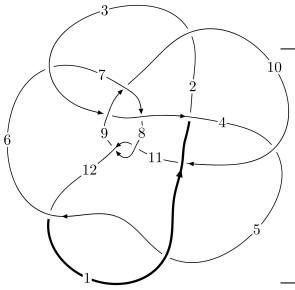
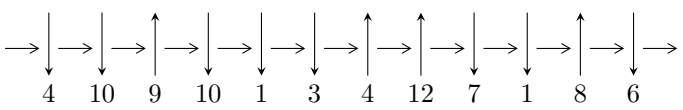
$12n_{0728}$ $(K12n_{0728})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -1.01387 \times 10^{267} u^{81} + 3.48609 \times 10^{267} u^{80} + \cdots + 2.22405 \times 10^{267} b + 4.23115 \times 10^{269}, \\ & - 2.64646 \times 10^{270} u^{81} + 8.98482 \times 10^{270} u^{80} + \cdots + 1.75700 \times 10^{269} a + 1.03533 \times 10^{273}, \\ & u^{82} - 4u^{81} + \cdots - 894u + 237 \rangle \\ I_2^u = \langle & -5.22864 \times 10^{27} u^{28} - 2.99746 \times 10^{31} u^{27} + \cdots + 1.50231 \times 10^{32} b - 4.81229 \times 10^{32}, \\ & - 1.28844 \times 10^{32} u^{28} - 5.79283 \times 10^{31} u^{27} + \cdots + 5.00769 \times 10^{31} a - 4.89974 \times 10^{32}, \ u^{29} + u^{28} + \cdots + 21u + \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 111 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. $\boldsymbol{I_1^u = \langle -1.01 \times 10^{267} u^{81} + 3.49 \times 10^{267} u^{80} + \cdots + 2.22 \times 10^{267} b + 4.23 \times 10^{269},\ -2.65 \times 10^{270} u^{81} + 8.98 \times 10^{270} u^{80} + \cdots + 1.76 \times 10^{269} a + 1.04 \times 10^{273},\ u^{82} - 4u^{81} + \cdots - 894u + 237 \rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 15.0624u^{81} - 51.1374u^{80} + \cdots + 12694.4u - 5892.60 \\ 0.455867u^{81} - 1.56745u^{80} + \cdots + 424.525u - 190.246 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 14.6066u^{81} - 49.5699u^{80} + \cdots + 12269.8u - 5702.36 \\ 0.455867u^{81} - 1.56745u^{80} + \cdots + 424.525u - 190.246 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 9.68886u^{81} - 32.9414u^{80} + \cdots + 8238.54u - 3793.65 \\ -1.52253u^{81} + 5.00949u^{80} + \cdots - 1129.77u + 530.774 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -9.32638u^{81} + 30.9392u^{80} + \cdots - 7468.80u + 3517.86 \\ 0.580835u^{81} - 1.94165u^{80} + \cdots + 527.411u - 163.415 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -10.4342u^{81} + 34.5042u^{80} + \cdots - 8588.49u + 3567.69 \\ -0.0359770u^{81} + 0.402833u^{80} + \cdots - 246.388u + 125.616 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 20.0850u^{81} - 68.1817u^{80} + \cdots + 16846.5u - 7861.99 \\ 2.37573u^{81} - 8.00559u^{80} + \cdots + 1957.35u - 912.163 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -44.6363u^{81} + 148.888u^{80} + \cdots - 36104.8u + 16270.5 \\ -0.966828u^{81} + 3.01023u^{80} + \cdots - 682.104u + 297.723 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -11.1285u^{81} + 37.2025u^{80} + \cdots - 9471.64u + 