248 - 1.241290I$	$4.40684 + 4.36446I$	0
$u = -0.898218 + 0.678865I$ $a = 0.179251 + 0.632745I$ $b = 0.014143 + 0.836013I$	$5.97757 - 0.66120I$	0
$u = -0.898218 - 0.678865I$ $a = 0.179251 - 0.632745I$ $b = 0.014143 - 0.836013I$	$5.97757 + 0.66120I$	0
$u = -0.585246 + 0.976451I$ $a = 1.99761 + 0.67960I$ $b = 0.692044 - 1.145060I$	$0.81481 - 6.80898I$	0
$u = -0.585246 - 0.976451I$ $a = 1.99761 - 0.67960I$ $b = 0.692044 + 1.145060I$	$0.81481 + 6.80898I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.659061 + 0.934255I$ $a = -1.62301 + 0.40053I$ $b = -1.208270 - 0.529614I$	$9.57845 + 4.88836I$	0
$u = 0.659061 - 0.934255I$ $a = -1.62301 - 0.40053I$ $b = -1.208270 + 0.529614I$	$9.57845 - 4.88836I$	0
$u = 0.671820 + 0.937942I$ $a = -0.00420 - 1.68031I$ $b = 0.657222 - 0.697436I$	$2.42160 + 2.30364I$	0
$u = 0.671820 - 0.937942I$ $a = -0.00420 + 1.68031I$ $b = 0.657222 + 0.697436I$	$2.42160 - 2.30364I$	0
$u = 0.993762 + 0.598379I$ $a = 1.33362 - 0.67978I$ $b = 0.742562 - 1.087310I$	$10.8811 - 11.8282I$	0
$u = 0.993762 - 0.598379I$ $a = 1.33362 + 0.67978I$ $b = 0.742562 + 1.087310I$	$10.8811 + 11.8282I$	0
$u = 0.014143 + 0.836013I$ $a = -0.546063 + 0.697155I$ $b = -0.898218 + 0.678865I$	$5.97757 - 0.66120I$	$6.00000 + 0.I$
$u = 0.014143 - 0.836013I$ $a = -0.546063 - 0.697155I$ $b = -0.898218 - 0.678865I$	$5.97757 + 0.66120I$	$6.00000 + 0.I$
$u = -0.586521 + 1.010100I$ $a = 1.119650 + 0.692976I$ $b = 0.075243 - 1.202660I$	$-3.13888 - 6.52644I$	0
$u = -0.586521 - 1.010100I$ $a = 1.119650 - 0.692976I$ $b = 0.075243 + 1.202660I$	$-3.13888 + 6.52644I$	0

