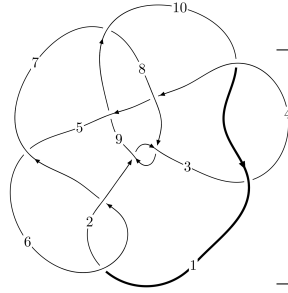
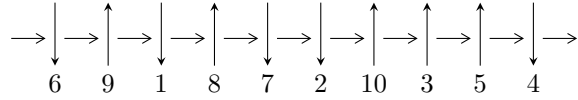


10<sub>107</sub> (K10a<sub>66</sub>)



A knot diagram<sup>1</sup>

**Linearized knot diagram**



**Solving Sequence**

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

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

$$I_1^u = \langle 3.47436 \times 10^{121}u^{53} + 1.72858 \times 10^{122}u^{52} + \dots + 9.59630 \times 10^{122}b + 1.78292 \times 10^{122}, \\ -1.53764 \times 10^{122}u^{53} - 8.54360 \times 10^{122}u^{52} + \dots + 9.59630 \times 10^{122}a - 1.60436 \times 10^{123}, u^{54} + 5u^{53} + \dots + \\ I_2^u = \langle u^7 - u^6 - u^4 + b + 1, u^4 + a - u, u^8 - u^5 - u^4 + u + 1 \rangle$$

\* 2 irreducible components of  $\dim_{\mathbb{C}} = 0$ , with total 62 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.

$$\mathbf{I. } I_1^u = \langle 3.47 \times 10^{121} u^{53} + 1.73 \times 10^{122} u^{52} + \dots + 9.60 \times 10^{122} b + 1.78 \times 10^{122}, -1.54 \times 10^{122} u^{53} - 8.54 \times 10^{122} u^{52} + \dots + 9.60 \times 10^{122} a - 1.60 \times 10^{123}, u^{54} + 5u^{53} + \dots + u + 2 \rangle$$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.160232u^{53} + 0.890301u^{52} + \dots + 13.7576u + 1.67185 \\ -0.0362051u^{53} - 0.180130u^{52} + \dots - 2.75155u - 0.185792 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.196437u^{53} + 1.07043u^{52} + \dots + 16.5092u + 1.85764 \\ -0.0362051u^{53} - 0.180130u^{52} + \dots - 2.75155u - 0.185792 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0961420u^{53} + 0.569261u^{52} + \dots - 3.23497u - 4.09449 \\ 0.100644u^{53} + 0.590672u^{52} + \dots + 0.552368u + 1.22006 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.643905u^{53} - 3.03045u^{52} + \dots + 15.9005u + 4.34106 \\ 0.176005u^{53} + 0.787005u^{52} + \dots - 3.07121u - 0.393571 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.101496u^{53} - 0.690858u^{52} + \dots - 23.6713u - 4.01578 \\ -0.0385911u^{53} - 0.220008u^{52} + \dots + 3.07522u + 0.327925 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.128037u^{53} + 0.744252u^{52} + \dots + 16.9188u + 2.03592 \\ -0.0983217u^{53} - 0.460344u^{52} + \dots - 2.80102u - 0.155940 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.491512u^{53} - 2.79234u^{52} + \dots - 8.87717u - 1.13816 \\ 0.0534818u^{53} + 0.417725u^{52} + \dots + 0.472700u - 0.0509315 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes =  $0.461877u^{53} + 2.14757u^{52} + \dots - 1.68088u - 2.26465$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
$c_1, c_6$	$u^{54} - u^{53} + \dots - 14u + 7$
$c_2, c_8$	$u^{54} - u^{53} + \dots + 9u^2 + 1$
$c_3, c_{10}$	$u^{54} - 2u^{53} + \dots - 75u + 19$
$c_4$	$u^{54} + 5u^{53} + \dots + u + 2$
$c_5$	$u^{54} + 23u^{53} + \dots + 406u + 49$
$c_7$	$u^{54} + 7u^{53} + \dots + 123u + 49$
$c_9$	$u^{54} - 3u^{51} + \dots + 19u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
$c_1, c_6$	$y^{54} - 23y^{53} + \dots - 406y + 49$
$c_2, c_8$	$y^{54} + 33y^{53} + \dots + 18y + 1$
$c_3, c_{10}$	$y^{54} + 36y^{53} + \dots + 911y + 361$
$c_4$	$y^{54} - 3y^{53} + \dots + 43y + 4$
$c_5$	$y^{54} + 21y^{53} + \dots + 31458y + 2401$
$c_7$	$y^{54} - 15y^{53} + \dots - 60601y + 2401$
$c_9$	$y^{54} + 42y^{52} + \dots - 17y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.961364 + 0.112432I$ $a = -0.572959 - 0.054695I$ $b = -0.66278 - 1.34570I$	$2.22290 - 1.39898I$	$4.85913 - 0.38785I$
$u = -0.961364 - 0.112432I$ $a = -0.572959 + 0.054695I$ $b = -0.66278 + 1.34570I$	$2.22290 + 1.39898I$	$4.85913 + 0.38785I$
$u = 0.558405 + 0.788615I$ $a = -1.055990 + 0.295330I$ $b = -1.156370 + 0.001294I$	$-1.38784 + 3.43862I$	$-1.22590 - 4.16430I$
$u = 0.558405 - 0.788615I$ $a = -1.055990 - 0.295330I$ $b = -1.156370 - 0.001294I$	$-1.38784 - 3.43862I$	$-1.22590 + 4.16430I$
$u = -0.679141 + 0.788921I$ $a = 1.121720 + 0.119877I$ $b = 1.268940 - 0.162988I$	$-3.08313 - 8.79179I$	$-2.77233 + 8.25769I$
$u = -0.679141 - 0.788921I$ $a = 1.121720 - 0.119877I$ $b = 1.268940 + 0.162988I$	$-3.08313 + 8.79179I$	$-2.77233 - 8.25769I$
$u = 0.149591 + 1.036280I$ $a = 0.578889 + 1.147670I$ $b = 0.516207 + 0.654055I$	$-2.54046 + 2.78962I$	$-3.14255 - 2.96255I$
$u = 0.149591 - 1.036280I$ $a = 0.578889 - 1.147670I$ $b = 0.516207 - 0.654055I$	$-2.54046 - 2.78962I$	$-3.14255 + 2.96255I$
$u = -0.830583 + 0.437641I$ $a = -1.154350 + 0.444935I$ $b = -0.722840 - 0.321202I$	$-0.20915 - 4.60279I$	$-0.54557 + 5.84363I$
$u = -0.830583 - 0.437641I$ $a = -1.154350 - 0.444935I$ $b = -0.722840 + 0.321202I$	$-0.20915 + 4.60279I$	$-0.54557 - 5.84363I$

