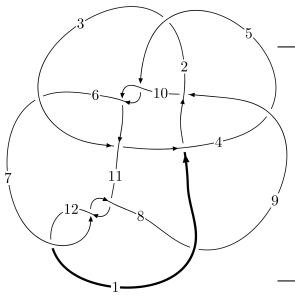
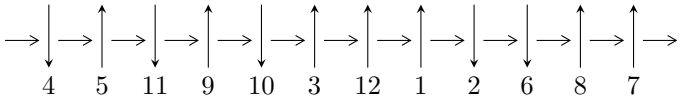
$12a_{0865}$ $(K12a_{0865})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 5.19820 \times 10^{201} u^{139} + 6.60058 \times 10^{201} u^{138} + \cdots + 2.86650 \times 10^{201} b - 1.70750 \times 10^{201}, \\ & 6.84846 \times 10^{202} u^{139} + 1.27131 \times 10^{203} u^{138} + \cdots + 2.86650 \times 10^{201} a - 4.52189 \times 10^{203}, \\ & u^{140} + 2u^{139} + \cdots - 29u - 1 \rangle \\ I_2^u = \langle & -17u^{25} - 137u^{24} + \cdots + 31b - 49,\ -127u^{25} - 274u^{24} + \cdots + 31a - 315,\ u^{26} + u^{25} + \cdots + 6u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 166 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. $\boldsymbol{I_1^u = \langle 5.20 \times 10^{201} u^{139} + 6.60 \times 10^{201} u^{138} + \cdots + 2.87 \times 10^{201} b - 1.71 \times 10^{201},\ 6.85 \times 10^{202} u^{139} + 1.27 \times 10^{203} u^{138} + \cdots + 2.87 \times 10^{201} a - 4.52 \times 10^{203},\ u^{140} + 2u^{139} + \cdots - 29u - 1 \rangle}$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_4 = \begin{pmatrix} -23.8914u^{139} - 44.3507u^{138} + \cdots + 3396.80u + 157.750 \\ -1.81343u^{139} - 2.30267u^{138} + \cdots + 38.5060u + 0.595675 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -4.24614u^{139} - 11.1656u^{138} + \cdots + 511.349u + 4.19872 \\ 0.0697095u^{139} - 1.99479u^{138} + \cdots - 220.467u - 7.87942 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^4 - u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -27.0046u^{139} - 46.2135u^{138} + \cdots + 3518.44u + 162.574 \\ -1.23012u^{139} + 2.21877u^{138} + \cdots - 41.5813u - 2.31366 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -25.2211u^{139} - 44.6624u^{138} + \cdots + 3446.08u + 160.211 \\ -0.652155u^{139} + 1.76471u^{138} + \cdots - 77.5282u - 4.21315 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 13.6940u^{139} + 26.6243u^{138} + \cdots - 1236.53u - 28.6211 \\ 2.72181u^{139} + 7.06780u^{138} + \cdots - 331.465u - 15.6455 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.00786984u^{139} - 1.16765u^{138} + \cdots - 309.091u - 43.0354 \\ -1.98484u^{139} - 8.29039u^{138} + \cdots + 454.057u + 21.0848 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6.89858u^{139} - 15.8047u^{138} + \cdots + 1204.83u + 62.7229$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{140} + 11u^{139} + \cdots - 24651u - 2513$
c_2	$u^{140} - 9u^{139} + \cdots + 270u + 7$
c_3	$u^{140} - 8u^{138} + \cdots - 94043u + 17197$
c_4	$u^{140} + 3u^{139} + \cdots + 8798u - 3781$
c_5, c_{10}	$u^{140} - 50u^{138} + \cdots - 4u - 1$
c_6	$u^{140} + 2u^{139} + \cdots - 20u - 1$
c_7, c_{11}, c_{12}	$u^{140} - 2u^{139} + \cdots + 29u - 1$
c_8	$u^{140} + 2u^{139} + \cdots + 1113371u - 44197$
c_9	$u^{140} - 2u^{139} + \cdots + 71035u - 11231$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{140} + y^{139} + \cdots - 2719370831y + 6315169$
c_2	$y^{140} + 15y^{139} + \cdots - 2382y + 49$
c_3	$y^{140} - 16y^{139} + \cdots - 26838854679y + 295736809$
c_4	$y^{140} - 25y^{139} + \cdots - 1468752308y + 14295961$
