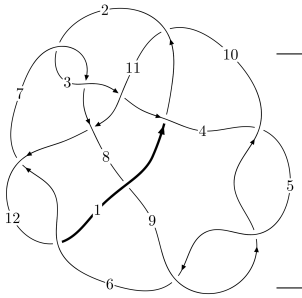
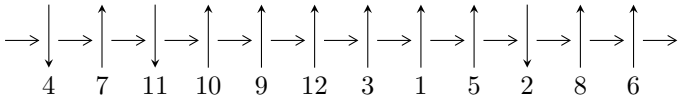
$12a_{1103}$ $(K12a_{1103})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 6.61422 \times 10^{347} u^{121} - 2.31862 \times 10^{348} u^{120} + \cdots + 2.33758 \times 10^{350} b + 1.43204 \times 10^{351}, \\
& 6.57060 \times 10^{349} u^{121} + 1.89785 \times 10^{350} u^{120} + \cdots + 3.66222 \times 10^{351} a - 5.14072 \times 10^{352}, \\
& u^{122} - 2u^{121} + \cdots - 152u - 47 \rangle \\
I_2^u = \langle & 5203601 u^{24} - 8655319 u^{23} + \cdots + 2543847 b + 13993811, \\
& 1931569 u^{24} - 2943707 u^{23} + \cdots + 847949 a + 3267199,\ u^{25} - u^{24} + \cdots + 3u + 1 \rangle
\end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 147 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. $\boldsymbol{I_1^u = \langle 6.61 \times 10^{347} u^{121} - 2.32 \times 10^{348} u^{120} + \cdots + 2.34 \times 10^{350} b + 1.43 \times 10^{351},\ 6.57 \times 10^{349} u^{121} + 1.90 \times 10^{350} u^{120} + \cdots + 3.66 \times 10^{351} a - 5.14 \times 10^{352},\ u^{122} - 2u^{121} + \cdots - 152u - 47 \rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0179416u^{121} - 0.0518224u^{120} + \cdots + 69.8068u + 14.0372 \\ -0.00282951u^{121} + 0.00991885u^{120} + \cdots - 28.6098u - 6.12616 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.00428493u^{121} - 0.0507703u^{120} + \cdots + 79.9417u + 15.7605 \\ -0.0155258u^{121} + 0.0135688u^{120} + \cdots - 27.5804u - 5.99751 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.136734u^{121} - 0.432540u^{120} + \cdots + 9.98190u + 12.6345 \\ -0.0476945u^{121} + 0.180320u^{120} + \cdots + 1.25918u - 0.937436 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.0151121u^{121} - 0.0617412u^{120} + \cdots + 98.4166u + 20.1633 \\ -0.00282951u^{121} + 0.00991885u^{120} + \cdots - 28.6098u - 6.12616 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0450192u^{121} + 0.0839493u^{120} + \cdots + 55.6338u + 2.64084 \\ 0.0250738u^{121} - 0.0917528u^{120} + \cdots - 17.9308u + 1.65005 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.00533299u^{121} + 0.0826627u^{120} + \cdots + 11.2409u + 8.99684 \\ -0.00257120u^{121} - 0.0401578u^{120} + \cdots - 5.20743u - 1.39274 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0525949u^{121} - 0.0614382u^{120} + \cdots + 95.0912u + 12.7763 \\ -0.0105100u^{121} + 0.0172075u^{120} + \cdots - 31.6028u - 1.95745 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.328524u^{121} - 0.623159u^{120} + \cdots - 90.1165u + 22.2357$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$3(3u^{122} - 34u^{121} + \cdots + 928u - 64)$
c_2, c_7	$u^{122} - 31u^{120} + \cdots + 12944u + 3049$
c_3	$3(3u^{122} - u^{121} + \cdots - 5439u - 6578)$
c_4, c_5, c_9	$u^{122} - 2u^{121} + \cdots - 152u - 47$
c_6, c_{12}	$3(3u^{122} + 13u^{121} + \cdots - 10048u - 9856)$
c_8	$u^{122} + 33u^{120} + \cdots + 43329371u + 6397761$
c_{10}	$u^{122} + 4u^{121} + \cdots + 218080u - 15200$
