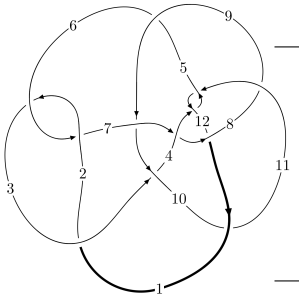
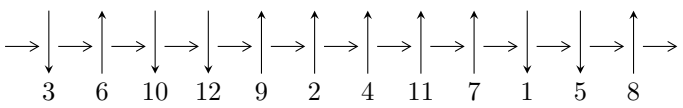
$12a_{0457}$ $(K12a_{0457})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.58709 \times 10^{561} u^{181} + 9.87432 \times 10^{561} u^{180} + \cdots + 5.35199 \times 10^{561} b - 9.54773 \times 10^{562}, \\ & - 1.66259 \times 10^{562} u^{181} - 2.79221 \times 10^{562} u^{180} + \cdots + 5.88719 \times 10^{562} a + 3.00657 \times 10^{563}, \\ & u^{182} - u^{181} + \cdots + 195u - 11 \rangle \\ I_2^u = \langle & -2.94627 \times 10^{21} u^{46} + 1.06794 \times 10^{22} u^{45} + \cdots + 2.90616 \times 10^{21} b - 2.06732 \times 10^{22}, \\ & - 4.24175 \times 10^{21} u^{46} + 1.09748 \times 10^{22} u^{45} + \cdots + 2.90616 \times 10^{21} a - 1.94328 \times 10^{22}, \\ & u^{47} + 13u^{45} + \cdots + 3u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 229 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. $\boldsymbol{I_1^u = \langle 1.59 \times 10^{561} u^{181} + 9.87 \times 10^{561} u^{180} + \cdots + 5.35 \times 10^{561} b - 9.55 \times 10^{562},\ -1.66 \times 10^{562} u^{181} - 2.79 \times 10^{562} u^{180} + \cdots + 5.89 \times 10^{562} a + 3.01 \times 10^{563},\ u^{182} - u^{181} + \cdots + 195u - 11 \rangle}$

(i) Arc colorings

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

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

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

$$a_{10} = \begin{pmatrix} 0.282408u^{181} + 0.474286u^{180} + \cdots - 7.81834u - 5.10697 \\ -0.296542u^{181} - 1.84498u^{180} + \cdots - 292.837u + 17.8396 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.426730u^{181} + 2.54621u^{180} + \cdots + 524.087u - 35.8491 \\ -0.183215u^{181} + 2.67594u^{180} + \cdots + 433.789u - 26.9732 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} 0.0954184u^{181} + 0.737891u^{180} + \cdots + 78.8011u - 1.90680 \\ -0.580714u^{181} - 0.712417u^{180} + \cdots - 101.183u + 7.71908 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 3.53650u^{181} - 3.37660u^{180} + \cdots - 747.932u + 37.4265 \\ 3.15967u^{181} - 5.38431u^{180} + \cdots - 1000.45u + 57.9589 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 2.86232u^{181} - 2.41148u^{180} + \cdots - 566.602u + 26.7734 \\ 2.28337u^{181} - 4.73075u^{180} + \cdots - 851.621u + 49.7200 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.133531u^{181} - 1.04533u^{180} + \cdots - 355.789u + 27.2831 \\ 1.09284u^{181} - 1.93033u^{180} + \cdots - 444.725u + 26.6777 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.727233u^{181} - 1.06159u^{180} + \cdots - 360.131u + 18.9256 \\ 0.934569u^{181} - 1.03798u^{180} + \cdots - 139.137u + 7.79370 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.66160u^{181} - 0.329436u^{180} + \cdots + 113.796u - 4.78638$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{182} + 77u^{181} + \cdots + 8263u + 121$
c_2, c_6	$u^{182} - u^{181} + \cdots + 195u - 11$
c_3	$u^{182} + 2u^{181} + \cdots - 5309082u - 451273$
c_4, c_{11}	$u^{182} + 2u^{181} + \cdots + 19u - 1$
c_5	$u^{182} + 2u^{181} + \cdots - 38159038193725u - 9874199002121$
c_7	$u^{182} - 3u^{181} + \cdots - 16973493258u + 2170070627$
c_8	$u^{182} - 13u^{181} + \cdots - 32599410u + 3488929$
c_9	$u^{182} - 8u^{181} + \cdots + 120499307u - 33795031$
c_{10}	$u^{182} - 16u^{181} + \cdots + 87245097403u - 3309477077$
c_{12}	$u^{182} + u^{181} + \cdots + 38826485u + 8693093$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{182} + 69y^{181} + \cdots + 304853435y + 14641$
c_2, c_6	$y^{182} + 77y^{181} + \cdots + 8263y + 121$
c_3	$y^{182} + 44y^{181} + \cdots - 374808253700y + 203647320529$
c_4, c_{11}	$y^{182} + 126y^{181} + \cdots - 113y + 1$
c_5	$y^{182} - 100y^{181} + \cdots - 6.27 \times 10^{27}y + 9.75 \times 10^{25}$
c_7	$y^{182} - 83y^{181} + \cdots + 7.07 \times 10^{20}y + 4.71 \times 10^{18}$
c_8	$y^{182} - 65y^{181} + \cdots + 5327570686683198y + 12172625567041$
c_9	$y^{182} - 60y^{181} + \cdots - 84230223266656641y + 1142104120290961$
c_{10}	$y^{182} + 70y^{181} + \cdots - 5.83 \times 10^{20}y + 1.10 \times 10^{19}$
