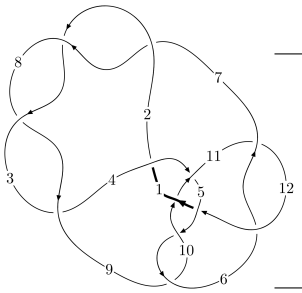
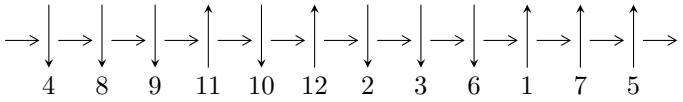
$12a_{1141}$ $(K12a_{1141})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.16393 \times 10^{80} u^{98} + 1.96153 \times 10^{80} u^{97} + \cdots + 1.45806 \times 10^{80} b - 1.44154 \times 10^{81},$$
$$2.69483 \times 10^{80} u^{98} + 2.63977 \times 10^{81} u^{97} + \cdots + 1.02064 \times 10^{81} a - 2.84283 \times 10^{82},\ u^{99} + u^{98} + \cdots - 18u + 7\rangle$$
$$I_2^u = \langle -u^{14} + u^{13} + 8u^{12} - 7u^{11} - 24u^{10} + 16u^9 + 35u^8 - 10u^7 - 31u^6 - 7u^5 + 21u^4 + 8u^3 - 6u^2 + b - 4u + 1,$$
$$-2u^{14} + u^{13} + \cdots + a + 1,$$
$$u^{16} - 10u^{14} + 39u^{12} + u^{11} - 74u^{10} - 8u^9 + 71u^8 + 23u^7 - 38u^6 - 28u^5 + 18u^4 + 13u^3 - 4u^2 - 2u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 115 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.

$\boldsymbol{I_1^u = \langle -1.16\times 10^{80}u^{98}+1.96\times 10^{80}u^{97}+\cdots+1.46\times 10^{80}b-1.44\times 10^{81},\ 2.69\times 10^{80}u^{98}+2.64\times 10^{81}u^{97}+\cdots+1.02\times 10^{81}a-2.84\times 10^{82},\ u^{99}+u^{98}+\cdots-18u+7\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

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

$$a_{11} = \begin{pmatrix} -0.264033u^{98} - 2.58639u^{97} + \cdots - 24.9570u + 27.8534 \\ 0.798272u^{98} - 1.34530u^{97} + \cdots - 18.0941u + 9.88675 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.833020u^{98} - 1.92704u^{97} + \cdots - 27.1985u + 23.2113 \\ 1.31877u^{98} - 1.84396u^{97} + \cdots - 38.6806u + 21.8148 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^6+3u^4-2u^2+1 \\ -u^8+4u^6-4u^4 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.00205647u^{98} - 2.51782u^{97} + \cdots - 29.1751u + 26.6019 \\ 1.06025u^{98} - 1.27673u^{97} + \cdots - 22.3122u + 8.63527 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.514009u^{98} + 1.64940u^{97} + \cdots + 14.5324u - 20.0768 \\ -0.502672u^{98} + 1.10075u^{97} + \cdots + 15.7291u - 8.88776 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.370327u^{98} - 2.17342u^{97} + \cdots - 29.7554u + 24.1137 \\ 1.00004u^{98} - 1.94343u^{97} + \cdots - 28.8770u + 14.8644 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4.35878u^{98} + 7.93657u^{97} + \cdots + 50.8346u - 78.6235$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{99} - 23u^{98} + \cdots + 738442u - 80017$
