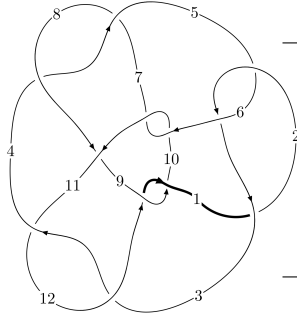
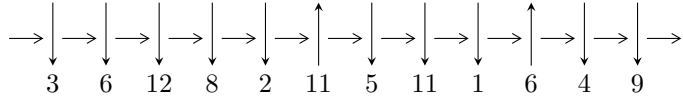


12n₀₅₄₅ (K12n₀₅₄₅)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 4.07415 \times 10^{97} u^{57} - 1.87667 \times 10^{98} u^{56} + \dots + 6.83675 \times 10^{98} b - 3.94295 \times 10^{98}, \\ - 8.87267 \times 10^{97} u^{57} + 3.53450 \times 10^{98} u^{56} + \dots + 6.83675 \times 10^{98} a + 9.76518 \times 10^{98}, u^{58} - 4u^{57} + \dots + 6u \rangle$$

$$I_2^u = \langle -2u^{15} + 6u^{14} + \dots + b + 1, \\ - u^{13} + 3u^{12} - 10u^{11} + 17u^{10} - 29u^9 + 31u^8 - 36u^7 + 27u^6 - 29u^5 + 18u^4 - 17u^3 + 6u^2 + a - 3u, \\ u^{16} - 3u^{15} + \dots - u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 74 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.

I.

$$I_1^u = \langle 4.07 \times 10^{97} u^{57} - 1.88 \times 10^{98} u^{56} + \dots + 6.84 \times 10^{98} b - 3.94 \times 10^{98}, -8.87 \times 10^{97} u^{57} + 3.53 \times 10^{98} u^{56} + \dots + 6.84 \times 10^{98} a + 9.77 \times 10^{98}, u^{58} - 4u^{57} + \dots + 6u + 4 \rangle$$

