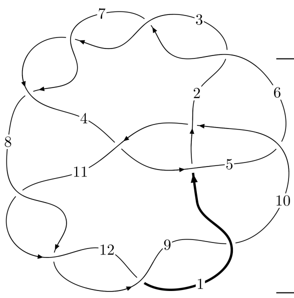
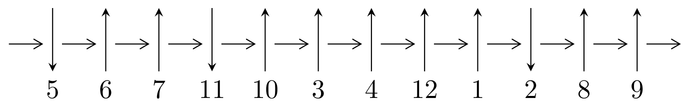
$12a_{1220}$ $(K12a_{1220})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & b+u,\ -2u^8-3u^7+9u^6+11u^5-14u^4-8u^3+11u^2+a+2, \\
& u^9+2u^8-4u^7-8u^6+5u^5+8u^4-4u^3-3u^2-u-1\rangle \\
I_2^u = \langle & -2.05889\times10^{21}u^{39}-4.20027\times10^{20}u^{38}+\cdots+5.82584\times10^{21}b+1.03593\times10^{20}, \\
& 2.35540\times10^{21}u^{39}+3.66482\times10^{21}u^{38}+\cdots+2.91292\times10^{21}a+2.62000\times10^{21},\ u^{40}+2u^{39}+\cdots+11u+ \\
I_3^u = \langle & b-1,\ a+2,\ u^2-u-1\rangle \\
I_4^u = \langle & 2b+a,\ a^2-2a-4,\ u+1\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 53 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. $I_1^u = \langle b+u,\ -2u^8-3u^7+\cdots+a+2,\ u^9+2u^8+\cdots-u-1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 16u^8+24u^7-76u^6-84u^5+124u^4+40u^3-88u^2+20u-22$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^9 - 2u^6 + 5u^5 - 2u^4 - 4u^3 - 3u^2 + 3u + 1$
c_2, c_3, c_6 c_7, c_8, c_9 c_{11}, c_{12}	$u^9 - 2u^8 - 4u^7 + 8u^6 + 5u^5 - 8u^4 - 4u^3 + 3u^2 - u + 1$
c_4	$u^9 + 13u^8 + \cdots + 320u + 64$
c_5	$u^9 + 13u^8 + 71u^7 + 214u^6 + 390u^5 + 435u^4 + 279u^3 + 78u^2 - 8u - 8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^9 + 10y^7 - 12y^6 + 23y^5 - 56y^4 + 38y^3 - 29y^2 + 15y - 1$
c_2, c_3, c_6 c_7, c_8, c_9 c_{11}, c_{12}	$y^9 - 12y^8 + 58y^7 - 144y^6 + 195y^5 - 140y^4 + 38y^3 + 15y^2 - 5y - 1$
c_4	$y^9 - 21y^8 + \cdots + 8192y - 4096$
c_5	$y^9 - 27y^8 + \cdots + 1312y - 64$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.927341 + 0.453196I$ $a = 0.991720 - 0.824614I$ $b = -0.927341 - 0.453196I$	$4.81531 + 7.88365I$	$13.1197 - 8.5237I$
$u = 0.927341 - 0.453196I$ $a = 0.991720 + 0.824614I$ $b = -0.927341 + 0.453196I$	$4.81531 - 7.88365I$	$13.1197 + 8.5237I$
$u = -0.659939$ $a = -5.89270$ $b = 0.659939$	2.11613	-57.9970
$u = -1.43521$ $a = -2.20604$ $b = 1.43521$	8.30534	10.1970
$u = 0.002669 + 0.448114I$ $a = 0.830042 - 0.971880I$ $b = -0.002669 - 0.448114I$	$-0.78700 - 1.41074I$	$1.25059 + 3.40619I$
$u = 0.002669 - 0.448114I$ $a = 0.830042 + 0.971880I$ $b = -0.002669 + 0.448114I$	$-0.78700 + 1.41074I$	$1.25059 - 3.40619I$
$u = 1.66419$ $a = 3.91567$ $b = -1.66419$	18.8023	6.12260
$u = -1.71453 + 0.16075I$ $a = -2.23022 - 0.99164I$ $b = 1.71453 - 0.16075I$	$-16.1728 - 13.0673I$	$15.4687 + 5.5944I$
$u = -1.71453 - 0.16075I$ $a = -2.23022 + 0.99164I$ $b = 1.71453 + 0.16075I$	$-16.1728 + 13.0673I$	$15.4687 - 5.5944I$