c_{12}	$y^{182} - 57y^{181} + \cdots - 3145101509628851y + 75569865906649$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.631933 + 0.776970I$ $a = -1.65261 - 1.75545I$ $b = -1.74171 + 0.24098I$	$6.97272 - 0.23557I$	0
$u = \quad 0.631933 - 0.776970I$ $a = -1.65261 + 1.75545I$ $b = -1.74171 - 0.24098I$	$6.97272 + 0.23557I$	0
$u = -0.632760 + 0.770322I$ $a = -0.11056 + 2.39938I$ $b = -0.34857 + 1.45255I$	$7.91436 + 5.68837I$	0
$u = -0.632760 - 0.770322I$ $a = -0.11056 - 2.39938I$ $b = -0.34857 - 1.45255I$	$7.91436 - 5.68837I$	0
$u = -0.505651 + 0.867835I$ $a = \quad 0.20529 - 2.28170I$ $b = \quad 1.57861 - 2.01284I$	$2.46270 - 5.69294I$	0
$u = -0.505651 - 0.867835I$ $a = \quad 0.20529 + 2.28170I$ $b = \quad 1.57861 + 2.01284I$	$2.46270 + 5.69294I$	0
$u = \quad 0.555676 + 0.856464I$ $a = -0.373690 + 0.189044I$ $b = -1.375140 - 0.038000I$	$0.73313 + 1.72700I$	0
$u = \quad 0.555676 - 0.856464I$ $a = -0.373690 - 0.189044I$ $b = -1.375140 + 0.038000I$	$0.73313 - 1.72700I$	0
$u = \quad 0.553470 + 0.860165I$ $a = -0.42398 - 1.46537I$ $b = -0.057580 - 0.315865I$	$0.72308 + 2.71161I$	0
$u = \quad 0.553470 - 0.860165I$ $a = -0.42398 + 1.46537I$ $b = -0.057580 + 0.315865I$	$0.72308 - 2.71161I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.632870+0.807341I$ $a=\ 1.37911-1.32103I$ $b=\ 1.48733+0.40353I$	$3.51581-0.69080I$	0
$u=-0.632870-0.807341I$ $a=\ 1.37911+1.32103I$ $b=\ 1.48733-0.40353I$	$3.51581+0.69080I$	0
$u=\ 0.634227+0.807382I$ $a=-0.75123+1.66878I$ $b=\ 1.83427+1.96031I$	$7.79532-4.87002I$	0
$u=\ 0.634227-0.807382I$ $a=-0.75123-1.66878I$ $b=\ 1.83427-1.96031I$	$7.79532+4.87002I$	0
$u=\ 0.243407+1.001150I$ $a=\ 0.530592-1.034200I$ $b=\ 1.145160-0.367665I$	$-1.57699-0.96008I$	0
$u=\ 0.243407-1.001150I$ $a=\ 0.530592+1.034200I$ $b=\ 1.145160+0.367665I$	$-1.57699+0.96008I$	0
$u=-0.916874+0.471952I$ $a=-0.002829+1.150230I$ $b=-0.754882+0.535498I$	$9.47112+2.17209I$	0
$u=-0.916874-0.471952I$ $a=-0.002829-1.150230I$ $b=-0.754882-0.535498I$	$9.47112-2.17209I$	0
$u=\ 0.892126+0.527577I$ $a=\ 0.659159+1.114030I$ $b=\ 1.63494+0.05175I$	$9.85070-2.32266I$	0
$u=\ 0.892126-0.527577I$ $a=\ 0.659159-1.114030I$ $b=\ 1.63494-0.05175I$	$9.85070+2.32266I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.663555+0.797112I$ $a=\ 1.33810-0.99347I$ $b=\ 2.29960-0.27379I$	$7.55519-0.30516I$	0
$u=-0.663555-0.797112I$ $a=\ 1.33810+0.99347I$ $b=\ 2.29960+0.27379I$	$7.55519+0.30516I$	0
$u=\ 0.650144+0.815932I$ $a=\ 0.30077+2.29042I$ $b=\ 0.63200+1.61924I$	$3.47733+0.38218I$	0
$u=\ 0.650144-0.815932I$ $a=\ 0.30077-2.29042I$ $b=\ 0.63200-1.61924I$	$3.47733-0.38218I$	0
$u=-0.874669+0.580375I$ $a=\ 0.92398-1.08793I$ $b=\ 1.371120+0.193415I$	$4.85248+3.78665I$	0
$u=-0.874669-0.580375I$ $a=\ 0.92398+1.08793I$ $b=\ 1.371120-0.193415I$	$4.85248-3.78665I$	0
$u=-0.458613+0.830611I$ $a=\ 1.86473-0.59837I$ $b=\ 1.59506+0.41043I$	$2.58944+1.69215I$	0
$u=-0.458613-0.830611I$ $a=\ 1.86473+0.59837I$ $b=\ 1.59506-0.41043I$	$2.58944-1.69215I$	0
$u=\ 0.933388+0.497942I$ $a=-0.58218-1.36147I$ $b=-1.320980+0.133542I$	$8.58940-4.72156I$	0
$u=\ 0.933388-0.497942I$ $a=-0.58218+1.36147I$ $b=-1.320980-0.133542I$	$8.58940+4.72156I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.924489+0.526819I$ $a=-0.810217+1.092250I$ $b=-1.51468-0.11098I$	$5.51807+8.96111I$	0
$u=-0.924489-0.526819I$ $a=-0.810217-1.092250I$ $b=-1.51468+0.11098I$	$5.51807-8.96111I$	0
$u=-0.912357+0.549512I$ $a=-0.065292-1.069180I$ $b=1.240240-0.453768I$	$8.94932+0.14223I$	0
$u=-0.912357-0.549512I$ $a=-0.065292+1.069180I$ $b=1.240240+0.453768I$	$8.94932-0.14223I$	0
$u=-0.465535+0.809704I$ $a=0.169775+0.018988I$ $b=-0.944350+1.000900I$	$2.10752+1.81777I$	0
$u=-0.465535-0.809704I$ $a=0.169775-0.018988I$ $b=-0.944350-1.000900I$	$2.10752-1.81777I$	0
$u=-0.626727+0.872915I$ $a=0.07240-1.54884I$ $b=1.76358-1.45067I$	$3.31560-4.24542I$	0
$u=-0.626727-0.872915I$ $a=0.07240+1.54884I$ $b=1.76358+1.45067I$	$3.31560+4.24542I$	0
$u=0.452245+0.805252I$ $a=0.517112+1.097860I$ $b=0.834423+0.856549I$	$-0.02246+1.79724I$	0
$u=0.452245-0.805252I$ $a=0.517112-1.097860I$ $b=0.834423-0.856549I$	$-0.02246-1.79724I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.220942+1.055330I$		
$a=$	$1.369150+0.012423I$	$1.95420-4.55320I$	0
$b=$	$0.549632-1.178900I$		
$u=$	$0.220942-1.055330I$		
