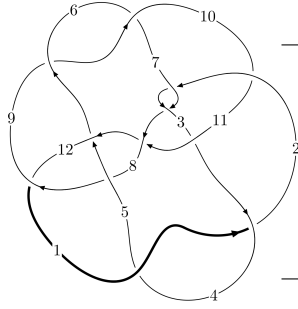
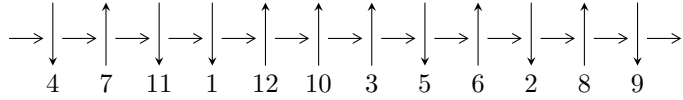


12a₁₁₁₁ (K12a₁₁₁₁)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 6.44358 \times 10^{663} u^{142} - 3.78775 \times 10^{662} u^{141} + \dots + 6.82477 \times 10^{666} b + 1.57113 \times 10^{666}, \\ 3.65254 \times 10^{666} u^{142} - 5.30227 \times 10^{666} u^{141} + \dots + 7.02951 \times 10^{668} a + 1.55949 \times 10^{669}, \\ u^{143} - u^{142} + \dots + 386u + 206 \rangle$$

$$I_2^u = \langle 2.25450 \times 10^{32} u^{39} + 6.59613 \times 10^{31} u^{38} + \dots + 9.63661 \times 10^{32} b + 2.18292 \times 10^{33}, \\ 1.16107 \times 10^{33} u^{39} - 1.36968 \times 10^{33} u^{38} + \dots + 1.92732 \times 10^{33} a + 1.04728 \times 10^{34}, u^{40} - 13u^{38} + \dots + 10u + \dots \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 183 representations.

¹The 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>).

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

$$\mathbf{I. } I_1^u = \langle 6.44 \times 10^{663} u^{142} - 3.79 \times 10^{662} u^{141} + \dots + 6.82 \times 10^{666} b + 1.57 \times 10^{666}, 3.65 \times 10^{666} u^{142} - 5.30 \times 10^{666} u^{141} + \dots + 7.03 \times 10^{668} a + 1.56 \times 10^{669}, u^{143} - u^{142} + \dots + 386u + 206 \rangle$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -0.00519601u^{142} + 0.00754286u^{141} + \dots + 4.73232u - 2.21849 \\ -0.000944146u^{142} + 0.0000555000u^{141} + \dots - 4.11931u - 0.230210 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.00264122u^{142} - 0.00202716u^{141} + \dots + 12.5165u - 1.10038 \\ -0.00174240u^{142} - 0.00124465u^{141} + \dots + 0.502531u - 0.481627 \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} -0.00555176u^{142} + 0.00903576u^{141} + \dots + 3.46011u - 2.53093 \\ -0.000701503u^{142} + 0.0000127943u^{141} + \dots - 5.02587u - 0.308388 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.00195969u^{142} - 0.00530041u^{141} + \dots - 7.01821u - 2.88220 \\ 0.000282759u^{142} + 0.00134612u^{141} + \dots + 1.62966u - 0.410901 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.00614015u^{142} + 0.00759836u^{141} + \dots + 0.613008u - 2.44871 \\ -0.000944146u^{142} + 0.0000555000u^{141} + \dots - 4.11931u - 0.230210 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.00621299u^{142} - 0.00774462u^{141} + \dots - 7.23321u + 5.22982 \\ 0.000367164u^{142} - 0.00594574u^{141} + \dots + 6.69531u + 1.01883 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.00434444u^{142} - 0.00318853u^{141} + \dots + 10.6877u - 3.04330 \\ 0.000852588u^{142} + 0.000829582u^{141} + \dots + 1.86680u - 0.404961 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.00381391u^{142} - 0.00485688u^{141} + \dots - 13.7966u + 4.54115 \\ 0.00582786u^{142} + 0.000899180u^{141} + \dots - 2.10823u - 0.785313 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-0.0323696u^{142} + 0.0169279u^{141} + \dots + 14.8197u + 8.68835$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{143} - 9u^{142} + \dots - 60u + 1$
c_2, c_7	$u^{143} + u^{142} + \dots + 386u - 206$
c_3	$u^{143} + 5u^{142} + \dots - 201714210u + 12357493$
c_5	$u^{143} - 4u^{142} + \dots - 117392u - 5947$
c_6, c_9	$u^{143} - 9u^{142} + \dots - 29761u + 6317$
c_8	$u^{143} - 3u^{142} + \dots + 165724u + 28690$
c_{10}	$u^{143} + 3u^{142} + \dots - 6317830u + 1664477$
c_{11}	$u^{143} + 5u^{142} + \dots + 452720672761u - 54947494499$
c_{12}	$u^{143} + 2u^{142} + \dots + 393169u - 36221$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{143} + 133y^{142} + \dots - 532y - 1$
c_2, c_7	$y^{143} - 107y^{142} + \dots - 4268y - 42436$
c_3	$y^{143} + 61y^{142} + \dots + 345432706394200y - 152707633245049$
c_5	$y^{143} - 36y^{142} + \dots + 1571191116y - 35366809$
