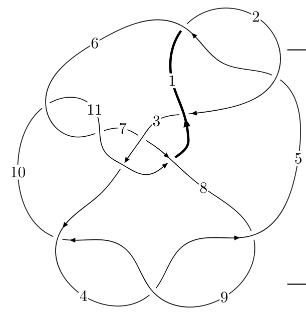
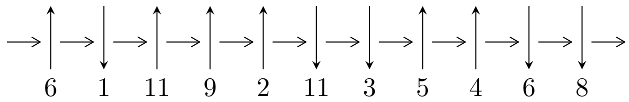
# $11n_{114}$ $(K11n_{114})$




A knot diagram[1]

**Linearized knot diagam**




**Solving Sequence**

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

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

$$I_1^u = \langle -8.11096 \times 10^{17}u^{33} + 9.35587 \times 10^{20}u^{32} + \cdots + 6.89890 \times 10^{21}b + 2.59045 \times 10^{22},$$
$$2.18041 \times 10^{22}u^{33} + 5.62075 \times 10^{22}u^{32} + \cdots + 7.58879 \times 10^{22}a + 3.69144 \times 10^{23},\ u^{34} + 2u^{33} + \cdots + 7u + 1$$
$$I_2^u = \langle u^6 - u^5 + 2u^4 + 3u^2 + b - u + 1,\ 3u^7 - 3u^6 + 8u^5 - 2u^4 + 12u^3 - 2u^2 + a + 7u + 1,$$
$$u^8 - u^7 + 3u^6 - u^5 + 5u^4 - u^3 + 4u^2 + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 42 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.** $\boldsymbol{I_1^u = \langle -8.11 \times 10^{17} u^{33} + 9.36 \times 10^{20} u^{32} + \cdots + 6.90 \times 10^{21} b + 2.59 \times 10^{22},\ 2.18 \times 10^{22} u^{33} + 5.62 \times 10^{22} u^{32} + \cdots + 7.59 \times 10^{22} a + 3.69 \times 10^{23},\ u^{34} + 2u^{33} + \cdots + 7u + 11 \rangle}$

**(i) Arc colorings**

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^2+1 \\ -u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u \\ u^3+u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.287320u^{33} - 0.740665u^{32} + \cdots - 3.53964u - 4.86434 \\ 0.000117569u^{33} - 0.135614u^{32} + \cdots + 0.865413u - 3.75488 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.143106u^{33} + 0.249396u^{32} + \cdots - 0.223580u + 1.42586 \\ 0.104883u^{33} - 0.445287u^{32} + \cdots + 3.18850u - 8.62377 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.0394778u^{33} + 0.431456u^{32} + \cdots + 0.666334u + 6.41410 \\ 0.165129u^{33} + 0.482550u^{32} + \cdots - 3.55890u + 3.74557 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.0368522u^{33} - 0.145447u^{32} + \cdots + 0.442048u - 2.59348 \\ 0.0284463u^{33} - 0.271749u^{32} + \cdots + 3.02149u - 6.45999 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.707206u^{33} - 0.981033u^{32} + \cdots - 12.7294u + 3.24526 \\ 0.738525u^{33} + 0.935117u^{32} + \cdots + 13.8701u + 0.827585 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.707206u^{33} - 0.981033u^{32} + \cdots - 12.7294u + 3.24526 \\ 0.524915u^{33} + 0.603994u^{32} + \cdots + 9.12444u + 5.59476 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.707206u^{33} - 0.981033u^{32} + \cdots - 12.7294u + 3.24526 \\ 0.524915u^{33} + 0.603994u^{32} + \cdots + 9.12444u + 5.59476 \end{pmatrix}$$

**(ii) Obstruction class** $= -1$

**(iii) Cusp Shapes** $= \frac{7834694531803698284505}{6898902254749248769081}u^{33} + \frac{2198142894708307293437 8}{6898902254749248769081}u^{32} + \cdots + \frac{2497727943813855626677 95}{6898902254749248769081}u + \frac{8956686233915853267807 9}{6898902254749248769081}$