$a=$	$1.369150-0.012423I$	$1.95420+4.55320I$	0
$b=$	$0.549632+1.178900I$		
$u=$	$0.637383+0.870473I$		
$a=$	$1.86831+0.16044I$	$3.31211+4.63591I$	0
$b=$	$2.33244-0.08278I$		
$u=$	$0.637383-0.870473I$		
$a=$	$1.86831-0.16044I$	$3.31211-4.63591I$	0
$b=$	$2.33244+0.08278I$		
$u=$	$0.937825+0.534651I$		
$a=$	$0.87212+1.15341I$	$10.2706-14.8755I$	0
$b=$	$1.55379-0.24257I$		
$u=$	$0.937825-0.534651I$		
$a=$	$0.87212-1.15341I$	$10.2706+14.8755I$	0
$b=$	$1.55379+0.24257I$		
$u=$	$-0.708071+0.815604I$		
$a=$	$-0.10069+1.94194I$	$8.20130-6.30272I$	0
$b=$	$-0.70412+1.32099I$		
$u=$	$-0.708071-0.815604I$		
$a=$	$-0.10069-1.94194I$	$8.20130+6.30272I$	0
$b=$	$-0.70412-1.32099I$		
$u=$	$0.441114+0.807249I$		
$a=$	$-0.19134-2.42815I$	$-0.022971+0.996096I$	0
$b=$	$-0.91796-1.43722I$		
$u=$	$0.441114-0.807249I$		
$a=$	$-0.19134+2.42815I$	$-0.022971-0.996096I$	0
$b=$	$-0.91796+1.43722I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.622855 + 0.886369I$ $a = 2.24095 + 1.13511I$ $b = 1.81291 - 1.50251I$	$7.55009 + 9.79273I$	0
$u = 0.622855 - 0.886369I$ $a = 2.24095 - 1.13511I$ $b = 1.81291 + 1.50251I$	$7.55009 - 9.79273I$	0
$u = -0.530823 + 0.745021I$ $a = 0.502174 + 0.555666I$ $b = -0.97541 + 1.32446I$	$1.95963 + 1.72495I$	0
$u = -0.530823 - 0.745021I$ $a = 0.502174 - 0.555666I$ $b = -0.97541 - 1.32446I$	$1.95963 - 1.72495I$	0
$u = -0.160219 + 0.897897I$ $a = -0.901106 - 0.170529I$ $b = 0.453433 + 0.217919I$	$1.35572 - 4.86438I$	0
$u = -0.160219 - 0.897897I$ $a = -0.901106 + 0.170529I$ $b = 0.453433 - 0.217919I$	$1.35572 + 4.86438I$	0
$u = -0.571472 + 0.927694I$ $a = -1.298200 + 0.399511I$ $b = -0.382575 - 0.835713I$	$1.36817 - 6.19695I$	0
$u = -0.571472 - 0.927694I$ $a = -1.298200 - 0.399511I$ $b = -0.382575 + 0.835713I$	$1.36817 + 6.19695I$	0
$u = 0.467156 + 0.986445I$ $a = -0.852742 - 0.656440I$ $b = -1.53925 - 0.07375I$	$-0.67167 + 2.67554I$	0
$u = 0.467156 - 0.986445I$ $a = -0.852742 + 0.656440I$ $b = -1.53925 + 0.07375I$	$-0.67167 - 2.67554I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.973048 + 0.519295I$ $a = 0.014391 + 0.866018I$ $b = 0.755408 + 0.484817I$	$5.32052 + 3.86352I$	0
$u = 0.973048 - 0.519295I$ $a = 0.014391 - 0.866018I$ $b = 0.755408 - 0.484817I$	$5.32052 - 3.86352I$	0
$u = 0.854993 + 0.697740I$ $a = -1.31960 - 0.90738I$ $b = -1.73895 + 0.52611I$	$8.01369 - 4.13820I$	0
$u = 0.854993 - 0.697740I$ $a = -1.31960 + 0.90738I$ $b = -1.73895 - 0.52611I$	$8.01369 + 4.13820I$	0
$u = 0.733957 + 0.824303I$ $a = 0.290309 - 1.384090I$ $b = -1.54739 - 1.37090I$	$7.38312 + 5.08653I$	0
$u = 0.733957 - 0.824303I$ $a = 0.290309 + 1.384090I$ $b = -1.54739 + 1.37090I$	$7.38312 - 5.08653I$	0
$u = -0.646203 + 0.895156I$ $a = 0.94098 - 2.16469I$ $b = 1.63609 - 0.98694I$	$7.25316 - 4.78011I$	0
$u = -0.646203 - 0.895156I$ $a = 0.94098 + 2.16469I$ $b = 1.63609 + 0.98694I$	$7.25316 + 4.78011I$	0
$u = 0.622702 + 0.911924I$ $a = -0.56426 - 1.60083I$ $b = -2.29930 - 1.39669I$	$6.55259 + 5.15491I$	0
$u = 0.622702 - 0.911924I$ $a = -0.56426 + 1.60083I$ $b = -2.29930 + 1.39669I$	$6.55259 - 5.15491I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.625395+0.915387I$ $a=-1.72882-0.21541I$ $b=-2.36328-0.43256I$	$7.46437-10.62170I$	0
$u=-0.625395-0.915387I$ $a=-1.72882+0.21541I$ $b=-2.36328+0.43256I$	$7.46437+10.62170I$	0
$u=0.086041+1.105460I$ $a=0.149188-0.169317I$ $b=-0.644765+0.259046I$	$-1.74919+2.67650I$	0
$u=0.086041-1.105460I$ $a=0.149188+0.169317I$ $b=-0.644765-0.259046I$	$-1.74919-2.67650I$	0
$u=0.146549+1.101730I$ $a=-0.094814+0.750696I$ $b=-0.701831+0.844087I$	$-1.22941+1.28711I$	0
$u=0.146549-1.101730I$ $a=-0.094814-0.750696I$ $b=-0.701831-0.844087I$	$-1.22941-1.28711I$	0
$u=0.728249+0.850972I$ $a=-1.19782-1.01054I$ $b=-1.45992+0.72846I$	$7.30499+0.45145I$	0
$u=0.728249-0.850972I$ $a=-1.19782+1.01054I$ $b=-1.45992-0.72846I$	$7.30499-0.45145I$	0
$u=-0.170408+1.111120I$ $a=-0.518963+0.268132I$ $b=0.232205-0.164738I$	$-5.42453-0.61915I$	0
$u=-0.170408-1.111120I$ $a=-0.518963-0.268132I$ $b=0.232205+0.164738I$	$-5.42453+0.61915I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.713965+0.869974I$ $a=-1.333890+0.188730I$ $b=-1.74912-0.20946I$	$8.04336+0.87793I$	0
$u=-0.713965-0.869974I$ $a=-1.333890-0.188730I$ $b=-1.74912+0.20946I$	$8.04336-0.87793I$	0
