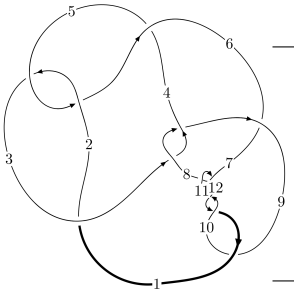
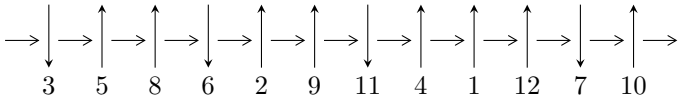
$12a_{0124}$ $(K12a_{0124})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 8u^{82} - 5u^{81} + \cdots + 2b + 6u,\ -8u^{82} + 24u^{81} + \cdots + 2a + 13,\ u^{83} - 3u^{82} + \cdots + 3u^2 + 1\rangle$$
$$I_2^u = \langle -u^2a + b,\ -u^2a + u^3 + a^2 - au + 2u^2 - a + 2u,\ u^4 + u^3 + u^2 + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 91 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. $\boldsymbol{I_1^u = \langle 8u^{82} - 5u^{81} + \cdots + 2b + 6u,\ -8u^{82} + 24u^{81} + \cdots + 2a + 13,\ u^{83} - 3u^{82} + \cdots + 3u^2 + 1\rangle}$

(i) Arc colorings

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

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

$$a_4 = \begin{pmatrix} 4u^{82} - 12u^{81} + \cdots - 15u^2 - \frac{13}{2} \\ -4u^{82} + \frac{5}{2}u^{81} + \cdots - \frac{13}{2}u^2 - 3u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^7 - 2u^3 \\ u^7 + u^5 + 2u^3 + u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 4u^{82} - 12u^{81} + \cdots - u - \frac{13}{2} \\ -4u^{82} + \frac{7}{2}u^{81} + \cdots - \frac{13}{2}u^2 - 3u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^{14} - u^{12} - 4u^{10} - 3u^8 - 4u^6 - 2u^4 + 1 \\ u^{14} + 2u^{12} + 5u^{10} + 6u^8 + 6u^6 + 4u^4 + u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} \frac{5}{2}u^{82} - 8u^{81} + \cdots - 12u^2 - 6 \\ -\frac{5}{2}u^{82} + u^{81} + \cdots - 6u^2 - \frac{5}{2}u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -\frac{1}{2}u^{79} + u^{78} + \cdots - u^2 + \frac{1}{2} \\ -\frac{1}{2}u^{81} + u^{80} + \cdots - 5u^4 + \frac{1}{2}u^2 \end{pmatrix}$$