c_5, c_{10}	$y^{140} - 100y^{139} + \cdots - 192y + 1$
c_6	$y^{140} + 8y^{139} + \cdots + 32y + 1$
c_7, c_{11}, c_{12}	$y^{140} + 122y^{139} + \cdots - 197y + 1$
c_8	$y^{140} - 44y^{139} + \cdots - 361041802395y + 1953374809$
c_9	$y^{140} - 28y^{139} + \cdots - 7929328317y + 126135361$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.699032+0.735483I$ $a=-0.002897-0.339529I$ $b=\ \ 0.213622+0.152636I$	$0.77056-2.64531I$	0
$u=-0.699032-0.735483I$ $a=-0.002897+0.339529I$ $b=\ \ 0.213622-0.152636I$	$0.77056+2.64531I$	0
$u=\ \ 0.544207+0.805924I$ $a=-0.489701-0.895906I$ $b=-0.438060+0.011080I$	$-4.10669+8.88255I$	0
$u=\ \ 0.544207-0.805924I$ $a=-0.489701+0.895906I$ $b=-0.438060-0.011080I$	$-4.10669-8.88255I$	0
$u=\ \ 0.394579+0.859613I$ $a=-1.131630+0.715654I$ $b=-0.079745+0.891189I$	$-0.29782-2.37813I$	0
$u=\ \ 0.394579-0.859613I$ $a=-1.131630-0.715654I$ $b=-0.079745-0.891189I$	$-0.29782+2.37813I$	0
$u=\ \ 0.472498+0.968616I$ $a=\ \ 0.829026-1.037290I$ $b=-0.219589-0.656120I$	$1.70342-4.58350I$	0
$u=\ \ 0.472498-0.968616I$ $a=\ \ 0.829026+1.037290I$ $b=-0.219589+0.656120I$	$1.70342+4.58350I$	0
$u=-0.460890+0.977356I$ $a=-0.88656-1.48895I$ $b=\ \ 0.362261-0.992992I$	$-3.34831+10.32660I$	0
$u=-0.460890-0.977356I$ $a=-0.88656+1.48895I$ $b=\ \ 0.362261+0.992992I$	$-3.34831-10.32660I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.286617+0.845325I$ $a=-1.022550+0.191229I$ $b=-0.283574+0.113795I$	$-0.20232-1.86529I$	0
$u=-0.286617-0.845325I$ $a=-1.022550-0.191229I$ $b=-0.283574-0.113795I$	$-0.20232+1.86529I$	0
$u=\ \ 0.798963+0.394167I$ $a=-0.0640261+0.0498232I$ $b=-0.630429+0.028242I$	$-2.77125-4.07901I$	0
$u=\ \ 0.798963-0.394167I$ $a=-0.0640261-0.0498232I$ $b=-0.630429-0.028242I$	$-2.77125+4.07901I$	0
$u=-0.853631+0.194477I$ $a=-0.1209890+0.0240797I$ $b=-0.471244-0.957436I$	$4.00764-2.40019I$	0
$u=-0.853631-0.194477I$ $a=-0.1209890-0.0240797I$ $b=-0.471244+0.957436I$	$4.00764+2.40019I$	0
$u=-0.806277+0.337217I$ $a=-0.323402-0.104556I$ $b=\ \ 0.326147+0.688530I$	$1.29205-2.18437I$	0
$u=-0.806277-0.337217I$ $a=-0.323402+0.104556I$ $b=\ \ 0.326147-0.688530I$	$1.29205+2.18437I$	0
$u=-0.234226+1.101490I$ $a=\ \ 1.30344+2.09572I$ $b=\ \ 0.30641+1.61658I$	$-4.83691+1.38716I$	0
$u=-0.234226-1.101490I$ $a=\ \ 1.30344-2.09572I$ $b=\ \ 0.30641-1.61658I$	$-4.83691-1.38716I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.835619 + 0.222340I$ $a = 0.1004540 - 0.0066237I$ $b = -0.82637 + 1.36466I$	$4.00903 + 9.23441I$	0
$u = 0.835619 - 0.222340I$ $a = 0.1004540 + 0.0066237I$ $b = -0.82637 - 1.36466I$	$4.00903 - 9.23441I$	0
$u = -0.836214 + 0.217940I$ $a = 0.0298363 - 0.0339143I$ $b = 1.10522 + 1.58007I$	$-1.0018 - 14.9566I$	0
$u = -0.836214 - 0.217940I$ $a = 0.0298363 + 0.0339143I$ $b = 1.10522 - 1.58007I$	$-1.0018 + 14.9566I$	0
$u = -0.512843 + 1.037880I$ $a = 0.448547 + 0.469658I$ $b = -0.060475 + 0.554886I$	$1.44816 - 2.40172I$	0
$u = -0.512843 - 1.037880I$ $a = 0.448547 - 0.469658I$ $b = -0.060475 - 0.554886I$	$1.44816 + 2.40172I$	0
$u = 0.793750 + 0.246725I$ $a = 0.293281 + 0.080782I$ $b = 0.43556 - 1.48959I$	$1.69280 + 6.70388I$	0
