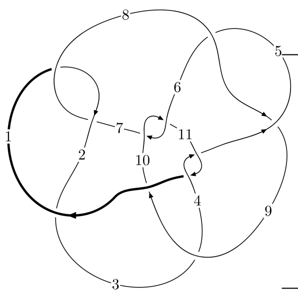
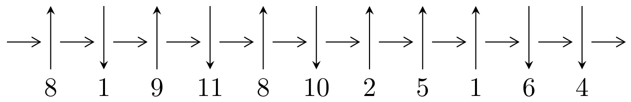
$11n_{142}$ ($K11n_{142}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle &-u^{13} + 6u^{12} + \cdots + b + 3,\\
&u^{13} - u^{12} + 15u^{10} - 48u^9 + 106u^8 - 178u^7 + 222u^6 - 230u^5 + 175u^4 - 107u^3 + 57u^2 + 2a - 19u + 10,\\
&u^{14} - 5u^{13} + \cdots - 6u + 2\rangle\\
I_2^u = \langle &u^6 + u^5 + 4u^4 + 3u^3 + 4u^2 + b + 2u + 1,\ -u^7 - 2u^5 + 2u^4 + 3u^3 + 4u^2 + 2a + 4u + 1,\\
&u^8 + 2u^7 + 6u^6 + 8u^5 + 11u^4 + 10u^3 + 8u^2 + 5u + 2\rangle\\
I_3^u = \langle &u^4a + 2u^2a - u^3 - au + b + a - u + 1,\ u^3a + 2u^4 + 2u^2a + 3u^3 + a^2 + 2au + 5u^2 + 2a + u - 1,\\
&u^5 + u^4 + 2u^3 + u^2 + u + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 32 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.

$$I^u_1 = \langle -u^{13}+6u^{12}+\cdots+b+3,\ u^{13}-u^{12}+\cdots+2a+10,\ u^{14}-5u^{13}+\cdots-6u+2\rangle$$

(i) Arc colorings

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

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

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

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

$$a_9 = \begin{pmatrix}-\frac{1}{2}u^{13}+\frac{1}{2}u^{12}+\cdots+\frac{19}{2}u-5\\u^{13}-6u^{12}+\cdots+11u-3\end{pmatrix}$$

$$a_3 = \begin{pmatrix}\frac{1}{2}u^{13}-\frac{5}{2}u^{12}+\cdots-\frac{11}{2}u^2+\frac{3}{2}u\\u^{13}-4u^{12}+\cdots+3u-1\end{pmatrix}$$

$$a_2 = \begin{pmatrix}\frac{1}{2}u^{13}-\frac{3}{2}u^{12}+\cdots-\frac{7}{2}u^2+\frac{1}{2}u\\-u^{13}+4u^{12}+\cdots-2u+1\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-\frac{3}{2}u^{13}+\frac{13}{2}u^{12}+\cdots-\frac{3}{2}u-2\\u^{13}-6u^{12}+\cdots+11u-3\end{pmatrix}$$

