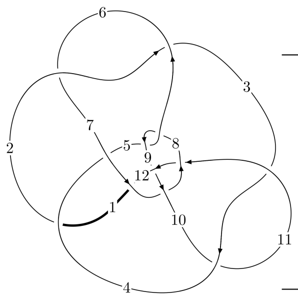
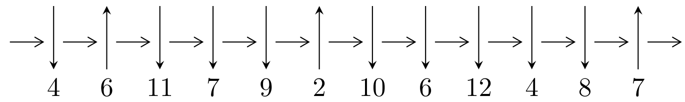
$12n_{0814}$ ($K12n_{0814}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 81175333063282u^{24} + 30690153292943u^{23} + \cdots + 146921783235464266b - 3242513336998852, \\
& -1.32142 \times 10^{15}u^{24} + 2.10121 \times 10^{15}u^{23} + \cdots + 2.93844 \times 10^{16}a - 4.20080 \times 10^{16},\ u^{25} - u^{24} + \cdots + 16u - \\
I_2^u = \langle & 1.78508 \times 10^{168}u^{59} + 1.43280 \times 10^{169}u^{58} + \cdots + 5.04029 \times 10^{172}b - 1.24666 \times 10^{173}, \\
& 8.20931 \times 10^{173}u^{59} + 8.68057 \times 10^{173}u^{58} + \cdots + 1.02973 \times 10^{176}a + 5.66958 \times 10^{176}, \\
& u^{60} + u^{59} + \cdots + 289u + 227\rangle \\
I_3^u = \langle & u^5 + u^4 + 3u^3 + 2u^2 + b + 2u + 1,\ -u^8 - u^7 - 5u^6 - 4u^5 - 9u^4 - 5u^3 - 6u^2 + a - 2u, \\
& u^{10} + u^9 + 6u^8 + 5u^7 + 13u^6 + 9u^5 + 12u^4 + 7u^3 + 4u^2 + 2u + 1\rangle \\
I_4^u = \langle & 16776080628176u^{27} + 79179955700749u^{26} + \cdots + 246911290075282b + 255994971816198, \\
& -331954436821981u^{27} - 912855799370818u^{26} + \cdots + 24691129075282a - 1987962528029584, \\
& u^{28} + 2u^{27} + \cdots + 8u + 4\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 123 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.

$\boldsymbol{I_1^u = \langle 8.12\times 10^{13}u^{24}+3.07\times 10^{13}u^{23}+\cdots+1.47\times 10^{16}b-3.24\times 10^{15},\ -1.32\times 10^{15}u^{24}+2.10\times 10^{15}u^{23}+\cdots+2.94\times 10^{16}a-4.20\times 10^{16},\ u^{25}-u^{24}+\cdots+16u+4\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.0449701u^{24} - 0.0715078u^{23} + \cdots - 0.542106u + 1.42960 \\ -0.00552507u^{24} - 0.00208888u^{23} + \cdots + 0.581749u + 0.220697 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.0263934u^{24} - 0.121687u^{23} + \cdots + 1.62285u + 1.66323 \\ 0.0406210u^{24} - 0.0468137u^{23} + \cdots + 1.43529u + 0.315002 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.105850u^{24} - 0.0806724u^{23} + \cdots + 2.97593u + 2.35666 \\ 0.0193466u^{24} - 0.0661674u^{23} + \cdots - 0.842412u - 0.0345387 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.0476780u^{24} - 0.209975u^{23} + \cdots + 1.63902u + 1.59706 \\ 0.0541918u^{24} + 0.0416602u^{23} + \cdots + 2.42220u + 0.583015 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.160052u^{24} - 0.146654u^{23} + \cdots + 3.13660u + 2.52396 \\ 0.0265376u^{24} - 0.0541059u^{23} + \cdots - 0.710082u + 0.179880 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.133514u^{24} - 0.0925477u^{23} + \cdots + 3.84668u + 2.34408 \\ 0.0189237u^{24} - 0.0163606u^{23} + \cdots - 0.400984u + 0.201981 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.326043u^{24} - 0.239402u^{23} + \cdots + 5.88596u + 2.83366 \\ -0.0981597u^{24} + 0.00638083u^{23} + \cdots + 0.203450u + 0.196612 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.0859368u^{24} - 0.160051u^{23} + \cdots - 0.334258u + 0.895546 \\ -0.00296197u^{24} + 0.00385475u^{23} + \cdots + 0.480951u + 0.145002 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$$= -\frac{2216884505248312}{7346089161773213}u^{24} + \frac{2474930584341802}{7346089161773213}u^{23} + \cdots - \frac{40988520351799862}{7346089161773213}u - \frac{70154967845383976}{7346089161773213}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{25} - u^{24} + \cdots + 20u + 1$
c_2, c_6	$u^{25} - 8u^{24} + \cdots - 22u + 20$
c_3, c_5, c_8 c_{10}	$u^{25} - u^{24} + \cdots + 16u + 4$
c_7, c_9	$u^{25} + 6u^{23} + \cdots - u + 1$
c_{11}	$u^{25} + 17u^{24} + \cdots + 1986u + 292$
