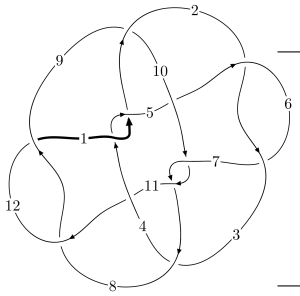
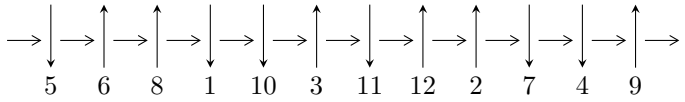
$12a_{1229}$ $(K12a_{1229})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle -657243u^{19} + 550757u^{18} + \cdots + 150052055b - 22884294, \\
&\quad 2745998u^{19} - 1810107u^{18} + \cdots + 885415a + 11576054,\ u^{20} - u^{19} + \cdots + 8u - 1\rangle \\
I_2^u &= \langle 1.61625 \times 10^{510}u^{119} + 2.95718 \times 10^{510}u^{118} + \cdots + 2.43355 \times 10^{509}b + 1.95951 \times 10^{512}, \\
&\quad -2.49960 \times 10^{511}u^{119} - 4.27348 \times 10^{511}u^{118} + \cdots + 2.45789 \times 10^{511}a - 1.68445 \times 10^{513}, \\
&\quad u^{120} + u^{119} + \cdots - 1207u - 101\rangle \\
I_3^u &= \langle -u^2 + b,\ -u^2 + a + 1,\ u^6 - u^5 - u^4 + 2u^3 - u + 1\rangle \\
I_4^u &= \langle -890375597269u^{23} + 254192032954u^{22} + \cdots + 29055549398b + 3174095591762, \\
&\quad 3872069553587u^{23} - 1069682860926u^{22} + \cdots + 29055549398a - 13742313845163, \\
&\quad u^{24} - 10u^{22} + \cdots - 11u - 1\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 170 representations.

[1]The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

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

I.

$\boldsymbol{I_1^u = \langle -6.57\times 10^5 u^{19} + 5.51\times 10^5 u^{18} + \cdots + 1.51\times 10^7 b - 2.29\times 10^7,\ 2.75\times 10^6 u^{19} - 1.81\times 10^6 u^{18} + \cdots + 8.85\times 10^5 a + 1.16\times 10^7,\ u^{20} - u^{19} + \cdots + 8u - 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -3.10137u^{19} + 2.04436u^{18} + \cdots + 46.2868u - 13.0742 \\ 0.0436647u^{19} - 0.0365902u^{18} + \cdots - 2.22938u + 1.52034 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -3.38270u^{19} + 1.83814u^{18} + \cdots + 48.5281u - 13.6793 \\ 0.351266u^{19} + 0.114483u^{18} + \cdots - 3.60717u + 1.40274 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -3.14503u^{19} + 2.08095u^{18} + \cdots + 48.5161u - 14.5945 \\ 0.0436647u^{19} - 0.0365902u^{18} + \cdots - 2.22938u + 1.52034 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 4.34974u^{19} - 3.12294u^{18} + \cdots - 60.9551u + 17.5138 \\ -0.605158u^{19} + 0.323827u^{18} + \cdots + 7.26222u - 2.59996 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 5.75707u^{19} - 4.24667u^{18} + \cdots - 87.5291u + 27.3276 \\ -0.400467u^{19} + 0.658924u^{18} + \cdots + 11.8243u - 4.07902 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 4.69299u^{19} - 3.80267u^{18} + \cdots - 76.9633u + 24.1825 \\ -0.393392u^{19} + 0.726860u^{18} + \cdots + 12.9953u - 4.03535 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -4.03535u^{19} + 3.64196u^{18} + \cdots + 61.8775u - 19.2875 \\ -0.289803u^{19} - 0.784497u^{18} + \cdots - 1.34116u + 1.91374 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -5.17324u^{19} + 4.24751u^{18} + \cdots + 75.3851u - 25.4465 \\ 1.22379u^{19} - 0.813102u^{18} + \cdots - 14.2496u + 4.29959 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{25801680}{3010411}u^{19} + \frac{13740304}{3010411}u^{18} + \cdots + \frac{265194524}{3010411}u - \frac{69023780}{3010411}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_7 c_{10}	$u^{20} + u^{19} + \cdots - 8u - 1$
c_2, c_6, c_8 c_{12}	$u^{20} - u^{19} + \cdots + 8u - 1$
c_3, c_9	$u^{20} + 3u^{19} + \cdots - 4u + 1$
c_5, c_{11}	$u^{20} - 3u^{19} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_7, c_8 c_{10}, c_{12}	$y^{20} - 21y^{19} + \cdots - 22y + 1$