(i) Arc colorings

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

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

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

$$a_{11} = \begin{pmatrix} 0.129779u^{57} - 0.516986u^{56} + \dots + 5.18894u - 1.42834 \\ -0.0595919u^{57} + 0.274498u^{56} + \dots + 1.46859u + 0.576728 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.00288585u^{57} + 0.0503023u^{56} + \dots - 2.22480u - 1.52939 \\ -0.0906534u^{57} + 0.405030u^{56} + \dots + 1.10469u + 0.502037 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.189371u^{57} - 0.791484u^{56} + \dots + 3.72034u - 2.00506 \\ -0.0595919u^{57} + 0.274498u^{56} + \dots + 1.46859u + 0.576728 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0387990u^{57} - 0.162896u^{56} + \dots - 3.18685u - 1.73013 \\ -0.192685u^{57} + 0.853552u^{56} + \dots + 0.855020u + 1.27477 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.296992u^{57} + 0.998359u^{56} + \dots - 10.6074u - 1.68008 \\ 0.171483u^{57} - 0.586975u^{56} + \dots + 8.98917u + 2.03171 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0524169u^{57} - 0.224873u^{56} + \dots - 1.55050u - 2.18646 \\ -0.174759u^{57} + 0.745226u^{56} + \dots + 0.209991u + 1.01830 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.342530u^{57} + 1.40424u^{56} + \dots - 3.12486u + 1.77424 \\ 0.141129u^{57} - 0.526127u^{56} + \dots + 5.69791u + 0.00196869 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.103749u^{57} + 0.491535u^{56} + \dots + 8.67337u + 0.492109 \\ 0.137791u^{57} - 0.597731u^{56} + \dots + 2.06345u - 1.32119 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $0.123076u^{57} - 0.812943u^{56} + \dots - 17.7171u - 16.8383$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{58} + 41u^{57} + \dots - 191u + 169$
c_2, c_5	$u^{58} + u^{57} + \dots - 37u - 13$
c_3, c_{11}	$u^{58} - 3u^{57} + \dots - u - 17$
c_4, c_7	$u^{58} - 4u^{57} + \dots + 6u + 4$
c_6, c_{10}	$u^{58} + 3u^{57} + \dots - 16568u + 2143$
c_8	$u^{58} + u^{57} + \dots + 202u + 3$
c_9, c_{12}	$u^{58} + 3u^{57} + \dots + 7097u + 431$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{58} - 37y^{57} + \dots - 1807601y + 28561$
c_2, c_5	$y^{58} - 41y^{57} + \dots + 191y + 169$
c_3, c_{11}	$y^{58} + 47y^{57} + \dots - 171y + 289$
c_4, c_7	$y^{58} + 18y^{57} + \dots + 356y + 16$
c_6, c_{10}	$y^{58} + 65y^{57} + \dots - 280143286y + 4592449$
c_8	$y^{58} - 15y^{57} + \dots - 60898y + 9$
c_9, c_{12}	$y^{58} - 49y^{57} + \dots - 11167097y + 185761$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.633756 + 0.791145I$ $a = -0.887765 + 0.616824I$ $b = -0.553388 + 0.628935I$	$-3.87656 - 0.61696I$	$-11.92005 - 0.88689I$
$u = 0.633756 - 0.791145I$ $a = -0.887765 - 0.616824I$ $b = -0.553388 - 0.628935I$	$-3.87656 + 0.61696I$	$-11.92005 + 0.88689I$
$u = 0.747067 + 0.601176I$ $a = -1.51970 - 0.38331I$ $b = -0.401468 - 0.201550I$	$-4.20974 - 3.93817I$	$-13.2121 + 6.9659I$
$u = 0.747067 - 0.601176I$ $a = -1.51970 + 0.38331I$ $b = -0.401468 + 0.201550I$	$-4.20974 + 3.93817I$	$-13.2121 - 6.9659I$
$u = 0.480297 + 0.959333I$ $a = -1.99240 + 0.86576I$ $b = -0.172651 - 0.899004I$	$-3.54839 - 3.84914I$	$-10.22465 + 4.74982I$
$u = 0.480297 - 0.959333I$ $a = -1.99240 - 0.86576I$ $b = -0.172651 + 0.899004I$	$-3.54839 + 3.84914I$	$-10.22465 - 4.74982I$
$u = -0.521709 + 0.983940I$ $a = 1.54639 - 0.06752I$ $b = 0.506281 - 1.185660I$	$0.09858 + 7.47040I$	$-8.00000 - 8.36343I$
$u = -0.521709 - 0.983940I$ $a = 1.54639 + 0.06752I$ $b = 0.506281 + 1.185660I$	$0.09858 - 7.47040I$	$-8.00000 + 8.36343I$
$u = 0.503661 + 0.728248I$ $a = -1.66274 - 0.02895I$ $b = -0.391966 - 1.295650I$	$2.85966 - 4.49859I$	$-1.23708 + 2.46876I$
$u = 0.503661 - 0.728248I$ $a = -1.66274 + 0.02895I$ $b = -0.391966 + 1.295650I$	$2.85966 + 4.49859I$	$-1.23708 - 2.46876I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.594982 + 0.640753I$		
$a = 0.969927 - 0.024407I$	$-0.55040 + 1.69114I$	$-3.72847 - 5.08829I$
$b = 0.339779 + 0.189097I$		
$u = -0.594982 - 0.640753I$		
$a = 0.969927 + 0.024407I$	$-0.55040 - 1.69114I$	$-3.72847 + 5.08829I$
$b = 0.339779 - 0.189097I$		
$u = -0.730255 + 0.859792I$		
$a = -0.481459 + 0.177345I$	$1.91016 + 2.82560I$	$-8.00000 + 0.I$
$b = -0.202364 + 1.025230I$		
$u = -0.730255 - 0.859792I$		
$a = -0.481459 - 0.177345I$	$1.91016 - 2.82560I$	$-8.00000 + 0.I$
$b = -0.202364 - 1.025230I$		
$u = -0.219621 + 0.839350I$		
$a = 1.130710 + 0.505098I$	$-2.59431 + 2.44159I$	$-7.94322 - 3.82016I$
$b = 0.843328 + 0.336352I$		
$u = -0.219621 - 0.839350I$		
$a = 1.130710 - 0.505098I$	$-2.59431 - 2.44159I$	$-7.94322 + 3.82016I$
$b = 0.843328 - 0.336352I$		
$u = 0.898691 + 0.720344I$		
