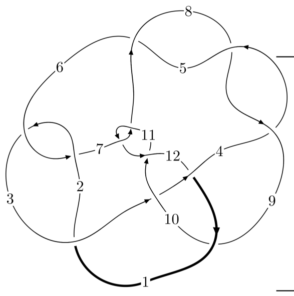
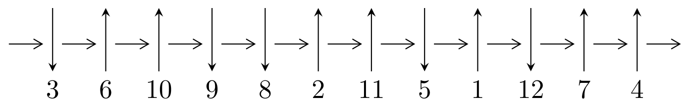
$12a_{0449}$ ($K12a_{0449}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle b-u,\ 99197u^{26} + 483399u^{25} + \cdots + 631375a - 1029892,\ u^{27} + u^{26} + \cdots + 3u + 1\rangle$$

$$I_2^u = \langle 5.33925 \times 10^{205}u^{93} + 1.44539 \times 10^{206}u^{92} + \cdots + 6.46446 \times 10^{207}b - 5.33518 \times 10^{207},$$
$$1.10034 \times 10^{207}u^{93} - 1.28414 \times 10^{208}u^{92} + \cdots + 1.48683 \times 10^{209}a - 1.01915 \times 10^{210},$$
$$u^{94} - 2u^{93} + \cdots + 239u + 23\rangle$$

$$I_3^u = \langle b+u,\ 3u^{12} + 2u^{11} + 10u^{10} + 5u^9 + 21u^8 + 9u^7 + 26u^6 + 8u^5 + 23u^4 + 2u^3 + 13u^2 + a - 4u + 5,$$
$$u^{14} + u^{13} + 4u^{12} + 3u^{11} + 9u^{10} + 6u^9 + 13u^8 + 7u^7 + 13u^6 + 5u^5 + 9u^4 + u^3 + 4u^2 + 1\rangle$$

$$I_4^u = \langle -u^{13} - u^{12} - 4u^{11} - 3u^{10} - 9u^9 - 5u^8 - 13u^7 - 5u^6 - 13u^5 - 5u^4 - 9u^3 - 3u^2 + b - 4u - 1,$$
$$3u^{12} + 2u^{11} + 10u^{10} + 5u^9 + 21u^8 + 6u^7 + 27u^6 + 3u^5 + 24u^4 + 4u^3 + 12u^2 + a + 2u + 4,$$
$$u^{14} + u^{13} + 4u^{12} + 3u^{11} + 9u^{10} + 5u^9 + 13u^8 + 5u^7 + 13u^6 + 5u^5 + 9u^4 + 3u^3 + 4u^2 + u + 1\rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 149 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. $I_1^u = \langle b - u,\ 9.92 \times 10^4 u^{26} + 4.83 \times 10^5 u^{25} + \cdots + 6.31 \times 10^5 a - 1.03 \times 10^6,\ u^{27} + u^{26} + \cdots + 3u + 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -0.157113u^{26} - 0.765629u^{25} + \cdots + 2.13457u + 1.63119 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.157113u^{26} - 0.765629u^{25} + \cdots + 1.13457u + 1.63119 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.608516u^{26} + 0.435136u^{25} + \cdots - 2.10253u + 0.842887 \\ -u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.598842u^{26} - 1.17770u^{25} + \cdots - 1.70722u + 0.923554 \\ -0.0912247u^{26} - 0.115144u^{25} + \cdots - 0.178083u + 0.112520 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.0162677u^{26} - 0.0766074u^{25} + \cdots + 3.11723u + 2.23971 \\ u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.0478115u^{26} + 0.779812u^{25} + \cdots - 2.00245u - 1.72486 \\ -0.0331435u^{26} - 0.163559u^{25} + \cdots - 0.490035u - 0.496162 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.128060u^{26} - 0.212444u^{25} + \cdots + 2.62579u + 2.11032 \\ 0.317876u^{26} + 0.232204u^{25} + \cdots + 0.983732u + 0.0465033 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{1220986}{631375}u^{26} + \frac{62912}{631375}u^{25} + \cdots - \frac{2949469}{631375}u + \frac{2743229}{631375}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{27} + 11u^{26} + \cdots - u - 1$
c_2, c_6, c_7 c_{11}	$u^{27} - u^{26} + \cdots + 3u - 1$
c_3	$u^{27} - 24u^{26} + \cdots + 12672u - 1280$
c_4, c_5, c_8	$u^{27} - 12u^{26} + \cdots + 400u - 32$
c_9, c_{12}	$u^{27} - 6u^{25} + \cdots - 6u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{27} + 19y^{26} + \cdots + 59y - 1$
c_2, c_6, c_7 c_{11}	$y^{27} + 11y^{26} + \cdots - y - 1$
c_3	$y^{27} - 6y^{26} + \cdots - 8994816y - 1638400$
c_4, c_5, c_8	$y^{27} + 24y^{26} + \cdots + 9984y - 1024$
c_9, c_{12}	$y^{27} - 12y^{26} + \cdots + 8y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.746155 + 0.657899I$ $a = 1.92597 + 0.33252I$ $b = 0.746155 + 0.657899I$	$4.39292 - 2.39590I$	$7.41009 + 1.19808I$
$u = 0.746155 - 0.657899I$ $a = 1.92597 - 0.33252I$ $b = 0.746155 - 0.657899I$	$4.39292 + 2.39590I$	$7.41009 - 1.19808I$
$u = -0.281755 + 1.039740I$ $a = -0.45630 - 1.46633I$ $b = -0.281755 + 1.039740I$	$-3.52982 - 3.73575I$	$-3.49881 + 4.98534I$
