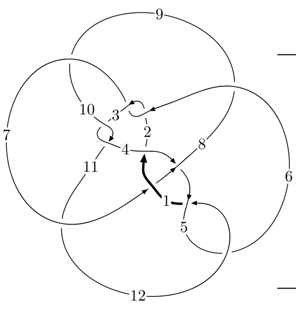
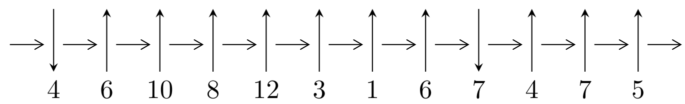
$12n_{0867}$ $(K12n_{0867})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle b - u,\ -81072715476u^{25} + 52576364860u^{24} + \cdots + 3386368973a + 151407587225,$$
$$u^{26} - 7u^{24} + \cdots - 2u - 1\rangle$$
$$I_2^u = \langle -6.03995 \times 10^{146}u^{63} - 9.04955 \times 10^{146}u^{62} + \cdots + 5.66297 \times 10^{148}b - 4.48747 \times 10^{149},$$
$$-1.13952 \times 10^{150}u^{63} - 1.92915 \times 10^{150}u^{62} + \cdots + 4.19060 \times 10^{150}a - 1.96444 \times 10^{152},$$
$$u^{64} + 2u^{63} + \cdots + 171u + 37\rangle$$
$$I_3^u = \langle b + u,\ 106u^{13} - 38u^{12} + \cdots + 29a + 111,\ u^{14} - 4u^{12} + 8u^{10} - 10u^8 + u^7 + 5u^6 - u^5 + 2u^4 - u^3 - 2u^2 + u -$$
$$I_4^u = \langle u^{11} - 4u^9 + 5u^7 - 3u^5 + 5u^3 + b - 4u,$$
$$-3u^{11} - 4u^{10} + 11u^9 + 14u^8 - 11u^7 - 13u^6 + 4u^5 + 5u^4 - 12u^3 - 17u^2 + 2a + 8u + 8,$$
$$u^{12} - 4u^{10} + 5u^8 - 3u^6 + 5u^4 - 4u^2 + 1\rangle$$
$$I_5^u = \langle b + u - 1,\ a + u - 1,\ u^2 - u + 1\rangle$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 118 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. $\boldsymbol{I^u_1 = \langle b - u,\ -8.11\times 10^{10}u^{25} + 5.26\times 10^{10}u^{24} + \cdots + 3.39\times 10^{9}a + 1.51\times 10^{11},\ u^{26} - 7u^{24} + \cdots - 2u - 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_7 = \begin{pmatrix}23.9409u^{25} - 15.5259u^{24} + \cdots - 17.7599u - 44.7109\\u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}u\\-u^3 + u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}14.9186u^{25} - 4.47512u^{24} + \cdots + 9.17407u - 31.5817\\5.21774u^{25} - 3.42933u^{24} + \cdots - 2.57347u - 10.1364\end{pmatrix}$$
$$a_6 = \begin{pmatrix}23.9409u^{25} - 15.5259u^{24} + \cdots - 18.7599u - 44.7109\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-15.5259u^{25} + 7.24164u^{24} + \cdots + 3.17090u + 24.9409\\u^2\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-20.9154u^{25} + 9.26554u^{24} + \cdots + 2.12830u + 32.1825\\1.96019u^{25} - 0.497707u^{24} + \cdots + 1.34172u - 2.02390\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-46.2583u^{25} + 23.0203u^{24} + \cdots + 7.38663u + 78.1426\\2.51848u^{25} - 0.734211u^{24} + \cdots + 3.08951u - 4.29711\end{pmatrix}$$
$$a_9 = \begin{pmatrix}27.4397u^{25} - 10.7838u^{24} + \cdots + 6.93525u - 57.8914\\7.24164u^{25} - 5.38952u^{24} + \cdots - 6.11087u - 15.5259\end{pmatrix}$$
$$a_8 = \begin{pmatrix}17.7388u^{25} - 9.73803u^{24} + \cdots - 4.81229u - 36.4461\\2.02390u^{25} - 1.96019u^{24} + \cdots - 2.53740u - 5.38952\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{39142336274}{3386368973}u^{25} - \frac{35272648620}{3386368973}u^{24} + \cdots - \frac{7281974472}{260489921}u - \frac{23728803050}{3386368973}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26} - 21u^{25} + \cdots + 7680u - 512$
c_2, c_3, c_6 c_{10}	$u^{26} - 7u^{24} + \cdots + 2u - 1$
c_4, c_7	$u^{26} + 5u^{24} + \cdots - 8u + 1$
c_5, c_{12}	$u^{26} - 11u^{25} + \cdots + 304u - 24$
c_8, c_{11}	$u^{26} - 2u^{25} + \cdots - 80u + 19$
c_9	$u^{26} - 21u^{25} + \cdots - 16284u + 1096$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{26} - y^{25} + \cdots - 3932160y + 262144$
c_2, c_3, c_6 c_{10}	$y^{26} - 14y^{25} + \cdots - 24y + 1$
c_4, c_7	$y^{26} + 10y^{25} + \cdots - 36y + 1$
c_5, c_{12}	$y^{26} + 17y^{25} + \cdots - 2656y + 576$
