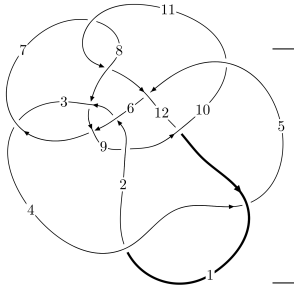
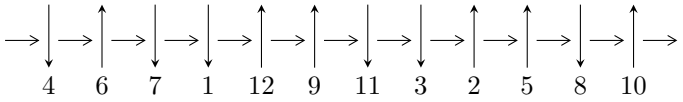
$12a_{0893}$ $(K12a_{0893})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -5.61103 \times 10^{2633} u^{209} - 1.17812 \times 10^{2634} u^{208} + \cdots + 2.36542 \times 10^{2634} b + 2.70080 \times 10^{2633},$$
$$6.58387 \times 10^{2634} u^{209} + 1.29409 \times 10^{2635} u^{208} + \cdots + 2.36542 \times 10^{2634} a - 3.74081 \times 10^{2635},$$
$$3u^{210} + 6u^{209} + \cdots - 26u + 1\rangle$$
$$I_2^u = \langle 1.26412 \times 10^{171} u^{55} - 3.51118 \times 10^{171} u^{54} + \cdots + 2.84952 \times 10^{170} b - 1.69933 \times 10^{171},$$
$$3.45571 \times 10^{170} u^{55} - 9.11636 \times 10^{170} u^{54} + \cdots + 2.84952 \times 10^{170} a + 1.97333 \times 10^{170},\ 3u^{56} - 9u^{55} + \cdots - 7u$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 266 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. $\boldsymbol{I_1^u = \langle -5.61 \times 10^{2633} u^{209} - 1.18 \times 10^{2634} u^{208} + \cdots + 2.37 \times 10^{2634} b + 2.70 \times 10^{2633},\ 6.58 \times 10^{2634} u^{209} + 1.29 \times 10^{2635} u^{208} + \cdots + 2.37 \times 10^{2634} a - 3.74 \times 10^{2635},\ 3u^{210} + 6u^{209} + \cdots - 26u + 1 \rangle}$

(i) Arc colorings

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

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

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

$$a_{11} = \begin{pmatrix} -2.78338u^{209} - 5.47088u^{208} + \cdots - 408.910u + 15.8146 \\ 0.237211u^{209} + 0.498058u^{208} + \cdots + 26.8040u - 0.114179 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -3.02059u^{209} - 5.96893u^{208} + \cdots - 435.714u + 15.9288 \\ 0.237211u^{209} + 0.498058u^{208} + \cdots + 26.8040u - 0.114179 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1.17133u^{209} + 2.28236u^{208} + \cdots + 251.317u - 19.4374 \\ -0.336848u^{209} - 0.679864u^{208} + \cdots - 45.5636u + 1.65715 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0423068u^{209} - 0.230676u^{208} + \cdots + 68.9630u - 11.9556 \\ -0.159705u^{209} - 0.320978u^{208} + \cdots - 26.1963u + 1.32984 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.48273u^{209} + 2.90344u^{208} + \cdots + 295.968u - 21.0744 \\ -0.336339u^{209} - 0.680440u^{208} + \cdots - 45.6823u + 1.65772 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.235422u^{209} + 0.325882u^{208} + \cdots + 124.375u - 14.6092 \\ -0.176154u^{209} - 0.345408u^{208} + \cdots - 29.8021u + 1.42071 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 2.43638u^{209} + 4.77805u^{208} + \cdots + 340.373u - 14.4855 \\ -0.238536u^{209} - 0.486428u^{208} + \cdots - 26.9801u + 0.410462 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.272076u^{209} - 0.664735u^{208} + \cdots - 26.7015u + 0.929693 \\ 0.00207036u^{209} + 0.00307822u^{208} + \cdots + 0.0551708u + 0.101753 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2.23770u^{209} - 4.46873u^{208} + \cdots - 371.192u + 13.8781 \\ 0.196187u^{209} + 0.405338u^{208} + \cdots + 25.3540u - 0.160323 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.435971u^{209} - 0.805405u^{208} + \cdots + 121.187u - 8.89267$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{210} + 10u^{209} + \cdots - 27478849u + 12092767$
c_2	$u^{210} - 6u^{209} + \cdots + 49u + 1$
c_3	$u^{210} + 8u^{208} + \cdots + 257055u + 4092$
c_5	$u^{210} + 7u^{209} + \cdots + 1508984076u + 44022057$
c_6	$u^{210} + 12u^{209} + \cdots + 4260u + 237$
c_7, c_{11}	$u^{210} + 2u^{209} + \cdots - 101779u + 358027$
c_8	$3(3u^{210} + 6u^{209} + \cdots - 26u + 1)$
c_9	$3(3u^{210} - 3u^{209} + \cdots + 4592789u + 999482)$
c_{10}	$3(3u^{210} + 15u^{209} + \cdots + 1.12391 \times 10^8 u + 1.34206 \times 10^7)$
c_{12}	$u^{210} + 12u^{209} + \cdots + 450u + 375$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{210} + 148y^{209} + \cdots + 7967626144440991y + 146235013716289$
c_2	$y^{210} + 22y^{209} + \cdots + 49y + 1$
c_3	$y^{210} + 16y^{209} + \cdots - 23452087521y + 16744464$
c_5	$y^{210} + 21y^{209} + \cdots + 183177916340579052y + 1937941502511249$
c_6	$y^{210} + 8y^{209} + \cdots + 4428546y + 56169$
c_7, c_{11}	$y^{210} - 102y^{209} + \cdots - 7529227423575y + 128183332729$
c_8	$9(9y^{210} + 96y^{209} + \cdots + 290y + 1)$
c_9	$9(9y^{210} + 537y^{209} + \cdots - 2.72232 \times 10^{14}y + 9.98964 \times 10^{11})$
c_{10}	$9 \cdot (9y^{210} - 525y^{209} + \cdots - 18148003448693073y + 180112826454544)$
c_{12}	$y^{210} - 34y^{209} + \cdots - 9502500y + 140625$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.838294 + 0.540054I$ $a = 1.77803 - 0.11287I$ $b = 1.350600 + 0.028259I$	$-7.00637 - 2.65784I$	0
$u = 0.838294 - 0.540054I$ $a = 1.77803 + 0.11287I$ $b = 1.350600 - 0.028259I$	$-7.00637 + 2.65784I$	0