c_2, c_3, c_7 c_8	$u^{99} + u^{98} + \cdots - 18u + 7$
c_4	$u^{99} + 2u^{97} + \cdots + 270u + 25$
c_5, c_9	$u^{99} + 2u^{98} + \cdots + 1662u + 229$
c_6, c_{11}	$u^{99} + u^{98} + \cdots - u + 7$
c_{10}	$u^{99} + 13u^{98} + \cdots - 4180u - 1361$
c_{12}	$u^{99} - 5u^{98} + \cdots - 3u + 5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{99} + 19y^{98} + \cdots - 55556666826y - 6402720289$
c_2, c_3, c_7 c_8	$y^{99} - 113y^{98} + \cdots + 954y - 49$
c_4	$y^{99} + 4y^{98} + \cdots + 11450y - 625$
c_5, c_9	$y^{99} + 64y^{98} + \cdots + 1987766y - 52441$
c_6, c_{11}	$y^{99} + 63y^{98} + \cdots - 1595y - 49$
c_{10}	$y^{99} - 25y^{98} + \cdots + 92281126y - 1852321$
c_{12}	$y^{99} - 5y^{98} + \cdots - 591y - 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.763291+0.609745I$ $a=-0.310082-0.171201I$ $b=-0.749409+0.925641I$	$0.86700+4.61216I$	0
$u=-0.763291-0.609745I$ $a=-0.310082+0.171201I$ $b=-0.749409-0.925641I$	$0.86700-4.61216I$	0
$u=\ \ 0.691941+0.585463I$ $a=\ \ 1.024370-0.210352I$ $b=\ \ 1.40382+1.37236I$	$0.9782-14.1492I$	0
$u=\ \ 0.691941-0.585463I$ $a=\ \ 1.024370+0.210352I$ $b=\ \ 1.40382-1.37236I$	$0.9782+14.1492I$	0
$u=\ \ 0.798193+0.428389I$ $a=-0.247703-0.269691I$ $b=-0.613093-0.868425I$	$-0.09955-3.40884I$	0
$u=\ \ 0.798193-0.428389I$ $a=-0.247703+0.269691I$ $b=-0.613093+0.868425I$	$-0.09955+3.40884I$	0
$u=\ \ 0.437870+0.789230I$ $a=\ \ 0.101251+0.317677I$ $b=-0.503643-0.222196I$	$3.61622-2.57236I$	0
$u=\ \ 0.437870-0.789230I$ $a=\ \ 0.101251-0.317677I$ $b=-0.503643+0.222196I$	$3.61622+2.57236I$	0
$u=\ \ 0.848923+0.087013I$ $a=-0.592659-0.955005I$ $b=-0.231461+0.462338I$	$-5.69841+1.85582I$	0
$u=\ \ 0.848923-0.087013I$ $a=-0.592659+0.955005I$ $b=-0.231461-0.462338I$	$-5.69841-1.85582I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.649236+0.536213I$ $a=\ \ 1.146540+0.196143I$ $b=\ \ 1.61665-1.19536I$	$-2.81830+7.75472I$	0
$u=-0.649236-0.536213I$ $a=\ \ 1.146540-0.196143I$ $b=\ \ 1.61665+1.19536I$	$-2.81830-7.75472I$	0
$u=-1.142900+0.201687I$ $a=-0.506272+0.893053I$ $b=\ \ 0.1036290+0.0001587I$	$-2.15673-6.65249I$	0
$u=-1.142900-0.201687I$ $a=-0.506272-0.893053I$ $b=\ \ 0.1036290-0.0001587I$	$-2.15673+6.65249I$	0
