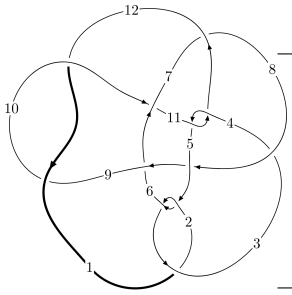
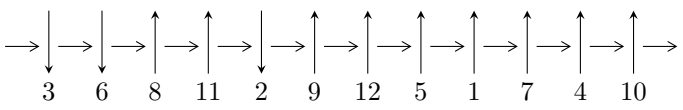
$12a_{0317}$ $(K12a_{0317})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.32563 \times 10^{433} u^{170} + 1.21640 \times 10^{434} u^{169} + \cdots + 1.40890 \times 10^{433} b - 1.01659 \times 10^{434},$$
$$1.54855 \times 10^{434} u^{170} - 5.21699 \times 10^{434} u^{169} + \cdots + 1.40890 \times 10^{433} a - 1.21190 \times 10^{435},$$
$$u^{171} - 4u^{170} + \cdots - 15u + 1 \rangle$$
$$I_2^u = \langle 32195546 u^{41} + 78988862 u^{40} + \cdots + 764339 b + 140677369,$$
$$90471926 u^{41} + 220915467 u^{40} + \cdots + 2293017 a + 394515903,\ u^{42} + 3u^{41} + \cdots - 26u^2 + 3 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 213 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. $\boldsymbol{I_1^u = \langle -2.33 \times 10^{433} u^{170} + 1.22 \times 10^{434} u^{169} + \cdots + 1.41 \times 10^{433} b - 1.02 \times 10^{434},\ 1.55 \times 10^{434} u^{170} - 5.22 \times 10^{434} u^{169} + \cdots + 1.41 \times 10^{433} a - 1.21 \times 10^{435},\ u^{171} - 4u^{170} + \cdots - 15u + 1 \rangle}$

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix} -10.9912u^{170} + 37.0289u^{169} + \cdots - 657.898u + 86.0181 \\ 1.65068u^{170} - 8.63368u^{169} + \cdots - 35.5431u + 7.21549 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 4.08126u^{170} + 16.4331u^{169} + \cdots - 1390.19u + 180.144 \\ 30.3070u^{170} - 84.4218u^{169} + \cdots + 157.355u - 4.90611 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -23.2483u^{170} + 71.0398u^{169} + \cdots - 834.056u + 102.538 \\ -9.46748u^{170} + 18.0078u^{169} + \cdots - 87.8514u + 10.3668 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 55.3657u^{170} - 186.121u^{169} + \cdots + 1834.04u - 189.057 \\ 26.3127u^{170} - 71.7091u^{169} + \cdots + 227.304u - 15.1206 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 42.9698u^{170} - 160.816u^{169} + \cdots + 1415.01u - 125.166 \\ 15.3205u^{170} - 65.5905u^{169} + \cdots + 387.277u - 26.3923 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -14.8780u^{170} + 50.2409u^{169} + \cdots - 718.830u + 90.9230 \\ -2.23607u^{170} + 4.57829u^{169} + \cdots - 96.4751u + 12.1204 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 8.25459u^{170} - 7.08653u^{169} + \cdots - 609.543u + 67.1361 \\ 35.9201u^{170} - 121.227u^{169} + \cdots + 606.030u - 45.7176 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -73.4828u^{170} + 198.083u^{169} + \cdots - 1119.20u + 108.206$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{171} + 82u^{170} + \cdots + 109u + 1$
c_2, c_5	$u^{171} + 4u^{170} + \cdots - 15u - 1$
c_3	$u^{171} + u^{170} + \cdots + 426385251u - 251071867$
c_4, c_{11}	$u^{171} - 2u^{170} + \cdots + 3950u - 1849$
c_6	$u^{171} - 3u^{170} + \cdots - 148u - 1496$
c_7	$u^{171} + 2u^{170} + \cdots - 2755517934u - 204636559$
c_8	$u^{171} - 15u^{169} + \cdots - 541710u - 228281$
c_9, c_{12}	$u^{171} + 11u^{170} + \cdots - 15988u - 3784$
c_{10}	$u^{171} + 4u^{170} + \cdots - 974881u - 49723$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{171} + 26y^{170} + \cdots + 2329y - 1$
c_2, c_5	$y^{171} - 82y^{170} + \cdots + 109y - 1$
c_3	$y^{171} + 39y^{170} + \cdots - 1949406148708587857y - 63037082398865689$
c_4, c_{11}	$y^{171} + 106y^{170} + \cdots - 87630868y - 3418801$
c_6	$y^{171} + 7y^{170} + \cdots + 82092464y - 2238016$
c_7	$y^{171} + 60y^{170} + \cdots - 3089300280968879260y - 41876121279360481$
c_8	$y^{171} - 30y^{170} + \cdots + 167534946682y - 52112214961$
c_9, c_{12}	$y^{171} + 131y^{170} + \cdots - 270117680y - 14318656$
c_{10}	$y^{171} + 50y^{170} + \cdots - 24962763117y - 2472376729$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.380674 + 0.927822I$ $a = -1.44104 + 0.75185I$ $b = -0.0853248 - 0.0837685I$	$-4.1236 + 14.6388I$	0
$u = 0.380674 - 0.927822I$ $a = -1.44104 - 0.75185I$ $b = -0.0853248 + 0.0837685I$	$-4.1236 - 14.6388I$	0
