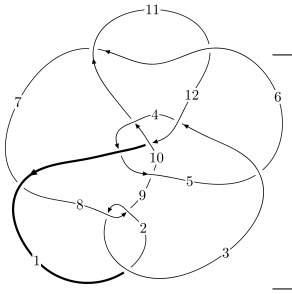
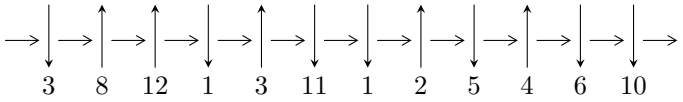
$12n_{0614}$ $(K12n_{0614})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.58062 \times 10^{138} u^{65} + 4.69453 \times 10^{138} u^{64} + \cdots + 1.96428 \times 10^{138} b - 6.10934 \times 10^{138},$$
$$- 5.77959 \times 10^{138} u^{65} + 1.53536 \times 10^{139} u^{64} + \cdots + 1.96428 \times 10^{138} a - 8.78790 \times 10^{138},\ u^{66} - 3u^{65} + \cdots -$$
$$I_2^u = \langle -2.51011 \times 10^{19} u^{29} - 1.59153 \times 10^{20} u^{28} + \cdots + 4.01614 \times 10^{18} b + 6.48608 \times 10^{19},$$
$$9.77600 \times 10^{19} u^{29} + 6.23565 \times 10^{20} u^{28} + \cdots + 4.01614 \times 10^{18} a - 2.61075 \times 10^{20},\ u^{30} + 6u^{29} + \cdots - 5u + 1$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 96 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. $\boldsymbol{I_1^u = \langle -2.58 \times 10^{138} u^{65} + 4.69 \times 10^{138} u^{64} + \cdots + 1.96 \times 10^{138} b - 6.11 \times 10^{138},\ -5.78 \times 10^{138} u^{65} + 1.54 \times 10^{139} u^{64} + \cdots + 1.96 \times 10^{138} a - 8.79 \times 10^{138},\ u^{66} - 3u^{65} + \cdots - u + 1 \rangle}$

(i) Arc colorings

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_{4} = \begin{pmatrix} 2.94235u^{65} - 7.81641u^{64} + \cdots + 25.6075u + 4.47386 \\ 1.31378u^{65} - 2.38995u^{64} + \cdots - 2.35764u + 3.11022 \end{pmatrix}$$

$$a_{5} = \begin{pmatrix} 1.35304u^{65} - 5.33630u^{64} + \cdots + 26.0334u + 0.352996 \\ 1.00899u^{65} - 0.212160u^{64} + \cdots - 3.05615u + 5.39804 \end{pmatrix}$$

$$a_{3} = \begin{pmatrix} 1.62857u^{65} - 5.42646u^{64} + \cdots + 27.9652u + 1.36363 \\ 1.31378u^{65} - 2.38995u^{64} + \cdots - 2.35764u + 3.11022 \end{pmatrix}$$

$$a_{2} = \begin{pmatrix} 2.67431u^{65} - 6.60681u^{64} + \cdots + 7.51766u + 0.766700 \\ -1.06116u^{65} + 2.61339u^{64} + \cdots - 4.02289u + 2.44879 \end{pmatrix}$$

$$a_{6} = \begin{pmatrix} 2.56600u^{65} - 6.01019u^{64} + \cdots + 22.5310u + 4.35095 \\ 0.291260u^{65} - 1.82499u^{64} + \cdots - 2.83835u - 0.458853 \end{pmatrix}$$

$$a_{9} = \begin{pmatrix} -1.65301u^{65} + 3.65430u^{64} + \cdots - 1.56313u + 1.16438 \\ 0.868094u^{65} - 1.36078u^{64} + \cdots + 2.50443u - 0.692763 \end{pmatrix}$$

$$a_{8} = \begin{pmatrix} -2.32081u^{65} + 5.95599u^{64} + \cdots - 22.5004u + 1.37356 \\ 2.29981u^{65} - 4.87483u^{64} + \cdots + 9.45129u - 0.967867 \end{pmatrix}$$