$u=-0.609435+0.533021I$ $a=-1.47973+0.57722I$ $b=-0.114393+1.380160I$	$4.41559+7.48924I$	0
$u=-0.609435-0.533021I$ $a=-1.47973-0.57722I$ $b=-0.114393-1.380160I$	$4.41559-7.48924I$	0
$u=\ \ 0.676022+0.428807I$ $a=-1.39804+0.28148I$ $b=-1.24437-1.50203I$	$-1.43426-5.86382I$	0
$u=\ \ 0.676022-0.428807I$ $a=-1.39804-0.28148I$ $b=-1.24437+1.50203I$	$-1.43426+5.86382I$	0
$u=-0.728898+0.301402I$ $a=\ \ 0.463149-1.182220I$ $b=-0.714291-0.035123I$	$-2.26210-0.32498I$	0
$u=-0.728898-0.301402I$ $a=\ \ 0.463149+1.182220I$ $b=-0.714291+0.035123I$	$-2.26210+0.32498I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.502985 + 0.582942I$ $a = 0.746369 - 0.416319I$ $b = 0.767382 + 0.220139I$	$3.96912 - 1.96998I$	0
$u = 0.502985 - 0.582942I$ $a = 0.746369 + 0.416319I$ $b = 0.767382 - 0.220139I$	$3.96912 + 1.96998I$	0
$u = 0.488561 + 0.594766I$ $a = 0.188342 - 0.610285I$ $b = 0.679847 - 0.474605I$	$4.01500 - 2.06533I$	0
$u = 0.488561 - 0.594766I$ $a = 0.188342 + 0.610285I$ $b = 0.679847 + 0.474605I$	$4.01500 + 2.06533I$	0
$u = 0.620258 + 0.414743I$ $a = -0.983477 - 0.837263I$ $b = -0.367877 - 1.128180I$	$0.15736 - 3.84244I$	$0. + 7.19805I$
$u = 0.620258 - 0.414743I$ $a = -0.983477 + 0.837263I$ $b = -0.367877 + 1.128180I$	$0.15736 + 3.84244I$	$0. - 7.19805I$
$u = 0.250868 + 0.687008I$ $a = -1.180340 - 0.709707I$ $b = 0.716050 - 0.942890I$	$2.28768 + 9.87518I$	$-2.00000 - 5.33704I$
$u = 0.250868 - 0.687008I$ $a = -1.180340 + 0.709707I$ $b = 0.716050 + 0.942890I$	$2.28768 - 9.87518I$	$-2.00000 + 5.33704I$
$u = -0.114104 + 0.710742I$ $a = 1.021980 + 0.034819I$ $b = -0.272551 - 0.242795I$	$2.77279 - 0.19088I$	$4.76195 - 1.33883I$
$u = -0.114104 - 0.710742I$ $a = 1.021980 - 0.034819I$ $b = -0.272551 + 0.242795I$	$2.77279 + 0.19088I$	$4.76195 + 1.33883I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.574003+0.422917I$ $a=-0.98239-1.03631I$ $b=-1.56531+0.74752I$	$-2.25497+2.06352I$	$-5.88569-4.07985I$
$u=-0.574003-0.422917I$ $a=-0.98239+1.03631I$ $b=-1.56531-0.74752I$	$-2.25497-2.06352I$	$-5.88569+4.07985I$
$u=-0.551944+0.442603I$ $a=\quad 0.142792-0.247167I$ $b=\quad 0.69382-1.76142I$	$1.87885+5.04729I$	$0.-8.53052I$
$u=-0.551944-0.442603I$ $a=\quad 0.142792+0.247167I$ $b=\quad 0.69382+1.76142I$	$1.87885-5.04729I$	$0.+8.53052I$
$u=-1.297430+0.245162I$ $a=-0.724683-0.405345I$ $b=-0.553294+0.342994I$	$-1.84376+6.35965I$	0
