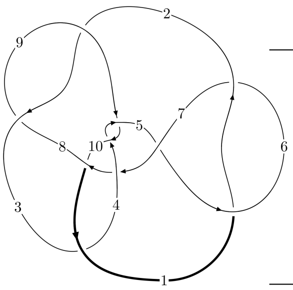
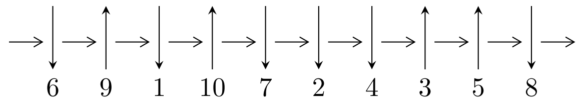
10_{105} $(K10a_{72})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -30u^{16} - 176u^{15} + \cdots + 1103b + 331,\ 1294u^{16} - 1159u^{15} + \cdots + 1103a + 2562,$$
$$u^{17} + 6u^{15} + u^{14} + 16u^{13} + 4u^{12} + 20u^{11} + 7u^{10} + 7u^9 + 5u^8 - 7u^7 + 3u^6 - 3u^5 + u^4 + 3u^3 + 2u + 1\rangle$$
$$I_2^u = \langle -4.51865 \times 10^{39}u^{35} + 6.97530 \times 10^{39}u^{34} + \cdots + 1.68010 \times 10^{40}b - 7.80705 \times 10^{39},$$
$$-1.24909 \times 10^{45}u^{35} + 1.82583 \times 10^{45}u^{34} + \cdots + 2.27642 \times 10^{45}a + 4.03057 \times 10^{46},$$
$$u^{36} - u^{35} + \cdots + 186u + 43\rangle$$
$$I_3^u = \langle u^6 + 4u^4 - u^3 + 4u^2 + b - 2u + 2,\ -u^7 + u^6 - 4u^5 + 5u^4 - 5u^3 + 6u^2 + a - 3u + 3,$$
$$u^8 + 4u^6 - u^5 + 5u^4 - 2u^3 + 4u^2 - u + 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 61 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 in decimal forms when there is not enough margin.

I. $\boldsymbol{I_1^u = \langle -30u^{16} - 176u^{15} + \cdots + 1103b + 331,\ 1294u^{16} - 1159u^{15} + \cdots + 1103a + 2562,\ u^{17} + 6u^{15} + \cdots + 2u + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1.17316u^{16} + 1.05077u^{15} + \cdots + 0.526745u - 2.32276 \\ 0.0271985u^{16} + 0.159565u^{15} + \cdots + 1.65549u - 0.300091 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.20036u^{16} + 0.891206u^{15} + \cdots - 1.12874u - 2.02267 \\ 0.0271985u^{16} + 0.159565u^{15} + \cdots + 1.65549u - 0.300091 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.393472u^{16} - 0.0417044u^{15} + \cdots + 0.317316u + 0.407978 \\ -1.59383u^{16} + 0.849501u^{15} + \cdots - 0.811423u - 1.61469 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^2 + 1 \\ 1.57298u^{16} - 1.10517u^{15} + \cdots + 0.408885u + 1.81142 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1 \\ -1.16500u^{16} + 1.49864u^{15} + \cdots + 1.42339u - 0.312783 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} u \\ -1.49864u^{16} + 0.407978u^{15} + \cdots - 1.01723u - 1.16500 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{1215}{1103}u^{16} - \frac{3902}{1103}u^{15} + \cdots + \frac{52}{1103}u - \frac{4030}{1103}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{17} - 7u^{16} + \cdots - 36u + 8$
c_2, c_4, c_8 c_9	$u^{17} + 6u^{15} + \cdots + 2u + 1$
c_3, c_7	$u^{17} - u^{16} + \cdots - u + 1$
c_5	$u^{17} + 7u^{16} + \cdots - 48u + 64$
c_{10}	$u^{17} - 15u^{16} + \cdots + 608u - 64$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{17} - 7y^{16} + \cdots - 48y - 64$
