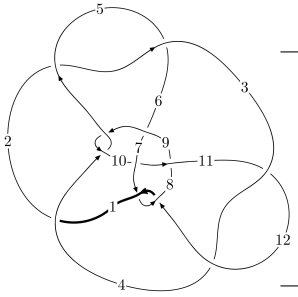
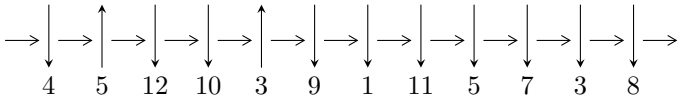
$12n_{0834}$ $(K12n_{0834})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.08966 \times 10^{500} u^{82} - 2.94352 \times 10^{500} u^{81} + \cdots + 5.30022 \times 10^{505} b - 6.35080 \times 10^{505},$$
$$- 3.64438 \times 10^{506} u^{82} - 1.00895 \times 10^{507} u^{81} + \cdots + 9.03577 \times 10^{510} a - 1.96606 \times 10^{512},$$
$$u^{83} + 3u^{82} + \cdots + 2662084u + 170479 \rangle$$
$$I_2^u = \langle -4.04393 \times 10^{21} u^{26} + 1.97112 \times 10^{22} u^{25} + \cdots + 1.93265 \times 10^{20} b - 3.76256 \times 10^{21},$$
$$1.42730 \times 10^{21} u^{26} - 6.73395 \times 10^{21} u^{25} + \cdots + 1.93265 \times 10^{20} a + 2.32727 \times 10^{20},\ u^{27} - 4u^{26} + \cdots - 6u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 110 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. $\boldsymbol{I_1^u = \langle -1.09 \times 10^{500} u^{82} - 2.94 \times 10^{500} u^{81} + \cdots + 5.30 \times 10^{505} b - 6.35 \times 10^{505},\ -3.64 \times 10^{506} u^{82} - 1.01 \times 10^{507} u^{81} + \cdots + 9.04 \times 10^{510} a - 1.97 \times 10^{512},\ u^{83} + 3u^{82} + \cdots + 2662084u + 170479 \rangle}$

(i) Arc colorings

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

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0000403328u^{82} + 0.000111662u^{81} + \cdots + 301.582u + 21.7586 \\ 2.05587 \times 10^{-6} u^{82} + 5.55358 \times 10^{-6} u^{81} + \cdots + 16.7884u + 1.19821 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 7.99165 \times 10^{-6} u^{82} + 0.0000218152u^{81} + \cdots + 83.4879u + 11.2783 \\ 3.56446 \times 10^{-6} u^{82} + 8.91911 \times 10^{-6} u^{81} + \cdots + 12.5852u + 1.13575 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.0000382770u^{82} + 0.000106108u^{81} + \cdots + 284.794u + 20.5604 \\ 2.05587 \times 10^{-6} u^{82} + 5.55358 \times 10^{-6} u^{81} + \cdots + 16.7884u + 1.19821 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0000270188u^{82} + 0.0000765238u^{81} + \cdots + 263.798u + 21.3036 \\ 3.76716 \times 10^{-6} u^{82} + 9.89186 \times 10^{-6} u^{81} + \cdots + 26.9027u + 2.10980 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0000270188u^{82} + 0.0000765238u^{81} + \cdots + 263.798u + 21.3036 \\ 4.37821 \times 10^{-6} u^{82} + 0.0000117106u^{81} + \cdots + 34.3627u + 2.88251 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -8.47736 \times 10^{-6} u^{82} - 0.0000243217u^{81} + \cdots - 110.183u - 10.6747 \\ -2.67993 \times 10^{-6} u^{82} - 6.44923 \times 10^{-6} u^{81} + \cdots - 7.29709u - 