$u=-1.297430-0.245162I$ $a=-0.724683+0.405345I$ $b=-0.553294-0.342994I$	$-1.84376-6.35965I$	0
$u=-0.330304+0.573316I$ $a=\quad 0.761223+0.313103I$ $b=\quad 0.33905-1.40088I$	$5.23430-3.68890I$	$2.98854+1.79364I$
$u=-0.330304-0.573316I$ $a=\quad 0.761223-0.313103I$ $b=\quad 0.33905+1.40088I$	$5.23430+3.68890I$	$2.98854-1.79364I$
$u=-0.270684+0.587647I$ $a=-1.15217+1.17890I$ $b=\quad 0.638102+0.968916I$	$-1.71656-3.90788I$	$-3.38936+3.68440I$
$u=-0.270684-0.587647I$ $a=-1.15217-1.17890I$ $b=\quad 0.638102-0.968916I$	$-1.71656+3.90788I$	$-3.38936-3.68440I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.521611 + 0.357512I$ $a = 0.69052 + 1.77803I$ $b = -1.005600 - 0.390867I$	$-2.87449 - 1.28088I$	$-2.04294 + 6.38847I$
$u = 0.521611 - 0.357512I$ $a = 0.69052 - 1.77803I$ $b = -1.005600 + 0.390867I$	$-2.87449 + 1.28088I$	$-2.04294 - 6.38847I$
$u = -0.569395 + 0.213633I$ $a = 0.815353 - 0.538900I$ $b = -0.037666 - 0.231193I$	$-1.071210 + 0.471534I$	$-7.90805 - 1.67970I$
$u = -0.569395 - 0.213633I$ $a = 0.815353 + 0.538900I$ $b = -0.037666 + 0.231193I$	$-1.071210 - 0.471534I$	$-7.90805 + 1.67970I$
$u = -0.419265 + 0.424814I$ $a = -2.13162 + 1.24115I$ $b = -0.358198 + 0.662173I$	$2.28522 - 1.94327I$	$3.21298 - 1.03946I$
$u = -0.419265 - 0.424814I$ $a = -2.13162 - 1.24115I$ $b = -0.358198 - 0.662173I$	$2.28522 + 1.94327I$	$3.21298 + 1.03946I$
$u = 0.517050 + 0.296886I$ $a = 0.934378 + 0.341756I$ $b = 1.56636 + 1.33611I$	$0.87417 + 1.73334I$	$-4.33449 + 2.25502I$
$u = 0.517050 - 0.296886I$ $a = 0.934378 - 0.341756I$ $b = 1.56636 - 1.33611I$	$0.87417 - 1.73334I$	$-4.33449 - 2.25502I$
$u = 1.42400 + 0.08728I$ $a = 1.61066 + 0.70366I$ $b = 0.96811 + 1.12630I$	$-0.26486 + 1.46630I$	0
$u = 1.42400 - 0.08728I$ $a = 1.61066 - 0.70366I$ $b = 0.96811 - 1.12630I$	$-0.26486 - 1.46630I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.44232 + 0.02930I$ $a = -1.03789 - 1.40791I$ $b = -0.879871 - 0.773001I$	$-6.73733 + 2.03033I$	0
$u = 1.44232 - 0.02930I$ $a = -1.03789 + 1.40791I$ $b = -0.879871 + 0.773001I$	$-6.73733 - 2.03033I$	0
$u = -0.303479 + 0.431708I$ $a = 0.86305 - 1.28776I$ $b = -0.986240 - 0.387244I$	$-1.52675 + 0.96711I$	$-4.03573 - 4.34958I$
$u = -0.303479 - 0.431708I$ $a = 0.86305 + 1.28776I$ $b = -0.986240 + 0.387244I$	$-1.52675 - 0.96711I$	$-4.03573 + 4.34958I$
