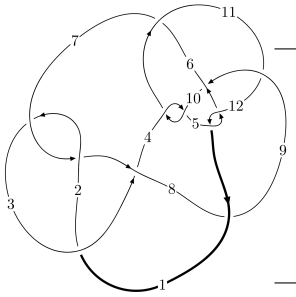
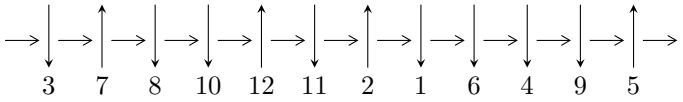
$12a_{0543}$ $(K12a_{0543})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 1.68337 \times 10^{119} u^{144} + 7.16684 \times 10^{118} u^{143} + \cdots + 5.14439 \times 10^{118} b + 6.42016 \times 10^{118},$$
$$- 1.79261 \times 10^{120} u^{144} - 1.95501 \times 10^{120} u^{143} + \cdots + 3.60108 \times 10^{119} a - 8.71578 \times 10^{120},$$
$$u^{145} + u^{144} + \cdots + 10u + 7 \rangle$$
$$I_2^u = \langle -u^{25} - u^{24} + \cdots + b + 1,\ u^{25} - 2u^{24} + \cdots + a - 4,\ u^{26} + 7u^{24} + \cdots + 3u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 171 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. $\boldsymbol{I_1^u = \langle 1.68 \times 10^{119} u^{144} + 7.17 \times 10^{118} u^{143} + \cdots + 5.14 \times 10^{118} b + 6.42 \times 10^{118},\ -1.79 \times 10^{120} u^{144} - 1.96 \times 10^{120} u^{143} + \cdots + 3.60 \times 10^{119} a - 8.72 \times 10^{120},\ u^{145} + u^{144} + \cdots + 10u + 7 \rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} u^8 + u^6 + u^4 + 1 \\ u^{10} + 2u^8 + 3u^6 + 2u^4 + u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 4.97800u^{144} + 5.42896u^{143} + \cdots + 56.4506u + 24.2033 \\ -3.27224u^{144} - 1.39314u^{143} + \cdots - 27.5746u - 1.24799 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 5.49859u^{144} + 4.11098u^{143} + \cdots + 54.4352u + 13.8676 \\ -2.49995u^{144} - 0.367127u^{143} + \cdots - 19.0091u + 1.60456 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 4.80687u^{144} + 6.35204u^{143} + \cdots + 65.5375u + 32.7772 \\ -2.14463u^{144} - 1.10343u^{143} + \cdots - 21.2231u - 3.92713 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 2.92464u^{144} + 2.24128u^{143} + \cdots + 26.1845u + 8.46431 \\ 0.305108u^{144} + 0.518469u^{143} + \cdots + 3.64666u + 2.19118 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 5.60505u^{144} + 4.70435u^{143} + \cdots + 57.1498u + 18.1858 \\ -2.57136u^{144} - 0.200226u^{143} + \cdots - 17.8815u + 2.50357 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0931173u^{144} + 4.00522u^{143} + \cdots + 31.6281u + 25.6618$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{145} + 69u^{144} + \cdots - 362u - 49$
c_2, c_7	$u^{145} + u^{144} + \cdots + 10u + 7$
c_3	$u^{145} - u^{144} + \cdots - 194332u + 20503$
c_4, c_{10}	$u^{145} - u^{144} + \cdots - 10727u + 2347$
c_5, c_{12}	$u^{145} - 2u^{144} + \cdots - 12270u + 2449$
c_6	$u^{145} + 16u^{143} + \cdots + 3486694u + 149809$
c_8	$u^{145} + 5u^{144} + \cdots + 35208736u + 7631659$
c_9	$u^{145} + 7u^{144} + \cdots - 13u + 1$
c_{11}	$u^{145} - 21u^{144} + \cdots + 135u + 83$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{145} + 21y^{144} + \cdots - 34870y - 2401$
c_2, c_7	$y^{145} + 69y^{144} + \cdots - 362y - 49$
c_3	$y^{145} - 21y^{144} + \cdots + 39082161962y - 420373009$
c_4, c_{10}	$y^{145} + 105y^{144} + \cdots - 226926923y - 5508409$
c_5, c_{12}	$y^{145} + 86y^{144} + \cdots + 45603454y - 5997601$