0.675289 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 9.13713 \times 10^{-6} u^{82} + 0.0000248460u^{81} + \cdots + 28.5787u + 2.02038 \\ 8.20590 \times 10^{-6} u^{82} + 0.0000216780u^{81} + \cdots + 38.0155u + 2.21423 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.0000343092u^{82} + 0.0000920768u^{81} + \cdots + 221.021u + 17.7205 \\ -1.53610 \times 10^{-6} u^{82} - 5.91305 \times 10^{-6} u^{81} + \cdots - 34.4259u - 2.76913 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.0000735631u^{82} - 0.000207254u^{81} + \cdots - 607.762u - 56.2513$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{83} - 3u^{82} + \cdots + 348287054u + 1799981$
c_2, c_5	$u^{83} + 3u^{82} + \cdots + 2662084u + 170479$
c_3, c_{11}	$u^{83} + 2u^{82} + \cdots + 6280u + 317$
c_4, c_9	$u^{83} + u^{82} + \cdots + 355u^2 + 19$
c_6	$u^{83} - 10u^{82} + \cdots - 5710543466u + 554133157$
c_7, c_{12}	$u^{83} - u^{82} + \cdots - 94u + 421$
c_8	$u^{83} - 2u^{82} + \cdots + 2794u + 4489$
c_{10}	$u^{83} + u^{82} + \cdots - 9u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{83} - 67y^{82} + \cdots + 126569059795229812y - 3239931600361$
c_2, c_5	$y^{83} + 73y^{82} + \cdots + 763249377340y - 29063089441$
c_3, c_{11}	$y^{83} - 52y^{82} + \cdots + 9384264y - 100489$
c_4, c_9	$y^{83} + 25y^{82} + \cdots - 13490y - 361$
c_6	$y^{83} - 104y^{82} + \cdots + 9.99 \times 10^{18}y - 3.07 \times 10^{17}$
c_7, c_{12}	$y^{83} + 51y^{82} + \cdots - 4179272y - 177241$
c_8	$y^{83} - 14y^{82} + \cdots + 313731786y - 20151121$
c_{10}	$y^{83} + 7y^{82} + \cdots + 19y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.460170 + 0.898995I$ $a = -0.168620 + 0.726275I$ $b = -0.221048 + 0.705863I$	$4.26133 - 0.63411I$	0
$u = 0.460170 - 0.898995I$ $a = -0.168620 - 0.726275I$ $b = -0.221048 - 0.705863I$	$4.26133 + 0.63411I$	0
$u = -0.941883 + 0.232685I$ $a = 0.197853 - 0.761878I$ $b = -0.06542 + 1.55250I$	$9.22626 - 0.03282I$	0
$u = -0.941883 - 0.232685I$ $a = 0.197853 + 0.761878I$ $b = -0.06542 - 1.55250I$	$9.22626 + 0.03282I$	0
$u = 0.151233 + 1.055790I$ $a = -1.63266 - 0.24668I$ $b = -0.669200 + 0.693855I$	$-3.59693 - 0.25964I$	0
$u = 0.151233 - 1.055790I$ $a = -1.63266 + 0.24668I$ $b = -0.669200 - 0.693855I$	$-3.59693 + 0.25964I$	0
$u = 0.104503 + 0.894745I$ $a = -1.48586 + 0.41944I$ $b = 0.130955 + 0.330576I$	$-1.93363 + 2.55099I$	$-6.08801 - 4.34231I$
$u = 0.104503 - 0.894745I$ $a = -1.48586 - 0.41944I$ $b = 0.130955 - 0.330576I$	$-1.93363 - 2.55099I$	$-6.08801 + 4.34231I$
$u = -0.320146 + 0.834261I$ $a = 0.32192 - 1.66448I$ $b = -0.061384 - 0.907535I$	$2.46760 + 6.12253I$	$-5.10820 - 3.57469I$