$u = 0.793750 - 0.246725I$ $a = 0.293281 - 0.080782I$ $b = 0.43556 + 1.48959I$	$1.69280 - 6.70388I$	0
$u = -0.824639$ $a = -0.567248$ $b = 1.18239$	0.488916	0
$u = 0.154361 + 1.181950I$ $a = -1.68351 + 1.36233I$ $b = -0.540055 + 1.146340I$	$-1.56656 - 1.31155I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.154361 - 1.181950I$ $a = -1.68351 - 1.36233I$ $b = -0.540055 - 1.146340I$	$-1.56656 + 1.31155I$	0
$u = 0.793092$ $a = -0.0806651$ $b = 1.53427$	-2.58349	0
$u = 0.791372$ $a = 0.799386$ $b = 0.861709$	2.30047	0
$u = -0.750566 + 0.146215I$ $a = -0.0957158 - 0.0484548I$ $b = -1.20575 - 1.93727I$	$-2.02859 - 5.11462I$	0
$u = -0.750566 - 0.146215I$ $a = -0.0957158 + 0.0484548I$ $b = -1.20575 + 1.93727I$	$-2.02859 + 5.11462I$	0
$u = 0.263724 + 1.213630I$ $a = -2.28924 + 1.40544I$ $b = -1.20765 + 1.17964I$	$-2.23381 - 2.33627I$	0
$u = 0.263724 - 1.213630I$ $a = -2.28924 - 1.40544I$ $b = -1.20765 - 1.17964I$	$-2.23381 + 2.33627I$	0
$u = 0.101179 + 1.246570I$ $a = 1.42493 - 1.52688I$ $b = 1.73158 - 1.63248I$	$-5.53848 - 4.43348I$	0
$u = 0.101179 - 1.246570I$ $a = 1.42493 + 1.52688I$ $b = 1.73158 + 1.63248I$	$-5.53848 + 4.43348I$	0
$u = -0.239253 + 1.231670I$ $a = -1.74160 + 0.07198I$ $b = -1.038660 - 0.033582I$	$-1.23220 - 2.64621I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.239253-1.231670I$ $a=-1.74160-0.07198I$ $b=-1.038660+0.033582I$	$-1.23220+2.64621I$	0
$u=-0.250859+1.242540I$ $a=2.29923+1.40989I$ $b=1.21683+2.45378I$	$-3.20135+1.99274I$	0
$u=-0.250859-1.242540I$ $a=2.29923-1.40989I$ $b=1.21683-2.45378I$	$-3.20135-1.99274I$	0
$u=-0.354369+1.218200I$ $a=0.791897-0.893559I$ $b=1.282500+0.117755I$	$-3.25883-4.26153I$	0
$u=-0.354369-1.218200I$ $a=0.791897+0.893559I$ $b=1.282500-0.117755I$	$-3.25883+4.26153I$	0
$u=0.263563+1.244070I$ $a=-1.74414+0.50928I$ $b=-1.32904+1.54589I$	$0.89939+1.62384I$	0
$u=0.263563-1.244070I$ $a=-1.74414-0.50928I$ $b=-1.32904-1.54589I$	$0.89939-1.62384I$	0
$u=0.704979+0.164031I$ $a=-0.150435+0.275954I$ $b=0.75076-1.65751I$	$1.17772+4.48967I$	$0.-7.53783I$
$u=0.704979-0.164031I$ $a=-0.150435-0.275954I$ $b=0.75076+1.65751I$	$1.17772-4.48967I$	$0.+7.53783I$
$u=-0.138523+1.273300I$ $a=1.91958+1.67472I$ $b=0.27945+1.45817I$	$-5.52155+3.54608I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.138523-1.273300I$ $a=1.91958-1.67472I$ $b=0.27945-1.45817I$	$-5.52155-3.54608I$	0
$u=0.680138+0.223925I$ $a=-0.193380+0.683004I$ $b=-0.774622+1.149680I$	$-3.19836+6.87023I$	$0.-7.99221I$
$u=0.680138-0.223925I$ $a=-0.193380-0.683004I$ $b=-0.774622-1.149680I$	$-3.19836-6.87023I$	$0.+7.99221I$
$u=0.709719+0.068224I$ $a=-0.683746-0.317946I$ $b=0.11986-1.99234I$	$1.24243+5.87125I$	$6.34904-7.19748I$
$u=0.709719-0.068224I$ $a=-0.683746+0.317946I$ $b=0.11986+1.99234I$	$1.24243-5.87125I$	$6.34904+7.19748I$
$u=-0.709889+0.062652I$ $a=-0.600356+0.023567I$ $b=-0.331801+0.869990I$	$2.27965-0.78103I$	$5.12667+2.33382I$
$u=-0.709889-0.062652I$ $a=-0.600356-0.023567I$ $b=-0.331801-0.869990I$	$2.27965+0.78103I$	$5.12667-2.33382I$
$u=0.338264+1.242640I$ $a=0.885981+0.992035I$ $b=0.645640+0.882198I$	$-1.53639+4.07833I$	0