$u = -0.366931 + 0.917472I$ $a = 1.24732 + 0.78228I$ $b = 0.0952655 + 0.0515088I$	$-0.53997 - 8.66240I$	0
$u = -0.366931 - 0.917472I$ $a = 1.24732 - 0.78228I$ $b = 0.0952655 - 0.0515088I$	$-0.53997 + 8.66240I$	0
$u = 0.342928 + 0.920390I$ $a = -1.043760 + 0.494653I$ $b = 0.066645 + 0.176467I$	$-6.04580 + 3.49754I$	0
$u = 0.342928 - 0.920390I$ $a = -1.043760 - 0.494653I$ $b = 0.066645 - 0.176467I$	$-6.04580 - 3.49754I$	0
$u = -0.457582 + 0.853117I$ $a = 0.495659 + 0.753146I$ $b = 0.062593 + 0.311303I$	$3.31452 - 0.97599I$	0
$u = -0.457582 - 0.853117I$ $a = 0.495659 - 0.753146I$ $b = 0.062593 - 0.311303I$	$3.31452 + 0.97599I$	0
$u = 0.513246 + 0.819161I$ $a = -0.400049 + 1.051320I$ $b = -0.250673 + 0.288197I$	$0.55062 - 5.32202I$	0
$u = 0.513246 - 0.819161I$ $a = -0.400049 - 1.051320I$ $b = -0.250673 - 0.288197I$	$0.55062 + 5.32202I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.963158+0.402921I$ $a=-0.200696-0.192810I$ $b=\ \ 1.95696-1.21862I$	$-6.54806-0.36272I$	0
$u=-0.963158-0.402921I$ $a=-0.200696+0.192810I$ $b=\ \ 1.95696+1.21862I$	$-6.54806+0.36272I$	0
$u=-0.902678+0.300350I$ $a=\ \ 0.169921-0.476034I$ $b=\ \ 0.31990-2.60195I$	$-6.00184+3.22017I$	0
$u=-0.902678-0.300350I$ $a=\ \ 0.169921+0.476034I$ $b=\ \ 0.31990+2.60195I$	$-6.00184-3.22017I$	0
$u=-0.524370+0.789822I$ $a=\ \ 0.952807+0.482256I$ $b=-0.327914-0.000260I$	$3.81793-2.46825I$	0
$u=-0.524370-0.789822I$ $a=\ \ 0.952807-0.482256I$ $b=-0.327914+0.000260I$	$3.81793+2.46825I$	0
$u=\ \ 0.619006+0.717514I$ $a=\ \ 1.45978-0.38331I$ $b=\ \ 0.984183-0.260417I$	$-0.55947+2.06152I$	0
$u=\ \ 0.619006-0.717514I$ $a=\ \ 1.45978+0.38331I$ $b=\ \ 0.984183+0.260417I$	$-0.55947-2.06152I$	0
$u=-0.963099+0.428193I$ $a=-1.078290+0.719454I$ $b=\ \ 0.04140+1.50915I$	$-4.11245-0.56172I$	0
$u=-0.963099-0.428193I$ $a=-1.078290-0.719454I$ $b=\ \ 0.04140-1.50915I$	$-4.11245+0.56172I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.983442 + 0.380664I$ $a = -0.088813 + 0.216542I$ $b = 0.422686 + 0.496267I$	$-1.69986 - 1.28381I$	0
$u = 0.983442 - 0.380664I$ $a = -0.088813 - 0.216542I$ $b = 0.422686 - 0.496267I$	$-1.69986 + 1.28381I$	0
$u = -0.608840 + 0.864426I$ $a = -1.46352 - 0.29358I$ $b = -0.760839 + 0.330719I$	$-0.89924 - 4.15334I$	0
$u = -0.608840 - 0.864426I$ $a = -1.46352 + 0.29358I$ $b = -0.760839 - 0.330719I$	$-0.89924 + 4.15334I$	0
$u = -0.852708 + 0.633407I$ $a = -0.067536 + 0.409120I$ $b = 0.288912 + 1.118510I$	$1.80657 + 0.58573I$	0
$u = -0.852708 - 0.633407I$ $a = -0.067536 - 0.409120I$ $b = 0.288912 - 1.118510I$	$1.80657 - 0.58573I$	0
$u = 0.601646 + 0.717900I$ $a = 0.722399 + 0.676708I$ $b = -0.061865 + 0.750125I$	$-1.72699 + 3.31478I$	0
$u = 0.601646 - 0.717900I$ $a = 0.722399 - 0.676708I$ $b = -0.061865 - 0.750125I$	$-1.72699 - 3.31478I$	0
$u = 0.472074 + 0.807039I$ $a = -1.224110 + 0.555132I$ $b = 0.324520 - 0.201902I$	$0.35785 + 8.72561I$	0
$u = 0.472074 - 0.807039I$ $a = -1.224110 - 0.555132I$ $b = 0.324520 + 0.201902I$	$0.35785 - 8.72561I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.910458+0.553549I$		
$a=$	$0.609592-1.005530I$	$2.17789-2.71349I$	0
$b=$	$0.59333-1.73565I$		
$u=$	$0.910458-0.553549I$		
$a=$	$0.609592+1.005530I$	$2.17789+2.71349I$	0
$b=$	$0.59333+1.73565I$		
$u=$	$0.737359+0.574044I$		
$a=$	$1.24787-0.67806I$	$2.70711-1.80349I$	0
$b=$	$0.387336-0.505592I$		
$u=$	$0.737359-0.574044I$		
$a=$	$1.24787+0.67806I$	$2.70711+1.80349I$	0
$b=$	$0.387336+0.505592I$		
$u=$	$-0.996064+0.412530I$		
$a=$	$1.23619-1.36760I$	$-4.94892+4.79852I$	0
$b=$	$0.83346-1.99349I$		
$u=$	$-0.996064-0.412530I$		
$a=$	$1.23619+1.36760I$	$-4.94892-4.79852I$	0
$b=$	$0.83346+1.99349I$		
$u=$	$-1.027420+0.328668I$		
$a=$	$-0.534851+0.323176I$	$-1.98076+0.78863I$	0
$b=$	$-1.63930+1.42441I$		
$u=$	$-1.027420-0.328668I$		
$a=$	$-0.534851-0.323176I$	$-1.98076-0.78863I$	0
$b=$	$-1.63930-1.42441I$		
$u=$	$-0.652142+0.649935I$		
$a=$	$-1.54760-0.45381I$	$2.49581-1.32359I$	0
$b=$	$-0.480196+0.209602I$		
$u=$	$-0.652142-0.649935I$		
$a=$	$-1.54760+0.45381I$	$2.49581+1.32359I$	0