$u = -1.48799$ $a = 2.09639$ $b = 1.68145$	-4.04626	0
$u = 0.494977 + 0.033800I$ $a = 1.76169 - 1.98879I$ $b = 0.439062 - 0.955413I$	$0.87319 - 3.26894I$	$-5.13325 + 7.07926I$
$u = 0.494977 - 0.033800I$ $a = 1.76169 + 1.98879I$ $b = 0.439062 + 0.955413I$	$0.87319 + 3.26894I$	$-5.13325 - 7.07926I$
$u = 0.220361 + 0.439245I$ $a = 0.959569 - 0.061026I$ $b = 0.380950 + 0.742407I$	$1.31423 + 0.82561I$	$3.50137 - 0.32849I$
$u = 0.220361 - 0.439245I$ $a = 0.959569 + 0.061026I$ $b = 0.380950 - 0.742407I$	$1.31423 - 0.82561I$	$3.50137 + 0.32849I$
$u = -1.51425 + 0.17065I$ $a = 0.527100 + 1.191720I$ $b = 0.597586 + 0.935450I$	$-2.57936 + 4.78942I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.51425-0.17065I$ $a=\ 0.527100-1.191720I$ $b=\ 0.597586-0.935450I$	$-2.57936-4.78942I$	0
$u=\ 0.101860+0.460295I$ $a=\ 1.84322-0.11187I$ $b=-0.595286+0.892959I$	$0.12875+2.77820I$	$-1.87617-4.60612I$
$u=\ 0.101860-0.460295I$ $a=\ 1.84322+0.11187I$ $b=-0.595286-0.892959I$	$0.12875-2.77820I$	$-1.87617+4.60612I$
$u=\ 1.52610+0.09330I$ $a=-1.80851-0.49814I$ $b=-1.356600+0.129572I$	$-4.27161+0.25928I$	0
$u=\ 1.52610-0.09330I$ $a=-1.80851+0.49814I$ $b=-1.356600-0.129572I$	$-4.27161-0.25928I$	0
$u=-1.52712+0.15738I$ $a=\ 1.48245+0.37484I$ $b=\ 1.130290+0.082284I$	$-2.74425+4.58226I$	0
$u=-1.52712-0.15738I$ $a=\ 1.48245-0.37484I$ $b=\ 1.130290-0.082284I$	$-2.74425-4.58226I$	0
$u=-1.55819+0.03781I$ $a=\ 1.51013-1.40745I$ $b=\ 0.796484-1.079400I$	$-6.20517-2.93963I$	0
$u=-1.55819-0.03781I$ $a=\ 1.51013+1.40745I$ $b=\ 0.796484+1.079400I$	$-6.20517+2.93963I$	0
$u=-1.55895+0.08512I$ $a=\ 2.84299-1.47477I$ $b=\ 2.79322-2.03600I$	$-6.23677-0.35234I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.55895-0.08512I$ $a=\ \ 2.84299+1.47477I$ $b=\ \ 2.79322+2.03600I$	$-6.23677+0.35234I$	0
$u=-1.56027+0.09761I$ $a=-0.825260-0.038446I$ $b=-1.04023+1.11745I$	$-9.98972+2.89332I$	0
$u=-1.56027-0.09761I$ $a=-0.825260+0.038446I$ $b=-1.04023-1.11745I$	$-9.98972-2.89332I$	0
$u=\ \ 1.55972+0.12130I$ $a=\ \ 1.70559+2.08880I$ $b=\ \ 1.57167+2.85062I$	$-5.26165-7.05580I$	0
$u=\ \ 1.55972-0.12130I$ $a=\ \ 1.70559-2.08880I$ $b=\ \ 1.57167-2.85062I$	$-5.26165+7.05580I$	0
$u=\ \ 1.56570+0.07807I$ $a=\ \ 0.749210+0.562591I$ $b=\ \ 0.286823+0.284697I$	$-8.34824-1.63671I$	0