$u = -0.320146 - 0.834261I$ $a = 0.32192 + 1.66448I$ $b = -0.061384 + 0.907535I$	$2.46760 - 6.12253I$	$-5.10820 + 3.57469I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.079120+0.323083I$ $a=-0.102641-1.048010I$ $b=-0.002580+0.402975I$	$4.68534-3.54286I$	0
$u=-1.079120-0.323083I$ $a=-0.102641+1.048010I$ $b=-0.002580-0.402975I$	$4.68534+3.54286I$	0
$u=0.766720+0.305993I$ $a=-0.152016+0.363218I$ $b=-0.072957+1.226830I$	$7.80934+4.18853I$	$5.53622-8.64057I$
$u=0.766720-0.305993I$ $a=-0.152016-0.363218I$ $b=-0.072957-1.226830I$	$7.80934-4.18853I$	$5.53622+8.64057I$
$u=0.361275+0.737742I$ $a=0.647299+0.280234I$ $b=-0.15977-1.58744I$	$2.95977-5.59698I$	$-7.31611+4.13920I$
$u=0.361275-0.737742I$ $a=0.647299-0.280234I$ $b=-0.15977+1.58744I$	$2.95977+5.59698I$	$-7.31611-4.13920I$
$u=0.800505+0.047194I$ $a=0.0794772-0.0099353I$ $b=0.191222-0.999614I$	$2.00895+1.88550I$	$-2.97510-3.95787I$
$u=0.800505-0.047194I$ $a=0.0794772+0.0099353I$ $b=0.191222+0.999614I$	$2.00895-1.88550I$	$-2.97510+3.95787I$
$u=0.153357+1.222420I$ $a=1.209470-0.126486I$ $b=0.692358-0.502979I$	$-1.37477+2.01127I$	0
$u=0.153357-1.222420I$ $a=1.209470+0.126486I$ $b=0.692358+0.502979I$	$-1.37477-2.01127I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.767881+0.006018I$ $a=0.684140-0.442889I$ $b=-0.932129-0.022458I$	$-3.25081-0.95000I$	$-7.88321+7.61599I$
$u=-0.767881-0.006018I$ $a=0.684140+0.442889I$ $b=-0.932129+0.022458I$	$-3.25081+0.95000I$	$-7.88321-7.61599I$
$u=0.549190+1.115550I$ $a=1.300670-0.214187I$ $b=0.588894-0.776860I$	$-0.96511+2.32927I$	0
$u=0.549190-1.115550I$ $a=1.300670+0.214187I$ $b=0.588894+0.776860I$	$-0.96511-2.32927I$	0
$u=-0.685812+0.256869I$ $a=-0.389456+0.622000I$ $b=0.786038-0.201636I$	$-2.43520+2.07800I$	$-9.07465-2.81903I$
$u=-0.685812-0.256869I$ $a=-0.389456-0.622000I$ $b=0.786038+0.201636I$	$-2.43520-2.07800I$	$-9.07465+2.81903I$
$u=0.240184+1.253840I$ $a=-1.32154+0.54080I$ $b=-0.669629+1.120710I$	$-2.11921+5.33902I$	0
$u=0.240184-1.253840I$ $a=-1.32154-0.54080I$ $b=-0.669629-1.120710I$	$-2.11921-5.33902I$	0
$u=-0.452391+1.200180I$ $a=-1.327090+0.475985I$ $b=-1.124410-0.597252I$	$-6.01531-1.51859I$	0
$u=-0.452391-1.200180I$ $a=-1.327090-0.475985I$ $b=-1.124410+0.597252I$	$-6.01531+1.51859I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.559073 + 0.326140I$ $a = -0.091237 - 0.446252I$ $b = 0.338905 + 1.330250I$	$1.39029 - 2.51273I$	$-5.26385 - 4.80671I$
$u = 0.559073 - 0.326140I$ $a = -0.091237 + 0.446252I$ $b = 0.338905 - 1.330250I$	$1.39029 + 2.51273I$	$-5.26385 + 4.80671I$
$u = 1.262080 + 0.619347I$ $a = -0.080706 + 0.577363I$ $b = -0.267607 - 1.101350I$	$2.47880 + 4.31907I$	0