$u=0.338264-1.242640I$ $a=0.885981-0.992035I$ $b=0.645640-0.882198I$	$-1.53639-4.07833I$	0
$u=-0.237859+1.267520I$ $a=1.87506+0.52134I$ $b=1.072570+0.110917I$	$-0.87635-1.45469I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.237859-1.267520I$ $a=\ 1.87506-0.52134I$ $b=\ 1.072570-0.110917I$	$-0.87635+1.45469I$	0
$u=-0.153130+1.286400I$ $a=-2.33191-0.81105I$ $b=-2.28428-1.09051I$	$-2.59239-0.40513I$	0
$u=-0.153130-1.286400I$ $a=-2.33191+0.81105I$ $b=-2.28428+1.09051I$	$-2.59239+0.40513I$	0
$u=\ 0.702759+0.035024I$ $a=\ 0.853019+0.137797I$ $b=-0.55503-1.35140I$	$4.60287+1.87168I$	$11.89122-4.10578I$
$u=\ 0.702759-0.035024I$ $a=\ 0.853019-0.137797I$ $b=-0.55503+1.35140I$	$4.60287-1.87168I$	$11.89122+4.10578I$
$u=\ 0.335754+0.602836I$ $a=\ 0.93091-1.29214I$ $b=\ 0.421732-0.159334I$	$-4.69130-3.41875I$	$-4.42625+2.23362I$
$u=\ 0.335754-0.602836I$ $a=\ 0.93091+1.29214I$ $b=\ 0.421732+0.159334I$	$-4.69130+3.41875I$	$-4.42625-2.23362I$
$u=-0.678583+0.049366I$ $a=-0.957749+0.458206I$ $b=\ 0.36880-2.25617I$	$0.45229-5.35060I$	$7.25971+5.20115I$
$u=-0.678583-0.049366I$ $a=-0.957749-0.458206I$ $b=\ 0.36880+2.25617I$	$0.45229+5.35060I$	$7.25971-5.20115I$
$u=\ 0.282654+1.290250I$ $a=\ 1.09719-1.34918I$ $b=-0.056532-0.990814I$	$0.47298+5.43679I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.282654 - 1.290250I$ $a = 1.09719 + 1.34918I$ $b = -0.056532 + 0.990814I$	$0.47298 - 5.43679I$	0
$u = 0.216260 + 1.312170I$ $a = 0.402189 + 0.478964I$ $b = 0.851919 - 0.831079I$	$-7.97931 + 2.80431I$	0
$u = 0.216260 - 1.312170I$ $a = 0.402189 - 0.478964I$ $b = 0.851919 + 0.831079I$	$-7.97931 - 2.80431I$	0
$u = -0.255683 + 1.305510I$ $a = -0.90800 - 1.66526I$ $b = -0.70433 - 2.40393I$	$-1.28242 - 4.99790I$	0
$u = -0.255683 - 1.305510I$ $a = -0.90800 + 1.66526I$ $b = -0.70433 + 2.40393I$	$-1.28242 + 4.99790I$	0
$u = -0.295633 + 1.297610I$ $a = 0.644611 + 1.000810I$ $b = 0.45480 + 1.38839I$	$-1.96637 - 4.43266I$	0
$u = -0.295633 - 1.297610I$ $a = 0.644611 - 1.000810I$ $b = 0.45480 - 1.38839I$	$-1.96637 + 4.43266I$	0
$u = -0.270539 + 1.306760I$ $a = -1.98197 - 2.10546I$ $b = -0.25403 - 1.98172I$	$-3.79851 - 8.78428I$	0
$u = -0.270539 - 1.306760I$ $a = -1.98197 + 2.10546I$ $b = -0.25403 + 1.98172I$	$-3.79851 + 8.78428I$	0
$u = -0.616335 + 0.237274I$ $a = -0.050993 + 1.088220I$ $b = -0.87278 - 1.49764I$	$-2.54122 - 5.60876I$	$-1.84378 + 7.59056I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.616335-0.237274I$ $a=-0.050993-1.088220I$ $b=-0.87278+1.49764I$	$-2.54122+5.60876I$	$-1.84378-7.59056I$
$u=0.288865+1.311520I$ $a=2.04975-1.85069I$ $b=1.44642-2.60044I$	$-3.08162+9.48378I$	0
$u=0.288865-1.311520I$ $a=2.04975+1.85069I$ $b=1.44642+2.60044I$	$-3.08162-9.48378I$	0
$u=0.196363+1.336460I$ $a=2.42702+0.15394I$ $b=2.07468-0.64978I$	$-8.11323+3.27890I$	0
$u=0.196363-1.336460I$ $a=2.42702-0.15394I$ $b=2.07468+0.64978I$	$-8.11323-3.27890I$	0
$u=-0.647650+0.036056I$ $a=1.364760-0.168535I$ $b=0.230064-1.253090I$	$2.93048-1.72674I$	$7.21258+2.95499I$
$u=-0.647650-0.036056I$ $a=1.364760+0.168535I$ $b=0.230064+1.253090I$	$2.93048+1.72674I$	$7.21258-2.95499I$
$u=-0.415644+0.496287I$ $a=1.06763+1.02386I$ $b=-0.884039+0.741752I$	$-3.46790+2.34643I$	$-3.04341-0.92950I$