c_6	$y^{145} + 32y^{144} + \cdots - 735797446182y - 22442736481$
c_8	$y^{145} + 73y^{144} + \cdots - 2911748666672046y - 58242219092281$
c_9	$y^{145} - 7y^{144} + \cdots + 67y - 1$
c_{11}	$y^{145} - 17y^{144} + \cdots + 528509y - 6889$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.184394+0.997690I$ $a=1.205560-0.226744I$ $b=-0.467031-0.834593I$	$-1.79715+1.32721I$	0
$u=-0.184394-0.997690I$ $a=1.205560+0.226744I$ $b=-0.467031+0.834593I$	$-1.79715-1.32721I$	0
$u=0.787390+0.592137I$ $a=-0.489679-0.314649I$ $b=-0.149224+0.355817I$	$5.28775-1.33253I$	0
$u=0.787390-0.592137I$ $a=-0.489679+0.314649I$ $b=-0.149224-0.355817I$	$5.28775+1.33253I$	0
$u=-0.338378+0.957023I$ $a=-3.20344+1.10546I$ $b=1.80339+1.12969I$	$-2.55022-4.09982I$	0
$u=-0.338378-0.957023I$ $a=-3.20344-1.10546I$ $b=1.80339-1.12969I$	$-2.55022+4.09982I$	0
$u=-0.303177+0.976012I$ $a=1.62753-0.47233I$ $b=-1.51906+0.55961I$	$1.18528-1.07910I$	0
$u=-0.303177-0.976012I$ $a=1.62753+0.47233I$ $b=-1.51906-0.55961I$	$1.18528+1.07910I$	0
$u=0.396214+0.942465I$ $a=-0.051002+0.579643I$ $b=-0.247222-0.810358I$	$-0.47939+1.85777I$	0
$u=0.396214-0.942465I$ $a=-0.051002-0.579643I$ $b=-0.247222+0.810358I$	$-0.47939-1.85777I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.698321+0.678727I$ $a=-0.791006+0.117482I$ $b=-0.166137-0.243382I$	$5.99895-2.02453I$	0
$u=-0.698321-0.678727I$ $a=-0.791006-0.117482I$ $b=-0.166137+0.243382I$	$5.99895+2.02453I$	0
$u=-0.097852+1.023050I$ $a=\ \ 1.63457-0.39899I$ $b=-1.42349-0.63315I$	$-0.22854+3.12050I$	0
$u=-0.097852-1.023050I$ $a=\ \ 1.63457+0.39899I$ $b=-1.42349+0.63315I$	$-0.22854-3.12050I$	0
$u=\ \ 0.741562+0.623321I$ $a=\ \ 0.532405+0.864548I$ $b=\ \ 0.073970-0.745696I$	$4.64179+11.18290I$	0
$u=\ \ 0.741562-0.623321I$ $a=\ \ 0.532405-0.864548I$ $b=\ \ 0.073970+0.745696I$	$4.64179-11.18290I$	0
$u=\ \ 0.241101+1.005640I$ $a=\ \ 1.71508+1.43776I$ $b=-2.02337-0.03526I$	$0.635555+0.338860I$	0
$u=\ \ 0.241101-1.005640I$ $a=\ \ 1.71508-1.43776I$ $b=-2.02337+0.03526I$	$0.635555-0.338860I$	0
$u=\ \ 0.251556+1.022450I$ $a=-3.24031+0.24100I$ $b=\ \ 1.41535-1.01544I$	$-3.47507-2.68719I$	0
$u=\ \ 0.251556-1.022450I$ $a=-3.24031-0.24100I$ $b=\ \ 1.41535+1.01544I$	$-3.47507+2.68719I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.824404+0.433210I$ $a=-0.332263-0.322654I$ $b=-1.003040+0.868786I$	$4.39588+2.05646I$	0
$u=-0.824404-0.433210I$ $a=-0.332263+0.322654I$ $b=-1.003040-0.868786I$	$4.39588-2.05646I$	0
$u=0.490005+0.773992I$ $a=1.004320+0.687450I$ $b=-0.825636-0.474558I$	$0.13695+2.07089I$	0
$u=0.490005-0.773992I$ $a=1.004320-0.687450I$ $b=-0.825636+0.474558I$	$0.13695-2.07089I$	0
$u=-0.438325+0.992032I$ $a=-1.83986-1.03644I$ $b=0.63602+2.34736I$	$-2.15013-6.05393I$	0
$u=-0.438325-0.992032I$ $a=-1.83986+1.03644I$ $b=0.63602-2.34736I$	$-2.15013+6.05393I$	0
$u=-0.706416+0.581377I$ $a=0.453554-0.977363I$ $b=0.040691+1.056500I$	$7.52331-5.01192I$	0
$u=-0.706416-0.581377I$ $a=0.453554+0.977363I$ $b=0.040691-1.056500I$	$7.52331+5.01192I$	0
$u=0.335392+1.037830I$ $a=1.24878+0.94604I$ $b=-0.753812+1.170660I$	$-4.06964+4.22267I$	0