$u=-0.203912+0.850305I$ $a=\ \ 0.21411+1.85695I$ $b=-0.88888+1.25171I$	$-0.65134+1.63840I$	0
$u=-0.203912-0.850305I$ $a=\ \ 0.21411-1.85695I$ $b=-0.88888-1.25171I$	$-0.65134-1.63840I$	0
$u=-1.013160+0.496296I$ $a=\ \ 0.173474+0.797453I$ $b=-0.726329+0.525125I$	$9.87586-9.51235I$	0
$u=-1.013160-0.496296I$ $a=\ \ 0.173474-0.797453I$ $b=-0.726329-0.525125I$	$9.87586+9.51235I$	0
$u=-0.509438+1.010740I$ $a=-0.657047+0.822412I$ $b=-0.174623+0.531939I$	$1.34232-5.62268I$	0
$u=-0.509438-1.010740I$ $a=-0.657047-0.822412I$ $b=-0.174623-0.531939I$	$1.34232+5.62268I$	0
$u=\ \ 0.194485+1.115360I$ $a=\ \ 0.350100+0.186108I$ $b=-0.608444-0.027519I$	$-3.11951+4.78627I$	0
$u=\ \ 0.194485-1.115360I$ $a=\ \ 0.350100-0.186108I$ $b=-0.608444+0.027519I$	$-3.11951-4.78627I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.577569 + 0.986336I$ $a = -1.30379 - 2.11625I$ $b = -1.95283 - 1.76243I$	$0.52117 + 6.74313I$	0
$u = 0.577569 - 0.986336I$ $a = -1.30379 + 2.11625I$ $b = -1.95283 + 1.76243I$	$0.52117 - 6.74313I$	0
$u = 0.539310 + 1.017660I$ $a = 0.48284 + 1.45251I$ $b = 1.21063 + 1.31370I$	$-1.04203 + 1.94035I$	0
$u = 0.539310 - 1.017660I$ $a = 0.48284 - 1.45251I$ $b = 1.21063 - 1.31370I$	$-1.04203 - 1.94035I$	0
$u = -0.674362 + 0.513171I$ $a = 0.217297 - 1.068620I$ $b = 0.480136 + 0.394938I$	$4.23188 + 1.98085I$	0
$u = -0.674362 - 0.513171I$ $a = 0.217297 + 1.068620I$ $b = 0.480136 - 0.394938I$	$4.23188 - 1.98085I$	0
$u = 0.523596 + 0.665424I$ $a = -1.93350 - 1.53251I$ $b = -2.02164 - 0.92803I$	$1.55166 - 2.20765I$	0
$u = 0.523596 - 0.665424I$ $a = -1.93350 + 1.53251I$ $b = -2.02164 + 0.92803I$	$1.55166 + 2.20765I$	0
$u = -0.249633 + 1.135220I$ $a = 0.027284 + 0.876617I$ $b = 0.425806 + 1.195920I$	$-0.220552 - 1.380440I$	0
$u = -0.249633 - 1.135220I$ $a = 0.027284 - 0.876617I$ $b = 0.425806 - 1.195920I$	$-0.220552 + 1.380440I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.037010 + 0.528193I$ $a = -0.277213 - 0.530078I$ $b = -0.764643 + 0.016513I$	$3.34061 - 1.52937I$	0
$u = 1.037010 - 0.528193I$ $a = -0.277213 + 0.530078I$ $b = -0.764643 - 0.016513I$	$3.34061 + 1.52937I$	0
$u = 0.564420 + 1.019640I$ $a = 0.96255 + 2.32046I$ $b = 2.72476 + 1.11435I$	$4.08712 + 10.98160I$	0
$u = 0.564420 - 1.019640I$ $a = 0.96255 - 2.32046I$ $b = 2.72476 - 1.11435I$	$4.08712 - 10.98160I$	0
$u = 0.817225 + 0.131367I$ $a = 0.461699 - 0.183311I$ $b = -0.289638 - 0.615141I$	$2.67857 - 0.12645I$	0
$u = 0.817225 - 0.131367I$ $a = 0.461699 + 0.183311I$ $b = -0.289638 + 0.615141I$	$2.67857 + 0.12645I$	0
$u = -0.576283 + 1.037330I$ $a = -0.71881 + 1.62776I$ $b = -1.67056 + 1.09790I$	$-2.87088 - 6.14959I$	0
$u = -0.576283 - 1.037330I$ $a = -0.71881 - 1.62776I$ $b = -1.67056 - 1.09790I$	$-2.87088 + 6.14959I$	0
$u = -0.993083 + 0.654574I$ $a = 0.791409 - 0.430790I$ $b = 0.908179 + 0.513341I$	$5.05745 + 5.24853I$	0
$u = -0.993083 - 0.654574I$ $a = 0.791409 + 0.430790I$ $b = 0.908179 - 0.513341I$	$5.05745 - 5.24853I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.618399+1.017950I$ $a=\ 0.042351-0.951694I$ $b=\ 1.33266-0.96303I$	$2.84228-6.99204I$	0
$u=-0.618399-1.017950I$ $a=\ 0.042351+0.951694I$ $b=\ 1.33266+0.96303I$	$2.84228+6.99204I$	0
$u=-0.434782+1.111920I$ $a=-1.57044+1.24088I$ $b=-1.77955-0.25057I$	$-2.87850-3.79731I$	0
$u=-0.434782-1.111920I$ $a=-1.57044-1.24088I$ $b=-1.77955+0.25057I$	$-2.87850+3.79731I$	0
$u=\ 0.711411+0.365807I$ $a=\ 0.805096+0.334688I$ $b=\ 0.535882+0.327142I$	$3.58911-0.88670I$	0
$u=\ 0.711411-0.365807I$ $a=\ 0.805096-0.334688I$ $b=\ 0.535882-0.327142I$	$3.58911+0.88670I$	0
$u=-0.204114+1.185610I$ $a=-0.512736-0.326345I$ $b=-1.333950+0.328440I$	$-0.10040+3.87106I$	0
$u=-0.204114-1.185610I$ $a=-0.512736+0.326345I$ $b=-1.333950-0.328440I$	$-0.10040-3.87106I$	0
$u=\ 0.590716+1.063190I$ $a=\ 0.618335+1.154470I$ $b=\ 0.832829+1.044430I$	$1.68765+5.78923I$	0
$u=\ 0.590716-1.063190I$ $a=\ 0.618335-1.154470I$ $b=\ 0.832829-1.044430I$	$1.68765-5.78923I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.585565+1.067670I$ $a=\ \ 1.21297-1.62955I$ $b=\ \ 2.15101-1.53445I$	$2.50984-11.35040I$	0
$u=-0.585565-1.067670I$ $a=\ \ 1.21297+1.62955I$ $b=\ \ 2.15101+1.53445I$	$2.50984+11.35040I$	0