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.043990 + 0.201174I$ $a = 0.829255 - 0.100464I$ $b = 0.82599 - 1.28687I$	$1.65482 + 5.78575I$	$2.51560 - 7.01331I$
$u = 1.043990 - 0.201174I$ $a = 0.829255 + 0.100464I$ $b = 0.82599 + 1.28687I$	$1.65482 - 5.78575I$	$2.51560 + 7.01331I$
$u = 0.992623 + 0.381167I$ $a = 1.089900 + 0.189030I$ $b = 0.831671 - 0.901756I$	$0.562845 + 1.252740I$	$-1.233700 + 0.528973I$
$u = 0.992623 - 0.381167I$ $a = 1.089900 - 0.189030I$ $b = 0.831671 + 0.901756I$	$0.562845 - 1.252740I$	$-1.233700 - 0.528973I$
$u = -0.703334 + 0.548552I$ $a = -1.35884 + 0.54589I$ $b = -0.486359 - 1.054920I$	$0.47962 - 3.24903I$	$-2.21240 + 6.16822I$
$u = -0.703334 - 0.548552I$ $a = -1.35884 - 0.54589I$ $b = -0.486359 + 1.054920I$	$0.47962 + 3.24903I$	$-2.21240 - 6.16822I$
$u = 0.090692 + 0.846569I$ $a = -0.681551 + 0.813861I$ $b = -0.628328 + 0.416871I$	$-1.44225 + 1.32993I$	$-2.25893 - 3.81749I$
$u = 0.090692 - 0.846569I$ $a = -0.681551 - 0.813861I$ $b = -0.628328 - 0.416871I$	$-1.44225 - 1.32993I$	$-2.25893 + 3.81749I$
$u = 0.039167 + 1.215900I$ $a = 0.12642 + 1.42966I$ $b = 0.116430 + 0.911737I$	$-3.14719 - 1.85744I$	$0. + 4.53165I$
$u = 0.039167 - 1.215900I$ $a = 0.12642 - 1.42966I$ $b = 0.116430 - 0.911737I$	$-3.14719 + 1.85744I$	$0. - 4.53165I$