$u = -0.974110 + 0.329203I$ $a = 0.302974 + 0.036436I$ $b = 0.27482 - 1.51050I$	$3.01434 + 4.31771I$	0
$u = -0.974110 - 0.329203I$ $a = 0.302974 - 0.036436I$ $b = 0.27482 + 1.51050I$	$3.01434 - 4.31771I$	0
$u = -0.502020 + 0.818598I$ $a = 0.310752 - 1.345780I$ $b = -0.906972 + 0.145337I$	$-0.39504 + 4.95163I$	0
$u = -0.502020 - 0.818598I$ $a = 0.310752 + 1.345780I$ $b = -0.906972 - 0.145337I$	$-0.39504 - 4.95163I$	0
$u = -0.631212 + 0.704469I$ $a = 1.122220 + 0.782606I$ $b = -0.212816 - 0.811223I$	$4.13252 + 1.14382I$	0
$u = -0.631212 - 0.704469I$ $a = 1.122220 - 0.782606I$ $b = -0.212816 + 0.811223I$	$4.13252 - 1.14382I$	0
$u = 0.299721 + 0.889161I$ $a = 0.06887 + 1.80152I$ $b = -1.137400 - 0.557002I$	$1.50993 - 6.12543I$	0
$u = 0.299721 - 0.889161I$ $a = 0.06887 - 1.80152I$ $b = -1.137400 + 0.557002I$	$1.50993 + 6.12543I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.932725 + 0.048673I$ $a = 2.30883 + 0.48865I$ $b = 1.072620 + 0.492248I$	$-4.49722 - 5.58626I$	0
$u = 0.932725 - 0.048673I$ $a = 2.30883 - 0.48865I$ $b = 1.072620 - 0.492248I$	$-4.49722 + 5.58626I$	0
$u = -0.975344 + 0.442624I$ $a = -1.11120 - 1.12254I$ $b = -0.959846 - 0.255558I$	$-3.94127 + 2.23313I$	0
$u = -0.975344 - 0.442624I$ $a = -1.11120 + 1.12254I$ $b = -0.959846 + 0.255558I$	$-3.94127 - 2.23313I$	0
$u = -0.561718 + 0.923956I$ $a = -0.574246 - 0.849632I$ $b = -0.899775 + 0.623859I$	$1.71023 + 4.27980I$	0
$u = -0.561718 - 0.923956I$ $a = -0.574246 + 0.849632I$ $b = -0.899775 - 0.623859I$	$1.71023 - 4.27980I$	0
$u = -0.910592 + 0.588984I$ $a = -2.11961 - 0.21354I$ $b = -1.114550 + 0.369861I$	$-3.23520 + 7.08529I$	0
$u = -0.910592 - 0.588984I$ $a = -2.11961 + 0.21354I$ $b = -1.114550 - 0.369861I$	$-3.23520 - 7.08529I$	0
$u = 0.602104 + 0.902630I$ $a = 0.352390 + 0.985041I$ $b = -0.676345 + 0.160093I$	$-1.28161 - 4.61716I$	0
$u = 0.602104 - 0.902630I$ $a = 0.352390 - 0.985041I$ $b = -0.676345 - 0.160093I$	$-1.28161 + 4.61716I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.794512 + 0.745220I$ $a = -0.0260919 - 0.1248450I$ $b = 0.098483 + 1.091630I$	$2.07212 - 7.26772I$	0
$u = 0.794512 - 0.745220I$ $a = -0.0260919 + 0.1248450I$ $b = 0.098483 - 1.091630I$	$2.07212 + 7.26772I$	0
$u = 0.882397 + 0.218865I$ $a = -2.41669 - 0.21438I$ $b = -1.076990 - 0.277729I$	$-4.24696 - 3.56604I$	0
$u = 0.882397 - 0.218865I$ $a = -2.41669 + 0.21438I$ $b = -1.076990 + 0.277729I$	$-4.24696 + 3.56604I$	0
$u = -1.077580 + 0.192610I$ $a = 1.063200 + 0.208572I$ $b = 1.51413 - 0.32222I$	$-2.95365 - 1.10457I$	0
$u = -1.077580 - 0.192610I$ $a = 1.063200 - 0.208572I$ $b = 1.51413 + 0.32222I$	$-2.95365 + 1.10457I$	0
$u = 0.883763 + 0.193908I$ $a = 0.915880 - 0.288558I$ $b = 1.289470 + 0.457581I$	$-2.85438 + 0.37294I$	0
$u = 0.883763 - 0.193908I$ $a = 0.915880 + 0.288558I$ $b = 1.289470 - 0.457581I$	$-2.85438 - 0.37294I$	0
$u = 0.291081 + 0.846442I$ $a = 0.881435 - 0.399940I$ $b = -0.622853 + 0.669170I$	$3.55993 - 0.33553I$	0
$u = 0.291081 - 0.846442I$ $a = 0.881435 + 0.399940I$ $b = -0.622853 - 0.669170I$	$3.55993 + 0.33553I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.038123+1.104440I$ $a=\ \ 1.131140+0.040930I$ $b=-1.328670-0.120397I$	$3.24826-0.03375I$	0
$u=-0.038123-1.104440I$ $a=\ \ 1.131140-0.040930I$ $b=-1.328670+0.120397I$	$3.24826+0.03375I$	0
$u=-0.268475+1.072690I$ $a=\ \ 0.043255-0.398396I$ $b=-0.785143+0.405357I$	$1.50142+3.76427I$	0
$u=-0.268475-1.072690I$ $a=\ \ 0.043255+0.398396I$ $b=-0.785143-0.405357I$	$1.50142-3.76427I$	0
$u=\ \ 0.142639+1.103720I$ $a=\ \ 0.306795-0.176767I$ $b=-0.526898-0.279012I$	$6.06903+0.32205I$	0
$u=\ \ 0.142639-1.103720I$ $a=\ \ 0.306795+0.176767I$ $b=-0.526898+0.279012I$	$6.06903-0.32205I$	0
$u=-0.806291+0.362257I$ $a=\ \ 1.224860+0.178142I$ $b=\ \ 1.27334-0.93876I$	$-0.52426+3.89742I$	0
$u=-0.806291-0.362257I$ $a=\ \ 1.224860-0.178142I$ $b=\ \ 1.27334+0.93876I$	$-0.52426-3.89742I$	0
$u=\ \ 0.352923+0.810416I$ $a=-0.665121-0.292336I$ $b=-0.881282+0.748614I$	$1.79631+0.92582I$	0
$u=\ \ 0.352923-0.810416I$ $a=-0.665121+0.292336I$ $b=-0.881282-0.748614I$	$1.79631-0.92582I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.861574+0.729370I$ $a=-2.19323-0.96284I$ $b=-0.565584+0.608098I$	$5.01219+8.07894I$	0
$u=-0.861574-0.729370I$ $a=-2.19323+0.96284I$ $b=-0.565584-0.608098I$	$5.01219-8.07894I$	0
$u=-1.129100+0.140684I$ $a=-1.23791-0.89091I$ $b=-0.810907+0.540868I$	$0.28583+6.27248I$	0
$u=-1.129100-0.140684I$ $a=-1.23791+0.89091I$ $b=-0.810907-0.540868I$	$0.28583-6.27248I$	0
$u=-0.206487+0.835219I$ $a=-1.60062-1.85574I$ $b=-0.576402-0.135329I$	$1.13788-6.73057I$	0
$u=-0.206487-0.835219I$ $a=-1.60062+1.85574I$ $b=-0.576402+0.135329I$	$1.13788+6.73057I$	0
$u=0.956158+0.628238I$ $a=-1.83593+0.38440I$ $b=-1.234210-0.338031I$	$-4.47132-5.17456I$	0
$u=0.956158-0.628238I$ $a=-1.83593-0.38440I$ $b=-1.234210+0.338031I$	$-4.47132+5.17456I$	0
