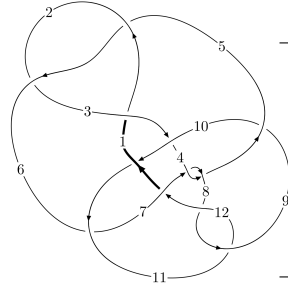
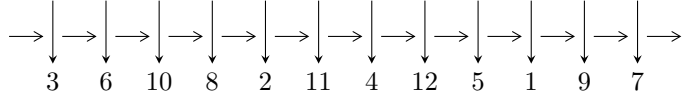


12a₀₄₃₁ (K12a₀₄₃₁)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -1.08221 \times 10^{1017} u^{182} + 1.35395 \times 10^{1018} u^{181} + \dots + 2.55657 \times 10^{1018} b + 6.03949 \times 10^{1020}, \\ 6.03054 \times 10^{1019} u^{182} - 8.16888 \times 10^{1020} u^{181} + \dots + 2.10491 \times 10^{1020} a + 2.67814 \times 10^{1023}, \\ u^{183} - 13u^{182} + \dots + 6260u - 3952 \rangle$$

$$I_2^u = \langle -5.30317 \times 10^{15} u^{45} + 9.11536 \times 10^{16} u^{44} + \dots + 9.18144 \times 10^{14} b - 6.45933 \times 10^{16}, \\ 1.83232 \times 10^{17} u^{45} - 3.25201 \times 10^{18} u^{44} + \dots + 6.42701 \times 10^{15} a + 4.76357 \times 10^{17}, u^{46} - 18u^{45} + \dots - 97u + \dots \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 229 representations.

¹The 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>).

²All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\mathbf{I. } I_1^u = \langle -1.08 \times 10^{1017} u^{182} + 1.35 \times 10^{1018} u^{181} + \dots + 2.56 \times 10^{1018} b + 6.04 \times 10^{1020}, 6.03 \times 10^{1019} u^{182} - 8.17 \times 10^{1020} u^{181} + \dots + 2.10 \times 10^{1020} a + 2.68 \times 10^{1023}, u^{183} - 13u^{182} + \dots + 6260u - 3952 \rangle$$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -0.286499u^{182} + 3.88088u^{181} + \dots + 4569.49u - 1272.33 \\ 0.0423306u^{182} - 0.529598u^{181} + \dots + 222.058u - 236.235 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.387179u^{182} - 4.99816u^{181} + \dots - 1287.11u - 949.545 \\ 0.0501010u^{182} - 0.653556u^{181} + \dots - 265.486u - 132.693 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.244169u^{182} + 3.35128u^{181} + \dots + 4791.55u - 1508.57 \\ 0.0423306u^{182} - 0.529598u^{181} + \dots + 222.058u - 236.235 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.117373u^{182} + 1.35855u^{181} + \dots - 1035.35u + 1306.01 \\ -0.111769u^{182} + 1.45629u^{181} + \dots + 1217.32u - 0.425868 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.150852u^{182} + 1.98096u^{181} + \dots + 1225.75u + 102.938 \\ 0.00953673u^{182} - 0.157843u^{181} + \dots - 704.908u + 345.154 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.119555u^{182} + 1.73225u^{181} + \dots + 3788.50u - 1319.55 \\ -0.0310668u^{182} + 0.464528u^{181} + \dots + 1509.59u - 561.843 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.193264u^{182} + 2.55272u^{181} + \dots + 1827.85u - 18.6801 \\ -0.0164454u^{182} + 0.188229u^{181} + \dots - 398.097u + 304.139 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0929241u^{182} - 1.36603u^{181} + \dots - 2642.26u + 1101.99 \\ -0.0701137u^{182} + 0.884804u^{181} + \dots + 214.247u + 298.614 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-0.0678249u^{182} + 0.743225u^{181} + \dots - 2271.57u + 1265.71$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{183} + 82u^{182} + \dots + 16u + 1$
c_2, c_5	$u^{183} + 4u^{182} + \dots + 20u + 1$
c_3	$u^{183} + 2u^{182} + \dots + 136040u + 44287$
c_4, c_7	$u^{183} + 2u^{182} + \dots + 30967u + 8921$
c_6	$u^{183} - 2u^{182} + \dots + 10862u + 527$
c_8, c_{11}	$u^{183} + 13u^{182} + \dots + 6260u + 3952$
c_9	$u^{183} - u^{182} + \dots + 36530383u + 15439309$
c_{10}	$u^{183} - 13u^{182} + \dots + 808u + 1$
c_{12}	$u^{183} + 8u^{182} + \dots - 9354518u + 728723$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{183} + 50y^{182} + \dots + 4624y - 1$
c_2, c_5	$y^{183} - 82y^{182} + \dots + 16y - 1$
c_3	$y^{183} + 4y^{182} + \dots - 261117339144y - 1961338369$
c_4, c_7	$y^{183} - 100y^{182} + \dots + 3828341213y - 79584241$
c_6	$y^{183} + 26y^{182} + \dots - 28715838y - 277729$
c_8, c_{11}	$y^{183} + 99y^{182} + \dots - 447121808y - 15618304$