c_{12}	$u^{25} + 29u^{24} + \cdots + 90112u + 8192$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{25} + 37y^{24} + \cdots + 186y - 1$
c_2, c_6	$y^{25} + 8y^{24} + \cdots + 1244y - 400$
c_3, c_5, c_8 c_{10}	$y^{25} + 27y^{24} + \cdots + 80y - 16$
c_7, c_9	$y^{25} + 12y^{24} + \cdots - 39y - 1$
c_{11}	$y^{25} - y^{24} + \cdots - 613924y - 85264$
c_{12}	$y^{25} - 15y^{24} + \cdots + 469762048y - 67108864$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.356781 + 0.935663I$ $a = -1.010680 + 0.364892I$ $b = -0.135584 + 0.828584I$	$4.71782 - 3.78505I$	$-1.08130 + 4.52429I$
$u = 0.356781 - 0.935663I$ $a = -1.010680 - 0.364892I$ $b = -0.135584 - 0.828584I$	$4.71782 + 3.78505I$	$-1.08130 - 4.52429I$
$u = 0.955649 + 0.143797I$ $a = 0.323056 + 0.156868I$ $b = -0.840661 + 0.749782I$	$2.79251 - 4.59559I$	$-4.91859 + 6.11356I$
$u = 0.955649 - 0.143797I$ $a = 0.323056 - 0.156868I$ $b = -0.840661 - 0.749782I$	$2.79251 + 4.59559I$	$-4.91859 - 6.11356I$
$u = -0.443877 + 1.205860I$ $a = -1.330180 + 0.229600I$ $b = 0.418639 + 0.822145I$	$4.34108 + 5.05136I$	$-4.70774 - 3.42318I$
$u = -0.443877 - 1.205860I$ $a = -1.330180 - 0.229600I$ $b = 0.418639 - 0.822145I$	$4.34108 - 5.05136I$	$-4.70774 + 3.42318I$
$u = -0.678966 + 0.135775I$ $a = 0.930489 + 0.854461I$ $b = -0.673372 + 0.921554I$	$2.14403 - 0.99025I$	$-7.34445 - 1.53442I$
$u = -0.678966 - 0.135775I$ $a = 0.930489 - 0.854461I$ $b = -0.673372 - 0.921554I$	$2.14403 + 0.99025I$	$-7.34445 + 1.53442I$
$u = -0.156784 + 1.353090I$ $a = 1.72576 + 0.14878I$ $b = -0.90179 - 1.12633I$	$10.67230 + 2.17630I$	$0.04174 + 1.53653I$
$u = -0.156784 - 1.353090I$ $a = 1.72576 - 0.14878I$ $b = -0.90179 + 1.12633I$	$10.67230 - 2.17630I$	$0.04174 - 1.53653I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.367112 + 0.493386I$ $a = 2.07051 - 0.52494I$ $b = 0.180406 + 1.142870I$	$-4.21532 + 1.65565I$	$-18.4972 + 2.9896I$
$u = 0.367112 - 0.493386I$ $a = 2.07051 + 0.52494I$ $b = 0.180406 - 1.142870I$	$-4.21532 - 1.65565I$	$-18.4972 - 2.9896I$
$u = -0.03076 + 1.42689I$ $a = 1.38281 + 0.68917I$ $b = -1.011890 - 0.838182I$	$11.56050 + 4.89672I$	$2.97284 - 7.85735I$
$u = -0.03076 - 1.42689I$ $a = 1.38281 - 0.68917I$ $b = -1.011890 + 0.838182I$	$11.56050 - 4.89672I$	$2.97284 + 7.85735I$
$u = -0.03578 + 1.50371I$ $a = -0.432938 + 0.103827I$ $b = 0.34268 - 1.63762I$	$2.81426 - 3.91771I$	$-1.29620 + 2.19890I$
$u = -0.03578 - 1.50371I$ $a = -0.432938 - 0.103827I$ $b = 0.34268 + 1.63762I$	$2.81426 + 3.91771I$	$-1.29620 - 2.19890I$
$u = -0.319157 + 0.375086I$ $a = 0.787826 - 0.669604I$ $b = -0.268609 - 0.688871I$	$-0.332739 + 1.160480I$	$-3.99385 - 5.99928I$
$u = -0.319157 - 0.375086I$ $a = 0.787826 + 0.669604I$ $b = -0.268609 + 0.688871I$	$-0.332739 - 1.160480I$	$-3.99385 + 5.99928I$
$u = 0.47309 + 1.48937I$ $a = -1.051700 - 0.257525I$ $b = 1.116970 - 0.232182I$	$7.93268 - 2.23602I$	$0.761695 + 0.334356I$
$u = 0.47309 - 1.48937I$ $a = -1.051700 + 0.257525I$ $b = 1.116970 + 0.232182I$	$7.93268 + 2.23602I$	$0.761695 - 0.334356I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.332884$ $a = 1.83055$ $b = 0.306235$	-1.10902	-7.26140
$u = 0.62513 + 1.55416I$ $a = 1.381370 + 0.302300I$ $b = -1.00799 + 1.26430I$	$13.3035 - 17.0719I$	$-2.40849 + 7.81401I$
$u = 0.62513 - 1.55416I$ $a = 1.381370 - 0.302300I$ $b = -1.00799 - 1.26430I$	$13.3035 + 17.0719I$	$-2.40849 - 7.81401I$
$u = -0.44600 + 1.67824I$ $a = 0.808407 - 0.509554I$ $b = -1.37193 + 0.86362I$	$14.7335 + 8.6358I$	$-0.89771 - 3.83191I$
$u = -0.44600 - 1.67824I$ $a = 0.808407 + 0.509554I$ $b = -1.37193 - 0.86362I$	$14.7335 - 8.6358I$	$-0.89771 + 3.83191I$

