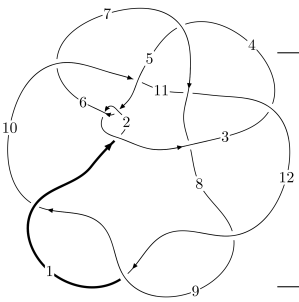
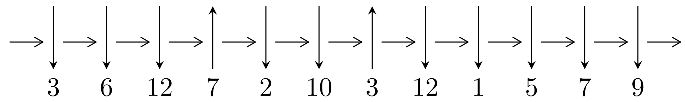
$12n_{0316}$ ($K12n_{0316}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 1.49187 \times 10^{37} u^{44} - 1.01328 \times 10^{37} u^{43} + \cdots + 2.01007 \times 10^{37} b - 7.03971 \times 10^{37}, \\
& - 1.39776 \times 10^{38} u^{44} + 1.68461 \times 10^{38} u^{43} + \cdots + 1.40705 \times 10^{38} a + 1.95501 \times 10^{39}, \\
& u^{45} - 2u^{44} + \cdots - 63u + 7 \rangle \\
I_2^u = \langle & -3u^{12} - 7u^{11} + 2u^{10} + 24u^9 + 6u^8 - 43u^7 - 27u^6 + 49u^5 + 37u^4 - 29u^3 - 27u^2 + b + 10u + 7, \\
& 5u^{12} + 13u^{11} - 2u^{10} - 44u^9 - 19u^8 + 78u^7 + 60u^6 - 84u^5 - 82u^4 + 47u^3 + 53u^2 + a - 13u - 13, \\
& u^{13} + 3u^{12} + u^{11} - 8u^{10} - 7u^9 + 12u^8 + 17u^7 - 9u^6 - 20u^5 + u^4 + 12u^3 + 2u^2 - 3u - 1 \rangle
\end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 58 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. $I_1^u = \langle 1.49\times10^{37}u^{44} - 1.01\times10^{37}u^{43} + \cdots + 2.01\times10^{37}b - 7.04\times10^{37},\ -1.40\times10^{38}u^{44} + 1.68\times10^{38}u^{43} + \cdots + 1.41\times10^{38}a + 1.96\times10^{39},\ u^{45} - 2u^{44} + \cdots - 63u + 7\rangle$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix}0\\u\end{pmatrix}$$

$$a_2 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

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

$$a_9 = \begin{pmatrix}0.993395u^{44} - 1.19726u^{43} + \cdots + 89.5674u - 13.8944\\-0.742197u^{44} + 0.504102u^{43} + \cdots - 24.9174u + 3.50222\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}0.168633u^{44} - 0.289227u^{43} + \cdots + 40.1071u - 8.51481\\-0.625412u^{44} + 0.0300369u^{43} + \cdots + 0.0542180u - 0.00472178\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-2.57523u^{44} + 2.47327u^{43} + \cdots - 150.787u + 17.0513\\-0.238127u^{44} - 0.117959u^{43} + \cdots + 25.4258u - 2.94147\end{pmatrix}$$

$$a_5 = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$

$$a_4 = \begin{pmatrix}0.0434605u^{44} - 0.501873u^{43} + \cdots + 32.2099u - 4.00706\\-1.00696u^{44} + 1.07716u^{43} + \cdots - 66.0581u + 8.54528\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}-1.44259u^{44} + 2.27648u^{43} + \cdots - 114.430u + 18.0623\\0.842298u^{44} - 0.861398u^{43} + \cdots + 32.9618u - 4.57062\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-2.81336u^{44} + 2.35531u^{43} + \cdots - 125.361u + 14.1099\\-0.238127u^{44} - 0.117959u^{43} + \cdots + 25.4258u - 2.94147\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-0.991831u^{44} + 1.08676u^{43} + \cdots - 88.6012u + 14.4109\\0.546953u^{44} - 0.100468u^{43} + \cdots - 0.832675u - 0.0412010\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.33381u^{44} + 0.732754u^{43} + \cdots - 88.2937u - 0.929056$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{45} + 18u^{44} + \cdots + 3381u + 49$