c_{11}	$u^{122} + 5u^{121} + \cdots - 286928u + 42477$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$9(9y^{122} - 178y^{121} + \cdots - 586752y + 4096)$
c_2, c_7	$y^{122} - 62y^{121} + \cdots - 249449374y + 9296401$
c_3	$9(9y^{122} + 323y^{121} + \cdots + 3.39707 \times 10^9 y + 4.32701 \times 10^7)$
c_4, c_5, c_9	$y^{122} + 134y^{121} + \cdots + 155026y + 2209$
c_6, c_{12}	$9(9y^{122} + 887y^{121} + \cdots + 7.49242 \times 10^9 y + 9.71407 \times 10^7)$
c_8	$y^{122} + 66y^{121} + \cdots + 154006928978549y + 40931345813121$
c_{10}	$y^{122} - 30y^{121} + \cdots - 15898137600y + 231040000$
c_{11}	$y^{122} - 25y^{121} + \cdots - 64741944322y + 1804295529$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.711563+0.720964I$ $a=-1.393790+0.166814I$ $b=-0.385156+1.286830I$	$-3.41596-8.34949I$	0
$u=-0.711563-0.720964I$ $a=-1.393790-0.166814I$ $b=-0.385156-1.286830I$	$-3.41596+8.34949I$	0
$u=-0.944407+0.213488I$ $a=\ \ 0.123892+0.730233I$ $b=\ \ 0.211045+1.169170I$	$-1.93761+3.07571I$	0
$u=-0.944407-0.213488I$ $a=\ \ 0.123892-0.730233I$ $b=\ \ 0.211045-1.169170I$	$-1.93761-3.07571I$	0
$u=-0.919192+0.571564I$ $a=\ \ 0.803946-0.667457I$ $b=\ \ 0.021906-1.351500I$	$-3.59564-3.96001I$	0
$u=-0.919192-0.571564I$ $a=\ \ 0.803946+0.667457I$ $b=\ \ 0.021906+1.351500I$	$-3.59564+3.96001I$	0
$u=\ \ 0.824964+0.703277I$ $a=\ \ 1.253070+0.282967I$ $b=\ \ 0.48146+1.38037I$	$-0.5307+14.4114I$	0
$u=\ \ 0.824964-0.703277I$ $a=\ \ 1.253070-0.282967I$ $b=\ \ 0.48146-1.38037I$	$-0.5307-14.4114I$	0
$u=\ \ 0.388492+1.015430I$ $a=-0.562166-0.618126I$ $b=\ \ 0.175635-1.239650I$	$-1.32108-2.03766I$	0
$u=\ \ 0.388492-1.015430I$ $a=-0.562166+0.618126I$ $b=\ \ 0.175635+1.239650I$	$-1.32108+2.03766I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.646003+0.637157I$ $a=-0.486912-0.920991I$ $b=-0.743569+0.184739I$	$3.65027+4.40861I$	0
$u=-0.646003-0.637157I$ $a=-0.486912+0.920991I$ $b=-0.743569-0.184739I$	$3.65027-4.40861I$	0
$u=-0.800406+0.779400I$ $a=\ \ 0.869349-0.273565I$ $b=\ \ 0.242672-1.354910I$	$-4.15358-2.18179I$	0
$u=-0.800406-0.779400I$ $a=\ \ 0.869349+0.273565I$ $b=\ \ 0.242672+1.354910I$	$-4.15358+2.18179I$	0
$u=\ \ 0.875561+0.742822I$ $a=-0.828938-0.268010I$ $b=-0.434435-1.182230I$	$-3.28469+5.56042I$	0
$u=\ \ 0.875561-0.742822I$ $a=-0.828938+0.268010I$ $b=-0.434435+1.182230I$	$-3.28469-5.56042I$	0
$u=\ \ 1.075060+0.432573I$ $a=\ \ 0.034159+0.686221I$ $b=-0.340366+1.218210I$	$0.40180-8.35687I$	0
$u=\ \ 1.075060-0.432573I$ $a=\ \ 0.034159-0.686221I$ $b=-0.340366-1.218210I$	$0.40180+8.35687I$	0
$u=-0.144300+0.809129I$ $a=-0.07390-1.72418I$ $b=-0.285127+0.727893I$	$3.40823-2.43241I$	0
$u=-0.144300-0.809129I$ $a=-0.07390+1.72418I$ $b=-0.285127-0.727893I$	$3.40823+2.43241I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.966543 + 0.696539I$ $a = -0.601302 - 0.495746I$ $b = 0.088758 - 1.105320I$	$-2.99662 + 0.99837I$	0
$u = 0.966543 - 0.696539I$ $a = -0.601302 + 0.495746I$ $b = 0.088758 + 1.105320I$	$-2.99662 - 0.99837I$	0
$u = -0.671198 + 0.449572I$ $a = 1.228040 + 0.056946I$ $b = 1.102320 - 0.119184I$	$4.15580 - 8.88626I$	0