$u=\ \ 1.56570-0.07807I$ $a=\ \ 0.749210-0.562591I$ $b=\ \ 0.286823-0.284697I$	$-8.34824+1.63671I$	0
$u=\ \ 1.56598+0.11409I$ $a=-2.55571-0.12395I$ $b=-2.26156-1.03244I$	$-9.50202-3.97617I$	0
$u=\ \ 1.56598-0.11409I$ $a=-2.55571+0.12395I$ $b=-2.26156+1.03244I$	$-9.50202+3.97617I$	0
$u=\ \ 1.57047+0.15448I$ $a=-1.42059-1.23113I$ $b=-0.545692-1.202280I$	$-2.90241-9.99401I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.57047 - 0.15448I$ $a = -1.42059 + 1.23113I$ $b = -0.545692 + 1.202280I$	$-2.90241 + 9.99401I$	0
$u = -1.57507 + 0.11656I$ $a = -1.61810 + 1.13603I$ $b = -1.18957 + 1.06359I$	$-7.26990 + 5.77422I$	0
$u = -1.57507 - 0.11656I$ $a = -1.61810 - 1.13603I$ $b = -1.18957 - 1.06359I$	$-7.26990 - 5.77422I$	0
$u = 1.58482 + 0.15976I$ $a = 2.79031 + 0.46182I$ $b = 2.55704 + 1.24136I$	$-10.3375 - 10.3262I$	0
$u = 1.58482 - 0.15976I$ $a = 2.79031 - 0.46182I$ $b = 2.55704 - 1.24136I$	$-10.3375 + 10.3262I$	0
$u = -1.59587 + 0.12411I$ $a = -2.45389 + 1.03531I$ $b = -1.93276 + 1.84915I$	$-9.15520 + 7.91610I$	0
$u = -1.59587 - 0.12411I$ $a = -2.45389 - 1.03531I$ $b = -1.93276 - 1.84915I$	$-9.15520 - 7.91610I$	0
$u = 1.60647 + 0.08510I$ $a = -0.542163 + 0.210261I$ $b = -0.890760 - 0.619723I$	$-10.24050 - 1.11922I$	0
$u = 1.60647 - 0.08510I$ $a = -0.542163 - 0.210261I$ $b = -0.890760 + 0.619723I$	$-10.24050 + 1.11922I$	0
$u = -1.60022 + 0.17865I$ $a = 2.45649 - 0.73425I$ $b = 2.13417 - 1.63116I$	$-6.7302 + 17.0060I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.60022-0.17865I$ $a=\ \ 2.45649+0.73425I$ $b=\ \ 2.13417+1.63116I$	$-6.7302-17.0060I$	0
$u=-1.62129+0.02269I$ $a=-0.422405-0.828882I$ $b=-0.28613-1.67040I$	$-14.1221-1.4415I$	0
$u=-1.62129-0.02269I$ $a=-0.422405+0.828882I$ $b=-0.28613+1.67040I$	$-14.1221+1.4415I$	0
$u=\ \ 1.61475+0.19360I$ $a=-1.46104-0.59865I$ $b=-1.35349-1.38366I$	$-7.10456-7.68717I$	0
$u=\ \ 1.61475-0.19360I$ $a=-1.46104+0.59865I$ $b=-1.35349+1.38366I$	$-7.10456+7.68717I$	0
$u=-1.62392+0.13743I$ $a=-1.56203+0.90007I$ $b=-1.47911+1.38232I$	$-8.31409+5.62806I$	0
$u=-1.62392-0.13743I$ $a=-1.56203-0.90007I$ $b=-1.47911-1.38232I$	$-8.31409-5.62806I$	0
$u=\ \ 1.67170+0.00590I$ $a=-0.075885-0.586017I$ $b=\ \ 0.107620-1.333890I$	$-11.85680-6.44606I$	0
$u=\ \ 1.67170-0.00590I$ $a=-0.075885+0.586017I$ $b=\ \ 0.107620+1.333890I$	$-11.85680+6.44606I$	0

II.