$u=0.335392-1.037830I$ $a=1.24878-0.94604I$ $b=-0.753812-1.170660I$	$-4.06964-4.22267I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.837402 + 0.346097I$ $a = -0.470563 + 0.071252I$ $b = -0.915098 - 0.992526I$	$4.05564 - 4.81767I$	0
$u = 0.837402 - 0.346097I$ $a = -0.470563 - 0.071252I$ $b = -0.915098 + 0.992526I$	$4.05564 + 4.81767I$	0
$u = -0.606369 + 0.920094I$ $a = -0.615571 - 0.438638I$ $b = -0.118732 - 0.231346I$	$5.28012 - 2.99417I$	0
$u = -0.606369 - 0.920094I$ $a = -0.615571 + 0.438638I$ $b = -0.118732 + 0.231346I$	$5.28012 + 2.99417I$	0
$u = -0.814299 + 0.375549I$ $a = 0.575844 + 0.635418I$ $b = 1.66703 - 1.41778I$	$3.2718 + 14.1290I$	0
$u = -0.814299 - 0.375549I$ $a = 0.575844 - 0.635418I$ $b = 1.66703 + 1.41778I$	$3.2718 - 14.1290I$	0
$u = -0.338107 + 0.828564I$ $a = 1.170070 + 0.396851I$ $b = 0.545917 - 1.153990I$	$-2.23687 + 1.29929I$	0
$u = -0.338107 - 0.828564I$ $a = 1.170070 - 0.396851I$ $b = 0.545917 + 1.153990I$	$-2.23687 - 1.29929I$	0
$u = 0.732572 + 0.502840I$ $a = -0.702309 - 1.007620I$ $b = 0.097958 + 0.123214I$	$5.00367 + 2.20048I$	0
$u = 0.732572 - 0.502840I$ $a = -0.702309 + 1.007620I$ $b = 0.097958 - 0.123214I$	$5.00367 - 2.20048I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.208756 + 1.099840I$ $a = 1.153790 + 0.284530I$ $b = -0.764283 + 1.064860I$	$-5.69124 - 5.08448I$	0
$u = 0.208756 - 1.099840I$ $a = 1.153790 - 0.284530I$ $b = -0.764283 - 1.064860I$	$-5.69124 + 5.08448I$	0
$u = -0.754912 + 0.442722I$ $a = -0.894123 - 0.814790I$ $b = -1.40872 + 1.09063I$	$4.68617 + 4.86935I$	0
$u = -0.754912 - 0.442722I$ $a = -0.894123 + 0.814790I$ $b = -1.40872 - 1.09063I$	$4.68617 - 4.86935I$	0
$u = 0.175228 + 1.115380I$ $a = -1.68414 - 1.85829I$ $b = 1.75348 + 0.18743I$	$1.63161 - 5.18305I$	0
$u = 0.175228 - 1.115380I$ $a = -1.68414 + 1.85829I$ $b = 1.75348 - 0.18743I$	$1.63161 + 5.18305I$	0
$u = 0.777707 + 0.383999I$ $a = 0.600592 - 0.714495I$ $b = 1.71002 + 1.62586I$	$6.48441 - 7.60554I$	0
$u = 0.777707 - 0.383999I$ $a = 0.600592 + 0.714495I$ $b = 1.71002 - 1.62586I$	$6.48441 + 7.60554I$	0
$u = -0.653235 + 0.563065I$ $a = 0.16315 + 1.61830I$ $b = 0.782854 - 0.672428I$	$-0.13545 - 5.31806I$	0
$u = -0.653235 - 0.563065I$ $a = 0.16315 - 1.61830I$ $b = 0.782854 + 0.672428I$	$-0.13545 + 5.31806I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.430800+1.061450I$ $a=-1.93162+0.87528I$ $b=\ \ 1.66325+0.81510I$	$-3.66318-3.44179I$	0
$u=-0.430800-1.061450I$ $a=-1.93162-0.87528I$ $b=\ \ 1.66325-0.81510I$	$-3.66318+3.44179I$	0
$u=-0.555844+1.005450I$ $a=-1.097740+0.745118I$ $b=\ \ 1.90293+0.12033I$	$-1.44297+0.59465I$	0
$u=-0.555844-1.005450I$ $a=-1.097740-0.745118I$ $b=\ \ 1.90293-0.12033I$	$-1.44297-0.59465I$	0
$u=-0.286561+1.114860I$ $a=-0.31602+1.49740I$ $b=\ \ 1.069560-0.389689I$	$-5.39088+0.00078I$	0
$u=-0.286561-1.114860I$ $a=-0.31602-1.49740I$ $b=\ \ 1.069560+0.389689I$	$-5.39088-0.00078I$	0
$u=\ \ 0.749711+0.373069I$ $a=-0.246364+1.321170I$ $b=-1.40342-0.51244I$	$-1.10274-7.51513I$	0