$u = -0.671198 - 0.449572I$ $a = 1.228040 - 0.056946I$ $b = 1.102320 + 0.119184I$	$4.15580 + 8.88626I$	0
$u = 0.592638 + 0.541840I$ $a = 0.098411 + 0.973133I$ $b = -0.285793 + 0.805911I$	$2.81379 - 0.15458I$	0
$u = 0.592638 - 0.541840I$ $a = 0.098411 - 0.973133I$ $b = -0.285793 - 0.805911I$	$2.81379 + 0.15458I$	0
$u = -0.110720 + 1.199860I$ $a = -0.140904 + 1.236810I$ $b = 0.238007 - 0.355608I$	$1.82109 + 0.39807I$	0
$u = -0.110720 - 1.199860I$ $a = -0.140904 - 1.236810I$ $b = 0.238007 + 0.355608I$	$1.82109 - 0.39807I$	0
$u = 0.620141 + 0.482366I$ $a = 1.65587 + 0.57045I$ $b = 0.458721 + 0.949845I$	$2.97710 + 4.30693I$	0
$u = 0.620141 - 0.482366I$ $a = 1.65587 - 0.57045I$ $b = 0.458721 - 0.949845I$	$2.97710 - 4.30693I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.552575 + 0.547041I$ $a = -1.134450 + 0.309121I$ $b = -0.782083 - 0.025889I$	$0.65822 + 4.07057I$	0
$u = 0.552575 - 0.547041I$ $a = -1.134450 - 0.309121I$ $b = -0.782083 + 0.025889I$	$0.65822 - 4.07057I$	0
$u = -0.504759 + 0.574242I$ $a = 0.573223 - 0.402914I$ $b = -0.025420 - 1.288960I$	$-2.90797 - 1.31424I$	0
$u = -0.504759 - 0.574242I$ $a = 0.573223 + 0.402914I$ $b = -0.025420 + 1.288960I$	$-2.90797 + 1.31424I$	0
$u = -0.166628 + 1.260070I$ $a = 0.499290 + 0.246247I$ $b = 0.48725 - 1.51603I$	$-3.71841 - 1.26400I$	0
$u = -0.166628 - 1.260070I$ $a = 0.499290 - 0.246247I$ $b = 0.48725 + 1.51603I$	$-3.71841 + 1.26400I$	0
$u = 0.593443 + 0.357252I$ $a = 0.978294 - 0.576018I$ $b = 0.560470 + 0.099085I$	$1.193900 - 0.193638I$	0
$u = 0.593443 - 0.357252I$ $a = 0.978294 + 0.576018I$ $b = 0.560470 - 0.099085I$	$1.193900 + 0.193638I$	0
$u = -0.168599 + 0.648321I$ $a = -0.295148 + 0.830971I$ $b = 0.191511 - 1.052380I$	$-2.45670 - 1.73198I$	0
$u = -0.168599 - 0.648321I$ $a = -0.295148 - 0.830971I$ $b = 0.191511 + 1.052380I$	$-2.45670 + 1.73198I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.363565+0.560558I$ $a=1.77768+0.49343I$ $b=0.106654-1.301380I$	$-3.17722-2.12113I$	0
$u=-0.363565-0.560558I$ $a=1.77768-0.49343I$ $b=0.106654+1.301380I$	$-3.17722+2.12113I$	0
$u=0.644624+0.168603I$ $a=-1.50186-1.79693I$ $b=-0.318245-1.260090I$	$1.20438+5.87556I$	0
$u=0.644624-0.168603I$ $a=-1.50186+1.79693I$ $b=-0.318245+1.260090I$	$1.20438-5.87556I$	0
$u=0.529634+0.380291I$ $a=0.76835+1.42293I$ $b=-0.286234+0.353485I$	$1.79521+4.30982I$	$6.00000-6.96880I$
$u=0.529634-0.380291I$ $a=0.76835-1.42293I$ $b=-0.286234-0.353485I$	$1.79521-4.30982I$	$6.00000+6.96880I$
$u=-0.068350+1.354020I$ $a=0.879519+0.471079I$ $b=0.894615-0.037123I$	$0.37227-3.90700I$	0
$u=-0.068350-1.354020I$ $a=0.879519-0.471079I$ $b=0.894615+0.037123I$	$0.37227+3.90700I$	0
$u=0.221459+0.578403I$ $a=1.83852+0.27944I$ $b=0.55654+1.33372I$	$-1.51959+7.61336I$	$1.31895-8.06220I$
$u=0.221459-0.578403I$ $a=1.83852-0.27944I$ $b=0.55654-1.33372I$	$-1.51959-7.61336I$	$1.31895+8.06220I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.14969 + 1.41637I$ $a = 1.71834 - 0.45136I$ $b = 0.394011 + 1.307680I$	$-3.83496 + 8.49001I$	0