c_8, c_{11}	$y^{26} + 22y^{25} + \cdots - 7236y + 361$
c_9	$y^{26} + 5y^{25} + \cdots - 35876688y + 1201216$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.783583 + 0.497565I$ $a = -0.552401 + 0.963003I$ $b = -0.783583 + 0.497565I$	$2.97189 - 1.12917I$	$11.90635 + 3.31876I$
$u = -0.783583 - 0.497565I$ $a = -0.552401 - 0.963003I$ $b = -0.783583 - 0.497565I$	$2.97189 + 1.12917I$	$11.90635 - 3.31876I$
$u = -1.086820 + 0.182504I$ $a = 0.465254 - 0.140063I$ $b = -1.086820 + 0.182504I$	$1.13119 - 2.61384I$	$9.69860 + 3.81800I$
$u = -1.086820 - 0.182504I$ $a = 0.465254 + 0.140063I$ $b = -1.086820 - 0.182504I$	$1.13119 + 2.61384I$	$9.69860 - 3.81800I$
$u = 1.086220 + 0.199675I$ $a = 0.091019 + 0.925043I$ $b = 1.086220 + 0.199675I$	$2.34848 - 2.40757I$	$11.72048 + 1.43873I$
$u = 1.086220 - 0.199675I$ $a = 0.091019 - 0.925043I$ $b = 1.086220 - 0.199675I$	$2.34848 + 2.40757I$	$11.72048 - 1.43873I$
$u = 0.793430 + 0.080832I$ $a = -0.31402 + 1.95659I$ $b = 0.793430 + 0.080832I$	$2.86846 - 2.53404I$	$13.29449 + 3.41848I$
$u = 0.793430 - 0.080832I$ $a = -0.31402 - 1.95659I$ $b = 0.793430 - 0.080832I$	$2.86846 + 2.53404I$	$13.29449 - 3.41848I$
$u = 0.843436 + 0.905238I$ $a = -0.58396 + 1.35722I$ $b = 0.843436 + 0.905238I$	$-8.06090 - 4.16985I$	$4.50695 + 1.21035I$
$u = 0.843436 - 0.905238I$ $a = -0.58396 - 1.35722I$ $b = 0.843436 - 0.905238I$	$-8.06090 + 4.16985I$	$4.50695 - 1.21035I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.27855$ $a = -1.03578$ $b = 1.27855$	6.69425	-5.31560
$u = -0.947242 + 0.861971I$ $a = 0.449801 + 1.090630I$ $b = -0.947242 + 0.861971I$	$-2.70506 - 1.24876I$	$6.24886 - 0.86995I$
$u = -0.947242 - 0.861971I$ $a = 0.449801 - 1.090630I$ $b = -0.947242 - 0.861971I$	$-2.70506 + 1.24876I$	$6.24886 + 0.86995I$
$u = -1.152600 + 0.696627I$ $a = 0.876822 + 1.038740I$ $b = -1.152600 + 0.696627I$	$-4.95525 - 4.75697I$	$1.31627 + 5.46968I$
$u = -1.152600 - 0.696627I$ $a = 0.876822 - 1.038740I$ $b = -1.152600 - 0.696627I$	$-4.95525 + 4.75697I$	$1.31627 - 5.46968I$
$u = 0.983614 + 0.927361I$ $a = -0.149538 + 1.130440I$ $b = 0.983614 + 0.927361I$	$-6.37802 + 8.08526I$	$2.98916 - 6.73051I$
$u = 0.983614 - 0.927361I$ $a = -0.149538 - 1.130440I$ $b = 0.983614 - 0.927361I$	$-6.37802 - 8.08526I$	$2.98916 + 6.73051I$
$u = 1.18953 + 0.78832I$ $a = -0.510132 + 1.196150I$ $b = 1.18953 + 0.78832I$	$-0.89949 + 11.85540I$	$9.91635 - 8.77683I$
$u = 1.18953 - 0.78832I$ $a = -0.510132 - 1.196150I$ $b = 1.18953 - 0.78832I$	$-0.89949 - 11.85540I$	$9.91635 + 8.77683I$
$u = -0.554736 + 0.043432I$ $a = -0.54182 + 5.22386I$ $b = -0.554736 + 0.043432I$	$-2.22203 + 4.95013I$	$10.15122 + 4.02452I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.554736 - 0.043432I$ $a = -0.54182 - 5.22386I$ $b = -0.554736 - 0.043432I$	$-2.22203 - 4.95013I$	$10.15122 - 4.02452I$
$u = -1.19248 + 0.84134I$ $a = 0.41575 + 1.36350I$ $b = -1.19248 + 0.84134I$	$-5.8498 - 17.7947I$	$7.31708 + 9.41599I$
$u = -1.19248 - 0.84134I$ $a = 0.41575 - 1.36350I$ $b = -1.19248 - 0.84134I$	$-5.8498 + 17.7947I$	$7.31708 - 9.41599I$
$u = 0.364116 + 0.322517I$ $a = -0.38283 - 1.70403I$ $b = 0.364116 + 0.322517I$	$-3.28701 + 1.79973I$	$8.03339 - 3.90573I$
$u = 0.364116 - 0.322517I$ $a = -0.38283 + 1.70403I$ $b = 0.364116 - 0.322517I$	$-3.28701 - 1.79973I$	$8.03339 + 3.90573I$
$u = -0.364326$ $a = 0.507910$ $b = -0.364326$	0.612463	16.1170

