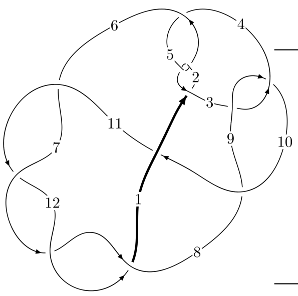
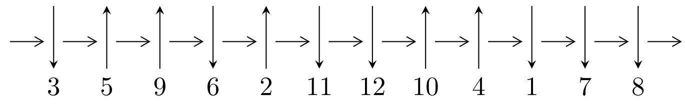
$12a_{0179}$ ($K12a_{0179}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.71708\times10^{39}u^{70} + 1.91637\times10^{39}u^{69} + \cdots + 7.55053\times10^{39}b - 5.39067\times10^{40},$$
$$2.23600\times10^{39}u^{70} + 3.25449\times10^{37}u^{69} + \cdots + 7.55053\times10^{39}a + 2.20656\times10^{40},\ u^{71} - u^{70} + \cdots + 32u - 1$$

$$I_1^v = \langle a,\ -v^3 + 2v^2 + 2b - 2v + 1,\ v^4 - v^3 + 2v^2 + v + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 75 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. $\boldsymbol{I_1^u = \langle -2.72 \times 10^{39} u^{70} + 1.92 \times 10^{39} u^{69} + \cdots + 7.55 \times 10^{39} b - 5.39 \times 10^{40},\ 2.24 \times 10^{39} u^{70} + 3.25 \times 10^{37} u^{69} + \cdots + 7.55 \times 10^{39} a + 2.21 \times 10^{40},\ u^{71} - u^{70} + \cdots + 32u - 16 \rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -0.296138u^{70} - 0.00431028u^{69} + \cdots + 12.0993u - 2.92239 \\ 0.359852u^{70} - 0.253806u^{69} + \cdots - 4.10423u + 7.13946 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0672794u^{70} - 0.0679694u^{69} + \cdots + 9.94426u - 3.79346 \\ -0.204932u^{70} - 0.00949976u^{69} + \cdots - 0.840329u - 3.24825 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0672794u^{70} - 0.0679694u^{69} + \cdots + 9.94426u - 3.79346 \\ 0.114199u^{70} - 0.134587u^{69} + \cdots - 2.41116u + 5.41223 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.272212u^{70} - 0.0774692u^{69} + \cdots + 9.10394u - 7.04171 \\ -0.204932u^{70} - 0.00949976u^{69} + \cdots - 0.840329u - 3.24825 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0361174u^{70} - 0.0228612u^{69} + \cdots + 12.0016u - 6.74339 \\ -0.0426249u^{70} - 0.173546u^{69} + \cdots - 2.35671u + 4.17575 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.169607u^{70} + 0.0192873u^{69} + \cdots + 9.80052u - 8.54872 \\ -0.197794u^{70} + 0.101478u^{69} + \cdots - 2.00512u - 2.63268 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.184380u^{70} - 0.0878898u^{69} + \cdots - 13.0143u + 10.6308 \\ 0.288200u^{70} - 0.111556u^{69} + \cdots + 0.409843u + 3.14069 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.56249u^{70} - 0.499654u^{69} + \cdots - 24.3357u + 56.8547$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{71} + 25u^{70} + \cdots - 24u - 1$
c_2, c_5	$u^{71} + 3u^{70} + \cdots - 12u^2 - 1$
c_3, c_9	$u^{71} + u^{70} + \cdots + 32u + 16$
c_6, c_7, c_{11} c_{12}	$u^{71} + 3u^{70} + \cdots - 2u + 1$
c_8	$u^{71} - 25u^{70} + \cdots + 3712u - 256$
c_{10}	$u^{71} - 21u^{70} + \cdots + 30122u - 2513$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{71} + 45y^{70} + \cdots + 32y - 1$
c_2, c_5	$y^{71} + 25y^{70} + \cdots - 24y - 1$