$u=\ \ 0.749711-0.373069I$ $a=-0.246364-1.321170I$ $b=-1.40342+0.51244I$	$-1.10274+7.51513I$	0
$u=\ \ 0.437131+1.077290I$ $a=\ \ 0.26927+1.88271I$ $b=-1.36581-1.26139I$	$-0.73593+1.52071I$	0
$u=\ \ 0.437131-1.077290I$ $a=\ \ 0.26927-1.88271I$ $b=-1.36581+1.26139I$	$-0.73593-1.52071I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.289488+1.127400I$ $a=\ \ 0.77596+1.28242I$ $b=\ \ 0.331794-0.970544I$	$-5.42792+0.17662I$	0
$u=-0.289488-1.127400I$ $a=\ \ 0.77596-1.28242I$ $b=\ \ 0.331794+0.970544I$	$-5.42792-0.17662I$	0
$u=-0.605587+0.994069I$ $a=\ \ 1.35475+0.78238I$ $b=-0.531018-0.543116I$	$6.30112-0.02283I$	0
$u=-0.605587-0.994069I$ $a=\ \ 1.35475-0.78238I$ $b=-0.531018+0.543116I$	$6.30112+0.02283I$	0
$u=\ \ 0.679698+0.485792I$ $a=\ \ 0.237669-1.035950I$ $b=\ \ 0.376722+0.729948I$	$2.95976+0.92488I$	0
$u=\ \ 0.679698-0.485792I$ $a=\ \ 0.237669+1.035950I$ $b=\ \ 0.376722-0.729948I$	$2.95976-0.92488I$	0
$u=-0.716572+0.425089I$ $a=-0.029300-1.060030I$ $b=-1.280090+0.563040I$	$2.64102+3.13575I$	0
$u=-0.716572-0.425089I$ $a=-0.029300+1.060030I$ $b=-1.280090-0.563040I$	$2.64102-3.13575I$	0
$u=\ \ 0.511208+0.657131I$ $a=\ \ 0.741436+0.404517I$ $b=-0.771755-0.186005I$	$0.27239+1.87412I$	0
$u=\ \ 0.511208-0.657131I$ $a=\ \ 0.741436-0.404517I$ $b=-0.771755+0.186005I$	$0.27239-1.87412I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.647175 + 0.971864I$ $a = 0.967998 - 0.643040I$ $b = -0.380814 + 0.210677I$	$3.60765 - 5.91767I$	0
$u = 0.647175 - 0.971864I$ $a = 0.967998 + 0.643040I$ $b = -0.380814 - 0.210677I$	$3.60765 + 5.91767I$	0
$u = -0.165538 + 1.164930I$ $a = -1.56610 + 1.52417I$ $b = 1.69391 - 0.15332I$	$-1.83364 + 11.47010I$	0
$u = -0.165538 - 1.164930I$ $a = -1.56610 - 1.52417I$ $b = 1.69391 + 0.15332I$	$-1.83364 - 11.47010I$	0
$u = 0.380646 + 1.117450I$ $a = -2.25990 - 0.29991I$ $b = 1.74240 - 0.96746I$	$-7.41429 + 5.48824I$	0
$u = 0.380646 - 1.117450I$ $a = -2.25990 + 0.29991I$ $b = 1.74240 + 0.96746I$	$-7.41429 - 5.48824I$	0
$u = 0.415590 + 1.106590I$ $a = 1.93053 - 0.83523I$ $b = -0.33602 + 1.90650I$	$-0.85504 + 5.80986I$	0
$u = 0.415590 - 1.106590I$ $a = 1.93053 + 0.83523I$ $b = -0.33602 - 1.90650I$	$-0.85504 - 5.80986I$	0
$u = 0.693171 + 0.424591I$ $a = -1.297510 + 0.408056I$ $b = -1.17331 - 1.38727I$	$4.77635 - 1.51542I$	0
$u = 0.693171 - 0.424591I$ $a = -1.297510 - 0.408056I$ $b = -1.17331 + 1.38727I$	$4.77635 + 1.51542I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.670777+0.453286I$ $a=-1.08992+1.00199I$ $b=-0.1120640-0.0829036I$	$4.93494+0.50336I$	0
$u=-0.670777-0.453286I$ $a=-1.08992-1.00199I$ $b=-0.1120640+0.0829036I$	$4.93494-0.50336I$	0
$u=-0.658657+0.469439I$ $a=\ \ 0.155719+0.370369I$ $b=\ \ 2.14970-0.34783I$	$0.96555-2.70815I$	0
$u=-0.658657-0.469439I$ $a=\ \ 0.155719-0.370369I$ $b=\ \ 2.14970+0.34783I$	$0.96555+2.70815I$	0
$u=\ \ 0.696152+0.409095I$ $a=\ \ 0.023956+0.141789I$ $b=\ \ 1.85277-0.60815I$	$0.66094-4.68741I$	0
$u=\ \ 0.696152-0.409095I$ $a=\ \ 0.023956-0.141789I$ $b=\ \ 1.85277+0.60815I$	$0.66094+4.68741I$	0
$u=\ \ 0.569625+1.050860I$ $a=-1.096000-0.096015I$ $b=\ \ 1.187160-0.449559I$	$1.29070+3.91656I$	0