c_3, c_5, c_9 c_{11}	$y^{20} - 9y^{19} + \cdots - 58y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.937024+0.450242I$ $a=-0.384605-0.337640I$ $b=-0.751635-1.117870I$	$-3.67791-3.10330I$	$-3.51583+4.92617I$
$u=-0.937024-0.450242I$ $a=-0.384605+0.337640I$ $b=-0.751635+1.117870I$	$-3.67791+3.10330I$	$-3.51583-4.92617I$
$u=-0.942219$ $a=-1.69416$ $b=\ \ 1.71447$	-6.37866	3.70440
$u=-0.090437+1.100790I$ $a=\ \ 0.357560-1.069910I$ $b=\ \ 0.819196-1.038580I$	$-9.29934-6.91821I$	$-7.59605+5.76583I$
$u=-0.090437-1.100790I$ $a=\ \ 0.357560+1.069910I$ $b=\ \ 0.819196+1.038580I$	$-9.29934+6.91821I$	$-7.59605-5.76583I$
$u=\ \ 1.162070+0.230203I$ $a=\ \ 0.805749+0.802349I$ $b=-0.512403-0.143211I$	$3.67791+3.10330I$	$3.51583-4.92617I$
$u=\ \ 1.162070-0.230203I$ $a=\ \ 0.805749-0.802349I$ $b=-0.512403+0.143211I$	$3.67791-3.10330I$	$3.51583+4.92617I$
$u=\ \ 0.692420+0.175493I$ $a=-0.62416-1.52463I$ $b=\ \ 0.164619-1.165220I$	$0.945117I$	$0.-6.62663I$
$u=\ \ 0.692420-0.175493I$ $a=-0.62416+1.52463I$ $b=\ \ 0.164619+1.165220I$	$-0.945117I$	$0.+6.62663I$
$u=-1.357150+0.312893I$ $a=\ \ 0.405622+0.858786I$ $b=-1.145400+0.490357I$	$9.29934-6.91821I$	$7.59605+5.76583I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.357150-0.312893I$ $a=\ \ 0.405622-0.858786I$ $b=-1.145400-0.490357I$	$9.29934+6.91821I$	$7.59605-5.76583I$
$u=\ \ 1.43028+0.61765I$ $a=\ \ 0.527948-0.948587I$ $b=-1.34101-1.03066I$	$19.4225I$	$0.-9.88055I$
$u=\ \ 1.43028-0.61765I$ $a=\ \ 0.527948+0.948587I$ $b=-1.34101+1.03066I$	$-19.4225I$	$0.+9.88055I$
$u=\ \ 1.56596$ $a=-0.0875994$ $b=-0.956582$	1.07560	8.20320
$u=\ \ 1.57822$ $a=-0.828201$ $b=\ \ 1.36600$	8.74433	11.3570
$u=\ \ 0.141085+0.364901I$ $a=\ \ 0.816431+1.084900I$ $b=\ \ 0.280693+0.450979I$	$0.971689I$	$0.-6.75018I$
$u=\ \ 0.141085-0.364901I$ $a=\ \ 0.816431-1.084900I$ $b=\ \ 0.280693-0.450979I$	$-0.971689I$	$0.+6.75018I$
$u=-1.69718$ $a=-0.563631$ $b=\ \ 0.137177$	-1.07560	-8.20320
$u=\ \ 0.207256$ $a=-6.59087$ $b=\ \ 1.30709$	-8.74433	-11.3570
$u=-1.79455$ $a=\ \ 0.955379$ $b=-1.59627$	6.37866	-3.70440

II. $\boldsymbol{I_2^u = \langle 1.62 \times 10^{510} u^{119} + 2.96 \times 10^{510} u^{118} + \cdots + 2.43 \times 10^{509} b + 1.96 \times 10^{512},\ -2.50 \times 10^{511} u^{119} - 4.27 \times 10^{511} u^{118} + \cdots + 2.46 \times 10^{511} a - 1.68 \times 10^{513},\ u^{120} + u^{119} + \cdots - 1207u - 101 \rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.01697u^{119} + 1.73868u^{118} + \cdots + 1250.63u + 68.5325 \\ -6.64154u^{119} - 12.1517u^{118} + \cdots - 10621.1u - 805.207 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 5.75809u^{119} + 10.3986u^{118} + \cdots + 8895.14u + 648.617 \\ -5.12212u^{119} - 9.38884u^{118} + \cdots - 8185.42u - 620.921 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 7.65852u^{119} + 13.8904u^{118} + \cdots + 11871.7u + 873.739 \\ -6.64154u^{119} - 12.1517u^{118} + \cdots - 10621.1u - 805.207 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.11875u^{119} - 2.64304u^{118} + \cdots - 1268.92u - 121.688 \\ -2.20452u^{119} - 4.10235u^{118} + \cdots - 3190.02u - 238.655 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -3.36432u^{119} - 6.52962u^{118} + \cdots - 4543.21u - 344.737 \\ 3.27162u^{119} + 6.24353u^{118} + \cdots + 4661.08u + 355.334 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 10.5896u^{119} + 19.1853u^{118} + \cdots + 16483.5u + 1214.74 \\ -8.57234u^{119} - 15.5835u^{118} + \cdots - 13957.2u - 1056.32 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -11.1962u^{119} - 20.8532u^{118} + \cdots - 16571.6u - 1239.72 \\ 8.28041u^{119} + 15.5128u^{118} + \cdots + 12526.9u + 951.367 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2.27197u^{119} - 4.78743u^{118} + \cdots - 2978.31u - 251.605 \\ 1.58455u^{119} + 2.95319u^{118} + \cdots + 2593.22u + 203.741 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -36.0800u^{119} - 67.2942u^{118} + \cdots - 54086.0u - 4089.21$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_7 c_{10}	$u^{120} - u^{119} + \cdots + 1207u - 101$