c_3, c_9	$y^{71} - 25y^{70} + \cdots + 3712y - 256$
c_6, c_7, c_{11} c_{12}	$y^{71} - 83y^{70} + \cdots + 4y - 1$
c_8	$y^{71} + 35y^{70} + \cdots - 1695744y - 65536$
c_{10}	$y^{71} - 23y^{70} + \cdots + 38952656y - 6315169$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.898695 + 0.447888I$ $a = -0.48166 + 1.64393I$ $b = 0.704202 - 0.678389I$	$-0.156625 - 0.128245I$	$-2.60256 + 0.62828I$
$u = 0.898695 - 0.447888I$ $a = -0.48166 - 1.64393I$ $b = 0.704202 + 0.678389I$	$-0.156625 + 0.128245I$	$-2.60256 - 0.62828I$
$u = 0.485356 + 0.866096I$ $a = 0.723279 - 0.275133I$ $b = -0.695289 - 0.658546I$	$-0.181303 - 0.963321I$	$-2.97724 + 2.47393I$
$u = 0.485356 - 0.866096I$ $a = 0.723279 + 0.275133I$ $b = -0.695289 + 0.658546I$	$-0.181303 + 0.963321I$	$-2.97724 - 2.47393I$
$u = -0.046756 + 1.006700I$ $a = 0.664918 - 0.351532I$ $b = -0.707383 - 0.856092I$	$-4.78280 + 2.70516I$	$-3.93532 - 3.08025I$
$u = -0.046756 - 1.006700I$ $a = 0.664918 + 0.351532I$ $b = -0.707383 + 0.856092I$	$-4.78280 - 2.70516I$	$-3.93532 + 3.08025I$
$u = 0.814841 + 0.602433I$ $a = -2.85625 + 1.03972I$ $b = 0.633904 + 0.996625I$	$-9.92867 + 3.79379I$	$-6.79831 - 6.12485I$
$u = 0.814841 - 0.602433I$ $a = -2.85625 - 1.03972I$ $b = 0.633904 - 0.996625I$	$-9.92867 - 3.79379I$	$-6.79831 + 6.12485I$
$u = 1.03416$ $a = 0.792535$ $b = -0.659001$	-4.08496	0
$u = 0.915846 + 0.508550I$ $a = 0.777578 - 0.138252I$ $b = -0.671992 - 0.337720I$	$0.04777 + 3.88882I$	$0. - 7.52926I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.915846 - 0.508550I$ $a = 0.777578 + 0.138252I$ $b = -0.671992 + 0.337720I$	$0.04777 - 3.88882I$	$0. + 7.52926I$
$u = -0.749394 + 0.742501I$ $a = 0.927602 + 1.023970I$ $b = -0.002922 + 1.034700I$	$-5.23643 + 0.49136I$	$-10.35637 + 0.I$
$u = -0.749394 - 0.742501I$ $a = 0.927602 - 1.023970I$ $b = -0.002922 - 1.034700I$	$-5.23643 - 0.49136I$	$-10.35637 + 0.I$
$u = 0.842164 + 0.647596I$ $a = 0.860044 - 0.892957I$ $b = -0.080620 - 1.043370I$	$-2.69671 + 2.52237I$	0
$u = 0.842164 - 0.647596I$ $a = 0.860044 + 0.892957I$ $b = -0.080620 + 1.043370I$	$-2.69671 - 2.52237I$	0
$u = -0.744352 + 0.553739I$ $a = 0.651043 - 0.469715I$ $b = -0.561912 - 1.022170I$	$-1.79172 + 0.68850I$	$-5.62900 + 3.38039I$
$u = -0.744352 - 0.553739I$ $a = 0.651043 + 0.469715I$ $b = -0.561912 + 1.022170I$	$-1.79172 - 0.68850I$	$-5.62900 - 3.38039I$
$u = -0.913780 + 0.144906I$ $a = 0.731500 + 0.609419I$ $b = -0.338962 + 1.033540I$	$-7.19330 - 3.32362I$	$-5.12286 + 4.83275I$
$u = -0.913780 - 0.144906I$ $a = 0.731500 - 0.609419I$ $b = -0.338962 - 1.033540I$	$-7.19330 + 3.32362I$	$-5.12286 - 4.83275I$
$u = 0.895328 + 0.614559I$ $a = 0.627473 + 0.478230I$ $b = -0.571721 + 1.063660I$	$-9.66637 + 1.00404I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.895328 - 0.614559I$ $a = 0.627473 - 0.478230I$ $b = -0.571721 - 1.063660I$	$-9.66637 - 1.00404I$	0