$$a_{7} = \begin{pmatrix} 0.411567u^{65} - 0.846993u^{64} + \cdots - 14.3635u - 0.600756 \\ 1.53761u^{65} - 4.15828u^{64} + \cdots + 8.11307u - 2.36203 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.387409u^{65} - 0.881551u^{64} + \cdots + 2.81929u - 2.83069 \\ -0.986797u^{65} + 2.57596u^{64} + \cdots + 2.56990u + 0.0462032 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 10.6441u^{65} - 22.9856u^{64} + \cdots + 3.38658u + 10.7302$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{66} + 15u^{65} + \cdots - 3u + 1$
c_2, c_8	$u^{66} + u^{65} + \cdots + 15u + 1$
c_3	$u^{66} + 3u^{65} + \cdots + 17224u + 1571$
c_4	$u^{66} + 2u^{65} + \cdots - 19824143u + 13993901$
c_5	$u^{66} - 8u^{65} + \cdots + 438u + 29$
c_6, c_{11}	$u^{66} + 28u^{64} + \cdots - 13u + 1$
c_7	$u^{66} - u^{65} + \cdots + 296940149u + 21005497$
c_9	$u^{66} - 4u^{65} + \cdots - 10934824u + 2425663$
c_{10}	$u^{66} - u^{65} + \cdots + 10841u + 4167$
c_{12}	$u^{66} - 3u^{65} + \cdots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{66}+87y^{65}+\cdots+221y+1$
c_2, c_8	$y^{66}+15y^{65}+\cdots-3y+1$
c_3	$y^{66}-25y^{65}+\cdots-67947428y+2468041$
c_4	$y^{66}+52y^{65}+\cdots-1605005892392269y+195829265197801$
c_5	$y^{66}-102y^{65}+\cdots-73060y+841$
c_6, c_{11}	$y^{66}+56y^{65}+\cdots-55y+1$
c_7	$y^{66}+165y^{65}+\cdots+9982498502631681y+441230904217009$
c_9	$y^{66}+96y^{65}+\cdots-208158950639894y+5883840989569$
c_{10}	$y^{66}-21y^{65}+\cdots+301897937y+17363889$
c_{12}	$y^{66}+7y^{65}+\cdots+93y+1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.249527 + 0.973850I$ $a = -0.269984 + 0.352199I$ $b = -1.284520 - 0.093761I$	$3.79747 + 2.06731I$	0
$u = 0.249527 - 0.973850I$ $a = -0.269984 - 0.352199I$ $b = -1.284520 + 0.093761I$	$3.79747 - 2.06731I$	0
$u = 0.615318 + 0.828344I$ $a = -0.02105 + 1.59803I$ $b = -0.727846 + 0.496461I$	$0.55976 - 4.92526I$	0
$u = 0.615318 - 0.828344I$ $a = -0.02105 - 1.59803I$ $b = -0.727846 - 0.496461I$	$0.55976 + 4.92526I$	0
$u = -0.437096 + 0.815557I$ $a = 0.405639 - 1.190780I$ $b = 1.26009 - 1.96901I$	$12.42740 + 5.70029I$	$3.74452 - 6.12160I$
$u = -0.437096 - 0.815557I$ $a = 0.405639 + 1.190780I$ $b = 1.26009 + 1.96901I$	$12.42740 - 5.70029I$	$3.74452 + 6.12160I$
$u = 0.033859 + 0.905828I$ $a = 0.686387 + 0.796402I$ $b = -0.999476 - 0.290107I$	$3.53265 + 0.97150I$	$4.91841 + 0.I$
$u = 0.033859 - 0.905828I$ $a = 0.686387 - 0.796402I$ $b = -0.999476 + 0.290107I$	$3.53265 - 0.97150I$	$4.91841 + 0.I$
$u = -0.682349 + 0.882535I$ $a = 0.466401 - 1.133650I$ $b = -0.374389 - 1.078440I$	$-0.80690 + 2.71270I$	0
$u = -0.682349 - 0.882535I$ $a = 0.466401 + 1.133650I$ $b = -0.374389 + 1.078440I$	$-0.80690 - 2.71270I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.289401+0.832892I$ $a=-0.352656+1.319950I$ $b=-1.34067+1.94518I$	$13.15070-1.94186I$	$5.70542-1.07468I$
$u=-0.289401-0.832892I$ $a=-0.352656-1.319950I$ $b=-1.34067-1.94518I$	$13.15070+1.94186I$	$5.70542+1.07468I$