$u = 1.262080 - 0.619347I$ $a = -0.080706 - 0.577363I$ $b = -0.267607 + 1.101350I$	$2.47880 - 4.31907I$	0
$u = -0.303827 + 1.372880I$ $a = 1.302350 - 0.009523I$ $b = 1.34178 + 1.06457I$	$-7.37820 - 4.65827I$	0
$u = -0.303827 - 1.372880I$ $a = 1.302350 + 0.009523I$ $b = 1.34178 - 1.06457I$	$-7.37820 + 4.65827I$	0
$u = 0.50902 + 1.34890I$ $a = -0.938167 - 0.437644I$ $b = -0.744424 + 1.131700I$	$-3.23576 + 0.65655I$	0
$u = 0.50902 - 1.34890I$ $a = -0.938167 + 0.437644I$ $b = -0.744424 - 1.131700I$	$-3.23576 - 0.65655I$	0
$u = 0.316164 + 0.450393I$ $a = -2.61551 + 2.38499I$ $b = -0.515805 + 0.697975I$	$1.42765 + 8.76014I$	$-8.9252 - 11.6486I$
$u = 0.316164 - 0.450393I$ $a = -2.61551 - 2.38499I$ $b = -0.515805 - 0.697975I$	$1.42765 - 8.76014I$	$-8.9252 + 11.6486I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.526776+0.130625I$ $a=\ 1.64907+1.42838I$ $b=-0.063525+0.410583I$	$-1.212250+0.458419I$	$-8.45009+2.61399I$
$u=-0.526776-0.130625I$ $a=\ 1.64907-1.42838I$ $b=-0.063525-0.410583I$	$-1.212250-0.458419I$	$-8.45009-2.61399I$
$u=-0.04934+1.49667I$ $a=-0.934626-0.361125I$ $b=-0.95732-1.26988I$	$-4.02002-6.07736I$	0
$u=-0.04934-1.49667I$ $a=-0.934626+0.361125I$ $b=-0.95732+1.26988I$	$-4.02002+6.07736I$	0
$u=\ 1.42390+0.51355I$ $a=\ 1.40096+0.28358I$ $b=\ 0.410299-0.847136I$	$-1.12191+2.28952I$	0
$u=\ 1.42390-0.51355I$ $a=\ 1.40096-0.28358I$ $b=\ 0.410299+0.847136I$	$-1.12191-2.28952I$	0
$u=\ 0.23379+1.55264I$ $a=\ 0.938585+0.174861I$ $b=\ 1.11049-0.94048I$	$-2.12242-2.67601I$	0
$u=\ 0.23379-1.55264I$ $a=\ 0.938585-0.174861I$ $b=\ 1.11049+0.94048I$	$-2.12242+2.67601I$	0
$u=\ 0.24509+1.55456I$ $a=\ 1.245430-0.100646I$ $b=\ 0.481804-0.886418I$	$-0.87721+2.01433I$	0
$u=\ 0.24509-1.55456I$ $a=\ 1.245430+0.100646I$ $b=\ 0.481804+0.886418I$	$-0.87721-2.01433I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.51376+1.57596I$ $a=\ \ 0.945701-0.164051I$ $b=\ \ 1.09511+1.11076I$	$-8.17262-4.55804I$	0
$u=-0.51376-1.57596I$ $a=\ \ 0.945701+0.164051I$ $b=\ \ 1.09511-1.11076I$	$-8.17262+4.55804I$	0
$u=-0.279421+0.154723I$ $a=-1.57511-2.32845I$ $b=\ \ 0.391533-1.077430I$	$0.89383+5.51966I$	$-4.81577-6.93480I$
$u=-0.279421-0.154723I$ $a=-1.57511+2.32845I$ $b=\ \ 0.391533+1.077430I$	$0.89383-5.51966I$	$-4.81577+6.93480I$
$u=-0.77897+1.52417I$ $a=-0.834559+0.320224I$ $b=-0.83894-1.21576I$	$-5.57447-8.53577I$	0
$u=-0.77897-1.52417I$ $a=-0.834559-0.320224I$ $b=-0.83894+1.21576I$	$-5.57447+8.53577I$	0
$u=\ \ 1.71458+0.23735I$ $a=\ \ 0.024016+0.194910I$ $b=-0.322108-0.323947I$	$4.44720-1.98419I$	0