II. $I^u_2 = \langle -2.06 \times 10^{21}u^{39} - 4.20 \times 10^{20}u^{38} + \cdots + 5.83 \times 10^{21}b + 1.04 \times 10^{20},\ 2.36 \times 10^{21}u^{39} + 3.66 \times 10^{21}u^{38} + \cdots + 2.91 \times 10^{21}a + 2.62 \times 10^{21},\ u^{40} + 2u^{39} + \cdots + 11u + 1\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.808605u^{39} - 1.25813u^{38} + \cdots - 36.2164u - 0.899441 \\ 0.353407u^{39} + 0.0720972u^{38} + \cdots - 5.91849u - 0.0177816 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -2.15713u^{39} - 2.78559u^{38} + \cdots - 51.4085u - 3.21686 \\ 1.21823u^{39} + 1.13143u^{38} + \cdots + 2.86886u + 0.489002 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.342472u^{39} - 0.586708u^{38} + \cdots - 13.6913u + 0.476673 \\ -0.105307u^{39} + 0.107577u^{38} + \cdots + 3.48164u + 0.766785 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -1.72446u^{39} - 2.57322u^{38} + \cdots - 46.0801u - 1.47304 \\ 0.444440u^{39} + 0.320947u^{38} + \cdots - 9.97662u - 0.424757 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -2.06730u^{39} - 2.12671u^{38} + \cdots - 39.7036u - 1.17508 \\ 1.61210u^{39} + 0.940683u^{38} + \cdots - 2.43132u + 0.257852 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -3.62228u^{39} - 3.22253u^{38} + \cdots - 46.8489u - 5.52801 \\ 3.45055u^{39} + 2.41041u^{38} + \cdots + 6.30294u + 0.399746 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{2825773251700395997919}{728229534914329869523}u^{39} - \frac{2538801677611388911625}{728229534914329869523}u^{38} + \cdots - \frac{4026436167073401552483 3}{728229534914329869523}u + \frac{2631129163027084440997}{728229534914329869523}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{40} + 3u^{39} + \cdots + 11u^2 + 4$
c_2, c_3, c_6 c_7, c_8, c_9 c_{11}, c_{12}	$u^{40} - 2u^{39} + \cdots - 11u + 1$
c_4	$(u^{20} - 7u^{19} + \cdots - 191u + 47)^2$
c_5	$(u^{20} - 6u^{19} + \cdots - 16u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{40} + 13y^{39} + \cdots + 88y + 16$
c_2, c_3, c_6 c_7, c_8, c_9 c_{11}, c_{12}	$y^{40} - 50y^{39} + \cdots - 49y + 1$
c_4	$(y^{20} + 3y^{19} + \cdots + 16629y + 2209)^2$
c_5	$(y^{20} - 24y^{19} + \cdots - 210y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.964193 + 0.183114I$ $a = 1.81237 - 1.07233I$ $b = -1.68373 - 0.13054I$	$12.94220 + 2.92572I$	$16.8415 - 2.9709I$
$u = 0.964193 - 0.183114I$ $a = 1.81237 + 1.07233I$ $b = -1.68373 + 0.13054I$	$12.94220 - 2.92572I$	$16.8415 + 2.9709I$
$u = -0.871135 + 0.550509I$ $a = 0.457497 + 0.668616I$ $b = -0.858752 - 0.047670I$	$4.04379 - 0.34594I$	$19.0261 - 0.3312I$
$u = -0.871135 - 0.550509I$ $a = 0.457497 - 0.668616I$ $b = -0.858752 + 0.047670I$	$4.04379 + 0.34594I$	$19.0261 + 0.3312I$
$u = -0.094224 + 0.891903I$ $a = -0.324167 - 0.354300I$ $b = 1.67359 - 0.07029I$	$10.57610 - 5.30216I$	$12.68744 + 4.85316I$
$u = -0.094224 - 0.891903I$ $a = -0.324167 + 0.354300I$ $b = 1.67359 + 0.07029I$	$10.57610 + 5.30216I$	$12.68744 - 4.85316I$
