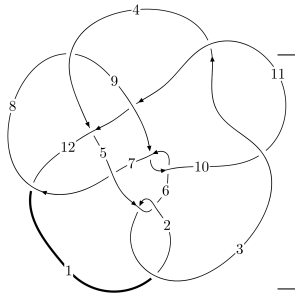
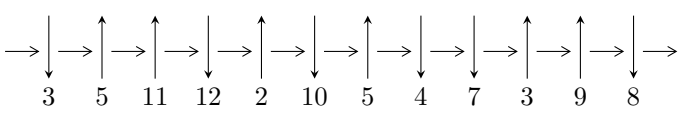
$12n_{0534}$ $(K12n_{0534})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -3.69906 \times 10^{250} u^{76} - 1.26904 \times 10^{251} u^{75} + \cdots + 6.74175 \times 10^{250} b - 1.48767 \times 10^{251},$$
$$- 2.19520 \times 10^{251} u^{76} - 8.95593 \times 10^{251} u^{75} + \cdots + 6.74175 \times 10^{250} a - 1.13911 \times 10^{252},$$
$$u^{77} + 4u^{76} + \cdots + 14u + 1 \rangle$$
$$I_2^u = \langle -9.09164 \times 10^{21} u^{22} + 3.04025 \times 10^{21} u^{21} + \cdots + 1.47737 \times 10^{22} b + 1.58364 \times 10^{22},$$
$$- 1.26080 \times 10^{22} u^{22} + 3.40886 \times 10^{22} u^{21} + \cdots + 7.38683 \times 10^{22} a - 5.26178 \times 10^{22},\ u^{23} - u^{22} + \cdots - u + 1$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 100 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. $\boldsymbol{I_1^u = \langle -3.70 \times 10^{250} u^{76} - 1.27 \times 10^{251} u^{75} + \cdots + 6.74 \times 10^{250} b - 1.49 \times 10^{251},\ -2.20 \times 10^{251} u^{76} - 8.96 \times 10^{251} u^{75} + \cdots + 6.74 \times 10^{250} a - 1.14 \times 10^{252},\ u^{77} + 4u^{76} + \cdots + 14u + 1 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 3.25613u^{76} + 13.2843u^{75} + \cdots + 159.304u + 16.8963 \\ 0.548680u^{76} + 1.88235u^{75} + \cdots + 31.3932u + 2.20665 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 3.80481u^{76} + 15.1666u^{75} + \cdots + 190.697u + 19.1029 \\ 0.548680u^{76} + 1.88235u^{75} + \cdots + 31.3932u + 2.20665 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 3.72053u^{76} + 15.8998u^{75} + \cdots + 60.2006u - 1.37429 \\ 0.115206u^{76} + 0.587561u^{75} + \cdots - 5.69859u - 1.78085 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 2.99371u^{76} + 12.2116u^{75} + \cdots + 156.235u + 16.9489 \\ 0.442657u^{76} + 1.58355u^{75} + \cdots + 28.1540u + 1.91734 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 2.87213u^{76} + 12.3222u^{75} + \cdots + 75.2678u + 2.03206 \\ 0.733192u^{76} + 2.99004u^{75} + \cdots - 7.36863u - 1.62550 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.590451u^{76} + 3.55470u^{75} + \cdots + 32.3369u + 12.2851 \\ 0.0782665u^{76} + 0.462570u^{75} + \cdots + 25.4892u + 3.43765 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.681023u^{76} + 4.03467u^{75} + \cdots - 10.4432u + 7.65451 \\ 0.255746u^{76} + 1.13089u^{75} + \cdots + 23.7511u + 3.31997 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -2.01550u^{76} - 