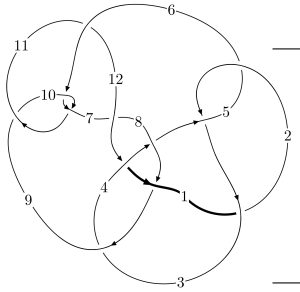
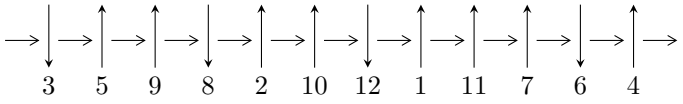
$12a_{0191}$ $(K12a_{0191})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle 2.52008 \times 10^{86} u^{132} + 3.94249 \times 10^{86} u^{131} + \cdots + 2.40447 \times 10^{86} b + 4.48441 \times 10^{86},$
$8.35432 \times 10^{85} u^{132} + 1.84786 \times 10^{86} u^{131} + \cdots + 3.00559 \times 10^{85} a + 5.71468 \times 10^{85},\ u^{133} + 3u^{132} + \cdots + 8u$
$I_2^u = \langle b^2 - b + 1,\ a + 1,\ u + 1 \rangle$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 135 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. $\boldsymbol{I_1^u = \langle 2.52 \times 10^{86} u^{132} + 3.94 \times 10^{86} u^{131} + \cdots + 2.40 \times 10^{86} b + 4.48 \times 10^{86},\ 8.35 \times 10^{85} u^{132} + 1.85 \times 10^{86} u^{131} + \cdots + 3.01 \times 10^{85} a + 5.71 \times 10^{85},\ u^{133} + 3u^{132} + \cdots + 8u + 1 \rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_{12} = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2.77960u^{132} - 6.14809u^{131} + \cdots - 19.5449u - 1.90135 \\ -1.04808u^{132} - 1.63965u^{131} + \cdots - 12.4583u - 1.86503 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^8 - u^6 + u^4 + 1 \\ -u^8 + 2u^6 - 2u^4 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.55645u^{132} - 7.01862u^{131} + \cdots - 38.9986u - 5.29904 \\ -0.441377u^{132} - 0.416986u^{131} + \cdots - 7.60203u - 2.08587 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2.59310u^{132} - 8.40110u^{131} + \cdots - 48.5351u - 7.64213 \\ 0.250137u^{132} + 1.15429u^{131} + \cdots - 2.41571u - 1.48573 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 4.12887u^{132} + 9.16088u^{131} + \cdots + 36.0661u + 3.95573 \\ 1.59710u^{132} + 4.52162u^{131} + \cdots + 17.3842u + 2.23057 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 4.25425u^{132} + 6.02863u^{131} + \cdots + 0.864270u - 0.604074 \\ -4.48777u^{132} - 9.82783u^{131} + \cdots - 40.5969u - 6.76622 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 12.1017u^{132} + 39.4347u^{131} + \cdots + 227.831u + 41.4535$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{133}+56u^{132}+\cdots-31u-1$
c_2, c_5	$u^{133}+2u^{132}+\cdots-3u-1$
c_3	$u^{133}+2u^{132}+\cdots-51u-1$
c_4	$u^{133}+4u^{132}+\cdots-503u-71$
c_6, c_{10}	$u^{133}-3u^{132}+\cdots+8u-1$
c_7	$u^{133}-u^{132}+\cdots+149316216u-14182609$
c_8	$u^{133}-7u^{132}+\cdots+4u^2-1$
c_9	$u^{133}-63u^{132}+\cdots+8u-1$
