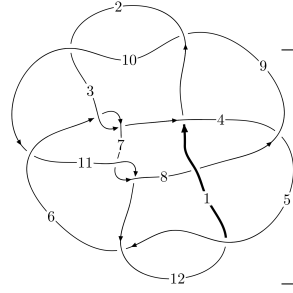
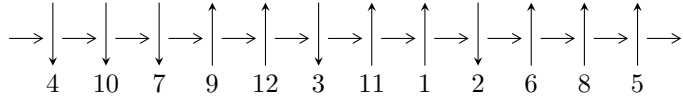


12a₁₁₇₂ (K12a₁₁₇₂)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 1.26512 \times 10^{751} u^{149} + 4.92723 \times 10^{751} u^{148} + \dots + 9.75259 \times 10^{750} b + 3.75083 \times 10^{754}, \\ 1.46795 \times 10^{755} u^{149} + 6.05059 \times 10^{755} u^{148} + \dots + 3.54702 \times 10^{754} a + 5.97136 \times 10^{758}, \\ u^{150} + 5u^{149} + \dots + 25271u + 3637 \rangle$$

$$I_2^u = \langle -5.55350 \times 10^{23} u^{39} - 2.43477 \times 10^{24} u^{38} + \dots + 4.09608 \times 10^{22} b + 5.26413 \times 10^{23}, \\ -3.66815 \times 10^{23} u^{39} - 1.42903 \times 10^{24} u^{38} + \dots + 4.09608 \times 10^{22} a + 7.74087 \times 10^{23}, \\ u^{40} + 4u^{39} + \dots - 13u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 190 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.

$$\text{I. } I_1^u = \langle 1.27 \times 10^{751} u^{149} + 4.93 \times 10^{751} u^{148} + \dots + 9.75 \times 10^{750} b + 3.75 \times 10^{754}, 1.47 \times 10^{755} u^{149} + 6.05 \times 10^{755} u^{148} + \dots + 3.55 \times 10^{754} a + 5.97 \times 10^{758}, u^{150} + 5u^{149} + \dots + 25271u + 3637 \rangle$$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -4.13854u^{149} - 17.0582u^{148} + \dots - 98334.7u - 16834.9 \\ -1.29722u^{149} - 5.05223u^{148} + \dots - 23607.2u - 3845.99 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -5.43576u^{149} - 22.1105u^{148} + \dots - 121942.u - 20680.9 \\ -1.29722u^{149} - 5.05223u^{148} + \dots - 23607.2u - 3845.99 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 7.01380u^{149} + 28.8224u^{148} + \dots + 162058.u + 27707.0 \\ 6.35386u^{149} + 26.1672u^{148} + \dots + 148191.u + 25334.3 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 3.94062u^{149} + 16.2785u^{148} + \dots + 89284.0u + 15295.2 \\ 0.141724u^{149} + 0.883339u^{148} + \dots + 7321.73u + 1509.73 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.44983u^{149} - 5.74168u^{148} + \dots - 31453.2u - 5285.38 \\ -4.65175u^{149} - 18.9905u^{148} + \dots - 109459.u - 18606.0 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -5.14999u^{149} - 20.9229u^{148} + \dots - 120587.u - 20507.9 \\ -3.80366u^{149} - 15.5738u^{148} + \dots - 90757.1u - 15456.8 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 3.43640u^{149} + 14.2416u^{148} + \dots + 76206.2u + 13142.3 \\ 2.56694u^{149} + 10.6431u^{148} + \dots + 62911.6u + 10837.4 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.70084u^{149} + 6.62008u^{148} + \dots + 29394.3u + 4671.47 \\ 1.88565u^{149} + 7.77565u^{148} + \dots + 42675.4u + 7307.30 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $11.7905u^{149} + 47.9073u^{148} + \dots + 263835.u + 44679.3$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{150} - 11u^{149} + \dots + 27517u - 277$
c_2, c_9	$u^{150} - 62u^{148} + \dots - 11776u + 448$
c_3, c_6	$u^{150} + 5u^{149} + \dots + 25271u + 3637$
c_4	$u^{150} + 3u^{149} + \dots + 1401453u + 97263$
c_5, c_{12}	$u^{150} - 3u^{149} + \dots + 3773u + 227$
c_7, c_{11}	$u^{150} - 47u^{148} + \dots + 242552u + 55892$
c_8	$u^{150} + 3u^{149} + \dots + 117u + 27$
c_{10}	$u^{150} + u^{149} + \dots + 5517033568u + 726291007$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{150} - y^{149} + \dots - 661651313y + 76729$
c_2, c_9	$y^{150} - 124y^{149} + \dots - 58378240y + 200704$
c_3, c_6	$y^{150} - 93y^{149} + \dots + 1259345009y + 13227769$
c_4	$y^{150} + 49y^{149} + \dots - 447479481843y + 9460091169$
c_5, c_{12}	$y^{150} + 109y^{149} + \dots + 1029767y + 51529$
c_7, c_{11}	$y^{150} - 94y^{149} + \dots - 105400910672y + 3123915664$
c_8	$y^{150} - y^{149} + \dots + 27513y + 729$