$u=0.761568+0.874361I$ $a=-0.185779+0.940016I$ $b=0.281809-0.549412I$	$-1.99263+2.64285I$	0
$u=0.761568-0.874361I$ $a=-0.185779-0.940016I$ $b=0.281809+0.549412I$	$-1.99263-2.64285I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.665830+0.949582I$ $a=-0.216448+0.192004I$ $b=\ \ 0.925219+0.649865I$	$1.28817+1.13940I$	0
$u=-0.665830-0.949582I$ $a=-0.216448-0.192004I$ $b=\ \ 0.925219-0.649865I$	$1.28817-1.13940I$	0
$u=\ \ 0.282254+1.131240I$ $a=-1.10347+1.66886I$ $b=-0.761673-0.275295I$	$-2.76953-0.36673I$	0
$u=\ \ 0.282254-1.131240I$ $a=-1.10347-1.66886I$ $b=-0.761673+0.275295I$	$-2.76953+0.36673I$	0
$u=-0.513702+1.048320I$ $a=\ \ 0.933452+0.478499I$ $b=\ \ 0.852363-0.218931I$	$-1.69340+1.74417I$	0
$u=-0.513702-1.048320I$ $a=\ \ 0.933452-0.478499I$ $b=\ \ 0.852363+0.218931I$	$-1.69340-1.74417I$	0
$u=-0.556498+0.618059I$ $a=-1.37127-0.60951I$ $b=-1.32437+0.77348I$	$0.86117+13.48710I$	0
$u=-0.556498-0.618059I$ $a=-1.37127+0.60951I$ $b=-1.32437-0.77348I$	$0.86117-13.48710I$	0
$u=\ \ 0.499885+0.663782I$ $a=-1.44798+0.85498I$ $b=-1.254670-0.634309I$	$-2.50988-8.05345I$	0
$u=\ \ 0.499885-0.663782I$ $a=-1.44798-0.85498I$ $b=-1.254670+0.634309I$	$-2.50988+8.05345I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.805967 + 0.177860I$ $a = 0.434459 + 0.646256I$ $b = -0.146359 - 0.254865I$	$0.95657 + 3.34017I$	0
$u = 0.805967 - 0.177860I$ $a = 0.434459 - 0.646256I$ $b = -0.146359 + 0.254865I$	$0.95657 - 3.34017I$	0
$u = -0.730148 + 0.325441I$ $a = 0.689403 + 0.803956I$ $b = 0.248934 + 0.487387I$	$-2.34065 + 1.51221I$	0
$u = -0.730148 - 0.325441I$ $a = 0.689403 - 0.803956I$ $b = 0.248934 - 0.487387I$	$-2.34065 - 1.51221I$	0
$u = 0.082067 + 0.789063I$ $a = -2.51671 - 0.30100I$ $b = 0.700472 - 0.136876I$	$4.67674 + 2.13623I$	0
$u = 0.082067 - 0.789063I$ $a = -2.51671 + 0.30100I$ $b = 0.700472 + 0.136876I$	$4.67674 - 2.13623I$	0
$u = -0.396844 + 0.672747I$ $a = 0.477507 - 0.394204I$ $b = 0.354193 - 0.256651I$	$-0.59462 + 1.63631I$	0
$u = -0.396844 - 0.672747I$ $a = 0.477507 + 0.394204I$ $b = 0.354193 + 0.256651I$	$-0.59462 - 1.63631I$	0
$u = 0.000149 + 0.779699I$ $a = -2.05632 - 0.40832I$ $b = 1.151910 + 0.441528I$	$1.73719 - 11.11930I$	0
$u = 0.000149 - 0.779699I$ $a = -2.05632 + 0.40832I$ $b = 1.151910 - 0.441528I$	$1.73719 + 11.11930I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.949273 + 0.771417I$ $a = 0.579696 - 0.324202I$ $b = 0.328331 + 1.185990I$	$1.57222 - 4.42354I$	0
$u = 0.949273 - 0.771417I$ $a = 0.579696 + 0.324202I$ $b = 0.328331 - 1.185990I$	$1.57222 + 4.42354I$	0
$u = 0.219917 + 1.206290I$ $a = -0.247126 + 0.003737I$ $b = -0.695623 - 0.473447I$	$4.41442 - 9.47905I$	0
$u = 0.219917 - 1.206290I$ $a = -0.247126 - 0.003737I$ $b = -0.695623 + 0.473447I$	$4.41442 + 9.47905I$	0
$u = -0.202107 + 0.740906I$ $a = -1.43945 + 0.88654I$ $b = 0.957278 - 0.420548I$	$-2.24052 + 6.62924I$	0
$u = -0.202107 - 0.740906I$ $a = -1.43945 - 0.88654I$ $b = 0.957278 + 0.420548I$	$-2.24052 - 6.62924I$	0
$u = -1.088940 + 0.577327I$ $a = 1.376260 + 0.191861I$ $b = 1.50735 + 0.08128I$	$-5.87042 - 1.91423I$	0
$u = -1.088940 - 0.577327I$ $a = 1.376260 - 0.191861I$ $b = 1.50735 - 0.08128I$	$-5.87042 + 1.91423I$	0
$u = -0.299101 + 0.694271I$ $a = 0.229867 - 0.239996I$ $b = 0.305748 - 0.639795I$	$-0.06110 + 1.78502I$	0
$u = -0.299101 - 0.694271I$ $a = 0.229867 + 0.239996I$ $b = 0.305748 + 0.639795I$	$-0.06110 - 1.78502I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.702449+0.275050I$ $a=\ \ 3.41512+0.46045I$ $b=\ \ 1.117660-0.549361I$	$-0.05361+11.89730I$	0
$u=-0.702449-0.275050I$ $a=\ \ 3.41512-0.46045I$ $b=\ \ 1.117660+0.549361I$	$-0.05361-11.89730I$	0
$u=-0.773109+0.976730I$ $a=-0.168386-0.112342I$ $b=-0.339086-0.627992I$	$-0.88491+4.23594I$	0
$u=-0.773109-0.976730I$ $a=-0.168386+0.112342I$ $b=-0.339086+0.627992I$	$-0.88491-4.23594I$	0
$u=-1.138080+0.558034I$ $a=-1.281100-0.010003I$ $b=-1.389430-0.120494I$	$-7.72543+5.67594I$	0
$u=-1.138080-0.558034I$ $a=-1.281100+0.010003I$ $b=-1.389430+0.120494I$	$-7.72543-5.67594I$	0
$u=-0.503915+0.527742I$ $a=\ \ 0.307213+0.874366I$ $b=\ \ 0.920430-0.907941I$	$-0.74677+6.77543I$	0
$u=-0.503915-0.527742I$ $a=\ \ 0.307213-0.874366I$ $b=\ \ 0.920430+0.907941I$	$-0.74677-6.77543I$	0
$u=\ \ 0.580935+1.145110I$ $a=\ \ 0.058772-0.156627I$ $b=-0.538663+0.798032I$	$5.18100-1.10780I$	0
$u=\ \ 0.580935-1.145110I$ $a=\ \ 0.058772+0.156627I$ $b=-0.538663-0.798032I$	$5.18100+1.10780I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.286489+0.647018I$ $a=-1.14375-2.69066I$ $b=-0.982337+0.550153I$	$2.47295+5.07532I$	0
$u=-0.286489-0.647018I$ $a=-1.14375+2.69066I$ $b=-0.982337-0.550153I$	$2.47295-5.07532I$	0
$u=0.556103+0.432905I$ $a=-0.46178-1.70459I$ $b=0.350612-0.679158I$	$2.20453-7.10994I$	0
$u=0.556103-0.432905I$ $a=-0.46178+1.70459I$ $b=0.350612+0.679158I$	$2.20453+7.10994I$	0