$u=-0.044565+1.229110I$ $a=\ \ 0.576218+0.302744I$ $b=\ \ 0.196655-0.332669I$	$3.23753-0.36287I$	0
$u=-0.044565-1.229110I$ $a=\ \ 0.576218-0.302744I$ $b=\ \ 0.196655+0.332669I$	$3.23753+0.36287I$	0
$u=\ \ 0.427223+1.161480I$ $a=-0.918195+0.185948I$ $b=-0.541547+0.722478I$	$-0.55666+4.50618I$	0
$u=\ \ 0.427223-1.161480I$ $a=-0.918195-0.185948I$ $b=-0.541547-0.722478I$	$-0.55666-4.50618I$	0
$u=-0.005505+0.751358I$ $a=-0.176930+1.261560I$ $b=-0.630785+0.994855I$	$-0.77236+1.52882I$	0
$u=-0.005505-0.751358I$ $a=-0.176930-1.261560I$ $b=-0.630785-0.994855I$	$-0.77236-1.52882I$	0
$u=\ \ 0.729845+1.023020I$ $a=-0.50569-1.91253I$ $b=-1.91801-1.54028I$	$6.99383+10.04510I$	0
$u=\ \ 0.729845-1.023020I$ $a=-0.50569+1.91253I$ $b=-1.91801+1.54028I$	$6.99383-10.04510I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.200601+0.714857I$		
$a=$	$0.021009+0.570723I$	$4.09160-1.35588I$	0
$b=$	$0.63334+1.54260I$		
$u=$	$0.200601-0.714857I$		
$a=$	$0.021009-0.570723I$	$4.09160+1.35588I$	0
$b=$	$0.63334-1.54260I$		
$u=$	$-0.654939+0.333048I$		
$a=$	$1.08324-1.90308I$	$4.44877+6.55534I$	0
$b=$	$0.945704-0.385788I$		
$u=$	$-0.654939-0.333048I$		
$a=$	$1.08324+1.90308I$	$4.44877-6.55534I$	0
$b=$	$0.945704+0.385788I$		
$u=$	$-0.709868+0.145215I$		
$a=$	$-1.023740-0.251496I$	$3.75874+1.68486I$	0
$b=$	$-0.110923+0.361589I$		
$u=$	$-0.709868-0.145215I$		
$a=$	$-1.023740+0.251496I$	$3.75874-1.68486I$	0
$b=$	$-0.110923-0.361589I$		
$u=$	$0.385403+0.610138I$		
$a=$	$0.56714+3.03938I$	$5.50665-6.62844I$	0
$b=$	$2.04152+0.51314I$		
$u=$	$0.385403-0.610138I$		
$a=$	$0.56714-3.03938I$	$5.50665+6.62844I$	0
$b=$	$2.04152-0.51314I$		
$u=$	$-0.695320+1.078710I$		
$a=$	$0.72521-1.55863I$	$3.32118-9.60903I$	0
$b=$	$1.92975-1.26630I$		
$u=$	$-0.695320-1.078710I$		
$a=$	$0.72521+1.55863I$	$3.32118+9.60903I$	0
$b=$	$1.92975+1.26630I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.056722 + 1.288920I$ $a = -0.349135 + 0.308909I$ $b = 0.185160 - 0.241916I$	$-1.41708 + 6.73353I$	0
$u = 0.056722 - 1.288920I$ $a = -0.349135 - 0.308909I$ $b = 0.185160 + 0.241916I$	$-1.41708 - 6.73353I$	0
$u = -0.167537 + 0.688669I$ $a = 1.69646 - 1.80585I$ $b = 0.82884 - 1.93265I$	$4.84605 + 6.84021I$	0
$u = -0.167537 - 0.688669I$ $a = 1.69646 + 1.80585I$ $b = 0.82884 + 1.93265I$	$4.84605 - 6.84021I$	0
$u = -0.069902 + 1.297340I$ $a = 0.289034 + 0.212919I$ $b = -0.348906 - 0.421935I$	$3.18249 - 12.63460I$	0
$u = -0.069902 - 1.297340I$ $a = 0.289034 - 0.212919I$ $b = -0.348906 + 0.421935I$	$3.18249 + 12.63460I$	0
$u = 0.686507 + 1.103850I$ $a = 0.99479 + 1.60122I$ $b = 2.05026 + 0.86912I$	$8.09406 + 8.15155I$	0
$u = 0.686507 - 1.103850I$ $a = 0.99479 - 1.60122I$ $b = 2.05026 - 0.86912I$	$8.09406 - 8.15155I$	0
$u = -0.702473 + 1.094520I$ $a = 0.935181 - 0.897488I$ $b = 1.69740 - 0.01509I$	$7.28269 - 6.07527I$	0
$u = -0.702473 - 1.094520I$ $a = 0.935181 + 0.897488I$ $b = 1.69740 + 0.01509I$	$7.28269 + 6.07527I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.571033+0.394466I$ $a=-0.506027+1.083950I$ $b=-1.059800+0.095444I$	$-1.19130+1.52333I$	0
$u=-0.571033-0.394466I$ $a=-0.506027-1.083950I$ $b=-1.059800-0.095444I$	$-1.19130-1.52333I$	0
$u=0.030053+1.314570I$ $a=0.144730-0.030201I$ $b=0.625785+0.764264I$	$1.89553-2.06321I$	0
$u=0.030053-1.314570I$ $a=0.144730+0.030201I$ $b=0.625785-0.764264I$	$1.89553+2.06321I$	0
$u=-0.698302+1.115550I$ $a=-0.88814+1.61031I$ $b=-2.04129+1.13634I$	$3.7128-14.9173I$	0
$u=-0.698302-1.115550I$ $a=-0.88814-1.61031I$ $b=-2.04129-1.13634I$	$3.7128+14.9173I$	0
$u=0.705862+1.118890I$ $a=0.85586+1.66872I$ $b=2.16568+1.24527I$	$8.4718+20.8976I$	0
$u=0.705862-1.118890I$ $a=0.85586-1.66872I$ $b=2.16568-1.24527I$	$8.4718-20.8976I$	0
$u=0.694165+1.129420I$ $a=-0.89641-1.35636I$ $b=-2.24140-0.99567I$	$6.66120+10.68300I$	0
$u=0.694165-1.129420I$ $a=-0.89641+1.35636I$ $b=-2.24140+0.99567I$	$6.66120-10.68300I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.680179+1.141450I$ $a=-0.938489+0.532856I$ $b=-1.54289+0.19451I$	$7.43358-8.04637I$	0
$u=-0.680179-1.141450I$ $a=-0.938489-0.532856I$ $b=-1.54289-0.19451I$	$7.43358+8.04637I$	0
$u=-0.763295+1.097840I$ $a=\ \ 0.192795-1.295980I$ $b=\ \ 1.22278-1.30196I$	$3.63109-11.64310I$	0