$u = -0.580986 + 0.928128I$ $a = 0.629379 - 0.415842I$ $b = -0.663444 - 0.995696I$	$-1.18425 + 6.22847I$	0
$u = -0.580986 - 0.928128I$ $a = 0.629379 + 0.415842I$ $b = -0.663444 + 0.995696I$	$-1.18425 - 6.22847I$	0
$u = 0.438808 + 0.779885I$ $a = 0.657294 + 0.414809I$ $b = -0.631199 + 0.953782I$	$0.39399 - 3.06003I$	$-0.75932 + 1.65602I$
$u = 0.438808 - 0.779885I$ $a = 0.657294 - 0.414809I$ $b = -0.631199 - 0.953782I$	$0.39399 + 3.06003I$	$-0.75932 - 1.65602I$
$u = 0.731479 + 0.831783I$ $a = 0.88446 - 1.13386I$ $b = 0.038927 - 1.065800I$	$-13.52330 - 2.24339I$	0
$u = 0.731479 - 0.831783I$ $a = 0.88446 + 1.13386I$ $b = 0.038927 + 1.065800I$	$-13.52330 + 2.24339I$	0
$u = -0.955053 + 0.565034I$ $a = -2.56607 - 0.59068I$ $b = 0.670926 - 0.992762I$	$-1.10321 - 5.18739I$	0
$u = -0.955053 - 0.565034I$ $a = -2.56607 + 0.59068I$ $b = 0.670926 + 0.992762I$	$-1.10321 + 5.18739I$	0
$u = -0.821890 + 0.297804I$ $a = 0.838078 + 0.097095I$ $b = -0.543921 + 0.231319I$	$1.32332 - 0.80569I$	$4.20345 + 1.04258I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.821890 - 0.297804I$ $a = 0.838078 - 0.097095I$ $b = -0.543921 - 0.231319I$	$1.32332 + 0.80569I$	$4.20345 - 1.04258I$
$u = -0.595799 + 0.966991I$ $a = 0.704626 + 0.251056I$ $b = -0.754441 + 0.629987I$	$-7.86275 + 2.84728I$	0
$u = -0.595799 - 0.966991I$ $a = 0.704626 - 0.251056I$ $b = -0.754441 - 0.629987I$	$-7.86275 - 2.84728I$	0
$u = -0.943340 + 0.686884I$ $a = 0.769346 + 0.904490I$ $b = -0.091008 + 1.099760I$	$-4.63880 - 5.93106I$	0
$u = -0.943340 - 0.686884I$ $a = 0.769346 - 0.904490I$ $b = -0.091008 - 1.099760I$	$-4.63880 + 5.93106I$	0
$u = -0.995858 + 0.614315I$ $a = 0.744700 + 0.143172I$ $b = -0.745958 + 0.363151I$	$-7.64756 - 5.89043I$	0
$u = -0.995858 - 0.614315I$ $a = 0.744700 - 0.143172I$ $b = -0.745958 - 0.363151I$	$-7.64756 + 5.89043I$	0
$u = -1.185220 + 0.024512I$ $a = -1.68390 - 0.91780I$ $b = 0.763748 + 0.846463I$	$6.09381 + 0.94811I$	0
$u = -1.185220 - 0.024512I$ $a = -1.68390 + 0.91780I$ $b = 0.763748 - 0.846463I$	$6.09381 - 0.94811I$	0
$u = 1.190440 + 0.117078I$ $a = -1.91536 - 0.66291I$ $b = 0.755383 + 0.886674I$	$5.97207 + 4.78145I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.190440 - 0.117078I$ $a = -1.91536 + 0.66291I$ $b = 0.755383 - 0.886674I$	$5.97207 - 4.78145I$	0
$u = 0.660911 + 1.000500I$ $a = 0.615402 + 0.416919I$ $b = -0.678388 + 1.018840I$	$-9.01807 - 8.30674I$	0
$u = 0.660911 - 1.000500I$ $a = 0.615402 - 0.416919I$ $b = -0.678388 - 1.018840I$	$-9.01807 + 8.30674I$	0
$u = -0.639037 + 0.480316I$ $a = 0.63082 - 2.00324I$ $b = 0.578600 + 0.637489I$	$-8.84566 + 1.15303I$	$-4.74959 + 2.27232I$
$u = -0.639037 - 0.480316I$ $a = 0.63082 + 2.00324I$ $b = 0.578600 - 0.637489I$	$-8.84566 - 1.15303I$	$-4.74959 - 2.27232I$