$u=\ \ 1.71458-0.23735I$ $a=\ \ 0.024016-0.194910I$ $b=-0.322108+0.323947I$	$4.44720+1.98419I$	0
$u=\ \ 0.29319+1.73778I$ $a=-0.832574+0.208844I$ $b=-0.842256+0.841665I$	$-4.08145+5.34949I$	0
$u=\ \ 0.29319-1.73778I$ $a=-0.832574-0.208844I$ $b=-0.842256-0.841665I$	$-4.08145-5.34949I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.13010 + 1.76314I$ $a = 0.915724 + 0.008694I$ $b = 1.25100 + 0.73854I$	$-7.22965 + 9.66297I$	0
$u = 0.13010 - 1.76314I$ $a = 0.915724 - 0.008694I$ $b = 1.25100 - 0.73854I$	$-7.22965 - 9.66297I$	0
$u = -0.142785 + 0.170899I$ $a = -3.16147 - 4.45029I$ $b = -0.578288 - 0.452235I$	$3.08537 - 3.61369I$	$-6.55201 + 5.17838I$
$u = -0.142785 - 0.170899I$ $a = -3.16147 + 4.45029I$ $b = -0.578288 + 0.452235I$	$3.08537 + 3.61369I$	$-6.55201 - 5.17838I$
$u = -0.213112$ $a = 2.54188$ $b = 0.384068$	-0.791810	-12.6720
$u = 0.08659 + 1.81227I$ $a = -0.887978 + 0.026815I$ $b = -1.057560 - 0.878142I$	$-10.06270 + 3.27636I$	0
$u = 0.08659 - 1.81227I$ $a = -0.887978 - 0.026815I$ $b = -1.057560 + 0.878142I$	$-10.06270 - 3.27636I$	0
$u = -0.19032 + 1.80895I$ $a = 0.786350 + 0.062928I$ $b = 1.16484 + 0.96951I$	$-8.59582 - 3.52880I$	0
$u = -0.19032 - 1.80895I$ $a = 0.786350 - 0.062928I$ $b = 1.16484 - 0.96951I$	$-8.59582 + 3.52880I$	0
$u = -1.83255 + 0.07076I$ $a = -0.200666 + 0.252048I$ $b = -0.658066 - 0.537500I$	$0.28249 - 8.18613I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.83255-0.07076I$ $a=-0.200666-0.252048I$ $b=-0.658066+0.537500I$	$0.28249+8.18613I$	0
$u=0.51163+1.76987I$ $a=0.879156-0.064606I$ $b=0.97483-1.06910I$	$-1.63743+10.21140I$	0
$u=0.51163-1.76987I$ $a=0.879156+0.064606I$ $b=0.97483+1.06910I$	$-1.63743-10.21140I$	0
$u=-1.77339+0.64608I$ $a=0.517134-0.144678I$ $b=0.519924+0.414154I$	$-2.58248-0.86247I$	0
$u=-1.77339-0.64608I$ $a=0.517134+0.144678I$ $b=0.519924-0.414154I$	$-2.58248+0.86247I$	0
$u=0.03322+1.92914I$ $a=-0.648747-0.094426I$ $b=-1.046470-0.645501I$	$-7.35769+1.59908I$	0
$u=0.03322-1.92914I$ $a=-0.648747+0.094426I$ $b=-1.046470+0.645501I$	$-7.35769-1.59908I$	0
$u=-0.73084+1.79088I$ $a=0.969017-0.067168I$ $b=0.91767+1.21902I$	$-5.6307-17.3815I$	0
$u=-0.73084-1.79088I$ $a=0.969017+0.067168I$ $b=0.91767-1.21902I$	$-5.6307+17.3815I$	0
$u=-0.75604+1.88383I$ $a=-0.930165+0.071600I$ $b=-0.922238-1.068110I$	$-9.40953-10.47900I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.75604-1.88383I$ $a=-0.930165-0.071600I$ $b=-0.922238+1.068110I$	$-9.40953+10.47900I$	0
$u=-0.17374+2.29146I$ $a=\ \ 0.880997-0.058898I$ $b=\ \ 0.713431+0.936889I$	$-2.47728-2.75627I$	0
$u=-0.17374-2.29146I$ $a=\ \ 0.880997+0.058898I$ $b=\ \ 0.713431-0.936889I$	$-2.47728+2.75627I$	0

II.