c_9	$y^{183} - y^{182} + \dots + 6862895901260619y - 238372262397481$
c_{10}	$y^{183} + 15y^{182} + \dots + 315098y - 1$
c_{12}	$y^{183} + 2y^{182} + \dots - 44241446103030y - 531037210729$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.109145 + 1.004260I$ $a = -0.32645 + 1.94373I$ $b = 0.46884 - 1.59401I$	$5.73632 + 2.61032I$	0
$u = 0.109145 - 1.004260I$ $a = -0.32645 - 1.94373I$ $b = 0.46884 + 1.59401I$	$5.73632 - 2.61032I$	0
$u = 0.474605 + 0.855807I$ $a = -0.16105 - 1.96522I$ $b = 0.936293 + 0.779716I$	$-0.11444 - 4.46856I$	0
$u = 0.474605 - 0.855807I$ $a = -0.16105 + 1.96522I$ $b = 0.936293 - 0.779716I$	$-0.11444 + 4.46856I$	0
$u = 0.787313 + 0.573287I$ $a = -0.481590 + 0.075837I$ $b = -1.200510 - 0.275493I$	$-3.41227 - 6.64607I$	0
$u = 0.787313 - 0.573287I$ $a = -0.481590 - 0.075837I$ $b = -1.200510 + 0.275493I$	$-3.41227 + 6.64607I$	0
$u = -0.431412 + 0.951554I$ $a = 0.61887 - 1.92842I$ $b = -1.197510 + 0.388597I$	$-6.95643 + 2.58003I$	0
$u = -0.431412 - 0.951554I$ $a = 0.61887 + 1.92842I$ $b = -1.197510 - 0.388597I$	$-6.95643 - 2.58003I$	0
$u = -0.224766 + 0.923643I$ $a = 0.29247 + 1.45607I$ $b = 0.967832 - 0.499646I$	$0.203430 + 0.797452I$	0
$u = -0.224766 - 0.923643I$ $a = 0.29247 - 1.45607I$ $b = 0.967832 + 0.499646I$	$0.203430 - 0.797452I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.146019 + 1.045120I$ $a = -0.70016 - 1.67400I$ $b = 0.296606 + 1.315740I$	$5.88429 - 2.90843I$	0
$u = -0.146019 - 1.045120I$ $a = -0.70016 + 1.67400I$ $b = 0.296606 - 1.315740I$	$5.88429 + 2.90843I$	0
$u = 0.089576 + 1.061220I$ $a = -0.03862 - 1.84294I$ $b = -0.11882 + 1.47999I$	$5.79090 - 3.15817I$	0
$u = 0.089576 - 1.061220I$ $a = -0.03862 + 1.84294I$ $b = -0.11882 - 1.47999I$	$5.79090 + 3.15817I$	0
$u = -0.491782 + 0.787874I$ $a = 0.63547 - 1.75863I$ $b = -1.234790 + 0.402039I$	$-3.35915 - 5.35503I$	0
$u = -0.491782 - 0.787874I$ $a = 0.63547 + 1.75863I$ $b = -1.234790 - 0.402039I$	$-3.35915 + 5.35503I$	0
$u = -0.398828 + 0.831123I$ $a = 0.05013 - 1.70457I$ $b = -1.65689 + 0.06147I$	$-8.67420 + 1.70955I$	0
$u = -0.398828 - 0.831123I$ $a = 0.05013 + 1.70457I$ $b = -1.65689 - 0.06147I$	$-8.67420 - 1.70955I$	0
$u = 0.042485 + 0.916931I$ $a = -0.07239 + 2.04280I$ $b = 1.083850 - 0.608952I$	$1.34148 + 3.84832I$	0
$u = 0.042485 - 0.916931I$ $a = -0.07239 - 2.04280I$ $b = 1.083850 + 0.608952I$	$1.34148 - 3.84832I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.253570 + 1.056280I$ $a = 0.675074 + 0.822827I$ $b = -0.397454 - 0.735287I$	$2.06637 - 1.14443I$	0
$u = 0.253570 - 1.056280I$ $a = 0.675074 - 0.822827I$ $b = -0.397454 + 0.735287I$	$2.06637 + 1.14443I$	0
$u = -0.303028 + 1.053370I$ $a = -0.74779 + 2.44925I$ $b = 1.151140 - 0.297713I$	$0.37592 + 4.43107I$	0
$u = -0.303028 - 1.053370I$ $a = -0.74779 - 2.44925I$ $b = 1.151140 + 0.297713I$	$0.37592 - 4.43107I$	0
$u = -0.398687 + 0.798508I$ $a = -0.56518 + 1.73812I$ $b = 1.225740 - 0.381156I$	$-1.337870 + 0.050450I$	0
$u = -0.398687 - 0.798508I$ $a = -0.56518 - 1.73812I$ $b = 1.225740 + 0.381156I$	$-1.337870 - 0.050450I$	0
$u = 0.434704 + 1.025960I$ $a = -0.391022 + 1.152800I$ $b = 0.452956 - 0.741335I$	$-0.139475 - 0.478764I$	0
$u = 0.434704 - 1.025960I$ $a = -0.391022 - 1.152800I$ $b = 0.452956 + 0.741335I$	$-0.139475 + 0.478764I$	0
$u = -0.458957 + 0.752394I$ $a = 0.73148 + 1.43664I$ $b = 0.972081 - 0.615995I$	$0.094435 + 0.634449I$	0
$u = -0.458957 - 0.752394I$ $a = 0.73148 - 1.43664I$ $b = 0.972081 + 0.615995I$	$0.094435 - 0.634449I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.702531 + 0.872299I$ $a = 0.202738 - 0.517122I$ $b = -0.998318 + 0.365025I$	$-2.20573 - 4.10299I$	0
$u = 0.702531 - 0.872299I$ $a = 0.202738 + 0.517122I$ $b = -0.998318 - 0.365025I$	$-2.20573 + 4.10299I$	0
$u = 1.130090 + 0.012260I$ $a = -0.087064 - 0.118191I$ $b = -1.135540 - 0.226140I$	$-4.63431 - 0.29028I$	0