$u=\ \ 0.569625-1.050860I$ $a=-1.096000+0.096015I$ $b=\ \ 1.187160+0.449559I$	$1.29070-3.91656I$	0
$u=\ \ 0.530351+1.072130I$ $a=\ \ 2.15831+1.00377I$ $b=-2.27909+0.16677I$	$-2.70997+2.55761I$	0
$u=\ \ 0.530351-1.072130I$ $a=\ \ 2.15831-1.00377I$ $b=-2.27909-0.16677I$	$-2.70997-2.55761I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.560721+1.056780I$ $a=-1.99582+2.46246I$ $b=\ \ 2.59318+0.22613I$	$-0.76533-2.05228I$	0
$u=-0.560721-1.056780I$ $a=-1.99582-2.46246I$ $b=\ \ 2.59318-0.22613I$	$-0.76533+2.05228I$	0
$u=-0.072536+1.198540I$ $a=\ \ 0.843928-0.674907I$ $b=-0.859816+0.260701I$	$-1.223970-0.253168I$	0
$u=-0.072536-1.198540I$ $a=\ \ 0.843928+0.674907I$ $b=-0.859816-0.260701I$	$-1.223970+0.253168I$	0
$u=\ \ 0.665080+1.003710I$ $a=-0.527424+0.347058I$ $b=-0.0028840+0.0612795I$	$4.06228+6.77781I$	0
$u=\ \ 0.665080-1.003710I$ $a=-0.527424-0.347058I$ $b=-0.0028840-0.0612795I$	$4.06228-6.77781I$	0
$u=-0.564275+1.065810I$ $a=-0.106865-0.291564I$ $b=\ \ 0.186769-0.738135I$	$3.13220-5.30727I$	0
$u=-0.564275-1.065810I$ $a=-0.106865+0.291564I$ $b=\ \ 0.186769+0.738135I$	$3.13220+5.30727I$	0
$u=\ \ 0.602451+1.051580I$ $a=-0.297227+0.108546I$ $b=\ \ 0.495009+0.529668I$	$3.37666+2.89310I$	0
$u=\ \ 0.602451-1.051580I$ $a=-0.297227-0.108546I$ $b=\ \ 0.495009-0.529668I$	$3.37666-2.89310I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.786073+0.018603I$ $a=-0.134255+0.444436I$ $b=-0.648623+1.033690I$	$-1.84816+6.47339I$	$-4.00000-7.35991I$
$u=-0.786073-0.018603I$ $a=-0.134255-0.444436I$ $b=-0.648623-1.033690I$	$-1.84816-6.47339I$	$-4.00000+7.35991I$
$u=0.470849+1.123390I$ $a=-1.16024-1.31564I$ $b=1.53168-0.31962I$	$-6.80529+2.18799I$	0
$u=0.470849-1.123390I$ $a=-1.16024+1.31564I$ $b=1.53168+0.31962I$	$-6.80529-2.18799I$	0
$u=0.569536+1.079360I$ $a=2.37858+0.41773I$ $b=-1.89509+1.91867I$	$2.85729+6.39098I$	0
$u=0.569536-1.079360I$ $a=2.37858-0.41773I$ $b=-1.89509-1.91867I$	$2.85729-6.39098I$	0
$u=-0.720675+0.285629I$ $a=0.532398+0.003468I$ $b=-0.300937-1.176800I$	$-1.27972+3.13142I$	$-4.00000+1.52364I$
$u=-0.720675-0.285629I$ $a=0.532398-0.003468I$ $b=-0.300937+1.176800I$	$-1.27972-3.13142I$	$-4.00000-1.52364I$
$u=0.566972+1.085860I$ $a=-0.72019-2.70277I$ $b=1.95871+0.64288I$	$-1.31995+9.55890I$	0
$u=0.566972-1.085860I$ $a=-0.72019+2.70277I$ $b=1.95871-0.64288I$	$-1.31995-9.55890I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.577640+1.082700I$ $a=\ \ 1.71775-1.10252I$ $b=-2.09488-0.26553I$	$0.70880-8.09519I$	0
$u=-0.577640-1.082700I$ $a=\ \ 1.71775+1.10252I$ $b=-2.09488+0.26553I$	$0.70880+8.09519I$	0
$u=-0.545457+1.112530I$ $a=-2.17887-0.42343I$ $b=\ \ 1.35181+1.72217I$	$-3.64516-7.56566I$	0
$u=-0.545457-1.112530I$ $a=-2.17887+0.42343I$ $b=\ \ 1.35181-1.72217I$	$-3.64516+7.56566I$	0
$u=-0.597023+1.086030I$ $a=\ \ 2.15158-0.82628I$ $b=-2.26804-1.36181I$	$2.78055-9.99731I$	0
$u=-0.597023-1.086030I$ $a=\ \ 2.15158+0.82628I$ $b=-2.26804+1.36181I$	$2.78055+9.99731I$	0
$u=\ \ 0.193774+1.229020I$ $a=\ \ 0.752680+0.881514I$ $b=-1.067280-0.404511I$	$-1.11956-1.75849I$	0