c_{11}	$u^{133}-3u^{132}+\cdots+149248u-14144$
c_{12}	$u^{133}+13u^{132}+\cdots+4u-4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{133} + 44y^{132} + \cdots - 463y - 1$
c_2, c_5	$y^{133} + 56y^{132} + \cdots - 31y - 1$
c_3	$y^{133} - 144y^{132} + \cdots + 469y - 1$
c_4	$y^{133} - 148y^{132} + \cdots + 609145y - 5041$
c_6, c_{10}	$y^{133} - 63y^{132} + \cdots + 8y - 1$
c_7	$y^{133} - 55y^{132} + \cdots + 8218121135689976y - 201146398046881$
c_8	$y^{133} - 15y^{132} + \cdots + 8y - 1$
c_9	$y^{133} + 17y^{132} + \cdots - 188y - 1$
c_{11}	$y^{133} + 23y^{132} + \cdots - 6938136960y - 200052736$
c_{12}	$y^{133} + 15y^{132} + \cdots - 376y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.938642+0.337279I$ $a=\ \ 0.20985-2.16393I$ $b=\ \ 0.390528-0.825680I$	$1.30397-2.83605I$	0
$u=-0.938642-0.337279I$ $a=\ \ 0.20985+2.16393I$ $b=\ \ 0.390528+0.825680I$	$1.30397+2.83605I$	0
$u=\ \ 0.676793+0.700478I$ $a=\ \ 1.40666-1.02355I$ $b=-0.420429-1.023560I$	$-5.04185+3.41791I$	0
$u=\ \ 0.676793-0.700478I$ $a=\ \ 1.40666+1.02355I$ $b=-0.420429+1.023560I$	$-5.04185-3.41791I$	0
$u=-0.628150+0.722355I$ $a=\ \ 1.21898+1.37771I$ $b=-0.631474+1.133740I$	$-3.83179-11.75880I$	0
$u=-0.628150-0.722355I$ $a=\ \ 1.21898-1.37771I$ $b=-0.631474-1.133740I$	$-3.83179+11.75880I$	0
$u=\ \ 0.567642+0.770256I$ $a=\ \ 0.128927+0.853025I$ $b=-0.418769+1.003390I$	$-5.10093-2.87602I$	0
$u=\ \ 0.567642-0.770256I$ $a=\ \ 0.128927-0.853025I$ $b=-0.418769-1.003390I$	$-5.10093+2.87602I$	0
$u=-1.021260+0.272501I$ $a=-5.04520-0.52842I$ $b=\ \ 0.529033+0.889780I$	$2.01730+1.36993I$	0
$u=-1.021260-0.272501I$ $a=-5.04520+0.52842I$ $b=\ \ 0.529033-0.889780I$	$2.01730-1.36993I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.619041+0.690475I$ $a=-0.045587+0.329564I$ $b=-0.869286-0.403020I$	$-1.64002-6.22274I$	0
$u=-0.619041-0.690475I$ $a=-0.045587-0.329564I$ $b=-0.869286+0.403020I$	$-1.64002+6.22274I$	0
$u=-1.033370+0.306485I$ $a=-3.13350+3.70534I$ $b=0.529045-0.819274I$	$2.24662-2.89797I$	0
$u=-1.033370-0.306485I$ $a=-3.13350-3.70534I$ $b=0.529045+0.819274I$	$2.24662+2.89797I$	0
$u=0.447619+0.798125I$ $a=0.353224-0.921347I$ $b=-0.327771-0.941641I$	$-4.45007-0.29957I$	0
$u=0.447619-0.798125I$ $a=0.353224+0.921347I$ $b=-0.327771+0.941641I$	$-4.45007+0.29957I$	0
$u=1.073510+0.162208I$ $a=0.112836+0.745408I$ $b=0.006446-1.247370I$	$-1.89384-3.73566I$	0
$u=1.073510-0.162208I$ $a=0.112836-0.745408I$ $b=0.006446+1.247370I$	$-1.89384+3.73566I$	0
