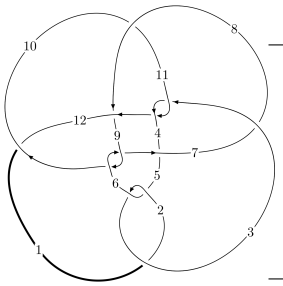
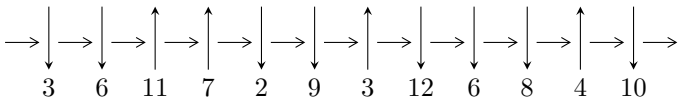
$12n_{0424}$ $(K12n_{0424})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 2.60349 \times 10^{202} u^{67} - 1.26475 \times 10^{203} u^{66} + \cdots + 3.63435 \times 10^{205} b + 1.56735 \times 10^{205}, \\ & 2.69439 \times 10^{205} u^{67} - 1.16805 \times 10^{206} u^{66} + \cdots + 1.15209 \times 10^{208} a + 8.44586 \times 10^{207}, \\ & u^{68} - 5u^{67} + \cdots + 86u - 317 \rangle \\ I_2^u = \langle & 56939u^{20} + 161982u^{19} + \cdots + 59123b + 87648,\ 299698u^{20} + 645903u^{19} + \cdots + 59123a + 588498, \\ & u^{21} + 2u^{20} + \cdots + 4u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 89 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. $\boldsymbol{I_1^u = \langle 2.60 \times 10^{202} u^{67} - 1.26 \times 10^{203} u^{66} + \cdots + 3.63 \times 10^{205} b + 1.57 \times 10^{205},\ 2.69 \times 10^{205} u^{67} - 1.17 \times 10^{206} u^{66} + \cdots + 1.15 \times 10^{208} a + 8.45 \times 10^{207},\ u^{68} - 5u^{67} + \cdots + 86u - 317 \rangle}$