c_{10}	$y^{150} + 49y^{149} + \dots + 2.26 \times 10^{19}y + 5.27 \times 10^{17}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.010160 + 0.001327I$ $a = -1.75230 - 0.22716I$ $b = 0.552597 - 0.775648I$	$-6.58473 - 0.02848I$	0
$u = 1.010160 - 0.001327I$ $a = -1.75230 + 0.22716I$ $b = 0.552597 + 0.775648I$	$-6.58473 + 0.02848I$	0
$u = -0.986489 + 0.066960I$ $a = -1.274150 + 0.028000I$ $b = 2.16405 - 0.90350I$	$0.12677 + 2.90266I$	0
$u = -0.986489 - 0.066960I$ $a = -1.274150 - 0.028000I$ $b = 2.16405 + 0.90350I$	$0.12677 - 2.90266I$	0
$u = -0.119280 + 0.963787I$ $a = 0.099277 + 1.380620I$ $b = -0.626734 - 0.783400I$	$-3.62768 + 4.13150I$	0
$u = -0.119280 - 0.963787I$ $a = 0.099277 - 1.380620I$ $b = -0.626734 + 0.783400I$	$-3.62768 - 4.13150I$	0
$u = -0.737777 + 0.719467I$ $a = 0.268764 + 0.035848I$ $b = -0.703268 + 0.646362I$	$3.69554 + 2.21429I$	0
$u = -0.737777 - 0.719467I$ $a = 0.268764 - 0.035848I$ $b = -0.703268 - 0.646362I$	$3.69554 - 2.21429I$	0
$u = 0.938985 + 0.427249I$ $a = -0.946853 - 0.614308I$ $b = 0.94381 - 1.59285I$	$-1.36518 + 1.23438I$	0
$u = 0.938985 - 0.427249I$ $a = -0.946853 + 0.614308I$ $b = 0.94381 + 1.59285I$	$-1.36518 - 1.23438I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.957385 + 0.105545I$ $a = -1.224200 - 0.152693I$ $b = 2.61460 - 0.05986I$	$-2.40883 - 8.55995I$	0
$u = 0.957385 - 0.105545I$ $a = -1.224200 + 0.152693I$ $b = 2.61460 + 0.05986I$	$-2.40883 + 8.55995I$	0
$u = 0.998838 + 0.292870I$ $a = -0.601572 - 0.901246I$ $b = 0.472808 - 0.556492I$	$-1.07866 - 3.62942I$	0
$u = 0.998838 - 0.292870I$ $a = -0.601572 + 0.901246I$ $b = 0.472808 + 0.556492I$	$-1.07866 + 3.62942I$	0
$u = 0.399736 + 0.866442I$ $a = -0.562313 - 0.384015I$ $b = 0.962382 + 0.449510I$	$5.61645 + 2.73061I$	0
$u = 0.399736 - 0.866442I$ $a = -0.562313 + 0.384015I$ $b = 0.962382 - 0.449510I$	$5.61645 - 2.73061I$	0
$u = -0.827895 + 0.470631I$ $a = -0.419188 - 0.213084I$ $b = -0.86315 + 1.61563I$	$3.23023 + 1.99379I$	0
$u = -0.827895 - 0.470631I$ $a = -0.419188 + 0.213084I$ $b = -0.86315 - 1.61563I$	$3.23023 - 1.99379I$	0
$u = -0.176065 + 0.932223I$ $a = -0.546997 - 1.119370I$ $b = 0.368260 + 0.700906I$	$-1.86777 + 4.08465I$	0
$u = -0.176065 - 0.932223I$ $a = -0.546997 + 1.119370I$ $b = 0.368260 - 0.700906I$	$-1.86777 - 4.08465I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.932265 + 0.169371I$ $a = 0.61464 + 1.75356I$ $b = 0.393835 + 0.238423I$	$-2.58412 + 4.82057I$	0
$u = -0.932265 - 0.169371I$ $a = 0.61464 - 1.75356I$ $b = 0.393835 - 0.238423I$	$-2.58412 - 4.82057I$	0
$u = -1.048040 + 0.169863I$ $a = -0.85088 + 1.38483I$ $b = 0.250228 + 0.748347I$	$-4.81324 + 5.56239I$	0
$u = -1.048040 - 0.169863I$ $a = -0.85088 - 1.38483I$ $b = 0.250228 - 0.748347I$	$-4.81324 - 5.56239I$	0
$u = -0.928918 + 0.085232I$ $a = -1.084560 - 0.650075I$ $b = -0.643149 - 1.167960I$	$0.26194 - 2.19269I$	0
$u = -0.928918 - 0.085232I$ $a = -1.084560 + 0.650075I$ $b = -0.643149 + 1.167960I$	$0.26194 + 2.19269I$	0
$u = -0.923812 + 0.115947I$ $a = 0.981095 + 0.202493I$ $b = -1.85969 + 0.55662I$	$-0.41992 + 2.90044I$	0
$u = -0.923812 - 0.115947I$ $a = 0.981095 - 0.202493I$ $b = -1.85969 - 0.55662I$	$-0.41992 - 2.90044I$	0
$u = 0.904769 + 0.195901I$ $a = 0.806718 - 1.097620I$ $b = 0.046242 - 0.544135I$	$1.64079 - 1.76353I$	0
$u = 0.904769 - 0.195901I$ $a = 0.806718 + 1.097620I$ $b = 0.046242 + 0.544135I$	$1.64079 + 1.76353I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.823699 + 0.694777I$		
$a = 0.620668 + 0.478797I$	$-0.36032 + 2.64753I$	0
$b = 0.421267 - 1.238130I$		
$u = -0.823699 - 0.694777I$		
$a = 0.620668 - 0.478797I$	$-0.36032 - 2.64753I$	0
$b = 0.421267 + 1.238130I$		
$u = -0.329008 + 1.028150I$		
$a = -0.210408 - 0.188365I$	$1.52233 + 4.09710I$	0
$b = 0.595601 + 0.084418I$		
$u = -0.329008 - 1.028150I$		
$a = -0.210408 + 0.188365I$	$1.52233 - 4.09710I$	0
$b = 0.595601 - 0.084418I$		
$u = 0.887346 + 0.227586I$		