$u=1.061100+0.243227I$ $a=-1.74905+1.01661I$ $b=0.688737-1.162250I$	$2.81853-3.85336I$	0
$u=1.061100-0.243227I$ $a=-1.74905-1.01661I$ $b=0.688737+1.162250I$	$2.81853+3.85336I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.906727 + 0.616271I$ $a = 0.099342 + 0.230960I$ $b = -0.350822 + 1.034860I$	$-4.35526 + 1.63876I$	0
$u = 0.906727 - 0.616271I$ $a = 0.099342 - 0.230960I$ $b = -0.350822 - 1.034860I$	$-4.35526 - 1.63876I$	0
$u = -1.058580 + 0.286836I$ $a = 0.498544 - 0.542479I$ $b = 0.124828 + 0.188943I$	$2.30068 - 0.56140I$	0
$u = -1.058580 - 0.286836I$ $a = 0.498544 + 0.542479I$ $b = 0.124828 - 0.188943I$	$2.30068 + 0.56140I$	0
$u = 1.019480 + 0.424090I$ $a = -0.817365 - 0.136498I$ $b = 0.297876 + 1.126390I$	$0.24508 + 5.65314I$	0
$u = 1.019480 - 0.424090I$ $a = -0.817365 + 0.136498I$ $b = 0.297876 - 1.126390I$	$0.24508 - 5.65314I$	0
$u = -0.550163 + 0.704374I$ $a = -0.14235 - 1.45370I$ $b = -0.099381 - 1.260370I$	$-7.42423 - 3.38928I$	0
$u = -0.550163 - 0.704374I$ $a = -0.14235 + 1.45370I$ $b = -0.099381 + 1.260370I$	$-7.42423 + 3.38928I$	0
$u = 1.071030 + 0.283668I$ $a = -1.77636 + 1.17552I$ $b = 0.954457 - 0.590743I$	$4.97036 - 1.30489I$	0
$u = 1.071030 - 0.283668I$ $a = -1.77636 - 1.17552I$ $b = 0.954457 + 0.590743I$	$4.97036 + 1.30489I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.341275 + 0.823182I$ $a = 1.22741 + 0.72538I$ $b = -0.517719 + 1.008110I$	$-3.16841 - 6.11783I$	0
$u = 0.341275 - 0.823182I$ $a = 1.22741 - 0.72538I$ $b = -0.517719 - 1.008110I$	$-3.16841 + 6.11783I$	0
$u = 1.057330 + 0.345227I$ $a = -2.41464 - 0.92687I$ $b = 0.776115 + 1.029020I$	$3.65902 + 4.97237I$	0
$u = 1.057330 - 0.345227I$ $a = -2.41464 + 0.92687I$ $b = 0.776115 - 1.029020I$	$3.65902 - 4.97237I$	0
$u = 1.071840 + 0.310160I$ $a = -1.76398 - 0.47056I$ $b = 0.948474 + 0.360859I$	$5.19875 + 2.12290I$	0
$u = 1.071840 - 0.310160I$ $a = -1.76398 + 0.47056I$ $b = 0.948474 - 0.360859I$	$5.19875 - 2.12290I$	0
$u = -0.365567 + 0.804751I$ $a = 1.25879 - 1.05621I$ $b = -0.663331 - 1.142380I$	$-2.4075 + 14.5311I$	0
$u = -0.365567 - 0.804751I$ $a = 1.25879 + 1.05621I$ $b = -0.663331 + 1.142380I$	$-2.4075 - 14.5311I$	0
$u = -0.812176 + 0.318124I$ $a = 1.47266 + 0.35071I$ $b = 0.215975 + 0.502125I$	$1.029600 - 0.175314I$	0
$u = -0.812176 - 0.318124I$ $a = 1.47266 - 0.35071I$ $b = 0.215975 - 0.502125I$	$1.029600 + 0.175314I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.956485+0.601189I$ $a=\ \ 0.881721+0.725739I$ $b=-0.825847+0.376564I$	$-0.641585+1.245630I$	0