**(iv) u-Polynomials at the component**

| Crossings | u-Polynomials at each crossing |
|---|---|
| $c_1, c_5$ | $u^{34} - 2u^{33} + \cdots - 7u + 11$ |
| $c_2$ | $u^{34} + 14u^{33} + \cdots + 1117u + 121$ |
| $c_3$ | $u^{34} + 5u^{33} + \cdots + 685u + 79$ |
| $c_4, c_8, c_9$ | $u^{34} - u^{33} + \cdots + 11u + 7$ |
| $c_6, c_{10}$ | $u^{34} + 17u^{32} + \cdots - 235u + 25$ |
| $c_7$ | $u^{34} - u^{33} + \cdots + 12u + 1$ |
| $c_{11}$ | $u^{34} + 3u^{33} + \cdots + 13u^2 + 1$ |

**(v) Riley Polynomials at the component**

| Crossings | Riley Polynomials at each crossing |
|---|---|
| $c_1, c_5$ | $y^{34} + 14y^{33} + \cdots + 1117y + 121$ |
| $c_2$ | $y^{34} + 26y^{33} + \cdots + 5145y + 14641$ |
| $c_3$ | $y^{34} - 39y^{33} + \cdots - 92711y + 6241$ |
| $c_4, c_8, c_9$ | $y^{34} + 27y^{33} + \cdots + 75y + 49$ |
| $c_6, c_{10}$ | $y^{34} + 34y^{33} + \cdots - 2025y + 625$ |
| $c_7$ | $y^{34} + 37y^{33} + \cdots + 238y + 1$ |
| $c_{11}$ | $y^{34} - 5y^{33} + \cdots + 26y + 1$ |

**(vi) Complex Volumes and Cusp Shapes**

| Solutions to $I_1^u$ | $\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$ | Cusp shape |
|---|---|---|
| $u = -0.644176 + 0.829926I$<br>$a = 1.09773 - 1.30377I$<br>$b = 1.18905 + 0.84583I$ | $3.62421 - 0.66236I$ | $0.88799 + 2.20410I$ |
| $u = -0.644176 - 0.829926I$<br>$a = 1.09773 + 1.30377I$<br>$b = 1.18905 - 0.84583I$ | $3.62421 + 0.66236I$ | $0.88799 - 2.20410I$ |
| $u = -0.634571 + 0.890410I$<br>$a = -0.522236 + 0.565118I$<br>$b = 0.98473 - 1.34431I$ | $3.43204 - 4.32834I$ | $0.57903 + 4.14192I$ |
| $u = -0.634571 - 0.890410I$<br>$a = -0.522236 - 0.565118I$<br>$b = 0.98473 + 1.34431I$ | $3.43204 + 4.32834I$ | $0.57903 - 4.14192I$ |
| $u = -0.287047 + 0.823608I$<br>$a = -0.04962 - 1.84400I$<br>$b = -0.090832 + 1.169670I$ | $1.321200 + 0.457071I$ | $-0.716277 + 1.122784I$ |
| $u = -0.287047 - 0.823608I$<br>$a = -0.04962 + 1.84400I$<br>$b = -0.090832 - 1.169670I$ | $1.321200 - 0.457071I$ | $-0.716277 - 1.122784I$ |
| $u = -0.483483 + 1.040970I$<br>$a = -0.808214 + 0.762258I$<br>$b = -0.602539 - 0.491415I$ | $-0.58958 - 3.12068I$ | $3.68668 + 4.96612I$ |
| $u = -0.483483 - 1.040970I$<br>$a = -0.808214 - 0.762258I$<br>$b = -0.602539 + 0.491415I$ | $-0.58958 + 3.12068I$ | $3.68668 - 4.96612I$ |
| $u = 0.895269 + 0.721333I$<br>$a = 0.693708 + 0.565955I$<br>$b = -0.88397 - 1.15926I$ | $8.26845 - 0.87317I$ | $4.37441 - 0.26243I$ |
| $u = 0.895269 - 0.721333I$<br>$a = 0.693708 - 0.565955I$<br>$b = -0.88397 + 1.15926I$ | $8.26845 + 0.87317I$ | $4.37441 + 0.26243I$ |