c_6, c_9	$y^{143} - 147y^{142} + \dots - 2851394811y - 39904489$
c_8	$y^{143} + 31y^{142} + \dots - 38326890024y - 823116100$
c_{10}	$y^{143} + 77y^{142} + \dots - 1249728511533410y - 2770483683529$
c_{11}	$y^{143} - 107y^{142} + \dots - 1.85 \times 10^{23}y - 3.02 \times 10^{21}$
c_{12}	$y^{143} + 50y^{142} + \dots - 57389804335y - 1311960841$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.063249 + 0.982291I$		
$a = 0.063883 - 0.226508I$	$-1.21642 - 3.83650I$	0
$b = 0.508736 + 0.372416I$		
$u = 0.063249 - 0.982291I$		
$a = 0.063883 + 0.226508I$	$-1.21642 + 3.83650I$	0
$b = 0.508736 - 0.372416I$		
$u = 0.955376 + 0.175175I$		
$a = 0.20674 - 1.62306I$	$-0.19601 + 2.73913I$	0
$b = -0.514277 + 0.891938I$		
$u = 0.955376 - 0.175175I$		
$a = 0.20674 + 1.62306I$	$-0.19601 - 2.73913I$	0
$b = -0.514277 - 0.891938I$		
$u = 0.726188 + 0.618520I$		
$a = 0.112078 - 0.271226I$	$0.91442 + 6.37781I$	0
$b = 0.774241 - 0.065819I$		
$u = 0.726188 - 0.618520I$		
$a = 0.112078 + 0.271226I$	$0.91442 - 6.37781I$	0
$b = 0.774241 + 0.065819I$		
$u = 0.930195 + 0.112377I$		
$a = -3.52277 - 1.80840I$	$7.99535 + 0.15590I$	0
$b = 0.005674 + 0.466916I$		
$u = 0.930195 - 0.112377I$		
$a = -3.52277 + 1.80840I$	$7.99535 - 0.15590I$	0
$b = 0.005674 - 0.466916I$		
$u = 0.381192 + 0.854280I$		
$a = -1.068870 - 0.053312I$	$6.44515 - 4.49680I$	0
$b = 0.51243 + 1.39432I$		
$u = 0.381192 - 0.854280I$		
$a = -1.068870 + 0.053312I$	$6.44515 + 4.49680I$	0
$b = 0.51243 - 1.39432I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.072310 + 0.175968I$ $a = -0.39712 - 2.28045I$ $b = 0.55071 + 1.62247I$	$3.98724 - 5.90791I$	0
$u = -1.072310 - 0.175968I$ $a = -0.39712 + 2.28045I$ $b = 0.55071 - 1.62247I$	$3.98724 + 5.90791I$	0
$u = -1.101400 + 0.087788I$ $a = 0.61298 + 1.66555I$ $b = -0.224702 - 0.818323I$	$1.245020 - 0.471467I$	0
$u = -1.101400 - 0.087788I$ $a = 0.61298 - 1.66555I$ $b = -0.224702 + 0.818323I$	$1.245020 + 0.471467I$	0
$u = -0.367676 + 0.811167I$ $a = 0.783968 + 0.422049I$ $b = -0.383251 + 0.925400I$	$1.98662 + 2.18393I$	0
$u = -0.367676 - 0.811167I$ $a = 0.783968 - 0.422049I$ $b = -0.383251 - 0.925400I$	$1.98662 - 2.18393I$	0
$u = 0.675904 + 0.579161I$ $a = -0.227068 + 0.923405I$ $b = -0.0231895 - 0.0517523I$	$0.91339 - 2.14644I$	0
$u = 0.675904 - 0.579161I$ $a = -0.227068 - 0.923405I$ $b = -0.0231895 + 0.0517523I$	$0.91339 + 2.14644I$	0
$u = -0.438458 + 0.767054I$ $a = -0.144781 - 0.508785I$ $b = 0.718464 + 0.514134I$	$3.41792 - 2.89335I$	0
$u = -0.438458 - 0.767054I$ $a = -0.144781 + 0.508785I$ $b = 0.718464 - 0.514134I$	$3.41792 + 2.89335I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.112580 + 0.175274I$ $a = 0.22479 - 2.08448I$ $b = 0.026394 + 0.583340I$	$3.05740 - 0.82586I$	0
$u = -1.112580 - 0.175274I$ $a = 0.22479 + 2.08448I$ $b = 0.026394 - 0.583340I$	$3.05740 + 0.82586I$	0
$u = 0.138732 + 1.135660I$ $a = -0.0619898 + 0.1217210I$ $b = -0.521109 + 1.211600I$	$9.61783 + 4.35986I$	0
$u = 0.138732 - 1.135660I$ $a = -0.0619898 - 0.1217210I$ $b = -0.521109 - 1.211600I$	$9.61783 - 4.35986I$	0
$u = -0.519039 + 1.020730I$ $a = -0.094411 - 0.193102I$ $b = 0.287209 - 0.335176I$	$-0.60536 - 3.38632I$	0
$u = -0.519039 - 1.020730I$ $a = -0.094411 + 0.193102I$ $b = 0.287209 + 0.335176I$	$-0.60536 + 3.38632I$	0
$u = 1.142070 + 0.133955I$ $a = -0.89388 - 1.54878I$ $b = 0.748829 + 0.894632I$	$7.40438 + 0.58958I$	0
$u = 1.142070 - 0.133955I$ $a = -0.89388 + 1.54878I$ $b = 0.748829 - 0.894632I$	$7.40438 - 0.58958I$	0
$u = -0.056660 + 0.847707I$ $a = -0.334580 - 0.292185I$ $b = -0.874752 + 0.867142I$	$4.48567 + 8.36278I$	0
$u = -0.056660 - 0.847707I$ $a = -0.334580 + 0.292185I$ $b = -0.874752 - 0.867142I$	$4.48567 - 8.36278I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.414095 + 1.094390I$ $a = -0.0007776 - 0.1280520I$ $b = 0.494924 - 0.982397I$	$8.82654 + 4.52566I$	0