$u = 0.14969 - 1.41637I$ $a = 1.71834 + 0.45136I$ $b = 0.394011 - 1.307680I$	$-3.83496 - 8.49001I$	0
$u = 0.08472 + 1.44133I$ $a = -0.408149 + 0.109054I$ $b = -2.15366 - 0.96195I$	$-4.10524 + 0.35227I$	0
$u = 0.08472 - 1.44133I$ $a = -0.408149 - 0.109054I$ $b = -2.15366 + 0.96195I$	$-4.10524 - 0.35227I$	0
$u = 0.397137 + 0.364224I$ $a = 0.998842 + 0.493503I$ $b = 0.963377 + 0.544778I$	$1.60418 - 1.28589I$	$5.39014 - 4.42202I$
$u = 0.397137 - 0.364224I$ $a = 0.998842 - 0.493503I$ $b = 0.963377 - 0.544778I$	$1.60418 + 1.28589I$	$5.39014 + 4.42202I$
$u = -0.179399 + 0.501683I$ $a = -2.23272 + 0.79175I$ $b = -0.375239 + 1.137740I$	$-4.44948 - 1.35368I$	$-3.38262 + 9.54178I$
$u = -0.179399 - 0.501683I$ $a = -2.23272 - 0.79175I$ $b = -0.375239 - 1.137740I$	$-4.44948 + 1.35368I$	$-3.38262 - 9.54178I$
$u = 0.08929 + 1.47252I$ $a = -0.608189 + 0.288110I$ $b = -0.513432 - 0.573870I$	$-4.41097 + 1.90052I$	0
$u = 0.08929 - 1.47252I$ $a = -0.608189 - 0.288110I$ $b = -0.513432 + 0.573870I$	$-4.41097 - 1.90052I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.361732+0.376917I$ $a=-0.671912+0.745291I$ $b=-0.266762-0.217897I$	$-1.38502-1.11204I$	$-1.01179+2.65936I$
$u=-0.361732-0.376917I$ $a=-0.671912-0.745291I$ $b=-0.266762+0.217897I$	$-1.38502+1.11204I$	$-1.01179-2.65936I$
$u=0.01380+1.48140I$ $a=-0.071801-0.845889I$ $b=0.05954+1.99044I$	$-6.47523+0.96880I$	0
$u=0.01380-1.48140I$ $a=-0.071801+0.845889I$ $b=0.05954-1.99044I$	$-6.47523-0.96880I$	0
$u=-0.08734+1.48047I$ $a=-0.645293-0.186675I$ $b=-1.180530-0.503207I$	$-1.50030-1.09339I$	0
$u=-0.08734-1.48047I$ $a=-0.645293+0.186675I$ $b=-1.180530+0.503207I$	$-1.50030+1.09339I$	0
$u=-0.375684+0.349981I$ $a=1.77959+0.54451I$ $b=0.834764+0.478037I$	$4.56255+0.46430I$	$12.30374+4.04241I$
$u=-0.375684-0.349981I$ $a=1.77959-0.54451I$ $b=0.834764-0.478037I$	$4.56255-0.46430I$	$12.30374-4.04241I$
$u=0.17535+1.47846I$ $a=-1.091770-0.334682I$ $b=-0.156136-0.434741I$	$-4.29256+6.88236I$	0
$u=0.17535-1.47846I$ $a=-1.091770+0.334682I$ $b=-0.156136+0.434741I$	$-4.29256-6.88236I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.00805+1.50090I$ $a=-1.35168+1.39321I$ $b=\ 0.013083-1.194870I$	$-6.76650-6.68366I$	0
$u=-0.00805-1.50090I$ $a=-1.35168-1.39321I$ $b=\ 0.013083+1.194870I$	$-6.76650+6.68366I$	0
$u=-0.11115+1.49746I$ $a=\ 0.721143-0.197957I$ $b=\ 0.731066+0.108932I$	$-7.65579-2.81845I$	0
$u=-0.11115-1.49746I$ $a=\ 0.721143+0.197957I$ $b=\ 0.731066-0.108932I$	$-7.65579+2.81845I$	0
$u=\ 0.491834$ $a=\ 0.826601$ $b=\ 0.427603$	0.747878	13.9070
$u=-0.20500+1.49703I$ $a=-0.601061-0.316134I$ $b=-1.36599+0.38177I$	$-2.20069-12.01280I$	0
$u=-0.20500-1.49703I$ $a=-0.601061+0.316134I$ $b=-1.36599-0.38177I$	$-2.20069+12.01280I$	0
$u=-0.05256+1.51357I$ $a=\ 1.78553+0.73527I$ $b=\ 0.180396-1.122430I$	$-10.64480-1.02048I$	0
$u=-0.05256-1.51357I$ $a=\ 1.78553-0.73527I$ $b=\ 0.180396+1.122430I$	$-10.64480+1.02048I$	0