$u=\ \ 0.193774-1.229020I$ $a=\ \ 0.752680-0.881514I$ $b=-1.067280+0.404511I$	$-1.11956+1.75849I$	0
$u=-0.687980+0.303581I$ $a=\ \ 0.814867+0.487323I$ $b=\ \ 0.62146-1.37978I$	$-1.33531+2.81897I$	$-6.12249-2.40079I$
$u=-0.687980-0.303581I$ $a=\ \ 0.814867-0.487323I$ $b=\ \ 0.62146+1.37978I$	$-1.33531-2.81897I$	$-6.12249+2.40079I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.543472+1.126620I$ $a=-1.00340-1.43746I$ $b=-0.18736+1.58829I$	$-3.71059-7.93725I$	0
$u=-0.543472-1.126620I$ $a=-1.00340+1.43746I$ $b=-0.18736-1.58829I$	$-3.71059+7.93725I$	0
$u=0.576970+1.110150I$ $a=1.77781+1.07541I$ $b=-2.38634+0.30525I$	$-3.26812+12.54560I$	0
$u=0.576970-1.110150I$ $a=1.77781-1.07541I$ $b=-2.38634-0.30525I$	$-3.26812-12.54560I$	0
$u=-0.439519+1.177620I$ $a=1.60063+0.53610I$ $b=-0.58033-1.55254I$	$-5.28717-10.80720I$	0
$u=-0.439519-1.177620I$ $a=1.60063-0.53610I$ $b=-0.58033+1.55254I$	$-5.28717+10.80720I$	0
$u=0.588713+1.114710I$ $a=-3.04785-0.61947I$ $b=2.45496-1.83511I$	$4.32194+12.75140I$	0
$u=0.588713-1.114710I$ $a=-3.04785+0.61947I$ $b=2.45496+1.83511I$	$4.32194-12.75140I$	0
$u=-0.409051+1.195690I$ $a=0.245838-1.307360I$ $b=-1.061410+0.867196I$	$-5.50406+2.24792I$	0
$u=-0.409051-1.195690I$ $a=0.245838+1.307360I$ $b=-1.061410-0.867196I$	$-5.50406-2.24792I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.621234+1.107540I$ $a=\ \ 1.59139-0.60187I$ $b=-1.45625-0.90520I$	$2.37877-7.44465I$	0
$u=-0.621234-1.107540I$ $a=\ \ 1.59139+0.60187I$ $b=-1.45625+0.90520I$	$2.37877+7.44465I$	0
$u=-0.598688+1.129240I$ $a=-2.70720+0.66114I$ $b=\ \ 2.33879+1.64430I$	$1.0265-19.4036I$	0
$u=-0.598688-1.129240I$ $a=-2.70720-0.66114I$ $b=\ \ 2.33879-1.64430I$	$1.0265+19.4036I$	0
$u=\ \ 0.599077+1.144460I$ $a=\ \ 1.64688+0.30692I$ $b=-1.26606+1.23218I$	$1.67753+10.14400I$	0
$u=\ \ 0.599077-1.144460I$ $a=\ \ 1.64688-0.30692I$ $b=-1.26606-1.23218I$	$1.67753-10.14400I$	0
$u=\ \ 0.568890+0.385452I$ $a=\ \ 0.54032+1.67742I$ $b=-1.251310-0.652831I$	$-0.75101+1.90370I$	$-4.80872-0.09845I$
$u=\ \ 0.568890-0.385452I$ $a=\ \ 0.54032-1.67742I$ $b=-1.251310+0.652831I$	$-0.75101-1.90370I$	$-4.80872+0.09845I$
$u=\ \ 0.642939+0.120216I$ $a=\ \ 0.566798+0.181916I$ $b=\ \ 1.162810-0.332187I$	$-4.02495+2.01618I$	$-7.90744-1.24994I$
$u=\ \ 0.642939-0.120216I$ $a=\ \ 0.566798-0.181916I$ $b=\ \ 1.162810+0.332187I$	$-4.02495-2.01618I$	$-7.90744+1.24994I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.593300 + 0.022047I$ $a = -0.101191 - 1.046710I$ $b = -0.607461 - 1.118300I$	$2.10728 - 2.09321I$	$0.33268 + 3.77036I$
$u = \quad 0.593300 - 0.022047I$ $a = -0.101191 + 1.046710I$ $b = -0.607461 + 1.118300I$	$2.10728 + 2.09321I$	$0.33268 - 3.77036I$
$u = -0.331001 + 0.427874I$ $a = \quad 2.29469 + 0.54871I$ $b = -0.286337 - 1.291110I$	$-0.66545 + 2.55610I$	$-0.94084 - 2.48924I$
$u = -0.331001 - 0.427874I$ $a = \quad 2.29469 - 0.54871I$ $b = -0.286337 + 1.291110I$	$-0.66545 - 2.55610I$	$-0.94084 + 2.48924I$
$u = -0.461079$ $a = \quad 0.707907$ $b = \quad 0.893156$	-1.10691	-8.89040

II.