$a = -0.812711 + 0.964936I$	$-2.43795 + 7.14768I$	0
$b = -1.189660 + 0.551074I$		
$u = 0.887346 - 0.227586I$		
$a = -0.812711 - 0.964936I$	$-2.43795 - 7.14768I$	0
$b = -1.189660 - 0.551074I$		
$u = 0.795254 + 0.737819I$		
$a = 0.864722 - 0.612025I$	$0.02417 - 2.76819I$	0
$b = 0.41745 + 1.72341I$		
$u = 0.795254 - 0.737819I$		
$a = 0.864722 + 0.612025I$	$0.02417 + 2.76819I$	0
$b = 0.41745 - 1.72341I$		
$u = -0.133091 + 0.895417I$		
$a = -0.17218 + 1.51826I$	$-4.47954 - 4.44672I$	0
$b = 0.808299 - 1.004490I$		
$u = -0.133091 - 0.895417I$		
$a = -0.17218 - 1.51826I$	$-4.47954 + 4.44672I$	0
$b = 0.808299 + 1.004490I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.185248 + 1.081780I$ $a = -0.465084 + 1.124470I$ $b = 0.128815 - 1.149810I$	$-6.66260 - 7.20467I$	0
$u = 0.185248 - 1.081780I$ $a = -0.465084 - 1.124470I$ $b = 0.128815 + 1.149810I$	$-6.66260 + 7.20467I$	0
$u = -1.003260 + 0.474064I$ $a = -0.426046 + 0.538649I$ $b = 0.315500 + 1.219820I$	$2.69954 + 2.37915I$	0
$u = -1.003260 - 0.474064I$ $a = -0.426046 - 0.538649I$ $b = 0.315500 - 1.219820I$	$2.69954 - 2.37915I$	0
$u = 0.865794 + 0.192350I$ $a = 0.819425 - 0.606169I$ $b = -0.79091 - 1.26456I$	$1.25757 - 0.97218I$	0
$u = 0.865794 - 0.192350I$ $a = 0.819425 + 0.606169I$ $b = -0.79091 + 1.26456I$	$1.25757 + 0.97218I$	0
$u = -0.943677 + 0.599804I$ $a = 0.717080 - 0.005338I$ $b = -0.155684 - 1.184590I$	$-0.58977 + 2.66247I$	0
$u = -0.943677 - 0.599804I$ $a = 0.717080 + 0.005338I$ $b = -0.155684 + 1.184590I$	$-0.58977 - 2.66247I$	0
$u = -1.056960 + 0.373139I$ $a = -0.0767874 - 0.0112237I$ $b = 0.149753 - 0.395142I$	$-1.83357 + 1.32917I$	0
$u = -1.056960 - 0.373139I$ $a = -0.0767874 + 0.0112237I$ $b = 0.149753 + 0.395142I$	$-1.83357 - 1.32917I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.051200 + 0.431460I$ $a = -0.129576 - 0.816108I$ $b = 1.068610 - 0.146172I$	$-2.27203 - 3.43715I$	0
$u = 1.051200 - 0.431460I$ $a = -0.129576 + 0.816108I$ $b = 1.068610 + 0.146172I$	$-2.27203 + 3.43715I$	0
$u = 0.704303 + 0.492491I$ $a = -0.116439 + 1.065210I$ $b = -1.62386 - 0.96825I$	$-0.60602 - 5.09602I$	0
$u = 0.704303 - 0.492491I$ $a = -0.116439 - 1.065210I$ $b = -1.62386 + 0.96825I$	$-0.60602 + 5.09602I$	0
$u = -1.118110 + 0.308233I$ $a = -0.277390 + 0.932094I$ $b = 0.979330 + 0.702422I$	$-3.24364 + 3.44616I$	0
$u = -1.118110 - 0.308233I$ $a = -0.277390 - 0.932094I$ $b = 0.979330 - 0.702422I$	$-3.24364 - 3.44616I$	0
$u = -0.328008 + 0.753116I$ $a = -0.902327 + 0.597892I$ $b = 1.165830 - 0.618355I$	$1.37688 - 8.62221I$	0
$u = -0.328008 - 0.753116I$ $a = -0.902327 - 0.597892I$ $b = 1.165830 + 0.618355I$	$1.37688 + 8.62221I$	0
$u = -0.810080 + 0.133797I$ $a = 0.661039 + 0.801510I$ $b = 0.433775 + 1.096310I$	$-0.24584 - 1.40229I$	0
$u = -0.810080 - 0.133797I$ $a = 0.661039 - 0.801510I$ $b = 0.433775 - 1.096310I$	$-0.24584 + 1.40229I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.125690 + 0.405810I$ $a = -0.212320 - 0.909509I$ $b = 0.465953 - 0.871792I$	$0.12094 - 6.12459I$	0
$u = 1.125690 - 0.405810I$ $a = -0.212320 + 0.909509I$ $b = 0.465953 + 0.871792I$	$0.12094 + 6.12459I$	0
$u = 1.200320 + 0.101588I$ $a = -0.130187 + 0.289602I$ $b = 0.305142 + 1.269170I$	$-6.75098 + 1.92609I$	0
$u = 1.200320 - 0.101588I$ $a = -0.130187 - 0.289602I$ $b = 0.305142 - 1.269170I$	$-6.75098 - 1.92609I$	0
$u = -0.080882 + 0.790242I$ $a = 0.10018 - 1.75276I$ $b = -0.029925 + 1.159940I$	$-7.75192 + 0.06941I$	0
$u = -0.080882 - 0.790242I$ $a = 0.10018 + 1.75276I$ $b = -0.029925 - 1.159940I$	$-7.75192 - 0.06941I$	0
$u = 0.790903$ $a = 1.65888$ $b = -1.23443$	2.40030	0
$u = -0.768103 + 0.145727I$ $a = 1.95529 - 0.92787I$ $b = -1.204540 - 0.151735I$	$-2.01380 - 3.01029I$	0
$u = -0.768103 - 0.145727I$ $a = 1.95529 + 0.92787I$ $b = -1.204540 + 0.151735I$	$-2.01380 + 3.01029I$	0