II. $I_2^u = \langle 1.79\times10^{168}u^{59} + 1.43\times10^{169}u^{58} + \cdots + 5.04\times10^{172}b - 1.25\times10^{173},\ 8.21\times10^{173}u^{59} + 8.68\times10^{173}u^{58} + \cdots + 1.03\times10^{176}a + 5.67\times10^{176},\ u^{60} + u^{59} + \cdots + 289u + 227\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-0.00797228u^{59} - 0.00842993u^{58} + \cdots + 9.12745u - 5.50588\\-0.0000354162u^{59} - 0.000284270u^{58} + \cdots - 4.15178u + 2.47338\end{pmatrix}$$
$$a_2 = \begin{pmatrix}0.00875654u^{59} + 0.00749914u^{58} + \cdots + 11.5546u + 7.51424\\-0.00793371u^{59} - 0.00743256u^{58} + \cdots - 8.38811u - 1.46531\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-0.0162583u^{59} - 0.0123765u^{58} + \cdots - 26.6169u + 2.33453\\-0.00855045u^{59} - 0.00916146u^{58} + \cdots + 0.843688u - 4.75348\end{pmatrix}$$
$$a_1 = \begin{pmatrix}0.00262878u^{59} + 0.00246517u^{58} + \cdots + 4.79084u + 5.76350\\-0.00901992u^{59} - 0.00861896u^{58} + \cdots - 7.31321u - 1.71360\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u\\u^3+u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.0188007u^{59} - 0.0151359u^{58} + \cdots - 25.8727u + 1.23865\\-0.00969922u^{59} - 0.0110547u^{58} + \cdots + 2.22778u - 5.80010\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-0.0117646u^{59} - 0.0129427u^{58} + \cdots - 2.49013u - 2.12575\\-0.0129451u^{59} - 0.0143337u^{58} + \cdots - 2.64558u - 7.90726\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}0.0212826u^{59} + 0.0118027u^{58} + \cdots + 59.9419u - 6.26228\\0.00838830u^{59} + 0.00778421u^{58} + \cdots + 18.9048u + 5.25987\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0.00318861u^{59} - 0.00358656u^{58} + \cdots + 16.6160u - 18.5879\\0.0112699u^{59} + 0.00793128u^{58} + \cdots + 14.3076u - 7.16173\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.00763493u^{59} + 0.0171335u^{58} + \cdots - 50.7125u + 29.2529$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{60} - 5u^{59} + \cdots - 61367u + 12433$
c_2, c_6	$(u^{30} + 3u^{29} + \cdots + 3u + 1)^2$
c_3, c_5, c_8 c_{10}	$u^{60} + u^{59} + \cdots + 289u + 227$
c_7, c_9	$u^{60} - 3u^{59} + \cdots - 8079u + 2305$
c_{11}	$(u^{30} - 7u^{29} + \cdots + 726u - 59)^2$
c_{12}	$(u^{30} - 10u^{29} + \cdots - 2853u - 591)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{60} + 51y^{59} + \cdots - 2575299743y + 154579489$
c_2, c_6	$(y^{30} + 9y^{29} + \cdots - 3y + 1)^2$
c_3, c_5, c_8 c_{10}	$y^{60} + 41y^{59} + \cdots + 250623y + 51529$
c_7, c_9	$y^{60} + 5y^{59} + \cdots + 133586719y + 5313025$
c_{11}	$(y^{30} + 17y^{29} + \cdots - 464182y + 3481)^2$
c_{12}	$(y^{30} - 30y^{29} + \cdots - 17977395y + 349281)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.151089 + 0.988984I$ $a = 1.015950 - 0.753380I$ $b = -0.268673 - 0.905256I$	$0.331844 + 0.773996I$	$-5.81323 - 0.94934I$
$u = -0.151089 - 0.988984I$ $a = 1.015950 + 0.753380I$ $b = -0.268673 + 0.905256I$	$0.331844 - 0.773996I$	$-5.81323 + 0.94934I$
$u = -0.197498 + 0.949193I$ $a = 0.054102 - 0.941860I$ $b = -0.09788 + 1.49969I$	$-6.07488 + 0.77241I$	$-12.7372 - 14.9639I$
$u = -0.197498 - 0.949193I$ $a = 0.054102 + 0.941860I$ $b = -0.09788 - 1.49969I$	$-6.07488 - 0.77241I$	$-12.7372 + 14.9639I$
$u = 0.326973 + 0.865535I$ $a = 1.17062 + 1.94335I$ $b = -0.220348 + 0.210562I$	$-1.05655 - 1.42739I$	$10.99269 - 2.14037I$
$u = 0.326973 - 0.865535I$ $a = 1.17062 - 1.94335I$ $b = -0.220348 - 0.210562I$	$-1.05655 + 1.42739I$	$10.99269 + 2.14037I$
$u = 0.599443 + 0.897678I$ $a = 0.310619 - 0.931457I$ $b = 0.476833$	5.08000	0