c_2, c_4, c_8 c_9	$y^{17} + 12y^{16} + \cdots + 4y - 1$
c_3, c_7	$y^{17} + 3y^{16} + \cdots - 9y - 1$
c_5	$y^{17} + 5y^{16} + \cdots + 17664y - 4096$
c_{10}	$y^{17} - 5y^{16} + \cdots + 17408y - 4096$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.099668 + 0.990377I$ $a = 0.755793 + 0.048508I$ $b = 0.874913 + 1.017070I$	$-0.65585 - 3.58827I$	$-5.01554 + 5.19820I$
$u = -0.099668 - 0.990377I$ $a = 0.755793 - 0.048508I$ $b = 0.874913 - 1.017070I$	$-0.65585 + 3.58827I$	$-5.01554 - 5.19820I$
$u = -0.397497 + 1.032420I$ $a = 2.04240 - 0.79952I$ $b = 1.30568 + 0.56699I$	$-3.72641 - 6.77030I$	$-4.91686 + 11.50550I$
$u = -0.397497 - 1.032420I$ $a = 2.04240 + 0.79952I$ $b = 1.30568 - 0.56699I$	$-3.72641 + 6.77030I$	$-4.91686 - 11.50550I$
$u = 0.749827 + 0.244567I$ $a = 0.108910 + 0.611388I$ $b = 0.696825 - 0.650971I$	$2.74501 + 0.69000I$	$3.24547 - 1.78817I$
$u = 0.749827 - 0.244567I$ $a = 0.108910 - 0.611388I$ $b = 0.696825 + 0.650971I$	$2.74501 - 0.69000I$	$3.24547 + 1.78817I$
$u = 0.346178 + 0.692637I$ $a = -0.666585 + 0.297186I$ $b = -0.037067 + 0.756233I$	$0.24233 + 1.64711I$	$1.95019 - 4.12084I$
$u = 0.346178 - 0.692637I$ $a = -0.666585 - 0.297186I$ $b = -0.037067 - 0.756233I$	$0.24233 - 1.64711I$	$1.95019 + 4.12084I$
$u = -0.736048 + 0.038467I$ $a = 0.755454 + 0.908610I$ $b = 0.928563 - 0.638410I$	$2.06897 + 4.31656I$	$2.23828 - 5.03995I$
$u = -0.736048 - 0.038467I$ $a = 0.755454 - 0.908610I$ $b = 0.928563 + 0.638410I$	$2.06897 - 4.31656I$	$2.23828 + 5.03995I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.285508 + 1.357540I$ $a = -1.79507 - 0.11101I$ $b = -1.375440 - 0.134825I$	$-10.04230 + 5.59145I$	$-9.61044 - 4.67516I$
$u = 0.285508 - 1.357540I$ $a = -1.79507 + 0.11101I$ $b = -1.375440 + 0.134825I$	$-10.04230 - 5.59145I$	$-9.61044 + 4.67516I$
$u = -0.52629 + 1.31806I$ $a = -0.119329 - 0.266115I$ $b = 0.352099 - 0.977016I$	$-3.89694 - 9.32757I$	$-4.13921 + 5.55906I$
$u = -0.52629 - 1.31806I$ $a = -0.119329 + 0.266115I$ $b = 0.352099 + 0.977016I$	$-3.89694 + 9.32757I$	$-4.13921 - 5.55906I$
$u = 0.59743 + 1.42672I$ $a = 1.62332 + 0.78900I$ $b = 1.192940 - 0.641161I$	$-6.4799 + 15.1817I$	$-6.31050 - 8.67042I$
$u = 0.59743 - 1.42672I$ $a = 1.62332 - 0.78900I$ $b = 1.192940 + 0.641161I$	$-6.4799 - 15.1817I$	$-6.31050 + 8.67042I$
$u = -0.438874$ $a = -1.40978$ $b = -0.877026$	-1.63327	-4.88280