$u=0.993146+0.878069I$ $a=0.165270-0.243800I$ $b=-0.142644+1.176400I$	$1.53849-3.99678I$	0
$u=0.993146-0.878069I$ $a=0.165270+0.243800I$ $b=-0.142644-1.176400I$	$1.53849+3.99678I$	0
$u=0.572408+1.196250I$ $a=-0.227683+0.056236I$ $b=0.458780-0.414775I$	$4.38891-8.29891I$	0
$u=0.572408-1.196250I$ $a=-0.227683-0.056236I$ $b=0.458780+0.414775I$	$4.38891+8.29891I$	0
$u=1.179300+0.610583I$ $a=-1.262920+0.190665I$ $b=-1.61506-0.03720I$	$-4.92707-10.37180I$	0
$u=1.179300-0.610583I$ $a=-1.262920-0.190665I$ $b=-1.61506+0.03720I$	$-4.92707+10.37180I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.077930+0.785964I$ $a=-0.236627+0.217969I$ $b=-0.378843-1.139770I$	$6.38657+5.55190I$	0
$u=-1.077930-0.785964I$ $a=-0.236627-0.217969I$ $b=-0.378843+1.139770I$	$6.38657-5.55190I$	0
$u=-0.370481+0.533275I$ $a=\ \ 1.083500+0.849965I$ $b=\ \ 1.224680-0.380525I$	$-2.17764+1.67158I$	0
$u=-0.370481-0.533275I$ $a=\ \ 1.083500-0.849965I$ $b=\ \ 1.224680+0.380525I$	$-2.17764-1.67158I$	0
$u=-0.844209+1.057240I$ $a=\ \ 1.62430+0.88862I$ $b=\ \ 1.106270-0.464937I$	$2.27330+12.13740I$	0
$u=-0.844209-1.057240I$ $a=\ \ 1.62430-0.88862I$ $b=\ \ 1.106270+0.464937I$	$2.27330-12.13740I$	0
$u=-0.751764+1.131800I$ $a=-1.23605-1.06569I$ $b=-1.016700+0.677033I$	$3.84639+6.58326I$	0
$u=-0.751764-1.131800I$ $a=-1.23605+1.06569I$ $b=-1.016700-0.677033I$	$3.84639-6.58326I$	0
$u=\ \ 0.083256+0.621860I$ $a=-1.089660+0.209851I$ $b=-0.967510-0.795769I$	$3.55279+4.63528I$	0
$u=\ \ 0.083256-0.621860I$ $a=-1.089660-0.209851I$ $b=-0.967510+0.795769I$	$3.55279-4.63528I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.544266+1.290110I$ $a=\ 0.134657-0.191636I$ $b=\ 0.628070+0.270831I$	$0.98489+1.78465I$	0
$u=-0.544266-1.290110I$ $a=\ 0.134657+0.191636I$ $b=\ 0.628070-0.270831I$	$0.98489-1.78465I$	0
$u=\ 0.429507+0.407611I$ $a=\ 1.29030-0.96089I$ $b=\ 1.31815+0.63665I$	$-2.12743-4.25100I$	0
$u=\ 0.429507-0.407611I$ $a=\ 1.29030+0.96089I$ $b=\ 1.31815-0.63665I$	$-2.12743+4.25100I$	0
$u=\ 0.571298+0.140121I$ $a=\ 1.75453-0.00376I$ $b=\ 1.39662+0.64840I$	$-1.15203-2.71654I$	0
$u=\ 0.571298-0.140121I$ $a=\ 1.75453+0.00376I$ $b=\ 1.39662-0.64840I$	$-1.15203+2.71654I$	0
$u=\ 0.75235+1.19938I$ $a=\ 0.268695+0.266373I$ $b=-1.11748+0.92510I$	$3.57512-2.37918I$	0
$u=\ 0.75235-1.19938I$ $a=\ 0.268695-0.266373I$ $b=-1.11748-0.92510I$	$3.57512+2.37918I$	0
$u=-1.07753+0.92119I$ $a=\ 1.75661+0.51364I$ $b=\ 0.787113-0.392648I$	$6.29350+0.71217I$	0
$u=-1.07753-0.92119I$ $a=\ 1.75661-0.51364I$ $b=\ 0.787113+0.392648I$	$6.29350-0.71217I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.95245 + 1.05842I$ $a = -0.0593108 + 0.0983097I$ $b = 0.358476 - 1.008920I$	$-1.38946 - 9.53042I$	0
$u = 0.95245 - 1.05842I$ $a = -0.0593108 - 0.0983097I$ $b = 0.358476 + 1.008920I$	$-1.38946 + 9.53042I$	0
$u = -1.01245 + 1.02934I$ $a = -0.1044490 + 0.0090545I$ $b = 0.419459 + 1.221530I$	$3.1418 + 15.2882I$	0
$u = -1.01245 - 1.02934I$ $a = -0.1044490 - 0.0090545I$ $b = 0.419459 - 1.221530I$	$3.1418 - 15.2882I$	0
$u = 0.392570 + 0.385220I$ $a = 1.59506 - 1.60422I$ $b = 1.178910 + 0.632393I$	$-1.69409 - 3.94908I$	0
$u = 0.392570 - 0.385220I$ $a = 1.59506 + 1.60422I$ $b = 1.178910 - 0.632393I$	$-1.69409 + 3.94908I$	0
$u = -0.91619 + 1.12719I$ $a = -0.627803 - 0.956862I$ $b = 0.036746 + 0.921669I$	$3.21822 - 7.78812I$	0
$u = -0.91619 - 1.12719I$ $a = -0.627803 + 0.956862I$ $b = 0.036746 - 0.921669I$	$3.21822 + 7.78812I$	0
$u = 1.43287 + 0.29295I$ $a = -1.62321 - 0.46309I$ $b = -0.736511 + 0.089319I$	$-2.89131 - 3.41550I$	0
$u = 1.43287 - 0.29295I$ $a = -1.62321 + 0.46309I$ $b = -0.736511 - 0.089319I$	$-2.89131 + 3.41550I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.014909 + 0.531363I$ $a = 0.453187 + 0.029063I$ $b = -0.107859 - 1.004670I$	$0.79385 + 2.10722I$	$8.15045 - 5.26873I$
$u = 0.014909 - 0.531363I$ $a = 0.453187 - 0.029063I$ $b = -0.107859 + 1.004670I$	$0.79385 - 2.10722I$	$8.15045 + 5.26873I$
$u = -1.13983 + 0.92777I$ $a = 0.318709 - 0.032039I$ $b = -0.29566 - 1.68166I$	$3.24679 + 4.68284I$	0
$u = -1.13983 - 0.92777I$ $a = 0.318709 + 0.032039I$ $b = -0.29566 + 1.68166I$	$3.24679 - 4.68284I$	0
$u = 0.149898 + 0.472455I$ $a = -0.341742 + 0.540391I$ $b = 0.581439 + 0.999013I$	$1.37894 - 4.54768I$	$6.26858 + 10.41405I$
$u = 0.149898 - 0.472455I$ $a = -0.341742 - 0.540391I$ $b = 0.581439 - 0.999013I$	$1.37894 + 4.54768I$	$6.26858 - 10.41405I$
$u = 0.448268 + 0.195955I$ $a = -2.52717 + 3.05511I$ $b = -1.024250 - 0.392230I$	$-5.23201 - 1.19230I$	$-14.5106 + 0.I$
$u = 0.448268 - 0.195955I$ $a = -2.52717 - 3.05511I$ $b = -1.024250 + 0.392230I$	$-5.23201 + 1.19230I$	$-14.5106 + 0.I$
$u = -0.347392 + 0.342546I$ $a = 4.09657 + 1.43461I$ $b = 1.077110 - 0.450997I$	$2.55963 + 0.63721I$	$3.86681 - 1.76840I$