$b=$	$-0.480196-0.209602I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.906002+0.159736I$ $a=\ \ 0.689025+0.974067I$ $b=-0.03277+2.18678I$	$-6.22172-2.61465I$	0
$u=-0.906002-0.159736I$ $a=\ \ 0.689025-0.974067I$ $b=-0.03277-2.18678I$	$-6.22172+2.61465I$	0
$u=-0.869676+0.299010I$ $a=-1.04273+1.82876I$ $b=-0.67765+2.07453I$	$-4.15612-1.96479I$	0
$u=-0.869676-0.299010I$ $a=-1.04273-1.82876I$ $b=-0.67765-2.07453I$	$-4.15612+1.96479I$	0
$u=-1.064860+0.185668I$ $a=-0.629574+1.258680I$ $b=-1.21135+2.25302I$	$-5.13287-3.61597I$	0
$u=-1.064860-0.185668I$ $a=-0.629574-1.258680I$ $b=-1.21135-2.25302I$	$-5.13287+3.61597I$	0
$u=\ \ 1.077930+0.132381I$ $a=-0.464354+0.339009I$ $b=-0.465901+1.022110I$	$-2.06028-1.44412I$	0
$u=\ \ 1.077930-0.132381I$ $a=-0.464354-0.339009I$ $b=-0.465901-1.022110I$	$-2.06028+1.44412I$	0
$u=-0.770478+0.767055I$ $a=\ \ 0.407056+0.408084I$ $b=-0.218278-0.150888I$	$2.06081+4.74559I$	0
$u=-0.770478-0.767055I$ $a=\ \ 0.407056-0.408084I$ $b=-0.218278+0.150888I$	$2.06081-4.74559I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.993773 + 0.458962I$ $a = -1.99976 - 1.52669I$ $b = -1.85743 - 2.32894I$	$-7.53815 - 8.95364I$	0
$u = 0.993773 - 0.458962I$ $a = -1.99976 + 1.52669I$ $b = -1.85743 + 2.32894I$	$-7.53815 + 8.95364I$	0
$u = -0.832496 + 0.341495I$ $a = 0.22368 - 1.39703I$ $b = -0.68750 - 2.12663I$	$-3.47452 + 3.78054I$	0
$u = -0.832496 - 0.341495I$ $a = 0.22368 + 1.39703I$ $b = -0.68750 + 2.12663I$	$-3.47452 - 3.78054I$	0
$u = -1.004720 + 0.455046I$ $a = 0.95877 + 1.80347I$ $b = 0.13848 + 2.70177I$	$-7.53406 - 3.01774I$	0
$u = -1.004720 - 0.455046I$ $a = 0.95877 - 1.80347I$ $b = 0.13848 - 2.70177I$	$-7.53406 + 3.01774I$	0
$u = 0.997250 + 0.488051I$ $a = 0.503407 - 0.672180I$ $b = -0.87705 - 1.19948I$	$-3.62922 - 6.25773I$	0
$u = 0.997250 - 0.488051I$ $a = 0.503407 + 0.672180I$ $b = -0.87705 + 1.19948I$	$-3.62922 + 6.25773I$	0
$u = 0.877140 + 0.148952I$ $a = 0.319254 - 0.244380I$ $b = 1.383800 - 0.021803I$	$-1.94154 - 1.69217I$	0
$u = 0.877140 - 0.148952I$ $a = 0.319254 + 0.244380I$ $b = 1.383800 + 0.021803I$	$-1.94154 + 1.69217I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.551191+0.697646I$ $a=-0.718557-0.424698I$ $b=-0.000171+0.443670I$	$1.83304-0.04257I$	0
$u=-0.551191-0.697646I$ $a=-0.718557+0.424698I$ $b=-0.000171-0.443670I$	$1.83304+0.04257I$	0
$u=-1.113720+0.007895I$ $a=0.696014-0.362883I$ $b=1.28502-1.37620I$	$-5.25534-6.96011I$	0
$u=-1.113720-0.007895I$ $a=0.696014+0.362883I$ $b=1.28502+1.37620I$	$-5.25534+6.96011I$	0
$u=-0.397409+0.784388I$ $a=-1.61735-0.84389I$ $b=-0.346025-0.010243I$	$0.88603-2.61590I$	0
$u=-0.397409-0.784388I$ $a=-1.61735+0.84389I$ $b=-0.346025+0.010243I$	$0.88603+2.61590I$	0
$u=1.001020+0.506622I$ $a=0.362424+0.558521I$ $b=-1.11134+2.02291I$	$-5.78670-6.09009I$	0
$u=1.001020-0.506622I$ $a=0.362424-0.558521I$ $b=-1.11134-2.02291I$	$-5.78670+6.09009I$	0
$u=-0.070999+0.872170I$ $a=0.222455-0.293730I$ $b=-0.079710+0.800694I$	$-4.04271+0.14105I$	0
$u=-0.070999-0.872170I$ $a=0.222455+0.293730I$ $b=-0.079710-0.800694I$	$-4.04271-0.14105I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.062620 + 0.373348I$ $a = 0.669379 + 1.159990I$ $b = -0.00720 + 2.58624I$	$-9.42963 + 3.52313I$	0
$u = 1.062620 - 0.373348I$ $a = 0.669379 - 1.159990I$ $b = -0.00720 - 2.58624I$	$-9.42963 - 3.52313I$	0
$u = 1.029440 + 0.468018I$ $a = -0.679986 + 1.187760I$ $b = 0.03796 + 1.87433I$	$-4.50899 - 1.41426I$	0
$u = 1.029440 - 0.468018I$ $a = -0.679986 - 1.187760I$ $b = 0.03796 - 1.87433I$	$-4.50899 + 1.41426I$	0
$u = -1.055360 + 0.416777I$ $a = 1.41093 + 0.56066I$ $b = 1.10806 + 1.28031I$	$-7.87632 + 5.00657I$	0
$u = -1.055360 - 0.416777I$ $a = 1.41093 - 0.56066I$ $b = 1.10806 - 1.28031I$	$-7.87632 - 5.00657I$	0
$u = 1.128130 + 0.138441I$ $a = 0.490406 + 1.029600I$ $b = 1.21506 + 1.53210I$	$-4.14419 + 0.26617I$	0
$u = 1.128130 - 0.138441I$ $a = 0.490406 - 1.029600I$ $b = 1.21506 - 1.53210I$	$-4.14419 - 0.26617I$	0