II. $\boldsymbol{I_2^u = \langle -4.52 \times 10^{39} u^{35} + 6.98 \times 10^{39} u^{34} + \cdots + 1.68 \times 10^{40} b - 7.81 \times 10^{39},\ -1.25 \times 10^{45} u^{35} + 1.83 \times 10^{45} u^{34} + \cdots + 2.28 \times 10^{45} a + 4.03 \times 10^{46},\ u^{36} - u^{35} + \cdots + 186u + 43 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.548710u^{35} - 0.802063u^{34} + \cdots - 49.1305u - 17.7057 \\ 0.268951u^{35} - 0.415172u^{34} + \cdots - 2.22836u + 0.464678 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.279759u^{35} - 0.386891u^{34} + \cdots - 46.9021u - 18.1704 \\ 0.268951u^{35} - 0.415172u^{34} + \cdots - 2.22836u + 0.464678 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.769505u^{35} + 1.07166u^{34} + \cdots + 31.1795u + 19.4777 \\ -0.393831u^{35} + 0.112167u^{34} + \cdots - 65.8523u - 14.5725 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.637961u^{35} + 0.592755u^{34} + \cdots - 103.303u - 23.1636 \\ -0.184491u^{35} + 0.149837u^{34} + \cdots - 15.4345u + 1.18486 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.359956u^{35} + 0.244025u^{34} + \cdots - 66.5978u - 5.35101 \\ 0.294559u^{35} - 0.557722u^{34} + \cdots - 13.0683u - 4.16067 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -0.371740u^{35} + 1.03334u^{34} + \cdots + 105.667u + 33.5297 \\ -0.291646u^{35} + 0.0216178u^{34} + \cdots - 56.3790u - 13.1684 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.228694u^{35} - 0.643530u^{34} + \cdots - 255.696u - 70.7596$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u^6 + u^5 - u^4 - 2u^3 + u + 1)^6$
c_2, c_4, c_8 c_9	$u^{36} - u^{35} + \cdots + 186u + 43$
c_3, c_7	$u^{36} - 3u^{35} + \cdots - 16u + 1$
c_5	$(u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1)^6$
c_{10}	$(u^3 + u^2 - 1)^{12}$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)^6$
c_2, c_4, c_8 c_9	$y^{36} + 27y^{35} + \cdots + 29904y + 1849$
c_3, c_7	$y^{36} - 9y^{35} + \cdots - 36y + 1$
c_5	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)^6$
c_{10}	$(y^3 - y^2 + 2y - 1)^{12}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.046060 + 0.100110I$ $a = -0.471095 + 0.739312I$ $b = -0.428243 - 0.664531I$	$-0.02007 + 3.75243I$	$-0.77353 - 3.77367I$
$u = -1.046060 - 0.100110I$ $a = -0.471095 - 0.739312I$ $b = -0.428243 + 0.664531I$	$-0.02007 - 3.75243I$	$-0.77353 + 3.77367I$
$u = -0.071145 + 1.052640I$ $a = 2.96217 + 0.54442I$ $b = 1.002190 - 0.295542I$	$-3.80128 - 1.90382I$	$-8.20696 + 2.18522I$
$u = -0.071145 - 1.052640I$ $a = 2.96217 - 0.54442I$ $b = 1.002190 + 0.295542I$	$-3.80128 + 1.90382I$	$-8.20696 - 2.18522I$
$u = 0.445481 + 0.807833I$ $a = -0.769672 - 0.151793I$ $b = -0.428243 + 0.664531I$	$-0.02007 + 1.90382I$	$-0.77353 - 2.18522I$
$u = 0.445481 - 0.807833I$ $a = -0.769672 + 0.151793I$ $b = -0.428243 - 0.664531I$	$-0.02007 - 1.90382I$	$-0.77353 + 2.18522I$