$u=\ 0.359145+0.783685I$ $a=\ 1.054300-0.565207I$ $b=-0.734467-0.404994I$	$7.06668+1.57189I$	$4.29931-7.86449I$
$u=\ 0.359145-0.783685I$ $a=\ 1.054300+0.565207I$ $b=-0.734467+0.404994I$	$7.06668-1.57189I$	$4.29931+7.86449I$
$u=\ 0.682707+0.513106I$ $a=\ 0.24428-2.03609I$ $b=\ 1.067660-0.541710I$	$1.63963-5.80606I$	$-5.45360+9.71206I$
$u=\ 0.682707-0.513106I$ $a=\ 0.24428+2.03609I$ $b=\ 1.067660+0.541710I$	$1.63963+5.80606I$	$-5.45360-9.71206I$
$u=\ 0.342573+0.774825I$ $a=-0.00166+1.68586I$ $b=-0.98226+1.11174I$	$3.76909-6.48056I$	$5.17385+9.06963I$
$u=\ 0.342573-0.774825I$ $a=-0.00166-1.68586I$ $b=-0.98226-1.11174I$	$3.76909+6.48056I$	$5.17385-9.06963I$
$u=\ 0.409070+0.741183I$ $a=-0.977149+0.697862I$ $b=\ 0.686979+0.481839I$	$6.87593-4.70790I$	$1.11470-3.72537I$
$u=\ 0.409070-0.741183I$ $a=-0.977149-0.697862I$ $b=\ 0.686979-0.481839I$	$6.87593+4.70790I$	$1.11470+3.72537I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.601095 + 0.581351I$ $a = 0.556911 - 0.409109I$ $b = 1.025200 - 0.590189I$	$0.136895 + 0.733623I$	$-2.74494 + 0.I$
$u = 0.601095 - 0.581351I$ $a = 0.556911 + 0.409109I$ $b = 1.025200 + 0.590189I$	$0.136895 - 0.733623I$	$-2.74494 + 0.I$
$u = -0.428271 + 0.713032I$ $a = 3.10687 - 0.23646I$ $b = -0.770827 - 0.716616I$	$12.07670 - 2.21337I$	$4.41985 - 2.89857I$
$u = -0.428271 - 0.713032I$ $a = 3.10687 + 0.23646I$ $b = -0.770827 + 0.716616I$	$12.07670 + 2.21337I$	$4.41985 + 2.89857I$
$u = -0.666391 + 0.960759I$ $a = 0.586302 - 0.825625I$ $b = -0.342142 - 0.858442I$	$-0.64111 + 2.45300I$	0
$u = -0.666391 - 0.960759I$ $a = 0.586302 + 0.825625I$ $b = -0.342142 + 0.858442I$	$-0.64111 - 2.45300I$	0
$u = -1.178240 + 0.061260I$ $a = 0.663485 + 0.224665I$ $b = 0.362141 + 0.169931I$	$-2.39687 - 0.04300I$	0
$u = -1.178240 - 0.061260I$ $a = 0.663485 - 0.224665I$ $b = 0.362141 - 0.169931I$	$-2.39687 + 0.04300I$	0
$u = -0.978455 + 0.724029I$ $a = -0.184249 + 0.739258I$ $b = 0.158181 + 1.022200I$	$-3.11037 + 0.52815I$	0
$u = -0.978455 - 0.724029I$ $a = -0.184249 - 0.739258I$ $b = 0.158181 - 1.022200I$	$-3.11037 - 0.52815I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.248792+0.713501I$ $a=\ 0.350874-1.113190I$ $b=-0.795609-0.732164I$	$1.05108+1.79441I$	$1.95797-4.33085I$
$u=-0.248792-0.713501I$ $a=\ 0.350874+1.113190I$ $b=-0.795609+0.732164I$	$1.05108-1.79441I$	$1.95797+4.33085I$
$u=-0.362005+0.647934I$ $a=-3.73012-0.37278I$ $b=\ 0.704011+0.655660I$	$12.40550+4.61805I$	$6.00525-8.48089I$
$u=-0.362005-0.647934I$ $a=-3.73012+0.37278I$ $b=\ 0.704011-0.655660I$	$12.40550-4.61805I$	$6.00525+8.48089I$
$u=\ 0.766631+1.026940I$ $a=-0.522622+0.702186I$ $b=-1.51898+0.65915I$	$6.16026-1.87831I$	0
$u=\ 0.766631-1.026940I$ $a=-0.522622-0.702186I$ $b=-1.51898-0.65915I$	$6.16026+1.87831I$	0
$u=\ 0.983808+0.839486I$ $a=\ 0.647660-1.216280I$ $b=\ 1.115270-0.152332I$	$5.26486-4.65376I$	0
$u=\ 0.983808-0.839486I$ $a=\ 0.647660+1.216280I$ $b=\ 1.115270+0.152332I$	$5.26486+4.65376I$	0