$u = -0.974222 + 0.606012I$ $a = -0.362252 - 1.303630I$ $b = -0.89790 - 2.06897I$	$1.51676 + 6.24193I$	0
$u = -0.974222 - 0.606012I$ $a = -0.362252 + 1.303630I$ $b = -0.89790 + 2.06897I$	$1.51676 - 6.24193I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.411540 + 0.737500I$ $a = 1.98145 - 0.41932I$ $b = 0.198004 - 0.081694I$	$-0.52582 + 5.71309I$	0
$u = 0.411540 - 0.737500I$ $a = 1.98145 + 0.41932I$ $b = 0.198004 + 0.081694I$	$-0.52582 - 5.71309I$	0
$u = 1.041990 + 0.524020I$ $a = 0.188332 + 0.059206I$ $b = 0.858931 + 0.001148I$	$-1.60249 - 1.20863I$	0
$u = 1.041990 - 0.524020I$ $a = 0.188332 - 0.059206I$ $b = 0.858931 - 0.001148I$	$-1.60249 + 1.20863I$	0
$u = 0.504932 + 0.663071I$ $a = -0.029547 - 1.046380I$ $b = -0.144795 + 0.279639I$	$-0.01068 - 3.46818I$	0
$u = 0.504932 - 0.663071I$ $a = -0.029547 + 1.046380I$ $b = -0.144795 - 0.279639I$	$-0.01068 + 3.46818I$	0
$u = 1.030840 + 0.550584I$ $a = 0.081680 + 0.737119I$ $b = 0.07377 + 2.27695I$	$-4.12716 - 2.65231I$	0
$u = 1.030840 - 0.550584I$ $a = 0.081680 - 0.737119I$ $b = 0.07377 - 2.27695I$	$-4.12716 + 2.65231I$	0
$u = 1.077090 + 0.455377I$ $a = -1.59679 - 0.24739I$ $b = -1.63729 - 0.38978I$	$-7.57854 - 1.92005I$	0
$u = 1.077090 - 0.455377I$ $a = -1.59679 + 0.24739I$ $b = -1.63729 + 0.38978I$	$-7.57854 + 1.92005I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.065590+0.482857I$ $a=-0.032303-0.881627I$ $b=\ 1.24334-2.14322I$	$-8.70093+10.41120I$	0
$u=-1.065590-0.482857I$ $a=-0.032303+0.881627I$ $b=\ 1.24334+2.14322I$	$-8.70093-10.41120I$	0
$u=\ 0.447936+1.084730I$ $a=\ 0.793300-0.275904I$ $b=\ 0.106561+0.242441I$	$-4.09201+3.51596I$	0
$u=\ 0.447936-1.084730I$ $a=\ 0.793300+0.275904I$ $b=\ 0.106561-0.242441I$	$-4.09201-3.51596I$	0
$u=\ 0.774135+0.887136I$ $a=-0.285418+0.534779I$ $b=-0.025746-0.229887I$	$-1.76625-10.05830I$	0
$u=\ 0.774135-0.887136I$ $a=-0.285418-0.534779I$ $b=-0.025746+0.229887I$	$-1.76625+10.05830I$	0
$u=\ 1.057200+0.522195I$ $a=\ 0.319475-1.147410I$ $b=\ 1.15222-2.70949I$	$-0.68694-5.83662I$	0
$u=\ 1.057200-0.522195I$ $a=\ 0.319475+1.147410I$ $b=\ 1.15222+2.70949I$	$-0.68694+5.83662I$	0
$u=\ 1.014160+0.611681I$ $a=\ 0.49863-1.52419I$ $b=\ 0.42736-1.97683I$	$-1.77729-7.16397I$	0
$u=\ 1.014160-0.611681I$ $a=\ 0.49863+1.52419I$ $b=\ 0.42736+1.97683I$	$-1.77729+7.16397I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.490276+0.649949I$ $a=-1.25407-0.97607I$ $b=\ \ 0.044037+0.412853I$	$2.05585+0.51972I$	0
$u=-0.490276-0.649949I$ $a=-1.25407+0.97607I$ $b=\ \ 0.044037-0.412853I$	$2.05585-0.51972I$	0
$u=-1.046380+0.570637I$ $a=-0.472941-0.969669I$ $b=-1.49813-1.94744I$	$0.42171+4.26907I$	0
$u=-1.046380-0.570637I$ $a=-0.472941+0.969669I$ $b=-1.49813+1.94744I$	$0.42171-4.26907I$	0
$u=-1.042350+0.593238I$ $a=-0.023763-0.780552I$ $b=-0.60275-1.50249I$	$0.34557+5.01997I$	0
$u=-1.042350-0.593238I$ $a=-0.023763+0.780552I$ $b=-0.60275+1.50249I$	$0.34557-5.01997I$	0
$u=-0.201828+0.771335I$ $a=-0.90135-1.61437I$ $b=-0.191801-0.131891I$	$1.10724-2.01592I$	0
$u=-0.201828-0.771335I$ $a=-0.90135+1.61437I$ $b=-0.191801+0.131891I$	$1.10724+2.01592I$	0
$u=\ \ 1.167640+0.293720I$ $a=-0.192728-0.745197I$ $b=\ \ 0.783957-1.173730I$	$-8.30514-3.98448I$	0
$u=\ \ 1.167640-0.293720I$ $a=-0.192728+0.745197I$ $b=\ \ 0.783957+1.173730I$	$-8.30514+3.98448I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.045390 + 0.627865I$ $a = -0.549568 - 0.896469I$ $b = -0.26589 - 1.78659I$	$-3.10720 - 8.54200I$	0
$u = 1.045390 - 0.627865I$ $a = -0.549568 + 0.896469I$ $b = -0.26589 + 1.78659I$	$-3.10720 + 8.54200I$	0
$u = 0.709475 + 0.317529I$ $a = 0.70726 + 2.86628I$ $b = 0.40349 + 2.30893I$	$-6.41519 + 5.46475I$	0
$u = 0.709475 - 0.317529I$ $a = 0.70726 - 2.86628I$ $b = 0.40349 - 2.30893I$	$-6.41519 - 5.46475I$	0
$u = -1.149490 + 0.441407I$ $a = 0.329460 - 0.001479I$ $b = -0.553301 + 0.312929I$	$-7.43064 + 4.29698I$	0
$u = -1.149490 - 0.441407I$ $a = 0.329460 + 0.001479I$ $b = -0.553301 - 0.312929I$	$-7.43064 - 4.29698I$	0