$u = -0.015491 + 1.101610I$ $a = 0.567110 - 0.099771I$ $b = -0.428243 - 0.664531I$	$-4.15765 + 0.92430I$	$-7.30279 - 0.79423I$
$u = -0.015491 - 1.101610I$ $a = 0.567110 + 0.099771I$ $b = -0.428243 + 0.664531I$	$-4.15765 - 0.92430I$	$-7.30279 + 0.79423I$
$u = 0.098878 + 1.131130I$ $a = -1.90200 - 0.19672I$ $b = -1.073950 + 0.558752I$	$-1.91067 + 2.86490I$	$-4.49024 - 2.53112I$
$u = 0.098878 - 1.131130I$ $a = -1.90200 + 0.19672I$ $b = -1.073950 - 0.558752I$	$-1.91067 - 2.86490I$	$-4.49024 + 2.53112I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.196406+1.132180I$ $a=-1.65820+1.54999I$ $b=-1.073950-0.558752I$	$-6.04826-5.69302I$	$-11.01951+5.51057I$
$u=-0.196406-1.132180I$ $a=-1.65820-1.54999I$ $b=-1.073950+0.558752I$	$-6.04826+5.69302I$	$-11.01951-5.51057I$
$u=\ 1.031890+0.635795I$ $a=\ 0.203148-0.430936I$ $b=\ 1.002190+0.295542I$	$-3.80128+1.90382I$	$-8.20696-2.18522I$
$u=\ 1.031890-0.635795I$ $a=\ 0.203148+0.430936I$ $b=\ 1.002190-0.295542I$	$-3.80128-1.90382I$	$-8.20696+2.18522I$
$u=\ 0.444188+1.146330I$ $a=\ 0.054279-0.572062I$ $b=-0.428243-0.664531I$	$-0.02007+3.75243I$	$-0.77353-3.77367I$
$u=\ 0.444188-1.146330I$ $a=\ 0.054279+0.572062I$ $b=-0.428243+0.664531I$	$-0.02007-3.75243I$	$-0.77353+3.77367I$
$u=-0.560207+1.124730I$ $a=\ 1.81411-1.13202I$ $b=\ 1.002190+0.295542I$	$-3.80128-3.75243I$	$-8.20696+3.77367I$
$u=-0.560207-1.124730I$ $a=\ 1.81411+1.13202I$ $b=\ 1.002190-0.295542I$	$-3.80128+3.75243I$	$-8.20696-3.77367I$
$u=-0.598261+0.392855I$ $a=-0.352723+0.385946I$ $b=-1.073950+0.558752I$	$-1.91067+2.86490I$	$-4.49024-2.53112I$
$u=-0.598261-0.392855I$ $a=-0.352723-0.385946I$ $b=-1.073950-0.558752I$	$-1.91067-2.86490I$	$-4.49024+2.53112I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.350340 + 0.016723I$ $a = -0.597073 - 0.522912I$ $b = -1.073950 + 0.558752I$	$-1.91067 + 8.52114I$	$-4.49024 - 8.49002I$
$u = 1.350340 - 0.016723I$ $a = -0.597073 + 0.522912I$ $b = -1.073950 - 0.558752I$	$-1.91067 - 8.52114I$	$-4.49024 + 8.49002I$
$u = -0.388989 + 1.300350I$ $a = -2.16057 + 0.72732I$ $b = -1.073950 - 0.558752I$	$-1.91067 - 8.52114I$	$-4.49024 + 8.49002I$
$u = -0.388989 - 1.300350I$ $a = -2.16057 - 0.72732I$ $b = -1.073950 + 0.558752I$	$-1.91067 + 8.52114I$	$-4.49024 - 8.49002I$
$u = -0.274718 + 0.565739I$ $a = -0.544610 + 1.141380I$ $b = -0.428243 + 0.664531I$	$-0.02007 + 1.90382I$	$-0.77353 - 2.18522I$
$u = -0.274718 - 0.565739I$ $a = -0.544610 - 1.141380I$ $b = -0.428243 - 0.664531I$	$-0.02007 - 1.90382I$	$-0.77353 + 2.18522I$
$u = -0.555599 + 1.270020I$ $a = 0.035250 - 0.334569I$ $b = -0.428243 + 0.664531I$	$-4.15765 - 0.92430I$	$-7.30279 + 0.79423I$
