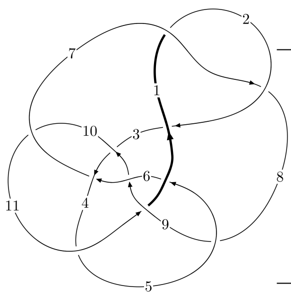
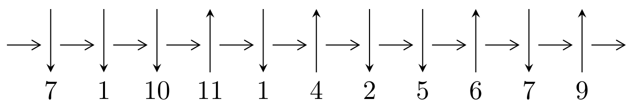
$11n_{148}$ ($K11n_{148}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle b-u,\ 3936u^{12} - 3615u^{11} + \cdots + 1546a + 3493,\\
&\quad u^{13} - u^{12} - 6u^{11} + 8u^{10} + 21u^9 - 27u^8 - 41u^7 + 43u^6 + 41u^5 - 35u^4 - 12u^3 + 10u^2 + u - 1\rangle\\
I_2^u &= \langle b-u,\ -689759u^{11} - 107599u^{10} + \cdots + 501166a - 3895672,\\
&\quad u^{12} - u^{10} + 4u^8 - 8u^7 + 14u^6 + 15u^5 - 33u^4 + u^3 + 26u^2 + 3u + 1\rangle\\
I_3^u &= \langle b+u,\ -280773u^{15} + 187752u^{14} + \cdots + 478966a - 1154354,\\
&\quad u^{16} - u^{15} + 5u^{14} - 7u^{13} + 8u^{12} - 15u^{11} + 8u^{10} - 6u^9 + 11u^8 + 10u^7 + 11u^5 - 4u^4 - 5u^3 + u^2 + u + 1\rangle\\
I_4^u &= \langle -5u^7 - 11u^6 + 19u^4 - 32u^3 - 9u^2 + 16b + 41u + 18,\\
&\quad -u^7 + 5u^6 + 12u^5 + 3u^4 - 20u^3 + 55u^2 + 32a - 31u + 2,\ u^8 + u^7 - 2u^6 - 3u^5 + 10u^4 - 7u^3 - 3u^2 + 4\rangle\\
I_5^u &= \langle 1632242669u^{15} - 3999460410u^{14} + \cdots + 688586688392b + 15730031303,\\
&\quad -1552686477u^{15} + 2916463782u^{14} + \cdots + 57539451944a - 28248685713,\\
&\quad u^{16} - u^{15} + \cdots + 14u + 61\rangle\\
I_6^u &= \langle b+u,\ a-u,\ u^2 + u + 1\rangle\\
I_7^u &= \langle b-u,\ a,\ u^2 + u - 1\rangle\\
I_8^u &= \langle u^3 - 2u^2 + b - 1,\ u^3 - u^2 + a - 2u - 2,\ u^4 - u^3 - 2u^2 - 2u - 1\rangle
\end{aligned}$$

* 8 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 73 representations.

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[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

I.

$$I_1^u = \langle b-u,\ 3936u^{12} - 3615u^{11} + \cdots + 1546a + 3493,\ u^{13} - u^{12} + \cdots + u - 1\rangle$$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2.54592u^{12} + 2.33829u^{11} + \cdots - 14.3182u - 2.25938 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2.54592u^{12} + 2.33829u^{11} + \cdots - 13.3182u - 2.25938 \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -3.90815u^{12} + 3.32342u^{11} + \cdots - 14.3635u - 2.48124 \\ 0.206339u^{12} - 0.195990u^{11} + \cdots + 3.33829u + 0.207633 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.25938u^{12} - 0.286546u^{11} + \cdots + 5.28008u - 6.57762 \\ -u^2 + 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.429495u^{12} + 1.13907u^{11} + \cdots - 10.4463u + 3.81307 \\ -0.197283u^{12} + 0.0588616u^{11} + \cdots + 0.287840u - 2.33959 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.429495u^{12} + 1.13907u^{11} + \cdots - 10.4463u + 3.81307 \\ 0.190168u^{12} + 0.120310u^{11} + \cdots - 0.851229u - 0.771022 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -2.33959u^{12} + 2.14230u^{11} + \cdots - 10.9799u - 2.05175 \\ 0.0679172u^{12} - 0.0284605u^{11} + \cdots + 1.19599u + 0.0103493 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.06210u^{12} - 0.345408u^{11} + \cdots + 4.99224u - 4.23803 \\ -0.0394567u^{12} - 0.188228u^{11} + \cdots + 0.0575679u + 0.932083 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.06210u^{12} - 0.345408u^{11} + \cdots + 4.99224u - 4.23803 \\ -0.0394567u^{12} - 0.188228u^{11} + \cdots + 0.0575679u + 0.932083 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{5825}{773}u^{12} + \frac{3398}{773}u^{11} + \frac{36475}{773}u^{10} - \frac{31741}{773}u^9 - \frac{135781}{773}u^8 + \frac{103033}{773}u^7 + \frac{280491}{773}u^6 - \frac{140065}{773}u^5 - \frac{289681}{773}u^4 + \frac{91807}{773}u^3 + \frac{95194}{773}u^2 - \frac{21889}{773}u - \frac{11636}{773}$

in decimal forms when there is not enough margin.