$u=-0.763295-1.097840I$ $a=\ \ 0.192795+1.295980I$ $b=\ \ 1.22278+1.30196I$	$3.63109+11.64310I$	0
$u=\ \ 0.742796+1.125820I$ $a=\ \ 0.668055+0.588349I$ $b=\ \ 1.176600+0.256881I$	$3.47793+2.36793I$	0
$u=\ \ 0.742796-1.125820I$ $a=\ \ 0.668055-0.588349I$ $b=\ \ 1.176600-0.256881I$	$3.47793-2.36793I$	0
$u=\ \ 0.738616+1.135540I$ $a=-0.428486-0.965150I$ $b=-1.189650-0.716519I$	$1.45987+7.89561I$	0
$u=\ \ 0.738616-1.135540I$ $a=-0.428486+0.965150I$ $b=-1.189650+0.716519I$	$1.45987-7.89561I$	0
$u=-0.618649$ $a=\ \ 0.728192$ $b=-1.47428$	0.108098	18.3330
$u=\ \ 0.562659+0.228411I$ $a=\ \ 0.945412+0.855370I$ $b=\ \ 0.586457-0.241341I$	$0.84694+2.23725I$	$2.54330-3.84278I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.562659 - 0.228411I$ $a = 0.945412 - 0.855370I$ $b = 0.586457 + 0.241341I$	$0.84694 - 2.23725I$	$2.54330 + 3.84278I$
$u = -0.770982 + 1.182260I$ $a = -0.594503 + 0.367484I$ $b = -1.020820 - 0.041310I$	$7.80521 + 3.05961I$	0
$u = -0.770982 - 1.182260I$ $a = -0.594503 - 0.367484I$ $b = -1.020820 + 0.041310I$	$7.80521 - 3.05961I$	0
$u = -0.141811 + 0.549699I$ $a = 0.34715 - 2.56347I$ $b = -0.0165403 - 0.1231980I$	$4.51012 + 1.72030I$	$0.49044 - 1.85993I$
$u = -0.141811 - 0.549699I$ $a = 0.34715 + 2.56347I$ $b = -0.0165403 + 0.1231980I$	$4.51012 - 1.72030I$	$0.49044 + 1.85993I$
$u = 0.374485 + 0.283341I$ $a = -0.88619 + 2.66947I$ $b = 1.46903 + 0.11597I$	$5.56765 - 6.66225I$	$5.36030 + 6.55661I$
$u = 0.374485 - 0.283341I$ $a = -0.88619 - 2.66947I$ $b = 1.46903 - 0.11597I$	$5.56765 + 6.66225I$	$5.36030 - 6.55661I$
$u = 0.14773 + 1.63388I$ $a = 0.0033641 - 0.0610754I$ $b = -0.0887299 + 0.1079550I$	$-4.47645 + 2.73175I$	0
$u = 0.14773 - 1.63388I$ $a = 0.0033641 + 0.0610754I$ $b = -0.0887299 - 0.1079550I$	$-4.47645 - 2.73175I$	0
$u = 0.336438$ $a = 2.28414$ $b = 0.0562635$	1.12439	10.6810

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.0623672 + 0.0747386I$		
$a = -5.34145 - 6.44249I$	$1.12920 - 2.58936I$	$0.42597 + 5.07188I$
$b = -0.345911 - 1.109320I$		
$u = \quad 0.0623672 - 0.0747386I$		
$a = -5.34145 + 6.44249I$	$1.12920 + 2.58936I$	$0.42597 - 5.07188I$
$b = -0.345911 + 1.109320I$		

II. $I_2^u = \langle -2.95 \times 10^{21} u^{46} + 1.07 \times 10^{22} u^{45} + \cdots + 2.91 \times 10^{21} b - 2.07 \times 10^{22},\ -4.24 \times 10^{21} u^{46} + 1.10 \times 10^{22} u^{45} + \cdots + 2.91 \times 10^{21} a - 1.94 \times 10^{22},\ u^{47} + 13u^{45} + \cdots + 3u - 1 \rangle$

(i) Arc colorings

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

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

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

$$a_{10} = \begin{pmatrix} 1.45958u^{46} - 3.77640u^{45} + \cdots - 30.9327u + 6.68676 \\ 1.01380u^{46} - 3.67476u^{45} + \cdots - 19.5665u + 7.11359 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.302165u^{46} + 2.44020u^{45} + \cdots + 5.29151u - 1.11671 \\ -2.63569u^{46} + 2.70010u^{45} + \cdots + 27.5084u - 7.35340 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -0.00106704u^{46} - 2.84660u^{45} + \cdots - 15.6523u + 12.7076 \\ -1.19251u^{46} - 3.16155u^{45} + \cdots - 14.3785u + 4.22262 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 1.78115u^{46} - 2.23666u^{45} + \cdots - 25.1525u + 3.86813 \\ 1.73175u^{46} - 4.56115u^{45} + \cdots - 25.3913u + 8.61756 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.42381u^{46} - 3.18579u^{45} + \cdots - 30.1820u + 6.58512 \\ 0.978037u^{46} - 3.08415u^{45} + \cdots - 18.8158u + 7.01195 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.670719u^{46} + 1.30568u^{45} + \cdots + 23.3545u - 3.63819 \\ -2.67977u^{46} - 0.323334u^{45} + \cdots + 6.41448u - 0.970342 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1.92077u^{46} + 1.32074u^{45} + \cdots - 3.40284u - 5.40605 \\ -2.30436u^{46} + 1.79297u^{45} + \cdots + 4.23125u + 0.0152093 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{1291091432688378590 4614}{2906155135733335807861}u^{46} + \frac{5272590445832937649905}{2906155135733335807861}u^{45} + \cdots - \frac{931765964213787239688 68}{2906155135733335807861}u + \frac{722096374716509667829 54}{2906155135733335807861}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{47} - 26u^{46} + \cdots - 23u + 1$