$u = -0.347392 - 0.342546I$ $a = 4.09657 - 1.43461I$ $b = 1.077110 + 0.450997I$	$2.55963 - 0.63721I$	$3.86681 + 1.76840I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.95610 + 1.17232I$ $a = 1.46292 - 0.76538I$ $b = 1.033660 + 0.376306I$	$-0.44883 - 4.77662I$	0
$u = 0.95610 - 1.17232I$ $a = 1.46292 + 0.76538I$ $b = 1.033660 - 0.376306I$	$-0.44883 + 4.77662I$	0
$u = -0.048639 + 0.470469I$ $a = -2.31406 + 0.03989I$ $b = -1.323320 - 0.145327I$	$3.69101 - 2.39345I$	$23.9009 - 0.4945I$
$u = -0.048639 - 0.470469I$ $a = -2.31406 - 0.03989I$ $b = -1.323320 + 0.145327I$	$3.69101 + 2.39345I$	$23.9009 + 0.4945I$
$u = 1.16823 + 0.98512I$ $a = 0.910920 - 0.247874I$ $b = 1.228870 - 0.123085I$	$-1.31176 + 2.02917I$	0
$u = 1.16823 - 0.98512I$ $a = 0.910920 + 0.247874I$ $b = 1.228870 + 0.123085I$	$-1.31176 - 2.02917I$	0
$u = 0.66314 + 1.37761I$ $a = 0.190377 - 0.106451I$ $b = 0.851449 - 0.383190I$	$6.10659 + 2.68645I$	0
$u = 0.66314 - 1.37761I$ $a = 0.190377 + 0.106451I$ $b = 0.851449 + 0.383190I$	$6.10659 - 2.68645I$	0
$u = 1.02328 + 1.16149I$ $a = -1.23924 + 0.86395I$ $b = -1.32072 - 0.78390I$	$0.09478 - 12.58360I$	0
$u = 1.02328 - 1.16149I$ $a = -1.23924 - 0.86395I$ $b = -1.32072 + 0.78390I$	$0.09478 + 12.58360I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.51398 + 0.34490I$ $a = -1.021860 - 0.415543I$ $b = -0.928023 + 0.383734I$	$-0.00403 - 2.60292I$	0
$u = 1.51398 - 0.34490I$ $a = -1.021860 + 0.415543I$ $b = -0.928023 - 0.383734I$	$-0.00403 + 2.60292I$	0
$u = 0.244829 + 0.374177I$ $a = 0.19981 - 2.56392I$ $b = -0.584939 + 0.369600I$	$1.90872 - 0.23293I$	$6.01992 - 1.16442I$
$u = 0.244829 - 0.374177I$ $a = 0.19981 + 2.56392I$ $b = -0.584939 - 0.369600I$	$1.90872 + 0.23293I$	$6.01992 + 1.16442I$
$u = 1.20586 + 1.02284I$ $a = -1.41319 + 0.52758I$ $b = -1.126070 - 0.471524I$	$-3.28929 - 8.48325I$	0
$u = 1.20586 - 1.02284I$ $a = -1.41319 - 0.52758I$ $b = -1.126070 + 0.471524I$	$-3.28929 + 8.48325I$	0
$u = 0.99834 + 1.24020I$ $a = 1.04576 - 1.01600I$ $b = 0.931144 + 0.816490I$	$1.56539 - 6.90162I$	0
$u = 0.99834 - 1.24020I$ $a = 1.04576 + 1.01600I$ $b = 0.931144 - 0.816490I$	$1.56539 + 6.90162I$	0
$u = 0.32917 + 1.59781I$ $a = -0.492373 + 0.905188I$ $b = -1.018380 - 0.352125I$	$-3.81269 - 2.36039I$	0
$u = 0.32917 - 1.59781I$ $a = -0.492373 - 0.905188I$ $b = -1.018380 + 0.352125I$	$-3.81269 + 2.36039I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.41581 + 0.82459I$ $a = 0.797505 - 0.038116I$ $b = 1.25655 - 0.69317I$	$-0.95765 + 4.25343I$	0
$u = 1.41581 - 0.82459I$ $a = 0.797505 + 0.038116I$ $b = 1.25655 + 0.69317I$	$-0.95765 - 4.25343I$	0
$u = 0.338788 + 0.110659I$ $a = 0.268919 - 0.782315I$ $b = 0.474984 + 1.174310I$	$0.60921 - 2.57123I$	$-7.2904 - 14.6569I$
$u = 0.338788 - 0.110659I$ $a = 0.268919 + 0.782315I$ $b = 0.474984 - 1.174310I$	$0.60921 + 2.57123I$	$-7.2904 + 14.6569I$
$u = -0.343467 + 0.089486I$ $a = -4.96228 - 2.87456I$ $b = -1.130510 + 0.321346I$	$-1.63552 - 4.25699I$	$-3.97244 + 9.03897I$
$u = -0.343467 - 0.089486I$ $a = -4.96228 + 2.87456I$ $b = -1.130510 - 0.321346I$	$-1.63552 + 4.25699I$	$-3.97244 - 9.03897I$
$u = -1.20762 + 1.11861I$ $a = -1.254210 - 0.536194I$ $b = -1.296090 + 0.500575I$	$-2.19139 + 12.57100I$	0
$u = -1.20762 - 1.11861I$ $a = -1.254210 + 0.536194I$ $b = -1.296090 - 0.500575I$	$-2.19139 - 12.57100I$	0
$u = 1.11410 + 1.21391I$ $a = 1.20748 - 0.77194I$ $b = 1.27619 + 0.72796I$	$0.3662 - 22.1609I$	0
$u = 1.11410 - 1.21391I$ $a = 1.20748 + 0.77194I$ $b = 1.27619 - 0.72796I$	$0.3662 + 22.1609I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.10085+1.22725I$ $a=-1.133590-0.740167I$ $b=-1.32744+0.62068I$	$-2.19552+10.32140I$	0
$u=-1.10085-1.22725I$ $a=-1.133590+0.740167I$ $b=-1.32744-0.62068I$	$-2.19552-10.32140I$	0
$u=-1.07502+1.25069I$ $a=\ \ 0.303047-0.089067I$ $b=\ \ 0.748325+0.682495I$	$2.67896+2.42662I$	0
$u=-1.07502-1.25069I$ $a=\ \ 0.303047+0.089067I$ $b=\ \ 0.748325-0.682495I$	$2.67896-2.42662I$	0
$u=-0.36230+1.61183I$ $a=\ \ 0.804188+0.432479I$ $b=\ \ 0.788923+0.042075I$	$-0.156729-1.239850I$	0
$u=-0.36230-1.61183I$ $a=\ \ 0.804188-0.432479I$ $b=\ \ 0.788923-0.042075I$	$-0.156729+1.239850I$	0
$u=-1.12678+1.24570I$ $a=\ \ 1.20035+0.76809I$ $b=\ \ 1.208310-0.653298I$	$-4.0173+15.5282I$	0
$u=-1.12678-1.24570I$ $a=\ \ 1.20035-0.76809I$ $b=\ \ 1.208310+0.653298I$	$-4.0173-15.5282I$	0
$u=-0.089737+0.304445I$ $a=-2.50533-0.04589I$ $b=\ \ 0.316230-1.017040I$	$5.45847+4.02150I$	$8.76172-4.01523I$
$u=-0.089737-0.304445I$ $a=-2.50533+0.04589I$ $b=\ \ 0.316230+1.017040I$	$5.45847-4.02150I$	$8.76172+4.01523I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.276028+0.152427I$ $a=-6.54022-8.80862I$ $b=\ 0.397416+0.226342I$	$4.38259+7.68124I$	$17.9968+1.1950I$
$u=-0.276028-0.152427I$ $a=-6.54022+8.80862I$ $b=\ 0.397416-0.226342I$	$4.38259-7.68124I$	$17.9968-1.1950I$
$u=-0.061119+0.303600I$ $a=-5.72825+7.50563I$ $b=-0.615006-0.171648I$	$5.56140-1.46096I$	$2.54516+10.47328I$