$u = -0.197554 + 1.205700I$ $a = 0.118695 - 1.167590I$ $b = -0.618277 + 1.032640I$	$-3.51177 - 13.09830I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.197554 - 1.205700I$		
$a = 0.118695 + 1.167590I$	$-3.51177 + 13.09830I$	0
$b = -0.618277 - 1.032640I$		
$u = -1.137090 + 0.483728I$		
$a = 0.705841 - 0.822951I$	$-1.11967 + 13.28180I$	0
$b = -0.902469 - 1.043400I$		
$u = -1.137090 - 0.483728I$		
$a = 0.705841 + 0.822951I$	$-1.11967 - 13.28180I$	0
$b = -0.902469 + 1.043400I$		
$u = 0.353759 + 0.676643I$		
$a = 0.891013 - 0.135254I$	$2.53456 + 1.99299I$	0
$b = -0.974476 - 0.381969I$		
$u = 0.353759 - 0.676643I$		
$a = 0.891013 + 0.135254I$	$2.53456 - 1.99299I$	0
$b = -0.974476 + 0.381969I$		
$u = 1.012010 + 0.713114I$		
$a = 1.139800 - 0.709059I$	$-9.93134 - 2.81764I$	0
$b = -0.16775 + 1.73082I$		
$u = 1.012010 - 0.713114I$		
$a = 1.139800 + 0.709059I$	$-9.93134 + 2.81764I$	0
$b = -0.16775 - 1.73082I$		
$u = 1.119970 + 0.534044I$		
$a = 0.612602 + 0.596707I$	$3.33083 - 7.86755I$	0
$b = -0.731038 + 0.973587I$		
$u = 1.119970 - 0.534044I$		
$a = 0.612602 - 0.596707I$	$3.33083 + 7.86755I$	0
$b = -0.731038 - 0.973587I$		
$u = -1.206740 + 0.340769I$		
$a = -0.079170 - 0.126321I$	$-1.82153 + 1.37745I$	0
$b = -0.151525 - 0.532132I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.206740 - 0.340769I$ $a = -0.079170 + 0.126321I$ $b = -0.151525 + 0.532132I$	$-1.82153 - 1.37745I$	0
$u = 1.260210 + 0.172455I$ $a = -0.135021 + 0.180414I$ $b = -0.677884 + 1.119710I$	$-4.38561 - 7.47780I$	0
$u = 1.260210 - 0.172455I$ $a = -0.135021 - 0.180414I$ $b = -0.677884 - 1.119710I$	$-4.38561 + 7.47780I$	0
$u = -1.199980 + 0.424503I$ $a = -1.387600 - 0.106421I$ $b = 0.70374 + 1.38992I$	$-11.12970 + 4.31255I$	0
$u = -1.199980 - 0.424503I$ $a = -1.387600 + 0.106421I$ $b = 0.70374 - 1.38992I$	$-11.12970 - 4.31255I$	0
$u = 1.249870 + 0.261258I$ $a = -1.189710 - 0.133220I$ $b = 0.745972 - 0.911972I$	$-5.59630 - 3.62180I$	0
$u = 1.249870 - 0.261258I$ $a = -1.189710 + 0.133220I$ $b = 0.745972 + 0.911972I$	$-5.59630 + 3.62180I$	0
$u = -1.289970 + 0.062116I$ $a = -1.264730 + 0.502231I$ $b = 0.324334 + 0.567660I$	$-7.03513 + 3.45364I$	0
$u = -1.289970 - 0.062116I$ $a = -1.264730 - 0.502231I$ $b = 0.324334 - 0.567660I$	$-7.03513 - 3.45364I$	0
$u = -0.554916 + 1.191230I$ $a = 0.279928 + 0.843523I$ $b = 0.242778 - 0.965248I$	$0.800417 + 0.658476I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.554916 - 1.191230I$		
$a = 0.279928 - 0.843523I$	$0.800417 - 0.658476I$	0
$b = 0.242778 + 0.965248I$		
$u = 1.277280 + 0.348366I$		
$a = 1.052750 - 0.146962I$	$-11.96840 - 4.09990I$	0
$b = -0.64441 + 1.53491I$		
$u = 1.277280 - 0.348366I$		
$a = 1.052750 + 0.146962I$	$-11.96840 + 4.09990I$	0
$b = -0.64441 - 1.53491I$		
$u = 0.126956 + 1.318390I$		
$a = -0.067964 - 0.830117I$	$0.58179 + 4.95472I$	0
$b = 0.399682 + 0.803392I$		
$u = 0.126956 - 1.318390I$		
$a = -0.067964 + 0.830117I$	$0.58179 - 4.95472I$	0
$b = 0.399682 - 0.803392I$		
$u = 1.258900 + 0.412713I$		
$a = -1.070070 + 0.418378I$	$-8.75414 + 0.03880I$	0
$b = 0.331062 - 0.793301I$		
$u = 1.258900 - 0.412713I$		
$a = -1.070070 - 0.418378I$	$-8.75414 - 0.03880I$	0
$b = 0.331062 + 0.793301I$		
$u = 1.262320 + 0.466159I$		
$a = 1.075930 + 0.002867I$	$-6.09175 - 8.66685I$	0
$b = -1.27205 + 1.46493I$		
$u = 1.262320 - 0.466159I$		
$a = 1.075930 - 0.002867I$	$-6.09175 + 8.66685I$	0
$b = -1.27205 - 1.46493I$		
$u = 0.295681 + 1.321680I$		
$a = -0.033215 + 1.020050I$	$0.95791 + 5.99188I$	0
$b = -0.426538 - 0.883202I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.295681 - 1.321680I$ $a = -0.033215 - 1.020050I$ $b = -0.426538 + 0.883202I$	$0.95791 - 5.99188I$	0
$u = -1.244810 + 0.533642I$ $a = 1.146590 + 0.037037I$ $b = -1.08362 - 1.87446I$	$-7.84345 + 9.65025I$	0
$u = -1.244810 - 0.533642I$ $a = 1.146590 - 0.037037I$ $b = -1.08362 + 1.87446I$	$-7.84345 - 9.65025I$	0