$u=\ 0.053565+0.677699I$ $a=\ 0.06723-2.16764I$ $b=\ 0.732638+0.191707I$	$3.59207+4.61001I$	$4.03017-6.08936I$
$u=\ 0.053565-0.677699I$ $a=\ 0.06723+2.16764I$ $b=\ 0.732638-0.191707I$	$3.59207-4.61001I$	$4.03017+6.08936I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.887350+1.047850I$ $a=-0.389145+0.768196I$ $b=\ \ 0.633717+0.991445I$	$-2.15650+6.27128I$	0
$u=-0.887350-1.047850I$ $a=-0.389145-0.768196I$ $b=\ \ 0.633717-0.991445I$	$-2.15650-6.27128I$	0
$u=\ \ 0.935204+1.043390I$ $a=\ \ 0.322460-0.784777I$ $b=\ \ 1.47663-0.84266I$	$3.09240-7.98201I$	0
$u=\ \ 0.935204-1.043390I$ $a=\ \ 0.322460+0.784777I$ $b=\ \ 1.47663+0.84266I$	$3.09240+7.98201I$	0
$u=\ \ 0.189006+0.539851I$ $a=-0.14714-1.49703I$ $b=\ \ 1.65589-1.01498I$	$1.81042-2.05249I$	$3.67407+5.51602I$
$u=\ \ 0.189006-0.539851I$ $a=-0.14714+1.49703I$ $b=\ \ 1.65589+1.01498I$	$1.81042+2.05249I$	$3.67407-5.51602I$
$u=\ \ 0.98278+1.07695I$ $a=-0.374561+0.803029I$ $b=-0.920434-0.084883I$	$2.95941+0.54302I$	0
$u=\ \ 0.98278-1.07695I$ $a=-0.374561-0.803029I$ $b=-0.920434+0.084883I$	$2.95941-0.54302I$	0
$u=\ \ 0.96734+1.18586I$ $a=-0.189609+1.218970I$ $b=-1.52025+1.03660I$	$15.3119-8.5854I$	0
$u=\ \ 0.96734-1.18586I$ $a=-0.189609-1.218970I$ $b=-1.52025-1.03660I$	$15.3119+8.5854I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.97648+1.18488I$		
$a=$	$0.075593-1.252430I$	$14.4678-15.9965I$	0
$b=$	$1.46536-1.04892I$		
$u=$	$0.97648-1.18488I$		
$a=$	$0.075593+1.252430I$	$14.4678+15.9965I$	0
$b=$	$1.46536+1.04892I$		
$u=$	$1.28242+1.00513I$		
$a=$	$0.884168-0.187959I$	$14.3264+0.4250I$	0
$b=$	$1.226060+0.549068I$		
$u=$	$1.28242-1.00513I$		
$a=$	$0.884168+0.187959I$	$14.3264-0.4250I$	0
$b=$	$1.226060-0.549068I$		
$u=$	$1.30509+0.99681I$		
$a=$	$-0.812511+0.031797I$	$13.4708+7.8026I$	0
$b=$	$-1.167660-0.660772I$		
$u=$	$1.30509-0.99681I$		
$a=$	$-0.812511-0.031797I$	$13.4708-7.8026I$	0
$b=$	$-1.167660+0.660772I$		
$u=$	$-1.13183+1.26806I$		
$a=$	$0.337985+0.720296I$	$9.15397+8.21782I$	0
$b=$	$1.196830+0.393471I$		
$u=$	$-1.13183-1.26806I$		
$a=$	$0.337985-0.720296I$	$9.15397-8.21782I$	0
$b=$	$1.196830-0.393471I$		
$u=$	$0.045507+0.282776I$		
$a=$	$-2.19269+1.53645I$	$-0.20859-1.52213I$	$-3.23626+4.72897I$
$b=$	$0.730632+0.344719I$		
$u=$	$0.045507-0.282776I$		
$a=$	$-2.19269-1.53645I$	$-0.20859+1.52213I$	$-3.23626-4.72897I$
$b=$	$0.730632-0.344719I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.16315+1.29787I$ $a=-0.388674-0.556758I$ $b=-1.166830-0.246261I$	$9.09525+0.92745I$	0
$u=-1.16315-1.29787I$ $a=-0.388674+0.556758I$ $b=-1.166830+0.246261I$	$9.09525-0.92745I$	0
$u=-0.064829+0.176117I$ $a=3.07467-0.79403I$ $b=0.307561-0.497960I$	$-0.217612+1.382700I$	$-2.39310-4.83328I$
$u=-0.064829-0.176117I$ $a=3.07467+0.79403I$ $b=0.307561+0.497960I$	$-0.217612-1.382700I$	$-2.39310+4.83328I$
$u=-1.76296+0.61380I$ $a=0.0226134-0.1199730I$ $b=0.341515-0.207501I$	$-4.80865+3.88403I$	0
$u=-1.76296-0.61380I$ $a=0.0226134+0.1199730I$ $b=0.341515+0.207501I$	$-4.80865-3.88403I$	0