$u = -1.061680 + 0.635110I$ $a = 0.273735 + 0.822058I$ $b = 0.60024 + 2.06447I$	$2.20474 + 7.83098I$	0
$u = -1.061680 - 0.635110I$ $a = 0.273735 - 0.822058I$ $b = 0.60024 - 2.06447I$	$2.20474 - 7.83098I$	0
$u = 1.093920 + 0.584750I$ $a = 0.27404 - 1.64466I$ $b = 0.44168 - 3.03809I$	$-2.53199 - 10.75090I$	0
$u = 1.093920 - 0.584750I$ $a = 0.27404 + 1.64466I$ $b = 0.44168 + 3.03809I$	$-2.53199 + 10.75090I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.844461 + 0.909920I$ $a = -0.036134 + 0.171839I$ $b = -0.511082 + 0.464120I$	$-1.98553 + 3.69676I$	0
$u = 0.844461 - 0.909920I$ $a = -0.036134 - 0.171839I$ $b = -0.511082 - 0.464120I$	$-1.98553 - 3.69676I$	0
$u = -1.053720 + 0.677803I$ $a = -0.24880 - 1.57148I$ $b = -0.68846 - 2.15501I$	$-2.29942 + 9.87625I$	0
$u = -1.053720 - 0.677803I$ $a = -0.24880 + 1.57148I$ $b = -0.68846 + 2.15501I$	$-2.29942 - 9.87625I$	0
$u = 1.090210 + 0.627244I$ $a = -0.276428 + 1.000330I$ $b = -0.87343 + 2.39462I$	$-1.4939 - 14.1007I$	0
$u = 1.090210 - 0.627244I$ $a = -0.276428 - 1.000330I$ $b = -0.87343 - 2.39462I$	$-1.4939 + 14.1007I$	0
$u = -1.109810 + 0.595798I$ $a = -0.56579 - 1.52348I$ $b = -1.06136 - 2.59414I$	$-1.22390 + 7.80396I$	0
$u = -1.109810 - 0.595798I$ $a = -0.56579 + 1.52348I$ $b = -1.06136 + 2.59414I$	$-1.22390 - 7.80396I$	0
$u = 1.071680 + 0.675404I$ $a = -0.578131 + 0.433434I$ $b = -0.769959 + 0.563752I$	$-1.109680 - 0.239217I$	0
$u = 1.071680 - 0.675404I$ $a = -0.578131 - 0.433434I$ $b = -0.769959 - 0.563752I$	$-1.109680 + 0.239217I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.576149 + 0.433704I$ $a = -0.967765 - 0.533623I$ $b = 0.98431 - 1.39957I$	$-4.48236 + 2.03856I$	0
$u = 0.576149 - 0.433704I$ $a = -0.967765 + 0.533623I$ $b = 0.98431 + 1.39957I$	$-4.48236 - 2.03856I$	0
$u = -1.100880 + 0.658866I$ $a = 0.440915 + 0.610542I$ $b = 0.438226 + 1.167770I$	$1.39954 + 6.58242I$	0
$u = -1.100880 - 0.658866I$ $a = 0.440915 - 0.610542I$ $b = 0.438226 - 1.167770I$	$1.39954 - 6.58242I$	0
$u = 0.438745 + 0.565194I$ $a = -0.922849 - 0.305989I$ $b = 0.636590 + 0.015216I$	$-2.50848 - 1.85627I$	0
$u = 0.438745 - 0.565194I$ $a = -0.922849 + 0.305989I$ $b = 0.636590 - 0.015216I$	$-2.50848 + 1.85627I$	0
$u = -1.186580 + 0.574880I$ $a = -0.759028 - 0.930199I$ $b = -1.40864 - 1.66478I$	$-1.71299 + 7.11811I$	0
$u = -1.186580 - 0.574880I$ $a = -0.759028 + 0.930199I$ $b = -1.40864 + 1.66478I$	$-1.71299 - 7.11811I$	0
$u = -1.315580 + 0.125248I$ $a = 0.627221 - 0.754303I$ $b = 1.39249 - 1.43802I$	$-10.0986 - 11.3443I$	0
$u = -1.315580 - 0.125248I$ $a = 0.627221 + 0.754303I$ $b = 1.39249 + 1.43802I$	$-10.0986 + 11.3443I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.167420 + 0.624750I$ $a = -0.309489 + 0.995822I$ $b = -0.39917 + 2.08712I$	$-8.53381 - 9.12168I$	0
$u = 1.167420 - 0.624750I$ $a = -0.309489 - 0.995822I$ $b = -0.39917 - 2.08712I$	$-8.53381 + 9.12168I$	0
$u = -1.165530 + 0.633557I$ $a = 0.482070 + 1.193780I$ $b = 0.89158 + 2.27526I$	$-2.9570 + 14.3312I$	0
$u = -1.165530 - 0.633557I$ $a = 0.482070 - 1.193780I$ $b = 0.89158 - 2.27526I$	$-2.9570 - 14.3312I$	0
$u = 1.166340 + 0.639823I$ $a = -0.427733 + 1.343320I$ $b = -0.94877 + 2.57215I$	$-6.5136 - 20.3636I$	0
$u = 1.166340 - 0.639823I$ $a = -0.427733 - 1.343320I$ $b = -0.94877 - 2.57215I$	$-6.5136 + 20.3636I$	0
$u = 0.562527 + 0.360078I$ $a = 0.535055 + 0.250854I$ $b = 0.23212 - 1.47561I$	$-2.30551 + 2.41321I$	0
$u = 0.562527 - 0.360078I$ $a = 0.535055 - 0.250854I$ $b = 0.23212 + 1.47561I$	$-2.30551 - 2.41321I$	0
$u = 1.324030 + 0.149451I$ $a = -0.581312 - 0.633839I$ $b = -1.13471 - 1.13580I$	$-6.38377 + 5.27943I$	0
$u = 1.324030 - 0.149451I$ $a = -0.581312 + 0.633839I$ $b = -1.13471 + 1.13580I$	$-6.38377 - 5.27943I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.253400 + 0.461324I$ $a = 0.920744 - 0.218807I$ $b = 1.66177 - 0.56815I$	$-2.85340 - 2.22309I$	0
$u = 1.253400 - 0.461324I$ $a = 0.920744 + 0.218807I$ $b = 1.66177 + 0.56815I$	$-2.85340 + 2.22309I$	0