$u = 0.599443 - 0.897678I$ $a = 0.310619 + 0.931457I$ $b = 0.476833$	5.08000	0
$u = 0.843197 + 0.154861I$ $a = 0.154657 - 0.463896I$ $b = -0.824890 - 0.215589I$	$3.05304 + 2.77277I$	$-2.69988 - 3.50142I$
$u = 0.843197 - 0.154861I$ $a = 0.154657 + 0.463896I$ $b = -0.824890 + 0.215589I$	$3.05304 - 2.77277I$	$-2.69988 + 3.50142I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.830816 + 0.161998I$ $a = 0.563539 - 0.534434I$ $b = -0.268673 - 0.905256I$	$0.331844 + 0.773996I$	$-5.81323 - 0.94934I$
$u = -0.830816 - 0.161998I$ $a = 0.563539 + 0.534434I$ $b = -0.268673 + 0.905256I$	$0.331844 - 0.773996I$	$-5.81323 + 0.94934I$
$u = 0.007925 + 0.844615I$ $a = -1.81193 - 2.76865I$ $b = 0.258541 + 0.333070I$	$1.89101 + 5.03315I$	$1.75905 - 6.82138I$
$u = 0.007925 - 0.844615I$ $a = -1.81193 + 2.76865I$ $b = 0.258541 - 0.333070I$	$1.89101 - 5.03315I$	$1.75905 + 6.82138I$
$u = 0.477112 + 1.090850I$ $a = -1.06340 - 1.18158I$ $b = 0.677641 - 0.588433I$	$5.72749 - 7.45875I$	0
$u = 0.477112 - 1.090850I$ $a = -1.06340 + 1.18158I$ $b = 0.677641 + 0.588433I$	$5.72749 + 7.45875I$	0
$u = 0.433233 + 1.120270I$ $a = 0.645877 + 0.522724I$ $b = -0.106768 + 1.224240I$	$-2.00126 - 5.14743I$	0
$u = 0.433233 - 1.120270I$ $a = 0.645877 - 0.522724I$ $b = -0.106768 - 1.224240I$	$-2.00126 + 5.14743I$	0
$u = -0.464555 + 1.178190I$ $a = 0.234302 + 0.213986I$ $b = 0.097409 - 1.142310I$	$3.33083 + 3.97209I$	0
$u = -0.464555 - 1.178190I$ $a = 0.234302 - 0.213986I$ $b = 0.097409 + 1.142310I$	$3.33083 - 3.97209I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.385734 + 0.615064I$ $a = -0.13976 + 1.50771I$ $b = \quad 0.556018$	-0.861477	$-2.21853 + 0.I$
$u = -0.385734 - 0.615064I$ $a = -0.13976 - 1.50771I$ $b = \quad 0.556018$	-0.861477	$-2.21853 + 0.I$
$u = -0.191587 + 1.292350I$ $a = -0.735001 + 0.950554I$ $b = \quad 0.097409 + 1.142310I$	$3.33083 - 3.97209I$	0
$u = -0.191587 - 1.292350I$ $a = -0.735001 - 0.950554I$ $b = \quad 0.097409 - 1.142310I$	$3.33083 + 3.97209I$	0
$u = -0.720332 + 1.143500I$ $a = -0.265603 + 0.406457I$ $b = \quad 0.258541 + 0.333070I$	$1.89101 + 5.03315I$	0
$u = -0.720332 - 1.143500I$ $a = -0.265603 - 0.406457I$ $b = \quad 0.258541 - 0.333070I$	$1.89101 - 5.03315I$	0
$u = -1.334490 + 0.240948I$ $a = \quad 0.168255 + 0.261950I$ $b = -0.220348 - 0.210562I$	$-1.05655 + 1.42739I$	0
$u = -1.334490 - 0.240948I$ $a = \quad 0.168255 - 0.261950I$ $b = -0.220348 + 0.210562I$	$-1.05655 - 1.42739I$	0
$u = \quad 0.167787 + 1.359600I$ $a = -1.33826 - 0.70122I$ $b = \quad 0.810607 + 0.866117I$	$6.78367 + 0.73525I$	0
$u = \quad 0.167787 - 1.359600I$ $a = -1.33826 + 0.70122I$ $b = \quad 0.810607 - 0.866117I$	$6.78367 - 0.73525I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.115657+1.370730I$ $a=\quad 0.911391+0.108509I$ $b=-0.824890-0.215589I$	$3.05304+2.77277I$	0
$u=-0.115657-1.370730I$ $a=\quad 0.911391-0.108509I$ $b=-0.824890+0.215589I$	$3.05304-2.77277I$	0
$u=\quad 0.19606+1.42365I$ $a=\quad 1.44865-0.22898I$ $b=-1.04755+1.32743I$	$11.53870-7.55219I$	0
$u=\quad 0.19606-1.42365I$ $a=\quad 1.44865+0.22898I$ $b=-1.04755-1.32743I$	$11.53870+7.55219I$	0
$u=-0.13751+1.44639I$ $a=-1.139830+0.571849I$ $b=\quad 1.11980-1.17245I$	$7.57073+1.54799I$	0
$u=-0.13751-1.44639I$ $a=-1.139830-0.571849I$ $b=\quad 1.11980+1.17245I$	$7.57073-1.54799I$	0
$u=-0.39296+1.43423I$ $a=-1.60846-0.05755I$ $b=\quad 0.836436+0.962571I$	$6.51793+5.45084I$	0
$u=-0.39296-1.43423I$ $a=-1.60846+0.05755I$ $b=\quad 0.836436-0.962571I$	$6.51793-5.45084I$	0
$u=\quad 1.48914+0.10011I$ $a=\quad 0.22281+1.55793I$ $b=-0.09788+1.49969I$	$-6.07488+0.77241I$	0