$\boldsymbol{I_2^u = \langle -4.04\times10^{21}u^{26}+1.97\times10^{22}u^{25}+\cdots+1.93\times10^{20}b-3.76\times10^{21},\ 1.43\times10^{21}u^{26}-6.73\times10^{21}u^{25}+\cdots+1.93\times10^{20}a+2.33\times10^{20},\ u^{27}-4u^{26}+\cdots-6u+1\rangle}$

(i) Arc colorings

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

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -7.38521u^{26} + 34.8432u^{25} + \cdots + 30.8641u - 1.20419 \\ 20.9243u^{26} - 101.991u^{25} + \cdots - 147.137u + 19.4685 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -10.6002u^{26} + 51.6860u^{25} + \cdots + 80.1888u - 6.20606 \\ 20.9788u^{26} - 102.527u^{25} + \cdots - 159.836u + 20.2238 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -28.3095u^{26} + 136.834u^{25} + \cdots + 178.001u - 20.6726 \\ 20.9243u^{26} - 101.991u^{25} + \cdots - 147.137u + 19.4685 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -5.40776u^{26} + 26.0671u^{25} + \cdots + 41.8757u - 0.657312 \\ -15.4098u^{26} + 76.2735u^{25} + \cdots + 115.483u - 18.5009 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -5.40776u^{26} + 26.0671u^{25} + \cdots + 41.8757u - 0.657312 \\ -18.7489u^{26} + 92.5673u^{25} + \cdots + 147.508u - 22.9370 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 58.0982u^{26} - 284.534u^{25} + \cdots - 452.283u + 58.5015 \\ -37.6519u^{26} + 184.309u^{25} + \cdots + 290.925u - 38.6642 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.594465u^{26} + 3.26250u^{25} + \cdots + 17.0575u - 0.276555 \\ -9.02856u^{26} + 44.5812u^{25} + \cdots + 69.3910u - 10.7702 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 8.01099u^{26} - 39.0436u^{25} + \cdots - 63.6642u + 15.2616 \\ 11.1766u^{26} - 54.5617u^{25} + \cdots - 86.0744u + 9.40541 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{3332383825444852696107 5}{193264588372002970811}u^{26} + \frac{164472182050612511766757}{19326458837200297081 1}u^{25} + \cdots + \frac{270764044802687883745440}{19326458837200297081 1}u - \frac{413473409691869277521 63}{19326458837200297081 1}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{27} - 12u^{26} + \cdots - 8u - 229$
c_2	$u^{27} + 4u^{26} + \cdots - 6u - 1$
c_3	$u^{27} - 5u^{26} + \cdots - 6u + 1$
c_4	$u^{27} + 2u^{26} + \cdots - 13u^2 - 1$
c_5	$u^{27} - 4u^{26} + \cdots - 6u + 1$
c_6	$u^{27} - u^{26} + \cdots + 336u - 173$
c_7	$u^{27} - 2u^{26} + \cdots + 2u + 1$
c_8	$u^{27} - u^{26} + \cdots - 2u - 1$
c_9	$u^{27} - 2u^{26} + \cdots + 13u^2 + 1$
c_{10}	$u^{27} + 5u^{25} + \cdots + 7u + 1$
c_{11}	$u^{27} + 5u^{26} + \cdots - 6u - 1$
c_{12}	$u^{27} + 2u^{26} + \cdots + 2u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{27} - 20y^{26} + \cdots + 1415284y - 52441$