$u=\ 0.25128+1.49421I$ $a=\ 0.132273+0.284904I$ $b=\ 0.050814-0.178084I$	$-4.45702+3.13630I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.25128 - 1.49421I$ $a = 0.132273 - 0.284904I$ $b = 0.050814 + 0.178084I$	$-4.45702 - 3.13630I$	0
$u = 0.18791 + 1.51173I$ $a = -1.253800 + 0.362385I$ $b = -0.564013 - 1.063060I$	$-3.57801 + 7.20388I$	0
$u = 0.18791 - 1.51173I$ $a = -1.253800 - 0.362385I$ $b = -0.564013 + 1.063060I$	$-3.57801 - 7.20388I$	0
$u = -0.07143 + 1.52949I$ $a = -0.91040 - 1.34671I$ $b = -0.117246 + 1.356750I$	$-10.11610 - 3.49099I$	0
$u = -0.07143 - 1.52949I$ $a = -0.91040 + 1.34671I$ $b = -0.117246 - 1.356750I$	$-10.11610 + 3.49099I$	0
$u = -0.03826 + 1.53414I$ $a = 0.998132 + 0.323734I$ $b = 0.61856 - 1.30241I$	$-11.35470 - 2.06133I$	0
$u = -0.03826 - 1.53414I$ $a = 0.998132 - 0.323734I$ $b = 0.61856 + 1.30241I$	$-11.35470 + 2.06133I$	0
$u = -0.214257 + 0.411180I$ $a = -3.97086 + 0.67080I$ $b = 0.015098 + 1.073910I$	$-4.11671 - 0.12736I$	$0.94456 - 1.28817I$
$u = -0.214257 - 0.411180I$ $a = -3.97086 - 0.67080I$ $b = 0.015098 - 1.073910I$	$-4.11671 + 0.12736I$	$0.94456 + 1.28817I$
$u = 0.16074 + 1.53123I$ $a = 0.633130 - 0.281624I$ $b = 1.010040 + 0.125952I$	$-6.21732 + 6.63593I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.16074 - 1.53123I$ $a = 0.633130 + 0.281624I$ $b = 1.010040 - 0.125952I$	$-6.21732 - 6.63593I$	0
$u = 0.06878 + 1.54356I$ $a = -0.814170 + 0.480849I$ $b = -0.68661 - 1.59169I$	$-8.65685 + 8.70085I$	0
$u = 0.06878 - 1.54356I$ $a = -0.814170 - 0.480849I$ $b = -0.68661 + 1.59169I$	$-8.65685 - 8.70085I$	0
$u = -0.08508 + 1.54373I$ $a = -0.402595 - 0.770129I$ $b = -0.07977 + 1.48769I$	$-10.09870 - 3.08767I$	0
$u = -0.08508 - 1.54373I$ $a = -0.402595 + 0.770129I$ $b = -0.07977 - 1.48769I$	$-10.09870 + 3.08767I$	0
$u = -0.422166 + 0.127391I$ $a = -2.73261 + 0.44017I$ $b = -0.664570 - 0.055125I$	$4.98035 - 2.21429I$	$17.4566 + 3.7886I$
$u = -0.422166 - 0.127391I$ $a = -2.73261 - 0.44017I$ $b = -0.664570 + 0.055125I$	$4.98035 + 2.21429I$	$17.4566 - 3.7886I$
$u = -0.00616 + 1.56274I$ $a = -0.484914 + 0.271559I$ $b = -0.123149 - 0.405837I$	$-4.60062 + 2.04307I$	0
$u = -0.00616 - 1.56274I$ $a = -0.484914 - 0.271559I$ $b = -0.123149 + 0.405837I$	$-4.60062 - 2.04307I$	0
$u = -0.00130 + 1.56633I$ $a = 0.553271 - 0.598667I$ $b = 0.215372 + 1.280170I$	$-10.06680 - 2.12419I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.00130-1.56633I$ $a=\ \ 0.553271+0.598667I$ $b=\ \ 0.215372-1.280170I$	$-10.06680+2.12419I$	0
$u=-0.31753+1.58025I$ $a=-1.012220-0.275174I$ $b=-0.15192+1.45664I$	$-10.61220-8.50524I$	0
$u=-0.31753-1.58025I$ $a=-1.012220+0.275174I$ $b=-0.15192-1.45664I$	$-10.61220+8.50524I$	0
$u=-0.23654+1.60033I$ $a=-0.925423-0.517825I$ $b=-0.34973+1.53498I$	$-11.93380-5.91895I$	0
$u=-0.23654-1.60033I$ $a=-0.925423+0.517825I$ $b=-0.34973-1.53498I$	$-11.93380+5.91895I$	0
$u=-0.23166+1.60217I$ $a=\ \ 1.121430+0.581215I$ $b=\ \ 0.45711-1.41089I$	$-11.1142-11.8998I$	0
$u=-0.23166-1.60217I$ $a=\ \ 1.121430-0.581215I$ $b=\ \ 0.45711+1.41089I$	$-11.1142+11.8998I$	0
$u=\ \ 0.27155+1.60500I$ $a=-1.066730+0.544388I$ $b=-0.52211-1.52980I$	$-8.1184+18.5002I$	0