II. $I_2^u = \langle -6.04 \times 10^{146} u^{63} - 9.05 \times 10^{146} u^{62} + \cdots + 5.66 \times 10^{148} b - 4.49 \times 10^{149},\ -1.14 \times 10^{150} u^{63} - 1.93 \times 10^{150} u^{62} + \cdots + 4.19 \times 10^{150} a - 1.96 \times 10^{152},\ u^{64} + 2u^{63} + \cdots + 171u + 37 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.271924u^{63} + 0.460353u^{62} + \cdots + 44.0665u + 46.8772 \\ 0.0106657u^{63} + 0.0159802u^{62} + \cdots + 13.7655u + 7.92425 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.624613u^{63} + 1.10102u^{62} + \cdots + 36.8238u + 101.708 \\ 0.00461596u^{63} + 0.0201036u^{62} + \cdots - 5.67814u - 1.77195 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.261258u^{63} + 0.444372u^{62} + \cdots + 30.3010u + 38.9530 \\ 0.0106657u^{63} + 0.0159802u^{62} + \cdots + 13.7655u + 7.92425 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.0485882u^{63} + 0.0990616u^{62} + \cdots + 25.2490u + 3.73071 \\ 0.0203311u^{63} + 0.00581512u^{62} + \cdots + 9.57805u + 11.5410 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.0841362u^{63} + 0.140025u^{62} + \cdots + 32.7070u + 15.2019 \\ 0.0299378u^{63} + 0.0305460u^{62} + \cdots + 5.74066u + 10.4261 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.406605u^{63} + 0.742625u^{62} + \cdots - 16.3394u + 64.2704 \\ -0.0987727u^{63} - 0.181070u^{62} + \cdots + 3.66166u - 12.0388 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.614690u^{63} + 1.08226u^{62} + \cdots + 40.7236u + 104.602 \\ -0.0329619u^{63} - 0.0652260u^{62} + \cdots + 3.48648u - 2.55001 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.207145u^{63} + 0.346285u^{62} + \cdots + 38.5161u + 33.4383 \\ 0.0910540u^{63} + 0.176548u^{62} + \cdots - 11.9099u + 7.81179 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.168425u^{63} - 0.321826u^{62} + \cdots + 44.9179u - 8.92647$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^{32} + 7u^{31} + \cdots + 12u + 1)^2$
c_2, c_3, c_6 c_{10}	$u^{64} - 2u^{63} + \cdots - 171u + 37$
c_4, c_7	$u^{64} - u^{63} + \cdots - 4808u - 587$
c_5, c_{12}	$(u^{32} + 5u^{31} + \cdots - 69u - 8)^2$
c_8, c_{11}	$u^{64} + 17u^{62} + \cdots - 264620u + 37823$
c_9	$(u^{32} + 13u^{31} + \cdots - 1313u - 169)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^{32} - 9y^{31} + \cdots - 46y + 1)^2$
c_2, c_3, c_6 c_{10}	$y^{64} - 18y^{63} + \cdots - 85481y + 1369$
c_4, c_7	$y^{64} + 9y^{63} + \cdots + 6985670y + 344569$
c_5, c_{12}	$(y^{32} + 25y^{31} + \cdots - 505y + 64)^2$
c_8, c_{11}	$y^{64} + 34y^{63} + \cdots - 493922520582y + 1430579329$
c_9	$(y^{32} - 15y^{31} + \cdots - 543335y + 28561)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.747581 + 0.648100I$ $a = -0.817423 - 1.099650I$ $b = -0.61201 - 1.28970I$	$-6.29180 - 0.24514I$	$-1.25097 + 0.92202I$
$u = -0.747581 - 0.648100I$ $a = -0.817423 + 1.099650I$ $b = -0.61201 + 1.28970I$	$-6.29180 + 0.24514I$	$-1.25097 - 0.92202I$
$u = 0.884153 + 0.502618I$ $a = 0.34258 - 1.42349I$ $b = -0.228782 + 0.015105I$	$-3.14442 + 2.14473I$	$8.00000 - 2.29641I$
$u = 0.884153 - 0.502618I$ $a = 0.34258 + 1.42349I$ $b = -0.228782 - 0.015105I$	$-3.14442 - 2.14473I$	$8.00000 + 2.29641I$
$u = -0.598567 + 0.826676I$ $a = 0.244371 + 0.711038I$ $b = 0.897842 + 1.021270I$	$-6.68309 - 1.04909I$	$0.34328 + 1.82313I$
$u = -0.598567 - 0.826676I$ $a = 0.244371 - 0.711038I$ $b = 0.897842 - 1.021270I$	$-6.68309 + 1.04909I$	$0.34328 - 1.82313I$