$u = -1.066010 + 0.557376I$ $a = -0.553984 - 1.154100I$ $b = 0.783980 + 0.661621I$	$3.27242 - 2.74628I$	0
$u = -1.066010 - 0.557376I$ $a = -0.553984 + 1.154100I$ $b = 0.783980 - 0.661621I$	$3.27242 + 2.74628I$	0
$u = -0.216560 + 0.759366I$ $a = 0.723009 + 0.336172I$ $b = -0.635057 + 0.763179I$	$1.00588 - 1.89636I$	$0.54641 + 5.25437I$
$u = -0.216560 - 0.759366I$ $a = 0.723009 - 0.336172I$ $b = -0.635057 - 0.763179I$	$1.00588 + 1.89636I$	$0.54641 - 5.25437I$
$u = 1.217720 + 0.204604I$ $a = -1.28956 + 1.01899I$ $b = 0.788740 - 0.796172I$	$-0.028361 + 1.390240I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.217720 - 0.204604I$ $a = -1.28956 - 1.01899I$ $b = 0.788740 + 0.796172I$	$-0.028361 - 1.390240I$	0
$u = 0.998362 + 0.733734I$ $a = 0.720523 - 0.920806I$ $b = -0.086327 - 1.133430I$	$-12.6856 + 8.1034I$	0
$u = 0.998362 - 0.733734I$ $a = 0.720523 + 0.920806I$ $b = -0.086327 + 1.133430I$	$-12.6856 - 8.1034I$	0
$u = 1.075840 + 0.632701I$ $a = -2.18572 + 0.55812I$ $b = 0.698464 + 1.015000I$	$2.20770 + 8.35369I$	0
$u = 1.075840 - 0.632701I$ $a = -2.18572 - 0.55812I$ $b = 0.698464 - 1.015000I$	$2.20770 - 8.35369I$	0
$u = -1.223810 + 0.275921I$ $a = -1.99796 + 0.29578I$ $b = 0.754446 - 0.931385I$	$-0.43731 - 7.18811I$	0
$u = -1.223810 - 0.275921I$ $a = -1.99796 - 0.29578I$ $b = 0.754446 + 0.931385I$	$-0.43731 + 7.18811I$	0
$u = -0.422944 + 0.589272I$ $a = 1.234610 - 0.617787I$ $b = 0.389148 + 0.464716I$	$-8.91534 + 1.12808I$	$-7.69562 + 1.51946I$
$u = -0.422944 - 0.589272I$ $a = 1.234610 + 0.617787I$ $b = 0.389148 - 0.464716I$	$-8.91534 - 1.12808I$	$-7.69562 - 1.51946I$
$u = 1.093130 + 0.656674I$ $a = -0.464088 + 1.005390I$ $b = 0.811468 - 0.632359I$	$1.65039 + 6.56883I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.093130 - 0.656674I$ $a = -0.464088 - 1.005390I$ $b = 0.811468 + 0.632359I$	$1.65039 - 6.56883I$	0
$u = -1.098940 + 0.711938I$ $a = -2.03891 - 0.66504I$ $b = 0.700760 - 1.035720I$	$0.43518 - 12.25320I$	0
$u = -1.098940 - 0.711938I$ $a = -2.03891 + 0.66504I$ $b = 0.700760 + 1.035720I$	$0.43518 + 12.25320I$	0
$u = -1.106240 + 0.731732I$ $a = -0.410040 - 0.912009I$ $b = 0.831200 + 0.610202I$	$-6.25111 - 9.04376I$	0
$u = -1.106240 - 0.731732I$ $a = -0.410040 + 0.912009I$ $b = 0.831200 - 0.610202I$	$-6.25111 + 9.04376I$	0
$u = 1.106610 + 0.773513I$ $a = -1.94318 + 0.74250I$ $b = 0.700048 + 1.051230I$	$-7.5826 + 14.7744I$	0
$u = 1.106610 - 0.773513I$ $a = -1.94318 - 0.74250I$ $b = 0.700048 - 1.051230I$	$-7.5826 - 14.7744I$	0
$u = 0.595380 + 0.063159I$ $a = 0.766930 - 0.508281I$ $b = -0.410411 - 0.925666I$	$-0.52089 + 2.54938I$	$1.55851 - 8.99527I$
$u = 0.595380 - 0.063159I$ $a = 0.766930 + 0.508281I$ $b = -0.410411 + 0.925666I$	$-0.52089 - 2.54938I$	$1.55851 + 8.99527I$