7.43009u^{75} + \cdots - 246.167u - 23.7129 \\ -0.454144u^{76} - 1.61501u^{75} + \cdots - 39.0367u - 2.17934 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 4.72922u^{76} + 19.1431u^{75} + \cdots + 210.364u + 20.7645 \\ 1.01772u^{76} + 4.07896u^{75} + \cdots + 27.5236u + 1.58371 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.26612u^{76} - 10.0790u^{75} + \cdots - 56.7965u - 6.97634$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{77} + 84u^{76} + \cdots + 220776u - 9409$
c_2, c_5	$u^{77} - 2u^{76} + \cdots + 584u + 97$
c_3, c_{10}	$u^{77} - u^{76} + \cdots - 404u - 44$
c_4	$u^{77} + 4u^{76} + \cdots + 14u + 1$
c_6, c_9	$u^{77} + 6u^{76} + \cdots - 8u + 1$
c_7	$u^{77} + 14u^{76} + \cdots + 936770u - 675287$
c_8	$u^{77} + 4u^{76} + \cdots - 24u + 1$
c_{11}	$u^{77} - 2u^{76} + \cdots + 16u + 1$
c_{12}	$u^{77} - 3u^{76} + \cdots - 482672u + 37636$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{77} - 172y^{76} + \cdots + 7173569444y - 88529281$
c_2, c_5	$y^{77} + 84y^{76} + \cdots + 220776y - 9409$
c_3, c_{10}	$y^{77} - 37y^{76} + \cdots + 117808y - 1936$
c_4	$y^{77} - 12y^{76} + \cdots + 68y - 1$
c_6, c_9	$y^{77} + 12y^{76} + \cdots + 4y - 1$
c_7	$y^{77} + 40y^{76} + \cdots + 11472934223744y - 456012532369$
c_8	$y^{77} + 12y^{76} + \cdots + 98y - 1$
c_{11}	$y^{77} - 8y^{76} + \cdots + 54y - 1$
c_{12}	$y^{77} - 13y^{76} + \cdots + 29073057280y - 1416468496$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.603067 + 0.813111I$ $a = 0.017137 - 1.292070I$ $b = 0.99462 + 1.26439I$	$7.23108 - 4.64101I$	0
$u = 0.603067 - 0.813111I$ $a = 0.017137 + 1.292070I$ $b = 0.99462 - 1.26439I$	$7.23108 + 4.64101I$	0
$u = 0.759653 + 0.620579I$ $a = -0.729094 + 0.411957I$ $b = 0.154848 - 0.382079I$	$1.70009 + 0.34267I$	0
$u = 0.759653 - 0.620579I$ $a = -0.729094 - 0.411957I$ $b = 0.154848 + 0.382079I$	$1.70009 - 0.34267I$	0
$u = -0.572007 + 0.704963I$ $a = -0.141969 - 0.535912I$ $b = 0.819778 + 1.087240I$	$1.37989 + 3.40941I$	$0. - 7.37735I$
$u = -0.572007 - 0.704963I$ $a = -0.141969 + 0.535912I$ $b = 0.819778 - 1.087240I$	$1.37989 - 3.40941I$	$0. + 7.37735I$
$u = -0.876447 + 0.065089I$ $a = 1.12695 - 1.60083I$ $b = 0.362810 - 0.282958I$	$-7.40774 - 0.19172I$	$-6.59818 + 0.I$
$u = -0.876447 - 0.065089I$ $a = 1.12695 + 1.60083I$ $b = 0.362810 + 0.282958I$	$-7.40774 + 0.19172I$	$-6.59818 + 0.I$
$u = -0.504176 + 1.001760I$ $a = -0.125990 + 1.267870I$ $b = 0.534856 - 0.760961I$	$2.41956 + 2.16164I$	0