c_2, c_6, c_8 c_{12}	$u^{120} + u^{119} + \cdots - 1207u - 101$
c_3, c_9	$u^{120} - 7u^{117} + \cdots - 175u - 575$
c_5, c_{11}	$u^{120} + 7u^{117} + \cdots + 175u - 575$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_7, c_8 c_{10}, c_{12}	$y^{120} - 73y^{119} + \cdots - 569059y + 10201$
c_3, c_5, c_9 c_{11}	$y^{120} + 86y^{118} + \cdots - 5688625y + 330625$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.571383 + 0.817824I$ $a = -0.337837 - 0.625440I$ $b = -0.767765 - 0.308435I$	$3.58665 + 3.20085I$	0
$u = 0.571383 - 0.817824I$ $a = -0.337837 + 0.625440I$ $b = -0.767765 + 0.308435I$	$3.58665 - 3.20085I$	0
$u = 1.015410 + 0.099318I$ $a = 0.775962 - 0.840114I$ $b = -1.62880 - 1.21221I$	$0.87063 + 4.37653I$	0
$u = 1.015410 - 0.099318I$ $a = 0.775962 + 0.840114I$ $b = -1.62880 + 1.21221I$	$0.87063 - 4.37653I$	0
$u = 1.029960 + 0.108703I$ $a = 1.44044 + 1.01116I$ $b = -1.120920 + 0.163726I$	$3.43093 + 4.34668I$	0
$u = 1.029960 - 0.108703I$ $a = 1.44044 - 1.01116I$ $b = -1.120920 - 0.163726I$	$3.43093 - 4.34668I$	0
$u = -0.376706 + 0.970628I$ $a = 0.709879 + 0.393674I$ $b = 0.541187 + 0.911081I$	$-0.31640 + 3.81201I$	0
$u = -0.376706 - 0.970628I$ $a = 0.709879 - 0.393674I$ $b = 0.541187 - 0.911081I$	$-0.31640 - 3.81201I$	0
$u = 0.929577 + 0.130081I$ $a = -0.52107 - 1.59976I$ $b = 0.495079 - 0.392935I$	$0.419089I$	0
$u = 0.929577 - 0.130081I$ $a = -0.52107 + 1.59976I$ $b = 0.495079 + 0.392935I$	$-0.419089I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.024900 + 0.276881I$ $a = 0.15555 - 1.79236I$ $b = -0.206866 - 0.464700I$	$0.159819 + 0.791393I$	0
$u = 1.024900 - 0.276881I$ $a = 0.15555 + 1.79236I$ $b = -0.206866 + 0.464700I$	$0.159819 - 0.791393I$	0
$u = 0.917589 + 0.114336I$ $a = -1.05262 - 1.82444I$ $b = 0.499926 - 0.525485I$	$-0.159819 + 0.791393I$	0
$u = 0.917589 - 0.114336I$ $a = -1.05262 + 1.82444I$ $b = 0.499926 + 0.525485I$	$-0.159819 - 0.791393I$	0
$u = -0.220382 + 1.055820I$ $a = -0.691368 - 0.822797I$ $b = -0.802424 - 0.803524I$	$-5.81721 + 4.62194I$	0
$u = -0.220382 - 1.055820I$ $a = -0.691368 + 0.822797I$ $b = -0.802424 + 0.803524I$	$-5.81721 - 4.62194I$	0
$u = -0.430102 + 0.999454I$ $a = -0.703162 - 0.687615I$ $b = 0.067673 - 1.048070I$	$-2.63314 + 3.37265I$	0
$u = -0.430102 - 0.999454I$ $a = -0.703162 + 0.687615I$ $b = 0.067673 + 1.048070I$	$-2.63314 - 3.37265I$	0
$u = -0.890569 + 0.149096I$ $a = 1.29257 + 1.47928I$ $b = -0.971229 + 0.609138I$	$-2.63314 - 3.37265I$	0
$u = -0.890569 - 0.149096I$ $a = 1.29257 - 1.47928I$ $b = -0.971229 - 0.609138I$	$-2.63314 + 3.37265I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.085370+0.245075I$ $a=\ \ 0.070673-0.888919I$ $b=-0.472794-0.687874I$	$-0.31640-3.81201I$	0
$u=-1.085370-0.245075I$ $a=\ \ 0.070673+0.888919I$ $b=-0.472794+0.687874I$	$-0.31640+3.81201I$	0
$u=-1.121070+0.002297I$ $a=-0.676952+0.628951I$ $b=\ \ 1.348580+0.398307I$	$5.58448+0.82681I$	0
$u=-1.121070-0.002297I$ $a=-0.676952-0.628951I$ $b=\ \ 1.348580-0.398307I$	$5.58448-0.82681I$	0