$u = 1.346190 + 0.154865I$ $a = -0.978217 - 0.404343I$ $b = 0.552647 - 0.913798I$	$-6.06255 - 3.50500I$	0
$u = 1.346190 - 0.154865I$ $a = -0.978217 + 0.404343I$ $b = 0.552647 + 0.913798I$	$-6.06255 + 3.50500I$	0
$u = -0.287406 + 1.324740I$ $a = -0.230390 - 0.842557I$ $b = -0.155678 + 0.649352I$	$-1.00538 + 3.93685I$	0
$u = -0.287406 - 1.324740I$ $a = -0.230390 + 0.842557I$ $b = -0.155678 - 0.649352I$	$-1.00538 - 3.93685I$	0
$u = -1.372310 + 0.181545I$ $a = 0.937634 + 0.109162I$ $b = -0.960941 - 0.931633I$	$-6.19633 - 1.10236I$	0
$u = -1.372310 - 0.181545I$ $a = 0.937634 - 0.109162I$ $b = -0.960941 + 0.931633I$	$-6.19633 + 1.10236I$	0
$u = -0.448553 + 0.408232I$ $a = 1.153760 + 0.202942I$ $b = -0.101711 - 0.735684I$	$-0.68571 + 1.61057I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.448553 - 0.408232I$ $a = 1.153760 - 0.202942I$ $b = -0.101711 + 0.735684I$	$-0.68571 - 1.61057I$	0
$u = 1.335230 + 0.414506I$ $a = 1.058170 - 0.038207I$ $b = -1.03786 + 1.05581I$	$-6.51133 - 8.68462I$	0
$u = 1.335230 - 0.414506I$ $a = 1.058170 + 0.038207I$ $b = -1.03786 - 1.05581I$	$-6.51133 + 8.68462I$	0
$u = 1.309990 + 0.492124I$ $a = -0.893429 + 0.195552I$ $b = 0.98673 - 1.88933I$	$-7.86878 - 9.22885I$	0
$u = 1.309990 - 0.492124I$ $a = -0.893429 - 0.195552I$ $b = 0.98673 + 1.88933I$	$-7.86878 + 9.22885I$	0
$u = 0.127023 + 0.582377I$ $a = 1.397510 - 0.052929I$ $b = -1.132450 + 0.273477I$	$0.215867 - 0.378588I$	0
$u = 0.127023 - 0.582377I$ $a = 1.397510 + 0.052929I$ $b = -1.132450 - 0.273477I$	$0.215867 + 0.378588I$	0
$u = 0.108367 + 0.572963I$ $a = -0.54085 - 2.01928I$ $b = 0.890209 + 0.199885I$	$-2.41089 + 4.44861I$	0
$u = 0.108367 - 0.572963I$ $a = -0.54085 + 2.01928I$ $b = 0.890209 - 0.199885I$	$-2.41089 - 4.44861I$	0
$u = -1.37752 + 0.43741I$ $a = 1.151110 + 0.008848I$ $b = -0.680649 - 1.239550I$	$-11.6290 + 12.4102I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.37752 - 0.43741I$		
$a = 1.151110 - 0.008848I$	$-11.6290 - 12.4102I$	0
$b = -0.680649 + 1.239550I$		
$u = -1.34386 + 0.62926I$		
$a = -1.085810 - 0.132229I$	$-7.1775 + 19.5574I$	0
$b = 0.98164 + 1.65016I$		
$u = -1.34386 - 0.62926I$		
$a = -1.085810 + 0.132229I$	$-7.1775 - 19.5574I$	0
$b = 0.98164 - 1.65016I$		
$u = -1.39878 + 0.50511I$		
$a = -0.799514 - 0.231472I$	$-5.59908 + 1.81169I$	0
$b = 0.609749 + 0.848863I$		
$u = -1.39878 - 0.50511I$		
$a = -0.799514 + 0.231472I$	$-5.59908 - 1.81169I$	0
$b = 0.609749 - 0.848863I$		
$u = -1.31210 + 0.70854I$		
$a = 0.889883 + 0.225649I$	$-1.88379 + 6.31357I$	0
$b = -0.63596 - 1.39780I$		
$u = -1.31210 - 0.70854I$		
$a = 0.889883 - 0.225649I$	$-1.88379 - 6.31357I$	0
$b = -0.63596 + 1.39780I$		
$u = -1.41740 + 0.52878I$		
$a = -0.800456 - 0.198628I$	$-5.27062 + 2.76969I$	0
$b = 0.93773 + 1.25672I$		
$u = -1.41740 - 0.52878I$		
$a = -0.800456 + 0.198628I$	$-5.27062 - 2.76969I$	0
$b = 0.93773 - 1.25672I$		
$u = 1.36382 + 0.65822I$		
$a = -1.007980 + 0.193575I$	$-2.63430 - 12.90040I$	0
$b = 0.95654 - 1.47225I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.36382 - 0.65822I$ $a = -1.007980 - 0.193575I$ $b = 0.95654 + 1.47225I$	$-2.63430 + 12.90040I$	0
$u = 1.38996 + 0.60561I$ $a = 0.899065 - 0.050559I$ $b = -0.84422 + 1.40131I$	$-3.56779 - 11.58210I$	0
$u = 1.38996 - 0.60561I$ $a = 0.899065 + 0.050559I$ $b = -0.84422 - 1.40131I$	$-3.56779 + 11.58210I$	0
$u = 1.39630 + 0.62620I$ $a = -0.776360 + 0.315025I$ $b = 0.305289 - 1.349360I$	$-10.35040 + 0.86822I$	0
$u = 1.39630 - 0.62620I$ $a = -0.776360 - 0.315025I$ $b = 0.305289 + 1.349360I$	$-10.35040 - 0.86822I$	0
$u = 0.200900 + 0.416136I$ $a = 1.278000 + 0.123209I$ $b = -0.486952 - 0.178301I$	$0.958164 + 0.683201I$	$7.40457 - 2.87603I$
$u = 0.200900 - 0.416136I$ $a = 1.278000 - 0.123209I$ $b = -0.486952 + 0.178301I$	$0.958164 - 0.683201I$	$7.40457 + 2.87603I$