$u = -1.355450 + 0.122500I$ $a = 0.292938 - 0.662790I$ $b = 0.365990 - 1.319890I$	$-11.95100 + 0.03526I$	0
$u = -1.355450 - 0.122500I$ $a = 0.292938 + 0.662790I$ $b = 0.365990 + 1.319890I$	$-11.95100 - 0.03526I$	0
$u = -0.569278 + 0.268741I$ $a = 1.92621 - 0.68538I$ $b = 1.11269 + 1.26871I$	$-6.12285 + 6.51973I$	$0. - 6.19150I$
$u = -0.569278 - 0.268741I$ $a = 1.92621 + 0.68538I$ $b = 1.11269 - 1.26871I$	$-6.12285 - 6.51973I$	$0. + 6.19150I$
$u = 0.384605 + 0.488008I$ $a = 1.98026 - 0.76831I$ $b = -0.382636 + 0.345120I$	$1.18594 + 1.54456I$	$6.00000 + 0.I$
$u = 0.384605 - 0.488008I$ $a = 1.98026 + 0.76831I$ $b = -0.382636 - 0.345120I$	$1.18594 - 1.54456I$	$6.00000 + 0.I$
$u = 1.204570 + 0.697620I$ $a = 0.125886 - 0.921075I$ $b = 0.52355 - 1.73548I$	$-6.51030 - 9.89166I$	0
$u = 1.204570 - 0.697620I$ $a = 0.125886 + 0.921075I$ $b = 0.52355 + 1.73548I$	$-6.51030 + 9.89166I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.165315 + 0.465261I$ $a = 0.39378 + 2.37313I$ $b = -0.089740 + 1.128560I$	$-5.18810 - 1.89288I$	$1.19982 + 2.47414I$
$u = 0.165315 - 0.465261I$ $a = 0.39378 - 2.37313I$ $b = -0.089740 - 1.128560I$	$-5.18810 + 1.89288I$	$1.19982 - 2.47414I$
$u = -0.194114 + 0.446095I$ $a = -1.98584 + 1.02772I$ $b = 0.312667 - 1.013280I$	$-6.50477 - 6.47522I$	$1.82966 + 5.52245I$
$u = -0.194114 - 0.446095I$ $a = -1.98584 - 1.02772I$ $b = 0.312667 + 1.013280I$	$-6.50477 + 6.47522I$	$1.82966 - 5.52245I$
$u = 0.283597 + 0.352278I$ $a = -1.83595 - 0.26178I$ $b = -0.456914 + 0.949294I$	$-2.63254 - 2.28841I$	$4.95456 + 3.86114I$
$u = 0.283597 - 0.352278I$ $a = -1.83595 + 0.26178I$ $b = -0.456914 - 0.949294I$	$-2.63254 + 2.28841I$	$4.95456 - 3.86114I$
$u = -1.65908 + 0.01030I$ $a = -0.038605 + 0.215099I$ $b = -0.218873 + 0.332343I$	$-11.93350 + 0.51771I$	0
$u = -1.65908 - 0.01030I$ $a = -0.038605 - 0.215099I$ $b = -0.218873 - 0.332343I$	$-11.93350 - 0.51771I$	0
$u = -0.232545$ $a = -1.56904$ $b = -0.441694$	0.757026	13.4850
$u = 0.172569 + 0.015223I$ $a = 6.99491 - 2.93176I$ $b = -0.270473 - 0.456161I$	$1.11614 - 1.37432I$	$3.73816 - 2.29235I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.172569-0.015223I$		
$a=$	$6.99491+2.93176I$	$1.11614+1.37432I$	$3.73816+2.29235I$
$b=$	$-0.270473+0.456161I$		

II. $\boldsymbol{I_2^u = \langle 3.22\times 10^7 u^{41} + 7.90\times 10^7 u^{40} + \cdots + 7.64\times 10^5 b + 1.41\times 10^8,\ 9.05\times 10^7 u^{41} + 2.21\times 10^8 u^{40} + \cdots + 2.29\times 10^6 a + 3.95\times 10^8,\ u^{42} + 3u^{41} + \cdots - 26u^2 + 3\rangle}$

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix} -39.4554u^{41} - 96.3427u^{40} + \cdots + 193.507u - 172.051 \\ -42.1221u^{41} - 103.343u^{40} + \cdots + 196.841u - 184.051 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 151.040u^{41} + 332.264u^{40} + \cdots - 470.103u + 473.697 \\ 205.034u^{41} + 429.544u^{40} + \cdots - 515.716u + 602.451 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -61.4724u^{41} - 140.672u^{40} + \cdots + 242.420u - 238.195 \\ -72.6820u^{41} - 161.789u^{40} + \cdots + 234.907u - 249.320 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 42.6390u^{41} + 123.914u^{40} + \cdots - 312.347u + 206.513 \\ 58.2703u^{41} + 166.496u^{40} + \cdots - 443.718u + 304.497 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 60.7798u^{41} + 98.9825u^{40} + \cdots + 2.83355u + 110.653 \\ 41.9942u^{41} + 48.4683u^{40} + \cdots + 155.753u - 10.3840 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -40.4554u^{41} - 96.3427u^{40} + \cdots + 185.507u - 169.051 \\ -43.1221u^{41} - 103.343u^{40} + \cdots + 188.841u - 181.051 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -44.2697u^{41} - 94.4060u^{40} + \cdots + 113.630u - 155.305 \\ -55.2775u^{41} - 106.785u^{40} + \cdots + 68.1978u - 121.661 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{118142947}{764339}u^{41} - \frac{319492704}{764339}u^{40} + \cdots + \frac{818560154}{764339}u - \frac{566660982}{764339}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{42} - 25u^{41} + \cdots - 156u + 9$