c_2, c_5	$y^{27} + 16y^{24} + \cdots + 28y - 1$
c_3, c_{11}	$y^{27} - 9y^{26} + \cdots + 20y - 1$
c_4, c_9	$y^{27} + 20y^{26} + \cdots - 26y - 1$
c_6	$y^{27} + 31y^{26} + \cdots + 67570y - 29929$
c_7, c_{12}	$y^{27} + 22y^{26} + \cdots - 40y^2 - 1$
c_8	$y^{27} + 9y^{26} + \cdots + 6y - 1$
c_{10}	$y^{27} + 10y^{26} + \cdots + 39y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.011508 + 0.960762I$ $a = -1.59813 + 0.58298I$ $b = -0.158063 + 0.354673I$	$-3.28117 + 2.00579I$	$-13.62403 - 3.47473I$
$u = 0.011508 - 0.960762I$ $a = -1.59813 - 0.58298I$ $b = -0.158063 - 0.354673I$	$-3.28117 - 2.00579I$	$-13.62403 + 3.47473I$
$u = -1.026840 + 0.248737I$ $a = -1.107710 - 0.660114I$ $b = 0.170360 - 0.749462I$	$2.07996 + 7.57439I$	$-4.21001 - 7.63313I$
$u = -1.026840 - 0.248737I$ $a = -1.107710 + 0.660114I$ $b = 0.170360 + 0.749462I$	$2.07996 - 7.57439I$	$-4.21001 + 7.63313I$
$u = -0.910768 + 0.010715I$ $a = -0.212195 + 0.911198I$ $b = 0.08610 - 1.55715I$	$9.18890 - 0.57633I$	$-5.5467 + 13.1274I$
$u = -0.910768 - 0.010715I$ $a = -0.212195 - 0.911198I$ $b = 0.08610 + 1.55715I$	$9.18890 + 0.57633I$	$-5.5467 - 13.1274I$
$u = -0.901824$ $a = -0.122321$ $b = 0.805064$	-3.43153	-12.0740
$u = 1.097310 + 0.319632I$ $a = -0.165655 + 1.075010I$ $b = -0.017250 - 0.689297I$	$5.14703 + 3.51083I$	$3.22862 - 1.62442I$
$u = 1.097310 - 0.319632I$ $a = -0.165655 - 1.075010I$ $b = -0.017250 + 0.689297I$	$5.14703 - 3.51083I$	$3.22862 + 1.62442I$
$u = 0.403986 + 1.079340I$ $a = -1.27045 - 0.63545I$ $b = -0.766066 + 0.866289I$	$-2.36848 - 0.53520I$	$-6.99550 + 1.26697I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.403986 - 1.079340I$ $a = -1.27045 + 0.63545I$ $b = -0.766066 - 0.866289I$	$-2.36848 + 0.53520I$	$-6.99550 - 1.26697I$
$u = -0.200525 + 1.237720I$ $a = 1.389760 - 0.042816I$ $b = 0.471583 - 1.001310I$	$-0.73876 + 1.53239I$	$-13.14639 + 3.16974I$
$u = -0.200525 - 1.237720I$ $a = 1.389760 + 0.042816I$ $b = 0.471583 + 1.001310I$	$-0.73876 - 1.53239I$	$-13.14639 - 3.16974I$
$u = 0.087914 + 1.261540I$ $a = -1.093090 + 0.703743I$ $b = -0.713641 + 1.066830I$	$-1.56049 + 6.01678I$	$-6.76815 - 9.06378I$
$u = 0.087914 - 1.261540I$ $a = -1.093090 - 0.703743I$ $b = -0.713641 - 1.066830I$	$-1.56049 - 6.01678I$	$-6.76815 + 9.06378I$
$u = 0.687795 + 0.149655I$ $a = -1.42021 - 0.58787I$ $b = 0.046892 + 1.311860I$	$4.43619 + 6.56592I$	$-2.27593 - 6.29860I$
$u = 0.687795 - 0.149655I$ $a = -1.42021 + 0.58787I$ $b = 0.046892 - 1.311860I$	$4.43619 - 6.56592I$	$-2.27593 + 6.29860I$
$u = -0.618893 + 0.275049I$ $a = -0.079398 - 0.928011I$ $b = -0.080572 - 1.247090I$	$7.44583 - 3.94798I$	$-10.42204 - 1.37695I$
$u = -0.618893 - 0.275049I$ $a = -0.079398 + 0.928011I$ $b = -0.080572 + 1.247090I$	$7.44583 + 3.94798I$	$-10.42204 + 1.37695I$