$u = 1.130090 - 0.012260I$ $a = -0.087064 + 0.118191I$ $b = -1.135540 + 0.226140I$	$-4.63431 + 0.29028I$	0
$u = -0.353012 + 0.788504I$ $a = 0.608945 - 0.237573I$ $b = -1.64585 - 0.07715I$	$-3.49751 + 8.99933I$	0
$u = -0.353012 - 0.788504I$ $a = 0.608945 + 0.237573I$ $b = -1.64585 + 0.07715I$	$-3.49751 - 8.99933I$	0
$u = -0.283921 + 1.106070I$ $a = 0.70475 + 1.43336I$ $b = -0.308285 - 1.271040I$	$6.91633 + 3.38590I$	0
$u = -0.283921 - 1.106070I$ $a = 0.70475 - 1.43336I$ $b = -0.308285 + 1.271040I$	$6.91633 - 3.38590I$	0
$u = -1.067610 + 0.423916I$ $a = 0.1193080 - 0.0260623I$ $b = 1.186720 + 0.496387I$	$-6.24789 - 6.13386I$	0
$u = -1.067610 - 0.423916I$ $a = 0.1193080 + 0.0260623I$ $b = 1.186720 - 0.496387I$	$-6.24789 + 6.13386I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.113524 + 0.842312I$ $a = 0.07623 - 2.18664I$ $b = -1.056900 + 0.627645I$	$0.986054 - 0.412804I$	0
$u = 0.113524 - 0.842312I$ $a = 0.07623 + 2.18664I$ $b = -1.056900 - 0.627645I$	$0.986054 + 0.412804I$	0
$u = 0.399422 + 1.080510I$ $a = -0.67177 - 1.48623I$ $b = 0.773473 - 0.007435I$	$1.24957 - 1.07670I$	0
$u = 0.399422 - 1.080510I$ $a = -0.67177 + 1.48623I$ $b = 0.773473 + 0.007435I$	$1.24957 + 1.07670I$	0
$u = 0.254841 + 1.124830I$ $a = 0.89046 - 1.87820I$ $b = 1.027580 + 0.329027I$	$4.20286 - 4.07396I$	0
$u = 0.254841 - 1.124830I$ $a = 0.89046 + 1.87820I$ $b = 1.027580 - 0.329027I$	$4.20286 + 4.07396I$	0
$u = -0.019531 + 0.843861I$ $a = -0.808548 - 0.403324I$ $b = 0.506373 + 0.692372I$	$1.46987 - 4.37845I$	0
$u = -0.019531 - 0.843861I$ $a = -0.808548 + 0.403324I$ $b = 0.506373 - 0.692372I$	$1.46987 + 4.37845I$	0
$u = 1.052910 + 0.481840I$ $a = -0.611221 + 0.357938I$ $b = -0.910693 + 0.163806I$	$-3.51368 + 0.79772I$	0
$u = 1.052910 - 0.481840I$ $a = -0.611221 - 0.357938I$ $b = -0.910693 - 0.163806I$	$-3.51368 - 0.79772I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.345762 + 1.107380I$ $a = 0.93334 - 2.22617I$ $b = -1.119480 + 0.339824I$	$-1.45556 + 10.63760I$	0
$u = -0.345762 - 1.107380I$ $a = 0.93334 + 2.22617I$ $b = -1.119480 - 0.339824I$	$-1.45556 - 10.63760I$	0
$u = 0.511654 + 0.642564I$ $a = -0.529780 + 0.454081I$ $b = 1.051550 - 0.416862I$	$-0.678419 + 0.466821I$	0
$u = 0.511654 - 0.642564I$ $a = -0.529780 - 0.454081I$ $b = 1.051550 + 0.416862I$	$-0.678419 - 0.466821I$	0
$u = -0.318264 + 0.750714I$ $a = -0.562016 + 0.468041I$ $b = 1.58856 + 0.01371I$	$-1.60032 + 3.27151I$	0
$u = -0.318264 - 0.750714I$ $a = -0.562016 - 0.468041I$ $b = 1.58856 - 0.01371I$	$-1.60032 - 3.27151I$	0
$u = 0.804315 + 0.124211I$ $a = 0.138450 - 0.772152I$ $b = -0.093252 + 0.370978I$	$-2.30567 + 1.61661I$	0
$u = 0.804315 - 0.124211I$ $a = 0.138450 + 0.772152I$ $b = -0.093252 - 0.370978I$	$-2.30567 - 1.61661I$	0
$u = 0.659084 + 0.477297I$ $a = 0.420291 - 0.946191I$ $b = -0.350893 + 0.419700I$	$-1.61613 - 3.71425I$	0
$u = 0.659084 - 0.477297I$ $a = 0.420291 + 0.946191I$ $b = -0.350893 - 0.419700I$	$-1.61613 + 3.71425I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.730801 + 0.939627I$ $a = 0.867974 + 1.090830I$ $b = 0.668981 - 0.612045I$	$2.31740 + 8.92866I$	0
$u = -0.730801 - 0.939627I$ $a = 0.867974 - 1.090830I$ $b = 0.668981 + 0.612045I$	$2.31740 - 8.92866I$	0
$u = -0.474103 + 1.094950I$ $a = -0.642206 - 1.143190I$ $b = 0.361960 + 1.207710I$	$-0.72684 + 5.65398I$	0
$u = -0.474103 - 1.094950I$ $a = -0.642206 + 1.143190I$ $b = 0.361960 - 1.207710I$	$-0.72684 - 5.65398I$	0
$u = -0.431482 + 1.114870I$ $a = -0.01943 + 1.78821I$ $b = 1.33997 - 0.62582I$	$2.33597 + 3.67582I$	0
$u = -0.431482 - 1.114870I$ $a = -0.01943 - 1.78821I$ $b = 1.33997 + 0.62582I$	$2.33597 - 3.67582I$	0
$u = -0.646738 + 1.007510I$ $a = -0.744686 - 1.114610I$ $b = -0.748352 + 0.577690I$	$4.67821 + 3.49103I$	0