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{13} - 6u^{12} + \cdots - 20u + 8$
c_2	$u^{13} + 10u^{12} + \cdots + 208u + 64$
c_3, c_5, c_8 c_{10}	$u^{13} + u^{12} + \cdots + u + 1$
c_4, c_9	$u^{13} - 2u^{12} + \cdots - u + 4$
c_6, c_{11}	$u^{13} + 5u^{12} + \cdots + 11u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{13} - 10y^{12} + \cdots + 208y - 64$
c_2	$y^{13} - 14y^{12} + \cdots - 14080y - 4096$
c_3, c_5, c_8 c_{10}	$y^{13} - 13y^{12} + \cdots + 21y - 1$
c_4, c_9	$y^{13} + 16y^{11} + \cdots + 65y - 16$
c_6, c_{11}	$y^{13} - 5y^{12} + \cdots + 157y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.679240$ $a = -0.118511$ $b = 0.679240$	-0.985814	-9.93790
$u = 1.319410 + 0.222030I$ $a = 0.746615 - 0.655764I$ $b = 1.319410 + 0.222030I$	$-1.44982 - 2.92540I$	$-5.79046 + 3.21859I$
$u = 1.319410 - 0.222030I$ $a = 0.746615 + 0.655764I$ $b = 1.319410 - 0.222030I$	$-1.44982 + 2.92540I$	$-5.79046 - 3.21859I$
$u = -1.310050 + 0.430816I$ $a = -0.729761 + 0.359278I$ $b = -1.310050 + 0.430816I$	$-9.72048 + 1.68662I$	$-6.99569 + 0.12715I$
$u = -1.310050 - 0.430816I$ $a = -0.729761 - 0.359278I$ $b = -1.310050 - 0.430816I$	$-9.72048 - 1.68662I$	$-6.99569 - 0.12715I$
$u = 0.440196 + 0.153722I$ $a = -1.05333 + 2.17650I$ $b = 0.440196 + 0.153722I$	$0.31710 - 4.56636I$	$-5.37309 + 4.90464I$
$u = 0.440196 - 0.153722I$ $a = -1.05333 - 2.17650I$ $b = 0.440196 - 0.153722I$	$0.31710 + 4.56636I$	$-5.37309 - 4.90464I$
$u = -0.458477 + 0.058416I$ $a = 1.85684 + 0.90881I$ $b = -0.458477 + 0.058416I$	$2.02562 + 0.48569I$	$2.64958 + 0.42406I$
$u = -0.458477 - 0.058416I$ $a = 1.85684 - 0.90881I$ $b = -0.458477 - 0.058416I$	$2.02562 - 0.48569I$	$2.64958 - 0.42406I$
$u = -1.40672 + 0.68037I$ $a = -0.434994 - 0.837741I$ $b = -1.40672 + 0.68037I$	$-1.01550 + 9.99038I$	$-3.69502 - 7.61192I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.40672-0.68037I$ $a=-0.434994+0.837741I$ $b=-1.40672-0.68037I$	$-1.01550-9.99038I$	$-3.69502+7.61192I$
$u=\ \ 1.57602+1.15308I$ $a=\ \ 0.173888-0.741516I$ $b=\ \ 1.57602+1.15308I$	$-8.5808-15.4617I$	$-4.82638+7.62465I$
$u=\ \ 1.57602-1.15308I$ $a=\ \ 0.173888+0.741516I$ $b=\ \ 1.57602-1.15308I$	$-8.5808+15.4617I$	$-4.82638-7.62465I$