$u = -0.803262 + 0.664543I$ $a = 0.62981 - 1.29173I$ $b = 0.762751 - 0.155996I$	$2.72858 - 3.38419I$	$16.1240 + 2.3766I$
$u = -0.803262 - 0.664543I$ $a = 0.62981 + 1.29173I$ $b = 0.762751 + 0.155996I$	$2.72858 + 3.38419I$	$16.1240 - 2.3766I$
$u = 0.725397 + 0.757869I$ $a = 1.002150 - 0.379337I$ $b = 0.987211 - 0.961056I$	$-4.99655 - 2.48694I$	$2.71838 + 6.51745I$
$u = 0.725397 - 0.757869I$ $a = 1.002150 + 0.379337I$ $b = 0.987211 + 0.961056I$	$-4.99655 + 2.48694I$	$2.71838 - 6.51745I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.036330 + 0.282218I$ $a = 0.10487 - 1.70181I$ $b = 0.555751 - 0.728079I$	$-0.07031 - 6.41881I$	$9.84201 + 8.36999I$
$u = -1.036330 - 0.282218I$ $a = 0.10487 + 1.70181I$ $b = 0.555751 + 0.728079I$	$-0.07031 + 6.41881I$	$9.84201 - 8.36999I$
$u = 0.555751 + 0.728079I$ $a = -1.31008 - 1.51039I$ $b = -1.036330 - 0.282218I$	$-0.07031 + 6.41881I$	$9.84201 - 8.36999I$
$u = 0.555751 - 0.728079I$ $a = -1.31008 + 1.51039I$ $b = -1.036330 + 0.282218I$	$-0.07031 - 6.41881I$	$9.84201 + 8.36999I$
$u = -0.956175 + 0.585855I$ $a = -1.10599 - 1.51798I$ $b = 0.771652 - 0.999575I$	$-5.62629 - 4.62037I$	$0. + 5.91719I$
$u = -0.956175 - 0.585855I$ $a = -1.10599 + 1.51798I$ $b = 0.771652 + 0.999575I$	$-5.62629 + 4.62037I$	$0. - 5.91719I$
$u = -0.763512 + 0.372948I$ $a = -0.502038 - 0.729370I$ $b = 1.54016 - 0.18960I$	$1.90078 - 6.98033I$	$8.48263 + 9.40811I$
$u = -0.763512 - 0.372948I$ $a = -0.502038 + 0.729370I$ $b = 1.54016 + 0.18960I$	$1.90078 + 6.98033I$	$8.48263 - 9.40811I$
$u = -0.848626 + 0.788875I$ $a = -0.463802 - 0.431146I$ $b = -0.848626 - 0.788875I$	-1.48320	$8.00000 + 0.I$
$u = -0.848626 - 0.788875I$ $a = -0.463802 + 0.431146I$ $b = -0.848626 + 0.788875I$	-1.48320	$8.00000 + 0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.840232$ $a = -1.60863$ $b = 1.33920$	5.92790	18.3780
$u = -0.916724 + 0.760771I$ $a = -0.42171 - 1.47210I$ $b = 1.164150 - 0.693868I$	$-1.26936 - 5.84614I$	0
$u = -0.916724 - 0.760771I$ $a = -0.42171 + 1.47210I$ $b = 1.164150 + 0.693868I$	$-1.26936 + 5.84614I$	0
$u = -0.781283 + 0.173339I$ $a = 1.41438 + 0.92421I$ $b = -1.381380 - 0.269991I$	$1.96444 + 4.61759I$	$12.02099 + 3.00810I$
$u = -0.781283 - 0.173339I$ $a = 1.41438 - 0.92421I$ $b = -1.381380 + 0.269991I$	$1.96444 - 4.61759I$	$12.02099 - 3.00810I$
$u = 0.537679 + 1.075690I$ $a = -0.427102 + 0.566369I$ $b = -0.880132 + 0.860062I$	$-2.89973 - 5.13287I$	0
$u = 0.537679 - 1.075690I$ $a = -0.427102 - 0.566369I$ $b = -0.880132 - 0.860062I$	$-2.89973 + 5.13287I$	0
$u = 0.983968 + 0.716147I$ $a = 0.34588 - 1.65595I$ $b = -1.26383 - 0.93490I$	$-4.21523 + 8.10070I$	0
$u = 0.983968 - 0.716147I$ $a = 0.34588 + 1.65595I$ $b = -1.26383 + 0.93490I$	$-4.21523 - 8.10070I$	0
$u = 0.762751 + 0.155996I$ $a = 0.06884 - 1.92313I$ $b = -0.803262 - 0.664543I$	$2.72858 + 3.38419I$	$16.1240 - 2.3766I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.762751 - 0.155996I$ $a = 0.06884 + 1.92313I$ $b = -0.803262 + 0.664543I$	$2.72858 - 3.38419I$	$16.1240 + 2.3766I$
$u = -0.880132 + 0.860062I$ $a = 0.399579 + 0.566471I$ $b = 0.537679 + 1.075690I$	$-2.89973 - 5.13287I$	0
$u = -0.880132 - 0.860062I$ $a = 0.399579 - 0.566471I$ $b = 0.537679 - 1.075690I$	$-2.89973 + 5.13287I$	0
$u = 0.771652 + 0.999575I$ $a = 0.43843 - 1.60921I$ $b = -0.956175 - 0.585855I$	$-5.62629 + 4.62037I$	0
$u = 0.771652 - 0.999575I$ $a = 0.43843 + 1.60921I$ $b = -0.956175 + 0.585855I$	$-5.62629 - 4.62037I$	0