3960.48 \\ -0.658286u^{81} + 2.29544u^{80} + \cdots - 634.762u + 267.171 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -44.4234u^{81} + 146.964u^{80} + \cdots - 35127.7u + 15332.5 \\ -3.66095u^{81} + 11.6545u^{80} + \cdots - 2709.62u + 1037.57 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 154.575u^{81} - 514.077u^{80} + \cdots + 124681.u - 53829.8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{82} + 14u^{81} + \cdots - 99113733u + 12092767$
c_2	$3(3u^{82} + 12u^{81} + \cdots + 1.10464 \times 10^9 u - 1.02450 \times 10^8)$
c_3	$3(3u^{82} + 3u^{81} + \cdots + 7u + 1)$
c_4	$3(3u^{82} - 140u^{80} + \cdots - 10653u - 4399)$
c_5, c_{12}	$u^{82} + 10u^{80} + \cdots - 1416u - 528$
c_6	$u^{82} + 2u^{81} + \cdots + 29u - 47$
c_7	$u^{82} + 23u^{80} + \cdots - 84216u - 19056$
c_8, c_{11}	$u^{82} + 2u^{81} + \cdots + 169u - 97$
c_9	$u^{82} - 4u^{81} + \cdots - 894u + 237$
c_{10}	$u^{82} - 3u^{81} + \cdots + 5918619u - 282651$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{82} - 126y^{81} + \cdots - 2530004844652363y + 146235013716289$
c_2	$9 \cdot (9y^{82} - 390y^{81} + \cdots - 204245228366900018y + 10495960905341209)$
c_3	$9(9y^{82} + 123y^{81} + \cdots - 27y + 1)$
c_4	$9(9y^{82} - 840y^{81} + \cdots - 1.02859 \times 10^7 y + 1.93512 \times 10^7)$
c_5, c_{12}	$y^{82} + 20y^{81} + \cdots - 716736y + 278784$
c_6	$y^{82} - 8y^{81} + \cdots - 9959y + 2209$
c_7	$y^{82} + 46y^{81} + \cdots + 23494984512y + 363131136$
c_8, c_{11}	$y^{82} - 28y^{81} + \cdots - 256511y + 9409$
c_9	$y^{82} - 12y^{81} + \cdots - 2374338y + 56169$
c_{10}	$y^{82} - 111y^{81} + \cdots - 288406262487y + 79891587801$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.850271+0.515578I$ $a=\ \ 0.271447-0.749585I$ $b=\ \ 1.179440-0.554371I$	$-7.33455+2.04069I$	0
$u=-0.850271-0.515578I$ $a=\ \ 0.271447+0.749585I$ $b=\ \ 1.179440+0.554371I$	$-7.33455-2.04069I$	0
$u=-0.755219+0.688817I$ $a=-0.72036+1.59123I$ $b=\ \ 0.701325+0.987821I$	$1.00223+2.76606I$	0
$u=-0.755219-0.688817I$ $a=-0.72036-1.59123I$ $b=\ \ 0.701325-0.987821I$	$1.00223-2.76606I$	0
$u=-0.398931+0.892202I$ $a=\ \ 0.834745-0.074502I$ $b=-0.743019-0.751372I$	$4.58774+5.09155I$	0
$u=-0.398931-0.892202I$ $a=\ \ 0.834745+0.074502I$ $b=-0.743019+0.751372I$	$4.58774-5.09155I$	0
$u=\ \ 0.645792+0.799973I$ $a=\ \ 0.285156+0.007683I$ $b=\ \ 0.588642+0.643448I$	$1.69738+2.28323I$	0
$u=\ \ 0.645792-0.799973I$ $a=\ \ 0.285156-0.007683I$ $b=\ \ 0.588642-0.643448I$	$1.69738-2.28323I$	0
$u=-0.751624+0.604004I$ $a=\ \ 0.18526-2.11592I$ $b=-0.297311-0.628227I$	$-6.95730+2.32221I$	0