II. $\boldsymbol{I^u_2 = \langle b-u,\ -6.90\times 10^5 u^{11} - 1.08\times 10^5 u^{10} + \cdots + 5.01\times 10^5 a - 3.90\times 10^6,\ u^{12} - u^{10} + \cdots + 3u + 1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1.37631u^{11} + 0.214697u^{10} + \cdots + 42.8501u + 7.77322 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1.37631u^{11} + 0.214697u^{10} + \cdots + 43.8501u + 7.77322 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 2.34713u^{11} + 0.345161u^{10} + \cdots + 61.9493u + 17.9990 \\ 0.209352u^{11} - 0.148428u^{10} + \cdots + 3.02040u + 0.214697 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1.45089u^{11} - 0.0821125u^{10} + \cdots + 40.5075u - 3.80051 \\ -0.0710822u^{11} + 0.0690011u^{10} + \cdots - 0.602275u - 0.458944 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1.03465u^{11} + 0.0271287u^{10} + \cdots + 28.9476u - 0.912330 \\ 0.0773456u^{11} + 0.0652877u^{10} + \cdots - 0.188917u - 0.249592 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1.03465u^{11} + 0.0271287u^{10} + \cdots + 28.9476u - 0.912330 \\ 0.0341124u^{11} + 0.224690u^{10} + \cdots - 1.30495u - 0.276721 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1.58566u^{11} + 0.0662695u^{10} + \cdots + 45.8705u + 7.98791 \\ 0.00371334u^{11} - 0.251541u^{10} + \cdots + 1.23593u + 0.148428 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.708286u^{11} + 0.253305u^{10} + \cdots - 15.0153u + 5.51408 \\ -0.251541u^{11} - 0.0941345u^{10} + \cdots + 0.137288u - 0.00371334 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.708286u^{11} + 0.253305u^{10} + \cdots - 15.0153u + 5.51408 \\ -0.251541u^{11} - 0.0941345u^{10} + \cdots + 0.137288u - 0.00371334 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{2218099}{501166}u^{11} - \frac{163295}{250583}u^{10} + \cdots + \frac{55914373}{501166}u - \frac{2178981}{501166}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$(u^6 - 4u^5 + 6u^4 - 5u^3 + 5u^2 - 6u + 4)^2$
c_2	$(u^6 + 4u^5 + 6u^4 + 5u^3 + 13u^2 - 4u + 16)^2$
c_3, c_5, c_8 c_{10}	$u^{12} - u^{10} + 4u^8 + 8u^7 + 14u^6 - 15u^5 - 33u^4 - u^3 + 26u^2 - 3u + 1$
c_4, c_9	$(u^6 + u^5 + 3u^4 + u^3 + 4u^2 + 1)^2$
c_6, c_{11}	$u^{12} + 4u^{11} + \cdots + 66u + 11$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y^6 - 4y^5 + 6y^4 - 5y^3 + 13y^2 + 4y + 16)^2$
c_2	$(y^6 - 4y^5 + 22y^4 + 195y^3 + 401y^2 + 400y + 256)^2$
c_3, c_5, c_8 c_{10}	$y^{12} - 2y^{11} + \cdots + 43y + 1$
c_4, c_9	$(y^6 + 5y^5 + 15y^4 + 25y^3 + 22y^2 + 8y + 1)^2$
c_6, c_{11}	$y^{12} - 4y^{11} + \cdots - 484y + 121$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.968045+0.076481I$ $a=-0.541139-1.217710I$ $b=-0.968045+0.076481I$	$-2.70944-2.74874I$	$-6.55410+3.66193I$
$u=-0.968045-0.076481I$ $a=-0.541139+1.217710I$ $b=-0.968045-0.076481I$	$-2.70944+2.74874I$	$-6.55410-3.66193I$
$u=\ \ 1.126210+0.587419I$ $a=\ \ 1.063370+0.516394I$ $b=\ \ 1.126210+0.587419I$	$-9.45817-7.70670I$	$-6.10501+5.38862I$
$u=\ \ 1.126210-0.587419I$ $a=\ \ 1.063370-0.516394I$ $b=\ \ 1.126210-0.587419I$	$-9.45817+7.70670I$	$-6.10501-5.38862I$
$u=\ \ 1.176980+0.755737I$ $a=\ \ 0.136599-0.758615I$ $b=\ \ 1.176980+0.755737I$	$-2.70944-2.74874I$	$-6.55410+3.66193I$
$u=\ \ 1.176980-0.755737I$ $a=\ \ 0.136599+0.758615I$ $b=\ \ 1.176980-0.755737I$	$-2.70944+2.74874I$	$-6.55410-3.66193I$
$u=\ \ 0.19389+1.60136I$ $a=\ \ 0.007131-0.411898I$ $b=\ \ 0.19389+1.60136I$	$3.94294-2.97593I$	$-11.8409+20.9878I$
$u=\ \ 0.19389-1.60136I$ $a=\ \ 0.007131+0.411898I$ $b=\ \ 0.19389-1.60136I$	$3.94294+2.97593I$	$-11.8409-20.9878I$
$u=-0.052940+0.185549I$ $a=\ \ 5.45961+8.32725I$ $b=-0.052940+0.185549I$	$3.94294-2.97593I$	$-11.8409+20.9878I$
$u=-0.052940-0.185549I$ $a=\ \ 5.45961-8.32725I$ $b=-0.052940-0.185549I$	$3.94294+2.97593I$	$-11.8409-20.9878I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.47610 + 1.13544I$ $a = -0.125567 - 0.653945I$ $b = -1.47610 + 1.13544I$	$-9.45817 + 7.70670I$	$-6.10501 - 5.38862I$
$u = -1.47610 - 1.13544I$ $a = -0.125567 + 0.653945I$ $b = -1.47610 - 1.13544I$	$-9.45817 - 7.70670I$	$-6.10501 + 5.38862I$