II.

$\boldsymbol{I_2^u = \langle -2.51\times 10^{19}u^{29} - 1.59\times 10^{20}u^{28} + \cdots + 4.02\times 10^{18}b + 6.49\times 10^{19},\ 9.78\times 10^{19}u^{29} + 6.24\times 10^{20}u^{28} + \cdots + 4.02\times 10^{18}a - 2.61\times 10^{20},\ u^{30} + 6u^{29} + \cdots - 5u + 1\rangle}$

(i) Arc colorings

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_{4} = \begin{pmatrix} -24.3418u^{29} - 155.265u^{28} + \cdots - 150.976u + 65.0064 \\ 6.25007u^{29} + 39.6284u^{28} + \cdots + 37.3973u - 16.1500 \end{pmatrix}$$

$$a_{5} = \begin{pmatrix} -33.8102u^{29} - 215.601u^{28} + \cdots - 210.102u + 90.3706 \\ 4.95851u^{29} + 31.7341u^{28} + \cdots + 29.2380u - 12.6245 \end{pmatrix}$$

$$a_{3} = \begin{pmatrix} -30.5919u^{29} - 194.893u^{28} + \cdots - 188.373u + 81.1565 \\ 6.25007u^{29} + 39.6284u^{28} + \cdots + 37.3973u - 16.1500 \end{pmatrix}$$

$$a_{2} = \begin{pmatrix} -12.1917u^{29} - 76.9619u^{28} + \cdots - 72.9374u + 39.5688 \\ -0.602753u^{29} - 4.04941u^{28} + \cdots - 4.64126u + 0.893751 \end{pmatrix}$$

$$a_{6} = \begin{pmatrix} 30.2018u^{29} + 191.789u^{28} + \cdots + 184.852u - 79.1727 \\ -8.03538u^{29} - 51.0463u^{28} + \cdots - 51.8658u + 22.2080 \end{pmatrix}$$