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.599196 + 1.091280I$ $a = 0.674349 + 0.091168I$ $b = 0.815766 - 0.311304I$	$-6.71595 - 1.65367I$	$-8.08588 + 0.I$
$u = -0.599196 - 1.091280I$ $a = 0.674349 - 0.091168I$ $b = 0.815766 + 0.311304I$	$-6.71595 + 1.65367I$	$-8.08588 + 0.I$
$u = 0.741079 + 0.137552I$ $a = 1.194820 + 0.322038I$ $b = 0.296885 - 0.144859I$	$1.46648 + 0.54178I$	$5.93628 - 0.17488I$
$u = 0.741079 - 0.137552I$ $a = 1.194820 - 0.322038I$ $b = 0.296885 + 0.144859I$	$1.46648 - 0.54178I$	$5.93628 + 0.17488I$
$u = -0.452082 + 0.566184I$ $a = 0.536326 + 0.764262I$ $b = 0.02633 + 1.48047I$	$4.02222 + 2.85318I$	$6.13116 - 2.92462I$
$u = -0.452082 - 0.566184I$ $a = 0.536326 - 0.764262I$ $b = 0.02633 - 1.48047I$	$4.02222 - 2.85318I$	$6.13116 + 2.92462I$
$u = -0.886321 + 0.919707I$ $a = -1.361200 - 0.310668I$ $b = -0.382977 - 1.263990I$	$4.21764 - 8.45863I$	0
$u = -0.886321 - 0.919707I$ $a = -1.361200 + 0.310668I$ $b = -0.382977 + 1.263990I$	$4.21764 + 8.45863I$	0
$u = -1.315250 + 0.034832I$ $a = -0.573199 + 0.672183I$ $b = 0.050400 - 0.679787I$	$-0.77663 - 4.41165I$	0
$u = -1.315250 - 0.034832I$ $a = -0.573199 - 0.672183I$ $b = 0.050400 + 0.679787I$	$-0.77663 + 4.41165I$	0

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.988588 + 0.893719I$ $a = 1.155390 - 0.272660I$ $b = 0.293080 - 1.228390I$	$5.49306 + 3.12677I$	0
$u = 0.988588 - 0.893719I$ $a = 1.155390 + 0.272660I$ $b = 0.293080 + 1.228390I$	$5.49306 - 3.12677I$	0
$u = -0.329231 + 0.560992I$ $a = -0.796917 + 0.754395I$ $b = -0.573088 + 0.315618I$	$-1.49546 + 0.86217I$	$-4.23255 - 0.90919I$
$u = -0.329231 - 0.560992I$ $a = -0.796917 - 0.754395I$ $b = -0.573088 - 0.315618I$	$-1.49546 - 0.86217I$	$-4.23255 + 0.90919I$
$u = 0.292792 + 0.451123I$ $a = 2.31599 + 2.42777I$ $b = 0.430531 - 0.886169I$	$-1.89398 + 6.72384I$	$-4.13785 - 10.41753I$
$u = 0.292792 - 0.451123I$ $a = 2.31599 - 2.42777I$ $b = 0.430531 + 0.886169I$	$-1.89398 - 6.72384I$	$-4.13785 + 10.41753I$
$u = 0.163858 + 0.499123I$ $a = -0.55065 + 1.32387I$ $b = -0.25259 + 1.55284I$	$4.11998 + 2.94109I$	$7.18387 + 1.28923I$
$u = 0.163858 - 0.499123I$ $a = -0.55065 - 1.32387I$ $b = -0.25259 - 1.55284I$	$4.11998 - 2.94109I$	$7.18387 - 1.28923I$
$u = -0.434000 + 0.294766I$ $a = -0.68751 + 1.92613I$ $b = -0.370703 - 1.020660I$	$0.35569 - 2.65328I$	$0.15342 + 4.21264I$
$u = -0.434000 - 0.294766I$ $a = -0.68751 - 1.92613I$ $b = -0.370703 + 1.020660I$	$0.35569 + 2.65328I$	$0.15342 - 4.21264I$



Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.19805 + 1.12252I$ $a = 0.970792 + 0.128427I$ $b = 0.63032 + 1.34945I$	$0.7043 - 15.3529I$	0
$u = -1.19805 - 1.12252I$ $a = 0.970792 - 0.128427I$ $b = 0.63032 - 1.34945I$	$0.7043 + 15.3529I$	0
$u = 1.19648 + 1.14726I$ $a = -0.856808 + 0.150553I$ $b = -0.55381 + 1.35250I$	$2.82560 + 9.37445I$	0
$u = 1.19648 - 1.14726I$ $a = -0.856808 - 0.150553I$ $b = -0.55381 - 1.35250I$	$2.82560 - 9.37445I$	0
$u = 0.181881 + 0.235745I$ $a = 0.11509 + 5.12406I$ $b = 0.209141 - 0.890213I$	$-2.94679 - 0.31182I$	$-2.63431 - 1.82332I$
$u = 0.181881 - 0.235745I$ $a = 0.11509 - 5.12406I$ $b = 0.209141 + 0.890213I$	$-2.94679 + 0.31182I$	$-2.63431 + 1.82332I$
$u = -1.32732 + 1.15930I$ $a = 0.674629 - 0.096385I$ $b = 0.474031 + 1.178630I$	$-3.96372 - 6.42189I$	0
$u = -1.32732 - 1.15930I$ $a = 0.674629 + 0.096385I$ $b = 0.474031 - 1.178630I$	$-3.96372 + 6.42189I$	0
$u = 0.75878 + 1.62635I$ $a = -0.265244 + 0.312071I$ $b = -0.154106 + 1.343330I$	$4.15647 + 3.52492I$	0
$u = 0.75878 - 1.62635I$ $a = -0.265244 - 0.312071I$ $b = -0.154106 - 1.343330I$	$4.15647 - 3.52492I$	0

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.56778 + 0.88249I$	$3.39532 + 0.06056I$	0
$a = 0.466526 - 0.069214I$		
$b = -0.029531 - 1.030030I$		
$u = 1.56778 - 0.88249I$	$3.39532 - 0.06056I$	0
$a = 0.466526 + 0.069214I$		
$b = -0.029531 + 1.030030I$		
$u = -1.54983 + 1.40253I$	$0.50528 + 5.97519I$	0
$a = -0.184901 - 0.232246I$		
$b = 0.187756 - 1.030500I$		
$u = -1.54983 - 1.40253I$	$0.50528 - 5.97519I$	0
$a = -0.184901 + 0.232246I$		
$b = 0.187756 + 1.030500I$		

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

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^4 + u \\ -u^7 + u^6 + u^4 - 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^7 - u^6 - 2u^4 + u + 1 \\ -u^7 + u^6 + u^4 - 1 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} u^6 - u^5 - u^3 + u^2 + u \\ u^7 - u^4 - u^3 + u + 1 \end{pmatrix}$$

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

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

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

(ii) Obstruction class = 1

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

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
$c_1$	$u^8 - 2u^6 - u^5 + 3u^4 + 2u^3 - 2u^2 - u + 1$
$c_2$	$u^8 + 4u^6 - u^5 + 5u^4 - 2u^3 + 4u^2 - u + 1$
$c_3$	$u^8 + u^7 + 4u^6 + 2u^5 + 5u^4 + u^3 + 4u^2 + 1$
$c_4$	$u^8 - u^5 - u^4 + u + 1$
$c_5$	$u^8 - 4u^7 + 10u^6 - 17u^5 + 23u^4 - 22u^3 + 14u^2 - 5u + 1$
$c_6$	$u^8 - 2u^6 + u^5 + 3u^4 - 2u^3 - 2u^2 + u + 1$
$c_7$	$u^8 - 2u^6 - 3u^5 + 4u^3 + 6u^2 + 4u + 1$
$c_8$	$u^8 + 4u^6 + u^5 + 5u^4 + 2u^3 + 4u^2 + u + 1$
$c_9$	$u^8 - u^7 - u^4 + u^3 + 1$
$c_{10}$	$u^8 - u^7 + 4u^6 - 2u^5 + 5u^4 - u^3 + 4u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
$c_1, c_6$	$y^8 - 4y^7 + 10y^6 - 17y^5 + 23y^4 - 22y^3 + 14y^2 - 5y + 1$
$c_2, c_8$	$y^8 + 8y^7 + 26y^6 + 47y^5 + 55y^4 + 42y^3 + 22y^2 + 7y + 1$
$c_3, c_{10}$	$y^8 + 7y^7 + 22y^6 + 42y^5 + 55y^4 + 47y^3 + 26y^2 + 8y + 1$
$c_4$	$y^8 - 2y^6 - y^5 + 3y^4 + 2y^3 - 2y^2 - y + 1$
$c_5$	$y^8 + 4y^7 + 10y^6 + 23y^5 + 23y^4 + 10y^3 + 22y^2 + 3y + 1$
$c_7$	$y^8 - 4y^7 + 4y^6 + 3y^5 + 2y^4 + 4y^3 + 4y^2 - 4y + 1$
$c_9$	$y^8 - y^7 - 2y^6 + 2y^5 + 3y^4 - y^3 - 2y^2 + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.154104 + 0.976543I$	$-3.90365 + 1.24143I$	$-8.13667 - 0.29040I$
$a = -0.62000 + 1.53629I$		
$b = 0.043533 + 0.616047I$		
$u = 0.154104 - 0.976543I$	$-3.90365 - 1.24143I$	$-8.13667 + 0.29040I$
$a = -0.62000 - 1.53629I$		
$b = 0.043533 - 0.616047I$		
$u = -0.437725 + 1.005550I$	$3.61840 - 3.26075I$	$-5.09230 + 4.26286I$
$a = -0.334414 - 0.437341I$		
$b = -0.25301 - 1.48886I$		
$u = -0.437725 - 1.005550I$	$3.61840 + 3.26075I$	$-5.09230 - 4.26286I$
$a = -0.334414 + 0.437341I$		
$b = -0.25301 + 1.48886I$		
$u = 1.089750 + 0.225697I$	$-0.91267 - 5.73534I$	$-1.12017 + 7.06636I$
$a = 0.039837 - 0.892510I$		
$b = 0.395593 + 0.812604I$		
$u = 1.089750 - 0.225697I$	$-0.91267 + 5.73534I$	$-1.12017 - 7.06636I$
$a = 0.039837 + 0.892510I$		
$b = 0.395593 - 0.812604I$		
$u = -0.806126 + 0.192419I$	$1.19791 - 2.24783I$	$2.34914 + 3.96490I$
$a = -1.085430 + 0.572644I$		
$b = -0.686120 - 0.967795I$		
$u = -0.806126 - 0.192419I$	$1.19791 + 2.24783I$	$2.34914 - 3.96490I$
$a = -1.085430 - 0.572644I$		
$b = -0.686120 + 0.967795I$		