| Solutions to $I_1^u$ | $\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$ | Cusp shape |
|---|---|---|
| $u = 0.053846 + 0.825704I$<br>$a = -0.916529 + 0.670441I$<br>$b = -1.58656 - 0.18494I$ | $-8.96690 + 0.23437I$ | $-4.99367 + 1.27444I$ |
| $u = 0.053846 - 0.825704I$<br>$a = -0.916529 - 0.670441I$<br>$b = -1.58656 + 0.18494I$ | $-8.96690 - 0.23437I$ | $-4.99367 - 1.27444I$ |
| $u = -0.150608 + 0.812616I$<br>$a = -1.42827 - 1.83208I$<br>$b = -0.098454 - 0.251948I$ | $1.20998 - 2.44183I$ | $-2.48690 + 6.55623I$ |
| $u = -0.150608 - 0.812616I$<br>$a = -1.42827 + 1.83208I$<br>$b = -0.098454 + 0.251948I$ | $1.20998 + 2.44183I$ | $-2.48690 - 6.55623I$ |
| $u = 0.448396 + 0.692842I$<br>$a = 0.180015 + 1.383330I$<br>$b = 0.984901 - 0.373416I$ | $-1.69966 + 1.41305I$ | $-2.63563 + 1.93957I$ |
| $u = 0.448396 - 0.692842I$<br>$a = 0.180015 - 1.383330I$<br>$b = 0.984901 + 0.373416I$ | $-1.69966 - 1.41305I$ | $-2.63563 - 1.93957I$ |
| $u = -0.552635 + 0.574968I$<br>$a = -0.094309 - 0.882449I$<br>$b = -0.013966 + 0.597149I$ | $0.93843 - 1.09598I$ | $4.47643 + 3.47040I$ |
| $u = -0.552635 - 0.574968I$<br>$a = -0.094309 + 0.882449I$<br>$b = -0.013966 - 0.597149I$ | $0.93843 + 1.09598I$ | $4.47643 - 3.47040I$ |
| $u = -1.136610 + 0.525255I$<br>$a = -0.769329 + 0.561612I$<br>$b = 0.828692 - 0.973451I$ | $4.73827 + 6.16193I$ | $1.43869 - 4.43987I$ |
| $u = -1.136610 - 0.525255I$<br>$a = -0.769329 - 0.561612I$<br>$b = 0.828692 + 0.973451I$ | $4.73827 - 6.16193I$ | $1.43869 + 4.43987I$ |