$u = -0.646738 - 1.007510I$ $a = -0.744686 + 1.114610I$ $b = -0.748352 - 0.577690I$	$4.67821 - 3.49103I$	0
$u = -1.170530 + 0.252592I$ $a = -0.199498 + 0.185514I$ $b = -1.180860 - 0.500188I$	$-0.60107 - 8.67171I$	0
$u = -1.170530 - 0.252592I$ $a = -0.199498 - 0.185514I$ $b = -1.180860 + 0.500188I$	$-0.60107 + 8.67171I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.797110 + 0.076706I$		
$a = 1.120170 + 0.608336I$	$0.41690 - 9.52197I$	0
$b = 0.099356 - 0.740353I$		
$u = -0.797110 - 0.076706I$		
$a = 1.120170 - 0.608336I$	$0.41690 + 9.52197I$	0
$b = 0.099356 + 0.740353I$		
$u = -0.788029 + 0.129530I$		
$a = -0.654235 - 0.039991I$	$0.53003 - 5.27967I$	0
$b = -1.144920 - 0.475116I$		
$u = -0.788029 - 0.129530I$		
$a = -0.654235 + 0.039991I$	$0.53003 + 5.27967I$	0
$b = -1.144920 + 0.475116I$		
$u = 0.798323 + 0.932992I$		
$a = -0.07037 + 1.58809I$	$-2.86365 - 8.03010I$	0
$b = -1.006650 - 0.609707I$		
$u = 0.798323 - 0.932992I$		
$a = -0.07037 - 1.58809I$	$-2.86365 + 8.03010I$	0
$b = -1.006650 + 0.609707I$		
$u = 1.175730 + 0.358109I$		
$a = -0.411681 + 0.018031I$	$-3.41980 + 0.72619I$	0
$b = -0.976199 + 0.219898I$		
$u = 1.175730 - 0.358109I$		
$a = -0.411681 - 0.018031I$	$-3.41980 - 0.72619I$	0
$b = -0.976199 - 0.219898I$		
$u = -0.372457 + 0.671523I$		
$a = -0.042280 - 0.317881I$	$-7.90926 + 0.91624I$	0
$b = -1.48840 - 0.13772I$		
$u = -0.372457 - 0.671523I$		
$a = -0.042280 + 0.317881I$	$-7.90926 - 0.91624I$	0
$b = -1.48840 + 0.13772I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.532725 + 1.114590I$ $a = -0.635982 - 0.234884I$ $b = 0.892669 + 0.739734I$	$1.69874 + 3.76399I$	0
$u = -0.532725 - 1.114590I$ $a = -0.635982 + 0.234884I$ $b = 0.892669 - 0.739734I$	$1.69874 - 3.76399I$	0
$u = 0.316657 + 1.201900I$ $a = 0.502826 + 1.087630I$ $b = -0.281956 - 0.866275I$	$3.12234 - 5.83694I$	0
$u = 0.316657 - 1.201900I$ $a = 0.502826 - 1.087630I$ $b = -0.281956 + 0.866275I$	$3.12234 + 5.83694I$	0
$u = 0.052081 + 0.754387I$ $a = -0.28394 - 3.64393I$ $b = 0.688567 + 0.068851I$	$2.46103 + 2.56983I$	0
$u = 0.052081 - 0.754387I$ $a = -0.28394 + 3.64393I$ $b = 0.688567 - 0.068851I$	$2.46103 - 2.56983I$	0
$u = 0.309349 + 1.213200I$ $a = 0.158221 - 0.960573I$ $b = -0.190956 + 0.682689I$	$2.60658 - 2.53272I$	0
$u = 0.309349 - 1.213200I$ $a = 0.158221 + 0.960573I$ $b = -0.190956 - 0.682689I$	$2.60658 + 2.53272I$	0
$u = 0.287985 + 1.221130I$ $a = -0.56421 + 1.81954I$ $b = -1.023200 - 0.378284I$	$3.40119 - 9.63122I$	0
$u = 0.287985 - 1.221130I$ $a = -0.56421 - 1.81954I$ $b = -1.023200 + 0.378284I$	$3.40119 + 9.63122I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.271230 + 1.227850I$	$3.78481 - 1.52233I$	0
$a = -0.374753 - 1.132670I$		
$b = 0.191130 + 0.893619I$		
$u = 0.271230 - 1.227850I$	$3.78481 + 1.52233I$	0
$a = -0.374753 + 1.132670I$		
$b = 0.191130 - 0.893619I$		
$u = -0.723508 + 0.027656I$	$2.46625 - 4.03969I$	0
$a = -1.114770 - 0.447162I$		
$b = -0.112143 + 0.739716I$		
$u = -0.723508 - 0.027656I$	$2.46625 + 4.03969I$	0
$a = -1.114770 + 0.447162I$		
$b = -0.112143 - 0.739716I$		
$u = -0.351815 + 1.228810I$	$4.65134 - 1.22493I$	0
$a = 0.572380 + 0.339024I$		
$b = -0.754831 - 0.618004I$		
$u = -0.351815 - 1.228810I$	$4.65134 + 1.22493I$	0
$a = 0.572380 - 0.339024I$		
$b = -0.754831 + 0.618004I$		
$u = 0.368231 + 1.230390I$	$2.72777 - 5.38077I$	0
$a = -0.56519 - 1.46369I$		
$b = 1.30650 + 0.80006I$		
$u = 0.368231 - 1.230390I$	$2.72777 + 5.38077I$	0
$a = -0.56519 + 1.46369I$		
$b = 1.30650 - 0.80006I$		
$u = -1.253930 + 0.286644I$	$-2.6809 - 14.1536I$	0
$a = 0.135769 - 0.216636I$		
$b = 1.183810 + 0.500442I$		
$u = -1.253930 - 0.286644I$	$-2.6809 + 14.1536I$	0
$a = 0.135769 + 0.216636I$		
$b = 1.183810 - 0.500442I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.467277 + 1.199050I$		
$a = 0.543327 + 1.242050I$	$5.82307 + 8.46174I$	0