### III. u-Polynomials

Crossings	u-Polynomials at each crossing
$c_1$	$(u^8 - 2u^6 + \dots - u + 1)(u^{54} - u^{53} + \dots - 14u + 7)$
$c_2$	$(u^8 + 4u^6 + \dots - u + 1)(u^{54} - u^{53} + \dots + 9u^2 + 1)$
$c_3$	$(u^8 + u^7 + \dots + 4u^2 + 1)(u^{54} - 2u^{53} + \dots - 75u + 19)$
$c_4$	$(u^8 - u^5 - u^4 + u + 1)(u^{54} + 5u^{53} + \dots + u + 2)$
$c_5$	$(u^8 - 4u^7 + 10u^6 - 17u^5 + 23u^4 - 22u^3 + 14u^2 - 5u + 1)$ $\cdot (u^{54} + 23u^{53} + \dots + 406u + 49)$
$c_6$	$(u^8 - 2u^6 + \dots + u + 1)(u^{54} - u^{53} + \dots - 14u + 7)$
$c_7$	$(u^8 - 2u^6 + \dots + 4u + 1)(u^{54} + 7u^{53} + \dots + 123u + 49)$
$c_8$	$(u^8 + 4u^6 + \dots + u + 1)(u^{54} - u^{53} + \dots + 9u^2 + 1)$
$c_9$	$(u^8 - u^7 - u^4 + u^3 + 1)(u^{54} - 3u^{51} + \dots + 19u + 1)$
$c_{10}$	$(u^8 - u^7 + \dots + 4u^2 + 1)(u^{54} - 2u^{53} + \dots - 75u + 19)$

#### IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
$c_1, c_6$	$(y^8 - 4y^7 + 10y^6 - 17y^5 + 23y^4 - 22y^3 + 14y^2 - 5y + 1)$ $\cdot (y^{54} - 23y^{53} + \dots - 406y + 49)$
$c_2, c_8$	$(y^8 + 8y^7 + 26y^6 + 47y^5 + 55y^4 + 42y^3 + 22y^2 + 7y + 1)$ $\cdot (y^{54} + 33y^{53} + \dots + 18y + 1)$
$c_3, c_{10}$	$(y^8 + 7y^7 + 22y^6 + 42y^5 + 55y^4 + 47y^3 + 26y^2 + 8y + 1)$ $\cdot (y^{54} + 36y^{53} + \dots + 911y + 361)$
$c_4$	$(y^8 - 2y^6 + \dots - y + 1)(y^{54} - 3y^{53} + \dots + 43y + 4)$
$c_5$	$(y^8 + 4y^7 + 10y^6 + 23y^5 + 23y^4 + 10y^3 + 22y^2 + 3y + 1)$ $\cdot (y^{54} + 21y^{53} + \dots + 31458y + 2401)$
$c_7$	$(y^8 - 4y^7 + 4y^6 + 3y^5 + 2y^4 + 4y^3 + 4y^2 - 4y + 1)$ $\cdot (y^{54} - 15y^{53} + \dots - 60601y + 2401)$
$c_9$	$(y^8 - y^7 + \dots - 2y^2 + 1)(y^{54} + 42y^{52} + \dots - 17y + 1)$