$u = 0.086806 + 1.285450I$ $a = 0.352088 - 0.327075I$ $b = 0.446778 - 0.106968I$	$-4.09830 - 1.29586I$	0
$u = 0.086806 - 1.285450I$ $a = 0.352088 + 0.327075I$ $b = 0.446778 + 0.106968I$	$-4.09830 + 1.29586I$	0
$u = 0.982919 + 0.838355I$ $a = -0.520314 + 0.687373I$ $b = -0.650640 + 1.170750I$	$-7.61349 + 10.61140I$	0
$u = 0.982919 - 0.838355I$ $a = -0.520314 - 0.687373I$ $b = -0.650640 - 1.170750I$	$-7.61349 - 10.61140I$	0
$u = 1.33920$ $a = -1.00927$ $b = 0.840232$	5.92790	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.650640 + 1.170750I$ $a = 0.550727 + 0.622987I$ $b = 0.982919 + 0.838355I$	$-7.61349 + 10.61140I$	0
$u = -0.650640 - 1.170750I$ $a = 0.550727 - 0.622987I$ $b = 0.982919 - 0.838355I$	$-7.61349 - 10.61140I$	0
$u = 1.164150 + 0.693868I$ $a = 0.566257 - 1.221150I$ $b = -0.916724 - 0.760771I$	$-1.26936 + 5.84614I$	0
$u = 1.164150 - 0.693868I$ $a = 0.566257 + 1.221150I$ $b = -0.916724 + 0.760771I$	$-1.26936 - 5.84614I$	0
$u = 0.897842 + 1.021270I$ $a = -0.479918 + 0.296866I$ $b = -0.598567 + 0.826676I$	$-6.68309 - 1.04909I$	0
$u = 0.897842 - 1.021270I$ $a = -0.479918 - 0.296866I$ $b = -0.598567 - 0.826676I$	$-6.68309 + 1.04909I$	0
$u = 0.571558 + 0.247045I$ $a = 0.902392 - 0.212211I$ $b = -1.51966 + 0.17892I$	$4.37128 + 1.08985I$	$2.66044 - 9.56608I$
$u = 0.571558 - 0.247045I$ $a = 0.902392 + 0.212211I$ $b = -1.51966 - 0.17892I$	$4.37128 - 1.08985I$	$2.66044 + 9.56608I$
$u = 0.987211 + 0.961056I$ $a = 0.282372 - 0.765497I$ $b = 0.725397 - 0.757869I$	$-4.99655 + 2.48694I$	0
$u = 0.987211 - 0.961056I$ $a = 0.282372 + 0.765497I$ $b = 0.725397 + 0.757869I$	$-4.99655 - 2.48694I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.381380 + 0.269991I$ $a = 0.947212 - 0.160105I$ $b = -0.781283 - 0.173339I$	$1.96444 - 4.61759I$	0
$u = -1.381380 - 0.269991I$ $a = 0.947212 + 0.160105I$ $b = -0.781283 + 0.173339I$	$1.96444 + 4.61759I$	0
$u = -0.61201 + 1.28970I$ $a = -0.582538 - 0.749981I$ $b = -0.747581 - 0.648100I$	$-6.29180 + 0.24514I$	0
$u = -0.61201 - 1.28970I$ $a = -0.582538 + 0.749981I$ $b = -0.747581 + 0.648100I$	$-6.29180 - 0.24514I$	0
$u = -1.51966 + 0.17892I$ $a = -0.361017 - 0.109388I$ $b = 0.571558 + 0.247045I$	$4.37128 + 1.08985I$	0
$u = -1.51966 - 0.17892I$ $a = -0.361017 + 0.109388I$ $b = 0.571558 - 0.247045I$	$4.37128 - 1.08985I$	0
$u = 0.446778 + 0.106968I$ $a = 0.739730 - 1.126570I$ $b = 0.086806 - 1.285450I$	$-4.09830 + 1.29586I$	$13.7807 - 5.0145I$
$u = 0.446778 - 0.106968I$ $a = 0.739730 + 1.126570I$ $b = 0.086806 + 1.285450I$	$-4.09830 - 1.29586I$	$13.7807 + 5.0145I$
$u = 1.54016 + 0.18960I$ $a = 0.390037 - 0.288022I$ $b = -0.763512 - 0.372948I$	$1.90078 + 6.98033I$	0
$u = 1.54016 - 0.18960I$ $a = 0.390037 + 0.288022I$ $b = -0.763512 + 0.372948I$	$1.90078 - 6.98033I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.26383 + 0.93490I$ $a = -0.257820 - 1.283980I$ $b = 0.983968 - 0.716147I$	$-4.21523 - 8.10070I$	0
$u = -1.26383 - 0.93490I$ $a = -0.257820 + 1.283980I$ $b = 0.983968 + 0.716147I$	$-4.21523 + 8.10070I$	0
$u = -0.228782 + 0.015105I$ $a = -4.74409 + 4.43535I$ $b = 0.884153 + 0.502618I$	$-3.14442 + 2.14473I$	$8.08474 - 2.29641I$
$u = -0.228782 - 0.015105I$ $a = -4.74409 - 4.43535I$ $b = 0.884153 - 0.502618I$	$-3.14442 - 2.14473I$	$8.08474 + 2.29641I$