$u = -0.504176 - 1.001760I$ $a = -0.125990 - 1.267870I$ $b = 0.534856 + 0.760961I$	$2.41956 - 2.16164I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.738185 + 0.849245I$ $a = -0.975432 + 0.272990I$ $b = 0.011881 - 0.595265I$	$2.30258 + 0.23661I$	0
$u = 0.738185 - 0.849245I$ $a = -0.975432 - 0.272990I$ $b = 0.011881 + 0.595265I$	$2.30258 - 0.23661I$	0
$u = -0.851789$ $a = -1.52171$ $b = -0.970413$	-1.09740	-10.3570
$u = 0.807485 + 0.037889I$ $a = 2.03423 + 0.82063I$ $b = 1.039560 - 0.013041I$	$-7.69102 + 5.64820I$	$-7.22889 - 4.04366I$
$u = 0.807485 - 0.037889I$ $a = 2.03423 - 0.82063I$ $b = 1.039560 + 0.013041I$	$-7.69102 - 5.64820I$	$-7.22889 + 4.04366I$
$u = -0.770876 + 0.163386I$ $a = 0.122882 - 1.183720I$ $b = 0.62353 + 1.85061I$	$-6.89705 - 5.46417I$	$-7.68374 + 2.64434I$
$u = -0.770876 - 0.163386I$ $a = 0.122882 + 1.183720I$ $b = 0.62353 - 1.85061I$	$-6.89705 + 5.46417I$	$-7.68374 - 2.64434I$
$u = -0.606094 + 0.481066I$ $a = -2.49603 + 0.49755I$ $b = -0.334450 + 0.491812I$	$-6.05313 + 8.15976I$	$-1.59925 - 11.05556I$
$u = -0.606094 - 0.481066I$ $a = -2.49603 - 0.49755I$ $b = -0.334450 - 0.491812I$	$-6.05313 - 8.15976I$	$-1.59925 + 11.05556I$
$u = 0.621201 + 0.435972I$ $a = -1.90399 + 0.94577I$ $b = -1.049600 - 0.524445I$	$-6.07059 - 3.11661I$	$-2.10448 + 5.82107I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.621201 - 0.435972I$ $a = -1.90399 - 0.94577I$ $b = -1.049600 + 0.524445I$	$-6.07059 + 3.11661I$	$-2.10448 - 5.82107I$
$u = 0.748499 + 0.117674I$ $a = -0.319645 + 0.370992I$ $b = 1.66519 - 1.15111I$	$-6.75237 + 0.75022I$	$-7.29921 + 3.68885I$
$u = 0.748499 - 0.117674I$ $a = -0.319645 - 0.370992I$ $b = 1.66519 + 1.15111I$	$-6.75237 - 0.75022I$	$-7.29921 - 3.68885I$
$u = -0.523660 + 0.493433I$ $a = -0.26799 - 2.25574I$ $b = -0.842541 + 0.974175I$	$5.54248 + 3.96289I$	$-2.44446 - 3.78941I$
$u = -0.523660 - 0.493433I$ $a = -0.26799 + 2.25574I$ $b = -0.842541 - 0.974175I$	$5.54248 - 3.96289I$	$-2.44446 + 3.78941I$
$u = -0.465307 + 1.214150I$ $a = 0.211228 + 0.623389I$ $b = 0.398293 - 0.592596I$	$2.39163 + 1.28478I$	0
$u = -0.465307 - 1.214150I$ $a = 0.211228 - 0.623389I$ $b = 0.398293 + 0.592596I$	$2.39163 - 1.28478I$	0
$u = -0.696063 + 0.006993I$ $a = -0.274649 - 0.181788I$ $b = -1.096560 + 0.119297I$	$-1.55465 + 0.00820I$	$-7.37344 + 0.46182I$
$u = -0.696063 - 0.006993I$ $a = -0.274649 + 0.181788I$ $b = -1.096560 - 0.119297I$	$-1.55465 - 0.00820I$	$-7.37344 - 0.46182I$
$u = -0.495506 + 0.487466I$ $a = -0.42509 + 1.42469I$ $b = -0.27362 - 1.79611I$	$-5.63283 + 2.58512I$	$-1.14489 - 6.76714I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.495506-0.487466I$ $a=-0.42509-1.42469I$ $b=-0.27362+1.79611I$	$-5.63283-2.58512I$	$-1.14489+6.76714I$