III. $\boldsymbol{I_3^u = \langle b+u,\ -2.81\times 10^5u^{15}+1.88\times 10^5u^{14}+\cdots+4.79\times 10^5a-1.15\times 10^6,\ u^{16}-u^{15}+\cdots+u+1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.586207u^{15}-0.391994u^{14}+\cdots+2.99697u+2.41010 \\ -u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.586207u^{15}-0.391994u^{14}+\cdots+1.99697u+2.41010 \\ -u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1.60046u^{15}-1.09856u^{14}+\cdots+0.905045u+5.14908 \\ -0.370010u^{15}+0.495060u^{14}+\cdots+0.219581u-0.194212 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.982304u^{15}+1.65935u^{14}+\cdots-5.17282u+0.456744 \\ 0.155410u^{15}-0.318879u^{14}+\cdots+0.496238u+0.382754 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.459400u^{15}-0.696398u^{14}+\cdots+4.05434u+0.305940 \\ -0.631821u^{15}+0.786116u^{14}+\cdots-0.118524u-0.511907 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.459400u^{15}-0.696398u^{14}+\cdots+4.05434u+0.305940 \\ -0.726319u^{15}+0.940998u^{14}+\cdots-0.340926u-0.274909 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.956216u^{15}-0.887055u^{14}+\cdots+2.77739u+2.60431 \\ 0.0409340u^{15}-0.0327789u^{14}+\cdots-1.24496u+0.125051 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.667893u^{15}-1.05794u^{14}+\cdots+2.47945u-1.10540 \\ 0.681729u^{15}-0.825163u^{14}+\cdots-0.159324u+0.901951 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.667893u^{15}-1.05794u^{14}+\cdots+2.47945u-1.10540 \\ 0.681729u^{15}-0.825163u^{14}+\cdots-0.159324u+0.901951 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{1422603}{239483}u^{15}+\frac{4693355}{478966}u^{14}+\cdots-\frac{9817835}{478966}u+\frac{275497}{478966}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{16} - 9u^{14} + 35u^{12} - 82u^{10} + 133u^8 - 152u^6 + 118u^4 - 56u^2 + 13$
c_2	$(u^8 + 9u^7 + 35u^6 + 82u^5 + 133u^4 + 152u^3 + 118u^2 + 56u + 13)^2$
c_3, c_5, c_8 c_{10}	$u^{16} - u^{15} + \cdots + u + 1$
c_4, c_9	$(u^8 + u^7 - u^5 - 3u^4 + u^3 + 4u^2 + u + 1)^2$
c_6, c_{11}	$u^{16} - 9u^{15} + \cdots - 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y^8 - 9y^7 + 35y^6 - 82y^5 + 133y^4 - 152y^3 + 118y^2 - 56y + 13)^2$
c_2	$(y^8 - 11y^7 + 15y^6 + 86y^5 + 39y^4 + 10y^3 + 358y^2 - 68y + 169)^2$
c_3, c_5, c_8 c_{10}	$y^{16} + 9y^{15} + \cdots + y + 1$
c_4, c_9	$(y^8 - y^7 - 4y^6 + 5y^5 + 11y^4 - 23y^3 + 8y^2 + 7y + 1)^2$
c_6, c_{11}	$y^{16} - 9y^{15} + \cdots - 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.274263 + 1.008870I$ $a = 0.79810 + 1.33602I$ $b = -0.274263 - 1.008870I$	$1.71914 - 5.38582I$	$-0.93122 + 9.75922I$
$u = 0.274263 - 1.008870I$ $a = 0.79810 - 1.33602I$ $b = -0.274263 + 1.008870I$	$1.71914 + 5.38582I$	$-0.93122 - 9.75922I$
$u = -0.638849 + 1.040850I$ $a = -0.169502 + 1.235590I$ $b = 0.638849 - 1.040850I$	$2.34546 + 2.94891I$	$0.795967 + 0.602909I$
$u = -0.638849 - 1.040850I$ $a = -0.169502 - 1.235590I$ $b = 0.638849 + 1.040850I$	$2.34546 - 2.94891I$	$0.795967 - 0.602909I$
$u = -0.701878 + 0.091386I$ $a = -0.850232 - 0.808730I$ $b = 0.701878 - 0.091386I$	$1.71914 + 5.38582I$	$-0.93122 - 9.75922I$
$u = -0.701878 - 0.091386I$ $a = -0.850232 + 0.808730I$ $b = 0.701878 + 0.091386I$	$1.71914 - 5.38582I$	$-0.93122 + 9.75922I$
$u = 0.610814 + 0.255978I$ $a = 1.098150 - 0.544353I$ $b = -0.610814 - 0.255978I$	$2.34546 + 2.94891I$	$0.795967 + 0.602909I$
$u = 0.610814 - 0.255978I$ $a = 1.098150 + 0.544353I$ $b = -0.610814 + 0.255978I$	$2.34546 - 2.94891I$	$0.795967 - 0.602909I$
$u = 1.305320 + 0.359264I$ $a = -0.481994 + 0.934732I$ $b = -1.305320 - 0.359264I$	$-6.45579 - 3.75611I$	$-8.46169 + 3.08159I$
$u = 1.305320 - 0.359264I$ $a = -0.481994 - 0.934732I$ $b = -1.305320 + 0.359264I$	$-6.45579 + 3.75611I$	$-8.46169 - 3.08159I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.213253 + 0.417979I$ $a = 2.89265 + 2.89484I$ $b = 0.213253 - 0.417979I$	$4.03613 - 2.81197I$	$9.0969 - 15.4678I$
$u = -0.213253 - 0.417979I$ $a = 2.89265 - 2.89484I$ $b = 0.213253 + 0.417979I$	$4.03613 + 2.81197I$	$9.0969 + 15.4678I$
$u = -0.24620 + 1.56767I$ $a = 0.067177 + 0.435558I$ $b = 0.24620 - 1.56767I$	$4.03613 + 2.81197I$	$9.0969 + 15.4678I$
$u = -0.24620 - 1.56767I$ $a = 0.067177 - 0.435558I$ $b = 0.24620 + 1.56767I$	$4.03613 - 2.81197I$	$9.0969 - 15.4678I$
$u = 0.10979 + 1.65368I$ $a = 0.145647 + 0.120240I$ $b = -0.10979 - 1.65368I$	$-6.45579 - 3.75611I$	$-8.46169 + 3.08159I$
$u = 0.10979 - 1.65368I$ $a = 0.145647 - 0.120240I$ $b = -0.10979 + 1.65368I$	$-6.45579 + 3.75611I$	$-8.46169 - 3.08159I$