$u=-0.415644-0.496287I$ $a=1.06763-1.02386I$ $b=-0.884039-0.741752I$	$-3.46790-2.34643I$	$-3.04341+0.92950I$
$u=0.347685+1.307660I$ $a=1.59582+1.05007I$ $b=1.76428+0.05092I$	$-6.70121+4.11313I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.347685 - 1.307660I$ $a = 1.59582 - 1.05007I$ $b = 1.76428 - 0.05092I$	$-6.70121 - 4.11313I$	0
$u = 0.000861 + 1.383150I$ $a = 0.168138 + 0.031688I$ $b = -0.251627 - 1.128170I$	$-10.94410 + 2.03541I$	0
$u = 0.000861 - 1.383150I$ $a = 0.168138 - 0.031688I$ $b = -0.251627 + 1.128170I$	$-10.94410 - 2.03541I$	0
$u = -0.554619 + 0.267239I$ $a = -0.361565 + 0.484477I$ $b = 0.053646 + 0.830344I$	$0.77541 - 1.50731I$	$-0.80674 + 3.53769I$
$u = -0.554619 - 0.267239I$ $a = -0.361565 - 0.484477I$ $b = 0.053646 - 0.830344I$	$0.77541 + 1.50731I$	$-0.80674 - 3.53769I$
$u = -0.316855 + 1.352120I$ $a = -3.06791 - 0.70498I$ $b = -2.32383 - 1.85395I$	$-6.75326 - 8.98336I$	0
$u = -0.316855 - 1.352120I$ $a = -3.06791 + 0.70498I$ $b = -2.32383 + 1.85395I$	$-6.75326 + 8.98336I$	0
$u = 0.295740 + 1.358740I$ $a = 2.36365 - 0.87968I$ $b = 1.67826 - 1.90924I$	$-3.63387 + 8.13829I$	0
$u = 0.295740 - 1.358740I$ $a = 2.36365 + 0.87968I$ $b = 1.67826 + 1.90924I$	$-3.63387 - 8.13829I$	0
$u = 0.047339 + 1.403100I$ $a = 0.339250 + 0.232601I$ $b = 0.635018 - 0.562878I$	$-6.94612 - 0.75092I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.047339 - 1.403100I$ $a = 0.339250 - 0.232601I$ $b = 0.635018 + 0.562878I$	$-6.94612 + 0.75092I$	0
$u = 0.129065 + 0.579302I$ $a = 0.85917 + 2.25285I$ $b = 0.419221 + 0.320317I$	$-5.00483 + 1.82985I$	$-6.73370 - 4.41022I$
$u = 0.129065 - 0.579302I$ $a = 0.85917 - 2.25285I$ $b = 0.419221 - 0.320317I$	$-5.00483 - 1.82985I$	$-6.73370 + 4.41022I$
$u = -0.260839 + 1.382420I$ $a = -2.31093 - 0.68137I$ $b = -1.50678 - 1.91307I$	$-7.66741 - 8.86666I$	0
$u = -0.260839 - 1.382420I$ $a = -2.31093 + 0.68137I$ $b = -1.50678 + 1.91307I$	$-7.66741 + 8.86666I$	0
$u = 0.281620 + 1.380760I$ $a = -2.28920 + 0.47079I$ $b = -2.06685 + 0.91123I$	$-8.27911 + 10.39120I$	0
$u = 0.281620 - 1.380760I$ $a = -2.28920 - 0.47079I$ $b = -2.06685 - 0.91123I$	$-8.27911 - 10.39120I$	0
$u = -0.252929 + 1.390350I$ $a = 1.56778 + 0.82379I$ $b = 1.39729 + 1.20425I$	$-4.47207 - 4.60035I$	0
$u = -0.252929 - 1.390350I$ $a = 1.56778 - 0.82379I$ $b = 1.39729 - 1.20425I$	$-4.47207 + 4.60035I$	0
$u = -0.35800 + 1.38540I$ $a = -1.49032 - 0.37570I$ $b = -1.06550 - 1.01527I$	$-0.98605 - 6.75226I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.35800-1.38540I$ $a=-1.49032+0.37570I$ $b=-1.06550+1.01527I$	$-0.98605+6.75226I$	0
$u=\ 0.139251+0.547050I$ $a=-1.28917+1.14830I$ $b=\ 0.197964+0.374273I$	$-0.93843-1.45328I$	$-2.95166+1.50514I$
$u=\ 0.139251-0.547050I$ $a=-1.28917-1.14830I$ $b=\ 0.197964-0.374273I$	$-0.93843+1.45328I$	$-2.95166-1.50514I$
$u=\ 0.06789+1.43640I$ $a=\ 0.756344+0.414480I$ $b=\ 0.614396+1.184790I$	$-11.16280-2.17630I$	0
$u=\ 0.06789-1.43640I$ $a=\ 0.756344-0.414480I$ $b=\ 0.614396-1.184790I$	$-11.16280+2.17630I$	0
$u=\ 0.560453$ $a=-2.29076$ $b=\ 0.803012$	-3.80246	1.20200