| Solutions to $I_1^u$ | $\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$ | Cusp shape |
|---|---|---|
| $u = \ \ 0.756435 + 1.023180I$<br>$a = -0.62198 - 1.35488I$<br>$b = -1.18148 + 1.00394I$ | $7.30863 + 6.97671I$ | $2.63789 - 4.86212I$ |
| $u = \ \ 0.756435 - 1.023180I$<br>$a = -0.62198 + 1.35488I$<br>$b = -1.18148 - 1.00394I$ | $7.30863 - 6.97671I$ | $2.63789 + 4.86212I$ |
| $u = \ \ 0.524805 + 1.159500I$<br>$a = \ \ 0.63911 + 1.30945I$<br>$b = \ \ 0.691350 - 0.814203I$ | $-3.52870 + 6.49607I$ | $-2.23998 - 7.61889I$ |
| $u = \ \ 0.524805 - 1.159500I$<br>$a = \ \ 0.63911 - 1.30945I$<br>$b = \ \ 0.691350 + 0.814203I$ | $-3.52870 - 6.49607I$ | $-2.23998 + 7.61889I$ |
| $u = \ \ 0.708381 + 0.143354I$<br>$a = -0.472404 - 1.210020I$<br>$b = \ \ 0.540279 + 0.562923I$ | $-0.67469 - 1.82017I$ | $-0.31426 + 4.15810I$ |
| $u = \ \ 0.708381 - 0.143354I$<br>$a = -0.472404 + 1.210020I$<br>$b = \ \ 0.540279 - 0.562923I$ | $-0.67469 + 1.82017I$ | $-0.31426 - 4.15810I$ |
| $u = \ \ 0.799493 + 1.050620I$<br>$a = \ \ 0.203588 - 0.576484I$<br>$b = -0.181256 + 0.478152I$ | $-4.09629 + 3.45751I$ | $1.56870 - 0.90780I$ |
| $u = \ \ 0.799493 - 1.050620I$<br>$a = \ \ 0.203588 + 0.576484I$<br>$b = -0.181256 - 0.478152I$ | $-4.09629 - 3.45751I$ | $1.56870 + 0.90780I$ |
| $u = -0.900199 + 1.075370I$<br>$a = \ \ 0.277106 + 0.755087I$<br>$b = -1.037800 - 0.322971I$ | $-2.66115 - 3.64589I$ | $-2.52165 + 4.68608I$ |
| $u = -0.900199 - 1.075370I$<br>$a = \ \ 0.277106 - 0.755087I$<br>$b = -1.037800 + 0.322971I$ | $-2.66115 + 3.64589I$ | $-2.52165 - 4.68608I$ |

| Solutions to $I_1^u$ | $\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$ | Cusp shape |
|---|---|---|
| $u = -0.75947 + 1.19369I$<br>$a = 0.368405 - 1.267140I$<br>$b = 1.19328 + 1.07494I$ | $2.59902 - 12.89140I$ | $-0.58969 + 7.04532I$ |
| $u = -0.75947 - 1.19369I$<br>$a = 0.368405 + 1.267140I$<br>$b = 1.19328 - 1.07494I$ | $2.59902 + 12.89140I$ | $-0.58969 - 7.04532I$ |
| $u = 0.36217 + 1.40594I$<br>$a = -0.0040506 - 0.0580629I$<br>$b = 0.764588 + 0.103356I$ | $-4.64353 + 2.61874I$ | $-6.15176 - 1.44812I$ |
| $u = 0.36217 - 1.40594I$<br>$a = -0.0040506 + 0.0580629I$<br>$b = 0.764588 - 0.103356I$ | $-4.64353 - 2.61874I$ | $-6.15176 + 1.44812I$ |

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

**(i) Arc colorings**

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

**(ii) Obstruction class** $= 1$

**(iii) Cusp Shapes** $= 5u^7 - 4u^6 + 11u^5 + u^4 + 18u^3 - 2u^2 + 7u + 1$

**(iv) u-Polynomials at the component**

| Crossings | u-Polynomials at each crossing |
|---|---|
| $c_1$ | $u^8 - u^7 + 3u^6 - u^5 + 5u^4 - u^3 + 4u^2 + 1$ |
| $c_2$ | $u^8 + 5u^7 + 17u^6 + 35u^5 + 49u^4 + 45u^3 + 26u^2 + 8u + 1$ |
| $c_3$ | $u^8 + 2u^6 - 5u^5 + u^4 - 3u^3 + 2u^2 + 2u + 1$ |
| $c_4$ | $u^8 + 5u^6 + 8u^4 - u^3 + 5u^2 - 2u + 1$ |
| $c_5$ | $u^8 + u^7 + 3u^6 + u^5 + 5u^4 + u^3 + 4u^2 + 1$ |
| $c_6$ | $u^8 + u^7 - u^6 - u^5 + u^4 - 2u^3 - u^2 + 2u + 1$ |
| $c_7$ | $u^8 + 4u^6 - u^5 + 5u^4 - u^3 + 3u^2 - u + 1$ |
| $c_8, c_9$ | $u^8 + 5u^6 + 8u^4 + u^3 + 5u^2 + 2u + 1$ |
| $c_{10}$ | $u^8 - u^7 - u^6 + u^5 + u^4 + 2u^3 - u^2 - 2u + 1$ |
| $c_{11}$ | $u^8 - 2u^7 - u^6 + 2u^5 + u^4 + u^3 - u^2 - u + 1$ |