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

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{15}{2}u^{82} - 8u^{81} + \cdots + 17u + \frac{25}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{83} + 27u^{82} + \cdots - 22u - 1$
c_2, c_5	$u^{83} + 5u^{82} + \cdots - 6u - 1$
c_3, c_8	$u^{83} - u^{82} + \cdots + 896u - 256$
c_6	$u^{83} + 3u^{82} + \cdots - 28678u - 6329$
c_7, c_{11}	$u^{83} + 3u^{82} + \cdots - 3u^2 - 1$
c_9, c_{10}, c_{12}	$u^{83} - 21u^{82} + \cdots - 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{83} + 63y^{82} + \cdots - 782y - 1$
c_2, c_5	$y^{83} + 27y^{82} + \cdots - 22y - 1$
c_3, c_8	$y^{83} - 45y^{82} + \cdots + 770048y - 65536$
c_6	$y^{83} - 15y^{82} + \cdots - 3774261726y - 40056241$
c_7, c_{11}	$y^{83} + 21y^{82} + \cdots - 6y - 1$
c_9, c_{10}, c_{12}	$y^{83} + 85y^{82} + \cdots + 34y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.343094+0.932755I$ $a=-2.78793+1.29202I$ $b=\ \ 1.91795+0.42351I$	$0.45934+5.84256I$	0
$u=-0.343094-0.932755I$ $a=-2.78793-1.29202I$ $b=\ \ 1.91795-0.42351I$	$0.45934-5.84256I$	0
$u=\ \ 0.298458+0.943559I$ $a=\ \ 0.810864-1.048410I$ $b=-0.268792+0.197880I$	$3.34331-5.43598I$	0
$u=\ \ 0.298458-0.943559I$ $a=\ \ 0.810864+1.048410I$ $b=-0.268792-0.197880I$	$3.34331+5.43598I$	0
$u=-0.276801+0.948551I$ $a=\ \ 2.78574-1.08616I$ $b=-1.72816-0.44874I$	$4.22365+2.71450I$	0
$u=-0.276801-0.948551I$ $a=\ \ 2.78574+1.08616I$ $b=-1.72816+0.44874I$	$4.22365-2.71450I$	0
$u=-0.151262+1.004710I$ $a=-2.47403+1.00449I$ $b=\ \ 1.40269+0.20603I$	$8.14096-5.43626I$	0
$u=-0.151262-1.004710I$ $a=-2.47403-1.00449I$ $b=\ \ 1.40269-0.20603I$	$8.14096+5.43626I$	0
$u=-0.176749+1.004370I$ $a=\ \ 2.53616-1.01779I$ $b=-1.47125-0.23649I$	$8.77851+0.61029I$	0
$u=-0.176749-1.004370I$ $a=\ \ 2.53616+1.01779I$ $b=-1.47125+0.23649I$	$8.77851-0.61029I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.260636 + 0.933904I$ $a = -0.949681 + 0.967452I$ $b = 0.337767 - 0.158358I$	$3.56863 + 0.12560I$	0
$u = 0.260636 - 0.933904I$ $a = -0.949681 - 0.967452I$ $b = 0.337767 + 0.158358I$	$3.56863 - 0.12560I$	0
$u = 0.701152 + 0.649791I$ $a = -0.157823 - 0.633968I$ $b = -0.626202 - 0.050636I$	$2.86901 + 0.22933I$	0
$u = 0.701152 - 0.649791I$ $a = -0.157823 + 0.633968I$ $b = -0.626202 + 0.050636I$	$2.86901 - 0.22933I$	0
$u = 0.410309 + 0.844223I$ $a = 0.254656 - 0.824567I$ $b = -0.0949998 + 0.0602684I$	$-1.01210 - 2.01711I$	0
$u = 0.410309 - 0.844223I$ $a = 0.254656 + 0.824567I$ $b = -0.0949998 - 0.0602684I$	$-1.01210 + 2.01711I$	0
$u = -0.345364 + 1.006340I$ $a = 2.65833 - 1.18168I$ $b = -1.85397 - 0.29823I$	$7.79448 + 5.46509I$	0
$u = -0.345364 - 1.006340I$ $a = 2.65833 + 1.18168I$ $b = -1.85397 + 0.29823I$	$7.79448 - 5.46509I$	0
$u = -0.364365 + 1.006860I$ $a = -2.63344 + 1.19214I$ $b = 1.87737 + 0.29191I$	$6.89769 + 11.50320I$	0
$u = -0.364365 - 1.006860I$ $a = -2.63344 - 1.19214I$ $b = 1.87737 - 0.29191I$	$6.89769 - 11.50320I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.692299 + 0.586886I$ $a = 0.105400 + 0.701418I$ $b = 0.612805 - 0.126857I$	$2.48455 - 5.49249I$	$4.00000 + 6.10141I$
$u = 0.692299 - 0.586886I$ $a = 0.105400 - 0.701418I$ $b = 0.612805 + 0.126857I$	$2.48455 + 5.49249I$	$4.00000 - 6.10141I$
$u = -0.227401 + 0.873532I$ $a = -2.94954 + 0.75439I$ $b = 1.52584 + 0.73742I$	$1.21112 - 0.90797I$	$9.54112 + 0.I$