$\boldsymbol{I_2^u = \langle -u^{25}-u^{24}+\cdots+b+1,\ u^{25}-2u^{24}+\cdots+a-4,\ u^{26}+7u^{24}+\cdots+3u^2+1\rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^3 \\ u^3+u \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} u^8+u^6+u^4+1 \\ u^{10}+2u^8+3u^6+2u^4+u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^{25}+2u^{24}+\cdots+6u^2+4 \\ u^{25}+u^{24}+\cdots+u-1 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^{25}+u^{24}+\cdots+4u^2+3 \\ u^{25}+u^{24}+\cdots+u-1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^{25}+u^{24}+\cdots+2u+1 \\ u^{25}-u^{24}+\cdots-2u^2-2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -2u^{23}+u^{22}+\cdots-6u^3-4u \\ -u^{25}-6u^{23}+\cdots+u^4+u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^{25}+u^{24}+\cdots+3u^2+3 \\ u^{25}+u^{24}+\cdots-u^4+u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 13u^{25}+86u^{23}-2u^{22}+287u^{21}-12u^{20}+605u^{19}-37u^{18}+877u^{17}-71u^{16}+918u^{15}-80u^{14}+740u^{13}-40u^{12}+515u^{11}+30u^{10}+337u^9+66u^8+177u^7+53u^6+58u^5+17u^4+16u^3-5u^2+10u-9$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26} - 14u^{25} + \cdots - 6u + 1$
c_2	$u^{26} + 7u^{24} + \cdots + 3u^2 + 1$
c_3	$u^{26} - 2u^{24} + \cdots - 2u + 1$
c_4	$u^{26} + 13u^{24} + \cdots - u + 1$
c_5	$u^{26} + u^{25} + \cdots + 13u^2 + 1$
c_6	$u^{26} + u^{25} + \cdots - 2u + 1$
c_7	$u^{26} + 7u^{24} + \cdots + 3u^2 + 1$
c_8	$u^{26} + 7u^{24} + \cdots + 3u^2 + 1$
c_9	$u^{26} + 2u^{25} + \cdots - u + 1$
c_{10}	$u^{26} + 13u^{24} + \cdots + u + 1$
c_{11}	$u^{26} - 4u^{24} + \cdots + 7u + 1$
c_{12}	$u^{26} - u^{25} + \cdots + 13u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{26} + 2y^{25} + \cdots + 10y + 1$
c_2, c_7	$y^{26} + 14y^{25} + \cdots + 6y + 1$
c_3	$y^{26} - 4y^{25} + \cdots + 6y + 1$
c_4, c_{10}	$y^{26} + 26y^{25} + \cdots + 19y + 1$
c_5, c_{12}	$y^{26} + 19y^{25} + \cdots + 26y + 1$
c_6	$y^{26} - 7y^{25} + \cdots - 2y + 1$
c_8	$y^{26} + 14y^{25} + \cdots + 6y + 1$
c_9	$y^{26} - 2y^{25} + \cdots - 7y + 1$
c_{11}	$y^{26} - 8y^{25} + \cdots - 5y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.359440+0.910887I$ $a=\ \ 1.77754-1.04325I$ $b=-1.84702+0.56243I$	$1.81449-1.47433I$	$2.93751+5.13499I$
$u=-0.359440-0.910887I$ $a=\ \ 1.77754+1.04325I$ $b=-1.84702-0.56243I$	$1.81449+1.47433I$	$2.93751-5.13499I$
$u=\ \ 0.402070+1.012970I$ $a=-2.58496-0.45894I$ $b=\ \ 1.39908-1.96159I$	$-3.09604+5.11284I$	$-9.28335-9.03985I$
$u=\ \ 0.402070-1.012970I$ $a=-2.58496+0.45894I$ $b=\ \ 1.39908+1.96159I$	$-3.09604-5.11284I$	$-9.28335+9.03985I$
$u=\ \ 0.789971+0.415474I$ $a=-0.627696+0.302463I$ $b=-1.087560-0.836873I$	$4.28502-3.71076I$	$-0.33164+1.61195I$
$u=\ \ 0.789971-0.415474I$ $a=-0.627696-0.302463I$ $b=-1.087560+0.836873I$	$4.28502+3.71076I$	$-0.33164-1.61195I$
$u=-0.699594+0.550884I$ $a=-0.956695+0.481873I$ $b=-0.200902+0.037955I$	$5.12297-1.01125I$	$0.66466+1.43973I$
$u=-0.699594-0.550884I$ $a=-0.956695-0.481873I$ $b=-0.200902-0.037955I$	$5.12297+1.01125I$	$0.66466-1.43973I$
$u=\ \ 0.510275+1.047840I$ $a=-1.71620-2.34544I$ $b=\ \ 2.66024+0.58919I$	$-2.28523+1.24764I$	$-9.11702+0.85683I$
$u=\ \ 0.510275-1.047840I$ $a=-1.71620+2.34544I$ $b=\ \ 2.66024-0.58919I$	$-2.28523-1.24764I$	$-9.11702-0.85683I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.339378+1.125810I$ $a=-0.826794-0.820362I$ $b=-0.365525+0.879813I$	$-5.01673+0.90484I$	$-7.57121-2.48547I$