(i) Arc colorings

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

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

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

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

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

$$a_{10} = \begin{pmatrix} -0.00233870u^{67} + 0.0101386u^{66} + \cdots - 11.2417u - 0.733090 \\ -0.000716356u^{67} + 0.00347999u^{66} + \cdots - 5.24442u - 0.431259 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.00233870u^{67} + 0.0101386u^{66} + \cdots - 11.2417u - 0.733090 \\ -0.00117955u^{67} + 0.00620829u^{66} + \cdots - 4.63678u + 0.0616603 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.00491528u^{67} - 0.0262227u^{66} + \cdots + 25.2225u + 6.20953 \\ -0.000952899u^{67} + 0.00487972u^{66} + \cdots + 0.0569866u + 0.671964 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.00396238u^{67} - 0.0213429u^{66} + \cdots + 25.2795u + 6.88149 \\ -0.000952899u^{67} + 0.00487972u^{66} + \cdots + 0.0569866u + 0.671964 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.00373541u^{67} - 0.0186514u^{66} + \cdots + 30.2287u + 11.1920 \\ -0.000136580u^{67} + 0.000781749u^{66} + \cdots + 3.37713u + 0.340186 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.00276461u^{67} + 0.0125786u^{66} + \cdots - 47.0972u - 12.3994 \\ -0.0000159099u^{67} + 0.000183427u^{66} + \cdots - 4.26921u + 0.0576805 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.000531157u^{67} + 0.00366050u^{66} + \cdots + 31.7108u + 3.30930 \\ -0.00101402u^{67} + 0.00536595u^{66} + \cdots + 0.703120u - 0.416678 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.00431587u^{67} + 0.0232128u^{66} + \cdots + 33.1103u + 8.26277$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{68}+81u^{67}+\cdots+7054940u+100489$
c_2, c_5	$u^{68}+5u^{67}+\cdots-86u-317$
c_3, c_{11}	$u^{68}-23u^{66}+\cdots+2u+1$
c_4	$u^{68}+12u^{67}+\cdots-352006u+2124268$
c_6, c_9	$u^{68}+6u^{67}+\cdots-23u+1$
c_7	$u^{68}-3u^{67}+\cdots+4608u-512$
c_8	$u^{68}+u^{67}+\cdots+30u-4$
c_{10}	$u^{68}+4u^{65}+\cdots+101u+41$
c_{12}	$u^{68}-15u^{67}+\cdots+4125551u-99557$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{68} - 173y^{67} + \cdots + 1338138438004y + 10098039121$
c_2, c_5	$y^{68} - 81y^{67} + \cdots - 7054940y + 100489$
c_3, c_{11}	$y^{68} - 46y^{67} + \cdots + 10y + 1$
c_4	$y^{68} + 72y^{67} + \cdots + 70533073386900y + 4512514535824$
c_6, c_9	$y^{68} + 12y^{67} + \cdots - 193y + 1$
c_7	$y^{68} + 21y^{67} + \cdots + 15597568y + 262144$