c_2	$u^{42} + 3u^{41} + \cdots - 26u^2 + 3$
c_3	$u^{42} - 2u^{40} + \cdots - 2u + 1$
c_4	$u^{42} + u^{41} + \cdots + u + 1$
c_5	$u^{42} - 3u^{41} + \cdots - 26u^2 + 3$
c_6	$u^{42} + 16u^{41} + \cdots + 112u + 8$
c_7	$u^{42} + u^{41} + \cdots - 15u + 3$
c_8	$u^{42} + 3u^{41} + \cdots + 9u + 1$
c_9	$u^{42} + 2u^{41} + \cdots + 7u + 1$
c_{10}	$u^{42} + 3u^{41} + \cdots - 2u + 1$
c_{11}	$u^{42} - u^{41} + \cdots - u + 1$
c_{12}	$u^{42} - 2u^{41} + \cdots - 7u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{42} - 5y^{41} + \cdots + 1008y + 81$
c_2, c_5	$y^{42} - 25y^{41} + \cdots - 156y + 9$
c_3	$y^{42} - 4y^{41} + \cdots + 46y + 1$
c_4, c_{11}	$y^{42} + 27y^{41} + \cdots + 29y + 1$
c_6	$y^{42} + 12y^{41} + \cdots + 992y + 64$
c_7	$y^{42} + 9y^{41} + \cdots + 321y + 9$
c_8	$y^{42} - 13y^{41} + \cdots - 25y + 1$
c_9, c_{12}	$y^{42} + 40y^{41} + \cdots + 57y + 1$
c_{10}	$y^{42} + 27y^{41} + \cdots + 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.950455+0.305739I$ $a=\ 1.46536-1.11570I$ $b=\ 0.900838-0.310788I$	$-7.47440+7.44321I$	$-1.35817-7.45357I$
$u=-0.950455-0.305739I$ $a=\ 1.46536+1.11570I$ $b=\ 0.900838+0.310788I$	$-7.47440-7.44321I$	$-1.35817+7.45357I$
$u=\ 0.978940+0.247424I$ $a=\ 0.85009+1.62491I$ $b=\ 1.18486+2.16175I$	$-4.79501+2.06027I$	$-3.74268-1.03228I$
$u=\ 0.978940-0.247424I$ $a=\ 0.85009-1.62491I$ $b=\ 1.18486-2.16175I$	$-4.79501-2.06027I$	$-3.74268+1.03228I$
$u=-0.952141+0.413492I$ $a=\ 0.691387+0.329126I$ $b=-1.10151+1.04083I$	$-6.17745-0.42747I$	$6.00000+1.53704I$
$u=-0.952141-0.413492I$ $a=\ 0.691387-0.329126I$ $b=-1.10151-1.04083I$	$-6.17745+0.42747I$	$6.00000-1.53704I$
$u=\ 0.994762+0.332933I$ $a=\ 0.511915+0.214663I$ $b=\ 1.29740+0.74563I$	$-0.803314-1.046230I$	$8.87158+0.64110I$
$u=\ 0.994762-0.332933I$ $a=\ 0.511915-0.214663I$ $b=\ 1.29740-0.74563I$	$-0.803314+1.046230I$	$8.87158-0.64110I$
$u=-0.894418+0.311210I$ $a=-0.06540+2.21926I$ $b=-0.41663+3.42169I$	$-7.28408-4.87526I$	$-3.30424+3.66370I$
$u=-0.894418-0.311210I$ $a=-0.06540-2.21926I$ $b=-0.41663-3.42169I$	$-7.28408+4.87526I$	$-3.30424-3.66370I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.536116+0.762720I$ $a=-1.76248-0.46691I$ $b=-0.765475+0.017457I$	$-0.50936-3.17813I$	$5.46215+2.44478I$
$u=-0.536116-0.762720I$ $a=-1.76248+0.46691I$ $b=-0.765475-0.017457I$	$-0.50936+3.17813I$	$5.46215-2.44478I$
$u=-0.437139+0.817645I$ $a=-0.699117-0.717728I$ $b=0.0575289-0.1221050I$	$3.33029-1.50340I$	$8.43166+5.43951I$
$u=-0.437139-0.817645I$ $a=-0.699117+0.717728I$ $b=0.0575289+0.1221050I$	$3.33029+1.50340I$	$8.43166-5.43951I$
$u=1.067150+0.193273I$ $a=-0.399628-1.005190I$ $b=-0.110132-0.777969I$	$-4.96584-3.41767I$	$2.55114+2.70113I$
$u=1.067150-0.193273I$ $a=-0.399628+1.005190I$ $b=-0.110132+0.777969I$	$-4.96584+3.41767I$	$2.55114-2.70113I$
$u=-0.824147+0.349081I$ $a=0.446059+0.589435I$ $b=0.63553+2.47791I$	$-5.63369+3.63547I$	$2.06259-9.95411I$
$u=-0.824147-0.349081I$ $a=0.446059-0.589435I$ $b=0.63553-2.47791I$	$-5.63369-3.63547I$	$2.06259+9.95411I$
$u=0.613680+0.948187I$ $a=0.900161+0.082005I$ $b=0.222985+0.263234I$	$-2.94042+4.12643I$	$0.-6.84078I$
$u=0.613680-0.948187I$ $a=0.900161-0.082005I$ $b=0.222985-0.263234I$	$-2.94042-4.12643I$	$0.+6.84078I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.016270 + 0.510467I$ $a = -0.570359 - 0.372196I$ $b = 0.61336 - 1.30916I$	$-5.31912 - 6.11142I$	$6.00000 + 8.63274I$
$u = 1.016270 - 0.510467I$ $a = -0.570359 + 0.372196I$ $b = 0.61336 + 1.30916I$	$-5.31912 + 6.11142I$	$6.00000 - 8.63274I$
$u = -1.024030 + 0.539879I$ $a = -0.512115 - 1.212970I$ $b = -1.39318 - 2.29964I$	$0.49914 + 5.10411I$	$0. - 6.82539I$
$u = -1.024030 - 0.539879I$ $a = -0.512115 + 1.212970I$ $b = -1.39318 + 2.29964I$	$0.49914 - 5.10411I$	$0. + 6.82539I$
$u = -0.598251 + 0.545469I$ $a = -1.79273 - 0.60929I$ $b = -0.195739 + 0.282322I$	$1.85564 - 0.68349I$	$6.64001 - 3.21154I$