$u=\quad 1.48914-0.10011I$ $a=\quad 0.22281-1.55793I$ $b=-0.09788-1.49969I$	$-6.07488-0.77241I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.08468 + 1.49584I$ $a = 1.349320 - 0.340698I$ $b = -1.36115 + 0.81924I$	$13.16510 - 1.04438I$	0
$u = 0.08468 - 1.49584I$ $a = 1.349320 + 0.340698I$ $b = -1.36115 - 0.81924I$	$13.16510 + 1.04438I$	0
$u = 0.42436 + 1.45884I$ $a = -1.51602 - 0.04319I$ $b = 1.11039 - 1.00742I$	$7.97566 - 9.65899I$	0
$u = 0.42436 - 1.45884I$ $a = -1.51602 + 0.04319I$ $b = 1.11039 + 1.00742I$	$7.97566 + 9.65899I$	0
$u = 1.53765 + 0.12330I$ $a = -0.300107 - 0.447420I$ $b = 1.11039 - 1.00742I$	$7.97566 - 9.65899I$	0
$u = 1.53765 - 0.12330I$ $a = -0.300107 + 0.447420I$ $b = 1.11039 + 1.00742I$	$7.97566 + 9.65899I$	0
$u = -0.33599 + 1.58079I$ $a = -1.043490 - 0.349969I$ $b = 0.677641 + 0.588433I$	$5.72749 + 7.45875I$	0
$u = -0.33599 - 1.58079I$ $a = -1.043490 + 0.349969I$ $b = 0.677641 - 0.588433I$	$5.72749 - 7.45875I$	0
$u = -1.61765 + 0.46633I$ $a = -0.174220 - 0.449001I$ $b = 1.11980 - 1.17245I$	$7.57073 + 1.54799I$	0
$u = -1.61765 - 0.46633I$ $a = -0.174220 + 0.449001I$ $b = 1.11980 + 1.17245I$	$7.57073 - 1.54799I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.199803+0.244970I$ $a=\ 4.38347+3.03006I$ $b=-0.106768-1.224240I$	$-2.00126+5.14743I$	$-12.34153-6.38581I$
$u=-0.199803-0.244970I$ $a=\ 4.38347-3.03006I$ $b=-0.106768+1.224240I$	$-2.00126-5.14743I$	$-12.34153+6.38581I$
$u=-0.154498+0.258494I$ $a=\ 1.97537-0.70610I$ $b=\ 0.810607-0.866117I$	$6.78367-0.73525I$	$1.34056+4.28994I$
$u=-0.154498-0.258494I$ $a=\ 1.97537+0.70610I$ $b=\ 0.810607+0.866117I$	$6.78367+0.73525I$	$1.34056-4.28994I$
$u=\ 0.283976+0.026888I$ $a=\ 1.65738-0.91773I$ $b=\ 0.836436-0.962571I$	$6.51793-5.45084I$	$-3.44913-0.50892I$
$u=\ 0.283976-0.026888I$ $a=\ 1.65738+0.91773I$ $b=\ 0.836436+0.962571I$	$6.51793+5.45084I$	$-3.44913+0.50892I$
$u=-0.81940+1.65329I$ $a=\ 1.140340-0.437941I$ $b=-1.04755-1.32743I$	$11.53870+7.55219I$	0
$u=-0.81940-1.65329I$ $a=\ 1.140340+0.437941I$ $b=-1.04755+1.32743I$	$11.53870-7.55219I$	0
$u=\ 0.67804+1.80475I$ $a=\ 0.603871+0.402297I$ $b=-1.36115-0.81924I$	$13.16510+1.04438I$	0
$u=\ 0.67804-1.80475I$ $a=\ 0.603871-0.402297I$ $b=-1.36115+0.81924I$	$13.16510-1.04438I$	0

III. $I_3^u =$
$\langle u^5+u^4+3u^3+2u^2+b+2u+1,\ -u^8-u^7+\cdots+a-2u,\ u^{10}+u^9+\cdots+2u+1\rangle$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} u^8+u^7+5u^6+4u^5+9u^4+5u^3+6u^2+2u \\ -u^5-u^4-3u^3-2u^2-2u-1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^9-u^8-5u^7-4u^6-8u^5-5u^4-3u^3-u^2+2u+2 \\ u^9+u^8+5u^7+4u^6+9u^5+6u^4+7u^3+4u^2+2u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u^7-u^6-5u^5-4u^4-9u^3-5u^2-5u-2 \\ -u^9-u^8-5u^7-4u^6-9u^5-5u^4-6u^3-2u^2-u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^9-u^8-5u^7-4u^6-8u^5-5u^4-2u^3-u^2+3u+2 \\ u^9+u^8+5u^7+4u^6+10u^5+6u^4+8u^3+4u^2+2u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^9-u^8-6u^7-5u^6-13u^5-9u^4-13u^3-7u^2-5u-2 \\ -u^9-u^8-5u^7-4u^6-9u^5-5u^4-6u^3-2u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^7-u^6-4u^5-4u^4-7u^3-5u^2-5u-2 \\ -u^9-u^8-5u^7-5u^6-10u^5-8u^4-8u^3-4u^2-u \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} u^6+2u^4+u^2 \\ u^8+3u^6+3u^4+u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -5u^9-u^8-28u^7-9u^6-59u^5-26u^4-53u^3-27u^2-13u-11$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{10} + u^9 + 2u^8 + u^7 - 5u^6 + 6u^5 + 5u^4 - 7u^3 + 6u^2 - 2u + 1$
c_2	$u^{10} + 3u^9 + 8u^8 + 13u^7 + 19u^6 + 18u^5 + 17u^4 + 9u^3 + 6u^2 + 2u + 1$