c_8	$y^{68} - 3y^{67} + \cdots + 100y + 16$
c_{10}	$y^{68} + 60y^{66} + \cdots - 19877y + 1681$
c_{12}	$y^{68} - 59y^{67} + \cdots - 745245389293y + 9911596249$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.871128 + 0.509881I$ $a = -0.251428 - 0.802924I$ $b = 0.018453 + 0.953747I$	$-1.05916 - 0.94846I$	0
$u = 0.871128 - 0.509881I$ $a = -0.251428 + 0.802924I$ $b = 0.018453 - 0.953747I$	$-1.05916 + 0.94846I$	0
$u = -0.544948 + 0.820477I$ $a = -0.774935 + 0.270468I$ $b = -1.058330 + 0.233379I$	$4.15929 - 0.82146I$	0
$u = -0.544948 - 0.820477I$ $a = -0.774935 - 0.270468I$ $b = -1.058330 - 0.233379I$	$4.15929 + 0.82146I$	0
$u = 1.046280 + 0.158379I$ $a = -0.05036 + 1.45147I$ $b = 0.389019 + 0.679852I$	$4.06606 + 4.41418I$	0
$u = 1.046280 - 0.158379I$ $a = -0.05036 - 1.45147I$ $b = 0.389019 - 0.679852I$	$4.06606 - 4.41418I$	0
$u = -0.885188 + 0.133345I$ $a = -0.609940 + 0.064726I$ $b = -0.36252 + 1.60437I$	$2.00126 + 7.10030I$	$-5.49116 - 6.13012I$
$u = -0.885188 - 0.133345I$ $a = -0.609940 - 0.064726I$ $b = -0.36252 - 1.60437I$	$2.00126 - 7.10030I$	$-5.49116 + 6.13012I$
$u = 0.440543 + 0.709904I$ $a = -0.925199 + 0.715716I$ $b = -0.563366 + 0.659728I$	$-0.315752 - 0.651012I$	$-5.42332 - 3.40225I$
$u = 0.440543 - 0.709904I$ $a = -0.925199 - 0.715716I$ $b = -0.563366 - 0.659728I$	$-0.315752 + 0.651012I$	$-5.42332 + 3.40225I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.800978 + 0.142572I$ $a = 0.366163 - 0.014633I$ $b = 0.69817 + 1.28569I$	$-1.37004 - 1.79460I$	$-8.18525 + 5.97883I$
$u = 0.800978 - 0.142572I$ $a = 0.366163 + 0.014633I$ $b = 0.69817 - 1.28569I$	$-1.37004 + 1.79460I$	$-8.18525 - 5.97883I$
$u = -0.188648 + 0.784530I$ $a = 1.113550 + 0.741221I$ $b = 0.823409 + 0.516607I$	$0.44809 + 2.22556I$	$-2.79693 - 5.37400I$
$u = -0.188648 - 0.784530I$ $a = 1.113550 - 0.741221I$ $b = 0.823409 - 0.516607I$	$0.44809 - 2.22556I$	$-2.79693 + 5.37400I$
$u = -1.042970 + 0.640059I$ $a = 0.252793 - 0.689948I$ $b = 0.583572 + 0.375949I$	$2.60331 + 6.17342I$	0
$u = -1.042970 - 0.640059I$ $a = 0.252793 + 0.689948I$ $b = 0.583572 - 0.375949I$	$2.60331 - 6.17342I$	0
$u = -0.588960 + 0.496925I$ $a = -0.393461 + 1.028770I$ $b = 0.135056 + 0.879028I$	$1.71068 - 2.22744I$	$-2.20317 + 3.51892I$
$u = -0.588960 - 0.496925I$ $a = -0.393461 - 1.028770I$ $b = 0.135056 - 0.879028I$	$1.71068 + 2.22744I$	$-2.20317 - 3.51892I$
$u = 0.558593 + 0.526304I$ $a = -0.860916 - 0.104097I$ $b = -0.292526 + 0.378622I$	$-0.41361 - 1.51672I$	$-4.11702 + 3.50590I$