$u=\ \ 0.27155-1.60500I$ $a=-1.066730-0.544388I$ $b=-0.52211+1.52980I$	$-8.1184-18.5002I$	0
$u=\ \ 0.26729+1.61046I$ $a=\ \ 0.827724-0.462263I$ $b=\ \ 0.55169+1.48040I$	$-11.0020+9.7291I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.26729 - 1.61046I$ $a = 0.827724 + 0.462263I$ $b = 0.55169 - 1.48040I$	$-11.0020 - 9.7291I$	0
$u = -0.360012$ $a = -0.637271$ $b = -1.81783$	-0.554574	82.4010
$u = 0.28630 + 1.62363I$ $a = 0.891455 - 0.261313I$ $b = 0.151880 + 1.200770I$	$-10.66770 + 5.55004I$	0
$u = 0.28630 - 1.62363I$ $a = 0.891455 + 0.261313I$ $b = 0.151880 - 1.200770I$	$-10.66770 - 5.55004I$	0
$u = 0.024700 + 0.331626I$ $a = 5.14653 - 2.58915I$ $b = -0.239406 + 1.142260I$	$-0.47715 - 6.65366I$	$-2.99743 + 8.37718I$
$u = 0.024700 - 0.331626I$ $a = 5.14653 + 2.58915I$ $b = -0.239406 - 1.142260I$	$-0.47715 + 6.65366I$	$-2.99743 - 8.37718I$
$u = 0.021499 + 0.227497I$ $a = 0.17878 + 2.35479I$ $b = -0.22556 - 1.76784I$	$-0.554858 + 0.805266I$	$21.3978 + 5.0125I$
$u = 0.021499 - 0.227497I$ $a = 0.17878 - 2.35479I$ $b = -0.22556 + 1.76784I$	$-0.554858 - 0.805266I$	$21.3978 - 5.0125I$
$u = 0.27114 + 1.78891I$ $a = -0.478508 + 0.386099I$ $b = 0.039931 - 1.194280I$	$-7.15389 - 2.16351I$	0
$u = 0.27114 - 1.78891I$ $a = -0.478508 - 0.386099I$ $b = 0.039931 + 1.194280I$	$-7.15389 + 2.16351I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.44723+1.82378I$		
$a=\quad 0.376829+0.289427I$	$-7.79059-3.56068I$	0
$b=\quad 0.046427-1.238160I$		
$u=-0.44723-1.82378I$		
$a=\quad 0.376829-0.289427I$	$-7.79059+3.56068I$	0
$b=\quad 0.046427+1.238160I$		

II. $\boldsymbol{I_2^u = \langle 5.20\times 10^6 u^{24} - 8.66\times 10^6 u^{23} + \cdots + 2.54\times 10^6 b + 1.40\times 10^7,\ 1.93\times 10^6 u^{24} - 2.94\times 10^6 u^{23} + \cdots + 8.48\times 10^5 a + 3.27\times 10^6,\ u^{25} - u^{24} + \cdots + 3u + 1\rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -2.27793u^{24} + 3.47156u^{23} + \cdots - 4.62200u - 3.85306 \\ -2.04556u^{24} + 3.40245u^{23} + \cdots - 5.10959u - 5.50104 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0507499u^{24} - 0.0445302u^{23} + \cdots - 1.31781u + 0.761174 \\ -1.40178u^{24} + 2.40954u^{23} + \cdots - 3.43125u - 3.55933 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 6.50472u^{24} - 9.26773u^{23} + \cdots + 5.64318u + 6.98691 \\ 1.25294u^{24} - 2.23907u^{23} + \cdots - 1.06793u + 2.29477 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.232367u^{24} + 0.0691087u^{23} + \cdots + 0.487586u + 1.64798 \\ -2.04556u^{24} + 3.40245u^{23} + \cdots - 5.10959u - 5.50104 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0887260u^{24} + 0.805143u^{23} + \cdots - 3.65878u - 2.01440 \\ -2.20604u^{24} + 2.74256u^{23} + \cdots - 7.93073u - 5.93784 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 8.07130u^{24} - 11.3266u^{23} + \cdots + 17.3986u + 15.1353 \\ 2.50446u^{24} - 3.41694u^{23} + \cdots + 3.95105u + 2.52628 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 6.78347u^{24} - 10.3188u^{23} + \cdots + 10.0144u + 16.2458 \\ -1.73546u^{24} + 2.45203u^{23} + \cdots - 2.22323u - 2.83892 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{1354961699}{68683869}u^{24} + \frac{2077690858}{68683869}u^{23} + \cdots - \frac{1452449185}{68683869}u - \frac{2691363689}{68683869}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$3(3u^{25} - 11u^{24} + \cdots + 3u - 1)$