c_2, c_5	$u^{45} + 2u^{44} + \cdots - 63u - 7$
c_3, c_{10}	$u^{45} - u^{44} + \cdots - 20u - 1$
c_4	$u^{45} + 7u^{44} + \cdots + 15464u + 821$
c_6	$u^{45} + 4u^{44} + \cdots - 22u - 4$
c_7	$u^{45} - 3u^{44} + \cdots + 22696u + 3551$
c_8, c_9, c_{12}	$u^{45} + u^{44} + \cdots + 64u + 19$
c_{11}	$u^{45} + u^{44} + \cdots - 63u + 9$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{45} + 42y^{44} + \cdots + 6542725y - 2401$
c_2, c_5	$y^{45} - 18y^{44} + \cdots + 3381y - 49$
c_3, c_{10}	$y^{45} + 57y^{44} + \cdots + 198y - 1$
c_4	$y^{45} - 63y^{44} + \cdots + 21028436y - 674041$
c_6	$y^{45} - 4y^{44} + \cdots - 68y - 16$
c_7	$y^{45} - 53y^{44} + \cdots + 550810170y - 12609601$
c_8, c_9, c_{12}	$y^{45} - 35y^{44} + \cdots - 84y - 361$
c_{11}	$y^{45} + 75y^{44} + \cdots + 405y - 81$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.352517+0.930511I$ $a=-2.09255-0.56873I$ $b=-1.53917-0.68803I$	$0.92371-3.61571I$	$-7.30973+5.35358I$
$u=-0.352517-0.930511I$ $a=-2.09255+0.56873I$ $b=-1.53917+0.68803I$	$0.92371+3.61571I$	$-7.30973-5.35358I$
$u=-0.622969+0.745341I$ $a=-0.498948-0.274339I$ $b=\ \ 0.0307757+0.1234220I$	$3.19833+0.47295I$	$-2.90845-1.14935I$
$u=-0.622969-0.745341I$ $a=-0.498948+0.274339I$ $b=\ \ 0.0307757-0.1234220I$	$3.19833-0.47295I$	$-2.90845+1.14935I$
$u=\ \ 0.852606+0.644697I$ $a=-1.60431+2.03212I$ $b=-0.66092+1.63965I$	$7.67151-0.54614I$	$-7.14162+2.19289I$
$u=\ \ 0.852606-0.644697I$ $a=-1.60431-2.03212I$ $b=-0.66092-1.63965I$	$7.67151+0.54614I$	$-7.14162-2.19289I$
$u=\ \ 0.870374+0.636220I$ $a=-1.51114+2.96200I$ $b=\ \ 0.84979+1.64164I$	$7.61467-4.45079I$	$-7.29611+4.22653I$
$u=\ \ 0.870374-0.636220I$ $a=-1.51114-2.96200I$ $b=\ \ 0.84979-1.64164I$	$7.61467+4.45079I$	$-7.29611-4.22653I$
$u=-0.706985+0.572515I$ $a=\ \ 1.61320+1.43432I$ $b=\ \ 0.612546+1.273340I$	$-0.603650+1.183020I$	$-7.09381-2.18131I$
$u=-0.706985-0.572515I$ $a=\ \ 1.61320-1.43432I$ $b=\ \ 0.612546-1.273340I$	$-0.603650-1.183020I$	$-7.09381+2.18131I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.017280+0.456940I$ $a = -0.20833-1.43339I$ $b = -1.77851+0.14760I$	$-2.41679-3.11933I$	$-8.64263+5.00261I$
$u = 1.017280-0.456940I$ $a = -0.20833+1.43339I$ $b = -1.77851-0.14760I$	$-2.41679+3.11933I$	$-8.64263-5.00261I$
$u = -0.837872+0.180212I$ $a = -0.719453+0.504755I$ $b = -0.475414+1.151620I$	$5.23022+2.95335I$	$-10.41493-5.15699I$
$u = -0.837872-0.180212I$ $a = -0.719453-0.504755I$ $b = -0.475414-1.151620I$	$5.23022-2.95335I$	$-10.41493+5.15699I$
$u = 0.829207+0.087175I$ $a = 2.10128-0.71672I$ $b = -0.375197+0.692927I$	$-6.31151-0.37732I$	$-13.18619-0.42975I$
$u = 0.829207-0.087175I$ $a = 2.10128+0.71672I$ $b = -0.375197-0.692927I$	$-6.31151+0.37732I$	$-13.18619+0.42975I$
$u = -0.780783+0.287291I$ $a = 0.16773-2.15348I$ $b = 1.01268+1.14500I$	$5.58706-0.92954I$	$-9.44375-1.95517I$
$u = -0.780783-0.287291I$ $a = 0.16773+2.15348I$ $b = 1.01268-1.14500I$	$5.58706+0.92954I$	$-9.44375+1.95517I$