Solutions to I^u_2	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.075243 + 1.202660I$ $a = -0.670379 + 1.086120I$ $b = -0.586521 - 1.010100I$	$-3.13888 + 6.52644I$	0
$u = 0.075243 - 1.202660I$ $a = -0.670379 - 1.086120I$ $b = -0.586521 + 1.010100I$	$-3.13888 - 6.52644I$	0
$u = -0.107571 + 0.785518I$ $a = -0.626612 - 0.578450I$ $b = 0.384275 + 0.922259I$	$-1.49826 + 1.86565I$	$3.52037 - 4.33930I$
$u = -0.107571 - 0.785518I$ $a = -0.626612 + 0.578450I$ $b = 0.384275 - 0.922259I$	$-1.49826 - 1.86565I$	$3.52037 + 4.33930I$
$u = -0.693227 + 1.033110I$ $a = -0.382680 - 1.145400I$ $b = -0.845063 - 0.559528I$	$3.38247 - 8.06038I$	0
$u = -0.693227 - 1.033110I$ $a = -0.382680 + 1.145400I$ $b = -0.845063 + 0.559528I$	$3.38247 + 8.06038I$	0
$u = 0.634075 + 1.073450I$ $a = -1.232080 + 0.266868I$ $b = -0.216288 - 1.390700I$	$2.60520 + 9.64233I$	0
$u = 0.634075 - 1.073450I$ $a = -1.232080 - 0.266868I$ $b = -0.216288 + 1.390700I$	$2.60520 - 9.64233I$	0
$u = 0.282265 + 0.698034I$ $a = 0.85393 - 2.11174I$ $b = 0.282265 - 0.698034I$	-1.99436	$6.54077 + 0.I$
$u = 0.282265 - 0.698034I$ $a = 0.85393 + 2.11174I$ $b = 0.282265 + 0.698034I$	-1.99436	$6.54077 + 0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.199970 + 0.386947I$ $a = 1.372760 + 0.245997I$ $b = 0.672129 + 0.755146I$	$10.12620 + 0.27578I$	0
$u = -1.199970 - 0.386947I$ $a = 1.372760 - 0.245997I$ $b = 0.672129 - 0.755146I$	$10.12620 - 0.27578I$	0
$u = -0.243248 + 1.241290I$ $a = 0.587897 - 0.021533I$ $b = 0.773550 + 0.436944I$	$4.40684 - 4.36446I$	0
$u = -0.243248 - 1.241290I$ $a = 0.587897 + 0.021533I$ $b = 0.773550 - 0.436944I$	$4.40684 + 4.36446I$	0
$u = 0.099062 + 0.726030I$ $a = -1.58207 + 0.49349I$ $b = -0.774589 - 1.024930I$	$4.93750 + 5.50082I$	$6.95120 - 5.88210I$
$u = 0.099062 - 0.726030I$ $a = -1.58207 - 0.49349I$ $b = -0.774589 + 1.024930I$	$4.93750 - 5.50082I$	$6.95120 + 5.88210I$
$u = -0.774589 + 1.024930I$ $a = 0.924639 - 0.196309I$ $b = 0.099062 - 0.726030I$	$4.93750 - 5.50082I$	0
$u = -0.774589 - 1.024930I$ $a = 0.924639 + 0.196309I$ $b = 0.099062 + 0.726030I$	$4.93750 + 5.50082I$	0
$u = 0.770591 + 1.030330I$ $a = -0.523962 + 0.646747I$ $b = -0.568462 + 0.683326I$	$1.73892 + 2.14972I$	0
$u = 0.770591 - 1.030330I$ $a = -0.523962 - 0.646747I$ $b = -0.568462 - 0.683326I$	$1.73892 - 2.14972I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.517894 + 0.472786I$ $a = -0.512074 - 0.022450I$ $b = 0.138860 + 1.051530I$	$-1.73726 + 1.92631I$	$3.89432 - 4.39576I$