$$a_6 = \begin{pmatrix}\frac{3}{2}u^{13}-\frac{13}{2}u^{12}+\cdots-\frac{31}{2}u^2+\frac{13}{2}u\\-u^{13}+5u^{12}+\cdots-8u+3\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-2u^{13}+9u^{12}+\cdots+19u^2-6u\\u^{13}-4u^{12}+\cdots+11u-4\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-\frac{3}{2}u^{13}+\frac{13}{2}u^{12}+\cdots-\frac{3}{2}u-1\\u^{13}-5u^{12}+\cdots+14u-5\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-\frac{3}{2}u^{13}+\frac{13}{2}u^{12}+\cdots-\frac{3}{2}u-1\\u^{13}-5u^{12}+\cdots+14u-5\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2u^{13}+11u^{12}-40u^{11}+102u^{10}-203u^9+326u^8-425u^7+456u^6-399u^5+283u^4-172u^3+85u^2-36u+14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_7	$u^{14} + 11u^{12} + \cdots - u + 1$
c_2	$u^{14} + 22u^{13} + \cdots + u + 1$
c_4, c_{11}	$u^{14} - 5u^{13} + \cdots - 6u + 2$
c_5, c_8	$u^{14} + 8u^{12} + \cdots - 4u + 1$
c_6, c_{10}	$u^{14} + 11u^{13} + \cdots + 208u + 32$
c_9	$u^{14} + u^{13} + \cdots - 42u + 43$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_7	$y^{14} + 22y^{13} + \cdots + y + 1$
c_2	$y^{14} - 66y^{13} + \cdots + 57y + 1$
c_4, c_{11}	$y^{14} + 11y^{13} + \cdots + 48y + 4$
c_5, c_8	$y^{14} + 16y^{13} + \cdots + 6y + 1$
c_6, c_{10}	$y^{14} + 5y^{13} + \cdots + 4352y + 1024$
c_9	$y^{14} + 29y^{13} + \cdots - 6924y + 1849$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.287050 + 0.917286I$ $a = 1.72431 - 0.08692I$ $b = 0.75441 - 1.21287I$	$0.82198 - 3.62125I$	$2.13881 + 1.61924I$
$u = 0.287050 - 0.917286I$ $a = 1.72431 + 0.08692I$ $b = 0.75441 + 1.21287I$	$0.82198 + 3.62125I$	$2.13881 - 1.61924I$
$u = 1.148320 + 0.063656I$ $a = 0.028321 - 0.233596I$ $b = -0.38125 - 1.63279I$	$-14.6114 + 5.0048I$	$-3.11103 - 2.22395I$
$u = 1.148320 - 0.063656I$ $a = 0.028321 + 0.233596I$ $b = -0.38125 + 1.63279I$	$-14.6114 - 5.0048I$	$-3.11103 + 2.22395I$
$u = 0.151463 + 0.669236I$ $a = -1.172520 + 0.541864I$ $b = -0.010117 + 0.820058I$	$0.100921 + 1.074380I$	$3.38569 - 3.60575I$
$u = 0.151463 - 0.669236I$ $a = -1.172520 - 0.541864I$ $b = -0.010117 - 0.820058I$	$0.100921 - 1.074380I$	$3.38569 + 3.60575I$
$u = -0.137919 + 0.533558I$ $a = -0.824651 + 0.595460I$ $b = -0.029422 + 0.445046I$	$0.158278 + 1.072210I$	$2.34747 - 5.95960I$
$u = -0.137919 - 0.533558I$ $a = -0.824651 - 0.595460I$ $b = -0.029422 - 0.445046I$	$0.158278 - 1.072210I$	$2.34747 + 5.95960I$
$u = -0.12127 + 1.46215I$ $a = 0.495610 + 0.295894I$ $b = 0.459360 - 0.015268I$	$6.08599 + 2.02171I$	$9.26276 - 3.22644I$
$u = -0.12127 - 1.46215I$ $a = 0.495610 - 0.295894I$ $b = 0.459360 + 0.015268I$	$6.08599 - 2.02171I$	$9.26276 + 3.22644I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.60561 + 1.35177I$ $a = -1.56827 + 0.69249I$ $b = -0.78424 + 1.62391I$	$-10.6271 - 11.1808I$	$-0.33111 + 5.29605I$
$u = 0.60561 - 1.35177I$ $a = -1.56827 - 0.69249I$ $b = -0.78424 - 1.62391I$	$-10.6271 + 11.1808I$	$-0.33111 - 5.29605I$
$u = 0.56676 + 1.45000I$ $a = 0.817208 - 1.060380I$ $b = -0.008750 - 1.377190I$	$-9.89254 - 1.11324I$	$-1.192579 + 0.716159I$
$u = 0.56676 - 1.45000I$ $a = 0.817208 + 1.060380I$ $b = -0.008750 + 1.377190I$	$-9.89254 + 1.11324I$	$-1.192579 - 0.716159I$

II. $\boldsymbol{I_2^u = \langle u^6 + u^5 + 4u^4 + 3u^3 + 4u^2 + b + 2u + 1,\ -u^7 - 2u^5 + 2u^4 + 3u^3 + 4u^2 + 2a + 4u + 1,\ u^8 + 2u^7 + \cdots + 5u + 2\rangle}$