$u=-0.751624-0.604004I$ $a=\ \ 0.18526+2.11592I$ $b=-0.297311+0.628227I$	$-6.95730-2.32221I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.927322+0.255571I$ $a=-0.154516+0.769316I$ $b=-0.320781+1.056570I$	$-0.09944+1.66245I$	0
$u=-0.927322-0.255571I$ $a=-0.154516-0.769316I$ $b=-0.320781-1.056570I$	$-0.09944-1.66245I$	0
$u=0.887925+0.302340I$ $a=-0.299354-0.748760I$ $b=-1.58756-0.77790I$	$-6.61377+4.10167I$	0
$u=0.887925-0.302340I$ $a=-0.299354+0.748760I$ $b=-1.58756+0.77790I$	$-6.61377-4.10167I$	0
$u=0.700572+0.798714I$ $a=0.577755-0.588155I$ $b=1.338410-0.294958I$	$4.41321+0.49327I$	0
$u=0.700572-0.798714I$ $a=0.577755+0.588155I$ $b=1.338410+0.294958I$	$4.41321-0.49327I$	0
$u=-0.819668+0.376320I$ $a=-0.468203+1.175900I$ $b=-1.33128+1.44116I$	$-6.30926+8.22313I$	0
$u=-0.819668-0.376320I$ $a=-0.468203-1.175900I$ $b=-1.33128-1.44116I$	$-6.30926-8.22313I$	0
$u=0.794993+0.390347I$ $a=-0.155542-1.291390I$ $b=1.24485-1.06941I$	$1.85456-6.66524I$	0
$u=0.794993-0.390347I$ $a=-0.155542+1.291390I$ $b=1.24485+1.06941I$	$1.85456+6.66524I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.992411+0.559301I$ $a=-0.256575-1.132100I$ $b=\ \ 0.109802-0.482795I$	$-6.97250+2.76431I$	0
$u=-0.992411-0.559301I$ $a=-0.256575+1.132100I$ $b=\ \ 0.109802+0.482795I$	$-6.97250-2.76431I$	0
$u=-1.016370+0.514652I$ $a=\ \ 0.113323+0.981555I$ $b=\ \ 0.442694+1.098610I$	$-0.307621+1.054850I$	0
$u=-1.016370-0.514652I$ $a=\ \ 0.113323-0.981555I$ $b=\ \ 0.442694-1.098610I$	$-0.307621-1.054850I$	0
$u=\ \ 0.783658+0.839527I$ $a=-0.232652-0.491677I$ $b=\ \ 1.088250-0.358012I$	$5.64411-3.29713I$	0
$u=\ \ 0.783658-0.839527I$ $a=-0.232652+0.491677I$ $b=\ \ 1.088250+0.358012I$	$5.64411+3.29713I$	0
$u=\ \ 0.772392+0.261309I$ $a=\ \ 0.23922+1.65529I$ $b=\ \ 0.92824+1.39853I$	$-8.69968-1.42199I$	0
$u=\ \ 0.772392-0.261309I$ $a=\ \ 0.23922-1.65529I$ $b=\ \ 0.92824-1.39853I$	$-8.69968+1.42199I$	0
$u=\ \ 0.754514+0.276947I$ $a=-0.32775+2.60121I$ $b=\ \ 0.080369+1.137500I$	$-8.60566-0.81317I$	0
$u=\ \ 0.754514-0.276947I$ $a=-0.32775-2.60121I$ $b=\ \ 0.080369-1.137500I$	$-8.60566+0.81317I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.653902+0.457863I$ $a=-0.091022+1.039930I$ $b=\ \ 0.248927+0.754353I$	$-0.301195+1.328750I$	0
$u=-0.653902-0.457863I$ $a=-0.091022-1.039930I$ $b=\ \ 0.248927-0.754353I$	$-0.301195-1.328750I$	0
$u=\ \ 0.778139$ $a=\ \ 2.71056$ $b=\ \ 0.253134$	-2.10752	0
$u=\ \ 0.986047+0.760457I$ $a=\ \ 0.246197+1.252340I$ $b=-0.990587+0.961519I$	$0.85224-8.09504I$	0
$u=\ \ 0.986047-0.760457I$ $a=\ \ 0.246197-1.252340I$ $b=-0.990587-0.961519I$	$0.85224+8.09504I$	0