$u=\ \ 0.956984+0.655205I$ $a=-0.348777+0.259561I$ $b=-0.45047+1.69807I$	$-2.49209+10.34980I$	0
$u=\ \ 0.956984-0.655205I$ $a=-0.348777-0.259561I$ $b=-0.45047-1.69807I$	$-2.49209-10.34980I$	0
$u=\ \ 0.838810+0.018028I$ $a=-0.022628-0.308718I$ $b=-0.73721+1.56066I$	$0.20224-3.55721I$	0
$u=\ \ 0.838810-0.018028I$ $a=-0.022628+0.308718I$ $b=-0.73721-1.56066I$	$0.20224+3.55721I$	0
$u=\ \ 1.056600+0.487993I$ $a=\ \ 0.272721-0.127124I$ $b=\ \ 0.81363-1.35709I$	$-5.81721+4.62194I$	0
$u=\ \ 1.056600-0.487993I$ $a=\ \ 0.272721+0.127124I$ $b=\ \ 0.81363+1.35709I$	$-5.81721-4.62194I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.150200+0.209306I$ $a=-0.63913+1.36002I$ $b=\ \ 0.503840-0.019875I$	$2.49209-10.34980I$	0
$u=-1.150200-0.209306I$ $a=-0.63913-1.36002I$ $b=\ \ 0.503840+0.019875I$	$2.49209+10.34980I$	0
$u=-1.163030+0.207546I$ $a=-0.338959-0.777400I$ $b=\ \ 0.769100-0.908473I$	$3.58665-3.20085I$	0
$u=-1.163030-0.207546I$ $a=-0.338959+0.777400I$ $b=\ \ 0.769100+0.908473I$	$3.58665+3.20085I$	0
$u=-1.18600$ $a=\ \ 0.491723$ $b=\ \ 0.878739$	-5.62510	0
$u=-1.126730+0.405886I$ $a=-0.590597-0.753377I$ $b=\ \ 1.37167-1.12469I$	$2.63314-3.37265I$	0
$u=-1.126730-0.405886I$ $a=-0.590597+0.753377I$ $b=\ \ 1.37167+1.12469I$	$2.63314+3.37265I$	0
$u=\ \ 0.201452+0.768382I$ $a=-0.00995+1.55417I$ $b=\ \ 1.130110+0.779101I$	-8.18473	0
$u=\ \ 0.201452-0.768382I$ $a=-0.00995-1.55417I$ $b=\ \ 1.130110-0.779101I$	-8.18473	0
$u=\ \ 0.789728+0.065338I$ $a=\ \ 0.023944+1.325150I$ $b=-0.989671+0.407033I$	$2.63314-3.37265I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.789728 - 0.065338I$ $a = 0.023944 - 1.325150I$ $b = -0.989671 - 0.407033I$	$2.63314 + 3.37265I$	0
$u = -0.131435 + 1.206100I$ $a = -0.321284 - 0.601557I$ $b = -0.318465 - 0.633657I$	$-3.58665 + 3.20085I$	0
$u = -0.131435 - 1.206100I$ $a = -0.321284 + 0.601557I$ $b = -0.318465 + 0.633657I$	$-3.58665 - 3.20085I$	0
$u = 0.705980 + 1.009290I$ $a = 0.412700 - 0.821924I$ $b = -1.37369 - 1.19804I$	$-3.43093 - 4.34668I$	0
$u = 0.705980 - 1.009290I$ $a = 0.412700 + 0.821924I$ $b = -1.37369 + 1.19804I$	$-3.43093 + 4.34668I$	0
$u = 1.216130 + 0.235698I$ $a = 0.633659 - 1.087890I$ $b = -1.02702 - 1.17366I$	$5.66863I$	0
$u = 1.216130 - 0.235698I$ $a = 0.633659 + 1.087890I$ $b = -1.02702 + 1.17366I$	$-5.66863I$	0
$u = -0.624516 + 0.424975I$ $a = -1.064150 - 0.150384I$ $b = -0.569569 - 0.536506I$	$-2.93285 + 0.71247I$	0
$u = -0.624516 - 0.424975I$ $a = -1.064150 + 0.150384I$ $b = -0.569569 + 0.536506I$	$-2.93285 - 0.71247I$	0
$u = 1.231680 + 0.238226I$ $a = 0.364546 - 0.506098I$ $b = -0.728486 - 0.358319I$	$2.93285 + 0.71247I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 1.231680 - 0.238226I$ $a = \ 0.364546 + 0.506098I$ $b = -0.728486 + 0.358319I$	$2.93285 - 0.71247I$	0
$u = -1.253480 + 0.188299I$ $a = -0.392247 - 1.303990I$ $b = \ 0.013415 - 0.259364I$	$-0.20224 - 3.55721I$	0
$u = -1.253480 - 0.188299I$ $a = -0.392247 + 1.303990I$ $b = \ 0.013415 + 0.259364I$	$-0.20224 + 3.55721I$	0
$u = -1.27931$ $a = -0.980199$ $b = \ 1.55109$	5.62510	0
$u = -1.231390 + 0.385936I$ $a = \ 0.693224 + 0.750299I$ $b = -1.72377 + 0.96596I$	$3.43093 - 4.34668I$	0
$u = -1.231390 - 0.385936I$ $a = \ 0.693224 - 0.750299I$ $b = -1.72377 - 0.96596I$	$3.43093 + 4.34668I$	0
$u = -0.181900 + 0.648976I$ $a = -0.02902 + 2.08615I$ $b = -0.757463 + 0.706650I$	$-5.58448 - 0.82681I$	0
$u = -0.181900 - 0.648976I$ $a = -0.02902 - 2.08615I$ $b = -0.757463 - 0.706650I$	$-5.58448 + 0.82681I$	0
$u = -0.665722$ $a = \ 2.32993$ $b = -1.25398$	-5.62510	0