$a = 0.437549 - 0.200217I$	$-7.44986 - 3.49551I$	0
$b = 0.662131 - 1.245830I$		
$u = 0.898691 - 0.720344I$		
$a = 0.437549 + 0.200217I$	$-7.44986 + 3.49551I$	0
$b = 0.662131 + 1.245830I$		
$u = 0.367889 + 0.761915I$		
$a = 1.191700 + 0.232164I$	$3.25433 + 1.08651I$	$-2.33651 - 2.83520I$
$b = 0.002717 + 1.140600I$		
$u = 0.367889 - 0.761915I$		
$a = 1.191700 - 0.232164I$	$3.25433 - 1.08651I$	$-2.33651 + 2.83520I$
$b = 0.002717 - 1.140600I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.808356$ $a = 1.77037$ $b = 0.734307$	-5.93820	-16.7950
$u = -0.119623 + 1.194280I$ $a = -0.126368 - 1.332700I$ $b = -0.08348 + 1.49201I$	$8.29523 + 3.26345I$	0
$u = -0.119623 - 1.194280I$ $a = -0.126368 + 1.332700I$ $b = -0.08348 - 1.49201I$	$8.29523 - 3.26345I$	0
$u = -0.317704 + 1.163150I$ $a = 0.017678 - 0.187020I$ $b = -0.082658 + 0.494670I$	$1.81717 + 2.37754I$	0
$u = -0.317704 - 1.163150I$ $a = 0.017678 + 0.187020I$ $b = -0.082658 - 0.494670I$	$1.81717 - 2.37754I$	0
$u = -1.087360 + 0.583319I$ $a = -0.335602 - 0.201290I$ $b = -0.581501 - 1.162890I$	$-3.42807 - 1.99613I$	0
$u = -1.087360 - 0.583319I$ $a = -0.335602 + 0.201290I$ $b = -0.581501 + 1.162890I$	$-3.42807 + 1.99613I$	0
$u = 0.187149 + 1.276260I$ $a = 0.277466 - 0.128726I$ $b = 0.064672 + 1.355790I$	$3.33606 - 0.14941I$	0
$u = 0.187149 - 1.276260I$ $a = 0.277466 + 0.128726I$ $b = 0.064672 - 1.355790I$	$3.33606 + 0.14941I$	0
$u = -0.697744 + 0.126410I$ $a = 1.99664 - 1.33804I$ $b = 0.277967 - 1.258560I$	$-2.06001 + 3.68426I$	$-11.27363 - 1.69816I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.697744 - 0.126410I$ $a = 1.99664 + 1.33804I$ $b = 0.277967 + 1.258560I$	$-2.06001 - 3.68426I$	$-11.27363 + 1.69816I$
$u = 0.759635 + 1.129180I$ $a = 1.29689 - 0.78536I$ $b = 0.43433 + 1.40722I$	$-6.14642 - 2.75220I$	0
$u = 0.759635 - 1.129180I$ $a = 1.29689 + 0.78536I$ $b = 0.43433 - 1.40722I$	$-6.14642 + 2.75220I$	0
$u = -1.001480 + 0.973107I$ $a = -0.832664 - 0.380632I$ $b = -1.023700 + 0.164160I$	$-6.48849 + 3.63570I$	0
$u = -1.001480 - 0.973107I$ $a = -0.832664 + 0.380632I$ $b = -1.023700 - 0.164160I$	$-6.48849 - 3.63570I$	0
$u = -0.859580 + 1.106170I$ $a = 1.096860 + 0.046929I$ $b = 0.198273 - 1.156390I$	$2.21851 + 3.93693I$	0
$u = -0.859580 - 1.106170I$ $a = 1.096860 - 0.046929I$ $b = 0.198273 + 1.156390I$	$2.21851 - 3.93693I$	0
$u = 0.974228 + 1.008910I$ $a = 0.926636 - 0.331530I$ $b = 1.073470 + 0.135176I$	$-10.8043 - 9.5417I$	0
$u = 0.974228 - 1.008910I$ $a = 0.926636 + 0.331530I$ $b = 1.073470 - 0.135176I$	$-10.8043 + 9.5417I$	0
$u = 1.03423 + 0.96722I$ $a = 0.813755 - 0.507387I$ $b = 0.952238 + 0.123695I$	$-10.98340 + 2.23509I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.03423 - 0.96722I$ $a = 0.813755 + 0.507387I$ $b = 0.952238 - 0.123695I$	$-10.98340 - 2.23509I$	0
$u = 1.16247 + 0.82462I$ $a = -1.067170 - 0.448360I$ $b = -0.221458 - 1.288520I$	$0.24583 - 6.42034I$	0
$u = 1.16247 - 0.82462I$ $a = -1.067170 + 0.448360I$ $b = -0.221458 + 1.288520I$	$0.24583 + 6.42034I$	0
$u = 1.27692 + 0.71765I$ $a = 0.292225 - 0.279237I$ $b = 0.494403 - 1.216990I$	$-7.61679 + 7.37751I$	0
$u = 1.27692 - 0.71765I$ $a = 0.292225 + 0.279237I$ $b = 0.494403 + 1.216990I$	$-7.61679 - 7.37751I$	0
$u = -0.84042 + 1.21729I$ $a = -1.183540 - 0.496027I$ $b = -0.47727 + 1.42425I$	$-1.49972 + 9.01325I$	0
$u = -0.84042 - 1.21729I$ $a = -1.183540 + 0.496027I$ $b = -0.47727 - 1.42425I$	$-1.49972 - 9.01325I$	0
$u = -0.266410 + 0.401142I$ $a = -2.92496 + 3.15692I$ $b = 0.112223 + 1.152450I$	$-1.72433 - 3.71273I$	$-7.24791 + 1.15995I$
$u = -0.266410 - 0.401142I$ $a = -2.92496 - 3.15692I$ $b = 0.112223 - 1.152450I$	$-1.72433 + 3.71273I$	$-7.24791 - 1.15995I$
$u = 0.91423 + 1.22132I$ $a = 1.259520 - 0.318765I$ $b = 0.49545 + 1.41482I$	$-5.9451 - 15.1173I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.91423 - 1.22132I$ $a = 1.259520 + 0.318765I$ $b = 0.49545 - 1.41482I$	$-5.9451 + 15.1173I$	0
$u = 0.058858 + 0.410475I$ $a = -0.92100 + 1.87652I$ $b = -0.14583 - 1.62296I$	$5.20134 - 2.93181I$	$-11.08507 + 6.44707I$
$u = 0.058858 - 0.410475I$ $a = -0.92100 - 1.87652I$ $b = -0.14583 + 1.62296I$	$5.20134 + 2.93181I$	$-11.08507 - 6.44707I$
$u = 0.145156 + 0.296103I$ $a = -1.54845 + 1.00675I$ $b = -0.777584 + 0.065221I$	$-1.097500 - 0.167840I$	$-6.15459 - 2.52205I$
$u = 0.145156 - 0.296103I$ $a = -1.54845 - 1.00675I$ $b = -0.777584 - 0.065221I$	$-1.097500 + 0.167840I$	$-6.15459 + 2.52205I$
$u = -0.329275$ $a = 0.0370472$ $b = -0.490183$	-0.882045	-11.0120
$u = -0.31854 + 1.65683I$ $a = 0.326154 + 0.658457I$ $b = 0.035991 - 1.065230I$	$3.20371 + 2.59445I$	0
$u = -0.31854 - 1.65683I$ $a = 0.326154 - 0.658457I$ $b = 0.035991 + 1.065230I$	$3.20371 - 2.59445I$	0