$u = -0.555599 - 1.270020I$ $a = 0.035250 + 0.334569I$ $b = -0.428243 - 0.664531I$	$-4.15765 + 0.92430I$	$-7.30279 - 0.79423I$
$u = -0.06736 + 1.43539I$ $a = 1.81428 - 0.63593I$ $b = 1.002190 - 0.295542I$	$-7.93886 + 0.92430I$	$-14.7362 - 0.7942I$
$u = -0.06736 - 1.43539I$ $a = 1.81428 + 0.63593I$ $b = 1.002190 + 0.295542I$	$-7.93886 - 0.92430I$	$-14.7362 + 0.7942I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.216323 + 0.422026I$ $a = -1.90801 - 1.66447I$ $b = 1.002190 - 0.295542I$	$-3.80128 + 3.75243I$	$-8.20696 - 3.77367I$
$u = -0.216323 - 0.422026I$ $a = -1.90801 + 1.66447I$ $b = 1.002190 + 0.295542I$	$-3.80128 - 3.75243I$	$-8.20696 + 3.77367I$
$u = 0.80839 + 1.45058I$ $a = -1.15715 - 0.89131I$ $b = -1.073950 + 0.558752I$	$-6.04826 + 5.69302I$	0
$u = 0.80839 - 1.45058I$ $a = -1.15715 + 0.89131I$ $b = -1.073950 - 0.558752I$	$-6.04826 - 5.69302I$	0
$u = 0.31139 + 1.81407I$ $a = 1.280070 - 0.127233I$ $b = 1.002190 + 0.295542I$	$-7.93886 - 0.92430I$	0
$u = 0.31139 - 1.81407I$ $a = 1.280070 + 0.127233I$ $b = 1.002190 - 0.295542I$	$-7.93886 + 0.92430I$	0

III. $\boldsymbol{I_3^u = \langle u^6 + 4u^4 - u^3 + 4u^2 + b - 2u + 2,\ -u^7 + u^6 + \cdots + a + 3,\ u^8 + 4u^6 - u^5 + 5u^4 - 2u^3 + 4u^2 - u + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^7 - u^6 + 4u^5 - 5u^4 + 5u^3 - 6u^2 + 3u - 3 \\ -u^6 - 4u^4 + u^3 - 4u^2 + 2u - 2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^7 + 4u^5 - u^4 + 4u^3 - 2u^2 + u - 1 \\ -u^6 - 4u^4 + u^3 - 4u^2 + 2u - 2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^7 + 3u^5 - u^4 + 2u^3 - u^2 + 3u \\ 2u^7 + 7u^5 - 2u^4 + 6u^3 - 3u^2 + 4u - 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^2 - 1 \\ -u^7 - u^6 - 4u^5 - 2u^4 - 4u^3 - u^2 - 2u - 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -1 \\ -u^7 - 2u^6 - 4u^5 - 6u^4 - 3u^3 - 4u^2 - u - 3 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ 2u^7 + 7u^5 - 2u^4 + 6u^3 - 3u^2 + 5u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3u^7 + 6u^6 - 12u^5 + 23u^4 - 18u^3 + 21u^2 - 15u + 8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^8-2u^6-u^5+3u^4+2u^3-2u^2-u+1$
c_2, c_9	$u^8+4u^6-u^5+5u^4-2u^3+4u^2-u+1$
c_3, c_7	$u^8+u^7-u^4-u^3+1$
c_4, c_8	$u^8+4u^6+u^5+5u^4+2u^3+4u^2+u+1$
c_5	$u^8-4u^7+10u^6-17u^5+23u^4-22u^3+14u^2-5u+1$
c_6	$u^8-2u^6+u^5+3u^4-2u^3-2u^2+u+1$
c_{10}	$u^8+4u^7+6u^6+4u^5-3u^3-2u^2+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^8 - 4y^7 + 10y^6 - 17y^5 + 23y^4 - 22y^3 + 14y^2 - 5y + 1$
c_2, c_4, c_8 c_9	$y^8 + 8y^7 + 26y^6 + 47y^5 + 55y^4 + 42y^3 + 22y^2 + 7y + 1$
c_3, c_7	$y^8 - y^7 - 2y^6 + 2y^5 + 3y^4 - y^3 - 2y^2 + 1$
c_5	$y^8 + 4y^7 + 10y^6 + 23y^5 + 23y^4 + 10y^3 + 22y^2 + 3y + 1$