(i) Arc colorings

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

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

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

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

$$a_9 = \begin{pmatrix} \frac{1}{2}u^7 + u^5 - u^4 - \frac{3}{2}u^3 - 2u^2 - 2u - \frac{1}{2} \\ -u^6 - u^5 - 4u^4 - 3u^3 - 4u^2 - 2u - 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -\frac{1}{2}u^7 - 2u^6 + \cdots - 2u + \frac{1}{2} \\ -u^7 - 2u^6 - 5u^5 - 6u^4 - 6u^3 - 5u^2 - 2u - 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{1}{2}u^7 + u^5 - u^4 - \frac{1}{2}u^3 - u^2 - u + \frac{1}{2} \\ -u^7 - 2u^6 - 5u^5 - 6u^4 - 5u^3 - 4u^2 - u - 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{1}{2}u^7 + u^6 + 2u^5 + 3u^4 + \frac{3}{2}u^3 + 2u^2 + \frac{1}{2} \\ -u^6 - u^5 - 4u^4 - 3u^3 - 4u^2 - 2u - 1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -\frac{1}{2}u^7 - u^6 + \cdots - 2u - \frac{1}{2} \\ u^5 + u^4 + 3u^3 + 2u^2 + u + 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^2 + u + 1 \\ u^6 + 2u^5 + 4u^4 + 5u^3 + 4u^2 + 2u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} \frac{1}{2}u^7 + u^6 + \cdots + 2u + \frac{3}{2} \\ -u^6 - u^5 - 4u^4 - 3u^3 - 4u^2 - u - 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} \frac{1}{2}u^7 + u^6 + \cdots + 2u + \frac{3}{2} \\ -u^6 - u^5 - 4u^4 - 3u^3 - 4u^2 - u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3u^7 - 6u^6 - 15u^5 - 22u^4 - 22u^3 - 22u^2 - 13u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^8 + 4u^6 + u^5 + 4u^4 + 3u^3 + 3u^2 + u + 1$
c_2	$u^8 + 8u^7 + 24u^6 + 37u^5 + 36u^4 + 21u^3 + 11u^2 + 5u + 1$
c_3, c_7	$u^8 + 4u^6 - u^5 + 4u^4 - 3u^3 + 3u^2 - u + 1$
c_4	$u^8 + 2u^7 + 6u^6 + 8u^5 + 11u^4 + 10u^3 + 8u^2 + 5u + 2$
c_5	$u^8 + u^6 - 3u^5 + u^4 - 2u^3 + 3u^2 + 1$
c_6	$u^8 + 3u^6 + 2u^5 + u^4 + 3u^3 + u^2 + 1$
c_8	$u^8 + u^6 + 3u^5 + u^4 + 2u^3 + 3u^2 + 1$
c_9	$u^8 + u^7 + 4u^6 + u^4 - 2u^2 + 1$
c_{10}	$u^8 + 3u^6 - 2u^5 + u^4 - 3u^3 + u^2 + 1$
c_{11}	$u^8 - 2u^7 + 6u^6 - 8u^5 + 11u^4 - 10u^3 + 8u^2 - 5u + 2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_7	$y^8 + 8y^7 + 24y^6 + 37y^5 + 36y^4 + 21y^3 + 11y^2 + 5y + 1$
c_2	$y^8 - 16y^7 + 56y^6 + 45y^5 + 192y^4 + 29y^3 - 17y^2 - 3y + 1$
c_4, c_{11}	$y^8 + 8y^7 + 26y^6 + 44y^5 + 41y^4 + 20y^3 + 8y^2 + 7y + 4$
c_5, c_8	$y^8 + 2y^7 + 3y^6 - y^5 - 3y^4 + 4y^3 + 11y^2 + 6y + 1$
c_6, c_{10}	$y^8 + 6y^7 + 11y^6 + 4y^5 - 3y^4 - y^3 + 3y^2 + 2y + 1$
c_9	$y^8 + 7y^7 + 18y^6 + 4y^5 - 13y^4 + 4y^3 + 6y^2 - 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.255307 + 0.956150I$ $a = 1.69644 - 0.66169I$ $b = 1.095290 + 0.323314I$	$-5.22098 - 1.00599I$	$2.77337 + 0.09808I$
$u = 0.255307 - 0.956150I$ $a = 1.69644 + 0.66169I$ $b = 1.095290 - 0.323314I$	$-5.22098 + 1.00599I$	$2.77337 - 0.09808I$
$u = -0.420429 + 1.128350I$ $a = -1.43682 - 0.24968I$ $b = -0.744211 - 1.167310I$	$1.09366 + 5.02764I$	$3.89133 - 6.50935I$
$u = -0.420429 - 1.128350I$ $a = -1.43682 + 0.24968I$ $b = -0.744211 + 1.167310I$	$1.09366 - 5.02764I$	$3.89133 + 6.50935I$
$u = -0.669415 + 0.364330I$ $a = 0.671643 + 0.022513I$ $b = -0.279662 + 1.002820I$	$-1.22874 - 0.94773I$	$-2.78542 + 1.04891I$
$u = -0.669415 - 0.364330I$ $a = 0.671643 - 0.022513I$ $b = -0.279662 - 1.002820I$	$-1.22874 + 0.94773I$	$-2.78542 - 1.04891I$
$u = -0.16546 + 1.54832I$ $a = 0.318738 + 0.607785I$ $b = -0.071417 + 0.603353I$	$5.35605 + 1.96927I$	$-2.37928 - 1.80892I$
$u = -0.16546 - 1.54832I$ $a = 0.318738 - 0.607785I$ $b = -0.071417 - 0.603353I$	$5.35605 - 1.96927I$	$-2.37928 + 1.80892I$