$$a_{9} = \begin{pmatrix} 28.9293u^{29} + 182.939u^{28} + \cdots + 176.262u - 85.9815 \\ -0.978784u^{29} - 5.60749u^{28} + \cdots - 5.70367u + 3.91752 \end{pmatrix}$$

$$a_{8} = \begin{pmatrix} -44.5210u^{29} - 283.726u^{28} + \cdots - 280.369u + 118.761 \\ 8.60468u^{29} + 54.5709u^{28} + \cdots + 55.9046u - 23.6544 \end{pmatrix}$$

$$a_{7} = \begin{pmatrix} -29.1421u^{29} - 186.256u^{28} + \cdots - 185.982u + 78.5055 \\ 10.7566u^{29} + 68.7177u^{28} + \cdots + 66.5121u - 28.8516 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 20.6148u^{29} + 130.865u^{28} + \cdots + 127.785u - 60.3047 \\ -1.36890u^{29} - 8.61147u^{28} + \cdots - 7.61980u + 5.21974 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{39236244732154106120}{4016136176896476131}u^{29} + \frac{247548470797569329746}{4016136176896476131}u^{28} + \cdots + \frac{19869352119097393946 0}{4016136176896476131}u - \frac{833315563970878385 85}{4016136176896476131}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{30} - 14u^{29} + \cdots - 11u + 1$
c_2	$u^{30} + 7u^{28} + \cdots + u + 1$
c_3	$u^{30} + 2u^{29} + \cdots - 2u + 1$
c_4	$u^{30} + 5u^{29} + \cdots - 3u + 1$
c_5	$u^{30} - 19u^{29} + \cdots - 1154u + 131$
c_6	$u^{30} - u^{29} + \cdots - u + 1$
c_7	$u^{30} + 14u^{28} + \cdots - 11u + 1$
c_8	$u^{30} + 7u^{28} + \cdots - u + 1$
c_9	$u^{30} + u^{29} + \cdots - 8u^2 + 1$
c_{10}	$u^{30} + 3u^{28} + \cdots - u + 1$
c_{11}	$u^{30} + u^{29} + \cdots + u + 1$
c_{12}	$u^{30} + 6u^{29} + \cdots - 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{30} + 18y^{29} + \cdots + 27y + 1$
c_2, c_8	$y^{30} + 14y^{29} + \cdots + 11y + 1$
c_3	$y^{30} - 2y^{29} + \cdots - 22y + 1$
c_4	$y^{30} + 3y^{29} + \cdots - 11y + 1$
c_5	$y^{30} - 31y^{29} + \cdots - 199614y + 17161$
c_6, c_{11}	$y^{30} + 15y^{29} + \cdots + 23y + 1$
c_7	$y^{30} + 28y^{29} + \cdots - 13y + 1$
c_9	$y^{30} + 7y^{29} + \cdots - 16y + 1$
c_{10}	$y^{30} + 6y^{29} + \cdots - 29y + 1$
c_{12}	$y^{30} - 2y^{29} + \cdots - 9y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.603204 + 0.809374I$ $a = 0.29660 + 1.47876I$ $b = -1.094550 + 0.548167I$	$2.13900 - 4.35109I$	$1.69957 + 4.49340I$
$u = 0.603204 - 0.809374I$ $a = 0.29660 - 1.47876I$ $b = -1.094550 - 0.548167I$	$2.13900 + 4.35109I$	$1.69957 - 4.49340I$
$u = -0.383848 + 0.902790I$ $a = -0.618153 - 0.806863I$ $b = 0.628202 - 0.320445I$	$6.99548 + 5.21560I$	$5.06626 - 10.74725I$
$u = -0.383848 - 0.902790I$ $a = -0.618153 + 0.806863I$ $b = 0.628202 + 0.320445I$	$6.99548 - 5.21560I$	$5.06626 + 10.74725I$