$u = -0.281755 - 1.039740I$ $a = -0.45630 + 1.46633I$ $b = -0.281755 - 1.039740I$	$-3.52982 + 3.73575I$	$-3.49881 - 4.98534I$
$u = -0.650521 + 0.866897I$ $a = -2.64625 - 0.54807I$ $b = -0.650521 + 0.866897I$	$2.46186 - 3.31082I$	$6.75297 + 3.07336I$
$u = -0.650521 - 0.866897I$ $a = -2.64625 + 0.54807I$ $b = -0.650521 - 0.866897I$	$2.46186 + 3.31082I$	$6.75297 - 3.07336I$
$u = -0.094739 + 1.096350I$ $a = -1.28622 - 0.62434I$ $b = -0.094739 + 1.096350I$	$-0.64427 + 3.17091I$	$-2.11058 - 2.29373I$
$u = -0.094739 - 1.096350I$ $a = -1.28622 + 0.62434I$ $b = -0.094739 - 1.096350I$	$-0.64427 - 3.17091I$	$-2.11058 + 2.29373I$
$u = 0.176859 + 1.086480I$ $a = 0.839851 - 1.074650I$ $b = 0.176859 + 1.086480I$	$-5.61395 + 0.05445I$	$-6.98172 + 0.86750I$
$u = 0.176859 - 1.086480I$ $a = 0.839851 + 1.074650I$ $b = 0.176859 - 1.086480I$	$-5.61395 - 0.05445I$	$-6.98172 - 0.86750I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.805946 + 0.753226I$ $a = 1.237390 + 0.449968I$ $b = 0.805946 + 0.753226I$	$10.51250 + 2.25745I$	$10.71549 - 2.75707I$
$u = 0.805946 - 0.753226I$ $a = 1.237390 - 0.449968I$ $b = 0.805946 - 0.753226I$	$10.51250 - 2.25745I$	$10.71549 + 2.75707I$
$u = -0.704061 + 0.941806I$ $a = -2.17634 + 0.20089I$ $b = -0.704061 + 0.941806I$	$1.99788 - 7.27498I$	$5.83290 + 8.99704I$
$u = -0.704061 - 0.941806I$ $a = -2.17634 - 0.20089I$ $b = -0.704061 - 0.941806I$	$1.99788 + 7.27498I$	$5.83290 - 8.99704I$
$u = -0.975439 + 0.658242I$ $a = -1.44476 + 0.02800I$ $b = -0.975439 + 0.658242I$	$12.41630 + 5.47236I$	$8.85634 - 1.56087I$
$u = -0.975439 - 0.658242I$ $a = -1.44476 - 0.02800I$ $b = -0.975439 - 0.658242I$	$12.41630 - 5.47236I$	$8.85634 + 1.56087I$
$u = 0.669337 + 1.009460I$ $a = 1.97958 - 1.21132I$ $b = 0.669337 + 1.009460I$	$8.79484 + 8.98450I$	$7.89641 - 7.55009I$
$u = 0.669337 - 1.009460I$ $a = 1.97958 + 1.21132I$ $b = 0.669337 - 1.009460I$	$8.79484 - 8.98450I$	$7.89641 + 7.55009I$
$u = 0.716486 + 1.064120I$ $a = 2.08136 - 0.43119I$ $b = 0.716486 + 1.064120I$	$2.01310 + 13.75430I$	$3.02468 - 10.55140I$
$u = 0.716486 - 1.064120I$ $a = 2.08136 + 0.43119I$ $b = 0.716486 - 1.064120I$	$2.01310 - 13.75430I$	$3.02468 + 10.55140I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.761514+1.146540I$ $a=-1.79916-0.64270I$ $b=-0.761514+1.146540I$	$9.2811-18.3561I$	$5.22196+9.69605I$
$u=-0.761514-1.146540I$ $a=-1.79916+0.64270I$ $b=-0.761514-1.146540I$	$9.2811+18.3561I$	$5.22196-9.69605I$
$u=\ \ 0.350509+0.506121I$ $a=\ \ 1.84663+2.87006I$ $b=\ \ 0.350509+0.506121I$	$4.17741-1.74336I$	$11.21417-1.14123I$
$u=\ \ 0.350509-0.506121I$ $a=\ \ 1.84663-2.87006I$ $b=\ \ 0.350509-0.506121I$	$4.17741+1.74336I$	$11.21417+1.14123I$
$u=-0.331730+0.517465I$ $a=\ \ 0.148186+0.163864I$ $b=-0.331730+0.517465I$	$0.056692-1.398250I$	$0.03091+4.28330I$
$u=-0.331730-0.517465I$ $a=\ \ 0.148186-0.163864I$ $b=-0.331730-0.517465I$	$0.056692+1.398250I$	$0.03091-4.28330I$
$u=-0.331066$ $a=\ \ 1.50011$ $b=-0.331066$	1.12812	9.27040

II. $\boldsymbol{I_2^u = \langle 5.34 \times 10^{205} u^{93} + 1.45 \times 10^{206} u^{92} + \cdots + 6.46 \times 10^{207} b - 5.34 \times 10^{207},\ 1.10 \times 10^{207} u^{93} - 1.28 \times 10^{208} u^{92} + \cdots + 1.49 \times 10^{209} a - 1.02 \times 10^{210},\ u^{94} - 2u^{93} + \cdots + 239u + 23\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -0.00740061u^{93} + 0.0863680u^{92} + \cdots + 51.8143u + 6.85450 \\ -0.00825939u^{93} - 0.0223590u^{92} + \cdots - 1.25417u + 0.825308 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.000858782u^{93} + 0.108727u^{92} + \cdots + 53.0685u + 6.02919 \\ -0.00825939u^{93} - 0.0223590u^{92} + \cdots - 1.25417u + 0.825308 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.0508490u^{93} - 0.0534431u^{92} + \cdots + 3.09848u + 2.28219 \\ -0.115309u^{93} + 0.236786u^{92} + \cdots - 54.3135u - 5.24937 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.0291642u^{93} + 0.00380409u^{92} + \cdots + 75.2003u + 11.8564 \\ 0.00448644u^{93} - 0.00426952u^{92} + \cdots + 14.9451u + 4.37624 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.199981u^{93} - 0.398793u^{92} + \cdots + 106.883u + 6.60078 \\ 0.0168638u^{93} - 0.0892040u^{92} + \cdots + 24.7190u + 1.75162 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.106433u^{93} - 0.368537u^{92} + \cdots + 31.8088u + 5.86817 \\ -0.00383274u^{93} + 0.0445719u^{92} + \cdots + 36.1222u + 5.61793 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.223235u^{93} - 0.439512u^{92} + \cdots + 110.354u + 6.95047 \\ 0.0181517u^{93} - 0.0920539u^{92} + \cdots + 26.5820u + 2.27200 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.344624u^{93} + 0.673277u^{92} + \cdots - 238.262u - 24.6289$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{94} + 34u^{93} + \cdots + 8843u + 529$
c_2, c_6, c_7 c_{11}	$u^{94} + 2u^{93} + \cdots - 239u + 23$
c_3	$(u^{47} + 12u^{46} + \cdots - 6u - 1)^2$
c_4, c_5, c_8	$(u^{47} + 5u^{46} + \cdots - 12u - 1)^2$
c_9, c_{12}	$u^{94} + 9u^{93} + \cdots - 745u + 137$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{94} + 58y^{93} + \cdots + 285816831y + 279841$
c_2, c_6, c_7 c_{11}	$y^{94} + 34y^{93} + \cdots + 8843y + 529$
c_3	$(y^{47} - 10y^{46} + \cdots + 28y - 1)^2$
c_4, c_5, c_8	$(y^{47} + 53y^{46} + \cdots + 26y - 1)^2$
c_9, c_{12}	$y^{94} - 25y^{93} + \cdots + 3079859y + 18769$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.637130 + 0.773918I$ $a = -0.692183 + 0.906681I$ $b = -0.760455 + 0.971795I$	$1.71266 - 1.57547I$	0
$u = 0.637130 - 0.773918I$ $a = -0.692183 - 0.906681I$ $b = -0.760455 - 0.971795I$	$1.71266 + 1.57547I$	0
$u = 0.092155 + 1.007520I$ $a = -0.49162 + 1.65142I$ $b = 0.637573 - 0.672241I$	$5.05720 - 3.14968I$	0
$u = 0.092155 - 1.007520I$ $a = -0.49162 - 1.65142I$ $b = 0.637573 + 0.672241I$	$5.05720 + 3.14968I$	0
$u = -0.124119 + 1.007900I$ $a = 0.499089 - 0.182116I$ $b = 0.594156 + 0.283061I$	$-1.52181 - 2.26811I$	0
$u = -0.124119 - 1.007900I$ $a = 0.499089 + 0.182116I$ $b = 0.594156 - 0.283061I$	$-1.52181 + 2.26811I$	0
$u = -0.913986 + 0.442783I$ $a = 1.255230 + 0.495106I$ $b = 0.634884 + 0.752287I$	$3.25089 + 0.51509I$	0
$u = -0.913986 - 0.442783I$ $a = 1.255230 - 0.495106I$ $b = 0.634884 - 0.752287I$	$3.25089 - 0.51509I$	0
$u = 0.634884 + 0.752287I$ $a = -0.815127 + 1.128530I$ $b = -0.913986 + 0.442783I$	$3.25089 + 0.51509I$	0
$u = 0.634884 - 0.752287I$ $a = -0.815127 - 1.128530I$ $b = -0.913986 - 0.442783I$	$3.25089 - 0.51509I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.723959 + 0.666548I$ $a = 1.298590 - 0.190158I$ $b = 0.760168 - 0.979589I$	$9.83692 - 3.62268I$	0
$u = 0.723959 - 0.666548I$ $a = 1.298590 + 0.190158I$ $b = 0.760168 + 0.979589I$	$9.83692 + 3.62268I$	0
$u = -0.661153 + 0.706858I$ $a = -0.703442 - 0.143437I$ $b = 0.290317 + 1.381150I$	$3.62334 + 3.92202I$	0
$u = -0.661153 - 0.706858I$ $a = -0.703442 + 0.143437I$ $b = 0.290317 - 1.381150I$	$3.62334 - 3.92202I$	0
$u = -0.833196 + 0.631650I$ $a = 1.71669 - 0.33754I$ $b = 0.606964 - 0.943477I$	$2.65918 - 4.37576I$	0
$u = -0.833196 - 0.631650I$ $a = 1.71669 + 0.33754I$ $b = 0.606964 + 0.943477I$	$2.65918 + 4.37576I$	0
$u = 0.863354 + 0.611884I$ $a = 1.23416 - 0.84596I$ $b = 0.689830 - 1.000820I$	$3.38496 - 7.87636I$	0
$u = 0.863354 - 0.611884I$ $a = 1.23416 + 0.84596I$ $b = 0.689830 + 1.000820I$	$3.38496 + 7.87636I$	0
