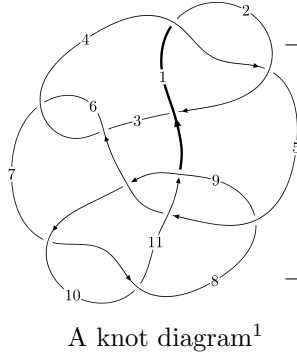
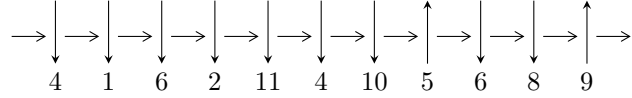


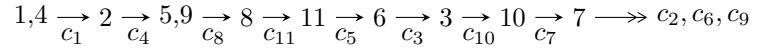
11n<sub>35</sub> (K11n<sub>35</sub>)



**Linearized knot diagram**



**Solving Sequence**



**Ideals for irreducible components<sup>2</sup> of  $X_{\text{par}}$**

$$I_1^u = \langle 7.64232 \times 10^{39} u^{50} + 4.53219 \times 10^{40} u^{49} + \dots + 8.75756 \times 10^{39} b + 1.97436 \times 10^{40}, \\ 2.47871 \times 10^{39} u^{50} + 1.88813 \times 10^{40} u^{49} + \dots + 2.18939 \times 10^{39} a + 1.19965 \times 10^{39}, u^{51} + 7u^{50} + \dots - 81u^2 + \\ I_2^u = \langle 2a^4 - 9a^3 + 10a^2 + 5b - 11a + 4, a^5 - 5a^4 + 6a^3 - 3a^2 + a - 1, u - 1 \rangle \\ I_3^u = \langle b, a + 3u + 5, u^2 + u - 1 \rangle$$

\* 3 irreducible components of  $\dim_{\mathbb{C}} = 0$ , with total 58 representations.

<sup>1</sup>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>).