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

(i) Arc colorings

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

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

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

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

$$a_9 = \begin{pmatrix} a \\ -u^4a - 2u^2a + u^3 + au - a + u - 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2u^3 + 4u^2 + a + 4u + 4 \\ u^4a + u^2a + u^3 - au + a + u + 1 \end{pmatrix}$$

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

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

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

$$a_7 = \begin{pmatrix} 2u^4 + 2u^3 + 4u^2 + 2u + 2 \\ 2u^4a - 2u^4 + 2u^2a - 4u^3 - 2au - 4u^2 - u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^4 - u^3 - 2u^2 - u - 1 \\ -u^4a + u^4 - u^2a + 2u^3 + au + 2u^2 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^4 - u^3 - 2u^2 - u - 1 \\ -u^4a + u^4 - u^2a + 2u^3 + au + 2u^2 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^3 + 4u^2 + 4u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_7	$u^{10} - u^9 + \cdots - 20u + 23$
c_2	$u^{10} + 15u^9 + \cdots + 2268u + 529$
c_4, c_{11}	$(u^5 + u^4 + 2u^3 + u^2 + u + 1)^2$
c_5, c_8	$u^{10} + 5u^9 + \cdots + 20u + 7$
c_6, c_{10}	$(u-1)^{10}$
c_9	$u^{10} + u^9 + 10u^8 - 8u^7 + 42u^6 + 2u^5 + 29u^4 + 43u^3 + 28u^2 - 12u + 67$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_7	$y^{10} + 15y^9 + \cdots + 2268y + 529$
c_2	$y^{10} - 33y^9 + \cdots - 245284y + 279841$
c_4, c_{11}	$(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)^2$
c_5, c_8	$y^{10} + 3y^9 + \cdots + 468y + 49$
c_6, c_{10}	$(y - 1)^{10}$
c_9	$y^{10} + 19y^9 + \cdots + 3608y + 4489$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.339110 + 0.822375I$ $a = 1.56543 - 1.34638I$ $b = -0.144990 + 0.454920I$	$-6.25064 - 1.53058I$	$-5.48489 + 4.43065I$
$u = 0.339110 + 0.822375I$ $a = -2.47201 - 1.14141I$ $b = -2.06136 - 0.79577I$	$-6.25064 - 1.53058I$	$-5.48489 + 4.43065I$
$u = 0.339110 - 0.822375I$ $a = 1.56543 + 1.34638I$ $b = -0.144990 - 0.454920I$	$-6.25064 + 1.53058I$	$-5.48489 - 4.43065I$
$u = 0.339110 - 0.822375I$ $a = -2.47201 + 1.14141I$ $b = -2.06136 + 0.79577I$	$-6.25064 + 1.53058I$	$-5.48489 - 4.43065I$
$u = -0.766826$ $a = -0.595741 + 0.396465I$ $b = -0.258559 - 1.303830I$	-4.17865	-4.51890
$u = -0.766826$ $a = -0.595741 - 0.396465I$ $b = -0.258559 + 1.303830I$	-4.17865	-4.51890
$u = -0.455697 + 1.200150I$ $a = 1.04040 + 1.01526I$ $b = 0.43147 + 1.63522I$	$-0.70717 + 4.40083I$	$-1.25569 - 3.49859I$