$u=-0.956485-0.601189I$ $a=\ \ 0.881721-0.725739I$ $b=-0.825847-0.376564I$	$-0.641585-1.245630I$	0
$u=-0.359356+0.784698I$ $a=\ \ 0.190011-0.403009I$ $b=-0.922850+0.445182I$	$-0.28125+8.72203I$	0
$u=-0.359356-0.784698I$ $a=\ \ 0.190011+0.403009I$ $b=-0.922850-0.445182I$	$-0.28125-8.72203I$	0
$u=-0.401720+0.758509I$ $a=-0.267477+1.249090I$ $b=-0.038805+1.300870I$	$-6.66241+5.90589I$	0
$u=-0.401720-0.758509I$ $a=-0.267477-1.249090I$ $b=-0.038805-1.300870I$	$-6.66241-5.90589I$	0
$u=\ \ 0.560497+0.648811I$ $a=\ \ 0.524922-0.403750I$ $b=-0.424723+0.078114I$	$-2.73017+0.09703I$	0
$u=\ \ 0.560497-0.648811I$ $a=\ \ 0.524922+0.403750I$ $b=-0.424723-0.078114I$	$-2.73017-0.09703I$	0
$u=-0.960239+0.633625I$ $a=-0.0716142-0.1064080I$ $b=-0.612797-1.124860I$	$-2.84776+6.59074I$	0
$u=-0.960239-0.633625I$ $a=-0.0716142+0.1064080I$ $b=-0.612797+1.124860I$	$-2.84776-6.59074I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000500 + 0.574022I$ $a = 0.745653 - 0.228474I$ $b = -0.510788 + 0.042986I$	$-1.43249 + 4.68363I$	0
$u = 1.000500 - 0.574022I$ $a = 0.745653 + 0.228474I$ $b = -0.510788 - 0.042986I$	$-1.43249 - 4.68363I$	0
$u = 1.139840 + 0.197666I$ $a = 1.73211 + 0.78820I$ $b = -0.899455 - 0.481249I$	$4.53074 - 6.07300I$	0
$u = 1.139840 - 0.197666I$ $a = 1.73211 - 0.78820I$ $b = -0.899455 + 0.481249I$	$4.53074 + 6.07300I$	0
$u = -1.032740 + 0.540075I$ $a = 0.959201 - 0.018023I$ $b = 0.495730 + 1.212150I$	$-0.589793 - 0.316757I$	0
$u = -1.032740 - 0.540075I$ $a = 0.959201 + 0.018023I$ $b = 0.495730 - 1.212150I$	$-0.589793 + 0.316757I$	0
$u = 1.157920 + 0.180871I$ $a = 1.88931 - 0.83451I$ $b = -0.668196 + 1.121420I$	$2.58003 - 11.84430I$	0
$u = 1.157920 - 0.180871I$ $a = 1.88931 + 0.83451I$ $b = -0.668196 - 1.121420I$	$2.58003 + 11.84430I$	0
$u = -1.014170 + 0.598205I$ $a = 1.64661 + 0.85587I$ $b = -0.136108 + 1.241100I$	$-6.05194 - 1.61446I$	0
$u = -1.014170 - 0.598205I$ $a = 1.64661 - 0.85587I$ $b = -0.136108 - 1.241100I$	$-6.05194 + 1.61446I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.186470+0.054021I$ $a=\ 1.189560-0.564974I$ $b=-0.431034+0.890623I$	$1.13183-1.75913I$	0
$u=-1.186470-0.054021I$ $a=\ 1.189560+0.564974I$ $b=-0.431034-0.890623I$	$1.13183+1.75913I$	0
$u=-0.516975+0.621794I$ $a=-0.50686-1.74873I$ $b=\ 0.558570-1.198940I$	$-2.11838-4.26875I$	$4.00000+8.90330I$
$u=-0.516975-0.621794I$ $a=-0.50686+1.74873I$ $b=\ 0.558570+1.198940I$	$-2.11838+4.26875I$	$4.00000-8.90330I$