II.

$$I_2^u = \langle -2u^{15} + 6u^{14} + \dots + b + 1, -u^{13} + 3u^{12} + \dots + a - 3u, u^{16} - 3u^{15} + \dots - u + 1 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_4 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_8 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_5 &= \begin{pmatrix} 1 \\ u^2 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} u^{13} - 3u^{12} + \dots - 6u^2 + 3u \\ 2u^{15} - 6u^{14} + \dots + 6u - 1 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 2u^{15} - 5u^{14} + \dots + 2u + 2 \\ -u^{14} + 3u^{13} + \dots + 3u - 1 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} -2u^{15} + 6u^{14} + \dots - 3u + 1 \\ 2u^{15} - 6u^{14} + \dots + 6u - 1 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -5u^{15} + 16u^{14} + \dots - u - 2 \\ 2u^{15} - 6u^{14} + \dots + 5u - 1 \end{pmatrix} \\ a_3 &= \begin{pmatrix} u^{15} - 5u^{14} + \dots - 12u^2 - 3 \\ 2u^{14} - 5u^{13} + \dots - 2u + 5 \end{pmatrix} \\ a_7 &= \begin{pmatrix} u \\ u^3 + u \end{pmatrix} \\ a_6 &= \begin{pmatrix} 2u^{15} - 5u^{14} + \dots + 6u^2 + 2 \\ -2u^{15} + 5u^{14} + \dots - u^2 - 3u \end{pmatrix} \\ a_2 &= \begin{pmatrix} -2u^{14} + 5u^{13} + \dots + 6u - 5 \\ -2u^{15} + 8u^{14} + \dots - 6u + 4 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 4u^{15} - 13u^{14} + \dots + 12u - 1 \\ -2u^{15} + 6u^{14} + \dots - 3u^2 - 1 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes $= -4u^{15} + 21u^{14} - 66u^{13} + 162u^{12} - 280u^{11} + 433u^{10} - 498u^9 + 559u^8 - 469u^7 + 452u^6 - 292u^5 + 262u^4 - 114u^3 + 85u^2 - 16u + 9$