$u=-0.988561+0.880973I$ $a=-0.220670-0.465255I$ $b=-0.492990+1.062540I$	$-0.83889+3.23068I$	0
$u=-0.988561-0.880973I$ $a=-0.220670+0.465255I$ $b=-0.492990-1.062540I$	$-0.83889-3.23068I$	0
$u=-0.387945+1.272310I$ $a=\ \ 0.621655+0.392644I$ $b=-0.651425-0.826090I$	$-4.61492-2.02556I$	0
$u=-0.387945-1.272310I$ $a=\ \ 0.621655-0.392644I$ $b=-0.651425+0.826090I$	$-4.61492+2.02556I$	0
$u=\ \ 0.935566+0.966645I$ $a=-0.002676+1.200680I$ $b=-0.682271-1.007510I$	$1.44567-6.72870I$	0
$u=\ \ 0.935566-0.966645I$ $a=-0.002676-1.200680I$ $b=-0.682271+1.007510I$	$1.44567+6.72870I$	0
$u=-1.089730+0.793182I$ $a=\ \ 0.216148+1.161190I$ $b=\ \ 1.16755-1.12635I$	$-6.58540+8.60086I$	0
$u=-1.089730-0.793182I$ $a=\ \ 0.216148-1.161190I$ $b=\ \ 1.16755+1.12635I$	$-6.58540-8.60086I$	0
$u=\ \ 0.494600+0.409927I$ $a=\ \ 0.195116-0.713007I$ $b=-1.83684+1.39416I$	$-6.21653-7.51366I$	$-3.0342+15.2771I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.494600 - 0.409927I$ $a = 0.195116 + 0.713007I$ $b = -1.83684 - 1.39416I$	$-6.21653 + 7.51366I$	$-3.0342 - 15.2771I$
$u = 0.559470 + 0.256633I$ $a = 0.25535 + 1.85165I$ $b = 0.101923 - 0.706888I$	$-0.67022 - 2.58077I$	$-5.47128 - 2.25816I$
$u = 0.559470 - 0.256633I$ $a = 0.25535 - 1.85165I$ $b = 0.101923 + 0.706888I$	$-0.67022 + 2.58077I$	$-5.47128 + 2.25816I$
$u = 0.545951 + 0.227105I$ $a = 1.73598 + 2.22492I$ $b = 0.315590 + 0.060991I$	$-0.83120 - 2.98976I$	$-7.50848 + 10.23936I$
$u = 0.545951 - 0.227105I$ $a = 1.73598 - 2.22492I$ $b = 0.315590 - 0.060991I$	$-0.83120 + 2.98976I$	$-7.50848 - 10.23936I$
$u = 1.08241 + 0.91304I$ $a = -0.046420 + 1.061490I$ $b = -0.76894 - 1.24936I$	$1.30391 - 7.00857I$	0
$u = 1.08241 - 0.91304I$ $a = -0.046420 - 1.061490I$ $b = -0.76894 + 1.24936I$	$1.30391 + 7.00857I$	0
$u = 0.562576 + 0.139521I$ $a = -0.22425 + 1.56597I$ $b = -0.682109 - 1.183950I$	$-1.10831 - 2.66434I$	$-5.93853 + 8.28488I$
$u = 0.562576 - 0.139521I$ $a = -0.22425 - 1.56597I$ $b = -0.682109 + 1.183950I$	$-1.10831 + 2.66434I$	$-5.93853 - 8.28488I$
$u = -1.11277 + 0.94222I$ $a = -0.200409 - 0.727141I$ $b = -0.985875 + 0.998786I$	$-1.27355 + 3.67313I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.11277-0.94222I$ $a=-0.200409+0.727141I$ $b=-0.985875-0.998786I$	$-1.27355-3.67313I$	0
$u=-0.74145+1.28136I$ $a=0.043294-0.596779I$ $b=-0.96222+1.21614I$	$-1.00429+4.67365I$	0
$u=-0.74145-1.28136I$ $a=0.043294+0.596779I$ $b=-0.96222-1.21614I$	$-1.00429-4.67365I$	0