$u = 0.558593 - 0.526304I$ $a = -0.860916 + 0.104097I$ $b = -0.292526 - 0.378622I$	$-0.41361 + 1.51672I$	$-4.11702 - 3.50590I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.698428+0.225559I$ $a=-0.06120+1.66744I$ $b=\ \ 0.059794+0.692238I$	$1.94783-2.44722I$	$0.47230-2.86417I$
$u=-0.698428-0.225559I$ $a=-0.06120-1.66744I$ $b=\ \ 0.059794-0.692238I$	$1.94783+2.44722I$	$0.47230+2.86417I$
$u=-1.149490+0.645257I$ $a=-0.244780+0.273572I$ $b=\ \ 0.201289+0.916767I$	$2.21731-2.65488I$	0
$u=-1.149490-0.645257I$ $a=-0.244780-0.273572I$ $b=\ \ 0.201289-0.916767I$	$2.21731+2.65488I$	0
$u=-0.734034+1.108720I$ $a=-0.095793-0.323746I$ $b=-0.023606+0.235560I$	$1.83474-2.80065I$	0
$u=-0.734034-1.108720I$ $a=-0.095793+0.323746I$ $b=-0.023606-0.235560I$	$1.83474+2.80065I$	0
$u=-0.537572+0.292817I$ $a=\ \ 1.59768-1.26454I$ $b=\ \ 0.424708-0.016900I$	$1.85960+4.70737I$	$-2.52304-10.70995I$
$u=-0.537572-0.292817I$ $a=\ \ 1.59768+1.26454I$ $b=\ \ 0.424708+0.016900I$	$1.85960-4.70737I$	$-2.52304+10.70995I$
$u=-0.753527+1.166220I$ $a=-0.762293-0.164274I$ $b=-0.822320+0.177075I$	$1.79765+10.38310I$	0
$u=-0.753527-1.166220I$ $a=-0.762293+0.164274I$ $b=-0.822320-0.177075I$	$1.79765-10.38310I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.474569 + 0.362132I$ $a = -1.72365 + 0.23562I$ $b = -0.443265 + 0.309260I$	$-0.87147 - 2.49560I$	$-8.19061 + 9.19024I$
$u = 0.474569 - 0.362132I$ $a = -1.72365 - 0.23562I$ $b = -0.443265 - 0.309260I$	$-0.87147 + 2.49560I$	$-8.19061 - 9.19024I$
$u = 0.830722 + 1.137770I$ $a = 0.613745 - 0.111412I$ $b = 0.732990 + 0.363720I$	$-2.05341 - 4.26526I$	0
$u = 0.830722 - 1.137770I$ $a = 0.613745 + 0.111412I$ $b = 0.732990 - 0.363720I$	$-2.05341 + 4.26526I$	0
$u = -0.429455 + 0.392611I$ $a = 0.56873 - 1.67827I$ $b = -0.460162 + 1.313910I$	$3.56883 - 5.49597I$	$-0.35708 + 7.00581I$
$u = -0.429455 - 0.392611I$ $a = 0.56873 + 1.67827I$ $b = -0.460162 - 1.313910I$	$3.56883 + 5.49597I$	$-0.35708 - 7.00581I$
$u = -1.43036$ $a = -0.0534743$ $b = -1.45724$	-3.29592	0
$u = 1.45239 + 0.17220I$ $a = -0.751230 - 0.429370I$ $b = -2.36893 - 0.07099I$	$-6.96130 - 1.46154I$	0
$u = 1.45239 - 0.17220I$ $a = -0.751230 + 0.429370I$ $b = -2.36893 + 0.07099I$	$-6.96130 + 1.46154I$	0
$u = 1.46944$ $a = 0.392688$ $b = 1.69276$	-3.78770	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.55873+0.13384I$ $a=\ \ 0.852639-0.619616I$ $b=\ \ 2.29095-0.57702I$	$-7.71397+4.42312I$	0
$u=-1.55873-0.13384I$ $a=\ \ 0.852639+0.619616I$ $b=\ \ 2.29095+0.57702I$	$-7.71397-4.42312I$	0
$u=\ \ 1.58955+0.06373I$ $a=-0.636720-0.744311I$ $b=-1.89607-0.94307I$	$-5.50713-5.89389I$	0