c_2	$u^{47} + 13u^{45} + \cdots + 3u - 1$
c_3	$u^{47} - u^{46} + \cdots - 4u + 1$
c_4	$u^{47} - u^{46} + \cdots + 3u + 1$
c_5	$u^{47} - 5u^{46} + \cdots + 15u + 1$
c_6	$u^{47} + 13u^{45} + \cdots + 3u + 1$
c_7	$u^{47} + 2u^{46} + \cdots + 2u - 11$
c_8	$u^{47} + 22u^{46} + \cdots + 22u + 1$
c_9	$u^{47} - 19u^{46} + \cdots + 21u - 1$
c_{10}	$u^{47} - 3u^{46} + \cdots + 3u - 11$
c_{11}	$u^{47} + u^{46} + \cdots + 3u - 1$
c_{12}	$u^{47} + 2u^{46} + \cdots + 11u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{47} + 2y^{46} + \cdots - 55y - 1$
c_2, c_6	$y^{47} + 26y^{46} + \cdots - 23y - 1$
c_3	$y^{47} + 9y^{46} + \cdots - 64y - 1$
c_4, c_{11}	$y^{47} + 27y^{46} + \cdots + y - 1$
c_5	$y^{47} - 23y^{46} + \cdots + 89y - 1$
c_7	$y^{47} - 14y^{46} + \cdots + 2732y - 121$
c_8	$y^{47} - 16y^{46} + \cdots + 30y - 1$
c_9	$y^{47} - 19y^{46} + \cdots + 41y - 1$
c_{10}	$y^{47} + 7y^{46} + \cdots - 2213y - 121$
c_{12}	$y^{47} - 12y^{46} + \cdots + 71y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.826824+0.613412I$ $a=\ 0.94513-1.25009I$ $b=\ 1.63266+0.19249I$	$7.44732+3.05544I$	$9.45632-0.91967I$
$u=-0.826824-0.613412I$ $a=\ 0.94513+1.25009I$ $b=\ 1.63266-0.19249I$	$7.44732-3.05544I$	$9.45632+0.91967I$
$u=\ 0.630113+0.820119I$ $a=\ 0.309894+0.822110I$ $b=\ 0.055617-0.522152I$	$6.92593+8.80337I$	$7.27214-6.50001I$
$u=\ 0.630113-0.820119I$ $a=\ 0.309894-0.822110I$ $b=\ 0.055617+0.522152I$	$6.92593-8.80337I$	$7.27214+6.50001I$
$u=-0.654943+0.824670I$ $a=\ 0.633349-1.190940I$ $b=\ 0.568342-0.358259I$	$2.34700-0.49920I$	$3.99270+0.27873I$
$u=-0.654943-0.824670I$ $a=\ 0.633349+1.190940I$ $b=\ 0.568342+0.358259I$	$2.34700+0.49920I$	$3.99270-0.27873I$
$u=-0.620546+0.851259I$ $a=\ 0.521983-0.670106I$ $b=\ 1.45599-0.91429I$	$2.29223-4.48551I$	$2.64807+6.17876I$
$u=-0.620546-0.851259I$ $a=\ 0.521983+0.670106I$ $b=\ 1.45599+0.91429I$	$2.29223+4.48551I$	$2.64807-6.17876I$
$u=\ 0.893904+0.602563I$ $a=-0.997201-0.915179I$ $b=-1.261730+0.280176I$	$5.94450-4.42000I$	$10.36704+3.81851I$
$u=\ 0.893904-0.602563I$ $a=-0.997201+0.915179I$ $b=-1.261730-0.280176I$	$5.94450+4.42000I$	$10.36704-3.81851I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.262540+1.045610I$ $a=\ 0.166980+1.086970I$ $b=\ 0.673564+1.111990I$	$-2.04368-0.95150I$	$-6.27689-0.95657I$
$u=-0.262540-1.045610I$ $a=\ 0.166980-1.086970I$ $b=\ 0.673564-1.111990I$	$-2.04368+0.95150I$	$-6.27689+0.95657I$
$u=\ 0.705464+0.840248I$ $a=-0.84390-1.63328I$ $b=-1.96716-0.60250I$	$7.67950+2.69845I$	$12.36475-3.04509I$
$u=\ 0.705464-0.840248I$ $a=-0.84390+1.63328I$ $b=-1.96716+0.60250I$	$7.67950-2.69845I$	$12.36475+3.04509I$
$u=\ 0.102300+1.109330I$ $a=\ 0.362174-0.441892I$ $b=\ 1.223880+0.172344I$	$-0.14442-3.27143I$	$2.00000+0.I$
$u=\ 0.102300-1.109330I$ $a=\ 0.362174+0.441892I$ $b=\ 1.223880-0.172344I$	$-0.14442+3.27143I$	$2.00000+0.I$
$u=\ 0.478866+1.010160I$ $a=\ 1.68970+0.68133I$ $b=\ 2.21369-0.29376I$	$4.95913+9.62770I$	$6.08733-8.46631I$
$u=\ 0.478866-1.010160I$ $a=\ 1.68970-0.68133I$ $b=\ 2.21369+0.29376I$	$4.95913-9.62770I$	$6.08733+8.46631I$
$u=\ 0.440504+0.756700I$ $a=\ 0.42706+3.10910I$ $b=\ 1.68779+1.80547I$	$5.87672-5.84564I$	$8.04796+0.32252I$
$u=\ 0.440504-0.756700I$ $a=\ 0.42706-3.10910I$ $b=\ 1.68779-1.80547I$	$5.87672+5.84564I$	$8.04796-0.32252I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.845953+0.224057I$ $a=-0.454033+0.049443I$ $b=-0.169032+0.370411I$	$2.19829+1.14973I$	$-0.20732-4.05965I$
$u=-0.845953-0.224057I$ $a=-0.454033-0.049443I$ $b=-0.169032-0.370411I$	$2.19829-1.14973I$	$-0.20732+4.05965I$
$u=-0.440600+0.735465I$ $a=-0.529757+1.304030I$ $b=-1.48003+1.46229I$	$1.07544+1.47462I$	$-0.30724+1.60278I$
$u=-0.440600-0.735465I$ $a=-0.529757-1.304030I$ $b=-1.48003-1.46229I$	$1.07544-1.47462I$	$-0.30724-1.60278I$
$u=-0.543398+1.017760I$ $a=-0.95120+1.12608I$ $b=-0.949869+0.729254I$	$-0.05728-5.50225I$	$-1.65148+5.32403I$
$u=-0.543398-1.017760I$ $a=-0.95120-1.12608I$ $b=-0.949869-0.729254I$	$-0.05728+5.50225I$	$-1.65148-5.32403I$
$u=0.717953+0.916298I$ $a=-0.197064-0.026048I$ $b=0.556317+0.184555I$	$6.62598-3.63352I$	$7.04034+2.52491I$