$u=1.15392+0.98438I$ $a=0.189656-0.983503I$ $b=1.05649+1.04370I$	$1.04209-11.12800I$	0
$u=1.15392-0.98438I$ $a=0.189656+0.983503I$ $b=1.05649-1.04370I$	$1.04209+11.12800I$	0
$u=1.27578+0.82674I$ $a=-0.028210-0.747755I$ $b=0.983703+0.510288I$	$-10.63430-0.77932I$	0
$u=1.27578-0.82674I$ $a=-0.028210+0.747755I$ $b=0.983703-0.510288I$	$-10.63430+0.77932I$	0
$u=-1.19102+0.96689I$ $a=0.042364+0.852648I$ $b=0.663009-1.174750I$	$0.59670+6.60400I$	0
$u=-1.19102-0.96689I$ $a=0.042364-0.852648I$ $b=0.663009+1.174750I$	$0.59670-6.60400I$	0
$u=-1.17866+1.01377I$ $a=-0.100366-1.020500I$ $b=-1.13483+1.20250I$	$-5.7029+17.1137I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.17866-1.01377I$ $a=-0.100366+1.020500I$ $b=-1.13483-1.20250I$	$-5.7029-17.1137I$	0
$u=\ \ 0.73522+1.41650I$ $a=\ \ 0.226876-0.344497I$ $b=-0.264437+0.769397I$	$2.27228+3.02090I$	0
$u=\ \ 0.73522-1.41650I$ $a=\ \ 0.226876+0.344497I$ $b=-0.264437-0.769397I$	$2.27228-3.02090I$	0
$u=-1.44998+0.70189I$ $a=-0.000402-0.374388I$ $b=\ \ 0.1367910+0.0032125I$	$1.85212+2.45583I$	0
$u=-1.44998-0.70189I$ $a=-0.000402+0.374388I$ $b=\ \ 0.1367910-0.0032125I$	$1.85212-2.45583I$	0
$u=-1.31500+0.99989I$ $a=\ \ 0.182254+0.531020I$ $b=\ \ 0.362827-0.503241I$	$-0.14857+5.14205I$	0
$u=-1.31500-0.99989I$ $a=\ \ 0.182254-0.531020I$ $b=\ \ 0.362827+0.503241I$	$-0.14857-5.14205I$	0
$u=-0.288327+0.137249I$ $a=\ \ 4.30796+0.13760I$ $b=\ \ 0.903613+0.110211I$	$0.538773+0.309700I$	$3.47469-5.36190I$
$u=-0.288327-0.137249I$ $a=\ \ 4.30796-0.13760I$ $b=\ \ 0.903613-0.110211I$	$0.538773-0.309700I$	$3.47469+5.36190I$
$u=\ \ 1.28118+1.19069I$ $a=\ \ 0.119945+0.585097I$ $b=-0.949737-0.531912I$	$-9.31303-8.44012I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.28118 - 1.19069I$ $a = 0.119945 - 0.585097I$ $b = -0.949737 + 0.531912I$	$-9.31303 + 8.44012I$	0
$u = -0.95767 + 1.50703I$ $a = -0.418269 - 0.219069I$ $b = 0.367757 + 0.773933I$	$-4.63907 - 8.62640I$	0
$u = -0.95767 - 1.50703I$ $a = -0.418269 + 0.219069I$ $b = 0.367757 - 0.773933I$	$-4.63907 + 8.62640I$	0
$u = -0.111723 + 0.086958I$ $a = -2.13788 + 5.96459I$ $b = -1.118850 + 0.549458I$	$-3.12995 + 2.73682I$	$-1.58248 - 2.63513I$
$u = -0.111723 - 0.086958I$ $a = -2.13788 - 5.96459I$ $b = -1.118850 - 0.549458I$	$-3.12995 - 2.73682I$	$-1.58248 + 2.63513I$
$u = 1.84411 + 0.58993I$ $a = 0.151269 - 0.012341I$ $b = -0.052124 + 0.551302I$	$4.21313 - 0.76858I$	0
$u = 1.84411 - 0.58993I$ $a = 0.151269 + 0.012341I$ $b = -0.052124 - 0.551302I$	$4.21313 + 0.76858I$	0

II.