$u = -0.517894 - 0.472786I$ $a = -0.512074 + 0.022450I$ $b = 0.138860 - 1.051530I$	$-1.73726 - 1.92631I$	$3.89432 + 4.39576I$
$u = 0.197229 + 0.661581I$ $a = 1.75065 - 0.31294I$ $b = -0.614599 + 1.163900I$	$5.26525 - 4.46279I$	$2.29672 + 4.19886I$
$u = 0.197229 - 0.661581I$ $a = 1.75065 + 0.31294I$ $b = -0.614599 - 1.163900I$	$5.26525 + 4.46279I$	$2.29672 - 4.19886I$
$u = -0.614599 + 1.163900I$ $a = 0.540716 - 0.760064I$ $b = 0.197229 + 0.661581I$	$5.26525 - 4.46279I$	0
$u = -0.614599 - 1.163900I$ $a = 0.540716 + 0.760064I$ $b = 0.197229 - 0.661581I$	$5.26525 + 4.46279I$	0
$u = 0.742562 + 1.087310I$ $a = 0.665074 - 1.138780I$ $b = 0.993762 - 0.598379I$	$10.8811 + 11.8282I$	0
$u = 0.742562 - 1.087310I$ $a = 0.665074 + 1.138780I$ $b = 0.993762 + 0.598379I$	$10.8811 - 11.8282I$	0
$u = -1.208270 + 0.529614I$ $a = 1.38348 - 0.43005I$ $b = 0.659061 - 0.934255I$	$9.57845 - 4.88836I$	0
$u = -1.208270 - 0.529614I$ $a = 1.38348 + 0.43005I$ $b = 0.659061 + 0.934255I$	$9.57845 + 4.88836I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.692044 + 1.145060I$ $a = -1.70181 + 0.57199I$ $b = -0.585246 - 0.976451I$	$0.81481 + 6.80898I$	0
$u = 0.692044 - 1.145060I$ $a = -1.70181 - 0.57199I$ $b = -0.585246 + 0.976451I$	$0.81481 - 6.80898I$	0
$u = -0.357390 + 0.546281I$ $a = 2.16190 + 3.30453I$ $b = -0.357390 - 0.546281I$	7.61775	$4.49295 + 0.I$
$u = -0.357390 - 0.546281I$ $a = 2.16190 - 3.30453I$ $b = -0.357390 + 0.546281I$	7.61775	$4.49295 + 0.I$
$u = -0.216288 + 1.390700I$ $a = 0.926336 + 0.623675I$ $b = 0.634075 - 1.073450I$	$2.60520 - 9.64233I$	0
$u = -0.216288 - 1.390700I$ $a = 0.926336 - 0.623675I$ $b = 0.634075 + 1.073450I$	$2.60520 + 9.64233I$	0
$u = -0.87344 + 1.16989I$ $a = 0.608052 + 0.726893I$ $b = 0.651474 + 0.855223I$	$7.65487 - 2.41625I$	0
$u = -0.87344 - 1.16989I$ $a = 0.608052 - 0.726893I$ $b = 0.651474 - 0.855223I$	$7.65487 + 2.41625I$	0
$u = -0.83829 + 1.22663I$ $a = 1.76949 + 0.44441I$ $b = 0.647081 - 0.859138I$	$7.64236 - 7.46930I$	0
$u = -0.83829 - 1.22663I$ $a = 1.76949 - 0.44441I$ $b = 0.647081 + 0.859138I$	$7.64236 + 7.46930I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.0592993 + 0.0462954I$ $a = 2.43438 + 7.56829I$ $b = 0.668613 + 0.872921I$	$1.01357 + 2.58423I$	$2.71428 - 4.03968I$
$u = -0.0592993 - 0.0462954I$ $a = 2.43438 - 7.56829I$ $b = 0.668613 - 0.872921I$	$1.01357 - 2.58423I$	$2.71428 + 4.03968I$