(iv) u -Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{16} - 10u^{15} + \dots - 14u + 1$
c_2	$u^{16} - 5u^{14} + \dots - 7u^2 + 1$
c_3	$u^{16} + 2u^{15} + \dots + 4u + 1$
c_4	$u^{16} - 3u^{15} + \dots - u + 1$
c_5	$u^{16} - 5u^{14} + \dots - 7u^2 + 1$
c_6	$u^{16} + 4u^{15} + \dots + 9u + 1$
c_7	$u^{16} + 3u^{15} + \dots + u + 1$
c_8	$u^{16} - 12u^{15} + \dots + 3u + 1$
c_9	$u^{16} + 4u^{15} + \dots + 2u + 1$
c_{10}	$u^{16} - 4u^{15} + \dots - 9u + 1$
c_{11}	$u^{16} - 2u^{15} + \dots - 4u + 1$
c_{12}	$u^{16} - 4u^{15} + \dots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{16} + 2y^{15} + \dots - 14y + 1$
c_2, c_5	$y^{16} - 10y^{15} + \dots - 14y + 1$
c_3, c_{11}	$y^{16} + 18y^{15} + \dots + 12y + 1$
c_4, c_7	$y^{16} + 13y^{15} + \dots + 11y + 1$
c_6, c_{10}	$y^{16} + 4y^{15} + \dots - 15y + 1$
c_8	$y^{16} - 4y^{15} + \dots - 31y + 1$
c_9, c_{12}	$y^{16} - 10y^{15} + \dots - 14y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.522632 + 0.681729I$		
$a = 3.01304 + 0.08828I$	$-1.67890 + 4.79509I$	$-7.33702 - 7.63468I$
$b = 0.193850 - 1.240090I$		
$u = -0.522632 - 0.681729I$		
$a = 3.01304 - 0.08828I$	$-1.67890 - 4.79509I$	$-7.33702 + 7.63468I$
$b = 0.193850 + 1.240090I$		
$u = 0.505824 + 0.614300I$		
$a = -1.018070 + 0.161240I$	$-1.40771 - 0.97837I$	$-9.52942 + 3.04465I$
$b = -0.775312 + 0.317843I$		
$u = 0.505824 - 0.614300I$		
$a = -1.018070 - 0.161240I$	$-1.40771 + 0.97837I$	$-9.52942 - 3.04465I$
$b = -0.775312 - 0.317843I$		
$u = 0.133841 + 1.204570I$		
$a = -0.35849 + 1.55300I$	$7.65003 - 3.66078I$	$-7.24903 + 5.37880I$
$b = -0.07812 - 1.52109I$		
$u = 0.133841 - 1.204570I$		
$a = -0.35849 - 1.55300I$	$7.65003 + 3.66078I$	$-7.24903 - 5.37880I$
$b = -0.07812 + 1.52109I$		
$u = 0.895544 + 0.875535I$		
$a = -1.117880 - 0.176389I$	$1.48311 - 4.99831I$	$-7.51711 + 5.80874I$
$b = -0.333939 - 1.201080I$		
$u = 0.895544 - 0.875535I$		
$a = -1.117880 + 0.176389I$	$1.48311 + 4.99831I$	$-7.51711 - 5.80874I$
$b = -0.333939 + 1.201080I$		
$u = 0.122314 + 0.707690I$		
$a = 0.010586 - 0.499972I$	$5.66385 + 2.53909I$	$-0.82857 + 1.24715I$
$b = -0.15573 + 1.61681I$		
$u = 0.122314 - 0.707690I$		
$a = 0.010586 + 0.499972I$	$5.66385 - 2.53909I$	$-0.82857 - 1.24715I$
$b = -0.15573 - 1.61681I$		