$u=\ 0.326269+0.737922I$ $a=\ 0.581012+0.276327I$ $b=-0.384807-0.441827I$	$-1.67402-2.04228I$	$0.+3.11343I$
$u=\ 0.326269-0.737922I$ $a=\ 0.581012-0.276327I$ $b=-0.384807+0.441827I$	$-1.67402+2.04228I$	$0.-3.11343I$
$u=-1.164350+0.267658I$ $a=\ 1.57158-0.87908I$ $b=-0.431717+0.707305I$	$2.69578-0.90782I$	0
$u=-1.164350-0.267658I$ $a=\ 1.57158+0.87908I$ $b=-0.431717-0.707305I$	$2.69578+0.90782I$	0
$u=-1.073090+0.525884I$ $a=-0.02919-1.69397I$ $b=\ 0.855172+0.938845I$	$2.42996-1.91167I$	0
$u=-1.073090-0.525884I$ $a=-0.02919+1.69397I$ $b=\ 0.855172-0.938845I$	$2.42996+1.91167I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.056950 + 0.559305I$ $a = 0.10846 - 1.87568I$ $b = 0.430768 - 0.937711I$	$-0.51321 + 3.28432I$	0
$u = 1.056950 - 0.559305I$ $a = 0.10846 + 1.87568I$ $b = 0.430768 + 0.937711I$	$-0.51321 - 3.28432I$	0
$u = 0.464633 + 0.655641I$ $a = -1.26428 + 3.48917I$ $b = 0.458134 + 0.928503I$	$-2.25487 + 1.46344I$	$10.47361 + 7.88997I$
$u = 0.464633 - 0.655641I$ $a = -1.26428 - 3.48917I$ $b = 0.458134 - 0.928503I$	$-2.25487 - 1.46344I$	$10.47361 - 7.88997I$
$u = -0.376109 + 0.709583I$ $a = -1.00205 + 1.36804I$ $b = 0.644594 + 1.215780I$	$-1.43164 + 6.14743I$	$4.00000 - 9.28084I$
$u = -0.376109 - 0.709583I$ $a = -1.00205 - 1.36804I$ $b = 0.644594 - 1.215780I$	$-1.43164 - 6.14743I$	$4.00000 + 9.28084I$
$u = 1.013000 + 0.643963I$ $a = 1.54835 - 0.88471I$ $b = -0.452616 - 1.029990I$	$-3.77821 + 8.20381I$	0
$u = 1.013000 - 0.643963I$ $a = 1.54835 + 0.88471I$ $b = -0.452616 + 1.029990I$	$-3.77821 - 8.20381I$	0
$u = 0.407638 + 0.685721I$ $a = -2.80601 - 2.71556I$ $b = 0.506623 - 0.928041I$	$-1.98627 - 3.38011I$	$4.0000 - 16.6696I$
$u = 0.407638 - 0.685721I$ $a = -2.80601 + 2.71556I$ $b = 0.506623 + 0.928041I$	$-1.98627 + 3.38011I$	$4.0000 + 16.6696I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.081200 + 0.545165I$ $a = -0.03586 + 3.05446I$ $b = 0.524517 - 0.749014I$	$0.57689 + 3.95354I$	0
$u = 1.081200 - 0.545165I$ $a = -0.03586 - 3.05446I$ $b = 0.524517 + 0.749014I$	$0.57689 - 3.95354I$	0
$u = 1.149370 + 0.396511I$ $a = 1.44488 - 1.33207I$ $b = -0.793011 + 0.596511I$	$6.81136 + 5.77876I$	0
$u = 1.149370 - 0.396511I$ $a = 1.44488 + 1.33207I$ $b = -0.793011 - 0.596511I$	$6.81136 - 5.77876I$	0
$u = -1.091750 + 0.535401I$ $a = -0.60127 - 1.63173I$ $b = 0.986693 + 0.216479I$	$3.67042 - 5.02818I$	0
$u = -1.091750 - 0.535401I$ $a = -0.60127 + 1.63173I$ $b = 0.986693 - 0.216479I$	$3.67042 + 5.02818I$	0