$u=-0.694300+0.284103I$ $a=-1.35570+1.82174I$ $b=\ \ 0.138687+0.871125I$	$-0.65973+2.45836I$	0
$u=-0.694300-0.284103I$ $a=-1.35570-1.82174I$ $b=\ \ 0.138687-0.871125I$	$-0.65973-2.45836I$	0
$u=-0.644494+0.341367I$ $a=\ \ 0.17207+3.88745I$ $b=\ \ 0.274695+0.835596I$	$-5.69889-5.28203I$	0
$u=-0.644494-0.341367I$ $a=\ \ 0.17207-3.88745I$ $b=\ \ 0.274695-0.835596I$	$-5.69889+5.28203I$	0
$u=\ \ 0.578089+0.442723I$ $a=\ \ 0.52803-3.87108I$ $b=\ \ 0.466703-0.384771I$	$-5.38362-7.14150I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.578089 - 0.442723I$ $a = 0.52803 + 3.87108I$ $b = 0.466703 + 0.384771I$	$-5.38362 + 7.14150I$	0
$u = -0.993572 + 0.801631I$ $a = -0.198392 - 0.784097I$ $b = -0.981533 - 0.850677I$	$-1.73300 + 4.30022I$	0
$u = -0.993572 - 0.801631I$ $a = -0.198392 + 0.784097I$ $b = -0.981533 + 0.850677I$	$-1.73300 - 4.30022I$	0
$u = 0.969380 + 0.897508I$ $a = 0.214456 - 1.096160I$ $b = 1.18899 - 1.21639I$	$1.74052 - 10.48820I$	0
$u = 0.969380 - 0.897508I$ $a = 0.214456 + 1.096160I$ $b = 1.18899 + 1.21639I$	$1.74052 + 10.48820I$	0
$u = 0.571480 + 0.349378I$ $a = 0.162785 + 0.461752I$ $b = -1.46297 + 0.68408I$	$-0.550623 - 1.155750I$	$0. + 9.52354I$
$u = 0.571480 - 0.349378I$ $a = 0.162785 - 0.461752I$ $b = -1.46297 - 0.68408I$	$-0.550623 + 1.155750I$	$0. - 9.52354I$
$u = 0.646667 + 0.157930I$ $a = -1.86555 + 1.47666I$ $b = -0.445822 + 0.624782I$	$2.08117 - 5.13424I$	$0. + 9.56633I$
$u = 0.646667 - 0.157930I$ $a = -1.86555 - 1.47666I$ $b = -0.445822 - 0.624782I$	$2.08117 + 5.13424I$	$0. - 9.56633I$
$u = 1.096790 + 0.760066I$ $a = -0.469877 + 1.140750I$ $b = -1.048700 + 0.777334I$	$3.17403 - 6.33099I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.096790 - 0.760066I$ $a = -0.469877 - 1.140750I$ $b = -1.048700 - 0.777334I$	$3.17403 + 6.33099I$	0
$u = 0.665121$ $a = -3.00914$ $b = 0.299281$	-9.80679	-71.6570
$u = -0.804129 + 1.139850I$ $a = -0.660591 + 0.539069I$ $b = 0.440518 + 0.824186I$	$1.94276 + 5.50841I$	0
$u = -0.804129 - 1.139850I$ $a = -0.660591 - 0.539069I$ $b = 0.440518 - 0.824186I$	$1.94276 - 5.50841I$	0
$u = 1.02823 + 0.99300I$ $a = -0.691003 + 0.097488I$ $b = -0.449010 - 0.350908I$	$1.83592 + 3.56054I$	0
$u = 1.02823 - 0.99300I$ $a = -0.691003 - 0.097488I$ $b = -0.449010 + 0.350908I$	$1.83592 - 3.56054I$	0
$u = 1.15815 + 0.85043I$ $a = 0.019191 + 0.727549I$ $b = -0.637514 + 0.265254I$	$4.52317 - 2.87684I$	0
$u = 1.15815 - 0.85043I$ $a = 0.019191 - 0.727549I$ $b = -0.637514 - 0.265254I$	$4.52317 + 2.87684I$	0
$u = -0.517394 + 0.218711I$ $a = 0.38948 - 2.40080I$ $b = -0.94523 - 1.19596I$	$2.61465 + 0.77345I$	$-61.138777 + 0.10I$