IV. $I^u_4 = \langle -5u^7 - 11u^6 + \cdots + 16b + 18,\ -u^7 + 5u^6 + \cdots + 32a + 2,\ u^8 + u^7 - 2u^6 - 3u^5 + 10u^4 - 7u^3 - 3u^2 + 4\rangle$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0312500u^7 - 0.156250u^6 + \cdots + 0.968750u - 0.0625000 \\ \frac{5}{16}u^7 + \frac{11}{16}u^6 + \cdots - \frac{41}{16}u - \frac{9}{8} \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.343750u^7 + 0.531250u^6 + \cdots - 1.59375u - 1.18750 \\ \frac{5}{16}u^7 + \frac{11}{16}u^6 + \cdots - \frac{41}{16}u - \frac{9}{8} \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.218750u^7 - 0.406250u^6 + \cdots + 1.71875u - 0.0625000 \\ \frac{1}{16}u^7 - \frac{1}{16}u^6 + \cdots - \frac{5}{16}u + \frac{3}{8} \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0937500u^7 + 0.281250u^6 + \cdots - 0.343750u - 0.687500 \\ \frac{5}{16}u^7 + \frac{7}{16}u^6 + \cdots - \frac{5}{16}u - \frac{5}{8} \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0937500u^7 - 0.281250u^6 + \cdots + 0.843750u + 1.18750 \\ -\frac{5}{16}u^7 - \frac{7}{16}u^6 + \cdots + \frac{5}{16}u + \frac{13}{8} \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0937500u^7 - 0.281250u^6 + \cdots + 0.843750u + 1.18750 \\ -0.437500u^7 - 0.562500u^6 + \cdots + 0.687500u + 2.37500 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.468750u^7 + 0.906250u^6 + \cdots - 1.46875u - 1.93750 \\ 0.812500u^7 + 1.68750u^6 + \cdots - 4.31250u - 3.62500 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.343750u^7 - 0.531250u^6 + \cdots + 1.59375u + 1.18750 \\ -0.562500u^7 - 0.937500u^6 + \cdots + 3.31250u + 2.62500 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.343750u^7 - 0.531250u^6 + \cdots + 1.59375u + 1.18750 \\ -0.562500u^7 - 0.937500u^6 + \cdots + 3.31250u + 2.62500 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{3}{2}u^7 - \frac{5}{2}u^6 + \frac{5}{2}u^4 - 12u^3 + \frac{17}{2}u^2 - \frac{1}{2}u - 7$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$(u^2+u-1)^4$
c_2	$(u^2+3u+1)^4$
c_3, c_5, c_8 c_{10}	$u^8-u^7-2u^6+3u^5+10u^4+7u^3-3u^2+4$
c_4, c_9	$u^8-3u^7+8u^6-3u^5+8u^4-3u^3+7u^2+16$
c_6, c_{11}	$(u^2-u+1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y^2 - 3y + 1)^4$
c_2	$(y^2 - 7y + 1)^4$
c_3, c_5, c_8 c_{10}	$y^8 - 5y^7 + 30y^6 - 41y^5 + 78y^4 - 125y^3 + 89y^2 - 24y + 16$
c_4, c_9	$y^8 + 7y^7 + 62y^6 + 115y^5 + 190y^4 + 359y^3 + 305y^2 + 224y + 256$
c_6, c_{11}	$(y^2 + y + 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.024520 + 0.199293I$ $a = -0.628676 - 0.723008I$ $b = -1.83354 + 1.20197I$	$-8.88264 + 4.05977I$	$-10.00000 - 6.92820I$
$u = 1.024520 - 0.199293I$ $a = -0.628676 + 0.723008I$ $b = -1.83354 - 1.20197I$	$-8.88264 - 4.05977I$	$-10.00000 + 6.92820I$
$u = 0.785903 + 1.018910I$ $a = 0.295593 + 0.718718I$ $b = -0.476886 - 0.483675I$	$-0.98696 - 4.05977I$	$-10.00000 + 6.92820I$
$u = 0.785903 - 1.018910I$ $a = 0.295593 - 0.718718I$ $b = -0.476886 + 0.483675I$	$-0.98696 + 4.05977I$	$-10.00000 - 6.92820I$
$u = -0.476886 + 0.483675I$ $a = -0.39108 + 1.41935I$ $b = 0.785903 - 1.018910I$	$-0.98696 + 4.05977I$	$-10.00000 - 6.92820I$
$u = -0.476886 - 0.483675I$ $a = -0.39108 - 1.41935I$ $b = 0.785903 + 1.018910I$	$-0.98696 - 4.05977I$	$-10.00000 + 6.92820I$
$u = -1.83354 + 1.20197I$ $a = -0.025832 + 0.455391I$ $b = 1.024520 + 0.199293I$	$-8.88264 + 4.05977I$	$-10.00000 - 6.92820I$
$u = -1.83354 - 1.20197I$ $a = -0.025832 - 0.455391I$ $b = 1.024520 - 0.199293I$	$-8.88264 - 4.05977I$	$-10.00000 + 6.92820I$