$u = -0.227401 - 0.873532I$ $a = -2.94954 - 0.75439I$ $b = 1.52584 - 0.73742I$	$1.21112 + 0.90797I$	$9.54112 + 0.I$
$u = 0.671828 + 0.924378I$ $a = -0.622871 - 1.201050I$ $b = 0.424357 - 0.487883I$	$3.34573 + 0.48424I$	0
$u = 0.671828 - 0.924378I$ $a = -0.622871 + 1.201050I$ $b = 0.424357 + 0.487883I$	$3.34573 - 0.48424I$	0
$u = 0.831524 + 0.823800I$ $a = -0.694677 + 0.144305I$ $b = -1.31150 - 1.32695I$	$-2.75630 + 0.70086I$	0
$u = 0.831524 - 0.823800I$ $a = -0.694677 - 0.144305I$ $b = -1.31150 + 1.32695I$	$-2.75630 - 0.70086I$	0
$u = -0.824449 + 0.832717I$ $a = -0.441161 + 0.881969I$ $b = 0.878507 - 0.473427I$	$-3.19009 + 2.27190I$	0
$u = -0.824449 - 0.832717I$ $a = -0.441161 - 0.881969I$ $b = 0.878507 + 0.473427I$	$-3.19009 - 2.27190I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.702510 + 0.941716I$ $a = 0.79024 + 1.27635I$ $b = -0.635208 + 0.630772I$	$3.58007 - 5.50953I$	0
$u = 0.702510 - 0.941716I$ $a = 0.79024 - 1.27635I$ $b = -0.635208 - 0.630772I$	$3.58007 + 5.50953I$	0
$u = -0.844416 + 0.826159I$ $a = 0.347812 - 0.924380I$ $b = -0.835200 + 0.578194I$	$-3.88410 - 3.30015I$	0
$u = -0.844416 - 0.826159I$ $a = 0.347812 + 0.924380I$ $b = -0.835200 - 0.578194I$	$-3.88410 + 3.30015I$	0
$u = 0.826999 + 0.856266I$ $a = 1.164140 - 0.198525I$ $b = 1.16923 + 1.96671I$	$-5.26102 - 3.68755I$	0
$u = 0.826999 - 0.856266I$ $a = 1.164140 + 0.198525I$ $b = 1.16923 - 1.96671I$	$-5.26102 + 3.68755I$	0
$u = 0.878403 + 0.805051I$ $a = -0.224135 + 0.379019I$ $b = -1.82429 - 0.88600I$	$-0.18851 + 3.79252I$	0
$u = 0.878403 - 0.805051I$ $a = -0.224135 - 0.379019I$ $b = -1.82429 + 0.88600I$	$-0.18851 - 3.79252I$	0
$u = 0.862910 + 0.833613I$ $a = 0.561839 - 0.539969I$ $b = 1.85608 + 1.34386I$	$-7.19455 + 3.46271I$	0
$u = 0.862910 - 0.833613I$ $a = 0.561839 + 0.539969I$ $b = 1.85608 - 1.34386I$	$-7.19455 - 3.46271I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.887411 + 0.811360I$ $a = 0.175412 - 0.475350I$ $b = 1.95172 + 0.87958I$	$-1.29156 + 9.73575I$	0
$u = 0.887411 - 0.811360I$ $a = 0.175412 + 0.475350I$ $b = 1.95172 - 0.87958I$	$-1.29156 - 9.73575I$	0
$u = -0.826761 + 0.900804I$ $a = -0.472121 + 0.373985I$ $b = 0.586467 - 0.059273I$	$-5.92062 + 3.08392I$	0
$u = -0.826761 - 0.900804I$ $a = -0.472121 - 0.373985I$ $b = 0.586467 + 0.059273I$	$-5.92062 - 3.08392I$	0
$u = -0.863134 + 0.872566I$ $a = 0.142463 - 0.696056I$ $b = -0.501251 + 0.517205I$	$-8.78473 + 1.47520I$	0
$u = -0.863134 - 0.872566I$ $a = 0.142463 + 0.696056I$ $b = -0.501251 - 0.517205I$	$-8.78473 - 1.47520I$	0
$u = 0.801558 + 0.934083I$ $a = -1.66203 - 1.34142I$ $b = 1.40427 - 1.92771I$	$-5.01807 - 2.40115I$	0
$u = 0.801558 - 0.934083I$ $a = -1.66203 + 1.34142I$ $b = 1.40427 + 1.92771I$	$-5.01807 + 2.40115I$	0
$u = -0.790976 + 0.948890I$ $a = -1.000770 + 0.219273I$ $b = 0.906203 + 0.319706I$	$-2.83107 + 3.77517I$	0
$u = -0.790976 - 0.948890I$ $a = -1.000770 - 0.219273I$ $b = 0.906203 - 0.319706I$	$-2.83107 - 3.77517I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.791713 + 0.956841I$ $a = 1.40368 + 1.52199I$ $b = -1.55092 + 1.33569I$	$-2.34548 - 6.77030I$	0
$u = 0.791713 - 0.956841I$ $a = 1.40368 - 1.52199I$ $b = -1.55092 - 1.33569I$	$-2.34548 + 6.77030I$	0
$u = -0.799666 + 0.960907I$ $a = 1.030170 - 0.107018I$ $b = -0.879329 - 0.414641I$	$-3.46560 + 9.43293I$	0