$u = 0.327964 + 0.426910I$ $a = 1.107820 + 0.038370I$ $b = 0.096513 - 0.298186I$	$-1.159260 - 0.383261I$	$-7.97768 + 0.90492I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.327964-0.426910I$		
$a=$	$1.107820-0.038370I$	$-1.159260+0.383261I$	$-7.97768-0.90492I$
$b=$	$0.096513+0.298186I$		

II. $\boldsymbol{I_1^v = \langle a,\ -v^3 + 2v^2 + 2b - 2v + 1,\ v^4 - v^3 + 2v^2 + v + 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ \frac{1}{2}v^3 - v^2 + v - \frac{1}{2} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ -\frac{1}{2}v^3 + v^2 - v - \frac{1}{2} \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{1}{2}v^3 - v^2 + v - \frac{1}{2} \\ \frac{1}{2}v^3 - v^2 + v + \frac{1}{2} \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{1}{2}v^3 + v^2 - v + \frac{1}{2} \\ -\frac{1}{2}v^3 + v^2 - v - \frac{1}{2} \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -\frac{1}{2}v^3 - v - \frac{1}{2} \end{pmatrix}$$
$$a_8 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -v \\ -\frac{1}{2}v^3 + v^2 - v - \frac{1}{2} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{1}{2}v^3 - v^2 + v - \frac{1}{2} \\ \frac{1}{2}v^3 + v + \frac{1}{2} \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= v^3 - 3v^2 + v - 7$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_5	$(u^2 - u + 1)^2$
c_2	$(u^2 + u + 1)^2$
c_3, c_8, c_9	u^4
c_6, c_7, c_{10}	$(u^2 + u - 1)^2$
c_{11}, c_{12}	$(u^2 - u - 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_5	$(y^2 + y + 1)^2$
c_3, c_8, c_9	y^4
c_6, c_7, c_{10} c_{11}, c_{12}	$(y^2 - 3y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v = -0.309017 + 0.535233I$ $a = 0$ $b = -0.500000 + 0.866025I$	$-0.98696 - 2.02988I$	$-6.50000 + 1.52761I$
$v = -0.309017 - 0.535233I$ $a = 0$ $b = -0.500000 - 0.866025I$	$-0.98696 + 2.02988I$	$-6.50000 - 1.52761I$
$v = 0.80902 + 1.40126I$ $a = 0$ $b = -0.500000 - 0.866025I$	$-8.88264 + 2.02988I$	$-6.50000 - 5.40059I$
$v = 0.80902 - 1.40126I$ $a = 0$ $b = -0.500000 + 0.866025I$	$-8.88264 - 2.02988I$	$-6.50000 + 5.40059I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$((u^2-u+1)^2)(u^{71}+25u^{70}+\cdots-24u-1)$
c_2	$((u^2+u+1)^2)(u^{71}+3u^{70}+\cdots-12u^2-1)$
c_3, c_9	$u^4(u^{71}+u^{70}+\cdots+32u+16)$
c_5	$((u^2-u+1)^2)(u^{71}+3u^{70}+\cdots-12u^2-1)$
c_6, c_7	$((u^2+u-1)^2)(u^{71}+3u^{70}+\cdots-2u+1)$
c_8	$u^4(u^{71}-25u^{70}+\cdots+3712u-256)$
c_{10}	$((u^2+u-1)^2)(u^{71}-21u^{70}+\cdots+30122u-2513)$
c_{11}, c_{12}	$((u^2-u-1)^2)(u^{71}+3u^{70}+\cdots-2u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y^2+y+1)^2)(y^{71}+45y^{70}+\cdots+32y-1)$
c_2, c_5	$((y^2+y+1)^2)(y^{71}+25y^{70}+\cdots-24y-1)$
c_3, c_9	$y^4(y^{71}-25y^{70}+\cdots+3712y-256)$
c_6, c_7, c_{11} c_{12}	$((y^2-3y+1)^2)(y^{71}-83y^{70}+\cdots+4y-1)$
c_8	$y^4(y^{71}+35y^{70}+\cdots-1695744y-65536)$
c_{10}	$((y^2-3y+1)^2)(y^{71}-23y^{70}+\cdots+3.89527\times 10^7 y-6315169)$