V.

$\boldsymbol{I^u_5 = \langle 1.63\times10^{9}u^{15} - 4.00\times10^{9}u^{14} + \cdots + 6.89\times10^{10}b + 1.57\times10^{10},\ -1.55\times10^{9}u^{15} + 2.92\times10^{9}u^{14} + \cdots + 5.75\times10^{10}a - 2.82\times10^{10},\ u^{16} - u^{15} + \cdots + 14u + 61\rangle}$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0269847u^{15} - 0.0506863u^{14} + \cdots + 0.983334u + 0.490945 \\ -0.0237042u^{15} + 0.0580821u^{14} + \cdots - 0.637455u - 0.228439 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.00328049u^{15} + 0.00739581u^{14} + \cdots + 0.345879u + 0.262505 \\ -0.0237042u^{15} + 0.0580821u^{14} + \cdots - 0.637455u - 0.228439 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0153528u^{15} - 0.0613303u^{14} + \cdots + 2.50796u - 1.49414 \\ -0.0137597u^{15} + 0.0519593u^{14} + \cdots - 0.953981u + 0.952940 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0119361u^{15} - 0.0470317u^{14} + \cdots + 1.26128u - 0.453422 \\ 0.0267082u^{15} - 0.0380007u^{14} + \cdots + 0.241699u + 1.87605 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0131130u^{15} - 0.0237893u^{14} + \cdots + 0.375432u - 0.0329971 \\ -0.0392634u^{15} + 0.0682124u^{14} + \cdots - 0.0372592u - 1.55608 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0131130u^{15} - 0.0237893u^{14} + \cdots + 0.375432u - 0.0329971 \\ -0.0376838u^{15} + 0.0837224u^{14} + \cdots - 0.687681u - 0.904829 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.0137569u^{15} - 0.0478038u^{14} + \cdots + 1.66013u - 1.18329 \\ 0.0333257u^{15} - 0.0545032u^{14} + \cdots + 0.314278u + 0.402625 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00328049u^{15} - 0.00739581u^{14} + \cdots - 0.345879u - 0.262505 \\ 0.0268634u^{15} - 0.0270621u^{14} + \cdots - 0.663389u + 1.53095 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00328049u^{15} - 0.00739581u^{14} + \cdots - 0.345879u - 0.262505 \\ 0.0268634u^{15} - 0.0270621u^{14} + \cdots - 0.663389u + 1.53095 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{2099874}{9069901}u^{15} + \frac{3556482}{9069901}u^{14} + \cdots - \frac{26506214}{9069901}u - \frac{45805682}{9069901}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$(u^2+u-1)^8$
c_2	$(u^2+3u+1)^8$
c_3, c_5, c_8 c_{10}	$u^{16}+u^{15}+\cdots-14u+61$
c_4, c_9	$(u^8+u^7+2u^6-5u^5-2u^4+11u^3+5u^2+2u+4)^2$
c_6, c_{11}	$(u^4-u^3+2u+1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y^2 - 3y + 1)^8$
c_2	$(y^2 - 7y + 1)^8$
c_3, c_5, c_8 c_{10}	$y^{16} + 13y^{15} + \cdots + 5172y + 3721$
c_4, c_9	$(y^8 + 3y^7 + 10y^6 - 45y^5 + 138y^4 - 105y^3 - 35y^2 + 36y + 16)^2$
c_6, c_{11}	$(y^4 - y^3 + 6y^2 - 4y + 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.627115 + 0.928941I$ $a = -0.219133 + 1.355720I$ $b = 0.409816 - 1.073270I$	$2.30291 + 4.05977I$	$2.00000 - 6.92820I$
$u = -0.627115 - 0.928941I$ $a = -0.219133 - 1.355720I$ $b = 0.409816 + 1.073270I$	$2.30291 - 4.05977I$	$2.00000 + 6.92820I$
$u = 0.664283 + 0.551323I$ $a = 0.415524 - 0.627471I$ $b = -0.756001 + 0.910051I$	$2.30291 - 4.05977I$	$2.00000 + 6.92820I$
$u = 0.664283 - 0.551323I$ $a = 0.415524 + 0.627471I$ $b = -0.756001 - 0.910051I$	$2.30291 + 4.05977I$	$2.00000 - 6.92820I$
$u = 0.409816 + 1.073270I$ $a = 0.508514 + 1.239550I$ $b = -0.627115 - 0.928941I$	$2.30291 - 4.05977I$	$2.00000 + 6.92820I$
$u = 0.409816 - 1.073270I$ $a = 0.508514 - 1.239550I$ $b = -0.627115 + 0.928941I$	$2.30291 + 4.05977I$	$2.00000 - 6.92820I$
$u = -1.009750 + 0.554510I$ $a = 0.413379 + 1.270590I$ $b = 1.57864 - 0.17666I$	$-5.59278 + 4.05977I$	$2.00000 - 6.92820I$
$u = -1.009750 - 0.554510I$ $a = 0.413379 - 1.270590I$ $b = 1.57864 + 0.17666I$	$-5.59278 - 4.05977I$	$2.00000 + 6.92820I$
$u = -0.756001 + 0.910051I$ $a = -0.457981 - 0.302983I$ $b = 0.664283 + 0.551323I$	$2.30291 - 4.05977I$	$2.00000 + 6.92820I$
$u = -0.756001 - 0.910051I$ $a = -0.457981 + 0.302983I$ $b = 0.664283 - 0.551323I$	$2.30291 + 4.05977I$	$2.00000 - 6.92820I$