$u = 0.741986+0.904888I$ $a = 1.232980-0.115587I$ $b = 0.350843-0.128409I$	$12.46620+1.15235I$	$-3.81779+0.34527I$
$u = 0.741986-0.904888I$ $a = 1.232980+0.115587I$ $b = 0.350843+0.128409I$	$12.46620-1.15235I$	$-3.81779-0.34527I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.822383$ $a = -2.63142$ $b = 0.371288$	-10.1445	9.33710
$u = 0.702661 + 0.398793I$ $a = -0.853897 + 0.310274I$ $b = -0.210564 + 0.967639I$	$-1.09811 - 1.39547I$	$-6.56054 + 4.96588I$
$u = 0.702661 - 0.398793I$ $a = -0.853897 - 0.310274I$ $b = -0.210564 - 0.967639I$	$-1.09811 + 1.39547I$	$-6.56054 - 4.96588I$
$u = -1.021490 + 0.633982I$ $a = 0.047816 - 0.193328I$ $b = -0.358831 - 0.204765I$	$1.97257 + 4.80081I$	$-5.11482 - 5.89967I$
$u = -1.021490 - 0.633982I$ $a = 0.047816 + 0.193328I$ $b = -0.358831 + 0.204765I$	$1.97257 - 4.80081I$	$-5.11482 + 5.89967I$
$u = 0.760787 + 0.239478I$ $a = 0.429130 - 0.024508I$ $b = 0.810532 - 0.368894I$	$-1.101730 - 0.180700I$	$-6.28342 - 1.85189I$
$u = 0.760787 - 0.239478I$ $a = 0.429130 + 0.024508I$ $b = 0.810532 + 0.368894I$	$-1.101730 + 0.180700I$	$-6.28342 + 1.85189I$
$u = -1.067050 + 0.679768I$ $a = 0.77890 + 2.44088I$ $b = -0.89344 + 1.68496I$	$-1.81546 + 3.64143I$	$-8.00000 - 2.52158I$
$u = -1.067050 - 0.679768I$ $a = 0.77890 - 2.44088I$ $b = -0.89344 - 1.68496I$	$-1.81546 - 3.64143I$	$-8.00000 + 2.52158I$
$u = 1.018190 + 0.768985I$ $a = -0.662287 - 0.442499I$ $b = -0.108103 - 0.271060I$	$11.57780 - 7.32875I$	$-8.00000 + 4.62290I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.018190 - 0.768985I$ $a = -0.662287 + 0.442499I$ $b = -0.108103 + 0.271060I$	$11.57780 + 7.32875I$	$-8.00000 - 4.62290I$
$u = 0.583636 + 1.148450I$ $a = 2.23765 - 1.83947I$ $b = 1.60697 - 1.61313I$	$8.75418 + 6.80607I$	$-8.00000 - 4.07465I$
$u = 0.583636 - 1.148450I$ $a = 2.23765 + 1.83947I$ $b = 1.60697 + 1.61313I$	$8.75418 - 6.80607I$	$-8.00000 + 4.07465I$
$u = -1.161870 + 0.639019I$ $a = 0.16411 - 2.14514I$ $b = 1.88266 - 1.13204I$	$-1.49977 + 9.31425I$	0
$u = -1.161870 - 0.639019I$ $a = 0.16411 + 2.14514I$ $b = 1.88266 + 1.13204I$	$-1.49977 - 9.31425I$	0
$u = 1.041350 + 0.853737I$ $a = -0.50445 + 1.98666I$ $b = 0.433982 + 1.234590I$	$-4.65783 - 3.47814I$	0
$u = 1.041350 - 0.853737I$ $a = -0.50445 - 1.98666I$ $b = 0.433982 - 1.234590I$	$-4.65783 + 3.47814I$	0
$u = 1.38604$ $a = 0.478642$ $b = 2.27111$	-5.50304	-17.6960
$u = 1.17910 + 0.78373I$ $a = 0.21212 - 2.72362I$ $b = -1.47078 - 1.85341I$	$6.8143 - 13.6617I$	0
$u = 1.17910 - 0.78373I$ $a = 0.21212 + 2.72362I$ $b = -1.47078 + 1.85341I$	$6.8143 + 13.6617I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.28910+0.63728I$ $a=\quad 0.22407+2.43968I$ $b=-1.41146+2.05143I$	$-1.85160+3.71712I$	0
$u=-1.28910-0.63728I$ $a=\quad 0.22407-2.43968I$ $b=-1.41146-2.05143I$	$-1.85160-3.71712I$	0
$u=-1.10756+0.93089I$ $a=\quad 0.042729+1.301160I$ $b=-0.474464+0.759384I$	$0.57168+3.78059I$	0