$u=-0.061119-0.303600I$ $a=-5.72825-7.50563I$ $b=-0.615006+0.171648I$	$5.56140+1.46096I$	$2.54516-10.47328I$
$u=\ 0.127682+0.241811I$ $a=\ 0.161881+0.596823I$ $b=-0.47670+1.57705I$	$3.80174-5.75146I$	$30.6157+36.4217I$
$u=\ 0.127682-0.241811I$ $a=\ 0.161881-0.596823I$ $b=-0.47670-1.57705I$	$3.80174+5.75146I$	$30.6157-36.4217I$
$u=\ 0.197842+0.105573I$ $a=-5.12098+5.46266I$ $b=\ 0.613635-0.414129I$	$-1.25154-2.95764I$	$-0.30838+4.31551I$
$u=\ 0.197842-0.105573I$ $a=-5.12098-5.46266I$ $b=\ 0.613635+0.414129I$	$-1.25154+2.95764I$	$-0.30838-4.31551I$
$u=-1.74537+0.44125I$ $a=\ 1.005500-0.056770I$ $b=\ 1.286470+0.298762I$	$-3.81826-0.86511I$	0
$u=-1.74537-0.44125I$ $a=\ 1.005500+0.056770I$ $b=\ 1.286470-0.298762I$	$-3.81826+0.86511I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.94830+1.53248I$ $a=-0.871026-0.770294I$ $b=-1.235300+0.451902I$	$-2.96204+9.17723I$	0
$u=-0.94830-1.53248I$ $a=-0.871026+0.770294I$ $b=-1.235300-0.451902I$	$-2.96204-9.17723I$	0
$u=1.33431+1.22026I$ $a=1.194430-0.727727I$ $b=0.969503+0.645506I$	$1.98954-7.58030I$	0
$u=1.33431-1.22026I$ $a=1.194430+0.727727I$ $b=0.969503-0.645506I$	$1.98954+7.58030I$	0
$u=1.38847+1.23917I$ $a=-1.020000+0.527609I$ $b=-1.241240-0.668372I$	$3.59647-11.93150I$	0
$u=1.38847-1.23917I$ $a=-1.020000-0.527609I$ $b=-1.241240+0.668372I$	$3.59647+11.93150I$	0
$u=0.0302633+0.0469418I$ $a=1.90747-12.21410I$ $b=0.783836+0.847861I$	$-0.01410-2.10099I$	$-4.92474+5.03538I$
$u=0.0302633-0.0469418I$ $a=1.90747+12.21410I$ $b=0.783836-0.847861I$	$-0.01410+2.10099I$	$-4.92474-5.03538I$
$u=-1.90181+0.80601I$ $a=-0.970400+0.143811I$ $b=-1.126050-0.405336I$	$-5.32594-5.87879I$	0
$u=-1.90181-0.80601I$ $a=-0.970400-0.143811I$ $b=-1.126050+0.405336I$	$-5.32594+5.87879I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.74086 + 1.20243I$ $a = -0.798269 - 0.020907I$ $b = -1.230410 + 0.516904I$	$-0.40068 + 12.77810I$	0
$u = 1.74086 - 1.20243I$ $a = -0.798269 + 0.020907I$ $b = -1.230410 - 0.516904I$	$-0.40068 - 12.77810I$	0
$u = 1.00866 + 1.89556I$ $a = 0.600196 - 0.430672I$ $b = 1.42509 + 0.18301I$	$-1.83726 + 2.39249I$	0
$u = 1.00866 - 1.89556I$ $a = 0.600196 + 0.430672I$ $b = 1.42509 - 0.18301I$	$-1.83726 - 2.39249I$	0
$u = 1.07420 + 1.90121I$ $a = 1.044720 - 0.329621I$ $b = 0.956987 + 0.049219I$	$-1.41111 - 1.62240I$	0
$u = 1.07420 - 1.90121I$ $a = 1.044720 + 0.329621I$ $b = 0.956987 - 0.049219I$	$-1.41111 + 1.62240I$	0
$u = -2.12783 + 0.56589I$ $a = 1.203670 + 0.053587I$ $b = 0.919266 + 0.112181I$	$-1.74764 + 1.95710I$	0
$u = -2.12783 - 0.56589I$ $a = 1.203670 - 0.053587I$ $b = 0.919266 - 0.112181I$	$-1.74764 - 1.95710I$	0
$u = -1.26382 + 1.80434I$ $a = 0.779221 + 0.602948I$ $b = 1.217150 - 0.527300I$	$-4.39505 + 2.23361I$	0
$u = -1.26382 - 1.80434I$ $a = 0.779221 - 0.602948I$ $b = 1.217150 + 0.527300I$	$-4.39505 - 2.23361I$	0

II. $I_2^u = \langle 1.26 \times 10^{171} u^{55} - 3.51 \times 10^{171} u^{54} + \cdots + 2.85 \times 10^{170} b - 1.70 \times 10^{171},\ 3.46 \times 10^{170} u^{55} - 9.12 \times 10^{170} u^{54} + \cdots + 2.85 \times 10^{170} a + 1.97 \times 10^{170},\ 3u^{56} - 9u^{55} + \cdots - 7u + 1 \rangle$

(i) Arc colorings

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

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

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

$$a_{11} = \begin{pmatrix} -1.21274u^{55} + 3.19926u^{54} + \cdots - 3.05746u - 0.692515 \\ -4.43627u^{55} + 12.3220u^{54} + \cdots - 17.4745u + 5.96358 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 3.22353u^{55} - 9.12274u^{54} + \cdots + 14.4171u - 6.65610 \\ -4.43627u^{55} + 12.3220u^{54} + \cdots - 17.4745u + 5.96358 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -7.58365u^{55} + 21.2071u^{54} + \cdots - 27.1304u + 10.7748 \\ -3.49544u^{55} + 9.92547u^{54} + \cdots - 10.5357u + 6.00055 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 2.51008u^{55} - 6.65444u^{54} + \cdots + 6.95020u - 2.51414 \\ 3.58195u^{55} - 9.95403u^{54} + \cdots + 13.1115u - 4.88832 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -4.40440u^{55} + 12.1696u^{54} + \cdots - 17.6691u + 5.28884 \\ -3.48854u^{55} + 9.91005u^{54} + \cdots - 10.4283u + 5.83380 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2.26339u^{55} + 6.34545u^{54} + \cdots - 8.13821u + 3.29395 \\ 1.10881u^{55} - 2.93841u^{54} + \cdots + 4.90056u - 1.06345 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.289817u^{55} - 0.913245u^{54} + \cdots + 2.36959u - 2.10817 \\ 0.924596u^{55} - 2.66988u^{54} + \cdots + 2.24190u - 1.88706 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.05912u^{55} + 3.03960u^{54} + \cdots - 5.28455u + 3.69035 \\ 1.26749u^{55} - 3.54767u^{54} + \cdots + 5.18685u - 1.57222 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.43960u^{55} - 4.12835u^{54} + \cdots + 5.40083u - 1.64207 \\ -2.43889u^{55} + 6.65258u^{54} + \cdots - 10.9087u + 3.38330 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 11.0111u^{55} - 32.0262u^{54} + \cdots + 23.8543u - 22.5533$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{56} - 11u^{55} + \cdots - 14u + 1$