$u = -0.455697 + 1.200150I$ $a = -1.53808 - 0.24695I$ $b = -0.466561 - 1.013320I$	$-0.70717 + 4.40083I$	$-1.25569 - 3.49859I$
$u = -0.455697 - 1.200150I$ $a = 1.04040 - 1.01526I$ $b = 0.43147 - 1.63522I$	$-0.70717 - 4.40083I$	$-1.25569 + 3.49859I$
$u = -0.455697 - 1.200150I$ $a = -1.53808 + 0.24695I$ $b = -0.466561 + 1.013320I$	$-0.70717 - 4.40083I$	$-1.25569 + 3.49859I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^8+4u^6+\cdots+u+1)(u^{10}-u^9+\cdots-20u+23)$ $\cdot(u^{14}+11u^{12}+\cdots-u+1)$
c_2	$(u^8+8u^7+24u^6+37u^5+36u^4+21u^3+11u^2+5u+1)$ $\cdot(u^{10}+15u^9+\cdots+2268u+529)(u^{14}+22u^{13}+\cdots+u+1)$
c_3, c_7	$(u^8+4u^6+\cdots-u+1)(u^{10}-u^9+\cdots-20u+23)$ $\cdot(u^{14}+11u^{12}+\cdots-u+1)$
c_4	$(u^5+u^4+2u^3+u^2+u+1)^2$ $\cdot(u^8+2u^7+6u^6+8u^5+11u^4+10u^3+8u^2+5u+2)$ $\cdot(u^{14}-5u^{13}+\cdots-6u+2)$
c_5	$(u^8+u^6-3u^5+u^4-2u^3+3u^2+1)(u^{10}+5u^9+\cdots+20u+7)$ $\cdot(u^{14}+8u^{12}+\cdots-4u+1)$
c_6	$(u-1)^{10}(u^8+3u^6+2u^5+u^4+3u^3+u^2+1)$ $\cdot(u^{14}+11u^{13}+\cdots+208u+32)$
c_8	$(u^8+u^6+3u^5+u^4+2u^3+3u^2+1)(u^{10}+5u^9+\cdots+20u+7)$ $\cdot(u^{14}+8u^{12}+\cdots-4u+1)$
c_9	$(u^8+u^7+4u^6+u^4-2u^2+1)$ $\cdot(u^{10}+u^9+10u^8-8u^7+42u^6+2u^5+29u^4+43u^3+28u^2-12u+67)$ $\cdot(u^{14}+u^{13}+\cdots-42u+43)$
c_{10}	$(u-1)^{10}(u^8+3u^6-2u^5+u^4-3u^3+u^2+1)$ $\cdot(u^{14}+11u^{13}+\cdots+208u+32)$
c_{11}	$(u^5+u^4+2u^3+u^2+u+1)^2$ $\cdot(u^8-2u^7+6u^6-8u^5+11u^4-10u^3+8u^2-5u+2)$ $\cdot(u^{14}-5u^{13}+\cdots-6u+2)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_7	$(y^8 + 8y^7 + 24y^6 + 37y^5 + 36y^4 + 21y^3 + 11y^2 + 5y + 1)$ $\cdot (y^{10} + 15y^9 + \cdots + 2268y + 529)(y^{14} + 22y^{13} + \cdots + y + 1)$
c_2	$(y^8 - 16y^7 + 56y^6 + 45y^5 + 192y^4 + 29y^3 - 17y^2 - 3y + 1)$ $\cdot (y^{10} - 33y^9 + \cdots - 245284y + 279841)(y^{14} - 66y^{13} + \cdots + 57y + 1)$
c_4, c_{11}	$(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)^2$ $\cdot (y^8 + 8y^7 + 26y^6 + 44y^5 + 41y^4 + 20y^3 + 8y^2 + 7y + 4)$ $\cdot (y^{14} + 11y^{13} + \cdots + 48y + 4)$
c_5, c_8	$(y^8 + 2y^7 + 3y^6 - y^5 - 3y^4 + 4y^3 + 11y^2 + 6y + 1)$ $\cdot (y^{10} + 3y^9 + \cdots + 468y + 49)(y^{14} + 16y^{13} + \cdots + 6y + 1)$
c_6, c_{10}	$(y - 1)^{10}(y^8 + 6y^7 + 11y^6 + 4y^5 - 3y^4 - y^3 + 3y^2 + 2y + 1)$ $\cdot (y^{14} + 5y^{13} + \cdots + 4352y + 1024)$
c_9	$(y^8 + 7y^7 + 18y^6 + 4y^5 - 13y^4 + 4y^3 + 6y^2 - 4y + 1)$ $\cdot (y^{10} + 19y^9 + \cdots + 3608y + 4489)$ $\cdot (y^{14} + 29y^{13} + \cdots - 6924y + 1849)$