$u = -0.799666 - 0.960907I$ $a = 1.030170 + 0.107018I$ $b = -0.879329 + 0.414641I$	$-3.46560 - 9.43293I$	0
$u = 0.275137 + 0.693608I$ $a = -0.675065 - 0.100546I$ $b = 0.094240 + 0.169866I$	$0.331802 - 1.167540I$	$4.13626 + 5.89733I$
$u = 0.275137 - 0.693608I$ $a = -0.675065 + 0.100546I$ $b = 0.094240 - 0.169866I$	$0.331802 + 1.167540I$	$4.13626 - 5.89733I$
$u = -0.836268 + 0.942183I$ $a = 0.700473 + 0.066913I$ $b = -0.547096 - 0.403838I$	$-8.56607 + 4.83405I$	0
$u = -0.836268 - 0.942183I$ $a = 0.700473 - 0.066913I$ $b = -0.547096 + 0.403838I$	$-8.56607 - 4.83405I$	0
$u = 0.813423 + 0.965425I$ $a = -1.48006 - 1.73900I$ $b = 2.05027 - 1.31001I$	$-6.78150 - 9.69525I$	0
$u = 0.813423 - 0.965425I$ $a = -1.48006 + 1.73900I$ $b = 2.05027 + 1.31001I$	$-6.78150 + 9.69525I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.881180+0.913291I$ $a=-0.276328-0.566432I$ $b=-0.052289+0.630239I$	$-5.91260+5.79260I$	0
$u=-0.881180-0.913291I$ $a=-0.276328+0.566432I$ $b=-0.052289-0.630239I$	$-5.91260-5.79260I$	0
$u=-0.874973+0.927104I$ $a=\ \ 0.412919+0.466829I$ $b=-0.118207-0.607991I$	$-5.86859+0.69731I$	0
$u=-0.874973-0.927104I$ $a=\ \ 0.412919-0.466829I$ $b=-0.118207+0.607991I$	$-5.86859-0.69731I$	0
$u=\ \ 0.807166+0.988107I$ $a=\ \ 1.30635+1.77940I$ $b=-1.96902+0.87719I$	$0.38494-10.04700I$	0
$u=\ \ 0.807166-0.988107I$ $a=\ \ 1.30635-1.77940I$ $b=-1.96902-0.87719I$	$0.38494+10.04700I$	0
$u=\ \ 0.814683+0.989919I$ $a=-1.31841-1.82237I$ $b=\ \ 2.08670-0.84930I$	$-0.7294-16.0429I$	0
$u=\ \ 0.814683-0.989919I$ $a=-1.31841+1.82237I$ $b=\ \ 2.08670+0.84930I$	$-0.7294+16.0429I$	0
$u=-0.685603+0.181822I$ $a=\ \ 0.179731+0.546082I$ $b=\ \ 1.46603-0.33423I$	$4.26360-7.76953I$	$3.54954+5.53049I$
$u=-0.685603-0.181822I$ $a=\ \ 0.179731-0.546082I$ $b=\ \ 1.46603+0.33423I$	$4.26360+7.76953I$	$3.54954-5.53049I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.674643+0.146601I$ $a=-0.222141-0.444607I$ $b=-1.44805+0.27104I$	$5.06565-1.86935I$	$5.12348+0.51490I$
$u=-0.674643-0.146601I$ $a=-0.222141+0.444607I$ $b=-1.44805-0.27104I$	$5.06565+1.86935I$	$5.12348-0.51490I$
$u=-0.008776+0.667764I$ $a=-1.80337-0.38176I$ $b=0.326945+0.654149I$	$0.85058-1.37420I$	$8.90440+4.62607I$
$u=-0.008776-0.667764I$ $a=-1.80337+0.38176I$ $b=0.326945-0.654149I$	$0.85058+1.37420I$	$8.90440-4.62607I$
$u=0.503583+0.430436I$ $a=0.295380+0.927474I$ $b=0.270810-0.364960I$	$-2.26469-1.48041I$	$-3.63359+3.93107I$
$u=0.503583-0.430436I$ $a=0.295380-0.927474I$ $b=0.270810+0.364960I$	$-2.26469+1.48041I$	$-3.63359-3.93107I$
$u=-0.525596+0.233371I$ $a=0.654378+0.773168I$ $b=1.185590-0.435183I$	$-1.65887-2.59378I$	$-1.71925+4.29721I$
$u=-0.525596-0.233371I$ $a=0.654378-0.773168I$ $b=1.185590+0.435183I$	$-1.65887+2.59378I$	$-1.71925-4.29721I$
$u=-0.236010+0.516430I$ $a=1.82352+1.48424I$ $b=0.401128-1.148950I$	$0.06273+2.77066I$	$3.20202+1.07638I$
$u=-0.236010-0.516430I$ $a=1.82352-1.48424I$ $b=0.401128+1.148950I$	$0.06273-2.77066I$	$3.20202-1.07638I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.512953$ $a=-0.759184$ $b=-1.14909$	1.54099	6.17060
$u=\ 0.482267+0.070594I$ $a=\ 0.085534+1.365730I$ $b=\ 0.057289-0.563567I$	$0.87174+2.58253I$	$1.22669-2.95128I$
$u=\ 0.482267-0.070594I$ $a=\ 0.085534-1.365730I$ $b=\ 0.057289+0.563567I$	$0.87174-2.58253I$	$1.22669+2.95128I$