$b = -0.318009 - 1.205300I$		
$u = -0.467277 - 1.199050I$		
$a = 0.543327 - 1.242050I$	$5.82307 - 8.46174I$	0
$b = -0.318009 + 1.205300I$		
$u = 1.153870 + 0.571829I$		
$a = -0.059652 - 0.287124I$	$-4.13877 + 1.34883I$	0
$b = -1.018420 + 0.298492I$		
$u = 1.153870 - 0.571829I$		
$a = -0.059652 + 0.287124I$	$-4.13877 - 1.34883I$	0
$b = -1.018420 - 0.298492I$		
$u = -0.514708 + 1.188900I$		
$a = 0.00545 - 1.68380I$	$3.60772 + 10.08900I$	0
$b = -1.31368 + 0.66694I$		
$u = -0.514708 - 1.188900I$		
$a = 0.00545 + 1.68380I$	$3.60772 - 10.08900I$	0
$b = -1.31368 - 0.66694I$		
$u = -0.054175 + 0.685608I$		
$a = 0.51808 + 3.97083I$	$0.66321 + 8.31222I$	0
$b = -0.629872 - 0.097015I$		
$u = -0.054175 - 0.685608I$		
$a = 0.51808 - 3.97083I$	$0.66321 - 8.31222I$	0
$b = -0.629872 + 0.097015I$		
$u = -0.506043 + 1.215480I$		
$a = -0.504501 - 1.225330I$	$3.7377 + 14.3343I$	0
$b = 0.313126 + 1.193960I$		
$u = -0.506043 - 1.215480I$		
$a = -0.504501 + 1.225330I$	$3.7377 - 14.3343I$	0
$b = 0.313126 - 1.193960I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.486321 + 1.228590I$ $a = -0.510957 - 1.020370I$ $b = -0.813686 + 0.465520I$	$5.78014 + 0.41286I$	0
$u = -0.486321 - 1.228590I$ $a = -0.510957 + 1.020370I$ $b = -0.813686 - 0.465520I$	$5.78014 - 0.41286I$	0
$u = 0.546514 + 0.397402I$ $a = -1.95929 + 1.33528I$ $b = -0.727239 + 0.164143I$	$-3.54777 + 0.93531I$	0
$u = 0.546514 - 0.397402I$ $a = -1.95929 - 1.33528I$ $b = -0.727239 - 0.164143I$	$-3.54777 - 0.93531I$	0
$u = 1.332810 + 0.174266I$ $a = 0.446401 + 0.471452I$ $b = 0.969672 - 0.309326I$	$-4.87780 + 3.81110I$	0
$u = 1.332810 - 0.174266I$ $a = 0.446401 - 0.471452I$ $b = 0.969672 + 0.309326I$	$-4.87780 - 3.81110I$	0
$u = -0.425880 + 0.495966I$ $a = -0.156712 - 0.002836I$ $b = 0.331826 + 0.747219I$	$1.68304 - 4.25771I$	0
$u = -0.425880 - 0.495966I$ $a = -0.156712 + 0.002836I$ $b = 0.331826 - 0.747219I$	$1.68304 + 4.25771I$	0
$u = 0.477424 + 1.265660I$ $a = -0.424691 + 1.023380I$ $b = 0.387518 - 0.643458I$	$1.19681 - 6.24940I$	0
$u = 0.477424 - 1.265660I$ $a = -0.424691 - 1.023380I$ $b = 0.387518 + 0.643458I$	$1.19681 + 6.24940I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.415418 + 1.306020I$ $a = 0.442663 + 0.980641I$ $b = 0.828008 - 0.438106I$	$4.34402 - 4.90681I$	0
$u = -0.415418 - 1.306020I$ $a = 0.442663 - 0.980641I$ $b = 0.828008 + 0.438106I$	$4.34402 + 4.90681I$	0
$u = 0.344518 + 1.331030I$ $a = 0.442440 - 0.818560I$ $b = -0.344799 + 0.522779I$	$2.37133 - 2.38494I$	0
$u = 0.344518 - 1.331030I$ $a = 0.442440 + 0.818560I$ $b = -0.344799 - 0.522779I$	$2.37133 + 2.38494I$	0
$u = 0.397657 + 1.316400I$ $a = 0.54626 + 1.32460I$ $b = -1.35181 - 0.72427I$	$1.94394 - 10.46340I$	0
$u = 0.397657 - 1.316400I$ $a = 0.54626 - 1.32460I$ $b = -1.35181 + 0.72427I$	$1.94394 + 10.46340I$	0
$u = -0.669803 + 1.204120I$ $a = 0.04594 + 1.54936I$ $b = 1.29166 - 0.68988I$	$-3.74950 + 12.34900I$	0
$u = -0.669803 - 1.204120I$ $a = 0.04594 - 1.54936I$ $b = 1.29166 + 0.68988I$	$-3.74950 - 12.34900I$	0
$u = -0.125365 + 0.602866I$ $a = 1.63023 + 0.53483I$ $b = 1.301450 + 0.164867I$	$-1.29014 - 2.00406I$	$-21.7805 + 0.I$
$u = -0.125365 - 0.602866I$ $a = 1.63023 - 0.53483I$ $b = 1.301450 - 0.164867I$	$-1.29014 + 2.00406I$	$-21.7805 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.614088 + 1.240630I$ $a = 0.336906 + 0.967331I$ $b = -0.805910 - 0.029245I$	$-0.98162 - 5.70269I$	0
$u = 0.614088 - 1.240630I$ $a = 0.336906 - 0.967331I$ $b = -0.805910 + 0.029245I$	$-0.98162 + 5.70269I$	0
$u = 0.146516 + 1.378940I$ $a = -1.235180 + 0.504746I$ $b = 0.639378 - 0.273765I$	$5.54116 - 1.26847I$	0
$u = 0.146516 - 1.378940I$ $a = -1.235180 - 0.504746I$ $b = 0.639378 + 0.273765I$	$5.54116 + 1.26847I$	0
$u = 0.518714 + 0.322835I$ $a = -1.31956 + 2.49608I$ $b = -0.703637 - 0.519861I$	$-3.58538 - 1.09348I$	$-21.7391 + 0.I$