$u = -1.339850 + 0.011748I$ $a = \ 0.598326 + 1.018120I$ $b = -0.350192 - 0.001232I$	$5.81721 + 4.62194I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.339850-0.011748I$ $a=\ \ 0.598326-1.018120I$ $b=-0.350192+0.001232I$	$5.81721-4.62194I$	0
$u=-0.070061+1.340720I$ $a=-0.338608+0.782490I$ $b=-0.88064+1.14324I$	$-4.62976-12.68520I$	0
$u=-0.070061-1.340720I$ $a=-0.338608-0.782490I$ $b=-0.88064-1.14324I$	$-4.62976+12.68520I$	0
$u=\ \ 1.296850+0.352743I$ $a=-0.648681+0.933581I$ $b=\ \ 1.42725+1.04940I$	$4.62976+12.68520I$	0
$u=\ \ 1.296850-0.352743I$ $a=-0.648681-0.933581I$ $b=\ \ 1.42725-1.04940I$	$4.62976-12.68520I$	0
$u=-0.608583+0.231833I$ $a=-0.53449-2.09677I$ $b=\ \ 0.972957-0.918369I$	$-9.23882I$	0
$u=-0.608583-0.231833I$ $a=-0.53449+2.09677I$ $b=\ \ 0.972957+0.918369I$	$9.23882I$	0
$u=\ \ 1.344520+0.306984I$ $a=\ \ 0.95576-1.11982I$ $b=-0.871355-0.775991I$	$-0.87063+4.37653I$	0
$u=\ \ 1.344520-0.306984I$ $a=\ \ 0.95576+1.11982I$ $b=-0.871355+0.775991I$	$-0.87063-4.37653I$	0
$u=-1.238950+0.607673I$ $a=\ \ 0.339962+0.907990I$ $b=-0.811381+1.152140I$	$-9.23882I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.238950-0.607673I$ $a=\ \ 0.339962-0.907990I$ $b=-0.811381-1.152140I$	$9.23882I$	0
$u=-1.267210+0.562599I$ $a=\ \ 0.537214+1.171070I$ $b=-1.12824+0.90180I$	$-2.49209-10.34980I$	0
$u=-1.267210-0.562599I$ $a=\ \ 0.537214-1.171070I$ $b=-1.12824-0.90180I$	$-2.49209+10.34980I$	0
$u=-0.393843+0.466604I$ $a=\ \ 0.35434-1.98110I$ $b=\ \ 0.936727-0.989096I$	$-9.27421I$	0
$u=-0.393843-0.466604I$ $a=\ \ 0.35434+1.98110I$ $b=\ \ 0.936727+0.989096I$	$9.27421I$	0
$u=\ \ 1.220870+0.671493I$ $a=-0.025206+0.760119I$ $b=\ \ 0.649527+0.540729I$	$0.31640+3.81201I$	0
$u=\ \ 1.220870-0.671493I$ $a=-0.025206-0.760119I$ $b=\ \ 0.649527-0.540729I$	$0.31640-3.81201I$	0
$u=\ \ 1.388360+0.181604I$ $a=-0.728130+0.656408I$ $b=\ \ 1.196200+0.305442I$	8.18473	0
$u=\ \ 1.388360-0.181604I$ $a=-0.728130-0.656408I$ $b=\ \ 1.196200-0.305442I$	8.18473	0
$u=-1.276600+0.576075I$ $a=\ \ 0.319149+0.918808I$ $b=-0.784834+0.945577I$	$-9.27421I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.276600-0.576075I$ $a=\ 0.319149-0.918808I$ $b=-0.784834-0.945577I$	$9.27421I$	0
$u=\ 1.16371+0.81575I$ $a=\ 0.238433+0.658620I$ $b=\ 0.678477+0.367081I$	$0.20224+3.55721I$	0
$u=\ 1.16371-0.81575I$ $a=\ 0.238433-0.658620I$ $b=\ 0.678477-0.367081I$	$0.20224-3.55721I$	0
$u=-0.234896+0.527579I$ $a=\ 0.97983+1.60290I$ $b=-0.443106+0.422894I$	$-2.93285+0.71247I$	$-3.42268+3.66333I$
$u=-0.234896-0.527579I$ $a=\ 0.97983-1.60290I$ $b=-0.443106-0.422894I$	$-2.93285-0.71247I$	$-3.42268-3.66333I$
$u=\ 0.476523+0.316358I$ $a=\ 1.35382+0.54474I$ $b=-0.141146-0.982125I$	$0.31640+3.81201I$	$0.-6.79551I$
$u=\ 0.476523-0.316358I$ $a=\ 1.35382-0.54474I$ $b=-0.141146+0.982125I$	$0.31640-3.81201I$	$0.+6.79551I$
$u=-1.37325+0.41309I$ $a=-0.957051-0.991306I$ $b=\ 1.143200-0.656374I$	$-3.43093-4.34668I$	0
$u=-1.37325-0.41309I$ $a=-0.957051+0.991306I$ $b=\ 1.143200+0.656374I$	$-3.43093+4.34668I$	0
$u=-0.181830+0.531149I$ $a=\ 0.947794+0.607629I$ $b=\ 0.27628+1.55488I$	$-0.419089I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.181830-0.531149I$ $a=\ 0.947794-0.607629I$ $b=\ 0.27628-1.55488I$	$0.419089I$	0
$u=\ 0.403941+0.384818I$ $a=\ 0.000885+1.300050I$ $b=\ 0.75727+1.79444I$	$0.159819-0.791393I$	$8.50855-4.94473I$
$u=\ 0.403941-0.384818I$ $a=\ 0.000885-1.300050I$ $b=\ 0.75727-1.79444I$	$0.159819+0.791393I$	$8.50855+4.94473I$