$u = -0.517394 - 0.218711I$ $a = 0.38948 + 2.40080I$ $b = -0.94523 + 1.19596I$	$2.61465 - 0.77345I$	$-61.138777 + 0.10I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.387563+0.385990I$ $a=-0.655661+1.116930I$ $b=\ \ 0.23435+2.08764I$	$0.416926-0.015506I$	$-10.35701+0.I$
$u=-0.387563-0.385990I$ $a=-0.655661-1.116930I$ $b=\ \ 0.23435-2.08764I$	$0.416926+0.015506I$	$-10.35701+0.I$
$u=\ \ 0.525179+0.030642I$ $a=\ \ 1.98553+0.13237I$ $b=-0.219757+0.080532I$	$-1.54159-0.00262I$	$-9.47854-0.67252I$
$u=\ \ 0.525179-0.030642I$ $a=\ \ 1.98553-0.13237I$ $b=-0.219757-0.080532I$	$-1.54159+0.00262I$	$-9.47854+0.67252I$
$u=-1.08161+1.04076I$ $a=\ \ 0.249928-0.089307I$ $b=-0.223261-0.241635I$	$-0.92678+2.59995I$	0
$u=-1.08161-1.04076I$ $a=\ \ 0.249928+0.089307I$ $b=-0.223261+0.241635I$	$-0.92678-2.59995I$	0
$u=-1.27100+0.88966I$ $a=\ \ 0.140122+1.152840I$ $b=\ \ 1.08021+1.07345I$	$-8.25214+9.72918I$	0
$u=-1.27100-0.88966I$ $a=\ \ 0.140122-1.152840I$ $b=\ \ 1.08021-1.07345I$	$-8.25214-9.72918I$	0
$u=\ \ 1.23138+0.94766I$ $a=-0.005878+1.239660I$ $b=-1.12230+1.17955I$	$-6.4341-17.3813I$	0
$u=\ \ 1.23138-0.94766I$ $a=-0.005878-1.239660I$ $b=-1.12230-1.17955I$	$-6.4341+17.3813I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.26485 + 0.95309I$ $a = -0.081517 - 1.100330I$ $b = 0.881525 - 0.992468I$	$-8.31362 - 8.50270I$	0
$u = 1.26485 - 0.95309I$ $a = -0.081517 + 1.100330I$ $b = 0.881525 + 0.992468I$	$-8.31362 + 8.50270I$	0
$u = -1.25584 + 1.02912I$ $a = 0.243511 - 0.984984I$ $b = -0.687246 - 1.235740I$	$-9.36023 + 3.54419I$	0
$u = -1.25584 - 1.02912I$ $a = 0.243511 + 0.984984I$ $b = -0.687246 + 1.235740I$	$-9.36023 - 3.54419I$	0
$u = -1.24611 + 1.22171I$ $a = 0.342846 - 0.640069I$ $b = -0.133519 - 1.161940I$	$-8.79053 + 5.40503I$	0
$u = -1.24611 - 1.22171I$ $a = 0.342846 + 0.640069I$ $b = -0.133519 + 1.161940I$	$-8.79053 - 5.40503I$	0
$u = 0.87706 + 1.53865I$ $a = 0.447462 + 0.116030I$ $b = 0.649803 + 0.664583I$	$-4.82272 + 8.99915I$	0
$u = 0.87706 - 1.53865I$ $a = 0.447462 - 0.116030I$ $b = 0.649803 - 0.664583I$	$-4.82272 - 8.99915I$	0
$u = -0.69060 + 2.02693I$ $a = -0.286871 + 0.036709I$ $b = -0.438732 + 0.301663I$	$-5.81231 - 1.18874I$	0
$u = -0.69060 - 2.02693I$ $a = -0.286871 - 0.036709I$ $b = -0.438732 - 0.301663I$	$-5.81231 + 1.18874I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.75755 + 1.86670I$ $a = -0.053853 - 0.275561I$ $b = -0.016508 - 0.416350I$	$-6.52629 - 0.82015I$	0
$u = 1.75755 - 1.86670I$ $a = -0.053853 + 0.275561I$ $b = -0.016508 + 0.416350I$	$-6.52629 + 0.82015I$	0

II.