$u = 0.414095 - 1.094390I$ $a = -0.0007776 + 0.1280520I$ $b = 0.494924 + 0.982397I$	$8.82654 - 4.52566I$	0
$u = 1.092630 + 0.421283I$ $a = 0.74496 + 2.20624I$ $b = 0.43448 - 2.43810I$	$8.68386 + 9.22388I$	0
$u = 1.092630 - 0.421283I$ $a = 0.74496 - 2.20624I$ $b = 0.43448 + 2.43810I$	$8.68386 - 9.22388I$	0
$u = -1.17738$ $a = -0.351660$ $b = -1.14009$	4.79177	0
$u = 1.170490 + 0.227959I$ $a = 0.06674 - 2.50737I$ $b = -0.485949 + 0.684127I$	$7.55504 + 0.96536I$	0
$u = 1.170490 - 0.227959I$ $a = 0.06674 + 2.50737I$ $b = -0.485949 - 0.684127I$	$7.55504 - 0.96536I$	0
$u = -1.132050 + 0.389913I$ $a = 0.364665 - 1.095350I$ $b = 0.480110 + 0.823925I$	$1.69118 - 1.59714I$	0
$u = -1.132050 - 0.389913I$ $a = 0.364665 + 1.095350I$ $b = 0.480110 - 0.823925I$	$1.69118 + 1.59714I$	0
$u = 1.199240 + 0.023932I$ $a = 2.03873 + 1.26924I$ $b = -3.16106 - 1.40806I$	$11.9989 + 7.9336I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.199240 - 0.023932I$ $a = 2.03873 - 1.26924I$ $b = -3.16106 + 1.40806I$	$11.9989 - 7.9336I$	0
$u = 1.203270 + 0.121115I$ $a = -0.537471 - 0.335218I$ $b = 1.57872 + 0.08308I$	$7.84470 + 2.02497I$	0
$u = 1.203270 - 0.121115I$ $a = -0.537471 + 0.335218I$ $b = 1.57872 - 0.08308I$	$7.84470 - 2.02497I$	0
$u = -1.146450 + 0.390646I$ $a = -0.34421 + 1.62819I$ $b = -0.78616 - 1.72700I$	$4.47571 - 6.67031I$	0
$u = -1.146450 - 0.390646I$ $a = -0.34421 - 1.62819I$ $b = -0.78616 + 1.72700I$	$4.47571 + 6.67031I$	0
$u = -0.647983 + 0.435098I$ $a = 0.536918 - 0.265762I$ $b = 0.440412 + 0.208288I$	$1.18421 - 1.10267I$	0
$u = -0.647983 - 0.435098I$ $a = 0.536918 + 0.265762I$ $b = 0.440412 - 0.208288I$	$1.18421 + 1.10267I$	0
$u = -1.187710 + 0.294499I$ $a = 1.29734 - 0.94120I$ $b = -1.31125 + 1.40213I$	$7.89180 - 5.36913I$	0
$u = -1.187710 - 0.294499I$ $a = 1.29734 + 0.94120I$ $b = -1.31125 - 1.40213I$	$7.89180 + 5.36913I$	0
$u = 1.148770 + 0.427323I$ $a = 0.555875 + 0.547182I$ $b = 0.710840 - 0.929994I$	$9.41055 + 3.01798I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.148770 - 0.427323I$ $a = 0.555875 - 0.547182I$ $b = 0.710840 + 0.929994I$	$9.41055 - 3.01798I$	0
$u = -1.228380 + 0.131927I$ $a = -0.86250 - 2.18922I$ $b = 1.99483 + 2.16450I$	$12.16680 - 2.21504I$	0
$u = -1.228380 - 0.131927I$ $a = -0.86250 + 2.18922I$ $b = 1.99483 - 2.16450I$	$12.16680 + 2.21504I$	0
$u = -0.137014 + 1.233950I$ $a = 0.0818318 - 0.0258247I$ $b = -0.499757 - 1.159650I$	$10.7483 - 13.2936I$	0
$u = -0.137014 - 1.233950I$ $a = 0.0818318 + 0.0258247I$ $b = -0.499757 + 1.159650I$	$10.7483 + 13.2936I$	0
$u = -1.242610 + 0.004364I$ $a = -0.397205 + 1.315590I$ $b = 1.50252 - 1.28995I$	$7.90357 - 4.28811I$	0
$u = -1.242610 - 0.004364I$ $a = -0.397205 - 1.315590I$ $b = 1.50252 + 1.28995I$	$7.90357 + 4.28811I$	0
$u = 1.216810 + 0.324499I$ $a = -0.37307 - 1.39525I$ $b = 0.222789 + 1.294990I$	$3.60537 + 4.86672I$	0
$u = 1.216810 - 0.324499I$ $a = -0.37307 + 1.39525I$ $b = 0.222789 - 1.294990I$	$3.60537 - 4.86672I$	0
$u = 0.452284 + 0.584462I$ $a = -1.29778 + 1.31918I$ $b = 0.687329 - 0.145806I$	$5.30193 + 0.39915I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.452284 - 0.584462I$ $a = -1.29778 - 1.31918I$ $b = 0.687329 + 0.145806I$	$5.30193 - 0.39915I$	0
$u = -1.263700 + 0.102951I$ $a = 0.96704 + 2.04160I$ $b = -1.98089 - 2.27803I$	$12.32160 - 2.09273I$	0
$u = -1.263700 - 0.102951I$ $a = 0.96704 - 2.04160I$ $b = -1.98089 + 2.27803I$	$12.32160 + 2.09273I$	0
$u = -0.000099 + 1.273440I$ $a = -0.266459 - 0.109975I$ $b = 0.328375 + 1.179610I$	$8.54655 - 3.12776I$	0
$u = -0.000099 - 1.273440I$ $a = -0.266459 + 0.109975I$ $b = 0.328375 - 1.179610I$	$8.54655 + 3.12776I$	0
$u = 1.282600 + 0.014675I$ $a = -0.87351 - 1.44323I$ $b = -0.326661 + 1.089320I$	$12.75150 + 0.08824I$	0