$\boldsymbol{I_2^u = \langle -9.09\times10^{21}u^{22}+3.04\times10^{21}u^{21}+\cdots+1.48\times10^{22}b+1.58\times10^{22},\ -1.26\times10^{22}u^{22}+3.41\times10^{22}u^{21}+\cdots+7.39\times10^{22}a-5.26\times10^{22},\ u^{23}-u^{22}+\cdots-u+1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_5 = \begin{pmatrix}1\\u^2\end{pmatrix}$$

$$a_9 = \begin{pmatrix}0.170683u^{22} - 0.461478u^{21} + \cdots - 0.608422u + 0.712319\\0.615395u^{22} - 0.205789u^{21} + \cdots - 1.78014u - 1.07193\end{pmatrix}$$

$$a_8 = \begin{pmatrix}0.786078u^{22} - 0.667267u^{21} + \cdots - 2.38857u - 0.359615\\0.615395u^{22} - 0.205789u^{21} + \cdots - 1.78014u - 1.07193\end{pmatrix}$$

$$a_1 = \begin{pmatrix}0.797082u^{22} - 0.983781u^{21} + \cdots - 5.25216u - 2.32110\\1.02448u^{22} - 0.766385u^{21} + \cdots - 2.49088u - 1.94129\end{pmatrix}$$

$$a_7 = \begin{pmatrix}0.438850u^{22} - 0.780715u^{21} + \cdots - 1.27569u + 0.593508\\0.420281u^{22} - 0.101126u^{21} + \cdots - 1.89359u - 0.611259\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-0.763143u^{22} + 0.220845u^{21} + \cdots + 1.03258u + 0.562499\\0.535749u^{22} - 0.438240u^{21} + \cdots - 1.79386u - 0.942303\end{pmatrix}$$

$$a_3 = \begin{pmatrix}0.244540u^{22} - 0.101985u^{21} + \cdots + 0.131270u + 1.25096\\-0.601253u^{22} + 0.339266u^{21} + \cdots + 0.179268u + 1.57292\end{pmatrix}$$

$$a_2 = \begin{pmatrix}1.06649u^{22} - 0.622172u^{21} + \cdots - 0.149983u - 0.464514\\-0.447852u^{22} + 0.245652u^{21} + \cdots - 0.340918u + 1.27115\end{pmatrix}$$

$$a_6 = \begin{pmatrix}3.13314u^{22} - 2.17629u^{21} + \cdots - 7.16559u - 4.63578\\0.281545u^{22} - 0.0491004u^{21} + \cdots + 1.03334u + 0.268967\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-1.99256u^{22} + 1.36071u^{21} + \cdots + 4.66860u + 2.56001\\-0.231287u^{22} + 0.0196431u^{21} + \cdots - 1.07710u + 0.0213039\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{6488994547224858272719}{7386830093401166493374 5}u^{22} + \frac{8749173993777045003185 7}{7386830093401166493374 5}u^{21} + \cdots - \frac{2736110277398635199422 02}{7386830093401166493374 5}u + \frac{4233062220436062246928}{7386830093401166493374 5}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{23} - 23u^{22} + \cdots - 5u + 1$
c_2	$u^{23} + 3u^{22} + \cdots - 5u - 1$
c_3	$u^{23} - 11u^{21} + \cdots + 4u - 4$
c_4	$u^{23} - u^{22} + \cdots - u + 1$
c_5	$u^{23} - 3u^{22} + \cdots - 5u + 1$
c_6	$u^{23} - 7u^{22} + \cdots - u - 1$
c_7	$u^{23} + u^{22} + \cdots + 277u - 25$
c_8	$u^{23} + u^{22} + \cdots - u + 1$
c_9	$u^{23} + 7u^{22} + \cdots - u + 1$