$u = 1.51354 + 0.27782I$ $a = 0.863523 - 0.198890I$ $b = -0.440305 + 0.728766I$	$-9.64210 + 7.52770I$	0
$u = 1.51354 - 0.27782I$ $a = 0.863523 + 0.198890I$ $b = -0.440305 - 0.728766I$	$-9.64210 - 7.52770I$	0
$u = -1.48043 + 0.48903I$ $a = 0.928515 + 0.239641I$ $b = -0.664712 - 0.463216I$	$-7.66583 + 2.01094I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.48043 - 0.48903I$ $a = 0.928515 - 0.239641I$ $b = -0.664712 + 0.463216I$	$-7.66583 - 2.01094I$	0
$u = -1.53548 + 0.32595I$ $a = -0.735885 - 0.015759I$ $b = 0.596023 + 0.808869I$	$-5.58878 + 1.16454I$	0
$u = -1.53548 - 0.32595I$ $a = -0.735885 + 0.015759I$ $b = 0.596023 - 0.808869I$	$-5.58878 - 1.16454I$	0
$u = -0.167293 + 0.348208I$ $a = 1.83787 - 0.67700I$ $b = -0.191489 + 0.714593I$	$-2.69119 - 3.50863I$	$1.23563 + 2.74710I$
$u = -0.167293 - 0.348208I$ $a = 1.83787 + 0.67700I$ $b = -0.191489 - 0.714593I$	$-2.69119 + 3.50863I$	$1.23563 - 2.74710I$
$u = 0.382127$ $a = 2.48249$ $b = -1.11213$	2.55754	3.74130
$u = -1.33777 + 0.99053I$ $a = -0.788204 - 0.513289I$ $b = 0.482787 + 1.122250I$	$-7.95606 + 4.32238I$	0
$u = -1.33777 - 0.99053I$ $a = -0.788204 + 0.513289I$ $b = 0.482787 - 1.122250I$	$-7.95606 - 4.32238I$	0
$u = -0.0344350 + 0.1134110I$ $a = 5.85783 + 7.20433I$ $b = 0.275772 - 0.538238I$	$-1.55837 + 1.70950I$	$0.72911 + 3.25859I$
$u = -0.0344350 - 0.1134110I$ $a = 5.85783 - 7.20433I$ $b = 0.275772 + 0.538238I$	$-1.55837 - 1.70950I$	$0.72911 - 3.25859I$

$$\text{II. } I_2^u = \langle -5.55 \times 10^{23} u^{39} - 2.43 \times 10^{24} u^{38} + \dots + 4.10 \times 10^{22} b + 5.26 \times 10^{23}, -3.67 \times 10^{23} u^{39} - 1.43 \times 10^{24} u^{38} + \dots + 4.10 \times 10^{22} a + 7.74 \times 10^{23}, u^{40} + 4u^{39} + \dots - 13u^2 + 1 \rangle$$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 8.95528u^{39} + 34.8878u^{38} + \dots - 40.8076u - 18.8983 \\ 13.5581u^{39} + 59.4414u^{38} + \dots - 15.3877u - 12.8516 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 22.5134u^{39} + 94.3292u^{38} + \dots - 56.1953u - 31.7499 \\ 13.5581u^{39} + 59.4414u^{38} + \dots - 15.3877u - 12.8516 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 6.11501u^{39} + 28.8254u^{38} + \dots - 14.8372u + 0.685148 \\ 9.62786u^{39} + 46.7043u^{38} + \dots - 42.7936u - 21.3780 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 11.7260u^{39} + 45.6720u^{38} + \dots - 109.251u - 40.7737 \\ 22.4688u^{39} + 100.225u^{38} + \dots - 93.7170u - 38.4217 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 33.5636u^{39} + 154.032u^{38} + \dots - 115.281u - 58.1994 \\ 23.7593u^{39} + 104.919u^{38} + \dots - 77.3861u - 33.1720 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 47.5039u^{39} + 216.072u^{38} + \dots - 160.509u - 78.4307 \\ 14.6255u^{39} + 64.4696u^{38} + \dots - 46.0983u - 19.2195 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -46.5007u^{39} - 206.399u^{38} + \dots + 176.687u + 83.6972 \\ -13.8529u^{39} - 61.1999u^{38} + \dots + 83.3795u + 36.0321 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -48.3382u^{39} - 226.147u^{38} + \dots + 118.490u + 69.8401 \\ -8.42535u^{39} - 31.3321u^{38} + \dots + 86.7859u + 29.3183 \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = \frac{3243539632135736316585250}{40960772555460737449619} u^{39} + \frac{13701408707039706486241154}{40960772555460737449619} u^{38} + \dots - \frac{17779643118128027734669843}{40960772555460737449619} u - \frac{9132260379857267362032457}{40960772555460737449619}$$

(iv) u -Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{40} - 6u^{39} + \dots + 4u + 1$
c_2	$u^{40} + u^{39} + \dots + u + 1$
c_3	$u^{40} - 4u^{39} + \dots - 13u^2 + 1$
c_4	$u^{40} + 6u^{38} + \dots + 17u^2 + 1$
c_5	$u^{40} + 18u^{38} + \dots + 4u^2 + 1$
c_6	$u^{40} + 4u^{39} + \dots - 13u^2 + 1$