c_2	$u^{56} + u^{55} + \cdots + 16u^2 + 1$
c_3	$u^{56} + u^{55} + \cdots - 102u + 21$
c_4	$u^{56} + 11u^{55} + \cdots + 14u + 1$
c_5	$u^{56} + 2u^{55} + \cdots - 195u + 21$
c_6	$u^{56} + 7u^{55} + \cdots - 9u + 3$
c_7	$u^{56} - u^{55} + \cdots + 2u + 1$
c_8	$3(3u^{56} - 9u^{55} + \cdots - 7u + 1)$
c_9	$3(3u^{56} - 12u^{55} + \cdots + 83u + 77)$
c_{10}	$3(3u^{56} - 6u^{55} + \cdots - 16u + 11)$
c_{11}	$u^{56} + u^{55} + \cdots - 2u + 1$
c_{12}	$u^{56} - 9u^{55} + \cdots - 33u + 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{56} + 47y^{55} + \cdots + 126y + 1$
c_2	$y^{56} + 21y^{55} + \cdots + 32y + 1$
c_3	$y^{56} + 31y^{55} + \cdots - 534y + 441$
c_5	$y^{56} - 4y^{55} + \cdots + 2211y + 441$
c_6	$y^{56} - 5y^{55} + \cdots + 33y + 9$
c_7, c_{11}	$y^{56} - 23y^{55} + \cdots - 52y + 1$
c_8	$9(9y^{56} - 57y^{55} + \cdots - 31y + 1)$
c_9	$9(9y^{56} + 132y^{55} + \cdots + 78735y + 5929)$
c_{10}	$9(9y^{56} - 66y^{55} + \cdots - 2918y + 121)$
c_{12}	$y^{56} - 23y^{55} + \cdots + 51y + 9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.170897+0.998779I$ $a=\ 1.160330-0.520147I$ $b=-1.189160-0.240228I$	$3.26605+1.02078I$	$5.19449-4.97831I$
$u=-0.170897-0.998779I$ $a=\ 1.160330+0.520147I$ $b=-1.189160+0.240228I$	$3.26605-1.02078I$	$5.19449+4.97831I$
$u=-0.627290+0.857461I$ $a=\ 0.153413-1.116260I$ $b=-0.688813-0.019138I$	$-2.56004+4.59795I$	$-7.52704-5.02532I$
$u=-0.627290-0.857461I$ $a=\ 0.153413+1.116260I$ $b=-0.688813+0.019138I$	$-2.56004-4.59795I$	$-7.52704+5.02532I$
$u=\ 1.071150+0.063233I$ $a=-1.52127+0.49577I$ $b=-1.075720+0.432191I$	$-4.00603+5.89030I$	$-2.57521-10.35602I$
$u=\ 1.071150-0.063233I$ $a=-1.52127-0.49577I$ $b=-1.075720-0.432191I$	$-4.00603-5.89030I$	$-2.57521+10.35602I$
$u=\ 0.362789+1.021530I$ $a=-0.262181-0.659306I$ $b=\ 0.434776-0.172084I$	$5.99639+1.17062I$	$5.60765-1.93661I$
$u=\ 0.362789-1.021530I$ $a=-0.262181+0.659306I$ $b=\ 0.434776+0.172084I$	$5.99639-1.17062I$	$5.60765+1.93661I$
$u=-0.716031+0.570272I$ $a=\ 0.46025+1.38032I$ $b=\ 0.734859-0.566812I$	$1.00674+5.33283I$	$2.18074-8.13944I$
$u=-0.716031-0.570272I$ $a=\ 0.46025-1.38032I$ $b=\ 0.734859+0.566812I$	$1.00674-5.33283I$	$2.18074+8.13944I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.497736+0.983757I$ $a=\ 0.265549+0.392024I$ $b=\ 0.293576-0.534201I$	$1.36177+2.69579I$	$2.60422-3.73324I$
$u=-0.497736-0.983757I$ $a=\ 0.265549-0.392024I$ $b=\ 0.293576+0.534201I$	$1.36177-2.69579I$	$2.60422+3.73324I$
$u=-0.870299+0.166124I$ $a=\ 1.090980+0.312471I$ $b=\ 1.47913-0.31680I$	$-3.34180-0.67011I$	$-16.1559-0.6381I$
$u=-0.870299-0.166124I$ $a=\ 1.090980-0.312471I$ $b=\ 1.47913+0.31680I$	$-3.34180+0.67011I$	$-16.1559+0.6381I$
$u=-1.133300+0.144061I$ $a=-1.90853-0.39672I$ $b=-0.694078-0.312933I$	$-2.46627+2.69611I$	$-6.79677-4.59448I$
$u=-1.133300-0.144061I$ $a=-1.90853+0.39672I$ $b=-0.694078+0.312933I$	$-2.46627-2.69611I$	$-6.79677+4.59448I$
$u=\ 1.023780+0.565079I$ $a=-1.79343+0.13037I$ $b=-1.180000-0.280061I$	$-4.93911-6.04446I$	$-6.86155+7.43666I$
$u=\ 1.023780-0.565079I$ $a=-1.79343-0.13037I$ $b=-1.180000+0.280061I$	$-4.93911+6.04446I$	$-6.86155-7.43666I$
$u=-0.786028+0.236510I$ $a=\ 0.988465+0.458147I$ $b=\ 0.901347-0.956098I$	$0.36514+4.38434I$	$-1.67435-10.00145I$
$u=-0.786028-0.236510I$ $a=\ 0.988465-0.458147I$ $b=\ 0.901347+0.956098I$	$0.36514-4.38434I$	$-1.67435+10.00145I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.299291+1.222440I$ $a=\ 0.61558+1.81623I$ $b=\ 0.646836-0.745244I$	$2.18151+7.47293I$	0
$u=-0.299291-1.222440I$ $a=\ 0.61558-1.81623I$ $b=\ 0.646836+0.745244I$	$2.18151-7.47293I$	0
$u=-0.722983+0.117569I$ $a=-1.81435-1.07383I$ $b=-1.178670-0.547086I$	$0.56050-11.50840I$	$1.28421+8.02826I$
$u=-0.722983-0.117569I$ $a=-1.81435+1.07383I$ $b=-1.178670+0.547086I$	$0.56050+11.50840I$	$1.28421-8.02826I$
$u=\ 0.336501+0.639735I$ $a=-0.571523-0.696790I$ $b=\ 0.830850+0.714772I$	$-0.28581-6.42749I$	$3.61440+6.02119I$
$u=\ 0.336501-0.639735I$ $a=-0.571523+0.696790I$ $b=\ 0.830850-0.714772I$	$-0.28581+6.42749I$	$3.61440-6.02119I$
$u=\ 0.446567+1.199170I$ $a=-0.039681-0.357375I$ $b=-0.382007-0.024552I$	$3.92498-8.71684I$	0
$u=\ 0.446567-1.199170I$ $a=-0.039681+0.357375I$ $b=-0.382007+0.024552I$	$3.92498+8.71684I$	0
$u=\ 0.237318+0.657069I$ $a=-1.87240-2.69636I$ $b=\ 0.514776-0.058134I$	$5.70986+1.03372I$	$9.24362+5.37789I$
$u=\ 0.237318-0.657069I$ $a=-1.87240+2.69636I$ $b=\ 0.514776+0.058134I$	$5.70986-1.03372I$	$9.24362-5.37789I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.461092 + 1.255620I$ $a = 1.08572 - 1.24350I$ $b = 0.809748 + 0.229582I$	$-2.90856 - 1.27899I$	0