$u = -0.648514 + 0.822215I$ $a = 0.414253 - 1.192590I$ $b = -0.129028 - 1.014040I$	$-0.78908 + 3.42720I$	$-3.11722 - 9.43783I$
$u = -0.648514 - 0.822215I$ $a = 0.414253 + 1.192590I$ $b = -0.129028 + 1.014040I$	$-0.78908 - 3.42720I$	$-3.11722 + 9.43783I$
$u = -0.404378 + 0.985375I$ $a = 0.681647 + 0.534909I$ $b = -0.628799 + 0.188622I$	$6.97379 - 0.97936I$	$2.14380 - 4.42680I$
$u = -0.404378 - 0.985375I$ $a = 0.681647 - 0.534909I$ $b = -0.628799 - 0.188622I$	$6.97379 + 0.97936I$	$2.14380 + 4.42680I$
$u = 0.867346 + 0.275922I$ $a = 0.913209 - 0.704051I$ $b = 0.930244 - 0.872725I$	$0.53572 - 1.51138I$	$-2.28158 + 1.95408I$
$u = 0.867346 - 0.275922I$ $a = 0.913209 + 0.704051I$ $b = 0.930244 + 0.872725I$	$0.53572 + 1.51138I$	$-2.28158 - 1.95408I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.829579+0.745332I$ $a=-0.323807+0.916399I$ $b=\ \ 0.20554+1.41759I$	$-2.31096+0.01849I$	$-1.78366+1.48028I$
$u=-0.829579-0.745332I$ $a=-0.323807-0.916399I$ $b=\ \ 0.20554-1.41759I$	$-2.31096-0.01849I$	$-1.78366-1.48028I$
$u=\ \ 0.871359+0.821323I$ $a=-0.009677-1.032930I$ $b=\ \ 1.180320-0.719837I$	$0.73610-8.24067I$	$-2.72267+8.70598I$
$u=\ \ 0.871359-0.821323I$ $a=-0.009677+1.032930I$ $b=\ \ 1.180320+0.719837I$	$0.73610+8.24067I$	$-2.72267-8.70598I$
$u=-0.676814+0.987894I$ $a=\ \ 0.735824-0.965341I$ $b=-0.526597-0.964939I$	$-0.22435+1.69315I$	$0.69403+2.03206I$
$u=-0.676814-0.987894I$ $a=\ \ 0.735824+0.965341I$ $b=-0.526597+0.964939I$	$-0.22435-1.69315I$	$0.69403-2.03206I$
$u=\ \ 0.360737+1.177760I$ $a=-0.017033+0.332514I$ $b=-0.927662-0.292814I$	$2.29381+2.51402I$	$-1.19591-4.68195I$
$u=\ \ 0.360737-1.177760I$ $a=-0.017033-0.332514I$ $b=-0.927662+0.292814I$	$2.29381-2.51402I$	$-1.19591+4.68195I$
$u=-1.231720+0.234032I$ $a=-0.614860-0.337013I$ $b=-0.485297-0.003569I$	$-2.15146-0.25175I$	$6.19891+8.76841I$
$u=-1.231720-0.234032I$ $a=-0.614860+0.337013I$ $b=-0.485297+0.003569I$	$-2.15146+0.25175I$	$6.19891-8.76841I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.552473 + 0.462183I$ $a = -0.98654 + 2.16131I$ $b = -0.851162 + 0.664272I$	$2.62025 - 5.69940I$	$1.20393 + 7.78726I$
$u = 0.552473 - 0.462183I$ $a = -0.98654 - 2.16131I$ $b = -0.851162 - 0.664272I$	$2.62025 + 5.69940I$	$1.20393 - 7.78726I$
$u = -0.800290 + 1.036500I$ $a = -0.619656 + 0.792306I$ $b = 0.649238 + 1.178040I$	$-1.40700 + 6.10902I$	$2.06343 - 6.00727I$
$u = -0.800290 - 1.036500I$ $a = -0.619656 - 0.792306I$ $b = 0.649238 - 1.178040I$	$-1.40700 - 6.10902I$	$2.06343 + 6.00727I$