$u = -0.708371 + 0.795453I$ $a = 1.42928 + 0.38031I$ $b = 1.257070 - 0.568916I$	$10.20390 - 4.26315I$	0
$u = -0.708371 - 0.795453I$ $a = 1.42928 - 0.38031I$ $b = 1.257070 + 0.568916I$	$10.20390 + 4.26315I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.637573 + 0.672241I$ $a = -1.00073 + 1.59333I$ $b = 0.092155 - 1.007520I$	$5.05720 + 3.14968I$	0
$u = 0.637573 - 0.672241I$ $a = -1.00073 - 1.59333I$ $b = 0.092155 + 1.007520I$	$5.05720 - 3.14968I$	0
$u = -0.740716 + 0.781651I$ $a = -0.83398 - 1.50097I$ $b = -0.654991 - 0.856676I$	$2.49440 + 1.76606I$	0
$u = -0.740716 - 0.781651I$ $a = -0.83398 + 1.50097I$ $b = -0.654991 + 0.856676I$	$2.49440 - 1.76606I$	0
$u = -0.654991 + 0.856676I$ $a = -1.34755 - 1.06032I$ $b = -0.740716 - 0.781651I$	$2.49440 - 1.76606I$	0
$u = -0.654991 - 0.856676I$ $a = -1.34755 + 1.06032I$ $b = -0.740716 + 0.781651I$	$2.49440 + 1.76606I$	0
$u = 0.401950 + 1.013810I$ $a = -1.55687 - 0.58870I$ $b = -0.336611 - 0.321294I$	$2.42935 + 4.96654I$	0
$u = 0.401950 - 1.013810I$ $a = -1.55687 + 0.58870I$ $b = -0.336611 + 0.321294I$	$2.42935 - 4.96654I$	0
$u = -0.121472 + 1.096320I$ $a = -0.546521 - 0.666812I$ $b = 0.658126 + 1.028670I$	$3.91970 + 1.95304I$	0
$u = -0.121472 - 1.096320I$ $a = -0.546521 + 0.666812I$ $b = 0.658126 - 1.028670I$	$3.91970 - 1.95304I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.639818 + 0.916187I$ $a = -2.06817 + 0.47862I$ $b = -0.731944 - 1.122850I$	$1.27653 + 6.58003I$	0
$u = 0.639818 - 0.916187I$ $a = -2.06817 - 0.47862I$ $b = -0.731944 + 1.122850I$	$1.27653 - 6.58003I$	0
$u = 0.606964 + 0.943477I$ $a = -1.61070 + 0.25384I$ $b = -0.833196 - 0.631650I$	$2.65918 + 4.37576I$	0
$u = 0.606964 - 0.943477I$ $a = -1.61070 - 0.25384I$ $b = -0.833196 + 0.631650I$	$2.65918 - 4.37576I$	0
$u = -0.643901 + 0.586372I$ $a = 0.852454 + 0.957705I$ $b = 0.95595 + 1.14190I$	$8.47453 + 3.44023I$	$12.7382 - 7.0609I$
$u = -0.643901 - 0.586372I$ $a = 0.852454 - 0.957705I$ $b = 0.95595 - 1.14190I$	$8.47453 - 3.44023I$	$12.7382 + 7.0609I$
$u = -0.055476 + 0.853945I$ $a = -1.08079 + 1.19882I$ $b = -0.527392 - 1.090030I$	$-2.02252 + 3.14008I$	$0. - 3.52874I$
$u = -0.055476 - 0.853945I$ $a = -1.08079 - 1.19882I$ $b = -0.527392 + 1.090030I$	$-2.02252 - 3.14008I$	$0. + 3.52874I$
$u = -0.702751 + 0.916973I$ $a = 0.575915 + 1.023560I$ $b = 1.230430 + 0.381871I$	$9.83536 - 1.14605I$	0
$u = -0.702751 - 0.916973I$ $a = 0.575915 - 1.023560I$ $b = 1.230430 - 0.381871I$	$9.83536 + 1.14605I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.536160 + 1.037800I$ $a = -1.016650 + 0.539628I$ $b = -0.102572 - 1.209430I$	$-3.44884 + 6.63369I$	0
$u = 0.536160 - 1.037800I$ $a = -1.016650 - 0.539628I$ $b = -0.102572 + 1.209430I$	$-3.44884 - 6.63369I$	0
$u = -0.650394 + 0.982206I$ $a = 1.003430 + 0.482649I$ $b = 0.15574 - 1.44448I$	$2.76733 - 9.04904I$	0
$u = -0.650394 - 0.982206I$ $a = 1.003430 - 0.482649I$ $b = 0.15574 + 1.44448I$	$2.76733 + 9.04904I$	0
$u = -1.037900 + 0.579454I$ $a = -1.034890 - 0.503132I$ $b = -0.773853 - 1.086360I$	$11.0683 + 11.8523I$	0
$u = -1.037900 - 0.579454I$ $a = -1.034890 + 0.503132I$ $b = -0.773853 + 1.086360I$	$11.0683 - 11.8523I$	0
$u = -0.410289 + 1.124300I$ $a = 0.275918 - 0.697933I$ $b = 0.213348 + 0.722040I$	$-1.44718 - 2.78873I$	0
$u = -0.410289 - 1.124300I$ $a = 0.275918 + 0.697933I$ $b = 0.213348 - 0.722040I$	$-1.44718 + 2.78873I$	0
$u = -0.280101 + 0.745156I$ $a = 0.84833 + 2.25683I$ $b = -0.280101 - 0.745156I$	0.218771	$-60.511321 + 0.10I$
$u = -0.280101 - 0.745156I$ $a = 0.84833 - 2.25683I$ $b = -0.280101 + 0.745156I$	0.218771	$-60.511321 + 0.10I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.630527 + 1.028320I$ $a = 1.86730 + 0.83890I$ $b = 0.85518 - 1.27123I$	$7.16483 - 8.49251I$	0