$u=-0.34940+1.39853I$ $a=\ 2.41537+0.60097I$ $b=\ 1.88452+1.73632I$	$-6.1257-19.2315I$	0
$u=-0.34940-1.39853I$ $a=\ 2.41537-0.60097I$ $b=\ 1.88452-1.73632I$	$-6.1257+19.2315I$	0
$u=\ 0.34817+1.39964I$ $a=-2.01913+0.65937I$ $b=-1.59183+1.64806I$	$-1.13256+13.50210I$	0
$u=\ 0.34817-1.39964I$ $a=-2.01913-0.65937I$ $b=-1.59183-1.64806I$	$-1.13256-13.50210I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.11930+1.43951I$ $a=-0.741681+1.053440I$ $b=-1.187150+0.194659I$	$-9.65636+0.48989I$	0
$u=-0.11930-1.43951I$ $a=-0.741681-1.053440I$ $b=-1.187150-0.194659I$	$-9.65636-0.48989I$	0
$u=0.32706+1.40776I$ $a=1.80093-0.93488I$ $b=1.04294-1.60093I$	$-3.56618+10.76380I$	0
$u=0.32706-1.40776I$ $a=1.80093+0.93488I$ $b=1.04294+1.60093I$	$-3.56618-10.76380I$	0
$u=0.521576+0.167755I$ $a=-0.096220+0.277378I$ $b=1.270040-0.515394I$	$-3.42563+0.66649I$	$-0.45885-2.75418I$
$u=0.521576-0.167755I$ $a=-0.096220-0.277378I$ $b=1.270040+0.515394I$	$-3.42563-0.66649I$	$-0.45885+2.75418I$
$u=0.25366+1.45092I$ $a=-1.054440+0.073125I$ $b=-0.995392+0.395885I$	$-8.80871-0.38474I$	0
$u=0.25366-1.45092I$ $a=-1.054440-0.073125I$ $b=-0.995392-0.395885I$	$-8.80871+0.38474I$	0
$u=-0.35205+1.43479I$ $a=1.185550+0.416143I$ $b=1.08229+1.21643I$	$-4.32526-6.46466I$	0
$u=-0.35205-1.43479I$ $a=1.185550-0.416143I$ $b=1.08229-1.21643I$	$-4.32526+6.46466I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.06057+1.48332I$ $a=-0.091101+0.234604I$ $b=-0.246697+0.908005I$	$-6.80931-4.55618I$	0
$u=-0.06057-1.48332I$ $a=-0.091101-0.234604I$ $b=-0.246697-0.908005I$	$-6.80931+4.55618I$	0
$u=0.04907+1.48476I$ $a=0.0491940-0.0865460I$ $b=0.335989+0.737270I$	$-11.7320+10.3068I$	0
$u=0.04907-1.48476I$ $a=0.0491940+0.0865460I$ $b=0.335989-0.737270I$	$-11.7320-10.3068I$	0
$u=0.06103+1.49160I$ $a=-0.055806+0.650492I$ $b=0.287980+0.259097I$	$-7.66364-1.37063I$	0
$u=0.06103-1.49160I$ $a=-0.055806-0.650492I$ $b=0.287980-0.259097I$	$-7.66364+1.37063I$	0
$u=-0.191515+0.006450I$ $a=-0.78891+3.15074I$ $b=-0.814477+0.455138I$	$1.22097-1.26060I$	$6.72230-0.52246I$
$u=-0.191515-0.006450I$ $a=-0.78891-3.15074I$ $b=-0.814477-0.455138I$	$1.22097+1.26060I$	$6.72230+0.52246I$
$u=-0.0880343+0.0402927I$ $a=-3.45905+11.49730I$ $b=0.546837-0.884330I$	$-1.92018-4.82836I$	$-0.56326+7.48494I$
$u=-0.0880343-0.0402927I$ $a=-3.45905-11.49730I$ $b=0.546837+0.884330I$	$-1.92018+4.82836I$	$-0.56326-7.48494I$

II. $I_2^u = \langle -17u^{25} - 137u^{24} + \cdots + 31b - 49,\ -127u^{25} - 274u^{24} + \cdots + 31a - 315,\ u^{26} + u^{25} + \cdots + 6u + 1 \rangle$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_4 = \begin{pmatrix} 4.09677u^{25} + 8.83871u^{24} + \cdots + 15.0323u + 10.1613 \\ 0.548387u^{25} + 4.41935u^{24} + \cdots + 17.5161u + 1.58065 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 4.16129u^{25} + 3.06452u^{24} + \cdots - 12.6129u + 8.93548 \\ 2.74194u^{25} + 2.09677u^{24} + \cdots - 6.41935u - 3.09677 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^4 - u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 3.61290u^{25} + 7.64516u^{24} + \cdots + 14.8710u + 9.35484 \\ -0.903226u^{25} + 1.83871u^{24} + \cdots + 14.0323u + 1.16129 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 4.09677u^{25} + 6.83871u^{24} + \cdots + 8.03226u + 9.16129 \\ 0.548387u^{25} + 3.41935u^{24} + \cdots + 12.5161u + 0.580645 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.129032u^{25} - 2.45161u^{24} + \cdots - 1.70968u - 10.5484 \\ 0.870968u^{25} - 2.45161u^{24} + \cdots - 14.7097u - 0.548387 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -1.06452u^{25} - 3.22581u^{24} + \cdots - 3.35484u - 13.7742 \\ 2u^{25} + 2u^{24} + \cdots - u + 2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{7}{31}u^{25} + \frac{474}{31}u^{24} + \cdots + \frac{2038}{31}u + \frac{53}{31}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26} - 12u^{25} + \cdots + 6u - 1$
c_2	$u^{26} + 14u^{25} + \cdots - 5u - 1$
c_3	$u^{26} + u^{25} + \cdots - 4u - 1$
c_4	$u^{26} - 3u^{24} + \cdots + u + 1$
c_5	$u^{26} - u^{25} + \cdots - u + 1$
c_6	$u^{26} + 3u^{25} + \cdots + 9u - 1$
c_7	$u^{26} + u^{25} + \cdots + 6u + 1$
c_8	$u^{26} - u^{25} + \cdots + 6u + 1$
c_9	$u^{26} - u^{25} + \cdots - 3u^2 + 1$
c_{10}	$u^{26} + u^{25} + \cdots + u + 1$
c_{11}, c_{12}	$u^{26} - u^{25} + \cdots - 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{26} + 12y^{25} + \cdots - 12y + 1$
c_2	$y^{26} + 10y^{25} + \cdots - 7y + 1$
c_3	$y^{26} + 3y^{25} + \cdots + 8y + 1$
c_4	$y^{26} - 6y^{25} + \cdots - y + 1$
c_5, c_{10}	$y^{26} - 17y^{25} + \cdots - 37y + 1$
c_6	$y^{26} + 7y^{25} + \cdots - 9y + 1$
c_7, c_{11}, c_{12}	$y^{26} + 25y^{25} + \cdots - 42y + 1$
c_8	$y^{26} - y^{25} + \cdots - 44y + 1$
c_9	$y^{26} - y^{25} + \cdots - 6y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.570324+0.774756I$ $a=\ \ 0.062953+0.322877I$ $b=\ \ 0.056432-0.135013I$	$0.88149-2.48442I$	$4.82711-6.97053I$
$u=-0.570324-0.774756I$ $a=\ \ 0.062953-0.322877I$ $b=\ \ 0.056432+0.135013I$	$0.88149+2.48442I$	$4.82711+6.97053I$
$u=\ \ 0.194960+1.171460I$ $a=\ \ 0.116973-0.371816I$ $b=-0.876393-0.265512I$	$-4.09956+6.26420I$	$-2.09614-7.20711I$
$u=\ \ 0.194960-1.171460I$ $a=\ \ 0.116973+0.371816I$ $b=-0.876393+0.265512I$	$-4.09956-6.26420I$	$-2.09614+7.20711I$
$u=-0.153778+1.219990I$ $a=\ \ 2.37249+0.84166I$ $b=\ \ 1.61699+0.69044I$	$-1.55816+0.01449I$	$1.65823-1.09511I$
$u=-0.153778-1.219990I$ $a=\ \ 2.37249-0.84166I$ $b=\ \ 1.61699-0.69044I$	$-1.55816-0.01449I$	$1.65823+1.09511I$
$u=\ \ 0.218488+1.216950I$ $a=-2.50652+2.19733I$ $b=-1.08292+2.37475I$	$-3.91127-2.95711I$	$-1.88290+5.00367I$
$u=\ \ 0.218488-1.216950I$ $a=-2.50652-2.19733I$ $b=-1.08292-2.37475I$	$-3.91127+2.95711I$	$-1.88290-5.00367I$
$u=-0.654711+0.361426I$ $a=\ \ 0.395064+0.193261I$ $b=-0.060892-0.776077I$	$1.07061-2.37540I$	$1.32666+13.27884I$
$u=-0.654711-0.361426I$ $a=\ \ 0.395064-0.193261I$ $b=-0.060892+0.776077I$	$1.07061+2.37540I$	$1.32666-13.27884I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.743243$ $a=-0.836776$ $b=-0.457861$	3.82899	11.0490
$u=-0.294316+1.257160I$ $a=-0.562419+0.684762I$ $b=-0.240717+0.868005I$	$-0.03821-3.75384I$	$6.23391+3.06632I$
$u=-0.294316-1.257160I$ $a=-0.562419-0.684762I$ $b=-0.240717-0.868005I$	$-0.03821+3.75384I$	$6.23391-3.06632I$