$u=\ \ 1.58955-0.06373I$ $a=-0.636720+0.744311I$ $b=-1.89607+0.94307I$	$-5.50713+5.89389I$	0
$u=-1.63011+0.19482I$ $a=\ \ 0.777479-0.591084I$ $b=\ \ 1.98605-0.45195I$	$-8.12749+4.22844I$	0
$u=-1.63011-0.19482I$ $a=\ \ 0.777479+0.591084I$ $b=\ \ 1.98605+0.45195I$	$-8.12749-4.22844I$	0
$u=\ \ 1.60712+0.36324I$ $a=-0.745239-0.676686I$ $b=-1.82570-0.29640I$	$-5.64912-6.82670I$	0
$u=\ \ 1.60712-0.36324I$ $a=-0.745239+0.676686I$ $b=-1.82570+0.29640I$	$-5.64912+6.82670I$	0
$u=-0.297585+0.072176I$ $a=\ \ 2.48257+0.33875I$ $b=\ \ 0.492290+0.055394I$	$-1.42607+0.01276I$	$-9.44279+0.81659I$
$u=-0.297585-0.072176I$ $a=\ \ 2.48257-0.33875I$ $b=\ \ 0.492290-0.055394I$	$-1.42607-0.01276I$	$-9.44279-0.81659I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.70975+0.05552I$ $a=-0.624502-0.582986I$ $b=-1.88329-0.29548I$	$-10.76850+2.56396I$	0
$u=-1.70975-0.05552I$ $a=-0.624502+0.582986I$ $b=-1.88329+0.29548I$	$-10.76850-2.56396I$	0
$u=1.71065+0.07105I$ $a=0.732714-0.538117I$ $b=1.95223-0.29659I$	$-7.52248-8.09991I$	0
$u=1.71065-0.07105I$ $a=0.732714+0.538117I$ $b=1.95223+0.29659I$	$-7.52248+8.09991I$	0
$u=-1.74721+0.17347I$ $a=0.813534-0.514883I$ $b=1.85421-0.43442I$	$-8.31422+4.53840I$	0
$u=-1.74721-0.17347I$ $a=0.813534+0.514883I$ $b=1.85421+0.43442I$	$-8.31422-4.53840I$	0
$u=1.72573+0.38376I$ $a=0.702168+0.550948I$ $b=2.08835+0.55587I$	$-6.2957-16.2757I$	0
$u=1.72573-0.38376I$ $a=0.702168-0.550948I$ $b=2.08835-0.55587I$	$-6.2957+16.2757I$	0
$u=-1.73754+0.38845I$ $a=-0.676834+0.471111I$ $b=-2.07579+0.51144I$	$-10.3272+10.1790I$	0
$u=-1.73754-0.38845I$ $a=-0.676834-0.471111I$ $b=-2.07579-0.51144I$	$-10.3272-10.1790I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.186071 + 0.088469I$ $a = 2.84558 + 5.76663I$ $b = -0.584481 + 0.792155I$	$6.79008 + 4.75733I$	$3.79704 - 5.76566I$
$u = 0.186071 - 0.088469I$ $a = 2.84558 - 5.76663I$ $b = -0.584481 - 0.792155I$	$6.79008 - 4.75733I$	$3.79704 + 5.76566I$
$u = 1.79378 + 0.03621I$ $a = -0.667026 - 0.311610I$ $b = -1.61634 - 0.35448I$	$-8.03735 - 1.00540I$	0
$u = 1.79378 - 0.03621I$ $a = -0.667026 + 0.311610I$ $b = -1.61634 + 0.35448I$	$-8.03735 + 1.00540I$	0
$u = 1.80621 + 0.03283I$ $a = 0.404169 - 0.562395I$ $b = 1.88508 - 0.20648I$	$-4.91628 + 2.38789I$	0
$u = 1.80621 - 0.03283I$ $a = 0.404169 + 0.562395I$ $b = 1.88508 + 0.20648I$	$-4.91628 - 2.38789I$	0
$u = 1.82029 + 0.48597I$ $a = 0.530834 + 0.328063I$ $b = 2.04333 + 0.51887I$	$-5.36733 - 3.53838I$	0
$u = 1.82029 - 0.48597I$ $a = 0.530834 - 0.328063I$ $b = 2.04333 - 0.51887I$	$-5.36733 + 3.53838I$	0