**(v) Riley Polynomials at the component**

| Crossings | Riley Polynomials at each crossing |
|---|---|
| $c_1, c_5$ | $y^8 + 5y^7 + 17y^6 + 35y^5 + 49y^4 + 45y^3 + 26y^2 + 8y + 1$ |
| $c_2$ | $y^8 + 9y^7 + 37y^6 + 43y^5 + 57y^4 - 3y^3 + 54y^2 - 12y + 1$ |
| $c_3$ | $y^8 + 4y^7 + 6y^6 - 17y^5 - 19y^4 + 19y^3 + 18y^2 + 1$ |
| $c_4, c_8, c_9$ | $y^8 + 10y^7 + 41y^6 + 90y^5 + 116y^4 + 89y^3 + 37y^2 + 6y + 1$ |
| $c_6, c_{10}$ | $y^8 - 3y^7 + 5y^6 - y^5 - 3y^4 - 4y^3 + 11y^2 - 6y + 1$ |
| $c_7$ | $y^8 + 8y^7 + 26y^6 + 45y^5 + 49y^4 + 35y^3 + 17y^2 + 5y + 1$ |
| $c_{11}$ | $y^8 - 6y^7 + 11y^6 - 4y^5 - 3y^4 - y^3 + 5y^2 - 3y + 1$ |

**(vi) Complex Volumes and Cusp Shapes**

| Solutions to $I_2^u$ | $\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$ | Cusp shape |
|---|---|---|
| $u = 0.295319 + 0.919504I$<br>$a = 0.574823 + 0.324205I$<br>$b = 1.61514 + 0.17511I$ | $-8.81521 + 1.23864I$ | $-3.07891 - 5.85923I$ |
| $u = 0.295319 - 0.919504I$<br>$a = 0.574823 - 0.324205I$<br>$b = 1.61514 - 0.17511I$ | $-8.81521 - 1.23864I$ | $-3.07891 + 5.85923I$ |
| $u = -0.573510 + 0.975502I$<br>$a = -0.242048 + 0.778127I$<br>$b = -0.938003 - 0.196254I$ | $-1.48925 - 2.46434I$ | $-0.94679 + 2.55997I$ |
| $u = -0.573510 - 0.975502I$<br>$a = -0.242048 - 0.778127I$<br>$b = -0.938003 + 0.196254I$ | $-1.48925 + 2.46434I$ | $-0.94679 - 2.55997I$ |
| $u = -0.091673 + 0.598709I$<br>$a = -1.73117 - 2.40896I$<br>$b = -0.288395 + 0.872454I$ | $1.80364 - 1.73790I$ | $2.56359 + 1.62971I$ |
| $u = -0.091673 - 0.598709I$<br>$a = -1.73117 + 2.40896I$<br>$b = -0.288395 - 0.872454I$ | $1.80364 + 1.73790I$ | $2.56359 - 1.62971I$ |
| $u = 0.86986 + 1.23517I$<br>$a = -0.101607 + 0.618527I$<br>$b = 0.611256 - 0.339089I$ | $-4.65866 + 3.95256I$ | $-7.53788 - 7.88846I$ |
| $u = 0.86986 - 1.23517I$<br>$a = -0.101607 - 0.618527I$<br>$b = 0.611256 + 0.339089I$ | $-4.65866 - 3.95256I$ | $-7.53788 + 7.88846I$ |