$u=0.672573+0.137645I$ $a=0.182295+0.187445I$ $b=0.37093-2.28388I$	$-0.69656+6.11279I$	$2.04958-8.84990I$
$u=0.672573-0.137645I$ $a=0.182295-0.187445I$ $b=0.37093+2.28388I$	$-0.69656-6.11279I$	$2.04958+8.84990I$
$u=0.514521+0.377424I$ $a=-1.108700-0.464445I$ $b=-0.016374+0.497312I$	$-1.75749-3.69110I$	$1.92676+2.35151I$
$u=0.514521-0.377424I$ $a=-1.108700+0.464445I$ $b=-0.016374-0.497312I$	$-1.75749+3.69110I$	$1.92676-2.35151I$
$u=-0.049404+1.365310I$ $a=-1.155230+0.503664I$ $b=-1.148720-0.569898I$	$-9.35257-0.74122I$	$-6.47141+0.74679I$
$u=-0.049404-1.365310I$ $a=-1.155230-0.503664I$ $b=-1.148720+0.569898I$	$-9.35257+0.74122I$	$-6.47141-0.74679I$
$u=0.286679+1.355700I$ $a=2.57289-1.48433I$ $b=1.52253-2.27511I$	$-5.43871+9.62915I$	$-3.03359-9.44298I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.286679 - 1.355700I$ $a = 2.57289 + 1.48433I$ $b = 1.52253 + 2.27511I$	$-5.43871 - 9.62915I$	$-3.03359 + 9.44298I$
$u = -0.32240 + 1.40604I$ $a = -1.41858 - 0.53533I$ $b = -1.22496 - 1.36260I$	$-4.44908 - 6.18514I$	$-6.46604 - 0.51526I$
$u = -0.32240 - 1.40604I$ $a = -1.41858 + 0.53533I$ $b = -1.22496 + 1.36260I$	$-4.44908 + 6.18514I$	$-6.46604 + 0.51526I$
$u = 0.10623 + 1.47024I$ $a = -0.036770 + 0.515141I$ $b = 0.412524 + 0.092105I$	$-8.02822 - 1.57552I$	$-8.71426 + 9.37859I$
$u = 0.10623 - 1.47024I$ $a = -0.036770 - 0.515141I$ $b = 0.412524 - 0.092105I$	$-8.02822 + 1.57552I$	$-8.71426 - 9.37859I$
$u = -0.153809$ $a = 8.00790$ $b = -1.19899$	-4.74050	-8.76440

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{26}-12u^{25}+\cdots+6u-1)(u^{140}+11u^{139}+\cdots-24651u-2513)$
c_2	$(u^{26}+14u^{25}+\cdots-5u-1)(u^{140}-9u^{139}+\cdots+270u+7)$
c_3	$(u^{26}+u^{25}+\cdots-4u-1)(u^{140}-8u^{138}+\cdots-94043u+17197)$
c_4	$(u^{26}-3u^{24}+\cdots+u+1)(u^{140}+3u^{139}+\cdots+8798u-3781)$
c_5	$(u^{26}-u^{25}+\cdots-u+1)(u^{140}-50u^{138}+\cdots-4u-1)$
c_6	$(u^{26}+3u^{25}+\cdots+9u-1)(u^{140}+2u^{139}+\cdots-20u-1)$
c_7	$(u^{26}+u^{25}+\cdots+6u+1)(u^{140}-2u^{139}+\cdots+29u-1)$
c_8	$(u^{26}-u^{25}+\cdots+6u+1)(u^{140}+2u^{139}+\cdots+1113371u-44197)$
c_9	$(u^{26}-u^{25}+\cdots-3u^2+1)(u^{140}-2u^{139}+\cdots+71035u-11231)$
c_{10}	$(u^{26}+u^{25}+\cdots+u+1)(u^{140}-50u^{138}+\cdots-4u-1)$
c_{11}, c_{12}	$(u^{26}-u^{25}+\cdots-6u+1)(u^{140}-2u^{139}+\cdots+29u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{26}+12y^{25}+\cdots-12y+1)$ $\cdot(y^{140}+y^{139}+\cdots-2719370831y+6315169)$
c_2	$(y^{26}+10y^{25}+\cdots-7y+1)(y^{140}+15y^{139}+\cdots-2382y+49)$
c_3	$(y^{26}+3y^{25}+\cdots+8y+1)$ $\cdot(y^{140}-16y^{139}+\cdots-26838854679y+295736809)$
c_4	$(y^{26}-6y^{25}+\cdots-y+1)$ $\cdot(y^{140}-25y^{139}+\cdots-1468752308y+14295961)$
c_5, c_{10}	$(y^{26}-17y^{25}+\cdots-37y+1)(y^{140}-100y^{139}+\cdots-192y+1)$
c_6	$(y^{26}+7y^{25}+\cdots-9y+1)(y^{140}+8y^{139}+\cdots+32y+1)$
c_7, c_{11}, c_{12}	$(y^{26}+25y^{25}+\cdots-42y+1)(y^{140}+122y^{139}+\cdots-197y+1)$
c_8	$(y^{26}-y^{25}+\cdots-44y+1)$ $\cdot(y^{140}-44y^{139}+\cdots-361041802395y+1953374809)$
c_9	$(y^{26}-y^{25}+\cdots-6y+1)$ $\cdot(y^{140}-28y^{139}+\cdots-7929328317y+126135361)$