$u = 1.091490 + 0.541216I$ $a = -0.281364 - 0.569955I$ $b = 0.268631 + 0.463462I$	$0.58808 + 6.56631I$	0
$u = 1.091490 - 0.541216I$ $a = -0.281364 + 0.569955I$ $b = 0.268631 - 0.463462I$	$0.58808 - 6.56631I$	0
$u = -1.201860 + 0.200635I$ $a = 1.54186 + 0.83855I$ $b = -0.514690 - 0.951900I$	$1.86540 + 3.13414I$	0
$u = -1.201860 - 0.200635I$ $a = 1.54186 - 0.83855I$ $b = -0.514690 + 0.951900I$	$1.86540 - 3.13414I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.084700 + 0.562327I$ $a = -4.28667 + 1.91345I$ $b = 0.524320 + 0.933011I$	$-0.00612 + 8.20949I$	0
$u = 1.084700 - 0.562327I$ $a = -4.28667 - 1.91345I$ $b = 0.524320 - 0.933011I$	$-0.00612 - 8.20949I$	0
$u = -1.097070 + 0.548031I$ $a = -2.18238 - 0.84343I$ $b = 0.987094 - 0.694444I$	$3.18188 - 8.50354I$	0
$u = -1.097070 - 0.548031I$ $a = -2.18238 + 0.84343I$ $b = 0.987094 + 0.694444I$	$3.18188 + 8.50354I$	0
$u = -1.098860 + 0.564154I$ $a = -2.84194 - 0.95940I$ $b = 0.669594 - 1.231270I$	$0.67683 - 11.03360I$	0
$u = -1.098860 - 0.564154I$ $a = -2.84194 + 0.95940I$ $b = 0.669594 + 1.231270I$	$0.67683 + 11.03360I$	0
$u = -1.150740 + 0.453999I$ $a = 2.31207 + 0.01912I$ $b = -0.720083 + 0.655606I$	$6.42598 - 2.29873I$	0
$u = -1.150740 - 0.453999I$ $a = 2.31207 - 0.01912I$ $b = -0.720083 - 0.655606I$	$6.42598 + 2.29873I$	0
$u = 1.167740 + 0.419689I$ $a = 2.51203 + 0.53875I$ $b = -0.660380 - 1.030670I$	$5.49722 + 11.24660I$	0
$u = 1.167740 - 0.419689I$ $a = 2.51203 - 0.53875I$ $b = -0.660380 + 1.030670I$	$5.49722 - 11.24660I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.015302+0.756473I$ $a=\ \ 0.969612+0.010752I$ $b=-0.625651+1.019820I$	$2.01993-7.11763I$	$4.28161+7.73107I$
$u=-0.015302-0.756473I$ $a=\ \ 0.969612-0.010752I$ $b=-0.625651-1.019820I$	$2.01993+7.11763I$	$4.28161-7.73107I$
$u=-0.350565+0.668164I$ $a=-0.605486+0.443628I$ $b=\ \ 0.934255+0.701571I$	$1.03385+3.77715I$	$8.53053-6.69546I$
$u=-0.350565-0.668164I$ $a=-0.605486-0.443628I$ $b=\ \ 0.934255-0.701571I$	$1.03385-3.77715I$	$8.53053+6.69546I$
$u=-1.102380+0.586574I$ $a=-1.66282-0.20699I$ $b=-0.021501-1.320600I$	$-4.59302-10.99800I$	0
$u=-1.102380-0.586574I$ $a=-1.66282+0.20699I$ $b=-0.021501+1.320600I$	$-4.59302+10.99800I$	0
$u=-1.174290+0.428522I$ $a=\ \ 0.84097+1.48784I$ $b=-0.634212-0.980790I$	$5.44043+2.88842I$	0
$u=-1.174290-0.428522I$ $a=\ \ 0.84097-1.48784I$ $b=-0.634212+0.980790I$	$5.44043-2.88842I$	0
$u=\ \ 1.090730+0.613399I$ $a=-0.445281+0.075190I$ $b=-0.276861+0.927174I$	$-2.53351+5.59015I$	0