III. $I_3^u = \langle b+u,\ 106u^{13} - 38u^{12} + \cdots + 29a + 111,\ u^{14} - 4u^{12} + \cdots + u + 1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -3.65517u^{13} + 1.31034u^{12} + \cdots + 0.586207u - 3.82759 \\ -u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1.65517u^{13} + 0.689655u^{12} + \cdots - 7.58621u + 4.82759 \\ 1.13793u^{13} - 0.275862u^{12} + \cdots + 0.0344828u + 1.06897 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -3.65517u^{13} + 1.31034u^{12} + \cdots + 1.58621u - 3.82759 \\ -u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.31034u^{13} + 1.62069u^{12} + \cdots + 0.172414u - 2.65517 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.55172u^{13} + 2.10345u^{12} + \cdots - 0.137931u - 4.27586 \\ -0.0344828u^{13} + 0.0689655u^{12} + \cdots + 0.241379u + 0.482759 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 3.79310u^{13} - 3.58621u^{12} + \cdots + 1.44828u + 5.89655 \\ -0.137931u^{13} + 0.275862u^{12} + \cdots - 0.0344828u - 1.06897 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.241379u^{13} + 1.51724u^{12} + \cdots - 12.6897u + 4.62069 \\ 1.62069u^{13} - 0.241379u^{12} + \cdots - 1.34483u + 1.31034 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.275862u^{13} + 0.551724u^{12} + \cdots - 5.06897u + 0.862069 \\ 0.482759u^{13} + 0.0344828u^{12} + \cdots - 0.379310u + 0.241379 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{118}{29}u^{13} - \frac{207}{29}u^{12} - 18u^{11} + 28u^{10} + \frac{1002}{29}u^9 - \frac{1511}{29}u^8 - \frac{1261}{29}u^7 + \frac{1944}{29}u^6 + \frac{327}{29}u^5 - \frac{830}{29}u^4 + \frac{591}{29}u^3 - \frac{749}{29}u^2 + \frac{44}{29}u + \frac{581}{29}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{14} - 4u^{13} + \cdots - 2u + 1$
c_2, c_{10}	$u^{14} - 4u^{12} + 8u^{10} - 10u^8 - u^7 + 5u^6 + u^5 + 2u^4 + u^3 - 2u^2 - u + 1$
c_3, c_6	$u^{14} - 4u^{12} + 8u^{10} - 10u^8 + u^7 + 5u^6 - u^5 + 2u^4 - u^3 - 2u^2 + u + 1$
c_4, c_7	$u^{14} + u^{11} + 5u^{10} - u^9 + u^7 + 3u^6 - 6u^5 + u^4 + 2u^3 + 2u^2 - 3u + 1$
c_5	$u^{14} + 4u^{13} + \cdots + 8u + 1$
c_8, c_{11}	$u^{14} + 2u^{13} + \cdots + 27u + 7$
c_9	$u^{14} + 14u^{13} + \cdots + 2333u + 319$
c_{12}	$u^{14} - 4u^{13} + \cdots - 8u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{14} + 3y^{11} + \cdots - 2y + 1$
c_2, c_3, c_6 c_{10}	$y^{14} - 8y^{13} + \cdots - 5y + 1$
c_4, c_7	$y^{14} + 10y^{12} + \cdots - 5y + 1$
c_5, c_{12}	$y^{14} + 10y^{13} + \cdots + 4y + 1$
c_8, c_{11}	$y^{14} + 12y^{13} + \cdots - y + 49$
c_9	$y^{14} + 10y^{13} + \cdots - 227877y + 101761$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.705264 + 0.481548I$ $a = -0.65418 - 1.69656I$ $b = -0.705264 - 0.481548I$	$1.87287 + 3.91500I$	$7.22173 - 7.63901I$
$u = 0.705264 - 0.481548I$ $a = -0.65418 + 1.69656I$ $b = -0.705264 + 0.481548I$	$1.87287 - 3.91500I$	$7.22173 + 7.63901I$
$u = 1.197260 + 0.164540I$ $a = 0.544579 - 0.736189I$ $b = -1.197260 - 0.164540I$	$3.96804 + 6.37801I$	$14.6039 - 5.9971I$
$u = 1.197260 - 0.164540I$ $a = 0.544579 + 0.736189I$ $b = -1.197260 + 0.164540I$	$3.96804 - 6.37801I$	$14.6039 + 5.9971I$
$u = 1.020540 + 0.674600I$ $a = 0.91974 - 1.32074I$ $b = -1.020540 - 0.674600I$	$-3.82504 + 4.57037I$	$9.01908 - 5.07868I$
$u = 1.020540 - 0.674600I$ $a = 0.91974 + 1.32074I$ $b = -1.020540 + 0.674600I$	$-3.82504 - 4.57037I$	$9.01908 + 5.07868I$
$u = -0.032890 + 0.769702I$ $a = -0.543523 - 0.781156I$ $b = 0.032890 - 0.769702I$	$-4.81955 + 1.15266I$	$0.22976 - 1.43233I$