c_{10}	$u^{23} - 11u^{21} + \cdots + 4u + 4$
c_{11}	$u^{23} - 3u^{22} + \cdots - u - 1$
c_{12}	$u^{23} + u^{21} + \cdots - 16u - 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{23} - 37y^{22} + \cdots + 15y - 1$
c_2, c_5	$y^{23} + 23y^{22} + \cdots - 5y - 1$
c_3, c_{10}	$y^{23} - 22y^{22} + \cdots + 80y - 16$
c_4	$y^{23} - 5y^{22} + \cdots + 7y - 1$
c_6, c_9	$y^{23} + 15y^{22} + \cdots + 3y - 1$
c_7	$y^{23} - 5y^{22} + \cdots + 35579y - 625$
c_8	$y^{23} + 11y^{22} + \cdots - 27y - 1$
c_{11}	$y^{23} - 5y^{22} + \cdots + 5y - 1$
c_{12}	$y^{23} + 2y^{22} + \cdots - 128y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.731235 + 0.720695I$ $a = 0.07221 - 1.44212I$ $b = 0.82742 + 1.33530I$	$6.02773 - 5.38429I$	$1.58961 + 7.50886I$
$u = 0.731235 - 0.720695I$ $a = 0.07221 + 1.44212I$ $b = 0.82742 - 1.33530I$	$6.02773 + 5.38429I$	$1.58961 - 7.50886I$
$u = -0.451358 + 0.763359I$ $a = -0.02344 - 1.62840I$ $b = -0.961846 + 0.981295I$	$6.47852 + 3.67171I$	$5.05436 - 1.40932I$
$u = -0.451358 - 0.763359I$ $a = -0.02344 + 1.62840I$ $b = -0.961846 - 0.981295I$	$6.47852 - 3.67171I$	$5.05436 + 1.40932I$
$u = -0.736084 + 1.023050I$ $a = 0.000846 + 0.648467I$ $b = 0.105502 - 1.020420I$	$0.48780 + 3.96432I$	$3.15093 - 8.04453I$
$u = -0.736084 - 1.023050I$ $a = 0.000846 - 0.648467I$ $b = 0.105502 + 1.020420I$	$0.48780 - 3.96432I$	$3.15093 + 8.04453I$
$u = 0.710083 + 1.187680I$ $a = -0.617574 + 0.477191I$ $b = -0.059064 - 0.619957I$	$3.11012 - 0.16471I$	$10.59532 - 0.10440I$
$u = 0.710083 - 1.187680I$ $a = -0.617574 - 0.477191I$ $b = -0.059064 + 0.619957I$	$3.11012 + 0.16471I$	$10.59532 + 0.10440I$
$u = -0.89617 + 1.11622I$ $a = 0.036477 + 0.651810I$ $b = 1.03520 - 1.25075I$	$-1.29427 + 4.46459I$	$-10.37642 - 5.61721I$
$u = -0.89617 - 1.11622I$ $a = 0.036477 - 0.651810I$ $b = 1.03520 + 1.25075I$	$-1.29427 - 4.46459I$	$-10.37642 + 5.61721I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.519697$ $a=\ \ 3.04560$ $b=\ \ 0.939628$	0.0865225	-9.70390
$u=-0.408794+0.286092I$ $a=-1.20734+2.30061I$ $b=-0.050189-0.760743I$	$-0.26931+2.82970I$	$9.42610-6.03745I$
$u=-0.408794-0.286092I$ $a=-1.20734-2.30061I$ $b=-0.050189+0.760743I$	$-0.26931-2.82970I$	$9.42610+6.03745I$
$u=\ \ 0.490813+0.070479I$ $a=-1.78315-0.94699I$ $b=-0.86159+1.21916I$	$-6.33659+1.58059I$	$-3.12037-2.30169I$
$u=\ \ 0.490813-0.070479I$ $a=-1.78315+0.94699I$ $b=-0.86159-1.21916I$	$-6.33659-1.58059I$	$-3.12037+2.30169I$
$u=\ \ 0.186913+0.444271I$ $a=\ \ 1.34944-0.94080I$ $b=\ \ 0.876524-0.917306I$	$-6.19036-6.81849I$	$-1.58405+2.82845I$