$u = 1.282600 - 0.014675I$ $a = -0.87351 + 1.44323I$ $b = -0.326661 - 1.089320I$	$12.75150 - 0.08824I$	0
$u = 1.283650 + 0.099596I$ $a = -0.189102 - 1.357530I$ $b = -1.01000 + 1.13209I$	$8.66625 + 5.69477I$	0
$u = 1.283650 - 0.099596I$ $a = -0.189102 + 1.357530I$ $b = -1.01000 - 1.13209I$	$8.66625 - 5.69477I$	0
$u = 1.245400 + 0.340280I$ $a = -0.05904 - 1.66184I$ $b = -0.68541 + 1.43978I$	$2.51631 + 5.42902I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.245400 - 0.340280I$ $a = -0.05904 + 1.66184I$ $b = -0.68541 - 1.43978I$	$2.51631 - 5.42902I$	0
$u = 0.061353 + 0.690684I$ $a = 0.241714 - 0.226123I$ $b = -0.579378 - 0.614296I$	$-1.15731 - 1.58205I$	$-4.52296 + 4.73648I$
$u = 0.061353 - 0.690684I$ $a = 0.241714 + 0.226123I$ $b = -0.579378 + 0.614296I$	$-1.15731 + 1.58205I$	$-4.52296 - 4.73648I$
$u = -0.069149 + 1.306240I$ $a = 0.1154510 + 0.0323087I$ $b = 0.054589 + 0.997768I$	$4.39607 - 0.57202I$	0
$u = -0.069149 - 1.306240I$ $a = 0.1154510 - 0.0323087I$ $b = 0.054589 - 0.997768I$	$4.39607 + 0.57202I$	0
$u = -1.268460 + 0.396111I$ $a = -0.09752 + 1.90763I$ $b = -0.766896 - 1.066460I$	$8.2767 - 12.8503I$	0
$u = -1.268460 - 0.396111I$ $a = -0.09752 - 1.90763I$ $b = -0.766896 + 1.066460I$	$8.2767 + 12.8503I$	0
$u = -1.326360 + 0.086161I$ $a = 1.09028 - 1.22494I$ $b = 0.332132 + 0.867042I$	$14.0258 - 8.7652I$	0
$u = -1.326360 - 0.086161I$ $a = 1.09028 + 1.22494I$ $b = 0.332132 - 0.867042I$	$14.0258 + 8.7652I$	0
$u = -1.294360 + 0.311963I$ $a = -0.10243 - 1.85655I$ $b = 0.343024 + 1.204900I$	$8.23976 - 5.40240I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.294360 - 0.311963I$ $a = -0.10243 + 1.85655I$ $b = 0.343024 - 1.204900I$	$8.23976 + 5.40240I$	0
$u = 1.270520 + 0.429126I$ $a = 0.069301 + 1.391300I$ $b = 0.504901 - 0.869448I$	$2.60070 + 8.76051I$	0
$u = 1.270520 - 0.429126I$ $a = 0.069301 - 1.391300I$ $b = 0.504901 + 0.869448I$	$2.60070 - 8.76051I$	0
$u = 1.320710 + 0.277205I$ $a = 0.852707 + 0.995391I$ $b = -0.71128 - 1.31855I$	$8.97044 - 4.30199I$	0
$u = 1.320710 - 0.277205I$ $a = 0.852707 - 0.995391I$ $b = -0.71128 + 1.31855I$	$8.97044 + 4.30199I$	0
$u = 1.352480 + 0.098069I$ $a = -0.065022 + 1.033040I$ $b = 1.01322 - 1.04325I$	$8.15187 + 0.31586I$	0
$u = 1.352480 - 0.098069I$ $a = -0.065022 - 1.033040I$ $b = 1.01322 + 1.04325I$	$8.15187 - 0.31586I$	0
$u = 0.023588 + 0.631840I$ $a = -0.168768 + 0.797811I$ $b = 0.657643 - 0.753052I$	$4.13106 + 1.83870I$	$2.89920 - 5.10545I$
$u = 0.023588 - 0.631840I$ $a = -0.168768 - 0.797811I$ $b = 0.657643 + 0.753052I$	$4.13106 - 1.83870I$	$2.89920 + 5.10545I$
$u = 1.363080 + 0.232385I$ $a = -0.27368 + 1.67609I$ $b = 0.529403 - 1.139360I$	$9.03396 + 6.11589I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.363080 - 0.232385I$ $a = -0.27368 - 1.67609I$ $b = 0.529403 + 1.139360I$	$9.03396 - 6.11589I$	0
$u = 0.045812 + 0.609386I$ $a = -1.108370 + 0.648971I$ $b = -0.889511 - 0.787080I$	$4.28684 + 2.15509I$	$3.24586 - 3.64837I$
$u = 0.045812 - 0.609386I$ $a = -1.108370 - 0.648971I$ $b = -0.889511 + 0.787080I$	$4.28684 - 2.15509I$	$3.24586 + 3.64837I$
$u = -1.383550 + 0.233350I$ $a = 0.013966 + 0.990193I$ $b = -0.085147 - 0.880038I$	$4.19028 - 0.70544I$	0
$u = -1.383550 - 0.233350I$ $a = 0.013966 - 0.990193I$ $b = -0.085147 + 0.880038I$	$4.19028 + 0.70544I$	0
$u = -0.538619 + 0.253117I$ $a = -0.668483 + 0.818787I$ $b = 0.996042 - 0.928731I$	$2.24221 + 3.91882I$	$1.00424 + 8.75922I$
$u = -0.538619 - 0.253117I$ $a = -0.668483 - 0.818787I$ $b = 0.996042 + 0.928731I$	$2.24221 - 3.91882I$	$1.00424 - 8.75922I$
$u = -1.26552 + 0.63772I$ $a = -0.447370 + 0.477985I$ $b = 0.225152 - 0.544877I$	$5.36424 - 2.94428I$	0
$u = -1.26552 - 0.63772I$ $a = -0.447370 - 0.477985I$ $b = 0.225152 + 0.544877I$	$5.36424 + 2.94428I$	0