c_2	$u^{25} + u^{24} + \cdots + u + 1$
c_3	$3(3u^{25} - 4u^{24} + \cdots - 11u + 5)$
c_4, c_5	$u^{25} - u^{24} + \cdots + 3u + 1$
c_6	$3(3u^{25} + 10u^{24} + \cdots - 44u + 13)$
c_7	$u^{25} - u^{24} + \cdots + u - 1$
c_8	$u^{25} + u^{24} + \cdots + 22u + 3$
c_9	$u^{25} + u^{24} + \cdots + 3u - 1$
c_{10}	$u^{25} + 3u^{24} + \cdots - 8u - 8$
c_{11}	$u^{25} + 8u^{24} + \cdots + 37u + 3$
c_{12}	$3(3u^{25} - 10u^{24} + \cdots - 44u - 13)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$9(9y^{25} - 61y^{24} + \cdots - 9y - 1)$
c_2, c_7	$y^{25} - 9y^{24} + \cdots + 21y - 1$
c_3	$9(9y^{25} + 80y^{24} + \cdots - 439y - 25)$
c_4, c_5, c_9	$y^{25} + 31y^{24} + \cdots - 11y - 1$
c_6, c_{12}	$9(9y^{25} + 212y^{24} + \cdots - 196y - 169)$
c_8	$y^{25} + 23y^{24} + \cdots + 490y - 9$
c_{10}	$y^{25} - 5y^{24} + \cdots + 608y - 64$
c_{11}	$y^{25} - 8y^{24} + \cdots + 241y - 9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.953006 + 0.609419I$ $a = -0.702323 - 0.508598I$ $b = -0.143934 - 1.279010I$	$-3.75446 + 2.84607I$	$1.75521 - 6.83793I$
$u = 0.953006 - 0.609419I$ $a = -0.702323 + 0.508598I$ $b = -0.143934 + 1.279010I$	$-3.75446 - 2.84607I$	$1.75521 + 6.83793I$
$u = -0.051411 + 0.820539I$ $a = -0.013715 - 0.601648I$ $b = -0.233278 - 1.311000I$	$-1.24049 + 0.73866I$	$5.97331 + 1.55223I$
$u = -0.051411 - 0.820539I$ $a = -0.013715 + 0.601648I$ $b = -0.233278 + 1.311000I$	$-1.24049 - 0.73866I$	$5.97331 - 1.55223I$
$u = -0.056133 + 1.179980I$ $a = -0.038672 + 1.159100I$ $b = -0.346581 - 0.537903I$	$1.67169 + 1.27167I$	$5.54338 - 5.39268I$
$u = -0.056133 - 1.179980I$ $a = -0.038672 - 1.159100I$ $b = -0.346581 + 0.537903I$	$1.67169 - 1.27167I$	$5.54338 + 5.39268I$
$u = 0.142109 + 1.403260I$ $a = -0.334973 + 0.211249I$ $b = -1.23550 - 1.53559I$	$-3.95324 + 0.10298I$	$-0.87661 + 11.43883I$
$u = 0.142109 - 1.403260I$ $a = -0.334973 - 0.211249I$ $b = -1.23550 + 1.53559I$	$-3.95324 - 0.10298I$	$-0.87661 - 11.43883I$
$u = -0.14393 + 1.44520I$ $a = -1.62048 + 0.06443I$ $b = -0.433633 + 1.150590I$	$-4.85022 - 8.74496I$	$0. + 9.43172I$
$u = -0.14393 - 1.44520I$ $a = -1.62048 - 0.06443I$ $b = -0.433633 - 1.150590I$	$-4.85022 + 8.74496I$	$0. - 9.43172I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.505901+0.033818I$ $a=-0.69057+2.73017I$ $b=\ \ 0.309455+1.143120I$	$0.20095+6.61023I$	$8.22034-6.98326I$
$u=-0.505901-0.033818I$ $a=-0.69057-2.73017I$ $b=\ \ 0.309455-1.143120I$	$0.20095-6.61023I$	$8.22034+6.98326I$
$u=\ \ 0.04152+1.51136I$ $a=\ \ 1.50388-0.62150I$ $b=\ \ 0.360522+1.182930I$	$-10.40960+1.66756I$	$3.53276-4.27763I$
$u=\ \ 0.04152-1.51136I$ $a=\ \ 1.50388+0.62150I$ $b=\ \ 0.360522-1.182930I$	$-10.40960-1.66756I$	$3.53276+4.27763I$