c_3, c_8	$u^{10} + u^9 + 6u^8 + 5u^7 + 13u^6 + 9u^5 + 12u^4 + 7u^3 + 4u^2 + 2u + 1$
c_5, c_{10}	$u^{10} - u^9 + 6u^8 - 5u^7 + 13u^6 - 9u^5 + 12u^4 - 7u^3 + 4u^2 - 2u + 1$
c_6	$u^{10} - 3u^9 + 8u^8 - 13u^7 + 19u^6 - 18u^5 + 17u^4 - 9u^3 + 6u^2 - 2u + 1$
c_7, c_9	$u^{10} - 2u^8 - 2u^7 + 3u^6 + 4u^5 - 3u^3 - 2u^2 + u + 1$
c_{11}	$u^{10} + 4u^9 + \cdots + 200u + 59$
c_{12}	$u^{10} - 6u^8 - 10u^7 + 13u^6 + 23u^5 + 55u^4 + 58u^3 + 32u^2 + 9u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{10} + 3y^9 - 8y^8 - 23y^7 + 59y^6 - 42y^5 + 57y^4 + 25y^3 + 18y^2 + 8y + 1$
c_2, c_6	$y^{10} + 7y^9 + \cdots + 8y + 1$
c_3, c_5, c_8 c_{10}	$y^{10} + 11y^9 + \cdots + 4y + 1$
c_7, c_9	$y^{10} - 4y^9 + \cdots - 5y + 1$
c_{11}	$y^{10} - 4y^9 + \cdots - 5898y + 3481$
c_{12}	$y^{10} - 12y^9 + \cdots - 17y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.218748 + 1.275640I$ $a = -0.080468 + 0.215654I$ $b = -0.015850 + 1.374270I$	$1.14572 - 5.62515I$	$-5.10001 + 5.95698I$
$u = 0.218748 - 1.275640I$ $a = -0.080468 - 0.215654I$ $b = -0.015850 - 1.374270I$	$1.14572 + 5.62515I$	$-5.10001 - 5.95698I$
$u = -0.383970 + 1.273480I$ $a = -1.329920 + 0.099945I$ $b = 0.204503 + 0.588468I$	$4.53396 + 6.42062I$	$-3.45225 - 7.77374I$
$u = -0.383970 - 1.273480I$ $a = -1.329920 - 0.099945I$ $b = 0.204503 - 0.588468I$	$4.53396 - 6.42062I$	$-3.45225 + 7.77374I$
$u = 0.232016 + 0.607746I$ $a = -1.85998 + 0.90065I$ $b = -0.232015 - 1.193450I$	$-3.84315 + 1.80254I$	$0.70838 - 4.06832I$
$u = 0.232016 - 0.607746I$ $a = -1.85998 - 0.90065I$ $b = -0.232015 + 1.193450I$	$-3.84315 - 1.80254I$	$0.70838 + 4.06832I$
$u = -0.498801 + 0.315427I$ $a = -0.587520 - 0.944917I$ $b = -0.366540 - 0.542378I$	$-1.58932 + 0.77300I$	$-11.96817 - 4.87496I$
$u = -0.498801 - 0.315427I$ $a = -0.587520 + 0.944917I$ $b = -0.366540 + 0.542378I$	$-1.58932 - 0.77300I$	$-11.96817 + 4.87496I$
$u = -0.06799 + 1.51152I$ $a = 1.35788 + 0.40393I$ $b = -1.09010 - 0.98242I$	$11.26730 + 3.87713I$	$-0.187934 - 1.212159I$
$u = -0.06799 - 1.51152I$ $a = 1.35788 - 0.40393I$ $b = -1.09010 + 0.98242I$	$11.26730 - 3.87713I$	$-0.187934 + 1.212159I$

IV.

$\boldsymbol{I^u_4 = \langle 1.68\times10^{13}u^{27}+7.92\times10^{13}u^{26}+\cdots+2.47\times10^{13}b+2.56\times10^{14},\ -3.32\times10^{14}u^{27}-9.13\times10^{14}u^{26}+\cdots+2.47\times10^{13}a-1.99\times10^{15},\ u^{28}+2u^{27}+\cdots+8u+4\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 13.4443u^{27}+36.9710u^{26}+\cdots+279.143u+80.5132 \\ -0.679438u^{27}-3.20682u^{26}+\cdots-25.2942u-10.3679 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 14.9817u^{27}+24.6610u^{26}+\cdots+11.9449u-46.5189 \\ -4.26678u^{27}-7.95280u^{26}+\cdots-15.8663u+5.82690 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 6.33618u^{27}+9.08717u^{26}+\cdots+32.6034u-14.4296 \\ 2.35281u^{27}+7.71441u^{26}+\cdots+52.9583u+19.0678 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 18.8735u^{27}+30.4600u^{26}+\cdots+13.5861u-61.9017 \\ -6.09935u^{27}-10.5567u^{26}+\cdots-15.5560u+13.7657 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 5.82391u^{27}+10.7369u^{26}+\cdots+56.1137u+0.790280 \\ 1.89033u^{27}+7.65187u^{26}+\cdots+57.1231u+23.5904 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -19.4311u^{27}-28.7414u^{26}+\cdots+15.3253u+83.6984 \\ 1.30957u^{27}+3.06693u^{26}+\cdots+8.16198u+2.52325 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 14.1989u^{27}+27.0878u^{26}+\cdots+113.314u-4.10633 \\ -0.966665u^{27}+2.54987u^{26}+\cdots+59.3242u+32.8147 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.694726u^{27}-12.2051u^{26}+\cdots-202.024u-104.533 \\ 4.19601u^{27}+7.80446u^{26}+\cdots+14.5407u-7.13048 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= \frac{549965322058885}{12345564537641}u^{27} + \frac{1232084486849614}{12345564537641}u^{26} + \cdots + \frac{5980853558878580}{12345564537641}u + \frac{810533241115920}{12345564537641}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{28} - 2u^{27} + \cdots - 163u + 19$