$u=\ \ 1.090730-0.613399I$ $a=-0.445281-0.075190I$ $b=-0.276861-0.927174I$	$-2.53351-5.59015I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.387791 + 0.637216I$ $a = 0.14049 - 2.06169I$ $b = 0.481601 + 0.755700I$	$-1.42538 + 0.69993I$	$-6.66926 - 7.86355I$
$u = 0.387791 - 0.637216I$ $a = 0.14049 + 2.06169I$ $b = 0.481601 - 0.755700I$	$-1.42538 - 0.69993I$	$-6.66926 + 7.86355I$
$u = 1.126490 + 0.564886I$ $a = 0.448241 - 1.135260I$ $b = -0.502254 + 0.497735I$	$0.66253 + 7.00119I$	0
$u = 1.126490 - 0.564886I$ $a = 0.448241 + 1.135260I$ $b = -0.502254 - 0.497735I$	$0.66253 - 7.00119I$	0
$u = -1.124910 + 0.583573I$ $a = 0.46160 + 1.67093I$ $b = -0.940787 - 0.454325I$	$1.98268 - 13.86070I$	0
$u = -1.124910 - 0.583573I$ $a = 0.46160 - 1.67093I$ $b = -0.940787 + 0.454325I$	$1.98268 + 13.86070I$	0
$u = -1.129400 + 0.592064I$ $a = 2.86507 + 0.85762I$ $b = -0.672642 + 1.146480I$	$-0.1378 - 19.7542I$	0
$u = -1.129400 - 0.592064I$ $a = 2.86507 - 0.85762I$ $b = -0.672642 - 1.146480I$	$-0.1378 + 19.7542I$	0
$u = 1.142280 + 0.591448I$ $a = 2.55358 - 0.52254I$ $b = -0.543968 - 1.012680I$	$-0.78658 + 11.37890I$	0
$u = 1.142280 - 0.591448I$ $a = 2.55358 + 0.52254I$ $b = -0.543968 + 1.012680I$	$-0.78658 - 11.37890I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.065930+0.709860I$ $a=\ 1.066470-0.030389I$ $b=-0.723285-0.585980I$	$3.31959-1.94903I$	$7.17757+2.10356I$
$u=-0.065930-0.709860I$ $a=\ 1.066470+0.030389I$ $b=-0.723285+0.585980I$	$3.31959+1.94903I$	$7.17757-2.10356I$
$u=-0.333129+0.619546I$ $a=\ 0.217652+0.440691I$ $b=\ 0.889320-0.199888I$	$1.52478+0.45431I$	$10.33849-0.32979I$
$u=-0.333129-0.619546I$ $a=\ 0.217652-0.440691I$ $b=\ 0.889320+0.199888I$	$1.52478-0.45431I$	$10.33849+0.32979I$
$u=\ 0.300197+0.625767I$ $a=\ 0.734191+0.386714I$ $b=\ 0.089707-0.659432I$	$-1.56814-1.96120I$	$-1.15247+4.15448I$
$u=\ 0.300197-0.625767I$ $a=\ 0.734191-0.386714I$ $b=\ 0.089707+0.659432I$	$-1.56814+1.96120I$	$-1.15247-4.15448I$
$u=-0.421195+0.533366I$ $a=-0.124453-0.274473I$ $b=\ 0.803348-0.848011I$	$0.49698-2.48140I$	$6.24663+6.11391I$
$u=-0.421195-0.533366I$ $a=-0.124453+0.274473I$ $b=\ 0.803348+0.848011I$	$0.49698+2.48140I$	$6.24663-6.11391I$
$u=\ 0.373684+0.509492I$ $a=\ 1.293220+0.519846I$ $b=\ 0.265162-0.828504I$	$-1.59378-1.99461I$	$-0.64184+4.85411I$
$u=\ 0.373684-0.509492I$ $a=\ 1.293220-0.519846I$ $b=\ 0.265162+0.828504I$	$-1.59378+1.99461I$	$-0.64184-4.85411I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.541857$ $a=\ \ 1.12231$ $b=\ \ 0.386938$	1.13637	8.34440