$u = -1.44031 + 0.11661I$ $a = -0.806252 + 1.145630I$ $b = -0.227588 - 0.947114I$	$12.99960 + 1.31290I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.44031 - 0.11661I$ $a = -0.806252 - 1.145630I$ $b = -0.227588 + 0.947114I$	$12.99960 - 1.31290I$	0
$u = -0.506720 + 0.123931I$ $a = -0.574801 - 0.058404I$ $b = -1.082530 + 0.234839I$	$-0.721640 - 0.771950I$	$6.7895 + 14.0300I$
$u = -0.506720 - 0.123931I$ $a = -0.574801 + 0.058404I$ $b = -1.082530 - 0.234839I$	$-0.721640 + 0.771950I$	$6.7895 - 14.0300I$
$u = 0.402474 + 0.319283I$ $a = 0.537712 - 0.216737I$ $b = -0.917840 - 0.189594I$	$-1.67511 - 0.18580I$	$-8.35328 - 2.78368I$
$u = 0.402474 - 0.319283I$ $a = 0.537712 + 0.216737I$ $b = -0.917840 + 0.189594I$	$-1.67511 + 0.18580I$	$-8.35328 + 2.78368I$
$u = -1.41900 + 0.48671I$ $a = -0.19963 + 1.57454I$ $b = -1.03651 - 1.61454I$	$14.5541 - 10.0372I$	0
$u = -1.41900 - 0.48671I$ $a = -0.19963 - 1.57454I$ $b = -1.03651 + 1.61454I$	$14.5541 + 10.0372I$	0
$u = 0.326329 + 0.354089I$ $a = -1.38407 + 2.38463I$ $b = -0.523183 + 0.887480I$	$7.76832 + 0.61589I$	$6.49655 + 1.36773I$
$u = 0.326329 - 0.354089I$ $a = -1.38407 - 2.38463I$ $b = -0.523183 - 0.887480I$	$7.76832 - 0.61589I$	$6.49655 - 1.36773I$
$u = -1.46631 + 0.42183I$ $a = -0.00955 - 1.54567I$ $b = 0.97782 + 1.64590I$	$14.6556 - 9.7915I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.46631 - 0.42183I$ $a = -0.00955 + 1.54567I$ $b = 0.97782 - 1.64590I$	$14.6556 + 9.7915I$	0
$u = 0.08385 + 1.52484I$ $a = -0.0154888 - 0.0442436I$ $b = 0.157122 - 0.871343I$	$3.72293 + 6.09076I$	0
$u = 0.08385 - 1.52484I$ $a = -0.0154888 + 0.0442436I$ $b = 0.157122 + 0.871343I$	$3.72293 - 6.09076I$	0
$u = 0.033490 + 0.462210I$ $a = 1.016220 + 0.653512I$ $b = 0.059175 - 0.524413I$	$0.27039 - 1.57105I$	$1.72390 + 2.77914I$
$u = 0.033490 - 0.462210I$ $a = 1.016220 - 0.653512I$ $b = 0.059175 + 0.524413I$	$0.27039 + 1.57105I$	$1.72390 - 2.77914I$
$u = 1.45411 + 0.52052I$ $a = -0.17128 - 1.53306I$ $b = -0.94035 + 1.62089I$	$15.8091 + 19.4094I$	0
$u = 1.45411 - 0.52052I$ $a = -0.17128 + 1.53306I$ $b = -0.94035 - 1.62089I$	$15.8091 - 19.4094I$	0
$u = 1.41627 + 0.63110I$ $a = 0.612007 + 0.746028I$ $b = 0.225349 - 1.289630I$	$13.52180 + 2.10936I$	0
$u = 1.41627 - 0.63110I$ $a = 0.612007 - 0.746028I$ $b = 0.225349 + 1.289630I$	$13.52180 - 2.10936I$	0
$u = 1.47709 + 0.50382I$ $a = 0.242450 + 1.148430I$ $b = 0.76890 - 1.24143I$	$9.57202 + 6.91435I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.47709 - 0.50382I$ $a = 0.242450 - 1.148430I$ $b = 0.76890 + 1.24143I$	$9.57202 - 6.91435I$	0
$u = 1.46578 + 0.56954I$ $a = 0.26843 + 1.44708I$ $b = 0.64578 - 1.58780I$	$13.2631 + 9.6735I$	0
$u = 1.46578 - 0.56954I$ $a = 0.26843 - 1.44708I$ $b = 0.64578 + 1.58780I$	$13.2631 - 9.6735I$	0
$u = -1.46778 + 0.57592I$ $a = -0.285520 + 1.098320I$ $b = -0.57764 - 1.36518I$	$9.01700 - 6.13391I$	0
$u = -1.46778 - 0.57592I$ $a = -0.285520 - 1.098320I$ $b = -0.57764 + 1.36518I$	$9.01700 + 6.13391I$	0
$u = -1.50537 + 0.56209I$ $a = -0.605416 + 0.816114I$ $b = -0.294985 - 1.039090I$	$13.38250 - 3.51054I$	0
$u = -1.50537 - 0.56209I$ $a = -0.605416 - 0.816114I$ $b = -0.294985 + 1.039090I$	$13.38250 + 3.51054I$	0
$u = -1.52358 + 0.53502I$ $a = 0.052891 - 1.149630I$ $b = 0.90478 + 1.28766I$	$9.2072 - 13.0692I$	0
$u = -1.52358 - 0.53502I$ $a = 0.052891 + 1.149630I$ $b = 0.90478 - 1.28766I$	$9.2072 + 13.0692I$	0
$u = -0.378863 + 0.061177I$ $a = 3.47517 + 0.31088I$ $b = 0.208210 - 0.137008I$	$2.36514 - 0.02734I$	$14.6346 - 8.8651I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.378863 - 0.061177I$ $a = 3.47517 - 0.31088I$ $b = 0.208210 + 0.137008I$	$2.36514 + 0.02734I$	$14.6346 + 8.8651I$
$u = -1.52097 + 0.66108I$ $a = 0.525718 - 0.650081I$ $b = 0.256543 + 1.083600I$	$14.9595 + 6.2651I$	0