<sup>2</sup>All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\mathbf{I. } I_1^u = \langle 7.64 \times 10^{39} u^{50} + 4.53 \times 10^{40} u^{49} + \dots + 8.76 \times 10^{39} b + 1.97 \times 10^{40}, 2.48 \times 10^{39} u^{50} + 1.89 \times 10^{40} u^{49} + \dots + 2.19 \times 10^{39} a + 1.20 \times 10^{39}, u^{51} + 7u^{50} + \dots - 81u^2 + 1 \rangle$$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} -1.13215u^{50} - 8.62401u^{49} + \dots + 75.3242u - 0.547939 \\ -0.872654u^{50} - 5.17518u^{49} + \dots + 5.03419u - 2.25447 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.36430u^{50} - 9.37394u^{49} + \dots + 72.3435u + 0.0541095 \\ -2.27233u^{50} - 13.7744u^{49} + \dots + 8.24704u - 3.73165 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2.21621u^{50} - 14.3423u^{49} + \dots + 4.63645u - 11.0109 \\ 0.0694094u^{50} - 0.202698u^{49} + \dots + 9.54759u - 1.43747 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.109838u^{50} + 0.455800u^{49} + \dots - 35.3698u + 2.83830 \\ 2.10336u^{50} + 11.3955u^{49} + \dots - 4.83182u + 1.99352 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2.02006u^{50} - 13.1436u^{49} + \dots + 56.6295u - 3.02939 \\ -3.40837u^{50} - 22.0852u^{49} + \dots + 10.9393u - 5.67809 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.109838u^{50} - 0.455800u^{49} + \dots + 35.3698u - 2.83830 \\ -1.41865u^{50} - 6.00756u^{49} + \dots + 4.72198u - 0.768857 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.109838u^{50} - 0.455800u^{49} + \dots + 35.3698u - 2.83830 \\ -1.41865u^{50} - 6.00756u^{49} + \dots + 4.72198u - 0.768857 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes =  $1.81706u^{50} + 20.2990u^{49} + \dots - 41.2566u + 8.01207$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
$c_1, c_4$	$u^{51} - 7u^{50} + \dots + 81u^2 - 1$
$c_2$	$u^{51} + 23u^{50} + \dots + 162u + 1$
$c_3, c_6$	$u^{51} - 2u^{50} + \dots - 96u - 32$
$c_5$	$u^{51} - 3u^{50} + \dots + 2u - 1$
$c_7, c_{10}$	$u^{51} - 4u^{50} + \dots - 87u + 1$
$c_8$	$u^{51} + u^{50} + \dots - 4u + 31$
$c_9$	$u^{51} + 5u^{50} + \dots - 402u - 137$
$c_{11}$	$u^{51} + 8u^{50} + \dots + 64u + 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
$c_1, c_4$	$y^{51} - 23y^{50} + \dots + 162y - 1$
$c_2$	$y^{51} + 17y^{50} + \dots + 12790y - 1$
$c_3, c_6$	$y^{51} + 30y^{50} + \dots - 8704y - 1024$
$c_5$	$y^{51} - 15y^{50} + \dots + 20y - 1$
$c_7, c_{10}$	$y^{51} - 30y^{50} + \dots + 6683y - 1$
$c_8$	$y^{51} + 29y^{50} + \dots + 22708y - 961$
$c_9$	$y^{51} + 37y^{50} + \dots + 211472y - 18769$
$c_{11}$	$y^{51} - 12y^{50} + \dots + 1272y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.923570 + 0.305757I$ $a = 0.416243 + 1.068130I$ $b = -0.620880 - 0.980403I$	$-3.69039 - 2.13393I$	$-15.8264 + 4.5625I$
$u = 0.923570 - 0.305757I$ $a = 0.416243 - 1.068130I$ $b = -0.620880 + 0.980403I$	$-3.69039 + 2.13393I$	$-15.8264 - 4.5625I$
$u = -0.359247 + 0.982542I$ $a = -0.744457 + 0.170926I$ $b = 1.095470 - 0.271570I$	$4.54085 - 1.95941I$	$-3.52747 + 2.51429I$
$u = -0.359247 - 0.982542I$ $a = -0.744457 - 0.170926I$ $b = 1.095470 + 0.271570I$	$4.54085 + 1.95941I$	$-3.52747 - 2.51429I$
$u = -0.872616 + 0.581002I$ $a = 1.29175 - 1.14812I$ $b = -1.88392 - 0.37218I$	$-2.26568 + 2.29719I$	$-12.40272 - 3.03914I$
$u = -0.872616 - 0.581002I$ $a = 1.29175 + 1.14812I$ $b = -1.88392 + 0.37218I$	$-2.26568 - 2.29719I$	$-12.40272 + 3.03914I$
$u = -0.788139 + 0.707702I$ $a = -0.54082 + 1.43941I$ $b = 0.259903 + 0.709097I$	$1.43007 + 1.84298I$	$-7.00000 - 8.98031I$
$u = -0.788139 - 0.707702I$ $a = -0.54082 - 1.43941I$ $b = 0.259903 - 0.709097I$	$1.43007 - 1.84298I$	$-7.00000 + 8.98031I$
$u = 0.744937 + 0.557874I$ $a = -1.79438 + 0.06696I$ $b = 1.049410 - 0.670680I$	$0.62734 - 3.24727I$	$-5.87868 + 5.45997I$
$u = 0.744937 - 0.557874I$ $a = -1.79438 - 0.06696I$ $b = 1.049410 + 0.670680I$	$0.62734 + 3.24727I$	$-5.87868 - 5.45997I$