Solutions to I_5^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.303235 + 1.148640I$ $a = 0.019154 - 0.546537I$ $b = 0.54336 + 2.67729I$	$-5.59278 + 4.05977I$	$2.00000 - 6.92820I$
$u = -0.303235 - 1.148640I$ $a = 0.019154 + 0.546537I$ $b = 0.54336 - 2.67729I$	$-5.59278 - 4.05977I$	$2.00000 + 6.92820I$
$u = 1.57864 + 0.17666I$ $a = -0.628149 + 0.737802I$ $b = -1.009750 - 0.554510I$	$-5.59278 - 4.05977I$	$2.00000 + 6.92820I$
$u = 1.57864 - 0.17666I$ $a = -0.628149 - 0.737802I$ $b = -1.009750 + 0.554510I$	$-5.59278 + 4.05977I$	$2.00000 - 6.92820I$
$u = 0.54336 + 2.67729I$ $a = 0.112628 - 0.209453I$ $b = -0.303235 + 1.148640I$	$-5.59278 + 4.05977I$	$2.00000 - 6.92820I$
$u = 0.54336 - 2.67729I$ $a = 0.112628 + 0.209453I$ $b = -0.303235 - 1.148640I$	$-5.59278 - 4.05977I$	$2.00000 + 6.92820I$

VI. $I_6^u = \langle b+u,\ a-u,\ u^2+u+1 \rangle$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u \\ -u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ -u-1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0 \\ -u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1 \\ u+1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0 \\ -u \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -8u - 4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_6^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.500000 + 0.866025I$ $a = -0.500000 + 0.866025I$ $b = \quad 0.500000 - 0.866025I$	$4.05977I$	$0. - 6.92820I$
$u = -0.500000 - 0.866025I$ $a = -0.500000 - 0.866025I$ $b = \quad 0.500000 + 0.866025I$	$-4.05977I$	$0. + 6.92820I$

VII. $I_7^u = \langle b-u,\ a,\ u^2+u-1\rangle$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 1 \\ -u+1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} 1 \\ -u+1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ -2u+2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ 3u-1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ 3u-2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ 3u-2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_5, c_7, c_8 c_9, c_{10}	$y^2 - 3y + 1$
c_2	$y^2 - 7y + 1$
c_6, c_{11}	y^2

(vi) Complex Volumes and Cusp Shapes

Solutions to I_7^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.618034$ $a = 0$ $b = 0.618034$	-0.986960	-10.0000
$u = -1.61803$ $a = 0$ $b = -1.61803$	-8.88264	-10.0000

VIII. $\boldsymbol{I_8^u = \langle u^3 - 2u^2 + b - 1,\ u^3 - u^2 + a - 2u - 2,\ u^4 - u^3 - 2u^2 - 2u - 1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^3 + u^2 + 2u + 2 \\ -u^3 + 2u^2 + 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -2u^3 + 3u^2 + 2u + 3 \\ -u^3 + 2u^2 + 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^3 + u^2 + 2u + 2 \\ -u^3 + 2u^2 + u + 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^3 + 2u^2 + 2 \\ -u^3 + 2u^2 + u + 2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 - 2u^2 - 1 \\ u^3 - u^2 - u - 2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^3 - 2u^2 - 1 \\ 2u^3 - 2u^2 - 2u - 3 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -2u^3 + 3u^2 + 3u + 3 \\ -u^3 + 3u^2 + u + 2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 2u^3 - 3u^2 - 2u - 3 \\ 3u^3 - 4u^2 - 2u - 3 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 2u^3 - 3u^2 - 2u - 3 \\ 3u^3 - 4u^2 - 2u - 3 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_7 c_9	$(y^2 - 3y + 1)^2$
c_2	$(y^2 - 7y + 1)^2$
c_3, c_5, c_8 c_{10}	$y^4 - 5y^3 - 2y^2 + 1$
c_6, c_{11}	$(y-1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_8^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.309017 + 0.722871I$ $a = \ \ 0.500000 + 1.169630I$ $b = -0.309017 - 0.722871I$	2.30291	2.00000
$u = -0.309017 - 0.722871I$ $a = \ \ 0.500000 - 1.169630I$ $b = -0.309017 + 0.722871I$	2.30291	2.00000
$u = -0.698478$ $a = \ \ 1.43168$ $b = \ \ 2.31651$	-5.59278	2.00000
$u = \ \ 2.31651$ $a = -0.431683$ $b = -0.698478$	-5.59278	2.00000