$u=-1.32190+0.62879I$ $a=\ 0.291425+0.159989I$ $b=\ 0.322356+0.758523I$	$-5.58448+0.82681I$	0
$u=-1.32190-0.62879I$ $a=\ 0.291425-0.159989I$ $b=\ 0.322356-0.758523I$	$-5.58448-0.82681I$	0
$u=\ 1.45709+0.25117I$ $a=-0.127705+0.542587I$ $b=\ 0.485835-0.028245I$	$5.58448+0.82681I$	0
$u=\ 1.45709-0.25117I$ $a=-0.127705-0.542587I$ $b=\ 0.485835+0.028245I$	$5.58448-0.82681I$	0
$u=-1.30990+0.68784I$ $a=-0.391778-0.894180I$ $b=\ 1.33961-1.18175I$	$2.49209-10.34980I$	0
$u=-1.30990-0.68784I$ $a=-0.391778+0.894180I$ $b=\ 1.33961+1.18175I$	$2.49209+10.34980I$	0
$u=\ 1.22946+0.83117I$ $a=-0.417236-0.486944I$ $b=-0.435299+0.086669I$	$0.87063+4.37653I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.22946 - 0.83117I$ $a = -0.417236 + 0.486944I$ $b = -0.435299 - 0.086669I$	$0.87063 - 4.37653I$	0
$u = 1.40423 + 0.52577I$ $a = -0.646016 + 0.989197I$ $b = 1.17056 + 0.98190I$	$-4.62976 + 12.68520I$	0
$u = 1.40423 - 0.52577I$ $a = -0.646016 - 0.989197I$ $b = 1.17056 - 0.98190I$	$-4.62976 - 12.68520I$	0
$u = -0.63469 + 1.37236I$ $a = 0.408707 + 0.305367I$ $b = 0.259804 + 0.960943I$	$-0.20224 + 3.55721I$	0
$u = -0.63469 - 1.37236I$ $a = 0.408707 - 0.305367I$ $b = 0.259804 - 0.960943I$	$-0.20224 - 3.55721I$	0
$u = -1.41461 + 0.61654I$ $a = -0.227152 - 0.907168I$ $b = 1.025380 - 0.508802I$	$4.62976 - 12.68520I$	0
$u = -1.41461 - 0.61654I$ $a = -0.227152 + 0.907168I$ $b = 1.025380 + 0.508802I$	$4.62976 + 12.68520I$	0
$u = 0.13532 + 1.57756I$ $a = 0.120473 + 0.305686I$ $b = 0.465933 + 0.231420I$	$5.66863I$	0
$u = 0.13532 - 1.57756I$ $a = 0.120473 - 0.305686I$ $b = 0.465933 - 0.231420I$	$-5.66863I$	0
$u = 1.48056 + 0.67558I$ $a = 0.243610 - 0.653874I$ $b = -1.021090 - 0.548627I$	$5.81721 + 4.62194I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.48056 - 0.67558I$ $a = 0.243610 + 0.653874I$ $b = -1.021090 + 0.548627I$	$5.81721 - 4.62194I$	0
$u = -0.055622 + 0.343280I$ $a = -1.41422 - 0.37347I$ $b = -0.65570 - 1.79393I$	$-0.159819 + 0.791393I$	$-8.50855 + 4.94473I$
$u = -0.055622 - 0.343280I$ $a = -1.41422 + 0.37347I$ $b = -0.65570 + 1.79393I$	$-0.159819 - 0.791393I$	$-8.50855 - 4.94473I$
$u = -0.021732 + 0.344096I$ $a = -2.48909 + 2.39233I$ $b = -0.555564 + 0.833787I$	$-3.58665 - 3.20085I$	$-6.93836 + 8.90282I$
$u = -0.021732 - 0.344096I$ $a = -2.48909 - 2.39233I$ $b = -0.555564 - 0.833787I$	$-3.58665 + 3.20085I$	$-6.93836 - 8.90282I$
$u = 1.69847$ $a = -0.517371$ $b = 0.583185$	5.62510	0
$u = -0.182421 + 0.010400I$ $a = -2.28942 - 2.44876I$ $b = 1.075820 + 0.140423I$	$2.93285 + 0.71247I$	$3.42268 + 3.66333I$
$u = -0.182421 - 0.010400I$ $a = -2.28942 + 2.44876I$ $b = 1.075820 - 0.140423I$	$2.93285 - 0.71247I$	$3.42268 - 3.66333I$
$u = -1.35852 + 1.23335I$ $a = -0.143899 - 0.194437I$ $b = 0.108243 - 0.945472I$	$-0.87063 + 4.37653I$	0
$u = -1.35852 - 1.23335I$ $a = -0.143899 + 0.194437I$ $b = 0.108243 + 0.945472I$	$-0.87063 - 4.37653I$	0

III. $I_3^u = \langle -u^2 + b,\ -u^2 + a + 1,\ u^6 - u^5 - u^4 + 2u^3 - u + 1 \rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^2 - 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^5 + 2u^3 - u \\ -u^5 + u^3 - u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^5 - 2u^3 + u \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u \\ u^3 - u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ -u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -8u^4 + 8u^2 - 8u - 4$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6, c_7 c_{12}	$u^6 + u^5 - u^4 - 2u^3 + u + 1$
c_2, c_4, c_8 c_{10}	$u^6 - u^5 - u^4 + 2u^3 - u + 1$