$u = 0.841679 + 0.285962I$ $a = -0.249728 + 0.281271I$ $b = 0.079408 + 0.721551I$	$1.73170 + 3.96676I$	$10.64355 - 7.18805I$
$u = 0.841679 - 0.285962I$ $a = -0.249728 - 0.281271I$ $b = 0.079408 - 0.721551I$	$1.73170 - 3.96676I$	$10.64355 + 7.18805I$
$u = 0.858752 + 0.047670I$ $a = -0.911277 - 0.334390I$ $b = 0.871135 - 0.550509I$	$4.04379 - 0.34594I$	$19.0261 - 0.3312I$
$u = 0.858752 - 0.047670I$ $a = -0.911277 + 0.334390I$ $b = 0.871135 + 0.550509I$	$4.04379 + 0.34594I$	$19.0261 + 0.3312I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.996751 + 0.567865I$ $a = -1.56536 + 1.35978I$ $b = 1.69022 + 0.12129I$	$13.9204 + 10.1318I$	$14.3223 - 6.7026I$
$u = 0.996751 - 0.567865I$ $a = -1.56536 - 1.35978I$ $b = 1.69022 - 0.12129I$	$13.9204 - 10.1318I$	$14.3223 + 6.7026I$
$u = -1.15373$ $a = 0.932910$ $b = -0.386843$	2.16630	-1.22340
$u = -0.952961 + 0.719204I$ $a = -1.31275 - 0.94519I$ $b = 1.68108 + 0.01576I$	$13.06170 - 0.07749I$	$17.5894 + 0.I$
$u = -0.952961 - 0.719204I$ $a = -1.31275 + 0.94519I$ $b = 1.68108 - 0.01576I$	$13.06170 + 0.07749I$	$17.5894 + 0.I$
$u = -0.745297$ $a = 6.94927$ $b = -1.62727$	10.1903	-24.0970
$u = -0.079408 + 0.721551I$ $a = -0.182590 + 0.422871I$ $b = -0.841679 + 0.285962I$	$1.73170 - 3.96676I$	$10.64355 + 7.18805I$
$u = -0.079408 - 0.721551I$ $a = -0.182590 - 0.422871I$ $b = -0.841679 - 0.285962I$	$1.73170 + 3.96676I$	$10.64355 - 7.18805I$
$u = -0.651290 + 0.157168I$ $a = 0.836528 - 0.648564I$ $b = 0.154389 - 0.087035I$	$1.239960 - 0.397086I$	$8.64524 + 0.31446I$
$u = -0.651290 - 0.157168I$ $a = 0.836528 + 0.648564I$ $b = 0.154389 + 0.087035I$	$1.239960 + 0.397086I$	$8.64524 - 0.31446I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.224632 + 0.357420I$ $a = -2.05994 + 0.87263I$ $b = -1.63217 + 0.03725I$	$9.29517 - 1.07904I$	$8.55163 - 1.79539I$
$u = -0.224632 - 0.357420I$ $a = -2.05994 - 0.87263I$ $b = -1.63217 - 0.03725I$	$9.29517 + 1.07904I$	$8.55163 + 1.79539I$
$u = 0.386843$ $a = -2.78232$ $b = 1.15373$	2.16630	-1.22340
$u = 1.62727$ $a = -3.18279$ $b = 0.745297$	10.1903	0
$u = 1.63217 + 0.03725I$ $a = 0.105394 + 0.568790I$ $b = 0.224632 + 0.357420I$	$9.29517 + 1.07904I$	0
$u = 1.63217 - 0.03725I$ $a = 0.105394 - 0.568790I$ $b = 0.224632 - 0.357420I$	$9.29517 - 1.07904I$	0
$u = -1.67359 + 0.07029I$ $a = -0.213109 + 0.143861I$ $b = 0.094224 - 0.891903I$	$10.57610 - 5.30216I$	0
$u = -1.67359 - 0.07029I$ $a = -0.213109 - 0.143861I$ $b = 0.094224 + 0.891903I$	$10.57610 + 5.30216I$	0
$u = -1.68108 + 0.01576I$ $a = -1.148200 - 0.036582I$ $b = 0.952961 + 0.719204I$	$13.06170 + 0.07749I$	0