$u=-0.339378-1.125810I$ $a=-0.826794+0.820362I$ $b=-0.365525-0.879813I$	$-5.01673-0.90484I$	$-7.57121+2.48547I$
$u=-0.585961+1.027330I$ $a=0.071777-0.307147I$ $b=-0.069106-0.778948I$	$3.69821-3.93735I$	$-0.59875+3.86614I$
$u=-0.585961-1.027330I$ $a=0.071777+0.307147I$ $b=-0.069106+0.778948I$	$3.69821+3.93735I$	$-0.59875-3.86614I$
$u=0.131481+1.188190I$ $a=0.920680+0.548104I$ $b=-1.067210-0.129315I$	$-0.95720-1.32676I$	$-1.98837-1.35287I$
$u=0.131481-1.188190I$ $a=0.920680-0.548104I$ $b=-1.067210+0.129315I$	$-0.95720+1.32676I$	$-1.98837+1.35287I$
$u=0.212681+0.768560I$ $a=2.45204-0.93805I$ $b=-0.066082+1.117050I$	$-1.90233-2.26974I$	$-5.62768+3.67958I$
$u=0.212681-0.768560I$ $a=2.45204+0.93805I$ $b=-0.066082-1.117050I$	$-1.90233+2.26974I$	$-5.62768-3.67958I$
$u=-0.528659+1.117570I$ $a=0.76590+1.70640I$ $b=0.35252-1.71795I$	$-3.69239-8.55446I$	$-7.1343+12.9586I$
$u=-0.528659-1.117570I$ $a=0.76590-1.70640I$ $b=0.35252+1.71795I$	$-3.69239+8.55446I$	$-7.1343-12.9586I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.605745 + 1.102710I$ $a = 1.61342 + 0.74661I$ $b = -1.65229 + 1.00006I$	$2.25080 + 8.95210I$	$-3.57588 - 6.47276I$
$u = 0.605745 - 1.102710I$ $a = 1.61342 - 0.74661I$ $b = -1.65229 - 1.00006I$	$2.25080 - 8.95210I$	$-3.57588 + 6.47276I$
$u = -0.650503 + 0.273818I$ $a = -1.013090 + 0.085330I$ $b = 0.622801 + 1.094180I$	$-1.29922 + 3.95173I$	$-4.67043 - 7.77775I$
$u = -0.650503 - 0.273818I$ $a = -1.013090 - 0.085330I$ $b = 0.622801 - 1.094180I$	$-1.29922 - 3.95173I$	$-4.67043 + 7.77775I$
$u = 0.511312 + 0.470800I$ $a = -0.87592 - 1.44241I$ $b = 1.82105 + 0.04411I$	$-0.56729 + 2.99412I$	$-5.20352 - 6.82351I$
$u = 0.511312 - 0.470800I$ $a = -0.87592 + 1.44241I$ $b = 1.82105 - 0.04411I$	$-0.56729 - 2.99412I$	$-5.20352 + 6.82351I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{26}-14u^{25}+\cdots-6u+1)(u^{145}+69u^{144}+\cdots-362u-49)$
c_2	$(u^{26}+7u^{24}+\cdots+3u^2+1)(u^{145}+u^{144}+\cdots+10u+7)$
c_3	$(u^{26}-2u^{24}+\cdots-2u+1)(u^{145}-u^{144}+\cdots-194332u+20503)$
c_4	$(u^{26}+13u^{24}+\cdots-u+1)(u^{145}-u^{144}+\cdots-10727u+2347)$
c_5	$(u^{26}+u^{25}+\cdots+13u^2+1)(u^{145}-2u^{144}+\cdots-12270u+2449)$
c_6	$(u^{26}+u^{25}+\cdots-2u+1)(u^{145}+16u^{143}+\cdots+3486694u+149809)$
c_7	$(u^{26}+7u^{24}+\cdots+3u^2+1)(u^{145}+u^{144}+\cdots+10u+7)$
c_8	$(u^{26}+7u^{24}+\cdots+3u^2+1)$ $\cdot(u^{145}+5u^{144}+\cdots+35208736u+7631659)$
c_9	$(u^{26}+2u^{25}+\cdots-u+1)(u^{145}+7u^{144}+\cdots-13u+1)$
c_{10}	$(u^{26}+13u^{24}+\cdots+u+1)(u^{145}-u^{144}+\cdots-10727u+2347)$
c_{11}	$(u^{26}-4u^{24}+\cdots+7u+1)(u^{145}-21u^{144}+\cdots+135u+83)$
c_{12}	$(u^{26}-u^{25}+\cdots+13u^2+1)(u^{145}-2u^{144}+\cdots-12270u+2449)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{26}+2y^{25}+\cdots+10y+1)(y^{145}+21y^{144}+\cdots-34870y-2401)$
c_2, c_7	$(y^{26}+14y^{25}+\cdots+6y+1)(y^{145}+69y^{144}+\cdots-362y-49)$
c_3	$(y^{26}-4y^{25}+\cdots+6y+1)$ $\cdot(y^{145}-21y^{144}+\cdots+39082161962y-420373009)$
c_4, c_{10}	$(y^{26}+26y^{25}+\cdots+19y+1)$ $\cdot(y^{145}+105y^{144}+\cdots-226926923y-5508409)$
c_5, c_{12}	$(y^{26}+19y^{25}+\cdots+26y+1)$ $\cdot(y^{145}+86y^{144}+\cdots+45603454y-5997601)$
c_6	$(y^{26}-7y^{25}+\cdots-2y+1)$ $\cdot(y^{145}+32y^{144}+\cdots-735797446182y-22442736481)$
c_8	$(y^{26}+14y^{25}+\cdots+6y+1)$ $\cdot(y^{145}+73y^{144}+\cdots-2911748666672046y-58242219092281)$
c_9	$(y^{26}-2y^{25}+\cdots-7y+1)(y^{145}-7y^{144}+\cdots+67y-1)$
c_{11}	$(y^{26}-8y^{25}+\cdots-5y+1)(y^{145}-17y^{144}+\cdots+528509y-6889)$