$u = 0.518714 - 0.322835I$ $a = -1.31956 - 2.49608I$ $b = -0.703637 + 0.519861I$	$-3.58538 + 1.09348I$	$-21.7391 + 0.I$
$u = -0.566763 + 0.220863I$ $a = 1.67423 + 0.55409I$ $b = 0.091554 - 0.741119I$	$-3.11477 - 1.50552I$	$-16.4873 + 3.6407I$
$u = -0.566763 - 0.220863I$ $a = 1.67423 - 0.55409I$ $b = 0.091554 + 0.741119I$	$-3.11477 + 1.50552I$	$-16.4873 - 3.6407I$
$u = 0.013734 + 0.603834I$ $a = -0.39739 - 2.50833I$ $b = -1.000060 + 0.601318I$	$0.40914 + 3.96289I$	$-10.29324 - 6.29056I$
$u = 0.013734 - 0.603834I$ $a = -0.39739 + 2.50833I$ $b = -1.000060 - 0.601318I$	$0.40914 - 3.96289I$	$-10.29324 + 6.29056I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.766595 + 1.172660I$		
$a = 0.124982 - 0.832007I$	$-2.46228 - 4.69197I$	0
$b = 1.242430 + 0.389858I$		
$u = 0.766595 - 1.172660I$		
$a = 0.124982 + 0.832007I$	$-2.46228 + 4.69197I$	0
$b = 1.242430 - 0.389858I$		
$u = 1.391360 + 0.228907I$		
$a = 0.113769 - 0.171494I$	$-5.14793 + 3.11046I$	0
$b = 1.083860 - 0.153683I$		
$u = 1.391360 - 0.228907I$		
$a = 0.113769 + 0.171494I$	$-5.14793 - 3.11046I$	0
$b = 1.083860 + 0.153683I$		
$u = 0.63153 + 1.27627I$		
$a = -0.020531 + 1.229020I$	$-0.32456 - 7.07139I$	0
$b = -1.182700 - 0.495337I$		
$u = 0.63153 - 1.27627I$		
$a = -0.020531 - 1.229020I$	$-0.32456 + 7.07139I$	0
$b = -1.182700 + 0.495337I$		
$u = 0.18170 + 1.42855I$		
$a = 1.022300 - 0.674010I$	$4.80356 - 6.37770I$	0
$b = -0.592432 + 0.352205I$		
$u = 0.18170 - 1.42855I$		
$a = 1.022300 + 0.674010I$	$4.80356 + 6.37770I$	0
$b = -0.592432 - 0.352205I$		
$u = 1.37397 + 0.43638I$		
$a = 0.221802 + 0.374664I$	$-4.89879 - 1.87482I$	0
$b = 0.999430 - 0.293615I$		
$u = 1.37397 - 0.43638I$		
$a = 0.221802 - 0.374664I$	$-4.89879 + 1.87482I$	0
$b = 0.999430 + 0.293615I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.496533 + 0.253809I$ $a = -0.466070 - 0.196336I$ $b = -0.215534 - 0.709071I$	$3.23792 + 0.82542I$	$-6.89615 - 2.38411I$
$u = -0.496533 - 0.253809I$ $a = -0.466070 + 0.196336I$ $b = -0.215534 + 0.709071I$	$3.23792 - 0.82542I$	$-6.89615 + 2.38411I$
$u = -0.64896 + 1.29851I$ $a = 0.03387 - 1.54317I$ $b = -1.28982 + 0.67958I$	$2.7112 + 15.0738I$	0
$u = -0.64896 - 1.29851I$ $a = 0.03387 + 1.54317I$ $b = -1.28982 - 0.67958I$	$2.7112 - 15.0738I$	0
$u = 0.76731 + 1.25750I$ $a = -0.05192 - 1.44891I$ $b = 1.094440 + 0.573842I$	$-2.09983 - 5.48874I$	0
$u = 0.76731 - 1.25750I$ $a = -0.05192 + 1.44891I$ $b = 1.094440 - 0.573842I$	$-2.09983 + 5.48874I$	0
$u = 1.38692 + 0.49888I$ $a = 0.192033 - 0.307439I$ $b = 1.015820 - 0.109600I$	$-4.78336 - 2.61030I$	0
$u = 1.38692 - 0.49888I$ $a = 0.192033 + 0.307439I$ $b = 1.015820 + 0.109600I$	$-4.78336 + 2.61030I$	0
$u = 0.16564 + 1.47662I$ $a = -0.531337 - 0.455411I$ $b = 0.652875 + 0.220274I$	$1.60056 - 2.69066I$	0
$u = 0.16564 - 1.47662I$ $a = -0.531337 + 0.455411I$ $b = 0.652875 - 0.220274I$	$1.60056 + 2.69066I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.68289 + 1.32024I$ $a = -0.04204 + 1.51465I$ $b = 1.28754 - 0.67942I$	$0.6343 + 20.9175I$	0
$u = -0.68289 - 1.32024I$ $a = -0.04204 - 1.51465I$ $b = 1.28754 + 0.67942I$	$0.6343 - 20.9175I$	0
$u = 0.60498 + 1.36829I$ $a = -0.05591 + 1.45303I$ $b = -1.097990 - 0.508722I$	$0.17372 - 6.69047I$	0
$u = 0.60498 - 1.36829I$ $a = -0.05591 - 1.45303I$ $b = -1.097990 + 0.508722I$	$0.17372 + 6.69047I$	0
$u = 0.63166 + 1.35633I$ $a = 0.235837 + 1.100380I$ $b = -1.291270 - 0.533265I$	$-0.50588 - 6.57404I$	0
$u = 0.63166 - 1.35633I$ $a = 0.235837 - 1.100380I$ $b = -1.291270 + 0.533265I$	$-0.50588 + 6.57404I$	0
$u = -0.275847 + 0.407167I$ $a = -1.313260 + 0.497056I$ $b = -1.361700 - 0.253712I$	$-3.66517 - 7.66196I$	$-18.6801 + 1.6819I$
$u = -0.275847 - 0.407167I$ $a = -1.313260 - 0.497056I$ $b = -1.361700 + 0.253712I$	$-3.66517 + 7.66196I$	$-18.6801 - 1.6819I$