$u = -0.630527 - 1.028320I$ $a = 1.86730 - 0.83890I$ $b = 0.85518 + 1.27123I$	$7.16483 + 8.49251I$	0
$u = -0.527392 + 1.090030I$ $a = 1.082180 + 0.360575I$ $b = -0.055476 - 0.853945I$	$-2.02252 - 3.14008I$	0
$u = -0.527392 - 1.090030I$ $a = 1.082180 - 0.360575I$ $b = -0.055476 + 0.853945I$	$-2.02252 + 3.14008I$	0
$u = -0.102572 + 1.209430I$ $a = 0.705573 + 0.853909I$ $b = 0.536160 - 1.037800I$	$-3.44884 - 6.63369I$	0
$u = -0.102572 - 1.209430I$ $a = 0.705573 - 0.853909I$ $b = 0.536160 + 1.037800I$	$-3.44884 + 6.63369I$	0
$u = 0.689830 + 1.000820I$ $a = 0.722351 - 1.083950I$ $b = 0.863354 - 0.611884I$	$3.38496 + 7.87636I$	0
$u = 0.689830 - 1.000820I$ $a = 0.722351 + 1.083950I$ $b = 0.863354 + 0.611884I$	$3.38496 - 7.87636I$	0
$u = 0.658126 + 1.028670I$ $a = -0.005505 - 0.778723I$ $b = -0.121472 + 1.096320I$	$3.91970 + 1.95304I$	0
$u = 0.658126 - 1.028670I$ $a = -0.005505 + 0.778723I$ $b = -0.121472 - 1.096320I$	$3.91970 - 1.95304I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.760455 + 0.971795I$ $a = 0.597484 + 0.708327I$ $b = 0.637130 + 0.773918I$	$1.71266 - 1.57547I$	0
$u = -0.760455 - 0.971795I$ $a = 0.597484 - 0.708327I$ $b = 0.637130 - 0.773918I$	$1.71266 + 1.57547I$	0
$u = 0.760168 + 0.979589I$ $a = 0.063713 - 1.039660I$ $b = 0.723959 - 0.666548I$	$9.83692 + 3.62268I$	0
$u = 0.760168 - 0.979589I$ $a = 0.063713 + 1.039660I$ $b = 0.723959 + 0.666548I$	$9.83692 - 3.62268I$	0
$u = 0.213348 + 0.722040I$ $a = 1.012610 - 0.630769I$ $b = -0.410289 + 1.124300I$	$-1.44718 - 2.78873I$	$-3.18438 + 7.54014I$
$u = 0.213348 - 0.722040I$ $a = 1.012610 + 0.630769I$ $b = -0.410289 - 1.124300I$	$-1.44718 + 2.78873I$	$-3.18438 - 7.54014I$
$u = -0.241250 + 0.704750I$ $a = -0.066138 + 0.253712I$ $b = -0.548096 + 0.386698I$	$0.014771 - 1.382010I$	$0.64027 + 2.61668I$
$u = -0.241250 - 0.704750I$ $a = -0.066138 - 0.253712I$ $b = -0.548096 - 0.386698I$	$0.014771 + 1.382010I$	$0.64027 - 2.61668I$
$u = 1.230430 + 0.381871I$ $a = -1.039810 + 0.167311I$ $b = -0.702751 + 0.916973I$	$9.83536 - 1.14605I$	0
$u = 1.230430 - 0.381871I$ $a = -1.039810 - 0.167311I$ $b = -0.702751 - 0.916973I$	$9.83536 + 1.14605I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.915093 + 0.919317I$ $a = -0.408139 + 0.257916I$ $b = -0.157827 + 0.143099I$	$7.98321 + 3.33848I$	0
$u = 0.915093 - 0.919317I$ $a = -0.408139 - 0.257916I$ $b = -0.157827 - 0.143099I$	$7.98321 - 3.33848I$	0
$u = -0.548096 + 0.386698I$ $a = 0.105708 + 0.271296I$ $b = -0.241250 + 0.704750I$	$0.014771 - 1.382010I$	$0.64027 + 2.61668I$
$u = -0.548096 - 0.386698I$ $a = 0.105708 - 0.271296I$ $b = -0.241250 - 0.704750I$	$0.014771 + 1.382010I$	$0.64027 - 2.61668I$
$u = -0.773853 + 1.086360I$ $a = -0.546735 - 0.867636I$ $b = -1.037900 - 0.579454I$	$11.0683 - 11.8523I$	0
$u = -0.773853 - 1.086360I$ $a = -0.546735 + 0.867636I$ $b = -1.037900 + 0.579454I$	$11.0683 + 11.8523I$	0
$u = -0.731944 + 1.122850I$ $a = 1.71067 + 0.45389I$ $b = 0.639818 - 0.916187I$	$1.27653 - 6.58003I$	0
$u = -0.731944 - 1.122850I$ $a = 1.71067 - 0.45389I$ $b = 0.639818 + 0.916187I$	$1.27653 + 6.58003I$	0
$u = 0.594156 + 0.283061I$ $a = 0.510319 + 0.641559I$ $b = -0.124119 + 1.007900I$	$-1.52181 - 2.26811I$	$-0.48315 + 4.62195I$
$u = 0.594156 - 0.283061I$ $a = 0.510319 - 0.641559I$ $b = -0.124119 - 1.007900I$	$-1.52181 + 2.26811I$	$-0.48315 - 4.62195I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.257070 + 0.568916I$ $a = -1.127470 - 0.179853I$ $b = -0.708371 - 0.795453I$	$10.20390 + 4.26315I$	0
$u = \ \ 1.257070 - 0.568916I$ $a = -1.127470 + 0.179853I$ $b = -0.708371 + 0.795453I$	$10.20390 - 4.26315I$	0