c_2	$(u^{14} - 2u^{13} + \cdots + 8u^2 + 1)^2$
c_3, c_8	$u^{28} + 2u^{27} + \cdots + 8u + 4$
c_5, c_{10}	$u^{28} - 2u^{27} + \cdots - 8u + 4$
c_6	$(u^{14} + 2u^{13} + \cdots + 8u^2 + 1)^2$
c_7, c_9	$u^{28} - 6u^{27} + \cdots - u + 1$
c_{11}	$(u^{14} - 3u^{13} + \cdots - 2u + 1)^2$
c_{12}	$(u^{14} - 3u^{13} + \cdots + 74u + 68)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{28} + 22y^{27} + \cdots + 10899y + 361$
c_2, c_6	$(y^{14} + 12y^{13} + \cdots + 16y + 1)^2$
c_3, c_5, c_8 c_{10}	$y^{28} + 10y^{27} + \cdots + 272y + 16$
c_7, c_9	$y^{28} - 2y^{27} + \cdots + 27y + 1$
c_{11}	$(y^{14} + y^{13} + \cdots - 10y + 1)^2$
c_{12}	$(y^{14} - 3y^{13} + \cdots + 15060y + 4624)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.128929 + 0.988461I$ $a = 0.215988 + 0.958905I$ $b = -0.06679 - 1.55090I$	$-5.93574 - 0.51365I$	$1.10966 - 8.86769I$
$u = 0.128929 - 0.988461I$ $a = 0.215988 - 0.958905I$ $b = -0.06679 + 1.55090I$	$-5.93574 + 0.51365I$	$1.10966 + 8.86769I$
$u = -0.772634 + 0.697387I$ $a = 0.065504 - 0.554645I$ $b = 0.793498 - 1.060250I$	$6.32313 + 0.22942I$	$-2.49445 - 1.32741I$
$u = -0.772634 - 0.697387I$ $a = 0.065504 + 0.554645I$ $b = 0.793498 + 1.060250I$	$6.32313 - 0.22942I$	$-2.49445 + 1.32741I$
$u = -0.589471 + 0.704492I$ $a = 0.38802 + 1.58694I$ $b = -0.410728 + 0.971915I$	$3.70456 - 1.58603I$	$-1.63833 + 0.55429I$
$u = -0.589471 - 0.704492I$ $a = 0.38802 - 1.58694I$ $b = -0.410728 - 0.971915I$	$3.70456 + 1.58603I$	$-1.63833 - 0.55429I$
$u = -0.318935 + 0.828249I$ $a = 1.25882 - 2.07446I$ $b = -0.129154 - 0.454753I$	$-1.28686 + 1.47696I$	$-23.0029 - 5.2896I$
$u = -0.318935 - 0.828249I$ $a = 1.25882 + 2.07446I$ $b = -0.129154 + 0.454753I$	$-1.28686 - 1.47696I$	$-23.0029 + 5.2896I$
$u = 0.434181 + 0.720450I$ $a = -0.601125 - 0.931348I$ $b = 0.797540 - 0.860254I$	$6.91920 - 6.19035I$	$1.69741 + 7.48551I$
$u = 0.434181 - 0.720450I$ $a = -0.601125 + 0.931348I$ $b = 0.797540 + 0.860254I$	$6.91920 + 6.19035I$	$1.69741 - 7.48551I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.269671 + 0.738522I$ $a = -0.268660 - 0.603585I$ $b = -0.410728 + 0.971915I$	$3.70456 - 1.58603I$	$-1.63833 + 0.55429I$
$u = 0.269671 - 0.738522I$ $a = -0.268660 + 0.603585I$ $b = -0.410728 - 0.971915I$	$3.70456 + 1.58603I$	$-1.63833 - 0.55429I$
$u = -0.010810 + 0.768664I$ $a = -1.03806 - 2.24380I$ $b = 0.054674 + 1.270070I$	$-1.20487 + 4.99386I$	$-1.94209 - 3.72866I$
$u = -0.010810 - 0.768664I$ $a = -1.03806 + 2.24380I$ $b = 0.054674 - 1.270070I$	$-1.20487 - 4.99386I$	$-1.94209 + 3.72866I$
$u = -1.249200 + 0.250928I$ $a = 0.226200 + 0.136184I$ $b = -0.129154 - 0.454753I$	$-1.28686 + 1.47696I$	$-23.0029 - 5.2896I$
$u = -1.249200 - 0.250928I$ $a = 0.226200 - 0.136184I$ $b = -0.129154 + 0.454753I$	$-1.28686 - 1.47696I$	$-23.0029 + 5.2896I$
$u = 0.499651 + 1.190630I$ $a = -0.740372 - 0.625582I$ $b = 0.054674 - 1.270070I$	$-1.20487 - 4.99386I$	$-1.94209 + 3.72866I$
$u = 0.499651 - 1.190630I$ $a = -0.740372 + 0.625582I$ $b = 0.054674 + 1.270070I$	$-1.20487 + 4.99386I$	$-1.94209 - 3.72866I$
$u = -0.702762 + 1.109660I$ $a = 0.132392 + 0.081953I$ $b = -0.039039 - 0.652784I$	$1.35017 + 4.86464I$	$-12.22925 - 3.65511I$