$\boldsymbol{I_2^u = \langle -u^{14}+u^{13}+\cdots+b+1,\ -2u^{14}+u^{13}+\cdots+a+1,\ u^{16}-10u^{14}+\cdots-2u+1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

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

$$a_{11} = \begin{pmatrix} 2u^{14}-u^{13}+\cdots+8u-1 \\ u^{14}-u^{13}+\cdots+4u-1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{15}+9u^{13}+\cdots-3u-1 \\ u^{12}-7u^{10}+17u^8+u^7-16u^6-5u^5+5u^4+7u^3-2u^2-3u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^6+3u^4-2u^2+1 \\ -u^8+4u^6-4u^4 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u^{14}-u^{13}+\cdots+10u^2+6u \\ -u^{13}+7u^{11}-17u^9-2u^8+16u^7+9u^6-5u^5-11u^4+u^3+2u^2+2u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^{15}+u^{14}+\cdots+2u+1 \\ u^{15}+u^{14}+\cdots-2u+1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 2u^{14}-u^{13}+\cdots+6u-1 \\ u^{14}-u^{13}+\cdots+4u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^{15}-3u^{13}-u^{12}-18u^{11}+7u^{10}+94u^9-11u^8-143u^7-19u^6+84u^5+58u^4-38u^3-33u^2+11u-1$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{16}+4u^{15}+\cdots-2u+1$
c_2, c_3	$u^{16}-10u^{14}+\cdots-2u+1$
c_4	$u^{16}+u^{15}+\cdots+2u^3+1$
c_5	$u^{16}+u^{15}+\cdots+8u^2+1$
c_6	$u^{16}+8u^{14}+\cdots-u+1$
c_7, c_8	$u^{16}-10u^{14}+\cdots+2u+1$
c_9	$u^{16}-u^{15}+\cdots+8u^2+1$
c_{10}	$u^{16}-4u^{14}+\cdots+8u+1$
c_{11}	$u^{16}+8u^{14}+\cdots+u+1$
c_{12}	$u^{16}-2u^{13}-2u^{12}+u^{11}+u^9+3u^8-2u^7+u^6+u^5-u^4+u^3-u^2-u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{16}+4y^{15}+\cdots+12y+1$
c_2, c_3, c_7 c_8	$y^{16}-20y^{15}+\cdots-12y+1$
c_4	$y^{16}-3y^{15}+\cdots-4y^2+1$
c_5, c_9	$y^{16}+13y^{15}+\cdots+16y+1$
c_6, c_{11}	$y^{16}+16y^{15}+\cdots+13y+1$
c_{10}	$y^{16}-8y^{15}+\cdots-8y+1$
c_{12}	$y^{16}-4y^{14}+\cdots-3y+1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.749888 + 0.412737I$ $a = -0.482981 - 0.157116I$ $b = -0.57933 - 1.35783I$	$-0.31642 - 4.80216I$	$-4.28190 + 8.53963I$
$u = 0.749888 - 0.412737I$ $a = -0.482981 + 0.157116I$ $b = -0.57933 + 1.35783I$	$-0.31642 + 4.80216I$	$-4.28190 - 8.53963I$
$u = -0.441315 + 0.700895I$ $a = 0.028510 - 0.642080I$ $b = -0.644596 - 0.091812I$	$3.29668 + 2.36445I$	$-7.72275 - 1.32048I$
$u = -0.441315 - 0.700895I$ $a = 0.028510 + 0.642080I$ $b = -0.644596 + 0.091812I$	$3.29668 - 2.36445I$	$-7.72275 + 1.32048I$
$u = -0.569717 + 0.232049I$ $a = -0.10645 - 2.03638I$ $b = -1.200940 + 0.301920I$	$-3.44134 + 0.81986I$	$-12.20354 + 0.25953I$
$u = -0.569717 - 0.232049I$ $a = -0.10645 + 2.03638I$ $b = -1.200940 - 0.301920I$	$-3.44134 - 0.81986I$	$-12.20354 - 0.25953I$