$u = \ \ 0.290317 + 1.381150I$ $a = -0.196459 - 0.451442I$ $b = -0.661153 + 0.706858I$	$3.62334 + 3.92202I$	0
$u = \ \ 0.290317 - 1.381150I$ $a = -0.196459 + 0.451442I$ $b = -0.661153 - 0.706858I$	$3.62334 - 3.92202I$	0
$u = \ \ 0.15574 + 1.44448I$ $a = -0.542768 + 0.721473I$ $b = -0.650394 - 0.982206I$	$2.76733 + 9.04904I$	0
$u = \ \ 0.15574 - 1.44448I$ $a = -0.542768 - 0.721473I$ $b = -0.650394 + 0.982206I$	$2.76733 - 9.04904I$	0
$u = \ \ 0.95595 + 1.14190I$ $a = -0.538804 + 0.521414I$ $b = -0.643901 + 0.586372I$	$8.47453 + 3.44023I$	0
$u = \ \ 0.95595 - 1.14190I$ $a = -0.538804 - 0.521414I$ $b = -0.643901 - 0.586372I$	$8.47453 - 3.44023I$	0
$u = \ \ 0.85518 + 1.27123I$ $a = -1.49665 + 0.59796I$ $b = -0.630527 - 1.028320I$	$7.16483 + 8.49251I$	0
$u = \ \ 0.85518 - 1.27123I$ $a = -1.49665 - 0.59796I$ $b = -0.630527 + 1.028320I$	$7.16483 - 8.49251I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.336611 + 0.321294I$ $a = 2.73806 - 2.77848I$ $b = 0.401950 - 1.013810I$	$2.42935 - 4.96654I$	$6.06415 + 7.59784I$
$u = -0.336611 - 0.321294I$ $a = 2.73806 + 2.77848I$ $b = 0.401950 + 1.013810I$	$2.42935 + 4.96654I$	$6.06415 - 7.59784I$
$u = -0.157827 + 0.143099I$ $a = 1.68440 + 2.40915I$ $b = 0.915093 + 0.919317I$	$7.98321 + 3.33848I$	$-1.37117 - 6.10856I$
$u = -0.157827 - 0.143099I$ $a = 1.68440 - 2.40915I$ $b = 0.915093 - 0.919317I$	$7.98321 - 3.33848I$	$-1.37117 + 6.10856I$

III. $\boldsymbol{I_3^u = \langle b+u,\ 3u^{12}+2u^{11}+\cdots+a+5,\ u^{14}+u^{13}+\cdots+4u^2+1\rangle}$

(i) Arc colorings

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

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5+u^3+u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -3u^{12}-2u^{11}+\cdots+4u-5 \\ -u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -3u^{12}-2u^{11}+\cdots+5u-5 \\ -u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -3u^{13}-2u^{12}+\cdots-5u+1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 2u^{13}+4u^{12}+\cdots+u+5 \\ -u^{12}-u^{11}-3u^{10}-2u^9-6u^8-3u^7-7u^6-2u^5-6u^4-2u^2+u-1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^{13}-u^{12}+\cdots+5u-2 \\ -u^3-u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^{13}+2u^{12}+\cdots-5u+3 \\ -u^{12}-u^{11}-3u^{10}-2u^9-5u^8-3u^7-5u^6-2u^5-3u^4+u^3-u^2+2u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{13}-2u^{12}+\cdots+5u-3 \\ u^{12}+u^{11}+\cdots-2u+1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -8u^{13}-10u^{12}-33u^{11}-32u^{10}-72u^9-63u^8-101u^7-77u^6-94u^5-56u^4-57u^3-22u^2-16u-3$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{14} - 7u^{13} + \cdots - 8u + 1$
c_2, c_7	$u^{14} - u^{13} + \cdots + 4u^2 + 1$
c_3	$u^{14} - 5u^{13} + \cdots + 2u^3 + 1$
c_4, c_5	$u^{14} - u^{13} + \cdots + 2u^2 + 1$
c_6, c_{11}	$u^{14} + u^{13} + \cdots + 4u^2 + 1$
c_8	$u^{14} + u^{13} + \cdots + 2u^2 + 1$
c_9, c_{12}	$u^{14} - 2u^{12} + 2u^{11} + 5u^{10} - 2u^9 - 2u^8 + 5u^7 + 4u^6 - 2u^5 + 2u^3 + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{14} + 7y^{13} + \cdots + 4y + 1$
c_2, c_6, c_7 c_{11}	$y^{14} + 7y^{13} + \cdots + 8y + 1$
c_3	$y^{14} - 5y^{13} + \cdots - 4y^2 + 1$
c_4, c_5, c_8	$y^{14} + 15y^{13} + \cdots + 4y + 1$
c_9, c_{12}	$y^{14} - 4y^{13} + \cdots - y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.835016 + 0.652956I$ $a = 1.082660 - 0.023516I$ $b = 0.835016 - 0.652956I$	$9.18268 - 3.72870I$	$6.95343 + 5.35594I$
$u = -0.835016 - 0.652956I$ $a = 1.082660 + 0.023516I$ $b = 0.835016 + 0.652956I$	$9.18268 + 3.72870I$	$6.95343 - 5.35594I$
$u = 0.385097 + 1.030810I$ $a = -0.713394 + 0.989090I$ $b = -0.385097 - 1.030810I$	$-2.10484 + 5.24737I$	$2.29092 - 7.88179I$