$u = -0.33613 + 1.40789I$ $a = -1.189530 + 0.025816I$ $b = -1.31239 - 1.09984I$	$-7.06890 - 4.61624I$	$1.56312 + 2.77810I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.33613-1.40789I$ $a=-1.189530-0.025816I$ $b=-1.31239+1.09984I$	$-7.06890+4.61624I$	$1.56312-2.77810I$
$u=1.55547+0.37415I$ $a=-0.203973+0.071367I$ $b=0.211811+0.536233I$	$4.79550-2.02115I$	0
$u=1.55547-0.37415I$ $a=-0.203973-0.071367I$ $b=0.211811-0.536233I$	$4.79550+2.02115I$	0
$u=0.228176+0.104580I$ $a=0.20393-2.73007I$ $b=0.192012+1.320610I$	$1.24796-3.09784I$	$-8.17629+7.75380I$
$u=0.228176-0.104580I$ $a=0.20393+2.73007I$ $b=0.192012-1.320610I$	$1.24796+3.09784I$	$-8.17629-7.75380I$
$u=1.47191+1.30625I$ $a=1.307810+0.070078I$ $b=0.466693-0.859632I$	$-1.15846+2.18965I$	0
$u=1.47191-1.30625I$ $a=1.307810-0.070078I$ $b=0.466693+0.859632I$	$-1.15846-2.18965I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{27}-12u^{26}+\cdots-8u-229)$ $\cdot(u^{83}-3u^{82}+\cdots+348287054u+1799981)$
c_2	$(u^{27}+4u^{26}+\cdots-6u-1)(u^{83}+3u^{82}+\cdots+2662084u+170479)$
c_3	$(u^{27}-5u^{26}+\cdots-6u+1)(u^{83}+2u^{82}+\cdots+6280u+317)$
c_4	$(u^{27}+2u^{26}+\cdots-13u^2-1)(u^{83}+u^{82}+\cdots+355u^2+19)$
c_5	$(u^{27}-4u^{26}+\cdots-6u+1)(u^{83}+3u^{82}+\cdots+2662084u+170479)$
c_6	$(u^{27}-u^{26}+\cdots+336u-173)$ $\cdot(u^{83}-10u^{82}+\cdots-5710543466u+554133157)$
c_7	$(u^{27}-2u^{26}+\cdots+2u+1)(u^{83}-u^{82}+\cdots-94u+421)$
c_8	$(u^{27}-u^{26}+\cdots-2u-1)(u^{83}-2u^{82}+\cdots+2794u+4489)$
c_9	$(u^{27}-2u^{26}+\cdots+13u^2+1)(u^{83}+u^{82}+\cdots+355u^2+19)$
c_{10}	$(u^{27}+5u^{25}+\cdots+7u+1)(u^{83}+u^{82}+\cdots-9u+1)$
c_{11}	$(u^{27}+5u^{26}+\cdots-6u-1)(u^{83}+2u^{82}+\cdots+6280u+317)$
c_{12}	$(u^{27}+2u^{26}+\cdots+2u-1)(u^{83}-u^{82}+\cdots-94u+421)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{27} - 20y^{26} + \cdots + 1415284y - 52441)$ $\cdot (y^{83} - 67y^{82} + \cdots + 126569059795229812y - 3239931600361)$
c_2, c_5	$(y^{27} + 16y^{24} + \cdots + 28y - 1)$ $\cdot (y^{83} + 73y^{82} + \cdots + 763249377340y - 29063089441)$
c_3, c_{11}	$(y^{27} - 9y^{26} + \cdots + 20y - 1)(y^{83} - 52y^{82} + \cdots + 9384264y - 100489)$
c_4, c_9	$(y^{27} + 20y^{26} + \cdots - 26y - 1)(y^{83} + 25y^{82} + \cdots - 13490y - 361)$
c_6	$(y^{27} + 31y^{26} + \cdots + 67570y - 29929)$ $\cdot (y^{83} - 104y^{82} + \cdots + 9.99 \times 10^{18}y - 3.07 \times 10^{17})$
c_7, c_{12}	$(y^{27} + 22y^{26} + \cdots - 40y^2 - 1)$ $\cdot (y^{83} + 51y^{82} + \cdots - 4179272y - 177241)$
c_8	$(y^{27} + 9y^{26} + \cdots + 6y - 1)$ $\cdot (y^{83} - 14y^{82} + \cdots + 313731786y - 20151121)$
c_{10}	$(y^{27} + 10y^{26} + \cdots + 39y - 1)(y^{83} + 7y^{82} + \cdots + 19y - 1)$