$u = 1.48473 + 0.16212I$ $a = -0.320775 + 1.110710I$ $b = -0.230819 + 0.697084I$	$-2.82368 - 5.27538I$	$-7.16301 + 8.89431I$
$u = 1.48473 - 0.16212I$ $a = -0.320775 - 1.110710I$ $b = -0.230819 - 0.697084I$	$-2.82368 + 5.27538I$	$-7.16301 - 8.89431I$
$u = -1.52213 + 0.04939I$ $a = 2.32971 - 1.33467I$ $b = 1.97084 - 0.94365I$	$-5.10540 - 1.62333I$	$-2.28629 + 4.04054I$
$u = -1.52213 - 0.04939I$ $a = 2.32971 + 1.33467I$ $b = 1.97084 + 0.94365I$	$-5.10540 + 1.62333I$	$-2.28629 - 4.04054I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.58491 + 0.07036I$ $a = -1.102130 + 0.179111I$ $b = -1.25975 - 0.84936I$	$-10.91500 - 1.94360I$	$-11.86525 + 1.00527I$
$u = 1.58491 - 0.07036I$ $a = -1.102130 - 0.179111I$ $b = -1.25975 + 0.84936I$	$-10.91500 + 1.94360I$	$-11.86525 - 1.00527I$
$u = 0.324777 + 0.221310I$ $a = 2.90404 + 1.73077I$ $b = 0.936104 + 0.903034I$	$1.32598 + 2.48939I$	$-0.39288 - 3.29934I$
$u = 0.324777 - 0.221310I$ $a = 2.90404 - 1.73077I$ $b = 0.936104 - 0.903034I$	$1.32598 - 2.48939I$	$-0.39288 + 3.29934I$
$u = -1.61115 + 0.13456I$ $a = -1.74992 + 1.16607I$ $b = -1.49151 + 1.86069I$	$-8.33978 + 6.95567I$	$-6.08440 - 5.77311I$
$u = -1.61115 - 0.13456I$ $a = -1.74992 - 1.16607I$ $b = -1.49151 - 1.86069I$	$-8.33978 - 6.95567I$	$-6.08440 + 5.77311I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{16}+4u^{15}+\cdots-2u+1)(u^{99}-23u^{98}+\cdots+738442u-80017)$
c_2, c_3	$(u^{16}-10u^{14}+\cdots-2u+1)(u^{99}+u^{98}+\cdots-18u+7)$
c_4	$(u^{16}+u^{15}+\cdots+2u^3+1)(u^{99}+2u^{97}+\cdots+270u+25)$
c_5	$(u^{16}+u^{15}+\cdots+8u^2+1)(u^{99}+2u^{98}+\cdots+1662u+229)$
c_6	$(u^{16}+8u^{14}+\cdots-u+1)(u^{99}+u^{98}+\cdots-u+7)$
c_7, c_8	$(u^{16}-10u^{14}+\cdots+2u+1)(u^{99}+u^{98}+\cdots-18u+7)$
c_9	$(u^{16}-u^{15}+\cdots+8u^2+1)(u^{99}+2u^{98}+\cdots+1662u+229)$
c_{10}	$(u^{16}-4u^{14}+\cdots+8u+1)(u^{99}+13u^{98}+\cdots-4180u-1361)$
c_{11}	$(u^{16}+8u^{14}+\cdots+u+1)(u^{99}+u^{98}+\cdots-u+7)$
c_{12}	$(u^{16}-2u^{13}-2u^{12}+u^{11}+u^9+3u^8-2u^7+u^6+u^5-u^4+u^3-u^2-u+1)$ $\cdot(u^{99}-5u^{98}+\cdots-3u+5)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{16}+4y^{15}+\cdots+12y+1)$ $\cdot(y^{99}+19y^{98}+\cdots-55556666826y-6402720289)$
c_2, c_3, c_7 c_8	$(y^{16}-20y^{15}+\cdots-12y+1)(y^{99}-113y^{98}+\cdots+954y-49)$
c_4	$(y^{16}-3y^{15}+\cdots-4y^2+1)(y^{99}+4y^{98}+\cdots+11450y-625)$
c_5, c_9	$(y^{16}+13y^{15}+\cdots+16y+1)(y^{99}+64y^{98}+\cdots+1987766y-52441)$
c_6, c_{11}	$(y^{16}+16y^{15}+\cdots+13y+1)(y^{99}+63y^{98}+\cdots-1595y-49)$
c_{10}	$(y^{16}-8y^{15}+\cdots-8y+1)$ $\cdot(y^{99}-25y^{98}+\cdots+92281126y-1852321)$
c_{12}	$(y^{16}-4y^{14}+\cdots-3y+1)(y^{99}-5y^{98}+\cdots-591y-25)$