III. $I_3^u = \langle b+u,\ u^{11}+u^{10}+\cdots+3u^2+a,\ u^{12}+u^{11}+\cdots+u+1\rangle$

(i) Arc colorings

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

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

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

$$a_{12} = \begin{pmatrix} -u^{11}-u^{10}-2u^9-u^8-3u^7-3u^6-2u^5-u^4-3u^2 \\ -u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^{11}-u^{10}-2u^9-u^8-3u^7-3u^6-2u^5-u^4-3u^2+u \\ -u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^{10}+u^9+3u^8+u^7+5u^6+2u^5+6u^4+4u^2+u+2 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{10}+u^9+3u^8+u^7+6u^6+2u^5+7u^4+5u^2+u+2 \\ u^8+2u^6+3u^4+u^2+1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{10}-u^9-3u^8-2u^7-6u^6-4u^5-7u^4-2u^3-5u^2-2u-2 \\ u^{11}+u^{10}+2u^9+u^8+3u^7+2u^6+2u^5+u^3+2u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^9+2u^7-u^6+4u^5-u^4+3u^3-2u^2+2u \\ -u^3-u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^{11}-3u^9-6u^7-7u^5-6u^3+u^2-3u \\ -u^8-2u^6-3u^4-u^2-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 7u^{11}+4u^{10}+16u^9+4u^8+31u^7+7u^6+26u^5-5u^4+23u^3-3u^2+u+3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{12} + 9y^{11} + \cdots + 5y + 1$
c_2, c_6, c_7 c_{11}	$y^{12} + 5y^{11} + \cdots + 5y + 1$
c_3, c_4, c_9	$y^{12} - 14y^{11} + \cdots + 2y + 1$
c_5	$y^{12} - y^{11} + \cdots + 2y + 1$
c_8, c_{12}	$y^{12} - 2y^{11} + \cdots - 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.655102 + 0.736440I$ $a = -1.251530 - 0.398490I$ $b = -0.655102 - 0.736440I$	$1.97845 + 3.67934I$	$6.30875 - 7.16034I$
$u = 0.655102 - 0.736440I$ $a = -1.251530 + 0.398490I$ $b = -0.655102 + 0.736440I$	$1.97845 - 3.67934I$	$6.30875 + 7.16034I$
$u = -0.793413 + 0.890052I$ $a = 2.01108 - 0.02373I$ $b = 0.793413 - 0.890052I$	$8.13868 - 5.95932I$	$11.90060 + 5.23042I$
$u = -0.793413 - 0.890052I$ $a = 2.01108 + 0.02373I$ $b = 0.793413 + 0.890052I$	$8.13868 + 5.95932I$	$11.90060 - 5.23042I$
$u = 0.592825 + 1.034570I$ $a = -1.95190 + 0.82796I$ $b = -0.592825 - 1.034570I$	$0.03780 + 6.13395I$	$3.34772 - 4.32128I$
$u = 0.592825 - 1.034570I$ $a = -1.95190 - 0.82796I$ $b = -0.592825 + 1.034570I$	$0.03780 - 6.13395I$	$3.34772 + 4.32128I$
$u = -0.554835 + 0.511693I$ $a = 0.11463 + 1.76794I$ $b = 0.554835 - 0.511693I$	$8.17744 - 0.96019I$	$12.36505 + 4.95398I$
$u = -0.554835 - 0.511693I$ $a = 0.11463 - 1.76794I$ $b = 0.554835 + 0.511693I$	$8.17744 + 0.96019I$	$12.36505 - 4.95398I$
$u = 0.147187 + 0.720863I$ $a = 1.32897 - 0.99098I$ $b = -0.147187 - 0.720863I$	$-2.42991 + 1.27964I$	$0.05150 - 3.21690I$
$u = 0.147187 - 0.720863I$ $a = 1.32897 + 0.99098I$ $b = -0.147187 + 0.720863I$	$-2.42991 - 1.27964I$	$0.05150 + 3.21690I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.546865 + 1.162890I$ $a = 1.248760 + 0.553949I$ $b = 0.546865 - 1.162890I$	$3.83675 - 8.25339I$	$10.02638 + 7.06157I$
$u = -0.546865 - 1.162890I$ $a = 1.248760 - 0.553949I$ $b = 0.546865 + 1.162890I$	$3.83675 + 8.25339I$	$10.02638 - 7.06157I$