c_3, c_9	$u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1$
c_5, c_{11}	$u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_7, c_8 c_{10}, c_{12}	$y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1$
c_3, c_5, c_9 c_{11}	$y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.002190+0.295542I$ $a=-0.082955-0.592379I$ $b=\ \ 0.917045-0.592379I$	$3.78121-1.84861I$	$7.43343+1.58845I$
$u=-1.002190-0.295542I$ $a=-0.082955+0.592379I$ $b=\ \ 0.917045+0.592379I$	$3.78121+1.84861I$	$7.43343-1.58845I$
$u=\ \ 0.428243+0.664531I$ $a=-1.258210+0.569162I$ $b=-0.258209+0.569162I$	$-3.78121-1.84861I$	$-7.43343+1.58845I$
$u=\ \ 0.428243-0.664531I$ $a=-1.258210-0.569162I$ $b=-0.258209-0.569162I$	$-3.78121+1.84861I$	$-7.43343-1.58845I$
$u=\ \ 1.073950+0.558752I$ $a=-0.158836+1.200140I$ $b=\ \ 0.84116+1.20014I$	$11.3860I$	$0.-11.02114I$
$u=\ \ 1.073950-0.558752I$ $a=-0.158836-1.200140I$ $b=\ \ 0.84116-1.20014I$	$-11.3860I$	$0.+11.02114I$

IV. $I_4^u = \langle -8.90\times 10^{11}u^{23} + 2.54\times 10^{11}u^{22} + \cdots + 2.91\times 10^{10}b + 3.17\times 10^{12},\ 3.87\times 10^{12}u^{23} - 1.07\times 10^{12}u^{22} + \cdots + 2.91\times 10^{10}a - 1.37\times 10^{13},\ u^{24} - 10u^{22} + \cdots - 11u - 1\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -133.264u^{23} + 36.8151u^{22} + \cdots + 3521.75u + 472.967 \\ 30.6439u^{23} - 8.74848u^{22} + \cdots - 800.758u - 109.242 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -145.583u^{23} + 40.3523u^{22} + \cdots + 3844.19u + 516.239 \\ 19.1548u^{23} - 5.62364u^{22} + \cdots - 504.916u - 69.5071 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -163.908u^{23} + 45.5636u^{22} + \cdots + 4322.51u + 582.209 \\ 30.6439u^{23} - 8.74848u^{22} + \cdots - 800.758u - 109.242 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 38.6955u^{23} - 8.18117u^{22} + \cdots - 1133.06u - 165.665 \\ 6.28672u^{23} - 2.05454u^{22} + \cdots - 160.681u - 19.7625 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -12.4005u^{23} + 0.904865u^{22} + \cdots + 499.269u + 85.9649 \\ -18.7080u^{23} + 5.68416u^{22} + \cdots + 471.569u + 60.4196 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 175.762u^{23} - 51.5394u^{22} + \cdots - 4505.30u - 589.351 \\ -58.1299u^{23} + 16.5665u^{22} + \cdots + 1501.04u + 196.542 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -30.9399u^{23} + 5.25752u^{22} + \cdots + 918.470u + 138.972 \\ -13.1835u^{23} + 4.63925u^{22} + \cdots + 341.190u + 42.1534 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 87.8916u^{23} - 27.4612u^{22} + \cdots - 2241.22u - 286.075 \\ -34.9729u^{23} + 10.6527u^{22} + \cdots + 901.141u + 117.632 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= \frac{3414113766563}{14527774699}u^{23} - \frac{966004724095}{14527774699}u^{22} + \cdots - \frac{91077924221825}{14527774699}u - \frac{11884483669996}{14527774699}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6, c_7 c_{12}	$u^{24} - 10u^{22} + \cdots + 11u - 1$
c_2, c_4, c_8 c_{10}	$u^{24} - 10u^{22} + \cdots - 11u - 1$
c_3, c_9	$u^{24} - 3u^{23} + \cdots + u - 1$
c_5, c_{11}	$u^{24} + 3u^{23} + \cdots - u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_7, c_8 c_{10}, c_{12}	$y^{24} - 20y^{23} + \cdots - 43y + 1$
c_3, c_5, c_9 c_{11}	$y^{24} + y^{23} + \cdots - 9y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.942012+0.158290I$ $a=\ \ 0.48886-2.41805I$ $b=-0.156662-0.513941I$	$-0.622919I$	$0.-44.2801I$
$u=-0.942012-0.158290I$ $a=\ \ 0.48886+2.41805I$ $b=-0.156662+0.513941I$	$0.622919I$	$0.+44.2801I$