$u = -1.52097 - 0.66108I$ $a = 0.525718 + 0.650081I$ $b = 0.256543 - 1.083600I$	$14.9595 - 6.2651I$	0
$u = 1.61114 + 0.50378I$ $a = -0.040164 - 0.908903I$ $b = -0.769459 + 1.129560I$	$9.27429 + 1.45996I$	0
$u = 1.61114 - 0.50378I$ $a = -0.040164 + 0.908903I$ $b = -0.769459 - 1.129560I$	$9.27429 - 1.45996I$	0
$u = -0.049562 + 0.260533I$ $a = -1.85903 - 3.88917I$ $b = 0.723247 - 1.123540I$	$8.61124 + 0.61804I$	$8.21630 - 0.05275I$
$u = -0.049562 - 0.260533I$ $a = -1.85903 + 3.88917I$ $b = 0.723247 + 1.123540I$	$8.61124 - 0.61804I$	$8.21630 + 0.05275I$
$u = 0.235216 + 0.084528I$ $a = 6.89054 + 0.71997I$ $b = -0.94931 - 1.06804I$	$9.11740 + 7.90608I$	$3.50443 - 2.49114I$
$u = 0.235216 - 0.084528I$ $a = 6.89054 - 0.71997I$ $b = -0.94931 + 1.06804I$	$9.11740 - 7.90608I$	$3.50443 + 2.49114I$
$u = 1.59586 + 0.83058I$ $a = -0.274602 - 0.487949I$ $b = -0.478287 + 0.852859I$	$11.67580 + 3.39507I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.59586 - 0.83058I$ $a = -0.274602 + 0.487949I$ $b = -0.478287 - 0.852859I$	$11.67580 - 3.39507I$	0
$u = -0.093991 + 0.153977I$ $a = -5.04826 - 4.48188I$ $b = 0.097290 - 0.960603I$	$4.39109 - 4.58923I$	$8.58393 + 3.88796I$
$u = -0.093991 - 0.153977I$ $a = -5.04826 + 4.48188I$ $b = 0.097290 + 0.960603I$	$4.39109 + 4.58923I$	$8.58393 - 3.88796I$

$$\text{II. } I_2^u = \langle 2.25 \times 10^{32} u^{39} + 6.60 \times 10^{31} u^{38} + \dots + 9.64 \times 10^{32} b + 2.18 \times 10^{33}, 1.16 \times 10^{33} u^{39} - 1.37 \times 10^{33} u^{38} + \dots + 1.93 \times 10^{33} a + 1.05 \times 10^{34}, u^{40} - 13u^{38} + \dots + 10u + 2 \rangle$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -0.602425u^{39} + 0.710664u^{38} + \dots - 10.7087u - 5.43388 \\ -0.233952u^{39} - 0.0684487u^{38} + \dots - 3.64438u - 2.26524 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3.89958u^{39} + 1.98200u^{38} + \dots - 11.6914u + 2.69034 \\ 0.535316u^{39} - 0.385469u^{38} + \dots + 6.47222u + 3.57782 \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} -0.389667u^{39} + 0.658923u^{38} + \dots - 9.77559u - 5.03479 \\ 0.0768492u^{39} - 0.177774u^{38} + \dots - 2.80321u - 1.96963 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.789231u^{39} + 1.42092u^{38} + \dots - 35.2177u - 10.3912 \\ -0.728506u^{39} + 0.00513893u^{38} + \dots - 8.26562u - 4.47121 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.836377u^{39} + 0.642215u^{38} + \dots - 14.3530u - 7.69911 \\ -0.233952u^{39} - 0.0684487u^{38} + \dots - 3.64438u - 2.26524 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1.23800u^{39} - 3.10273u^{38} + \dots + 45.8136u + 12.4713 \\ 1.07125u^{39} - 0.511122u^{38} + \dots + 9.54617u + 3.68656 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.296716u^{39} - 3.40902u^{38} + \dots + 66.5703u + 19.8151 \\ 1.54769u^{39} - 0.319304u^{38} + \dots + 17.7910u + 8.15344 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -11.5749u^{39} - 11.3593u^{38} + \dots + 155.304u + 23.8340 \\ 0.972865u^{39} + 0.450902u^{38} + \dots - 6.38197u - 1.33694 \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = 11.0509u^{39} - 0.255749u^{38} + \dots + 53.8794u + 28.7186$$

(iv) u -Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{40} - 2u^{39} + \dots - 10u + 1$
c_2	$u^{40} - 13u^{38} + \dots + 10u + 2$
c_3	$u^{40} - 6u^{39} + \dots - 4u + 1$
c_4	$u^{40} + 2u^{39} + \dots + 10u + 1$
c_5	$u^{40} - u^{39} + \dots - 12u + 1$
c_6	$u^{40} + 6u^{39} + \dots + 23u + 1$
c_7	$u^{40} - 13u^{38} + \dots - 10u + 2$
c_8	$u^{40} - 10u^{39} + \dots + 4u + 2$
c_9	$u^{40} - 6u^{39} + \dots - 23u + 1$
c_{10}	$u^{40} + 9u^{38} + \dots - 6u + 1$
c_{11}	$u^{40} + 6u^{39} + \dots - 529u + 169$
c_{12}	$u^{40} - 3u^{39} + \dots + 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{40} + 38y^{39} + \dots + 12y + 1$
c_2, c_7	$y^{40} - 26y^{39} + \dots - 80y + 4$