$u = -0.598251 - 0.545469I$ $a = -1.79273 + 0.60929I$ $b = -0.195739 - 0.282322I$	$1.85564 + 0.68349I$	$6.64001 + 3.21154I$
$u = 0.397145 + 0.691883I$ $a = 0.433660 + 0.041184I$ $b = -0.463476 + 0.905266I$	$-3.59397 + 1.76380I$	$4.69246 - 1.87261I$
$u = 0.397145 - 0.691883I$ $a = 0.433660 - 0.041184I$ $b = -0.463476 - 0.905266I$	$-3.59397 - 1.76380I$	$4.69246 + 1.87261I$
$u = -1.069900 + 0.609641I$ $a = -0.47718 - 1.69608I$ $b = -0.79127 - 2.59435I$	$-2.15943 + 8.39551I$	0
$u = -1.069900 - 0.609641I$ $a = -0.47718 + 1.69608I$ $b = -0.79127 + 2.59435I$	$-2.15943 - 8.39551I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.058590 + 0.669027I$ $a = -0.244549 - 1.247240I$ $b = -0.20636 - 2.12537I$	$-4.39127 - 9.99269I$	0
$u = 1.058590 - 0.669027I$ $a = -0.244549 + 1.247240I$ $b = -0.20636 + 2.12537I$	$-4.39127 + 9.99269I$	0
$u = 1.171190 + 0.473424I$ $a = 0.538639 - 0.310474I$ $b = 1.061100 - 0.636919I$	$-0.95429 - 1.62282I$	0
$u = 1.171190 - 0.473424I$ $a = 0.538639 + 0.310474I$ $b = 1.061100 + 0.636919I$	$-0.95429 + 1.62282I$	0
$u = 0.703787 + 0.205389I$ $a = 0.674199 + 1.168430I$ $b = -0.26560 + 2.00903I$	$-3.50925 + 2.38598I$	$2.81211 - 4.43489I$
$u = 0.703787 - 0.205389I$ $a = 0.674199 - 1.168430I$ $b = -0.26560 - 2.00903I$	$-3.50925 - 2.38598I$	$2.81211 + 4.43489I$
$u = -1.104950 + 0.654924I$ $a = -0.358378 - 0.691276I$ $b = -0.50656 - 1.42701I$	$1.35727 + 7.01956I$	0
$u = -1.104950 - 0.654924I$ $a = -0.358378 + 0.691276I$ $b = -0.50656 + 1.42701I$	$1.35727 - 7.01956I$	0
$u = 0.567146 + 0.360348I$ $a = 1.46206 - 1.25083I$ $b = 0.0110741 - 0.0812385I$	$1.18767 - 1.94619I$	$5.18581 + 9.50954I$
$u = 0.567146 - 0.360348I$ $a = 1.46206 + 1.25083I$ $b = 0.0110741 + 0.0812385I$	$1.18767 + 1.94619I$	$5.18581 - 9.50954I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.67712+0.03214I$ $a=-0.091602+0.162397I$ $b=-0.268741+0.155044I$	$-11.87150-0.63109I$	0
$u=-1.67712-0.03214I$ $a=-0.091602-0.162397I$ $b=-0.268741-0.155044I$	$-11.87150+0.63109I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{42}-25u^{41}+\cdots-156u+9)(u^{171}+82u^{170}+\cdots+109u+1)$
c_2	$(u^{42}+3u^{41}+\cdots-26u^2+3)(u^{171}+4u^{170}+\cdots-15u-1)$
c_3	$(u^{42}-2u^{40}+\cdots-2u+1)$ $\cdot(u^{171}+u^{170}+\cdots+426385251u-251071867)$
c_4	$(u^{42}+u^{41}+\cdots+u+1)(u^{171}-2u^{170}+\cdots+3950u-1849)$
c_5	$(u^{42}-3u^{41}+\cdots-26u^2+3)(u^{171}+4u^{170}+\cdots-15u-1)$
c_6	$(u^{42}+16u^{41}+\cdots+112u+8)(u^{171}-3u^{170}+\cdots-148u-1496)$
c_7	$(u^{42}+u^{41}+\cdots-15u+3)$ $\cdot(u^{171}+2u^{170}+\cdots-2755517934u-204636559)$
c_8	$(u^{42}+3u^{41}+\cdots+9u+1)(u^{171}-15u^{169}+\cdots-541710u-228281)$
c_9	$(u^{42}+2u^{41}+\cdots+7u+1)(u^{171}+11u^{170}+\cdots-15988u-3784)$
c_{10}	$(u^{42}+3u^{41}+\cdots-2u+1)(u^{171}+4u^{170}+\cdots-974881u-49723)$
c_{11}	$(u^{42}-u^{41}+\cdots-u+1)(u^{171}-2u^{170}+\cdots+3950u-1849)$
c_{12}	$(u^{42}-2u^{41}+\cdots-7u+1)(u^{171}+11u^{170}+\cdots-15988u-3784)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{42} - 5y^{41} + \cdots + 1008y + 81)(y^{171} + 26y^{170} + \cdots + 2329y - 1)$
c_2, c_5	$(y^{42} - 25y^{41} + \cdots - 156y + 9)(y^{171} - 82y^{170} + \cdots + 109y - 1)$
c_3	$(y^{42} - 4y^{41} + \cdots + 46y + 1)$ $\cdot (y^{171} + 39y^{170} + \cdots - 1949406148708587857y - 63037082398865689)$
c_4, c_{11}	$(y^{42} + 27y^{41} + \cdots + 29y + 1)$ $\cdot (y^{171} + 106y^{170} + \cdots - 87630868y - 3418801)$
c_6	$(y^{42} + 12y^{41} + \cdots + 992y + 64)$ $\cdot (y^{171} + 7y^{170} + \cdots + 82092464y - 2238016)$
c_7	$(y^{42} + 9y^{41} + \cdots + 321y + 9)$ $\cdot (y^{171} + 60y^{170} + \cdots - 3089300280968879260y - 41876121279360481)$
c_8	$(y^{42} - 13y^{41} + \cdots - 25y + 1)$ $\cdot (y^{171} - 30y^{170} + \cdots + 167534946682y - 52112214961)$
c_9, c_{12}	$(y^{42} + 40y^{41} + \cdots + 57y + 1)$ $\cdot (y^{171} + 131y^{170} + \cdots - 270117680y - 14318656)$
c_{10}	$(y^{42} + 27y^{41} + \cdots + 2y + 1)$ $\cdot (y^{171} + 50y^{170} + \cdots - 24962763117y - 2472376729)$