$\boldsymbol{I_2^u = \langle -5.23\times 10^{27}u^{28}-3.00\times 10^{31}u^{27}+\cdots+1.50\times 10^{32}b-4.81\times 10^{32},\ -1.29\times 10^{32}u^{28}-5.79\times 10^{31}u^{27}+\cdots+5.01\times 10^{31}a-4.90\times 10^{32},\ u^{29}+u^{28}+\cdots+21u+3\rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 2.57292u^{28} + 1.15679u^{27} + \cdots + 63.6754u + 9.78444 \\ 0.0000348041u^{28} + 0.199524u^{27} + \cdots + 8.67018u + 3.20327 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.57289u^{28} + 0.957263u^{27} + \cdots + 55.0052u + 6.58117 \\ 0.0000348041u^{28} + 0.199524u^{27} + \cdots + 8.67018u + 3.20327 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.79204u^{28} + 0.733552u^{27} + \cdots + 37.4659u + 4.93756 \\ -0.314246u^{28} + 0.0213907u^{27} + \cdots - 0.687225u + 1.53184 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -3.24471u^{28} - 1.69039u^{27} + \cdots - 96.6982u - 18.4465 \\ 0.408609u^{28} + 0.311148u^{27} + \cdots + 18.9214u + 4.01399 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.185810u^{28} + 0.157422u^{27} + \cdots - 2.10794u - 2.40655 \\ -0.341340u^{28} - 0.0800480u^{27} + \cdots - 4.54704u + 0.861258 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 3.22279u^{28} + 1.26764u^{27} + \cdots + 77.0253u + 10.8296 \\ 0.365131u^{28} + 0.358995u^{27} + \cdots + 18.0397u + 4.82029 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -8.06599u^{28} - 3.42279u^{27} + \cdots - 230.140u - 41.5155 \\ 0.403654u^{28} + 0.104323u^{27} + \cdots + 6.04333u + 0.354646 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.483104u^{28} - 0.131607u^{27} + \cdots - 20.2628u - 2.96096 \\ -0.327574u^{28} - 0.208981u^{27} + \cdots - 11.6078u - 1.41567 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -5.91616u^{28} - 1.81620u^{27} + \cdots - 146.707u - 26.8536 \\ 0.412051u^{28} + 0.218241u^{27} + \cdots + 8.53478u + 0.756118 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 23.0581u^{28} + 9.80392u^{27} + \cdots + 642.920u + 117.030$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{29} - 15u^{28} + \cdots + 16u - 1$
c_2	$3(3u^{29} + 3u^{28} + \cdots + 1025u - 451)$
c_3	$3(3u^{29} + 6u^{28} + \cdots + 2u - 1)$
c_4	$3(3u^{29} + 3u^{28} + \cdots + 14u - 11)$
c_5	$u^{29} - u^{28} + \cdots - 36u - 12$
c_6	$u^{29} - 3u^{28} + \cdots + 2u^2 - 1$
c_7	$u^{29} + u^{28} + \cdots + 32u^2 - 12$
c_8	$u^{29} - 3u^{28} + \cdots + 4u - 1$
c_9	$u^{29} + u^{28} + \cdots + 21u + 3$
c_{10}	$u^{29} - 8u^{28} + \cdots - 18u - 3$
c_{11}	$u^{29} + 3u^{28} + \cdots + 4u + 1$
c_{12}	$u^{29} + u^{28} + \cdots - 36u + 12$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{29} - 25y^{28} + \cdots - 36y - 1$
c_2	$9(9y^{29} - 57y^{28} + \cdots + 16031y - 203401)$
c_3	$9(9y^{29} + 60y^{28} + \cdots - 20y - 1)$
c_4	$9(9y^{29} - 255y^{28} + \cdots + 790y - 121)$