c_3	$y^{40} + 14y^{39} + \dots + 32y + 1$
c_5	$y^{40} - 7y^{39} + \dots - 40y + 1$
c_6, c_9	$y^{40} - 46y^{39} + \dots - 73y + 1$
c_8	$y^{40} + 4y^{39} + \dots + 44y + 4$
c_{10}	$y^{40} + 18y^{39} + \dots + 30y + 1$
c_{11}	$y^{40} - 30y^{39} + \dots - 65549y + 28561$
c_{12}	$y^{40} + 15y^{39} + \dots + 15y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.436942 + 0.894486I$ $a = 0.478329 - 0.120169I$ $b = -0.141204 - 0.986187I$	$2.74653 - 2.20053I$	$8.78838 + 4.10215I$
$u = 0.436942 - 0.894486I$ $a = 0.478329 + 0.120169I$ $b = -0.141204 + 0.986187I$	$2.74653 + 2.20053I$	$8.78838 - 4.10215I$
$u = 0.956426 + 0.080807I$ $a = 4.11642 + 3.38814I$ $b = -0.070273 - 0.328741I$	$8.06544 + 0.14337I$	$100.3401 + 38.7332I$
$u = 0.956426 - 0.080807I$ $a = 4.11642 - 3.38814I$ $b = -0.070273 + 0.328741I$	$8.06544 - 0.14337I$	$100.3401 - 38.7332I$
$u = -0.897511 + 0.239414I$ $a = 2.47541 - 1.62999I$ $b = -0.97913 + 1.58191I$	$9.97145 - 8.53202I$	$10.14817 + 7.01857I$
$u = -0.897511 - 0.239414I$ $a = 2.47541 + 1.62999I$ $b = -0.97913 - 1.58191I$	$9.97145 + 8.53202I$	$10.14817 - 7.01857I$
$u = 0.077174 + 1.087440I$ $a = -0.235696 - 0.115621I$ $b = 0.430181 - 1.151120I$	$7.78065 + 3.32776I$	$4.24987 - 3.07785I$
$u = 0.077174 - 1.087440I$ $a = -0.235696 + 0.115621I$ $b = 0.430181 + 1.151120I$	$7.78065 - 3.32776I$	$4.24987 + 3.07785I$
$u = 0.299198 + 1.098660I$ $a = -0.404389 + 0.503140I$ $b = -0.023506 + 0.580118I$	$3.03952 + 5.50198I$	$2.21258 - 3.89437I$
$u = 0.299198 - 1.098660I$ $a = -0.404389 - 0.503140I$ $b = -0.023506 - 0.580118I$	$3.03952 - 5.50198I$	$2.21258 + 3.89437I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.394765 + 1.078410I$ $a = -0.172022 + 0.078490I$ $b = -0.051321 + 0.349314I$	$-0.43199 - 3.60346I$	$12.9868 + 12.9347I$
$u = -0.394765 - 1.078410I$ $a = -0.172022 - 0.078490I$ $b = -0.051321 - 0.349314I$	$-0.43199 + 3.60346I$	$12.9868 - 12.9347I$
$u = -1.164870 + 0.218255I$ $a = -0.12282 + 1.66392I$ $b = -0.160926 - 0.615385I$	$2.88750 - 0.94185I$	$-5.07724 + 4.02331I$
$u = -1.164870 - 0.218255I$ $a = -0.12282 - 1.66392I$ $b = -0.160926 + 0.615385I$	$2.88750 + 0.94185I$	$-5.07724 - 4.02331I$
$u = 1.168980 + 0.397137I$ $a = -0.61830 - 1.68579I$ $b = -0.40472 + 1.73976I$	$5.18397 + 6.91325I$	$8.92571 - 8.98641I$
$u = 1.168980 - 0.397137I$ $a = -0.61830 + 1.68579I$ $b = -0.40472 - 1.73976I$	$5.18397 - 6.91325I$	$8.92571 + 8.98641I$
$u = -1.238080 + 0.071828I$ $a = 0.893283 + 0.034844I$ $b = -2.02888 - 0.32212I$	$11.55810 + 7.06028I$	$8.52745 - 2.23243I$
$u = -1.238080 - 0.071828I$ $a = 0.893283 - 0.034844I$ $b = -2.02888 + 0.32212I$	$11.55810 - 7.06028I$	$8.52745 + 2.23243I$
$u = 1.231470 + 0.201423I$ $a = -0.70654 - 1.33284I$ $b = -0.39765 + 1.44452I$	$10.96870 + 0.95024I$	$9.35569 - 0.56882I$
$u = 1.231470 - 0.201423I$ $a = -0.70654 + 1.33284I$ $b = -0.39765 - 1.44452I$	$10.96870 - 0.95024I$	$9.35569 + 0.56882I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.239750 + 0.251765I$ $a = -0.05676 + 1.71479I$ $b = 0.18854 - 1.63299I$	$5.24930 + 6.20734I$	$8.09419 - 7.42850I$
$u = 1.239750 - 0.251765I$ $a = -0.05676 - 1.71479I$ $b = 0.18854 + 1.63299I$	$5.24930 - 6.20734I$	$8.09419 + 7.42850I$
$u = -1.180250 + 0.554078I$ $a = -0.554259 + 0.506397I$ $b = 0.442110 - 0.499364I$	$5.13049 - 2.89491I$	$-5.53666 + 1.97856I$
$u = -1.180250 - 0.554078I$ $a = -0.554259 - 0.506397I$ $b = 0.442110 + 0.499364I$	$5.13049 + 2.89491I$	$-5.53666 - 1.97856I$
$u = 1.300110 + 0.318215I$ $a = -0.039213 + 0.399510I$ $b = 1.138870 - 0.629573I$	$10.38060 + 2.52342I$	$11.52799 + 0.I$
$u = 1.300110 - 0.318215I$ $a = -0.039213 - 0.399510I$ $b = 1.138870 + 0.629573I$	$10.38060 - 2.52342I$	$11.52799 + 0.I$
$u = -1.345680 + 0.061831I$ $a = -0.43894 - 1.47572I$ $b = 1.22499 + 1.44220I$	$9.74987 - 0.12508I$	$11.93819 + 0.I$