$u = -1.68108 - 0.01576I$ $a = -1.148200 + 0.036582I$ $b = 0.952961 - 0.719204I$	$13.06170 - 0.07749I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.68373 + 0.13054I$ $a = 1.115450 - 0.503449I$ $b = -0.964193 - 0.183114I$	$12.94220 + 2.92572I$	0
$u = 1.68373 - 0.13054I$ $a = 1.115450 + 0.503449I$ $b = -0.964193 + 0.183114I$	$12.94220 - 2.92572I$	0
$u = -1.69022 + 0.12129I$ $a = 1.353200 + 0.373072I$ $b = -0.996751 + 0.567865I$	$13.9204 - 10.1318I$	0
$u = -1.69022 - 0.12129I$ $a = 1.353200 - 0.373072I$ $b = -0.996751 - 0.567865I$	$13.9204 + 10.1318I$	0
$u = -1.70429 + 0.04276I$ $a = 2.28176 + 0.53396I$ $b = -1.74240 + 0.19593I$	$-17.0616 - 3.7959I$	0
$u = -1.70429 - 0.04276I$ $a = 2.28176 - 0.53396I$ $b = -1.74240 - 0.19593I$	$-17.0616 + 3.7959I$	0
$u = 1.74240 + 0.19593I$ $a = -2.16516 + 0.70975I$ $b = 1.70429 + 0.04276I$	$-17.0616 + 3.7959I$	0
$u = 1.74240 - 0.19593I$ $a = -2.16516 - 0.70975I$ $b = 1.70429 - 0.04276I$	$-17.0616 - 3.7959I$	0
$u = -0.154389 + 0.087035I$ $a = 3.71156 - 1.49520I$ $b = 0.651290 - 0.157168I$	$1.239960 - 0.397086I$	$8.64524 + 0.31446I$
$u = -0.154389 - 0.087035I$ $a = 3.71156 + 1.49520I$ $b = 0.651290 + 0.157168I$	$1.239960 + 0.397086I$	$8.64524 - 0.31446I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 17$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.618034$ $a = -2.00000$ $b = \quad 1.00000$	2.63189	17.0000
$u = \quad 1.61803$ $a = -2.00000$ $b = \quad 1.00000$	10.5276	17.0000

IV. $I_4^u = \langle 2b + a,\ a^2 - 2a - 4,\ u + 1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 17$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = -1.23607$ $b = 0.618034$	2.63189	17.0000
$u = -1.00000$ $a = 3.23607$ $b = -1.61803$	10.5276	17.0000

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^2(u+1)^2(u^9-2u^6+5u^5-2u^4-4u^3-3u^2+3u+1)$ $\cdot(u^{40}+3u^{39}+\cdots+11u^2+4)$
c_2, c_3, c_8 c_9	$(u+1)^2(u^2-u-1)$ $\cdot(u^9-2u^8-4u^7+8u^6+5u^5-8u^4-4u^3+3u^2-u+1)$ $\cdot(u^{40}-2u^{39}+\cdots-11u+1)$
c_4	$((u^2+u-1)^2)(u^9+13u^8+\cdots+320u+64)$ $\cdot(u^{20}-7u^{19}+\cdots-191u+47)^2$
c_5	$(u^2+u-1)^2$ $\cdot(u^9+13u^8+71u^7+214u^6+390u^5+435u^4+279u^3+78u^2-8u-8)$ $\cdot(u^{20}-6u^{19}+\cdots-16u+1)^2$
c_6, c_7, c_{11} c_{12}	$(u-1)^2(u^2+u-1)$ $\cdot(u^9-2u^8-4u^7+8u^6+5u^5-8u^4-4u^3+3u^2-u+1)$ $\cdot(u^{40}-2u^{39}+\cdots-11u+1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^2(y-1)^2(y^9+10y^7+\cdots+15y-1)$ $\cdot\,(y^{40}+13y^{39}+\cdots+88y+16)$
c_2, c_3, c_6 c_7, c_8, c_9 c_{11}, c_{12}	$(y-1)^2(y^2-3y+1)$ $\cdot\,(y^9-12y^8+58y^7-144y^6+195y^5-140y^4+38y^3+15y^2-5y-1)$ $\cdot\,(y^{40}-50y^{39}+\cdots-49y+1)$
c_4	$((y^2-3y+1)^2)(y^9-21y^8+\cdots+8192y-4096)$ $\cdot\,(y^{20}+3y^{19}+\cdots+16629y+2209)^2$
c_5	$((y^2-3y+1)^2)(y^9-27y^8+\cdots+1312y-64)$ $\cdot\,(y^{20}-24y^{19}+\cdots-210y+1)^2$