$u=0.717953-0.916298I$ $a=-0.197064+0.026048I$ $b=0.556317-0.184555I$	$6.62598+3.63352I$	$7.04034-2.52491I$
$u=-0.355593+1.109490I$ $a=-1.017310-0.245805I$ $b=-0.449843-0.556723I$	$-0.61067-5.04896I$	$2.00000+10.94268I$
$u=-0.355593-1.109490I$ $a=-1.017310+0.245805I$ $b=-0.449843+0.556723I$	$-0.61067+5.04896I$	$2.00000-10.94268I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.109847+0.826480I$ $a=\ \ 1.50107+0.47228I$ $b=\ \ 0.099884+1.264980I$	$1.34212+3.21376I$	$1.02834-3.60175I$
$u=-0.109847-0.826480I$ $a=\ \ 1.50107-0.47228I$ $b=\ \ 0.099884-1.264980I$	$1.34212-3.21376I$	$1.02834+3.60175I$
$u=\ \ 0.446151+1.100910I$ $a=-1.58149-1.26717I$ $b=-1.80627+0.25124I$	$-2.97445+3.69917I$	$-19.3709+16.9807I$
$u=\ \ 0.446151-1.100910I$ $a=-1.58149+1.26717I$ $b=-1.80627-0.25124I$	$-2.97445-3.69917I$	$-19.3709-16.9807I$
$u=-0.027254+1.190570I$ $a=\ \ 0.0165001+0.0345603I$ $b=-0.521740+0.784309I$	$1.35889+1.93098I$	$2.00000-1.60098I$
$u=-0.027254-1.190570I$ $a=\ \ 0.0165001-0.0345603I$ $b=-0.521740-0.784309I$	$1.35889-1.93098I$	$2.00000+1.60098I$
$u=-0.687401+1.054520I$ $a=\ \ 0.75226-1.69759I$ $b=\ \ 2.10474-1.13719I$	$6.09064-8.73869I$	0
$u=-0.687401-1.054520I$ $a=\ \ 0.75226+1.69759I$ $b=\ \ 2.10474+1.13719I$	$6.09064+8.73869I$	0
$u=\ \ 0.706235+1.089890I$ $a=-0.64145-1.44974I$ $b=-1.77696-1.28827I$	$4.41769+10.35310I$	0
$u=\ \ 0.706235-1.089890I$ $a=-0.64145+1.44974I$ $b=-1.77696+1.28827I$	$4.41769-10.35310I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.003574+0.681096I$ $a=-0.08290-2.14992I$ $b=-0.99332-1.04696I$	$-0.309340-0.677076I$	$2.01058-1.89029I$
$u=-0.003574-0.681096I$ $a=-0.08290+2.14992I$ $b=-0.99332+1.04696I$	$-0.309340+0.677076I$	$2.01058+1.89029I$
$u=\ 0.502730$ $a=\ 1.15645$ $b=-1.30140$	-0.249964	-4.72460
$u=-0.16725+1.61471I$ $a=\ 0.059053+0.140437I$ $b=\ 0.115958+0.235806I$	$-4.52427-2.67831I$	0
$u=-0.16725-1.61471I$ $a=\ 0.059053-0.140437I$ $b=\ 0.115958-0.235806I$	$-4.52427+2.67831I$	0
$u=\ 0.172862+0.296388I$ $a=\ 0.33291-2.81905I$ $b=\ 0.138218+0.737129I$	$5.07026-1.71080I$	$16.6995+2.5936I$
$u=\ 0.172862-0.296388I$ $a=\ 0.33291+2.81905I$ $b=\ 0.138218-0.737129I$	$5.07026+1.71080I$	$16.6995-2.5936I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{47}-26u^{46}+\cdots-23u+1)(u^{182}+77u^{181}+\cdots+8263u+121)$
c_2	$(u^{47}+13u^{45}+\cdots+3u-1)(u^{182}-u^{181}+\cdots+195u-11)$
c_3	$(u^{47}-u^{46}+\cdots-4u+1)(u^{182}+2u^{181}+\cdots-5309082u-451273)$
c_4	$(u^{47}-u^{46}+\cdots+3u+1)(u^{182}+2u^{181}+\cdots+19u-1)$
c_5	$(u^{47}-5u^{46}+\cdots+15u+1)$ $\cdot(u^{182}+2u^{181}+\cdots-38159038193725u-9874199002121)$
c_6	$(u^{47}+13u^{45}+\cdots+3u+1)(u^{182}-u^{181}+\cdots+195u-11)$
c_7	$(u^{47}+2u^{46}+\cdots+2u-11)$ $\cdot(u^{182}-3u^{181}+\cdots-16973493258u+2170070627)$
c_8	$(u^{47}+22u^{46}+\cdots+22u+1)$ $\cdot(u^{182}-13u^{181}+\cdots-32599410u+3488929)$
c_9	$(u^{47}-19u^{46}+\cdots+21u-1)$ $\cdot(u^{182}-8u^{181}+\cdots+120499307u-33795031)$
c_{10}	$(u^{47}-3u^{46}+\cdots+3u-11)$ $\cdot(u^{182}-16u^{181}+\cdots+87245097403u-3309477077)$
c_{11}	$(u^{47}+u^{46}+\cdots+3u-1)(u^{182}+2u^{181}+\cdots+19u-1)$
c_{12}	$(u^{47}+2u^{46}+\cdots+11u+1)$ $\cdot(u^{182}+u^{181}+\cdots+38826485u+8693093)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{47}+2y^{46}+\cdots-55y-1)$ $\cdot(y^{182}+69y^{181}+\cdots+304853435y+14641)$
c_2, c_6	$(y^{47}+26y^{46}+\cdots-23y-1)(y^{182}+77y^{181}+\cdots+8263y+121)$
c_3	$(y^{47}+9y^{46}+\cdots-64y-1)$ $\cdot(y^{182}+44y^{181}+\cdots-374808253700y+203647320529)$
c_4, c_{11}	$(y^{47}+27y^{46}+\cdots+y-1)(y^{182}+126y^{181}+\cdots-113y+1)$
c_5	$(y^{47}-23y^{46}+\cdots+89y-1)$ $\cdot(y^{182}-100y^{181}+\cdots-6.27\times10^{27}y+9.75\times10^{25})$
c_7	$(y^{47}-14y^{46}+\cdots+2732y-121)$ $\cdot(y^{182}-83y^{181}+\cdots+7.07\times10^{20}y+4.71\times10^{18})$
c_8	$(y^{47}-16y^{46}+\cdots+30y-1)$ $\cdot(y^{182}-65y^{181}+\cdots+5327570686683198y+12172625567041)$
c_9	$(y^{47}-19y^{46}+\cdots+41y-1)$ $\cdot(y^{182}-60y^{181}+\cdots-84230223266656641y+1142104120290961)$
c_{10}	$(y^{47}+7y^{46}+\cdots-2213y-121)$ $\cdot(y^{182}+70y^{181}+\cdots-5.83\times10^{20}y+1.10\times10^{19})$
c_{12}	$(y^{47}-12y^{46}+\cdots+71y-1)$ $\cdot(y^{182}-57y^{181}+\cdots-3145101509628851y+75569865906649)$