$u = -1.345680 - 0.061831I$ $a = -0.43894 + 1.47572I$ $b = 1.22499 - 1.44220I$	$9.74987 + 0.12508I$	$11.93819 + 0.I$
$u = -0.417083 + 0.431909I$ $a = -1.56921 - 1.02361I$ $b = -0.299335 - 0.112068I$	$2.24753 - 0.29424I$	$3.97234 + 10.56553I$
$u = -0.417083 - 0.431909I$ $a = -1.56921 + 1.02361I$ $b = -0.299335 + 0.112068I$	$2.24753 + 0.29424I$	$3.97234 - 10.56553I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.513604 + 0.186261I$ $a = -0.46856 - 1.52836I$ $b = 0.898028 + 0.924141I$	$2.29482 - 4.23782I$	$5.1246 + 15.2311I$
$u = 0.513604 - 0.186261I$ $a = -0.46856 + 1.52836I$ $b = 0.898028 - 0.924141I$	$2.29482 + 4.23782I$	$5.1246 - 15.2311I$
$u = -0.235194 + 0.415423I$ $a = -1.35938 - 2.37291I$ $b = 0.812536 + 0.456322I$	$5.24085 - 1.12599I$	$6.61664 + 5.94146I$
$u = -0.235194 - 0.415423I$ $a = -1.35938 + 2.37291I$ $b = 0.812536 - 0.456322I$	$5.24085 + 1.12599I$	$6.61664 - 5.94146I$
$u = -1.44151 + 0.49926I$ $a = 0.19217 - 1.51053I$ $b = 0.78813 + 1.59834I$	$12.6350 - 9.1299I$	0
$u = -1.44151 - 0.49926I$ $a = 0.19217 + 1.51053I$ $b = 0.78813 - 1.59834I$	$12.6350 + 9.1299I$	0
$u = -0.407720 + 0.076237I$ $a = -0.515749 - 0.871337I$ $b = -0.937899 - 0.093218I$	$-0.832582 + 0.409282I$	$-0.25908 + 5.25584I$
$u = -0.407720 - 0.076237I$ $a = -0.515749 + 0.871337I$ $b = -0.937899 + 0.093218I$	$-0.832582 - 0.409282I$	$-0.25908 - 5.25584I$
$u = 1.49902 + 0.74751I$ $a = -0.393777 - 0.579515I$ $b = -0.428541 + 0.955116I$	$11.14930 + 3.28767I$	0
$u = 1.49902 - 0.74751I$ $a = -0.393777 + 0.579515I$ $b = -0.428541 - 0.955116I$	$11.14930 - 3.28767I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{40} - 2u^{39} + \dots - 10u + 1)(u^{143} - 9u^{142} + \dots - 60u + 1)$
c_2	$(u^{40} - 13u^{38} + \dots + 10u + 2)(u^{143} + u^{142} + \dots + 386u - 206)$
c_3	$(u^{40} - 6u^{39} + \dots - 4u + 1)$ $\cdot (u^{143} + 5u^{142} + \dots - 201714210u + 12357493)$
c_4	$(u^{40} + 2u^{39} + \dots + 10u + 1)(u^{143} - 9u^{142} + \dots - 60u + 1)$
c_5	$(u^{40} - u^{39} + \dots - 12u + 1)(u^{143} - 4u^{142} + \dots - 117392u - 5947)$
c_6	$(u^{40} + 6u^{39} + \dots + 23u + 1)(u^{143} - 9u^{142} + \dots - 29761u + 6317)$
c_7	$(u^{40} - 13u^{38} + \dots - 10u + 2)(u^{143} + u^{142} + \dots + 386u - 206)$
c_8	$(u^{40} - 10u^{39} + \dots + 4u + 2)(u^{143} - 3u^{142} + \dots + 165724u + 28690)$
c_9	$(u^{40} - 6u^{39} + \dots - 23u + 1)(u^{143} - 9u^{142} + \dots - 29761u + 6317)$
c_{10}	$(u^{40} + 9u^{38} + \dots - 6u + 1)(u^{143} + 3u^{142} + \dots - 6317830u + 1664477)$
c_{11}	$(u^{40} + 6u^{39} + \dots - 529u + 169)$ $\cdot (u^{143} + 5u^{142} + \dots + 452720672761u - 54947494499)$
c_{12}	$(u^{40} - 3u^{39} + \dots + 5u + 1)(u^{143} + 2u^{142} + \dots + 393169u - 36221)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{40} + 38y^{39} + \dots + 12y + 1)(y^{143} + 133y^{142} + \dots - 532y - 1)$
c_2, c_7	$(y^{40} - 26y^{39} + \dots - 80y + 4)(y^{143} - 107y^{142} + \dots - 4268y - 42436)$
c_3	$(y^{40} + 14y^{39} + \dots + 32y + 1)$ $\cdot (y^{143} + 61y^{142} + \dots + 345432706394200y - 152707633245049)$
c_5	$(y^{40} - 7y^{39} + \dots - 40y + 1)$ $\cdot (y^{143} - 36y^{142} + \dots + 1571191116y - 35366809)$
c_6, c_9	$(y^{40} - 46y^{39} + \dots - 73y + 1)$ $\cdot (y^{143} - 147y^{142} + \dots - 2851394811y - 39904489)$
c_8	$(y^{40} + 4y^{39} + \dots + 44y + 4)$ $\cdot (y^{143} + 31y^{142} + \dots - 38326890024y - 823116100)$
c_{10}	$(y^{40} + 18y^{39} + \dots + 30y + 1)$ $\cdot (y^{143} + 77y^{142} + \dots - 1249728511533410y - 2770483683529)$
c_{11}	$(y^{40} - 30y^{39} + \dots - 65549y + 28561)$ $\cdot (y^{143} - 107y^{142} + \dots - 1.85 \times 10^{23}y - 3.02 \times 10^{21})$
c_{12}	$(y^{40} + 15y^{39} + \dots + 15y + 1)$ $\cdot (y^{143} + 50y^{142} + \dots - 57389804335y - 1311960841)$