$u=-1.10756-0.93089I$ $a=\quad 0.042729-1.301160I$ $b=-0.474464-0.759384I$	$0.57168-3.78059I$	0
$u=\quad 0.138369$ $a=-2.03994$ $b=\quad 0.689748$	-0.867384	-10.9880

II. $I_2^u =$
$\langle -3u^{12} - 7u^{11} + \cdots + b + 7,\ 5u^{12} + 13u^{11} + \cdots + a - 13,\ u^{13} + 3u^{12} + \cdots - 3u - 1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -5u^{12} - 13u^{11} + \cdots + 13u + 13 \\ 3u^{12} + 7u^{11} + \cdots - 10u - 7 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -6u^{12} - 15u^{11} + \cdots + 16u + 14 \\ 5u^{12} + 12u^{11} + \cdots - 13u - 9 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -4u^{12} - 9u^{11} + \cdots + 8u + 3 \\ -u^{12} - 3u^{11} + \cdots - u + 3 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 10u^{12} + 23u^{11} + \cdots - 25u - 13 \\ u^{12} + 3u^{11} + \cdots + 2u - 4 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 3u^{12} + 6u^{11} + \cdots - 8u - 8 \\ -6u^{12} - 15u^{11} + \cdots + 13u + 11 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -5u^{12} - 12u^{11} + \cdots + 7u + 6 \\ -u^{12} - 3u^{11} + \cdots - u + 3 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -9u^{12} - 23u^{11} + \cdots + 23u + 20 \\ 2u^{12} + 5u^{11} + \cdots - 6u - 4 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 3u^{12} + u^{11} - 19u^{10} - 32u^9 + 28u^8 + 70u^7 - 22u^6 - 115u^5 - 12u^4 + 84u^3 + 28u^2 - 36u - 23$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{13} - 7u^{12} + \cdots + 13u - 1$
c_2	$u^{13} + 3u^{12} + \cdots - 3u - 1$
c_3	$u^{13} + 8u^{11} + 24u^9 + u^8 + 33u^7 + 4u^6 + 20u^5 + 5u^4 + 5u^3 + u^2 + 2u - 1$
c_4	$u^{13} + 4u^{11} + \cdots + 6u - 1$
c_5	$u^{13} - 3u^{12} + \cdots - 3u + 1$
c_6	$u^{13} + 3u^{12} - 5u^{10} + u^8 - 5u^7 + 3u^6 + 8u^5 - u^4 - 6u^3 - u^2 + 2u + 1$
c_7	$u^{13} + 3u^{11} + \cdots + 6u - 1$
c_8, c_9	$u^{13} - 8u^{11} + \cdots + 2u + 1$
c_{10}	$u^{13} + 8u^{11} + 24u^9 - u^8 + 33u^7 - 4u^6 + 20u^5 - 5u^4 + 5u^3 - u^2 + 2u + 1$
c_{11}	$u^{13} - 2u^{12} + \cdots - 13u - 1$
c_{12}	$u^{13} - 8u^{11} + \cdots + 2u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{13} + 21y^{12} + \cdots + 21y - 1$
c_2, c_5	$y^{13} - 7y^{12} + \cdots + 13y - 1$
c_3, c_{10}	$y^{13} + 16y^{12} + \cdots + 6y - 1$
c_4	$y^{13} + 8y^{12} + \cdots + 4y - 1$
c_6	$y^{13} - 9y^{12} + \cdots + 6y - 1$
c_7	$y^{13} + 6y^{12} + \cdots + 22y - 1$
c_8, c_9, c_{12}	$y^{13} - 16y^{12} + \cdots + 8y - 1$
c_{11}	$y^{13} - 14y^{12} + \cdots + 29y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.881035+0.428633I$ $a=-1.93807-2.18231I$ $b=\ \ 0.402497-1.355330I$	$-5.55501+1.76839I$	$-9.42733-3.99027I$
$u=-0.881035-0.428633I$ $a=-1.93807+2.18231I$ $b=\ \ 0.402497+1.355330I$	$-5.55501-1.76839I$	$-9.42733+3.99027I$
$u=\ \ 0.910742$ $a=\ \ 2.11436$ $b=-0.698976$	-10.3385	-32.2600
$u=\ \ 0.988275+0.624685I$ $a=-0.18264+1.54866I$ $b=\ \ 0.822715+0.363964I$	$-4.28208-2.74184I$	$-11.58472+0.68743I$