$u = -0.032890 - 0.769702I$ $a = -0.543523 + 0.781156I$ $b = 0.032890 + 0.769702I$	$-4.81955 - 1.15266I$	$0.22976 + 1.43233I$
$u = -1.249640 + 0.050920I$ $a = -0.990118 + 0.119715I$ $b = 1.249640 - 0.050920I$	$6.96809 + 0.13335I$	$21.1617 - 9.9291I$
$u = -1.249640 - 0.050920I$ $a = -0.990118 - 0.119715I$ $b = 1.249640 + 0.050920I$	$6.96809 - 0.13335I$	$21.1617 + 9.9291I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.062670+0.800901I$ $a=-0.25516-1.44180I$ $b=\ \ 1.062670-0.800901I$	$-3.51744-7.29600I$	$8.08201+4.40748I$
$u=-1.062670-0.800901I$ $a=-0.25516+1.44180I$ $b=\ \ 1.062670+0.800901I$	$-3.51744+7.29600I$	$8.08201-4.40748I$
$u=-0.577867+0.218364I$ $a=\ \ 0.47866-4.77205I$ $b=\ \ 0.577867-0.218364I$	$-2.29191-5.40173I$	$7.1818+12.6437I$
$u=-0.577867-0.218364I$ $a=\ \ 0.47866+4.77205I$ $b=\ \ 0.577867+0.218364I$	$-2.29191+5.40173I$	$7.1818-12.6437I$

IV. $\boldsymbol{I_4^u = \langle u^{11} - 4u^9 + 5u^7 - 3u^5 + 5u^3 + b - 4u,\ -3u^{11} - 4u^{10} + \cdots + 2a + 8,\ u^{12} - 4u^{10} + 5u^8 - 3u^6 + 5u^4 - 4u^2 + 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{3}{2}u^{11} + 2u^{10} + \cdots - 4u - 4 \\ -u^{11} + 4u^9 - 5u^7 + 3u^5 - 5u^3 + 4u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -\frac{5}{2}u^{11} - \frac{7}{2}u^{10} + \cdots + \frac{13}{2}u + \frac{13}{2} \\ 2u^{11} + u^{10} + \cdots - \frac{11}{2}u - 2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{5}{2}u^{11} + 2u^{10} + \cdots - 8u - 4 \\ -u^{11} + 4u^9 - 5u^7 + 3u^5 - 5u^3 + 4u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 4u^{11} + \frac{5}{2}u^{10} + \cdots - \frac{15}{2}u - 7 \\ -u^{10} + 4u^8 - 5u^6 + 3u^4 - 5u^2 + 4 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 6u^{11} + 2u^{10} + \cdots - \frac{23}{2}u - \frac{11}{2} \\ -u^{11} - u^{10} + \cdots + 2u + \frac{7}{2} \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -\frac{1}{2}u^{10} - u^9 + \cdots - 4u - \frac{3}{2} \\ \frac{5}{2}u^{11} + \frac{3}{2}u^{10} + \cdots - 3u - \frac{3}{2} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -2u^{11} - 3u^{10} + \cdots + \frac{7}{2}u + \frac{11}{2} \\ \frac{3}{2}u^{11} + 2u^{10} + \cdots - 3u - 4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{7}{2}u^{11} - \frac{11}{2}u^{10} + \cdots + 3u + \frac{17}{2} \\ 3u^{11} + 4u^{10} + \cdots - 5u - \frac{15}{2} \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 12u^{11} + 9u^{10} - 43u^9 - 31u^8 + 42u^7 + 25u^6 - 17u^5 - 7u^4 + 52u^3 + 41u^2 - 27u - 5$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I^u_4	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.540561 + 0.841305I$ $a = 0.156629 - 0.987658I$ $b = 0.540561 - 0.841305I$	$-4.99541 + 1.18132I$	$3.40277 - 1.32440I$
$u = 0.540561 - 0.841305I$ $a = 0.156629 + 0.987658I$ $b = 0.540561 + 0.841305I$	$-4.99541 - 1.18132I$	$3.40277 + 1.32440I$
$u = -0.540561 + 0.841305I$ $a = -0.833234 - 0.552921I$ $b = -0.540561 - 0.841305I$	$-4.99541 + 1.18132I$	$3.40277 - 1.32440I$
$u = -0.540561 - 0.841305I$ $a = -0.833234 + 0.552921I$ $b = -0.540561 + 0.841305I$	$-4.99541 - 1.18132I$	$3.40277 + 1.32440I$
$u = -0.696578 + 0.098981I$ $a = 0.829073 - 0.673309I$ $b = -1.40718 - 0.19996I$	$4.73737 - 0.78507I$	$17.3864 - 1.2123I$
$u = -0.696578 - 0.098981I$ $a = 0.829073 + 0.673309I$ $b = -1.40718 + 0.19996I$	$4.73737 + 0.78507I$	$17.3864 + 1.2123I$
$u = 0.696578 + 0.098981I$ $a = -1.07796 + 1.55420I$ $b = 1.40718 - 0.19996I$	$1.90298 - 5.20040I$	$11.2108 + 9.9662I$