$u = -0.702762 - 1.109660I$ $a = 0.132392 - 0.081953I$ $b = -0.039039 + 0.652784I$	$1.35017 - 4.86464I$	$-12.22925 + 3.65511I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.007847 + 0.664573I$ $a = -2.32077 + 3.50003I$ $b = -0.039039 + 0.652784I$	$1.35017 - 4.86464I$	$-12.22925 + 3.65511I$
$u = 0.007847 - 0.664573I$ $a = -2.32077 - 3.50003I$ $b = -0.039039 - 0.652784I$	$1.35017 + 4.86464I$	$-12.22925 - 3.65511I$
$u = 0.130196 + 1.341580I$ $a = -1.33690 - 0.56146I$ $b = 0.793498 + 1.060250I$	$6.32313 - 0.22942I$	$-2.49445 + 1.32741I$
$u = 0.130196 - 1.341580I$ $a = -1.33690 + 0.56146I$ $b = 0.793498 - 1.060250I$	$6.32313 + 0.22942I$	$-2.49445 - 1.32741I$
$u = -0.41891 + 1.44857I$ $a = -1.54382 - 0.10820I$ $b = 0.797540 + 0.860254I$	$6.91920 + 6.19035I$	$1.69741 - 7.48551I$
$u = -0.41891 - 1.44857I$ $a = -1.54382 + 0.10820I$ $b = 0.797540 - 0.860254I$	$6.91920 - 6.19035I$	$1.69741 + 7.48551I$
$u = 1.59224 + 0.05574I$ $a = 0.06278 - 1.47160I$ $b = -0.06679 - 1.55090I$	$-5.93574 - 0.51365I$	$0. - 8.86769I$
$u = 1.59224 - 0.05574I$ $a = 0.06278 + 1.47160I$ $b = -0.06679 + 1.55090I$	$-5.93574 + 0.51365I$	$0. + 8.86769I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$(u^{10}+u^9+2u^8+u^7-5u^6+6u^5+5u^4-7u^3+6u^2-2u+1)$ $\cdot(u^{25}-u^{24}+\cdots+20u+1)(u^{28}-2u^{27}+\cdots-163u+19)$ $\cdot(u^{60}-5u^{59}+\cdots-61367u+12433)$
c_2	$(u^{10}+3u^9+8u^8+13u^7+19u^6+18u^5+17u^4+9u^3+6u^2+2u+1)$ $\cdot((u^{14}-2u^{13}+\cdots+8u^2+1)^2)(u^{25}-8u^{24}+\cdots-22u+20)$ $\cdot(u^{30}+3u^{29}+\cdots+3u+1)^2$
c_3, c_8	$(u^{10}+u^9+6u^8+5u^7+13u^6+9u^5+12u^4+7u^3+4u^2+2u+1)$ $\cdot(u^{25}-u^{24}+\cdots+16u+4)(u^{28}+2u^{27}+\cdots+8u+4)$ $\cdot(u^{60}+u^{59}+\cdots+289u+227)$
c_5, c_{10}	$(u^{10}-u^9+6u^8-5u^7+13u^6-9u^5+12u^4-7u^3+4u^2-2u+1)$ $\cdot(u^{25}-u^{24}+\cdots+16u+4)(u^{28}-2u^{27}+\cdots-8u+4)$ $\cdot(u^{60}+u^{59}+\cdots+289u+227)$
c_6	$(u^{10}-3u^9+8u^8-13u^7+19u^6-18u^5+17u^4-9u^3+6u^2-2u+1)$ $\cdot((u^{14}+2u^{13}+\cdots+8u^2+1)^2)(u^{25}-8u^{24}+\cdots-22u+20)$ $\cdot(u^{30}+3u^{29}+\cdots+3u+1)^2$
c_7, c_9	$(u^{10}-2u^8-2u^7+3u^6+4u^5-3u^3-2u^2+u+1)$ $\cdot(u^{25}+6u^{23}+\cdots-u+1)(u^{28}-6u^{27}+\cdots-u+1)$ $\cdot(u^{60}-3u^{59}+\cdots-8079u+2305)$
c_{11}	$(u^{10}+4u^9+\cdots+200u+59)(u^{14}-3u^{13}+\cdots-2u+1)^2$ $\cdot(u^{25}+17u^{24}+\cdots+1986u+292)(u^{30}-7u^{29}+\cdots+726u-59)^2$
c_{12}	$(u^{10}-6u^8-10u^7+13u^6+23u^5+55u^4+58u^3+32u^2+9u+1)$ $\cdot((u^{14}-3u^{13}+\cdots+74u+68)^2)(u^{25}+29u^{24}+\cdots+90112u+8192)$ $\cdot(u^{30}-10u^{29}+\cdots-2853u-591)^2$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{10}+3y^9-8y^8-23y^7+59y^6-42y^5+57y^4+25y^3+18y^2+8y+1)$ $\cdot\,(y^{25}+37y^{24}+\cdots+186y-1)(y^{28}+22y^{27}+\cdots+10899y+361)$ $\cdot\,(y^{60}+51y^{59}+\cdots-2575299743y+154579489)$
c_2, c_6	$(y^{10}+7y^9+\cdots+8y+1)(y^{14}+12y^{13}+\cdots+16y+1)^2$ $\cdot\,(y^{25}+8y^{24}+\cdots+1244y-400)(y^{30}+9y^{29}+\cdots-3y+1)^2$
c_3, c_5, c_8 c_{10}	$(y^{10}+11y^9+\cdots+4y+1)(y^{25}+27y^{24}+\cdots+80y-16)$ $\cdot\,(y^{28}+10y^{27}+\cdots+272y+16)$ $\cdot\,(y^{60}+41y^{59}+\cdots+250623y+51529)$
c_7, c_9	$(y^{10}-4y^9+\cdots-5y+1)(y^{25}+12y^{24}+\cdots-39y-1)$ $\cdot\,(y^{28}-2y^{27}+\cdots+27y+1)$ $\cdot\,(y^{60}+5y^{59}+\cdots+133586719y+5313025)$
c_{11}	$(y^{10}-4y^9+\cdots-5898y+3481)(y^{14}+y^{13}+\cdots-10y+1)^2$ $\cdot\,(y^{25}-y^{24}+\cdots-613924y-85264)$ $\cdot\,(y^{30}+17y^{29}+\cdots-464182y+3481)^2$
c_{12}	$(y^{10}-12y^9+\cdots-17y+1)(y^{14}-3y^{13}+\cdots+15060y+4624)^2$ $\cdot\,(y^{25}-15y^{24}+\cdots+469762048y-67108864)$ $\cdot\,(y^{30}-30y^{29}+\cdots-17977395y+349281)^2$