c_7	$u^{40} - u^{39} + \dots + 22u^2 + 4$
c_8	$u^{40} - 3u^{38} + \dots - 8u + 1$
c_9	$u^{40} - u^{39} + \dots - u + 1$
c_{10}	$u^{40} + 2u^{38} + \dots - 15u + 11$
c_{11}	$u^{40} + u^{39} + \dots + 22u^2 + 4$
c_{12}	$u^{40} + 18u^{38} + \dots + 4u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{40} + 10y^{39} + \cdots + 24y + 1$
c_2, c_9	$y^{40} - 33y^{39} + \cdots - 43y + 1$
c_3, c_6	$y^{40} - 22y^{39} + \cdots - 26y + 1$
c_4	$y^{40} + 12y^{39} + \cdots + 34y + 1$
c_5, c_{12}	$y^{40} + 36y^{39} + \cdots + 8y + 1$
c_7, c_{11}	$y^{40} - 31y^{39} + \cdots + 176y + 16$
c_8	$y^{40} - 6y^{39} + \cdots - 26y + 1$
c_{10}	$y^{40} + 4y^{39} + \cdots + 237y + 121$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.875550 + 0.472394I$ $a = -0.304334 + 0.063112I$ $b = -0.67850 - 1.70009I$	$2.08196 - 1.93157I$	$0.80761 + 3.55094I$
$u = 0.875550 - 0.472394I$ $a = -0.304334 - 0.063112I$ $b = -0.67850 + 1.70009I$	$2.08196 + 1.93157I$	$0.80761 - 3.55094I$
$u = -0.327790 + 0.919101I$ $a = -0.004312 - 0.724884I$ $b = -0.653889 + 0.387897I$	$1.12827 + 3.26253I$	$3.48799 - 2.61711I$
$u = -0.327790 - 0.919101I$ $a = -0.004312 + 0.724884I$ $b = -0.653889 - 0.387897I$	$1.12827 - 3.26253I$	$3.48799 + 2.61711I$
$u = 1.021970 + 0.240997I$ $a = 0.113817 - 1.268010I$ $b = 0.680352 - 0.154851I$	$-3.31425 - 4.94593I$	$-5.82504 + 8.14606I$
$u = 1.021970 - 0.240997I$ $a = 0.113817 + 1.268010I$ $b = 0.680352 + 0.154851I$	$-3.31425 + 4.94593I$	$-5.82504 - 8.14606I$
$u = -0.679908 + 0.814453I$ $a = 0.745749 + 0.692743I$ $b = 0.456859 - 1.306430I$	$1.68604 + 2.84031I$	$3.99275 - 3.95849I$
$u = -0.679908 - 0.814453I$ $a = 0.745749 - 0.692743I$ $b = 0.456859 + 1.306430I$	$1.68604 - 2.84031I$	$3.99275 + 3.95849I$
$u = -0.862166 + 0.133171I$ $a = 1.117500 + 0.619558I$ $b = -0.940368 + 0.878274I$	$1.99515 + 0.92442I$	$6.54916 - 0.54255I$
$u = -0.862166 - 0.133171I$ $a = 1.117500 - 0.619558I$ $b = -0.940368 - 0.878274I$	$1.99515 - 0.92442I$	$6.54916 + 0.54255I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.517393 + 0.641006I$ $a = 0.405272 + 0.881956I$ $b = -0.599237 + 0.090657I$	$2.73191 + 1.42296I$	$3.25505 - 3.03695I$
$u = -0.517393 - 0.641006I$ $a = 0.405272 - 0.881956I$ $b = -0.599237 - 0.090657I$	$2.73191 - 1.42296I$	$3.25505 + 3.03695I$
$u = -0.767119 + 0.289596I$ $a = -1.162540 + 0.124836I$ $b = -0.214441 + 0.748149I$	$-2.10702 + 2.31909I$	$-7.30905 - 5.14053I$
$u = -0.767119 - 0.289596I$ $a = -1.162540 - 0.124836I$ $b = -0.214441 - 0.748149I$	$-2.10702 - 2.31909I$	$-7.30905 + 5.14053I$
$u = 1.049010 + 0.558495I$ $a = -1.236740 + 0.515380I$ $b = 0.32342 - 1.54392I$	$-10.78120 - 2.33664I$	$-8.07162 + 0.I$
$u = 1.049010 - 0.558495I$ $a = -1.236740 - 0.515380I$ $b = 0.32342 + 1.54392I$	$-10.78120 + 2.33664I$	$-8.07162 + 0.I$
$u = 0.799198 + 0.087360I$ $a = 1.63740 + 1.21224I$ $b = -1.232190 + 0.471459I$	$-2.17410 + 3.36496I$	$-4.41823 - 10.45035I$
$u = 0.799198 - 0.087360I$ $a = 1.63740 - 1.21224I$ $b = -1.232190 - 0.471459I$	$-2.17410 - 3.36496I$	$-4.41823 + 10.45035I$
$u = -0.637771 + 0.465424I$ $a = -0.417965 - 0.196444I$ $b = -1.084680 + 0.745495I$	$0.80088 + 2.95314I$	$4.52574 - 4.72996I$
$u = -0.637771 - 0.465424I$ $a = -0.417965 + 0.196444I$ $b = -1.084680 - 0.745495I$	$0.80088 - 2.95314I$	$4.52574 + 4.72996I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.142360 + 0.458664I$ $a = -0.244402 + 0.348346I$ $b = 0.593603 + 0.571634I$	$-1.43073 + 1.72143I$	0
$u = -1.142360 - 0.458664I$ $a = -0.244402 - 0.348346I$ $b = 0.593603 - 0.571634I$	$-1.43073 - 1.72143I$	0
$u = 0.717137 + 0.178077I$ $a = -1.055540 - 0.763233I$ $b = -0.194278 + 0.327211I$	$-3.90732 - 4.60277I$	$-4.49440 + 4.27254I$
$u = 0.717137 - 0.178077I$ $a = -1.055540 + 0.763233I$ $b = -0.194278 - 0.327211I$	$-3.90732 + 4.60277I$	$-4.49440 - 4.27254I$