$u = 0.461092 - 1.255620I$ $a = 1.08572 + 1.24350I$ $b = 0.809748 - 0.229582I$	$-2.90856 + 1.27899I$	0
$u = 0.562504 + 0.226016I$ $a = -4.38690 + 4.16856I$ $b = -0.462747 + 0.085516I$	$4.16769 - 7.77852I$	$-13.0591 + 12.1864I$
$u = 0.562504 - 0.226016I$ $a = -4.38690 - 4.16856I$ $b = -0.462747 - 0.085516I$	$4.16769 + 7.77852I$	$-13.0591 - 12.1864I$
$u = 0.528262 + 0.265271I$ $a = 1.52687 - 0.27136I$ $b = 1.38314 + 0.75889I$	$-1.23332 - 3.00153I$	$-8.9128 + 16.9863I$
$u = 0.528262 - 0.265271I$ $a = 1.52687 + 0.27136I$ $b = 1.38314 - 0.75889I$	$-1.23332 + 3.00153I$	$-8.9128 - 16.9863I$
$u = 0.999026 + 0.998171I$ $a = 1.121210 - 0.777371I$ $b = 1.154090 + 0.414442I$	$-4.09826 - 1.97477I$	0
$u = 0.999026 - 0.998171I$ $a = 1.121210 + 0.777371I$ $b = 1.154090 - 0.414442I$	$-4.09826 + 1.97477I$	0
$u = 1.22734 + 0.79348I$ $a = 0.319350 - 0.015958I$ $b = -0.08084 + 1.73935I$	$3.09274 - 4.81796I$	0
$u = 1.22734 - 0.79348I$ $a = 0.319350 + 0.015958I$ $b = -0.08084 - 1.73935I$	$3.09274 + 4.81796I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.99183+1.16683I$ $a=-0.192222+0.000121I$ $b=-0.752753-0.743486I$	$2.42277+2.35883I$	0
$u=-0.99183-1.16683I$ $a=-0.192222-0.000121I$ $b=-0.752753+0.743486I$	$2.42277-2.35883I$	0
$u=-0.288760+0.336710I$ $a=-0.0291315+0.0250115I$ $b=\ \ 0.447932-1.207910I$	$0.68174+2.76182I$	$8.2057-22.8621I$
$u=-0.288760-0.336710I$ $a=-0.0291315-0.0250115I$ $b=\ \ 0.447932+1.207910I$	$0.68174-2.76182I$	$8.2057+22.8621I$
$u=-1.10440+1.14317I$ $a=-1.230600-0.665540I$ $b=-1.34834+0.55166I$	$-1.42124+11.76190I$	0
$u=-1.10440-1.14317I$ $a=-1.230600+0.665540I$ $b=-1.34834-0.55166I$	$-1.42124-11.76190I$	0
$u=-0.028287+0.367435I$ $a=-3.66048+0.08158I$ $b=-1.168440-0.141467I$	$3.43455-2.42547I$	$-8.93107+4.39818I$
$u=-0.028287-0.367435I$ $a=-3.66048-0.08158I$ $b=-1.168440+0.141467I$	$3.43455+2.42547I$	$-8.93107-4.39818I$
$u=\ \ 1.31540+1.12599I$ $a=-1.23056+0.72950I$ $b=-0.959385-0.673239I$	$1.79881-7.72829I$	0
$u=\ \ 1.31540-1.12599I$ $a=-1.23056-0.72950I$ $b=-0.959385+0.673239I$	$1.79881+7.72829I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.220065 + 0.028927I$ $a = -1.60149 - 0.20182I$ $b = -0.35371 - 1.42919I$	$3.69697 + 5.65263I$	$-10.81596 + 3.11923I$
$u = 0.220065 - 0.028927I$ $a = -1.60149 + 0.20182I$ $b = -0.35371 + 1.42919I$	$3.69697 - 5.65263I$	$-10.81596 - 3.11923I$
$u = -1.41211 + 1.49055I$ $a = 0.834236 + 0.421453I$ $b = 1.301130 - 0.127620I$	$-1.59072 - 2.57928I$	0
$u = -1.41211 - 1.49055I$ $a = 0.834236 - 0.421453I$ $b = 1.301130 + 0.127620I$	$-1.59072 + 2.57928I$	0
$u = 2.35744 + 0.94848I$ $a = 0.992799 - 0.129856I$ $b = 1.082470 + 0.059488I$	$-1.65760 + 2.13230I$	0
$u = 2.35744 - 0.94848I$ $a = 0.992799 + 0.129856I$ $b = 1.082470 - 0.059488I$	$-1.65760 - 2.13230I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{56}-11u^{55}+\cdots-14u+1)$ $\cdot(u^{210}+10u^{209}+\cdots-27478849u+12092767)$
c_2	$(u^{56}+u^{55}+\cdots+16u^2+1)(u^{210}-6u^{209}+\cdots+49u+1)$
c_3	$(u^{56}+u^{55}+\cdots-102u+21)(u^{210}+8u^{208}+\cdots+257055u+4092)$
c_4	$(u^{56}+11u^{55}+\cdots+14u+1)$ $\cdot(u^{210}+10u^{209}+\cdots-27478849u+12092767)$
c_5	$(u^{56}+2u^{55}+\cdots-195u+21)$ $\cdot(u^{210}+7u^{209}+\cdots+1508984076u+44022057)$
c_6	$(u^{56}+7u^{55}+\cdots-9u+3)(u^{210}+12u^{209}+\cdots+4260u+237)$
c_7	$(u^{56}-u^{55}+\cdots+2u+1)(u^{210}+2u^{209}+\cdots-101779u+358027)$
c_8	$9(3u^{56}-9u^{55}+\cdots-7u+1)(3u^{210}+6u^{209}+\cdots-26u+1)$
c_9	$9(3u^{56}-12u^{55}+\cdots+83u+77)$ $\cdot(3u^{210}-3u^{209}+\cdots+4592789u+999482)$
c_{10}	$9(3u^{56}-6u^{55}+\cdots-16u+11)$ $\cdot(3u^{210}+15u^{209}+\cdots+112390753u+13420612)$
c_{11}	$(u^{56}+u^{55}+\cdots-2u+1)(u^{210}+2u^{209}+\cdots-101779u+358027)$
c_{12}	$(u^{56}-9u^{55}+\cdots-33u+3)(u^{210}+12u^{209}+\cdots+450u+375)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{56}+47y^{55}+\cdots+126y+1)$ $\cdot(y^{210}+148y^{209}+\cdots+7967626144440991y+146235013716289)$
c_2	$(y^{56}+21y^{55}+\cdots+32y+1)(y^{210}+22y^{209}+\cdots+49y+1)$
c_3	$(y^{56}+31y^{55}+\cdots-534y+441)$ $\cdot(y^{210}+16y^{209}+\cdots-23452087521y+16744464)$
c_5	$(y^{56}-4y^{55}+\cdots+2211y+441)$ $\cdot(y^{210}+21y^{209}+\cdots+183177916340579052y+1937941502511249)$
c_6	$(y^{56}-5y^{55}+\cdots+33y+9)(y^{210}+8y^{209}+\cdots+4428546y+56169)$
c_7, c_{11}	$(y^{56}-23y^{55}+\cdots-52y+1)$ $\cdot(y^{210}-102y^{209}+\cdots-7529227423575y+128183332729)$
c_8	$81(9y^{56}-57y^{55}+\cdots-31y+1)(9y^{210}+96y^{209}+\cdots+290y+1)$
c_9	$81(9y^{56}+132y^{55}+\cdots+78735y+5929)$ $\cdot(9y^{210}+537y^{209}+\cdots-272232207635749y+998964268324)$
c_{10}	$81(9y^{56}-66y^{55}+\cdots-2918y+121)$ $\cdot(9y^{210}-525y^{209}+\cdots-18148003448693073y+180112826454544)$
c_{12}	$(y^{56}-23y^{55}+\cdots+51y+9)$ $\cdot(y^{210}-34y^{209}+\cdots-9502500y+140625)$