$u = 0.205389 + 0.430760I$ $a = -0.74249 + 1.21447I$ $b = 0.620928 - 0.135571I$	$-0.447847 + 0.185650I$	$-12.14694 + 0.21668I$
$u = 0.205389 - 0.430760I$ $a = -0.74249 - 1.21447I$ $b = 0.620928 + 0.135571I$	$-0.447847 - 0.185650I$	$-12.14694 - 0.21668I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.73692 + 1.35526I$ $a = -0.161369 - 0.932804I$ $b = 1.303480 + 0.460573I$	$-1.53863 - 10.41700I$	0
$u = 0.73692 - 1.35526I$ $a = -0.161369 + 0.932804I$ $b = 1.303480 - 0.460573I$	$-1.53863 + 10.41700I$	0
$u = 0.410475 + 0.152923I$ $a = 0.448222 + 1.123910I$ $b = 1.201530 + 0.302554I$	$-1.08479 - 2.28739I$	$-14.2740 + 2.5495I$
$u = 0.410475 - 0.152923I$ $a = 0.448222 - 1.123910I$ $b = 1.201530 - 0.302554I$	$-1.08479 + 2.28739I$	$-14.2740 - 2.5495I$
$u = 0.68759 + 1.40627I$ $a = -0.01422 - 1.46818I$ $b = 1.088640 + 0.536050I$	$-0.85640 - 10.87850I$	0
$u = 0.68759 - 1.40627I$ $a = -0.01422 + 1.46818I$ $b = 1.088640 - 0.536050I$	$-0.85640 + 10.87850I$	0
$u = -0.19606 + 1.57358I$ $a = 0.474004 + 0.387596I$ $b = -0.777694 - 0.405568I$	$5.95156 - 3.30419I$	0
$u = -0.19606 - 1.57358I$ $a = 0.474004 - 0.387596I$ $b = -0.777694 + 0.405568I$	$5.95156 + 3.30419I$	0
$u = -0.347973 + 0.210206I$ $a = 1.12522 + 1.40603I$ $b = 1.040380 + 0.353947I$	$-0.224627 - 0.064113I$	$-9.97227 + 1.02683I$
$u = -0.347973 - 0.210206I$ $a = 1.12522 - 1.40603I$ $b = 1.040380 - 0.353947I$	$-0.224627 + 0.064113I$	$-9.97227 - 1.02683I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.12611 + 1.68152I$ $a = -0.452111 - 0.405072I$ $b = 0.794743 + 0.354300I$	$4.54856 - 8.35215I$	0
$u = -0.12611 - 1.68152I$ $a = -0.452111 + 0.405072I$ $b = 0.794743 - 0.354300I$	$4.54856 + 8.35215I$	0
$u = 0.267414$ $a = -1.42355$ $b = 0.334187$	-0.620927	-15.7220

$$\text{II. } I_2^u = \langle -5.30 \times 10^{15}u^{45} + 9.12 \times 10^{16}u^{44} + \dots + 9.18 \times 10^{14}b - 6.46 \times 10^{16}, 1.83 \times 10^{17}u^{45} - 3.25 \times 10^{18}u^{44} + \dots + 6.43 \times 10^{15}a + 4.76 \times 10^{17}, u^{46} - 18u^{45} + \dots - 97u + 7 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_8 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_5 &= \begin{pmatrix} -28.5097u^{45} + 505.991u^{44} + \dots + 886.309u - 74.1180 \\ 5.77597u^{45} - 99.2802u^{44} + \dots - 994.275u + 70.3521 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 1 \\ u^2 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 15.0747u^{45} - 268.348u^{44} + \dots + 554.289u - 21.2840 \\ 7.43867u^{45} - 134.635u^{44} + \dots + 839.080u - 54.1122 \end{pmatrix} \\ a_4 &= \begin{pmatrix} -22.7338u^{45} + 406.710u^{44} + \dots - 107.966u - 3.76591 \\ 5.77597u^{45} - 99.2802u^{44} + \dots - 994.275u + 70.3521 \end{pmatrix} \\ a_3 &= \begin{pmatrix} -24.2349u^{45} + 449.377u^{44} + \dots - 3504.79u + 236.916 \\ 24.6720u^{45} - 428.236u^{44} + \dots - 2642.82u + 207.513 \end{pmatrix} \\ a_7 &= \begin{pmatrix} -20.8875u^{45} + 376.575u^{44} + \dots - 1374.44u + 74.0263 \\ 0.599368u^{45} + 3.82512u^{44} + \dots - 2048.07u + 152.213 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -16.8674u^{45} + 319.430u^{44} + \dots - 3591.66u + 250.074 \\ 0.599368u^{45} + 3.82512u^{44} + \dots - 2041.07u + 152.213 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} u \\ u^3 + u \end{pmatrix} \\ a_6 &= \begin{pmatrix} -21.6262u^{45} + 383.716u^{44} + \dots - 611.001u + 14.9556 \\ -2.41597u^{45} + 55.0604u^{44} + \dots - 1876.51u + 136.229 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -1.32204u^{45} + 18.4605u^{44} + \dots + 1429.06u - 105.726 \\ -1.56461u^{45} + 42.1820u^{44} + \dots - 2068.46u + 142.873 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = \frac{95792388053740867}{918144026274199}u^{45} - \frac{1807087590774948112}{918144026274199}u^{44} + \dots + \frac{16196303759661442603}{918144026274199}u - \frac{1172152646790843432}{918144026274199}$$