$u = 0.385097 - 1.030810I$ $a = -0.713394 - 0.989090I$ $b = -0.385097 + 1.030810I$	$-2.10484 - 5.24737I$	$2.29092 + 7.88179I$
$u = -0.304987 + 1.069450I$ $a = 1.364310 - 0.051930I$ $b = 0.304987 - 1.069450I$	$0.46853 - 6.15386I$	$1.00883 + 6.93248I$
$u = -0.304987 - 1.069450I$ $a = 1.364310 + 0.051930I$ $b = 0.304987 + 1.069450I$	$0.46853 + 6.15386I$	$1.00883 - 6.93248I$
$u = 0.698601 + 0.929832I$ $a = -1.98759 + 0.18930I$ $b = -0.698601 - 0.929832I$	$1.51835 + 5.41185I$	$4.65952 - 5.17870I$
$u = 0.698601 - 0.929832I$ $a = -1.98759 - 0.18930I$ $b = -0.698601 + 0.929832I$	$1.51835 - 5.41185I$	$4.65952 + 5.17870I$
$u = -0.146958 + 0.722606I$ $a = -2.16477 + 3.14041I$ $b = 0.146958 - 0.722606I$	$3.47331 + 1.89764I$	$-0.76890 - 1.21220I$
$u = -0.146958 - 0.722606I$ $a = -2.16477 - 3.14041I$ $b = 0.146958 + 0.722606I$	$3.47331 - 1.89764I$	$-0.76890 + 1.21220I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.688119 + 1.111760I$ $a = 1.62355 + 0.83041I$ $b = 0.688119 - 1.111760I$	$6.23197 - 7.88321I$	$3.18752 + 4.61068I$
$u = -0.688119 - 1.111760I$ $a = 1.62355 - 0.83041I$ $b = 0.688119 + 1.111760I$	$6.23197 + 7.88321I$	$3.18752 - 4.61068I$
$u = 0.391382 + 0.565226I$ $a = 0.295240 + 0.912738I$ $b = -0.391382 - 0.565226I$	$0.96922 + 1.42724I$	$8.66869 - 4.22022I$
$u = 0.391382 - 0.565226I$ $a = 0.295240 - 0.912738I$ $b = -0.391382 + 0.565226I$	$0.96922 - 1.42724I$	$8.66869 + 4.22022I$

IV.

$$\boldsymbol{I^u_4 = \langle -u^{13} - u^{12} + \cdots + b - 1,\ 3u^{12} + 2u^{11} + \cdots + a + 4,\ u^{14} + u^{13} + \cdots + u + 1\rangle}$$

(i) Arc colorings

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

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -3u^{12} - 2u^{11} + \cdots - 2u - 4 \\ u^{13} + u^{12} + \cdots + 4u + 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^{13} - 4u^{12} + \cdots - 6u - 5 \\ u^{13} + u^{12} + \cdots + 4u + 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 5u^{13} + 4u^{12} + \cdots + 2u^2 + 5u \\ -u^{13} - 3u^{11} + \cdots - u + 3 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^{13} + 5u^{12} + \cdots + 4u + 6 \\ -u^{13} - 3u^{12} + \cdots - 2u - 2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -3u^{13} - 2u^{12} + \cdots - 6u - 3 \\ -2u^{13} - 3u^{12} + \cdots - 2u - 3 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^{13} + 2u^{12} + \cdots - u + 2 \\ -u^{13} - 2u^{12} + \cdots - 3u - 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -3u^{13} - u^{12} + \cdots - 6u - 2 \\ -u^{13} - 3u^{12} + \cdots - 10u^2 - 3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= -4u^{13} - 8u^{12} - 16u^{11} - 26u^{10} - 35u^9 - 50u^8 - 43u^7 - 64u^6 - 32u^5 - 65u^4 - 19u^3 - 36u^2 - 8u - 7$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{14} - 7u^{13} + \cdots - 7u + 1$
c_2, c_7	$u^{14} - u^{13} + \cdots - u + 1$
c_3	$(u^7 + 2u^6 + u^5 - 2u^4 - 2u^3 - 1)^2$
c_4, c_5	$(u^7 + 4u^5 + 4u^3 - u^2 - 1)^2$
c_6, c_{11}	$u^{14} + u^{13} + \cdots + u + 1$
c_8	$(u^7 + 4u^5 + 4u^3 + u^2 + 1)^2$
c_9, c_{12}	$u^{14} - 2u^{12} + \cdots + 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{14} + 7y^{13} + \cdots + 7y + 1$
c_2, c_6, c_7 c_{11}	$y^{14} + 7y^{13} + \cdots + 7y + 1$
c_3	$(y^7 - 2y^6 + 5y^5 - 8y^4 + 8y^3 - 4y^2 - 1)^2$
c_4, c_5, c_8	$(y^7 + 8y^6 + 24y^5 + 32y^4 + 16y^3 - y^2 - 2y - 1)^2$
c_9, c_{12}	$y^{14} - 4y^{13} + \cdots - 5y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.694890 + 0.719116I$ $a = -1.08112 + 1.11881I$ $b = -0.694890 + 0.719116I$	2.16696	$5.29110 + 0.I$
$u = 0.694890 - 0.719116I$ $a = -1.08112 - 1.11881I$ $b = -0.694890 - 0.719116I$	2.16696	$5.29110 + 0.I$