$u=-0.220286+0.251966I$ $a=\ \ 0.884228-0.046461I$ $b=\ \ 0.639234-0.872441I$	$0.62854-2.45521I$	$2.71907+3.47111I$
$u=-0.220286-0.251966I$ $a=\ \ 0.884228+0.046461I$ $b=\ \ 0.639234+0.872441I$	$0.62854+2.45521I$	$2.71907-3.47111I$

II. $I_2^u = \langle b^2 - b + 1,\ a + 1,\ u + 1 \rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1 \\ b \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 2 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -b+1 \\ b-1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0 \\ b-1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} b-1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4b + 11$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_4 c_5	$u^2 - u + 1$
c_2	$u^2 + u + 1$
c_6, c_7, c_8 c_9	$(u+1)^2$
c_{10}	$(u-1)^2$
c_{11}, c_{12}	u^2

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_5	$y^2 + y + 1$
c_6, c_7, c_8 c_9, c_{10}	$(y-1)^2$
c_{11}, c_{12}	y^2

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.00000$ $a=-1.00000$ $b=\ \ 0.500000+0.866025I$	$1.64493+2.02988I$	$9.00000-3.46410I$
$u=-1.00000$ $a=-1.00000$ $b=\ \ 0.500000-0.866025I$	$1.64493-2.02988I$	$9.00000+3.46410I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^2-u+1)(u^{133}+56u^{132}+\cdots-31u-1)$
c_2	$(u^2+u+1)(u^{133}+2u^{132}+\cdots-3u-1)$
c_3	$(u^2-u+1)(u^{133}+2u^{132}+\cdots-51u-1)$
c_4	$(u^2-u+1)(u^{133}+4u^{132}+\cdots-503u-71)$
c_5	$(u^2-u+1)(u^{133}+2u^{132}+\cdots-3u-1)$
c_6	$((u+1)^2)(u^{133}-3u^{132}+\cdots+8u-1)$
c_7	$((u+1)^2)(u^{133}-u^{132}+\cdots+1.49316\times10^8u-1.41826\times10^7)$
c_8	$((u+1)^2)(u^{133}-7u^{132}+\cdots+4u^2-1)$
c_9	$((u+1)^2)(u^{133}-63u^{132}+\cdots+8u-1)$
c_{10}	$((u-1)^2)(u^{133}-3u^{132}+\cdots+8u-1)$
c_{11}	$u^2(u^{133}-3u^{132}+\cdots+149248u-14144)$
c_{12}	$u^2(u^{133}+13u^{132}+\cdots+4u-4)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^2+y+1)(y^{133}+44y^{132}+\cdots-463y-1)$
c_2, c_5	$(y^2+y+1)(y^{133}+56y^{132}+\cdots-31y-1)$
c_3	$(y^2+y+1)(y^{133}-144y^{132}+\cdots+469y-1)$
c_4	$(y^2+y+1)(y^{133}-148y^{132}+\cdots+609145y-5041)$
c_6, c_{10}	$((y-1)^2)(y^{133}-63y^{132}+\cdots+8y-1)$
c_7	$(y-1)^2$ $\cdot(y^{133}-55y^{132}+\cdots+8218121135689976y-201146398046881)$
c_8	$((y-1)^2)(y^{133}-15y^{132}+\cdots+8y-1)$
c_9	$((y-1)^2)(y^{133}+17y^{132}+\cdots-188y-1)$
c_{11}	$y^2(y^{133}+23y^{132}+\cdots-6.93814\times10^9y-2.00053\times10^8)$
c_{12}	$y^2(y^{133}+15y^{132}+\cdots-376y-16)$