II. $I_2^u = \langle 56939u^{20} + 161982u^{19} + \cdots + 59123b + 87648,\ 3.00 \times 10^5 u^{20} + 6.46 \times 10^5 u^{19} + \cdots + 5.91 \times 10^4 a + 5.88 \times 10^5,\ u^{21} + 2u^{20} + \cdots + 4u - 1\rangle$

(i) Arc colorings

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

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

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

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

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

$$a_{10} = \begin{pmatrix} -5.06906u^{20} - 10.9247u^{19} + \cdots + 10.8398u - 9.95379 \\ -0.963060u^{20} - 2.73975u^{19} + \cdots - 0.169291u - 1.48247 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -5.06906u^{20} - 10.9247u^{19} + \cdots + 10.8398u - 9.95379 \\ -0.775925u^{20} - 2.17956u^{19} + \cdots + 1.75331u - 0.695854 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -4.90401u^{20} - 9.43501u^{19} + \cdots + 9.38474u - 3.34662 \\ 0.681072u^{20} + 1.87392u^{19} + \cdots + 4.01839u + 1.44754 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -4.22294u^{20} - 7.56108u^{19} + \cdots + 13.4031u - 1.89907 \\ 0.681072u^{20} + 1.87392u^{19} + \cdots + 4.01839u + 1.44754 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -3.58847u^{20} - 10.1130u^{19} + \cdots + 43.2427u - 15.5705 \\ 3.67141u^{20} + 2.70835u^{19} + \cdots + 18.6702u - 4.15388 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 9.71688u^{20} + 17.8748u^{19} + \cdots - 12.3073u + 12.5600 \\ 0.519409u^{20} + 1.18825u^{19} + \cdots - 18.4028u + 4.61670 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1.21986u^{20} + 0.289397u^{19} + \cdots + 10.6943u + 1.02261 \\ 0.313381u^{20} + 2.64743u^{19} + \cdots + 0.618761u + 1.59928 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{13845}{59123}u^{20} - \frac{277255}{59123}u^{19} + \cdots - \frac{4783788}{59123}u + \frac{1378541}{59123}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{21} - 20u^{20} + \cdots + 16u - 1$
c_2	$u^{21} + 2u^{20} + \cdots + 4u - 1$
c_3	$u^{21} + u^{20} + \cdots + 4u - 1$
c_4	$u^{21} + u^{20} + \cdots - 94u - 29$
c_5	$u^{21} - 2u^{20} + \cdots + 4u + 1$
c_6	$u^{21} - 7u^{20} + \cdots - u + 1$
c_7	$u^{21} + u^{19} + \cdots + 6u + 1$
c_8	$u^{21} + u^{19} + \cdots + 2u - 1$
c_9	$u^{21} + 7u^{20} + \cdots - u - 1$
c_{10}	$u^{21} + u^{20} + \cdots + u + 1$
c_{11}	$u^{21} - u^{20} + \cdots + 4u + 1$
c_{12}	$u^{21} - 4u^{20} + \cdots + 117u + 29$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{21} - 24y^{20} + \cdots + 36y - 1$
c_2, c_5	$y^{21} - 20y^{20} + \cdots + 16y - 1$
c_3, c_{11}	$y^{21} - 17y^{20} + \cdots + 10y - 1$
c_4	$y^{21} + 17y^{20} + \cdots - 14364y - 841$
c_6, c_9	$y^{21} + 13y^{20} + \cdots - 7y - 1$
c_7	$y^{21} + 2y^{20} + \cdots + 28y - 1$
c_8	$y^{21} + 2y^{20} + \cdots - 16y - 1$
c_{10}	$y^{21} + 9y^{20} + \cdots + y - 1$
c_{12}	$y^{21} - 10y^{20} + \cdots + 5685y - 841$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.894035+0.426850I$ $a=-0.519136+0.655370I$ $b=-0.26891-1.39537I$	$3.24028+7.57467I$	$0.82215-8.81507I$
$u=-0.894035-0.426850I$ $a=-0.519136-0.655370I$ $b=-0.26891+1.39537I$	$3.24028-7.57467I$	$0.82215+8.81507I$
$u=-0.858392+0.405679I$ $a=-0.462130+1.325320I$ $b=-0.144594-0.205272I$	$6.04821-3.54076I$	$0.72244+2.01321I$
$u=-0.858392-0.405679I$ $a=-0.462130-1.325320I$ $b=-0.144594+0.205272I$	$6.04821+3.54076I$	$0.72244-2.01321I$
$u=0.899032+0.074143I$ $a=-0.325588-1.368960I$ $b=-0.179975-0.662985I$	$1.60454-2.95721I$	$-6.36375+7.33949I$
$u=0.899032-0.074143I$ $a=-0.325588+1.368960I$ $b=-0.179975+0.662985I$	$1.60454+2.95721I$	$-6.36375-7.33949I$