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.073300 + 0.130259I$ $a = 2.73037 + 1.97243I$ $b = -0.752137 + 0.540476I$	$-4.21875 + 0.45905I$	$-12.7704 - 7.0072I$
$u = 1.073300 - 0.130259I$ $a = 2.73037 - 1.97243I$ $b = -0.752137 - 0.540476I$	$-4.21875 - 0.45905I$	$-12.7704 + 7.0072I$
$u = -0.665417 + 0.633317I$ $a = 1.341350 - 0.037908I$ $b = -0.20863 - 1.70015I$	$0.08535 - 1.42859I$	$-8.20291 + 2.86015I$
$u = -0.665417 - 0.633317I$ $a = 1.341350 + 0.037908I$ $b = -0.20863 + 1.70015I$	$0.08535 + 1.42859I$	$-8.20291 - 2.86015I$
$u = -0.603362 + 0.919845I$ $a = -0.955773 + 0.890743I$ $b = 1.53585 - 0.75787I$	$6.12236 - 2.89222I$	$-7.00000 + 0.I$
$u = -0.603362 - 0.919845I$ $a = -0.955773 - 0.890743I$ $b = 1.53585 + 0.75787I$	$6.12236 + 2.89222I$	$-7.00000 + 0.I$
$u = 0.709519 + 0.862840I$ $a = 0.751349 + 0.774960I$ $b = -0.855985 - 0.416787I$	$-1.46329 + 2.48395I$	0
$u = 0.709519 - 0.862840I$ $a = 0.751349 - 0.774960I$ $b = -0.855985 + 0.416787I$	$-1.46329 - 2.48395I$	0
$u = -0.923670 + 0.689242I$ $a = -0.789827 - 1.033600I$ $b = 0.495586 - 0.521010I$	$1.01385 + 3.52246I$	0
$u = -0.923670 - 0.689242I$ $a = -0.789827 + 1.033600I$ $b = 0.495586 + 0.521010I$	$1.01385 - 3.52246I$	0

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.437529 + 1.071430I$ $a = 1.073640 - 0.605444I$ $b = -1.30783 + 0.82877I$	$3.27749 - 9.36362I$	0
$u = -0.437529 - 1.071430I$ $a = 1.073640 + 0.605444I$ $b = -1.30783 - 0.82877I$	$3.27749 + 9.36362I$	0
$u = -0.834183 + 0.022964I$ $a = -0.240873 + 0.744504I$ $b = -0.447898 + 1.297840I$	$-7.16136 - 4.34566I$	$0.37647 + 1.57270I$
$u = -0.834183 - 0.022964I$ $a = -0.240873 - 0.744504I$ $b = -0.447898 - 1.297840I$	$-7.16136 + 4.34566I$	$0.37647 - 1.57270I$
$u = 1.051020 + 0.519122I$ $a = -0.212768 - 0.967576I$ $b = 0.806427 + 0.022325I$	$-0.294650 - 1.061440I$	0
$u = 1.051020 - 0.519122I$ $a = -0.212768 + 0.967576I$ $b = 0.806427 - 0.022325I$	$-0.294650 + 1.061440I$	0
$u = -0.993259 + 0.639230I$ $a = -0.579456 - 0.533405I$ $b = -0.83461 + 1.79554I$	$-0.91339 + 6.46505I$	0
$u = -0.993259 - 0.639230I$ $a = -0.579456 + 0.533405I$ $b = -0.83461 - 1.79554I$	$-0.91339 - 6.46505I$	0
$u = 1.222940 + 0.084782I$ $a = 0.687532 - 0.411301I$ $b = 0.715736 - 0.439898I$	$-1.13007 - 1.28368I$	0
$u = 1.222940 - 0.084782I$ $a = 0.687532 + 0.411301I$ $b = 0.715736 + 0.439898I$	$-1.13007 + 1.28368I$	0

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.719478 + 1.003150I$ $a = 0.872802 - 0.173176I$ $b = -1.015780 + 0.052361I$	$5.28316 + 2.70789I$	0
$u = -0.719478 - 1.003150I$ $a = 0.872802 + 0.173176I$ $b = -1.015780 - 0.052361I$	$5.28316 - 2.70789I$	0
$u = 0.990585 + 0.737126I$ $a = 1.46798 + 0.33121I$ $b = -1.072350 + 0.755687I$	$-2.32039 - 8.39966I$	0
$u = 0.990585 - 0.737126I$ $a = 1.46798 - 0.33121I$ $b = -1.072350 - 0.755687I$	$-2.32039 + 8.39966I$	0
$u = 0.742417 + 0.124155I$ $a = 2.43511 + 6.15388I$ $b = -0.012912 + 0.273501I$	$-2.64938 - 0.11132I$	$-58.9394 + 3.8883I$
$u = 0.742417 - 0.124155I$ $a = 2.43511 - 6.15388I$ $b = -0.012912 - 0.273501I$	$-2.64938 + 0.11132I$	$-58.9394 - 3.8883I$
$u = -1.086370 + 0.734156I$ $a = -1.44695 + 0.84504I$ $b = 1.53144 + 1.12477I$	$4.63878 + 8.97661I$	0
$u = -1.086370 - 0.734156I$ $a = -1.44695 - 0.84504I$ $b = 1.53144 - 1.12477I$	$4.63878 - 8.97661I$	0
$u = -1.035770 + 0.809017I$ $a = 0.932196 - 0.624404I$ $b = -0.826302 - 0.379791I$	$4.27954 + 3.84215I$	0
$u = -1.035770 - 0.809017I$ $a = 0.932196 + 0.624404I$ $b = -0.826302 + 0.379791I$	$4.27954 - 3.84215I$	0



Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.650449$ $a = 1.17006$ $b = -0.110617$	-1.00288	-10.0670
$u = -1.227370 + 0.667999I$ $a = -0.663202 + 0.675600I$ $b = 0.918945 + 0.630687I$	$1.87901 + 7.98783I$	0
$u = -1.227370 - 0.667999I$ $a = -0.663202 - 0.675600I$ $b = 0.918945 - 0.630687I$	$1.87901 - 7.98783I$	0
$u = -1.213470 + 0.718395I$ $a = 1.34702 - 0.86109I$ $b = -1.31215 - 1.04774I$	$0.8642 + 15.7945I$	0
$u = -1.213470 - 0.718395I$ $a = 1.34702 + 0.86109I$ $b = -1.31215 + 1.04774I$	$0.8642 - 15.7945I$	0
$u = 1.46886 + 0.10563I$ $a = -0.173747 - 0.050346I$ $b = -0.921422 - 0.643101I$	$-3.74009 + 5.32281I$	0
$u = 1.46886 - 0.10563I$ $a = -0.173747 + 0.050346I$ $b = -0.921422 + 0.643101I$	$-3.74009 - 5.32281I$	0
$u = -1.64237$ $a = 0.00866580$ $b = -0.265959$	-10.4502	0
$u = -0.218706 + 0.056088I$ $a = 2.35076 - 2.94041I$ $b = 0.149528 - 0.895127I$	$-0.61038 - 1.48999I$	$-4.46560 + 4.54978I$
$u = -0.218706 - 0.056088I$ $a = 2.35076 + 2.94041I$ $b = 0.149528 + 0.895127I$	$-0.61038 + 1.48999I$	$-4.46560 - 4.54978I$

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.0948151$		
$a = 11.7096$	$-2.29513$	$-1.15090$
$b = -0.594393$		

$$\text{II. } \Gamma_2^u = \langle 2a^4 - 9a^3 + 10a^2 + 5b - 11a + 4, a^5 - 5a^4 + 6a^3 - 3a^2 + a - 1, u - 1 \rangle$$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} a \\ -\frac{2}{5}a^4 + \frac{9}{5}a^3 + \dots + \frac{11}{5}a - \frac{4}{5} \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{2}{5}a^4 - \frac{9}{5}a^3 + 2a^2 - \frac{6}{5}a + \frac{4}{5} \\ -\frac{2}{5}a^4 + \frac{9}{5}a^3 + \dots + \frac{11}{5}a - \frac{4}{5} \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -\frac{1}{5}a^4 + \frac{2}{5}a^3 + a^2 - \frac{2}{5}a + \frac{3}{5} \\ \frac{1}{5}a^4 - \frac{7}{5}a^3 + 3a^2 - \frac{8}{5}a - \frac{3}{5} \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0 \\ \frac{2}{5}a^4 - \frac{14}{5}a^3 + \dots - \frac{21}{5}a + \frac{4}{5} \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} a \\ \frac{2}{5}a^4 - \frac{14}{5}a^3 + \dots - \frac{21}{5}a + \frac{4}{5} \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ \frac{2}{5}a^4 - \frac{14}{5}a^3 + \dots - \frac{21}{5}a + \frac{4}{5} \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ \frac{2}{5}a^4 - \frac{14}{5}a^3 + \dots - \frac{21}{5}a + \frac{4}{5} \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = \frac{17}{5}a^4 - \frac{64}{5}a^3 + 2a^2 + \frac{39}{5}a - \frac{96}{5}$$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 0.881366 + 0.489365I$ $b = 0.339110 + 0.822375I$	$-1.97403 + 1.53058I$	$-13.4575 - 4.4032I$
$u = 1.00000$ $a = 0.881366 - 0.489365I$ $b = 0.339110 - 0.822375I$	$-1.97403 - 1.53058I$	$-13.4575 + 4.4032I$
$u = 1.00000$ $a = -0.142272 + 0.509071I$ $b = -0.455697 + 1.200150I$	$-7.51750 - 4.40083I$	$-22.0438 + 5.2094I$
$u = 1.00000$ $a = -0.142272 - 0.509071I$ $b = -0.455697 - 1.200150I$	$-7.51750 + 4.40083I$	$-22.0438 - 5.2094I$
$u = 1.00000$ $a = 3.52181$ $b = -0.766826$	$-4.04602$	$-2.99730$