$u=\ \ 0.988275-0.624685I$ $a=-0.18264-1.54866I$ $b=\ \ 0.822715-0.363964I$	$-4.28208+2.74184I$	$-11.58472-0.68743I$
$u=\ \ 0.786272+0.257302I$ $a=-1.165010+0.236660I$ $b=-0.544518+1.013380I$	$-1.90498-0.74935I$	$-15.2105+0.6429I$
$u=\ \ 0.786272-0.257302I$ $a=-1.165010-0.236660I$ $b=-0.544518-1.013380I$	$-1.90498+0.74935I$	$-15.2105-0.6429I$
$u=-1.010700+0.772169I$ $a=\ \ 0.445697+0.983245I$ $b=\ \ 0.008357+0.919135I$	$1.40993+3.16875I$	$-4.51782-0.85705I$
$u=-1.010700-0.772169I$ $a=\ \ 0.445697-0.983245I$ $b=\ \ 0.008357-0.919135I$	$1.40993-3.16875I$	$-4.51782+0.85705I$
$u=-0.501636+0.101564I$ $a=\ \ 0.96670+1.91810I$ $b=\ \ 0.581751-1.286380I$	$6.06288+2.09354I$	$-6.13746-2.14572I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.501636-0.101564I$ $a=\quad 0.96670-1.91810I$ $b=\quad 0.581751+1.286380I$	$6.06288-2.09354I$	$-6.13746+2.14572I$
$u=-1.33655+1.04817I$ $a=\quad 0.31613+3.50034I$ $b=-0.92132+3.01182I$	$-2.07604+4.55409I$	$-12.9921-8.8615I$
$u=-1.33655-1.04817I$ $a=\quad 0.31613-3.50034I$ $b=-0.92132-3.01182I$	$-2.07604-4.55409I$	$-12.9921+8.8615I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{13} - 7u^{12} + \cdots + 13u - 1)(u^{45} + 18u^{44} + \cdots + 3381u + 49)$
c_2	$(u^{13} + 3u^{12} + \cdots - 3u - 1)(u^{45} + 2u^{44} + \cdots - 63u - 7)$
c_3	$(u^{13} + 8u^{11} + 24u^9 + u^8 + 33u^7 + 4u^6 + 20u^5 + 5u^4 + 5u^3 + u^2 + 2u - 1)$ $\cdot (u^{45} - u^{44} + \cdots - 20u - 1)$
c_4	$(u^{13} + 4u^{11} + \cdots + 6u - 1)(u^{45} + 7u^{44} + \cdots + 15464u + 821)$
c_5	$(u^{13} - 3u^{12} + \cdots - 3u + 1)(u^{45} + 2u^{44} + \cdots - 63u - 7)$
c_6	$(u^{13} + 3u^{12} - 5u^{10} + u^8 - 5u^7 + 3u^6 + 8u^5 - u^4 - 6u^3 - u^2 + 2u + 1)$ $\cdot (u^{45} + 4u^{44} + \cdots - 22u - 4)$
c_7	$(u^{13} + 3u^{11} + \cdots + 6u - 1)(u^{45} - 3u^{44} + \cdots + 22696u + 3551)$
c_8, c_9	$(u^{13} - 8u^{11} + \cdots + 2u + 1)(u^{45} + u^{44} + \cdots + 64u + 19)$
c_{10}	$(u^{13} + 8u^{11} + 24u^9 - u^8 + 33u^7 - 4u^6 + 20u^5 - 5u^4 + 5u^3 - u^2 + 2u + 1)$ $\cdot (u^{45} - u^{44} + \cdots - 20u - 1)$
c_{11}	$(u^{13} - 2u^{12} + \cdots - 13u - 1)(u^{45} + u^{44} + \cdots - 63u + 9)$
c_{12}	$(u^{13} - 8u^{11} + \cdots + 2u - 1)(u^{45} + u^{44} + \cdots + 64u + 19)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{13}+21y^{12}+\cdots+21y-1)(y^{45}+42y^{44}+\cdots+6542725y-2401)$
c_2, c_5	$(y^{13}-7y^{12}+\cdots+13y-1)(y^{45}-18y^{44}+\cdots+3381y-49)$
c_3, c_{10}	$(y^{13}+16y^{12}+\cdots+6y-1)(y^{45}+57y^{44}+\cdots+198y-1)$
c_4	$(y^{13}+8y^{12}+\cdots+4y-1)(y^{45}-63y^{44}+\cdots+2.10284\times 10^{7}y-674041)$
c_6	$(y^{13}-9y^{12}+\cdots+6y-1)(y^{45}-4y^{44}+\cdots-68y-16)$
c_7	$(y^{13}+6y^{12}+\cdots+22y-1)$ $\cdot(y^{45}-53y^{44}+\cdots+550810170y-12609601)$
c_8, c_9, c_{12}	$(y^{13}-16y^{12}+\cdots+8y-1)(y^{45}-35y^{44}+\cdots-84y-361)$
c_{11}	$(y^{13}-14y^{12}+\cdots+29y-1)(y^{45}+75y^{44}+\cdots+405y-81)$