II. $I_2^u = \langle -u^2a + b,\ -u^2a + u^3 + a^2 - au + 2u^2 - a + 2u,\ u^4 + u^3 + u^2 + 1 \rangle$

(i) Arc colorings

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

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

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

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

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

$$a_3 = \begin{pmatrix} a \\ u^2a \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^2+1 \\ -u^3-u^2-1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^3a + 2a \\ -u^3a + 2u^2a - au \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2u^2 + a - u - 2 \\ u^2a + u^3 + u^2 + 2 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -u^2 - 1 \\ u^3 + u^2 + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -u^3a - 4u^2a + u^3 - 2au + 6u^2 - a + 6u + 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.351808 + 0.720342I$ $a = 1.54112 - 0.21492I$ $b = -0.500000 + 0.866025I$	$0.21101 - 3.44499I$	$5.86133 + 9.77094I$
$u = 0.351808 + 0.720342I$ $a = -0.58443 + 1.44211I$ $b = -0.500000 - 0.866025I$	$0.211005 + 0.614778I$	$1.10064 + 1.99408I$
$u = 0.351808 - 0.720342I$ $a = 1.54112 + 0.21492I$ $b = -0.500000 - 0.866025I$	$0.21101 + 3.44499I$	$5.86133 - 9.77094I$
$u = 0.351808 - 0.720342I$ $a = -0.58443 - 1.44211I$ $b = -0.500000 + 0.866025I$	$0.211005 - 0.614778I$	$1.10064 - 1.99408I$
$u = -0.851808 + 0.911292I$ $a = 0.576953 - 0.283088I$ $b = -0.500000 - 0.866025I$	$-6.79074 + 1.13408I$	$-1.56110 - 0.68902I$
$u = -0.851808 + 0.911292I$ $a = -0.533637 - 0.358112I$ $b = -0.500000 + 0.866025I$	$-6.79074 + 5.19385I$	$-0.90087 - 4.17049I$
$u = -0.851808 - 0.911292I$ $a = 0.576953 + 0.283088I$ $b = -0.500000 + 0.866025I$	$-6.79074 - 1.13408I$	$-1.56110 + 0.68902I$
$u = -0.851808 - 0.911292I$ $a = -0.533637 + 0.358112I$ $b = -0.500000 - 0.866025I$	$-6.79074 - 5.19385I$	$-0.90087 + 4.17049I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$((u^2-u+1)^4)(u^{83}+27u^{82}+\cdots-22u-1)$
c_2	$((u^2+u+1)^4)(u^{83}+5u^{82}+\cdots-6u-1)$
c_3, c_8	$u^8(u^{83}-u^{82}+\cdots+896u-256)$
c_5	$((u^2-u+1)^4)(u^{83}+5u^{82}+\cdots-6u-1)$
c_6	$((u^4+u^3+3u^2+2u+1)^2)(u^{83}+3u^{82}+\cdots-28678u-6329)$
c_7	$((u^4+u^3+u^2+1)^2)(u^{83}+3u^{82}+\cdots-3u^2-1)$
c_9, c_{10}	$((u^4+u^3+3u^2+2u+1)^2)(u^{83}-21u^{82}+\cdots-6u+1)$
c_{11}	$((u^4-u^3+u^2+1)^2)(u^{83}+3u^{82}+\cdots-3u^2-1)$
c_{12}	$((u^4-u^3+3u^2-2u+1)^2)(u^{83}-21u^{82}+\cdots-6u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y^2+y+1)^4)(y^{83}+63y^{82}+\cdots-782y-1)$
c_2, c_5	$((y^2+y+1)^4)(y^{83}+27y^{82}+\cdots-22y-1)$
c_3, c_8	$y^8(y^{83}-45y^{82}+\cdots+770048y-65536)$
c_6	$(y^4+5y^3+7y^2+2y+1)^2$ $\cdot(y^{83}-15y^{82}+\cdots-3774261726y-40056241)$
c_7, c_{11}	$((y^4+y^3+3y^2+2y+1)^2)(y^{83}+21y^{82}+\cdots-6y-1)$
c_9, c_{10}, c_{12}	$((y^4+5y^3+7y^2+2y+1)^2)(y^{83}+85y^{82}+\cdots+34y-1)$