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.269294 + 1.323520I$ $a = -0.201461 + 0.527298I$ $b = -0.185206 - 0.303507I$	$1.27597 - 2.61649I$	$-13.2971 + 5.8003I$
$u = 0.269294 - 1.323520I$ $a = -0.201461 - 0.527298I$ $b = -0.185206 + 0.303507I$	$1.27597 + 2.61649I$	$-13.2971 - 5.8003I$
$u = -0.283411 + 0.533145I$ $a = 2.59418 + 0.46203I$ $b = 0.388010 + 0.584237I$	$-4.14032 + 2.65100I$	$-12.96730 - 1.15952I$
$u = -0.283411 - 0.533145I$ $a = 2.59418 - 0.46203I$ $b = 0.388010 - 0.584237I$	$-4.14032 - 2.65100I$	$-12.96730 + 1.15952I$
$u = 0.37923 + 1.60128I$ $a = 0.078082 - 0.226823I$ $b = -0.053550 + 1.235140I$	$4.31342 - 1.80529I$	$-1.27447 + 2.27954I$
$u = 0.37923 - 1.60128I$ $a = 0.078082 + 0.226823I$ $b = -0.053550 - 1.235140I$	$4.31342 + 1.80529I$	$-1.27447 - 2.27954I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{16} - 10u^{15} + \dots - 14u + 1)(u^{58} + 41u^{57} + \dots - 191u + 169)$
c_2	$(u^{16} - 5u^{14} + \dots - 7u^2 + 1)(u^{58} + u^{57} + \dots - 37u - 13)$
c_3	$(u^{16} + 2u^{15} + \dots + 4u + 1)(u^{58} - 3u^{57} + \dots - u - 17)$
c_4	$(u^{16} - 3u^{15} + \dots - u + 1)(u^{58} - 4u^{57} + \dots + 6u + 4)$
c_5	$(u^{16} - 5u^{14} + \dots - 7u^2 + 1)(u^{58} + u^{57} + \dots - 37u - 13)$
c_6	$(u^{16} + 4u^{15} + \dots + 9u + 1)(u^{58} + 3u^{57} + \dots - 16568u + 2143)$
c_7	$(u^{16} + 3u^{15} + \dots + u + 1)(u^{58} - 4u^{57} + \dots + 6u + 4)$
c_8	$(u^{16} - 12u^{15} + \dots + 3u + 1)(u^{58} + u^{57} + \dots + 202u + 3)$
c_9	$(u^{16} + 4u^{15} + \dots + 2u + 1)(u^{58} + 3u^{57} + \dots + 7097u + 431)$
c_{10}	$(u^{16} - 4u^{15} + \dots - 9u + 1)(u^{58} + 3u^{57} + \dots - 16568u + 2143)$
c_{11}	$(u^{16} - 2u^{15} + \dots - 4u + 1)(u^{58} - 3u^{57} + \dots - u - 17)$
c_{12}	$(u^{16} - 4u^{15} + \dots - 2u + 1)(u^{58} + 3u^{57} + \dots + 7097u + 431)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{16} + 2y^{15} + \dots - 14y + 1)(y^{58} - 37y^{57} + \dots - 1807601y + 28561)$
c_2, c_5	$(y^{16} - 10y^{15} + \dots - 14y + 1)(y^{58} - 41y^{57} + \dots + 191y + 169)$
c_3, c_{11}	$(y^{16} + 18y^{15} + \dots + 12y + 1)(y^{58} + 47y^{57} + \dots - 171y + 289)$
c_4, c_7	$(y^{16} + 13y^{15} + \dots + 11y + 1)(y^{58} + 18y^{57} + \dots + 356y + 16)$
c_6, c_{10}	$(y^{16} + 4y^{15} + \dots - 15y + 1)$ $\cdot (y^{58} + 65y^{57} + \dots - 280143286y + 4592449)$
c_8	$(y^{16} - 4y^{15} + \dots - 31y + 1)(y^{58} - 15y^{57} + \dots - 60898y + 9)$
c_9, c_{12}	$(y^{16} - 10y^{15} + \dots - 14y + 1)$ $\cdot (y^{58} - 49y^{57} + \dots - 11167097y + 185761)$