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

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -u \\ -u + 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -3u - 5 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -2u - 4 \\ -1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1 \\ -u + 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u \\ -u + 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2u - 3 \\ -1 \end{pmatrix}$$

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

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

(ii) Obstruction class = 1

(iii) Cusp Shapes = -61

(iv) u-Polynomials at the component

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



(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_3^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.618034$ $a = -6.85410$ $b = 0$	-2.63189	-61.0000
$u = -1.61803$ $a = -0.145898$ $b = 0$	-10.5276	-61.0000

#### IV. u-Polynomials

Crossings	u-Polynomials at each crossing
$c_1$	$((u-1)^5)(u^2+u-1)(u^{51}-7u^{50}+\dots+81u^2-1)$
$c_2$	$((u+1)^5)(u^2+3u+1)(u^{51}+23u^{50}+\dots+162u+1)$
$c_3$	$u^5(u^2+u-1)(u^{51}-2u^{50}+\dots-96u-32)$
$c_4$	$((u+1)^5)(u^2-u-1)(u^{51}-7u^{50}+\dots+81u^2-1)$
$c_5$	$(u^2+3u+1)(u^5-3u^4+\dots-u+1)(u^{51}-3u^{50}+\dots+2u-1)$
$c_6$	$u^5(u^2-u-1)(u^{51}-2u^{50}+\dots-96u-32)$
$c_7$	$((u-1)^2)(u^5+u^4+\dots+u-1)(u^{51}-4u^{50}+\dots-87u+1)$
$c_8$	$(u^2+3u+1)(u^5+u^4+\dots+u+1)(u^{51}+u^{50}+\dots-4u+31)$
$c_9$	$(u^2+3u+1)(u^5-u^4+\dots+u+1)(u^{51}+5u^{50}+\dots-402u-137)$
$c_{10}$	$((u+1)^2)(u^5-u^4+\dots+u+1)(u^{51}-4u^{50}+\dots-87u+1)$
$c_{11}$	$u^2(u^5+u^4+\dots+u+1)(u^{51}+8u^{50}+\dots+64u+4)$

## V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
$c_1, c_4$	$((y-1)^5)(y^2-3y+1)(y^{51}-23y^{50}+\dots+162y-1)$
$c_2$	$((y-1)^5)(y^2-7y+1)(y^{51}+17y^{50}+\dots+12790y-1)$
$c_3, c_6$	$y^5(y^2-3y+1)(y^{51}+30y^{50}+\dots-8704y-1024)$
$c_5$	$(y^2-7y+1)(y^5-y^4+\dots+3y-1)(y^{51}-15y^{50}+\dots+20y-1)$
$c_7, c_{10}$	$((y-1)^2)(y^5-5y^4+\dots-y-1)(y^{51}-30y^{50}+\dots+6683y-1)$
$c_8$	$(y^2-7y+1)(y^5+3y^4+4y^3+y^2-y-1)$ $\cdot (y^{51}+29y^{50}+\dots+22708y-961)$
$c_9$	$(y^2-7y+1)(y^5-5y^4+8y^3-3y^2-y-1)$ $\cdot (y^{51}+37y^{50}+\dots+211472y-18769)$
$c_{11}$	$y^2(y^5+3y^4+\dots-y-1)(y^{51}-12y^{50}+\dots+1272y-16)$