$u=\ \ 0.855341+0.650781I$ $a=-0.310844+0.000102I$ $b=-0.481680+1.309900I$	$-2.28124I$	$-60.10+0.468753I$
$u=\ \ 0.855341-0.650781I$ $a=-0.310844-0.000102I$ $b=-0.481680-1.309900I$	$2.28124I$	$-60.10-0.468753I$
$u=\ \ 1.070590+0.231946I$ $a=\ \ 0.604840-0.875971I$ $b=-1.48893-1.35156I$	$0.75922+5.04540I$	$3.01002-10.31379I$
$u=\ \ 1.070590-0.231946I$ $a=\ \ 0.604840+0.875971I$ $b=-1.48893+1.35156I$	$0.75922-5.04540I$	$3.01002+10.31379I$
$u=\ \ 0.866934$ $a=-1.92529$ $b=\ \ 1.48863$	-7.67190	-2.90280
$u=-1.22624$ $a=-0.799131$ $b=\ \ 1.52764$	6.01573	15.7530
$u=\ \ 1.273950+0.269607I$ $a=\ \ 0.90375-1.25218I$ $b=-0.850713-0.797515I$	$-0.75922+5.04540I$	$-3.01002-10.31379I$
$u=\ \ 1.273950-0.269607I$ $a=\ \ 0.90375+1.25218I$ $b=-0.850713+0.797515I$	$-0.75922-5.04540I$	$-3.01002+10.31379I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.878983+0.966271I$ $a=-0.533797+0.263579I$ $b=-0.563921+0.259610I$	$0.75922-5.04540I$	$3.01002+10.31379I$
$u=-0.878983-0.966271I$ $a=-0.533797-0.263579I$ $b=-0.563921-0.259610I$	$0.75922+5.04540I$	$3.01002-10.31379I$
$u=-1.248310+0.399818I$ $a=-0.045143-1.063800I$ $b=\ \ 0.265944-0.202204I$	$-2.28124I$	$-60.10+0.468753I$
$u=-1.248310-0.399818I$ $a=-0.045143+1.063800I$ $b=\ \ 0.265944+0.202204I$	$2.28124I$	$-60.10-0.468753I$
$u=\ \ 1.37969$ $a=\ \ 0.477055$ $b=\ \ 0.457732$	-6.01573	-15.7530
$u=\ \ 1.61773$ $a=-0.920194$ $b=\ \ 1.66910$	7.67190	2.90280
$u=\ \ 0.80590+1.44348I$ $a=\ \ 0.303394-0.221283I$ $b=-0.214510-0.747474I$	$-0.75922-5.04540I$	$0.+10.31379I$
$u=\ \ 0.80590-1.44348I$ $a=\ \ 0.303394+0.221283I$ $b=-0.214510+0.747474I$	$-0.75922+5.04540I$	$0.-10.31379I$
$u=-0.280614+0.170720I$ $a=\ \ 0.40577-1.58463I$ $b=\ \ 0.07776-2.35522I$	$0.622919I$	$0.+44.2801I$
$u=-0.280614-0.170720I$ $a=\ \ 0.40577+1.58463I$ $b=\ \ 0.07776+2.35522I$	$-0.622919I$	$0.-44.2801I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.68097$ $a=\ \ 0.272302$ $b=-0.658191$	6.01573	15.7530
$u=-1.70519$ $a=\ \ 0.928246$ $b=-1.26238$	7.67190	0
$u=-0.292949$ $a=-4.30921$ $b=\ \ 1.58284$	-7.67190	-2.90280
$u=-0.270736$ $a=\ \ 5.64255$ $b=-0.979929$	-6.01573	-15.7530

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$(u^6+u^5-u^4-2u^3+u+1)(u^{20}+u^{19}+\cdots-8u-1)$ $\cdot(u^{24}-10u^{22}+\cdots+11u-1)(u^{120}-u^{119}+\cdots+1207u-101)$
c_2, c_8	$(u^6-u^5-u^4+2u^3-u+1)(u^{20}-u^{19}+\cdots+8u-1)$ $\cdot(u^{24}-10u^{22}+\cdots-11u-1)(u^{120}+u^{119}+\cdots-1207u-101)$
c_3, c_9	$(u^6+3u^5+5u^4+4u^3+2u^2+u+1)(u^{20}+3u^{19}+\cdots-4u+1)$ $\cdot(u^{24}-3u^{23}+\cdots+u-1)(u^{120}-7u^{117}+\cdots-175u-575)$
c_4, c_{10}	$(u^6-u^5-u^4+2u^3-u+1)(u^{20}+u^{19}+\cdots-8u-1)$ $\cdot(u^{24}-10u^{22}+\cdots-11u-1)(u^{120}-u^{119}+\cdots+1207u-101)$
c_5, c_{11}	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)(u^{20}-3u^{19}+\cdots+4u+1)$ $\cdot(u^{24}+3u^{23}+\cdots-u-1)(u^{120}+7u^{117}+\cdots+175u-575)$
c_6, c_{12}	$(u^6+u^5-u^4-2u^3+u+1)(u^{20}-u^{19}+\cdots+8u-1)$ $\cdot(u^{24}-10u^{22}+\cdots+11u-1)(u^{120}+u^{119}+\cdots-1207u-101)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_7, c_8 c_{10}, c_{12}	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)(y^{20} - 21y^{19} + \cdots - 22y + 1)$ $\cdot (y^{24} - 20y^{23} + \cdots - 43y + 1)(y^{120} - 73y^{119} + \cdots - 569059y + 10201)$
c_3, c_5, c_9 c_{11}	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)(y^{20} - 9y^{19} + \cdots - 58y + 1)$ $\cdot (y^{24} + y^{23} + \cdots - 9y + 1)(y^{120} + 86y^{118} + \cdots - 5688625y + 330625)$