$u = -1.248860 + 0.319926I$ $a = -1.271870 - 0.131954I$ $b = 0.544788 + 0.518239I$	$-6.57664 + 1.95208I$	0
$u = -1.248860 - 0.319926I$ $a = -1.271870 + 0.131954I$ $b = 0.544788 - 0.518239I$	$-6.57664 - 1.95208I$	0
$u = 1.291280 + 0.050770I$ $a = -0.995032 - 0.569847I$ $b = 0.584491 - 0.808147I$	$-6.48135 - 4.08929I$	0
$u = 1.291280 - 0.050770I$ $a = -0.995032 + 0.569847I$ $b = 0.584491 + 0.808147I$	$-6.48135 + 4.08929I$	0
$u = -0.083655 + 1.317110I$ $a = -0.191121 - 0.878922I$ $b = 0.413567 + 0.660370I$	$-0.71645 + 4.92833I$	0
$u = -0.083655 - 1.317110I$ $a = -0.191121 + 0.878922I$ $b = 0.413567 - 0.660370I$	$-0.71645 - 4.92833I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.441638 + 0.473881I$ $a = 1.36401 + 0.95654I$ $b = 1.16961 - 1.06404I$	$1.78283 + 2.95963I$	$4.33254 - 4.07138I$
$u = -0.441638 - 0.473881I$ $a = 1.36401 - 0.95654I$ $b = 1.16961 + 1.06404I$	$1.78283 - 2.95963I$	$4.33254 + 4.07138I$
$u = 1.325690 + 0.449579I$ $a = 0.944504 + 0.023650I$ $b = -1.26971 + 1.56551I$	$-5.73472 - 10.46300I$	0
$u = 1.325690 - 0.449579I$ $a = 0.944504 - 0.023650I$ $b = -1.26971 - 1.56551I$	$-5.73472 + 10.46300I$	0
$u = 0.456244 + 0.019907I$ $a = 1.98624 + 0.75595I$ $b = 2.03048 - 0.02995I$	$-1.25415 - 8.06760I$	$3.02844 + 6.59328I$
$u = 0.456244 - 0.019907I$ $a = 1.98624 - 0.75595I$ $b = 2.03048 + 0.02995I$	$-1.25415 + 8.06760I$	$3.02844 - 6.59328I$
$u = -1.51094 + 0.40221I$ $a = -0.773594 - 0.112926I$ $b = 0.611013 + 0.730234I$	$-5.90782 + 1.45247I$	0
$u = -1.51094 - 0.40221I$ $a = -0.773594 + 0.112926I$ $b = 0.611013 - 0.730234I$	$-5.90782 - 1.45247I$	0
$u = -1.31648 + 0.92061I$ $a = 0.842952 + 0.500067I$ $b = -0.540893 - 1.198140I$	$-7.87941 + 4.14991I$	0
$u = -1.31648 - 0.92061I$ $a = 0.842952 - 0.500067I$ $b = -0.540893 + 1.198140I$	$-7.87941 - 4.14991I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{40} - 6u^{39} + \dots + 4u + 1)(u^{150} - 11u^{149} + \dots + 27517u - 277)$
c_2	$(u^{40} + u^{39} + \dots + u + 1)(u^{150} - 62u^{148} + \dots - 11776u + 448)$
c_3	$(u^{40} - 4u^{39} + \dots - 13u^2 + 1)(u^{150} + 5u^{149} + \dots + 25271u + 3637)$
c_4	$(u^{40} + 6u^{38} + \dots + 17u^2 + 1)(u^{150} + 3u^{149} + \dots + 1401453u + 97263)$
c_5	$(u^{40} + 18u^{38} + \dots + 4u^2 + 1)(u^{150} - 3u^{149} + \dots + 3773u + 227)$
c_6	$(u^{40} + 4u^{39} + \dots - 13u^2 + 1)(u^{150} + 5u^{149} + \dots + 25271u + 3637)$
c_7	$(u^{40} - u^{39} + \dots + 22u^2 + 4)(u^{150} - 47u^{148} + \dots + 242552u + 55892)$
c_8	$(u^{40} - 3u^{38} + \dots - 8u + 1)(u^{150} + 3u^{149} + \dots + 117u + 27)$
c_9	$(u^{40} - u^{39} + \dots - u + 1)(u^{150} - 62u^{148} + \dots - 11776u + 448)$
c_{10}	$(u^{40} + 2u^{38} + \dots - 15u + 11)$ $\cdot (u^{150} + u^{149} + \dots + 5517033568u + 726291007)$
c_{11}	$(u^{40} + u^{39} + \dots + 22u^2 + 4)(u^{150} - 47u^{148} + \dots + 242552u + 55892)$
c_{12}	$(u^{40} + 18u^{38} + \dots + 4u^2 + 1)(u^{150} - 3u^{149} + \dots + 3773u + 227)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{40} + 10y^{39} + \dots + 24y + 1)$ $\cdot (y^{150} - y^{149} + \dots - 661651313y + 76729)$
c_2, c_9	$(y^{40} - 33y^{39} + \dots - 43y + 1)$ $\cdot (y^{150} - 124y^{149} + \dots - 58378240y + 200704)$
c_3, c_6	$(y^{40} - 22y^{39} + \dots - 26y + 1)$ $\cdot (y^{150} - 93y^{149} + \dots + 1259345009y + 13227769)$
c_4	$(y^{40} + 12y^{39} + \dots + 34y + 1)$ $\cdot (y^{150} + 49y^{149} + \dots - 447479481843y + 9460091169)$
c_5, c_{12}	$(y^{40} + 36y^{39} + \dots + 8y + 1)$ $\cdot (y^{150} + 109y^{149} + \dots + 1029767y + 51529)$
c_7, c_{11}	$(y^{40} - 31y^{39} + \dots + 176y + 16)$ $\cdot (y^{150} - 94y^{149} + \dots - 105400910672y + 3123915664)$
c_8	$(y^{40} - 6y^{39} + \dots - 26y + 1)(y^{150} - y^{149} + \dots + 27513y + 729)$
c_{10}	$(y^{40} + 4y^{39} + \dots + 237y + 121)$ $\cdot (y^{150} + 49y^{149} + \dots + 2.26 \times 10^{19}y + 5.27 \times 10^{17})$