c_5, c_{12}	$y^{29} + 13y^{28} + \cdots - 240y - 144$
c_6	$y^{29} + y^{28} + \cdots + 4y - 1$
c_7	$y^{29} + 23y^{28} + \cdots + 768y - 144$
c_8, c_{11}	$y^{29} - 11y^{28} + \cdots + 8y - 1$
c_9	$y^{29} + y^{28} + \cdots + 75y - 9$
c_{10}	$y^{29} - 26y^{28} + \cdots - 168y - 9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.806517+0.516536I$ $a=\ \ 0.31962-1.85273I$ $b=-0.875855-1.071580I$	$2.30873+1.98553I$	$-1.03185-3.58925I$
$u=-0.806517-0.516536I$ $a=\ \ 0.31962+1.85273I$ $b=-0.875855+1.071580I$	$2.30873-1.98553I$	$-1.03185+3.58925I$
$u=-0.376013+0.863829I$ $a=\ \ 0.609833+0.290857I$ $b=-0.775243-0.585801I$	$3.92717+5.34920I$	$-3.02498-8.09345I$
$u=-0.376013-0.863829I$ $a=\ \ 0.609833-0.290857I$ $b=-0.775243+0.585801I$	$3.92717-5.34920I$	$-3.02498+8.09345I$
$u=-0.761329+0.325566I$ $a=-0.092104+1.233530I$ $b=\ \ 0.24180+1.68427I$	$1.141070+0.487681I$	$-1.64816-2.39673I$
$u=-0.761329-0.325566I$ $a=-0.092104-1.233530I$ $b=\ \ 0.24180-1.68427I$	$1.141070-0.487681I$	$-1.64816+2.39673I$
$u=\ \ 0.951695+0.728084I$ $a=\ \ 0.084345-1.372000I$ $b=\ \ 1.15028-1.17037I$	$2.89282-8.83518I$	$-1.15031+8.18274I$
$u=\ \ 0.951695-0.728084I$ $a=\ \ 0.084345+1.372000I$ $b=\ \ 1.15028+1.17037I$	$2.89282+8.83518I$	$-1.15031-8.18274I$
$u=\ \ 0.722786+0.295555I$ $a=-0.28221-2.25960I$ $b=-0.45710-1.35183I$	$-8.18041-1.29267I$	$0.59850+4.44307I$
$u=\ \ 0.722786-0.295555I$ $a=-0.28221+2.25960I$ $b=-0.45710+1.35183I$	$-8.18041+1.29267I$	$0.59850-4.44307I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.161620 + 0.403726I$ $a = -0.766271 - 0.342291I$ $b = -0.575631 - 0.549188I$	$2.72207 + 3.67553I$	$0.30401 - 6.37797I$
$u = 1.161620 - 0.403726I$ $a = -0.766271 + 0.342291I$ $b = -0.575631 + 0.549188I$	$2.72207 - 3.67553I$	$0.30401 + 6.37797I$
$u = 0.745964 + 0.981340I$ $a = 0.256143 - 0.234841I$ $b = 1.202530 - 0.218214I$	$5.80126 - 1.19075I$	$1.61034 + 0.91379I$
$u = 0.745964 - 0.981340I$ $a = 0.256143 + 0.234841I$ $b = 1.202530 + 0.218214I$	$5.80126 + 1.19075I$	$1.61034 - 0.91379I$
$u = -0.800606 + 0.948142I$ $a = -0.867670 + 0.863482I$ $b = 0.563358 + 0.889807I$	$2.62362 + 4.59244I$	$-1.28176 - 3.75492I$
$u = -0.800606 - 0.948142I$ $a = -0.867670 - 0.863482I$ $b = 0.563358 - 0.889807I$	$2.62362 - 4.59244I$	$-1.28176 + 3.75492I$
$u = -0.643595$ $a = 3.01131$ $b = -0.392109$	-9.74623	60.6330
$u = 1.004300 + 0.955261I$ $a = -0.032582 + 1.080360I$ $b = -0.924689 + 0.609270I$	$5.06041 - 5.96533I$	$1.54179 + 5.79885I$
$u = 1.004300 - 0.955261I$ $a = -0.032582 - 1.080360I$ $b = -0.924689 - 0.609270I$	$5.06041 + 5.96533I$	$1.54179 - 5.79885I$
$u = -0.207866 + 0.499044I$ $a = 2.87124 - 2.21164I$ $b = 0.579550 - 0.346272I$	$-5.47528 + 6.38037I$	$-5.81773 - 3.65881I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.207866-0.499044I$ $a=\ \ 2.87124+2.21164I$ $b=\ \ 0.579550+0.346272I$	$-5.47528-6.38037I$	$-5.81773+3.65881I$