$u = 0.172255 + 0.578149I$ $a = 0.133471 - 0.699001I$ $b = 1.68863 + 0.23144I$	$1.73768 + 1.21323I$	$1.59734 + 2.38690I$
$u = 0.172255 - 0.578149I$ $a = 0.133471 + 0.699001I$ $b = 1.68863 - 0.23144I$	$1.73768 - 1.21323I$	$1.59734 - 2.38690I$
$u = 0.368737 + 0.013777I$ $a = -1.13147 - 4.66059I$ $b = -0.111152 + 1.120390I$	$12.18670 - 3.59085I$	$2.96392 + 1.72170I$
$u = 0.368737 - 0.013777I$ $a = -1.13147 + 4.66059I$ $b = -0.111152 - 1.120390I$	$12.18670 + 3.59085I$	$2.96392 - 1.72170I$
$u = -1.82097 + 0.60339I$ $a = 0.146187 + 0.168237I$ $b = 0.472070 + 0.019838I$	$-4.66165 + 4.05235I$	0
$u = -1.82097 - 0.60339I$ $a = 0.146187 - 0.168237I$ $b = 0.472070 - 0.019838I$	$-4.66165 - 4.05235I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{30}-14u^{29}+\cdots-11u+1)(u^{66}+15u^{65}+\cdots-3u+1)$
c_2	$(u^{30}+7u^{28}+\cdots+u+1)(u^{66}+u^{65}+\cdots+15u+1)$
c_3	$(u^{30}+2u^{29}+\cdots-2u+1)(u^{66}+3u^{65}+\cdots+17224u+1571)$
c_4	$(u^{30}+5u^{29}+\cdots-3u+1)$ $\cdot(u^{66}+2u^{65}+\cdots-19824143u+13993901)$
c_5	$(u^{30}-19u^{29}+\cdots-1154u+131)(u^{66}-8u^{65}+\cdots+438u+29)$
c_6	$(u^{30}-u^{29}+\cdots-u+1)(u^{66}+28u^{64}+\cdots-13u+1)$
c_7	$(u^{30}+14u^{28}+\cdots-11u+1)$ $\cdot(u^{66}-u^{65}+\cdots+296940149u+21005497)$
c_8	$(u^{30}+7u^{28}+\cdots-u+1)(u^{66}+u^{65}+\cdots+15u+1)$
c_9	$(u^{30}+u^{29}+\cdots-8u^2+1)(u^{66}-4u^{65}+\cdots-1.09348\times10^7u+2425663)$
c_{10}	$(u^{30}+3u^{28}+\cdots-u+1)(u^{66}-u^{65}+\cdots+10841u+4167)$
c_{11}	$(u^{30}+u^{29}+\cdots+u+1)(u^{66}+28u^{64}+\cdots-13u+1)$
c_{12}	$(u^{30}+6u^{29}+\cdots-5u+1)(u^{66}-3u^{65}+\cdots-u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{30}+18y^{29}+\cdots+27y+1)(y^{66}+87y^{65}+\cdots+221y+1)$
c_2, c_8	$(y^{30}+14y^{29}+\cdots+11y+1)(y^{66}+15y^{65}+\cdots-3y+1)$
c_3	$(y^{30}-2y^{29}+\cdots-22y+1)$ $\cdot(y^{66}-25y^{65}+\cdots-67947428y+2468041)$
c_4	$(y^{30}+3y^{29}+\cdots-11y+1)$ $\cdot(y^{66}+52y^{65}+\cdots-1605005892392269y+195829265197801)$
c_5	$(y^{30}-31y^{29}+\cdots-199614y+17161)$ $\cdot(y^{66}-102y^{65}+\cdots-73060y+841)$
c_6, c_{11}	$(y^{30}+15y^{29}+\cdots+23y+1)(y^{66}+56y^{65}+\cdots-55y+1)$
c_7	$(y^{30}+28y^{29}+\cdots-13y+1)$ $\cdot(y^{66}+165y^{65}+\cdots+9982498502631681y+441230904217009)$
c_9	$(y^{30}+7y^{29}+\cdots-16y+1)$ $\cdot(y^{66}+96y^{65}+\cdots-208158950639894y+5883840989569)$
c_{10}	$(y^{30}+6y^{29}+\cdots-29y+1)$ $\cdot(y^{66}-21y^{65}+\cdots+301897937y+17363889)$
c_{12}	$(y^{30}-2y^{29}+\cdots-9y+1)(y^{66}+7y^{65}+\cdots+93y+1)$