IX. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^2(u^2-u-1)(u^2+u-1)^{14}(u^6-4u^5+6u^4-5u^3+5u^2-6u+4)^2$ $\cdot\,(u^{13}-6u^{12}+\cdots-20u+8)$ $\cdot\,(u^{16}-9u^{14}+35u^{12}-82u^{10}+133u^8-152u^6+118u^4-56u^2+13)$
c_2	$u^2(u^2+3u+1)^{15}(u^6+4u^5+6u^4+5u^3+13u^2-4u+16)^2$ $\cdot\,(u^8+9u^7+35u^6+82u^5+133u^4+152u^3+118u^2+56u+13)^2$ $\cdot\,(u^{13}+10u^{12}+\cdots+208u+64)$
c_3, c_5, c_8 c_{10}	$(u^2-u-1)(u^2+u+1)(u^4+u^3-2u^2+2u-1)$ $\cdot\,(u^8-u^7-2u^6+3u^5+10u^4+7u^3-3u^2+4)$ $\cdot\,(u^{12}-u^{10}+4u^8+8u^7+14u^6-15u^5-33u^4-u^3+26u^2-3u+1)$ $\cdot\,(u^{13}+u^{12}+\cdots+u+1)(u^{16}-u^{15}+\cdots+u+1)$ $\cdot\,(u^{16}+u^{15}+\cdots-14u+61)$
c_4, c_9	$(u^2-u-1)(u^2-u+1)(u^2+u-1)^2(u^6+u^5+\cdots+4u^2+1)^2$ $\cdot\,(u^8-3u^7+8u^6-3u^5+8u^4-3u^3+7u^2+16)$ $\cdot\,(u^8+u^7-u^5-3u^4+u^3+4u^2+u+1)^2$ $\cdot\,(u^8+u^7+2u^6-5u^5-2u^4+11u^3+5u^2+2u+4)^2$ $\cdot\,(u^{13}-2u^{12}+\cdots-u+4)$
c_6, c_{11}	$u^2(u-1)^4(u^2-u+1)^5(u^4-u^3+2u+1)^4$ $\cdot\,(u^{12}+4u^{11}+\cdots+66u+11)(u^{13}+5u^{12}+\cdots+11u-1)$ $\cdot\,(u^{16}-9u^{15}+\cdots-6u+1)$

X. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^2(y^2-3y+1)^{15}(y^6-4y^5+6y^4-5y^3+13y^2+4y+16)^2$ $\cdot(y^8-9y^7+35y^6-82y^5+133y^4-152y^3+118y^2-56y+13)^2$ $\cdot(y^{13}-10y^{12}+\cdots+208y-64)$
c_2	$y^2(y^2-7y+1)^{15}(y^6-4y^5+22y^4+195y^3+401y^2+400y+256)^2$ $\cdot(y^8-11y^7+15y^6+86y^5+39y^4+10y^3+358y^2-68y+169)^2$ $\cdot(y^{13}-14y^{12}+\cdots-14080y-4096)$
c_3, c_5, c_8 c_{10}	$(y^2-3y+1)(y^2+y+1)(y^4-5y^3-2y^2+1)$ $\cdot(y^8-5y^7+30y^6-41y^5+78y^4-125y^3+89y^2-24y+16)$ $\cdot(y^{12}-2y^{11}+\cdots+43y+1)(y^{13}-13y^{12}+\cdots+21y-1)$ $\cdot(y^{16}+9y^{15}+\cdots+y+1)(y^{16}+13y^{15}+\cdots+5172y+3721)$
c_4, c_9	$((y^2-3y+1)^3)(y^2+y+1)(y^6+5y^5+\cdots+8y+1)^2$ $\cdot(y^8-y^7-4y^6+5y^5+11y^4-23y^3+8y^2+7y+1)^2$ $\cdot(y^8+3y^7+10y^6-45y^5+138y^4-105y^3-35y^2+36y+16)^2$ $\cdot(y^8+7y^7+62y^6+115y^5+190y^4+359y^3+305y^2+224y+256)$ $\cdot(y^{13}+16y^{11}+\cdots+65y-16)$
c_6, c_{11}	$y^2(y-1)^4(y^2+y+1)^5(y^4-y^3+6y^2-4y+1)^4$ $\cdot(y^{12}-4y^{11}+\cdots-484y+121)(y^{13}-5y^{12}+\cdots+157y-1)$ $\cdot(y^{16}-9y^{15}+\cdots-2y+1)$