$u = -0.225892 + 0.801630I$ $a = -2.21355 - 0.57675I$ $b = 0.325663 + 1.155690I$	$1.57743 + 3.93356I$	$1.12375 - 3.23997I$
$u = -0.225892 - 0.801630I$ $a = -2.21355 + 0.57675I$ $b = 0.325663 - 1.155690I$	$1.57743 - 3.93356I$	$1.12375 + 3.23997I$
$u = 0.321396 + 0.763972I$ $a = 0.372798 - 0.905399I$ $b = -0.467860 + 1.112130I$	$-1.05108 - 2.27150I$	$5.46525 - 2.40329I$
$u = 0.321396 - 0.763972I$ $a = 0.372798 + 0.905399I$ $b = -0.467860 - 1.112130I$	$-1.05108 + 2.27150I$	$5.46525 + 2.40329I$
$u = -0.325663 + 1.155690I$ $a = 1.10062 - 1.14286I$ $b = 0.225892 + 0.801630I$	$1.57743 - 3.93356I$	$1.12375 + 3.23997I$
$u = -0.325663 - 1.155690I$ $a = 1.10062 + 1.14286I$ $b = 0.225892 - 0.801630I$	$1.57743 + 3.93356I$	$1.12375 - 3.23997I$
$u = 0.467860 + 1.112130I$ $a = 0.265542 - 0.617986I$ $b = -0.321396 + 0.763972I$	$-1.05108 + 2.27150I$	$5.46525 + 2.40329I$
$u = 0.467860 - 1.112130I$ $a = 0.265542 + 0.617986I$ $b = -0.321396 - 0.763972I$	$-1.05108 - 2.27150I$	$5.46525 - 2.40329I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.506790 + 0.539046I$ $a = 1.206850 + 0.713023I$ $b = 0.925802 + 0.984727I$	$8.25977 + 2.86772I$	$6.76546 + 6.29506I$
$u = -0.506790 - 0.539046I$ $a = 1.206850 - 0.713023I$ $b = 0.925802 - 0.984727I$	$8.25977 - 2.86772I$	$6.76546 - 6.29506I$
$u = -0.925802 + 0.984727I$ $a = 0.348859 + 0.683436I$ $b = 0.506790 + 0.539046I$	$8.25977 - 2.86772I$	$6.76546 - 6.29506I$
$u = -0.925802 - 0.984727I$ $a = 0.348859 - 0.683436I$ $b = 0.506790 - 0.539046I$	$8.25977 + 2.86772I$	$6.76546 + 6.29506I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$(u^{14} - 7u^{13} + \cdots - 7u + 1)(u^{14} - 7u^{13} + \cdots - 8u + 1)$ $\cdot (u^{27} + 11u^{26} + \cdots - u - 1)(u^{94} + 34u^{93} + \cdots + 8843u + 529)$
c_2, c_7	$(u^{14} - u^{13} + \cdots + 4u^2 + 1)(u^{14} - u^{13} + \cdots - u + 1)$ $\cdot (u^{27} - u^{26} + \cdots + 3u - 1)(u^{94} + 2u^{93} + \cdots - 239u + 23)$
c_3	$((u^7 + 2u^6 + u^5 - 2u^4 - 2u^3 - 1)^2)(u^{14} - 5u^{13} + \cdots + 2u^3 + 1)$ $\cdot (u^{27} - 24u^{26} + \cdots + 12672u - 1280)(u^{47} + 12u^{46} + \cdots - 6u - 1)^2$
c_4, c_5	$((u^7 + 4u^5 + 4u^3 - u^2 - 1)^2)(u^{14} - u^{13} + \cdots + 2u^2 + 1)$ $\cdot (u^{27} - 12u^{26} + \cdots + 400u - 32)(u^{47} + 5u^{46} + \cdots - 12u - 1)^2$
c_6, c_{11}	$(u^{14} + u^{13} + \cdots + u + 1)(u^{14} + u^{13} + \cdots + 4u^2 + 1)$ $\cdot (u^{27} - u^{26} + \cdots + 3u - 1)(u^{94} + 2u^{93} + \cdots - 239u + 23)$
c_8	$((u^7 + 4u^5 + 4u^3 + u^2 + 1)^2)(u^{14} + u^{13} + \cdots + 2u^2 + 1)$ $\cdot (u^{27} - 12u^{26} + \cdots + 400u - 32)(u^{47} + 5u^{46} + \cdots - 12u - 1)^2$
c_9, c_{12}	$(u^{14} - 2u^{12} + \cdots + 5u + 1)$ $\cdot (u^{14} - 2u^{12} + 2u^{11} + 5u^{10} - 2u^9 - 2u^8 + 5u^7 + 4u^6 - 2u^5 + 2u^3 + u + 1)$ $\cdot (u^{27} - 6u^{25} + \cdots - 6u - 1)(u^{94} + 9u^{93} + \cdots - 745u + 137)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$(y^{14}+7y^{13}+\cdots+7y+1)(y^{14}+7y^{13}+\cdots+4y+1)$ $\cdot\,(y^{27}+19y^{26}+\cdots+59y-1)$ $\cdot\,(y^{94}+58y^{93}+\cdots+285816831y+279841)$
c_2, c_6, c_7 c_{11}	$(y^{14}+7y^{13}+\cdots+8y+1)(y^{14}+7y^{13}+\cdots+7y+1)$ $\cdot\,(y^{27}+11y^{26}+\cdots-y-1)(y^{94}+34y^{93}+\cdots+8843y+529)$
c_3	$((y^7-2y^6+\cdots-4y^2-1)^2)(y^{14}-5y^{13}+\cdots-4y^2+1)$ $\cdot\,(y^{27}-6y^{26}+\cdots-8994816y-1638400)$ $\cdot\,(y^{47}-10y^{46}+\cdots+28y-1)^2$
c_4, c_5, c_8	$(y^7+8y^6+24y^5+32y^4+16y^3-y^2-2y-1)^2$ $\cdot\,(y^{14}+15y^{13}+\cdots+4y+1)(y^{27}+24y^{26}+\cdots+9984y-1024)$ $\cdot\,(y^{47}+53y^{46}+\cdots+26y-1)^2$
c_9, c_{12}	$(y^{14}-4y^{13}+\cdots-5y+1)(y^{14}-4y^{13}+\cdots-y+1)$ $\cdot\,(y^{27}-12y^{26}+\cdots+8y-1)(y^{94}-25y^{93}+\cdots+3079859y+18769)$