$u=-0.29822+1.48265I$ $a=\ \ 0.359261-0.010371I$ $b=\ \ 0.294397-0.527129I$	$-4.72935-3.56321I$	$-1.49424+9.35141I$
$u=-0.29822-1.48265I$ $a=\ \ 0.359261+0.010371I$ $b=\ \ 0.294397+0.527129I$	$-4.72935+3.56321I$	$-1.49424-9.35141I$
$u=-0.049553+0.472941I$ $a=-0.42692-2.32869I$ $b=\ \ 0.380751-0.070614I$	$4.09675-1.69671I$	$10.23605+0.18054I$
$u=-0.049553-0.472941I$ $a=-0.42692+2.32869I$ $b=\ \ 0.380751+0.070614I$	$4.09675+1.69671I$	$10.23605-0.18054I$
$u=-0.442726$ $a=-0.307019$ $b=-1.28511$	-0.644153	-17.6250
$u=\ \ 0.193783+0.367383I$ $a=-3.55785-1.06926I$ $b=-0.194179-1.121940I$	$-3.97721+0.93985I$	$4.29842-3.66805I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.193783 - 0.367383I$ $a = -3.55785 + 1.06926I$ $b = -0.194179 + 1.121940I$	$-3.97721 - 0.93985I$	$4.29842 + 3.66805I$
$u = 0.29389 + 1.60477I$ $a = 0.894930 - 0.370990I$ $b = 0.26736 + 1.40770I$	$-11.09190 + 7.34545I$	$0. - 4.21220I$
$u = 0.29389 - 1.60477I$ $a = 0.894930 + 0.370990I$ $b = 0.26736 - 1.40770I$	$-11.09190 - 7.34545I$	$0. + 4.21220I$
$u = 0.20221 + 1.77609I$ $a = -0.219062 + 0.529517I$ $b = -0.049493 - 1.235800I$	$-7.69910 + 3.14314I$	0
$u = 0.20221 - 1.77609I$ $a = -0.219062 - 0.529517I$ $b = -0.049493 + 1.235800I$	$-7.69910 - 3.14314I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$9(3u^{25}-11u^{24}+\cdots+3u-1)(3u^{122}-34u^{121}+\cdots+928u-64)$
c_2	$(u^{25}+u^{24}+\cdots+u+1)(u^{122}-31u^{120}+\cdots+12944u+3049)$
c_3	$9(3u^{25}-4u^{24}+\cdots-11u+5)(3u^{122}-u^{121}+\cdots-5439u-6578)$
c_4, c_5	$(u^{25}-u^{24}+\cdots+3u+1)(u^{122}-2u^{121}+\cdots-152u-47)$
c_6	$9(3u^{25}+10u^{24}+\cdots-44u+13)$ $\cdot(3u^{122}+13u^{121}+\cdots-10048u-9856)$
c_7	$(u^{25}-u^{24}+\cdots+u-1)(u^{122}-31u^{120}+\cdots+12944u+3049)$
c_8	$(u^{25}+u^{24}+\cdots+22u+3)$ $\cdot(u^{122}+33u^{120}+\cdots+43329371u+6397761)$
c_9	$(u^{25}+u^{24}+\cdots+3u-1)(u^{122}-2u^{121}+\cdots-152u-47)$
c_{10}	$(u^{25}+3u^{24}+\cdots-8u-8)(u^{122}+4u^{121}+\cdots+218080u-15200)$
c_{11}	$(u^{25}+8u^{24}+\cdots+37u+3)(u^{122}+5u^{121}+\cdots-286928u+42477)$
c_{12}	$9(3u^{25}-10u^{24}+\cdots-44u-13)$ $\cdot(3u^{122}+13u^{121}+\cdots-10048u-9856)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$81(9y^{25}-61y^{24}+\cdots-9y-1)$ $\cdot(9y^{122}-178y^{121}+\cdots-586752y+4096)$
c_2, c_7	$(y^{25}-9y^{24}+\cdots+21y-1)$ $\cdot(y^{122}-62y^{121}+\cdots-249449374y+9296401)$
c_3	$81(9y^{25}+80y^{24}+\cdots-439y-25)$ $\cdot(9y^{122}+323y^{121}+\cdots+3397068507y+43270084)$
c_4, c_5, c_9	$(y^{25}+31y^{24}+\cdots-11y-1)(y^{122}+134y^{121}+\cdots+155026y+2209)$
c_6, c_{12}	$81(9y^{25}+212y^{24}+\cdots-196y-169)$ $\cdot(9y^{122}+887y^{121}+\cdots+7492415488y+97140736)$
c_8	$(y^{25}+23y^{24}+\cdots+490y-9)$ $\cdot(y^{122}+66y^{121}+\cdots+154006928978549y+40931345813121)$
c_{10}	$(y^{25}-5y^{24}+\cdots+608y-64)$ $\cdot(y^{122}-30y^{121}+\cdots-15898137600y+231040000)$
c_{11}	$(y^{25}-8y^{24}+\cdots+241y-9)$ $\cdot(y^{122}-25y^{121}+\cdots-64741944322y+1804295529)$