$u=-1.072430+0.326023I$ $a=0.271074-1.129650I$ $b=0.251948-1.072700I$	$5.27529+6.34734I$	$0.57668-6.47209I$
$u=-1.072430-0.326023I$ $a=0.271074+1.129650I$ $b=0.251948+1.072700I$	$5.27529-6.34734I$	$0.57668+6.47209I$
$u=0.685692+0.369999I$ $a=0.279617+0.898848I$ $b=-0.38782-1.43241I$	$-0.58771-1.41759I$	$1.42036+5.33647I$
$u=0.685692-0.369999I$ $a=0.279617-0.898848I$ $b=-0.38782+1.43241I$	$-0.58771+1.41759I$	$1.42036-5.33647I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.141080 + 0.631558I$ $a = -1.00212 + 1.21363I$ $b = -0.429943 + 0.543747I$	$-0.39852 - 1.44153I$	$-7.16101 + 3.82962I$
$u = 0.141080 - 0.631558I$ $a = -1.00212 - 1.21363I$ $b = -0.429943 - 0.543747I$	$-0.39852 + 1.44153I$	$-7.16101 - 3.82962I$
$u = 1.42200$ $a = 0.221842$ $b = 1.73232$	-4.94331	-8.42450
$u = -1.14688 + 0.98533I$ $a = 0.183692 - 0.275325I$ $b = -0.147350 - 0.800918I$	$2.40941 - 2.93010I$	$12.0576 + 13.5784I$
$u = -1.14688 - 0.98533I$ $a = 0.183692 + 0.275325I$ $b = -0.147350 + 0.800918I$	$2.40941 + 2.93010I$	$12.0576 - 13.5784I$
$u = 0.388530 + 0.117903I$ $a = -0.32404 + 3.02809I$ $b = 0.367355 + 0.666272I$	$2.06332 + 3.63257I$	$-2.19231 - 4.68251I$
$u = 0.388530 - 0.117903I$ $a = -0.32404 - 3.02809I$ $b = 0.367355 - 0.666272I$	$2.06332 - 3.63257I$	$-2.19231 + 4.68251I$
$u = -1.60153 + 0.15283I$ $a = 0.846635 - 0.626675I$ $b = 2.07762 - 0.56851I$	$-7.02711 + 4.47993I$	$-0.55876 - 3.70470I$
$u = -1.60153 - 0.15283I$ $a = 0.846635 + 0.626675I$ $b = 2.07762 + 0.56851I$	$-7.02711 - 4.47993I$	$-0.55876 + 3.70470I$
$u = 1.74793 + 0.28216I$ $a = -0.558930 - 0.427389I$ $b = -2.00449 - 0.42484I$	$-5.22125 - 3.17687I$	$-5.61119 - 1.61845I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.74793 - 0.28216I$		
$a = -0.558930 + 0.427389I$	$-5.22125 + 3.17687I$	$-5.61119 + 1.61845I$
$b = -2.00449 + 0.42484I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{21}-20u^{20}+\cdots+16u-1)$ $\cdot(u^{68}+81u^{67}+\cdots+7054940u+100489)$
c_2	$(u^{21}+2u^{20}+\cdots+4u-1)(u^{68}+5u^{67}+\cdots-86u-317)$
c_3	$(u^{21}+u^{20}+\cdots+4u-1)(u^{68}-23u^{66}+\cdots+2u+1)$
c_4	$(u^{21}+u^{20}+\cdots-94u-29)(u^{68}+12u^{67}+\cdots-352006u+2124268)$
c_5	$(u^{21}-2u^{20}+\cdots+4u+1)(u^{68}+5u^{67}+\cdots-86u-317)$
c_6	$(u^{21}-7u^{20}+\cdots-u+1)(u^{68}+6u^{67}+\cdots-23u+1)$
c_7	$(u^{21}+u^{19}+\cdots+6u+1)(u^{68}-3u^{67}+\cdots+4608u-512)$
c_8	$(u^{21}+u^{19}+\cdots+2u-1)(u^{68}+u^{67}+\cdots+30u-4)$
c_9	$(u^{21}+7u^{20}+\cdots-u-1)(u^{68}+6u^{67}+\cdots-23u+1)$
c_{10}	$(u^{21}+u^{20}+\cdots+u+1)(u^{68}+4u^{65}+\cdots+101u+41)$
c_{11}	$(u^{21}-u^{20}+\cdots+4u+1)(u^{68}-23u^{66}+\cdots+2u+1)$
c_{12}	$(u^{21}-4u^{20}+\cdots+117u+29)$ $\cdot(u^{68}-15u^{67}+\cdots+4125551u-99557)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{21} - 24y^{20} + \cdots + 36y - 1)$ $\cdot (y^{68} - 173y^{67} + \cdots + 1338138438004y + 10098039121)$
c_2, c_5	$(y^{21} - 20y^{20} + \cdots + 16y - 1)$ $\cdot (y^{68} - 81y^{67} + \cdots - 7054940y + 100489)$
c_3, c_{11}	$(y^{21} - 17y^{20} + \cdots + 10y - 1)(y^{68} - 46y^{67} + \cdots + 10y + 1)$
c_4	$(y^{21} + 17y^{20} + \cdots - 14364y - 841)$ $\cdot (y^{68} + 72y^{67} + \cdots + 70533073386900y + 4512514535824)$
c_6, c_9	$(y^{21} + 13y^{20} + \cdots - 7y - 1)(y^{68} + 12y^{67} + \cdots - 193y + 1)$
c_7	$(y^{21} + 2y^{20} + \cdots + 28y - 1)$ $\cdot (y^{68} + 21y^{67} + \cdots + 15597568y + 262144)$
c_8	$(y^{21} + 2y^{20} + \cdots - 16y - 1)(y^{68} - 3y^{67} + \cdots + 100y + 16)$
c_{10}	$(y^{21} + 9y^{20} + \cdots + y - 1)(y^{68} + 60y^{66} + \cdots - 19877y + 1681)$
c_{12}	$(y^{21} - 10y^{20} + \cdots + 5685y - 841)$ $\cdot (y^{68} - 59y^{67} + \cdots - 745245389293y + 9911596249)$