## III. u-Polynomials

| Crossings | u-Polynomials at each crossing |
|---|---|
| $c_1$ | $(u^8 - u^7 + \cdots + 4u^2 + 1)(u^{34} - 2u^{33} + \cdots - 7u + 11)$ |
| $c_2$ | $(u^8 + 5u^7 + 17u^6 + 35u^5 + 49u^4 + 45u^3 + 26u^2 + 8u + 1)$<br>$\cdot (u^{34} + 14u^{33} + \cdots + 1117u + 121)$ |
| $c_3$ | $(u^8 + 2u^6 - 5u^5 + u^4 - 3u^3 + 2u^2 + 2u + 1)$<br>$\cdot (u^{34} + 5u^{33} + \cdots + 685u + 79)$ |
| $c_4$ | $(u^8 + 5u^6 + 8u^4 - u^3 + 5u^2 - 2u + 1)(u^{34} - u^{33} + \cdots + 11u + 7)$ |
| $c_5$ | $(u^8 + u^7 + \cdots + 4u^2 + 1)(u^{34} - 2u^{33} + \cdots - 7u + 11)$ |
| $c_6$ | $(u^8 + u^7 - u^6 - u^5 + u^4 - 2u^3 - u^2 + 2u + 1)$<br>$\cdot (u^{34} + 17u^{32} + \cdots - 235u + 25)$ |
| $c_7$ | $(u^8 + 4u^6 + \cdots - u + 1)(u^{34} - u^{33} + \cdots + 12u + 1)$ |
| $c_8, c_9$ | $(u^8 + 5u^6 + 8u^4 + u^3 + 5u^2 + 2u + 1)(u^{34} - u^{33} + \cdots + 11u + 7)$ |
| $c_{10}$ | $(u^8 - u^7 - u^6 + u^5 + u^4 + 2u^3 - u^2 - 2u + 1)$<br>$\cdot (u^{34} + 17u^{32} + \cdots - 235u + 25)$ |
| $c_{11}$ | $(u^8 - 2u^7 + \cdots - u + 1)(u^{34} + 3u^{33} + \cdots + 13u^2 + 1)$ |

## IV. Riley Polynomials

| Crossings | Riley Polynomials at each crossing |
|---|---|
| $c_1, c_5$ | $(y^8+5y^7+17y^6+35y^5+49y^4+45y^3+26y^2+8y+1)$ $\cdot(y^{34}+14y^{33}+\cdots+1117y+121)$ |
| $c_2$ | $(y^8+9y^7+37y^6+43y^5+57y^4-3y^3+54y^2-12y+1)$ $\cdot(y^{34}+26y^{33}+\cdots+5145y+14641)$ |
| $c_3$ | $(y^8+4y^7+6y^6-17y^5-19y^4+19y^3+18y^2+1)$ $\cdot(y^{34}-39y^{33}+\cdots-92711y+6241)$ |
| $c_4, c_8, c_9$ | $(y^8+10y^7+41y^6+90y^5+116y^4+89y^3+37y^2+6y+1)$ $\cdot(y^{34}+27y^{33}+\cdots+75y+49)$ |
| $c_6, c_{10}$ | $(y^8-3y^7+5y^6-y^5-3y^4-4y^3+11y^2-6y+1)$ $\cdot(y^{34}+34y^{33}+\cdots-2025y+625)$ |
| $c_7$ | $(y^8+8y^7+26y^6+45y^5+49y^4+35y^3+17y^2+5y+1)$ $\cdot(y^{34}+37y^{33}+\cdots+238y+1)$ |
| $c_{11}$ | $(y^8-6y^7+11y^6-4y^5-3y^4-y^3+5y^2-3y+1)$ $\cdot(y^{34}-5y^{33}+\cdots+26y+1)$ |