$u=-0.96885+1.14802I$ $a=-0.007745+0.277103I$ $b=\ \ 0.446352+0.422725I$	$-0.75290+2.89272I$	$0.77680-13.45784I$
$u=-0.96885-1.14802I$ $a=-0.007745-0.277103I$ $b=\ \ 0.446352-0.422725I$	$-0.75290-2.89272I$	$0.77680+13.45784I$
$u=-0.389960+0.190898I$ $a=-1.56607+0.76115I$ $b=\ \ 1.068000+0.724990I$	$-0.493972+0.619932I$	$-3.41568+4.02939I$
$u=-0.389960-0.190898I$ $a=-1.56607-0.76115I$ $b=\ \ 1.068000-0.724990I$	$-0.493972-0.619932I$	$-3.41568-4.02939I$
$u=-1.30370+1.13616I$ $a=\ \ 0.244319-0.753395I$ $b=-0.376916-1.107240I$	$-8.60956+4.62804I$	0
$u=-1.30370-1.13616I$ $a=\ \ 0.244319+0.753395I$ $b=-0.376916+1.107240I$	$-8.60956-4.62804I$	0
$u=\ \ 0.85028+1.74655I$ $a=-0.276509-0.340069I$ $b=-0.070381-0.231703I$	$-6.31659-0.95842I$	0
$u=\ \ 0.85028-1.74655I$ $a=-0.276509+0.340069I$ $b=-0.070381+0.231703I$	$-6.31659+0.95842I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{29}-15u^{28}+\cdots+16u-1)$ $\cdot(u^{82}+14u^{81}+\cdots-99113733u+12092767)$
c_2	$9(3u^{29}+3u^{28}+\cdots+1025u-451)$ $\cdot(3u^{82}+12u^{81}+\cdots+1104636816u-102449797)$
c_3	$9(3u^{29}+6u^{28}+\cdots+2u-1)(3u^{82}+3u^{81}+\cdots+7u+1)$
c_4	$9(3u^{29}+3u^{28}+\cdots+14u-11)$ $\cdot(3u^{82}-140u^{80}+\cdots-10653u-4399)$
c_5	$(u^{29}-u^{28}+\cdots-36u-12)(u^{82}+10u^{80}+\cdots-1416u-528)$
c_6	$(u^{29}-3u^{28}+\cdots+2u^2-1)(u^{82}+2u^{81}+\cdots+29u-47)$
c_7	$(u^{29}+u^{28}+\cdots+32u^2-12)(u^{82}+23u^{80}+\cdots-84216u-19056)$
c_8	$(u^{29}-3u^{28}+\cdots+4u-1)(u^{82}+2u^{81}+\cdots+169u-97)$
c_9	$(u^{29}+u^{28}+\cdots+21u+3)(u^{82}-4u^{81}+\cdots-894u+237)$
c_{10}	$(u^{29}-8u^{28}+\cdots-18u-3)(u^{82}-3u^{81}+\cdots+5918619u-282651)$
c_{11}	$(u^{29}+3u^{28}+\cdots+4u+1)(u^{82}+2u^{81}+\cdots+169u-97)$
c_{12}	$(u^{29}+u^{28}+\cdots-36u+12)(u^{82}+10u^{80}+\cdots-1416u-528)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{29}-25y^{28}+\cdots-36y-1)$ $\cdot(y^{82}-126y^{81}+\cdots-2530004844652363y+146235013716289)$
c_2	$81(9y^{29}-57y^{28}+\cdots+16031y-203401)$ $\cdot(9y^{82}-390y^{81}+\cdots-204245228366900018y+10495960905341209)$
c_3	$81(9y^{29}+60y^{28}+\cdots-20y-1)(9y^{82}+123y^{81}+\cdots-27y+1)$
c_4	$81(9y^{29}-255y^{28}+\cdots+790y-121)$ $\cdot(9y^{82}-840y^{81}+\cdots-10285869y+19351201)$
c_5, c_{12}	$(y^{29}+13y^{28}+\cdots-240y-144)$ $\cdot(y^{82}+20y^{81}+\cdots-716736y+278784)$
c_6	$(y^{29}+y^{28}+\cdots+4y-1)(y^{82}-8y^{81}+\cdots-9959y+2209)$
c_7	$(y^{29}+23y^{28}+\cdots+768y-144)$ $\cdot(y^{82}+46y^{81}+\cdots+23494984512y+363131136)$
c_8, c_{11}	$(y^{29}-11y^{28}+\cdots+8y-1)(y^{82}-28y^{81}+\cdots-256511y+9409)$
c_9	$(y^{29}+y^{28}+\cdots+75y-9)(y^{82}-12y^{81}+\cdots-2374338y+56169)$
c_{10}	$(y^{29}-26y^{28}+\cdots-168y-9)$ $\cdot(y^{82}-111y^{81}+\cdots-288406262487y+79891587801)$