$u = 0.696578 - 0.098981I$ $a = -1.07796 - 1.55420I$ $b = 1.40718 + 0.19996I$	$1.90298 + 5.20040I$	$11.2108 - 9.9662I$
$u = 1.40718 + 0.19996I$ $a = -0.301314 + 0.434433I$ $b = 0.696578 - 0.098981I$	$4.73737 - 0.78507I$	$17.3864 - 1.2123I$
$u = 1.40718 - 0.19996I$ $a = -0.301314 - 0.434433I$ $b = 0.696578 + 0.098981I$	$4.73737 + 0.78507I$	$17.3864 + 1.2123I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.40718 + 0.19996I$ $a = \quad 0.726806 - 0.590256I$ $b = -0.696578 - 0.098981I$	$1.90298 - 5.20040I$	$11.2108 + 9.9662I$
$u = -1.40718 - 0.19996I$ $a = \quad 0.726806 + 0.590256I$ $b = -0.696578 + 0.098981I$	$1.90298 + 5.20040I$	$11.2108 - 9.9662I$

V. $I_5^u = \langle b + u - 1,\ a + u - 1,\ u^2 - u + 1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.500000 + 0.866025I$		
$a =$	$0.500000 - 0.866025I$	-3.28987	6.00000
$b =$	$0.500000 - 0.866025I$		
$u =$	$0.500000 - 0.866025I$		
$a =$	$0.500000 + 0.866025I$	-3.28987	6.00000
$b =$	$0.500000 + 0.866025I$		

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u+1)^2)(u^6+u^5-2u^3+u+1)^2(u^{14}-4u^{13}+\cdots-2u+1)$ $\cdot(u^{26}-21u^{25}+\cdots+7680u-512)(u^{32}+7u^{31}+\cdots+12u+1)^2$
c_2, c_{10}	$(u^2+u+1)(u^{12}-4u^{10}+5u^8-3u^6+5u^4-4u^2+1)$ $\cdot(u^{14}-4u^{12}+8u^{10}-10u^8-u^7+5u^6+u^5+2u^4+u^3-2u^2-u+1)$ $\cdot(u^{26}-7u^{24}+\cdots+2u-1)(u^{64}-2u^{63}+\cdots-171u+37)$
c_3, c_6	$(u^2+u+1)(u^{12}-4u^{10}+5u^8-3u^6+5u^4-4u^2+1)$ $\cdot(u^{14}-4u^{12}+8u^{10}-10u^8+u^7+5u^6-u^5+2u^4-u^3-2u^2+u+1)$ $\cdot(u^{26}-7u^{24}+\cdots+2u-1)(u^{64}-2u^{63}+\cdots-171u+37)$
c_4, c_7	(u^2+u+1) $\cdot(u^{12}-u^{11}+2u^{10}+2u^9+4u^8-u^7+2u^6-u^5+4u^4+2u^3+2u^2-u+1)$ $\cdot(u^{14}+u^{11}+5u^{10}-u^9+u^7+3u^6-6u^5+u^4+2u^3+2u^2-3u+1)$ $\cdot(u^{26}+5u^{24}+\cdots-8u+1)(u^{64}-u^{63}+\cdots-4808u-587)$
c_5	$u^2(u^6-2u^5+\cdots-4u+2)^2(u^{14}+4u^{13}+\cdots+8u+1)$ $\cdot(u^{26}-11u^{25}+\cdots+304u-24)(u^{32}+5u^{31}+\cdots-69u-8)^2$
c_8, c_{11}	$(u^2+u+1)(u^{12}-6u^{11}+\cdots-5u+1)(u^{14}+2u^{13}+\cdots+27u+7)$ $\cdot(u^{26}-2u^{25}+\cdots-80u+19)(u^{64}+17u^{62}+\cdots-264620u+37823)$
c_9	$((u+1)^2)(u^6-u^5+2u^3-u+1)^2(u^{14}+14u^{13}+\cdots+2333u+319)$ $\cdot(u^{26}-21u^{25}+\cdots-16284u+1096)$ $\cdot(u^{32}+13u^{31}+\cdots-1313u-169)^2$
c_{12}	$u^2(u^6+2u^5+\cdots+4u+2)^2(u^{14}-4u^{13}+\cdots-8u+1)$ $\cdot(u^{26}-11u^{25}+\cdots+304u-24)(u^{32}+5u^{31}+\cdots-69u-8)^2$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^2(y^6-y^5+4y^4-4y^3+4y^2-y+1)^2$ $\cdot(y^{14}+3y^{11}+\cdots-2y+1)(y^{26}-y^{25}+\cdots-3932160y+262144)$ $\cdot(y^{32}-9y^{31}+\cdots-46y+1)^2$
c_2, c_3, c_6 c_{10}	$(y^2+y+1)(y^6-4y^5+5y^4-3y^3+5y^2-4y+1)^2$ $\cdot(y^{14}-8y^{13}+\cdots-5y+1)(y^{26}-14y^{25}+\cdots-24y+1)$ $\cdot(y^{64}-18y^{63}+\cdots-85481y+1369)$
c_4, c_7	$(y^2+y+1)(y^{12}+3y^{11}+\cdots+3y+1)(y^{14}+10y^{12}+\cdots-5y+1)$ $\cdot(y^{26}+10y^{25}+\cdots-36y+1)(y^{64}+9y^{63}+\cdots+6985670y+344569)$
c_5, c_{12}	$y^2(y^6+4y^5+\cdots+4y+4)^2(y^{14}+10y^{13}+\cdots+4y+1)$ $\cdot(y^{26}+17y^{25}+\cdots-2656y+576)(y^{32}+25y^{31}+\cdots-505y+64)^2$
c_8, c_{11}	$(y^2+y+1)(y^{12}-4y^{10}+\cdots-y+1)(y^{14}+12y^{13}+\cdots-y+49)$ $\cdot(y^{26}+22y^{25}+\cdots-7236y+361)$ $\cdot(y^{64}+34y^{63}+\cdots-493922520582y+1430579329)$
c_9	$(y-1)^2(y^6-y^5+4y^4-4y^3+4y^2-y+1)^2$ $\cdot(y^{14}+10y^{13}+\cdots-227877y+101761)$ $\cdot(y^{26}+5y^{25}+\cdots-35876688y+1201216)$ $\cdot(y^{32}-15y^{31}+\cdots-543335y+28561)^2$