$u=\ \ 0.186913-0.444271I$ $a=\ \ 1.34944+0.94080I$ $b=\ \ 0.876524+0.917306I$	$-6.19036+6.81849I$	$-1.58405-2.82845I$
$u=\ \ 1.18516+0.98943I$ $a=-0.035369+1.025860I$ $b=-0.641385-1.228660I$	$1.62124-7.58679I$	$6.2802+14.4688I$
$u=\ \ 1.18516-0.98943I$ $a=-0.035369-1.025860I$ $b=-0.641385+1.228660I$	$1.62124+7.58679I$	$6.2802-14.4688I$
$u=\ \ 1.61755+0.10799I$ $a=\ \ 0.244155+0.255784I$ $b=-0.061603+0.408192I$	$3.93868+1.07679I$	$3.60784-10.46791I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.61755 - 0.10799I$ $a = 0.244155 - 0.255784I$ $b = -0.061603 - 0.408192I$	$3.93868 - 1.07679I$	$3.60784 + 10.46791I$
$u = -1.66949 + 1.18058I$ $a = -0.059058 - 0.227943I$ $b = -0.178787 + 0.528239I$	$2.25280 + 2.65056I$	$11.7285 - 10.8769I$
$u = -1.66949 - 1.18058I$ $a = -0.059058 + 0.227943I$ $b = -0.178787 - 0.528239I$	$2.25280 - 2.65056I$	$11.7285 + 10.8769I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{23}-23u^{22}+\cdots-5u+1)(u^{77}+84u^{76}+\cdots+220776u-9409)$
c_2	$(u^{23}+3u^{22}+\cdots-5u-1)(u^{77}-2u^{76}+\cdots+584u+97)$
c_3	$(u^{23}-11u^{21}+\cdots+4u-4)(u^{77}-u^{76}+\cdots-404u-44)$
c_4	$(u^{23}-u^{22}+\cdots-u+1)(u^{77}+4u^{76}+\cdots+14u+1)$
c_5	$(u^{23}-3u^{22}+\cdots-5u+1)(u^{77}-2u^{76}+\cdots+584u+97)$
c_6	$(u^{23}-7u^{22}+\cdots-u-1)(u^{77}+6u^{76}+\cdots-8u+1)$
c_7	$(u^{23}+u^{22}+\cdots+277u-25)(u^{77}+14u^{76}+\cdots+936770u-675287)$
c_8	$(u^{23}+u^{22}+\cdots-u+1)(u^{77}+4u^{76}+\cdots-24u+1)$
c_9	$(u^{23}+7u^{22}+\cdots-u+1)(u^{77}+6u^{76}+\cdots-8u+1)$
c_{10}	$(u^{23}-11u^{21}+\cdots+4u+4)(u^{77}-u^{76}+\cdots-404u-44)$
c_{11}	$(u^{23}-3u^{22}+\cdots-u-1)(u^{77}-2u^{76}+\cdots+16u+1)$
c_{12}	$(u^{23}+u^{21}+\cdots-16u-4)(u^{77}-3u^{76}+\cdots-482672u+37636)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{23} - 37y^{22} + \cdots + 15y - 1)$ $\cdot (y^{77} - 172y^{76} + \cdots + 7173569444y - 88529281)$
c_2, c_5	$(y^{23} + 23y^{22} + \cdots - 5y - 1)(y^{77} + 84y^{76} + \cdots + 220776y - 9409)$
c_3, c_{10}	$(y^{23} - 22y^{22} + \cdots + 80y - 16)(y^{77} - 37y^{76} + \cdots + 117808y - 1936)$
c_4	$(y^{23} - 5y^{22} + \cdots + 7y - 1)(y^{77} - 12y^{76} + \cdots + 68y - 1)$
c_6, c_9	$(y^{23} + 15y^{22} + \cdots + 3y - 1)(y^{77} + 12y^{76} + \cdots + 4y - 1)$
c_7	$(y^{23} - 5y^{22} + \cdots + 35579y - 625)$ $\cdot (y^{77} + 40y^{76} + \cdots + 11472934223744y - 456012532369)$
c_8	$(y^{23} + 11y^{22} + \cdots - 27y - 1)(y^{77} + 12y^{76} + \cdots + 98y - 1)$
c_{11}	$(y^{23} - 5y^{22} + \cdots + 5y - 1)(y^{77} - 8y^{76} + \cdots + 54y - 1)$
c_{12}	$(y^{23} + 2y^{22} + \cdots - 128y - 16)$ $\cdot (y^{77} - 13y^{76} + \cdots + 29073057280y - 1416468496)$