IV.

$\boldsymbol{I^u_4 = \langle -u^{11} - u^{10} + \cdots + b - 1,\ u^{11} + u^{10} + \cdots + a + 1,\ u^{12} + u^{11} + \cdots + u + 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 5u^{11} + 7u^{10} + 13u^9 + 11u^8 + 23u^7 + 23u^6 + 21u^5 + 15u^4 + 17u^3 + 8u^2 + 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{12} + 9y^{11} + \cdots + 9y + 1$
c_2, c_6, c_7 c_{11}	$y^{12} + 5y^{11} + \cdots + 5y + 1$
c_3, c_4, c_9	$(y^6 - 7y^5 + 17y^4 - 15y^3 + y^2 + y + 1)^2$
c_5	$(y^6 + y^5 + y^4 - 3y^3 - 3y^2 + y + 1)^2$
c_8, c_{12}	$y^{12} - 2y^{11} + \cdots - 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.140919 + 0.990021I$ $a = 0.28280 - 1.98683I$ $b = -0.140919 + 0.990021I$	-3.57493	$-60.206728 + 0.10I$
$u = 0.140919 - 0.990021I$ $a = 0.28280 + 1.98683I$ $b = -0.140919 - 0.990021I$	-3.57493	$-60.206728 + 0.10I$
$u = -0.751292 + 0.659970I$ $a = 1.54227 + 1.35480I$ $b = 0.751292 + 0.659970I$	8.82105	$12.00884 + 0.I$
$u = -0.751292 - 0.659970I$ $a = 1.54227 - 1.35480I$ $b = 0.751292 - 0.659970I$	8.82105	$12.00884 + 0.I$
$u = 0.508444 + 0.678069I$ $a = -1.215690 + 0.720457I$ $b = -0.707850 + 0.944001I$	$1.30433 - 1.63935I$	$4.91398 - 3.40744I$
$u = 0.508444 - 0.678069I$ $a = -1.215690 - 0.720457I$ $b = -0.707850 - 0.944001I$	$1.30433 + 1.63935I$	$4.91398 + 3.40744I$
$u = 0.707850 + 0.944001I$ $a = -0.252097 + 0.983240I$ $b = -0.508444 + 0.678069I$	$1.30433 + 1.63935I$	$4.91398 + 3.40744I$
$u = 0.707850 - 0.944001I$ $a = -0.252097 - 0.983240I$ $b = -0.508444 - 0.678069I$	$1.30433 - 1.63935I$	$4.91398 - 3.40744I$
$u = -0.383361 + 0.619349I$ $a = -0.549407 + 0.130797I$ $b = 0.722560 + 1.167350I$	$5.94221 + 4.33255I$	$14.4782 - 1.9451I$
$u = -0.383361 - 0.619349I$ $a = -0.549407 - 0.130797I$ $b = 0.722560 - 1.167350I$	$5.94221 - 4.33255I$	$14.4782 + 1.9451I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.722560 + 1.167350I$ $a = 0.192116 - 0.229946I$ $b = 0.383361 + 0.619349I$	$5.94221 - 4.33255I$	$14.4782 + 1.9451I$
$u = -0.722560 - 1.167350I$ $a = 0.192116 + 0.229946I$ $b = 0.383361 - 0.619349I$	$5.94221 + 4.33255I$	$14.4782 - 1.9451I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$(u^{12}-5u^{11}+\cdots-5u+1)(u^{12}-5u^{11}+\cdots-5u+1)$ $\cdot(u^{26}+11u^{25}+\cdots-8u+1)(u^{92}+32u^{91}+\cdots-225u+4)$
c_2, c_7	$(u^{12}-u^{11}+\cdots-u+1)(u^{12}-u^{11}+\cdots-u+1)(u^{26}-u^{25}+\cdots+2u-1)$ $\cdot(u^{92}+2u^{91}+\cdots+41u+2)$
c_3, c_4	$((u^6-u^5-3u^4+3u^3+u^2-u+1)^2)(u^{12}+2u^{11}+\cdots+2u+1)$ $\cdot(u^{26}+11u^{25}+\cdots-8u-32)(u^{46}-5u^{45}+\cdots-u+1)^2$
c_5	$(u^6-u^5+u^4+u^3-u^2+u-1)^2$ $\cdot(u^{12}-u^{11}-2u^9+4u^6-2u^5-u^4+3u^2+2u+1)$ $\cdot(u^{26}-24u^{25}+\cdots-29184u+2048)(u^{46}+11u^{45}+\cdots-11u-1)^2$
c_6, c_{11}	$(u^{12}+u^{11}+\cdots+u+1)(u^{12}+u^{11}+\cdots+u+1)(u^{26}-u^{25}+\cdots+2u-1)$ $\cdot(u^{92}+2u^{91}+\cdots+41u+2)$
c_8, c_{12}	$(u^{12}-u^{10}-u^9-3u^8+u^7+3u^6+2u^5+u^4-2u^3-u^2+1)$ $\cdot(u^{12}-u^{10}+2u^9+3u^8-5u^7+7u^6-u^5-2u^4+4u^3-u^2+1)$ $\cdot(u^{26}-6u^{24}+\cdots+u-2)(u^{92}-5u^{91}+\cdots-169896u+138881)$
c_9	$((u^6+u^5-3u^4-3u^3+u^2+u+1)^2)(u^{12}-2u^{11}+\cdots-2u+1)$ $\cdot(u^{26}+11u^{25}+\cdots-8u-32)(u^{46}-5u^{45}+\cdots-u+1)^2$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$(y^{12}+9y^{11}+\cdots+9y+1)(y^{12}+9y^{11}+\cdots+5y+1)$ $\cdot(y^{26}+15y^{25}+\cdots-156y+1)(y^{92}+60y^{91}+\cdots+881743y+16)$
c_2, c_6, c_7 c_{11}	$(y^{12}+5y^{11}+\cdots+5y+1)(y^{12}+5y^{11}+\cdots+5y+1)$ $\cdot(y^{26}+11y^{25}+\cdots-8y+1)(y^{92}+32y^{91}+\cdots-225y+4)$
c_3, c_4, c_9	$((y^6-7y^5+\cdots+y+1)^2)(y^{12}-14y^{11}+\cdots+2y+1)$ $\cdot(y^{26}-25y^{25}+\cdots-1344y+1024)(y^{46}-51y^{45}+\cdots-43y+1)^2$
c_5	$((y^6+y^5+y^4-3y^3-3y^2+y+1)^2)(y^{12}-y^{11}+\cdots+2y+1)$ $\cdot(y^{26}+58y^{24}+\cdots-138674176y+4194304)$ $\cdot(y^{46}+11y^{45}+\cdots+y+1)^2$
c_8, c_{12}	$(y^{12}-2y^{11}+\cdots-2y+1)(y^{12}-2y^{11}+\cdots-2y+1)$ $\cdot(y^{26}-12y^{25}+\cdots+63y+4)$ $\cdot(y^{92}-31y^{91}+\cdots-535870573466y+19287932161)$