c_{10}	$y^8 - 4y^7 + 4y^6 + 4y^5 + 2y^4 + 3y^3 + 4y^2 - 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.484309 + 0.994840I$ $a = 1.66075 - 1.39545I$ $b = 1.136610 + 0.491905I$	$-4.20254 - 5.73534I$	$-7.16249 + 5.56177I$
$u = -0.484309 - 0.994840I$ $a = 1.66075 + 1.39545I$ $b = 1.136610 - 0.491905I$	$-4.20254 + 5.73534I$	$-7.16249 - 5.56177I$
$u = 0.487513 + 0.687654I$ $a = -0.960124 - 0.950069I$ $b = 0.612814 + 0.310228I$	$-2.09195 + 2.24783I$	$-2.26438 - 2.85323I$
$u = 0.487513 - 0.687654I$ $a = -0.960124 + 0.950069I$ $b = 0.612814 - 0.310228I$	$-2.09195 - 2.24783I$	$-2.26438 + 2.85323I$
$u = 0.110933 + 0.652805I$ $a = -1.26488 + 0.66485I$ $b = -0.819536 + 0.880313I$	$0.32853 + 3.26075I$	$2.37672 - 5.45948I$
$u = 0.110933 - 0.652805I$ $a = -1.26488 - 0.66485I$ $b = -0.819536 - 0.880313I$	$0.32853 - 3.26075I$	$2.37672 + 5.45948I$
$u = -0.11414 + 1.61519I$ $a = -1.43575 + 0.22209I$ $b = -0.929887 + 0.300978I$	$-7.19351 + 1.24143I$	$-2.94984 - 5.90753I$
$u = -0.11414 - 1.61519I$ $a = -1.43575 - 0.22209I$ $b = -0.929887 - 0.300978I$	$-7.19351 - 1.24143I$	$-2.94984 + 5.90753I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^6+u^5-u^4-2u^3+u+1)^6)(u^8-2u^6+\cdots-u+1)$ $\cdot(u^{17}-7u^{16}+\cdots-36u+8)$
c_2, c_9	$(u^8+4u^6+\cdots-u+1)(u^{17}+6u^{15}+\cdots+2u+1)$ $\cdot(u^{36}-u^{35}+\cdots+186u+43)$
c_3, c_7	$(u^8+u^7-u^4-u^3+1)(u^{17}-u^{16}+\cdots-u+1)(u^{36}-3u^{35}+\cdots-16u+1)$
c_4, c_8	$(u^8+4u^6+\cdots+u+1)(u^{17}+6u^{15}+\cdots+2u+1)$ $\cdot(u^{36}-u^{35}+\cdots+186u+43)$
c_5	$(u^6+3u^5+5u^4+4u^3+2u^2+u+1)^6$ $\cdot(u^8-4u^7+10u^6-17u^5+23u^4-22u^3+14u^2-5u+1)$ $\cdot(u^{17}+7u^{16}+\cdots-48u+64)$
c_6	$((u^6+u^5-u^4-2u^3+u+1)^6)(u^8-2u^6+\cdots+u+1)$ $\cdot(u^{17}-7u^{16}+\cdots-36u+8)$
c_{10}	$(u^3+u^2-1)^{12}(u^8+4u^7+6u^6+4u^5-3u^3-2u^2+1)$ $\cdot(u^{17}-15u^{16}+\cdots+608u-64)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)^6$ $\cdot (y^8 - 4y^7 + 10y^6 - 17y^5 + 23y^4 - 22y^3 + 14y^2 - 5y + 1)$ $\cdot (y^{17} - 7y^{16} + \cdots - 48y - 64)$
c_2, c_4, c_8 c_9	$(y^8 + 8y^7 + 26y^6 + 47y^5 + 55y^4 + 42y^3 + 22y^2 + 7y + 1)$ $\cdot (y^{17} + 12y^{16} + \cdots + 4y - 1)(y^{36} + 27y^{35} + \cdots + 29904y + 1849)$
c_3, c_7	$(y^8 - y^7 + \cdots - 2y^2 + 1)(y^{17} + 3y^{16} + \cdots - 9y - 1)$ $\cdot (y^{36} - 9y^{35} + \cdots - 36y + 1)$
c_5	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)^6$ $\cdot (y^8 + 4y^7 + 10y^6 + 23y^5 + 23y^4 + 10y^3 + 22y^2 + 3y + 1)$ $\cdot (y^{17} + 5y^{16} + \cdots + 17664y - 4096)$
c_{10}	$((y^3 - y^2 + 2y - 1)^{12})(y^8 - 4y^7 + \cdots - 4y + 1)$ $\cdot (y^{17} - 5y^{16} + \cdots + 17408y - 4096)$