(iv) u -Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{46} - 25u^{45} + \dots - 35u + 1$
c_2	$u^{46} + 3u^{45} + \dots + 7u - 1$
c_3	$u^{46} - u^{45} + \dots - u - 1$
c_4	$u^{46} + u^{45} + \dots + 20u^2 - 1$
c_5	$u^{46} - 3u^{45} + \dots - 7u - 1$
c_6	$u^{46} - u^{45} + \dots + u - 1$
c_7	$u^{46} - u^{45} + \dots + 20u^2 - 1$
c_8	$u^{46} - 18u^{45} + \dots - 97u + 7$
c_9	$u^{46} + 6u^{44} + \dots - 46u + 7$
c_{10}	$u^{46} - 4u^{45} + \dots - 3u + 1$
c_{11}	$u^{46} + 18u^{45} + \dots + 97u + 7$
c_{12}	$u^{46} - 7u^{45} + \dots + 27u - 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{46} + 3y^{45} + \dots - 67y + 1$
c_2, c_5	$y^{46} - 25y^{45} + \dots - 35y + 1$
c_3	$y^{46} - 19y^{45} + \dots + y + 1$
c_4, c_7	$y^{46} - 27y^{45} + \dots - 40y + 1$
c_6	$y^{46} + 23y^{45} + \dots + 15y + 1$
c_8, c_{11}	$y^{46} + 24y^{45} + \dots + 657y + 49$
c_9	$y^{46} + 12y^{45} + \dots - 3642y + 49$
c_{10}	$y^{46} - 12y^{45} + \dots + 35y + 1$
c_{12}	$y^{46} - 21y^{45} + \dots - 281y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.161201 + 1.010030I$ $a = -0.15965 + 1.90225I$ $b = -0.00231 - 1.56197I$	$5.69748 - 3.64709I$	0
$u = 0.161201 - 1.010030I$ $a = -0.15965 - 1.90225I$ $b = -0.00231 + 1.56197I$	$5.69748 + 3.64709I$	0
$u = 0.147064 + 0.934830I$ $a = 0.56971 - 2.07224I$ $b = -0.38183 + 1.58226I$	$5.39271 + 2.38484I$	0
$u = 0.147064 - 0.934830I$ $a = 0.56971 + 2.07224I$ $b = -0.38183 - 1.58226I$	$5.39271 - 2.38484I$	0
$u = 0.390365 + 0.833934I$ $a = -0.07708 - 1.73979I$ $b = 1.66920 + 0.07137I$	$-8.64527 - 1.68385I$	0
$u = 0.390365 - 0.833934I$ $a = -0.07708 + 1.73979I$ $b = 1.66920 - 0.07137I$	$-8.64527 + 1.68385I$	0
$u = 1.128490 + 0.017970I$ $a = -0.502983 - 0.095250I$ $b = -0.893352 + 0.127136I$	$-2.95664 + 0.13475I$	0
$u = 1.128490 - 0.017970I$ $a = -0.502983 + 0.095250I$ $b = -0.893352 - 0.127136I$	$-2.95664 - 0.13475I$	0
$u = -0.247199 + 0.779763I$ $a = -0.87119 - 3.23577I$ $b = -0.754240 + 0.261816I$	$2.41680 + 3.37824I$	0
$u = -0.247199 - 0.779763I$ $a = -0.87119 + 3.23577I$ $b = -0.754240 - 0.261816I$	$2.41680 - 3.37824I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.365182 + 0.727919I$ $a = 1.18396 + 3.13974I$ $b = 0.689378 - 0.215443I$	$0.52681 + 8.99486I$	0
$u = -0.365182 - 0.727919I$ $a = 1.18396 - 3.13974I$ $b = 0.689378 + 0.215443I$	$0.52681 - 8.99486I$	0
$u = -0.035139 + 0.807159I$ $a = -0.11432 - 1.77557I$ $b = -1.136010 + 0.593494I$	$0.68717 + 2.04100I$	0
$u = -0.035139 - 0.807159I$ $a = -0.11432 + 1.77557I$ $b = -1.136010 - 0.593494I$	$0.68717 - 2.04100I$	0
$u = 0.152031 + 1.198330I$ $a = 0.794584 + 0.852769I$ $b = -0.539929 - 0.557970I$	$2.56334 - 2.50675I$	0
$u = 0.152031 - 1.198330I$ $a = 0.794584 - 0.852769I$ $b = -0.539929 + 0.557970I$	$2.56334 + 2.50675I$	0
$u = 0.369769 + 1.158630I$ $a = 0.31893 + 1.69472I$ $b = -1.260290 - 0.477165I$	$1.47815 - 4.23898I$	0
$u = 0.369769 - 1.158630I$ $a = 0.31893 - 1.69472I$ $b = -1.260290 + 0.477165I$	$1.47815 + 4.23898I$	0
$u = 0.473559 + 1.177910I$ $a = 0.399000 - 0.568405I$ $b = -0.519783 + 0.733946I$	$0.73688 - 4.35112I$	0
$u = 0.473559 - 1.177910I$ $a = 0.399000 + 0.568405I$ $b = -0.519783 - 0.733946I$	$0.73688 + 4.35112I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.722715$ $a = -0.901668$ $b = -0.357360$	-2.60560	-12.0000
$u = 0.071164 + 0.689648I$ $a = -0.488407 + 0.954185I$ $b = -1.392370 + 0.117735I$	$-0.91429 + 2.18439I$	0
$u = 0.071164 - 0.689648I$ $a = -0.488407 - 0.954185I$ $b = -1.392370 - 0.117735I$	$-0.91429 - 2.18439I$	0
$u = 0.424745 + 1.318440I$ $a = -0.323154 - 1.374540I$ $b = 1.226680 + 0.502394I$	$0.92317 - 9.69617I$	0
$u = 0.424745 - 1.318440I$ $a = -0.323154 + 1.374540I$ $b = 1.226680 - 0.502394I$	$0.92317 + 9.69617I$	0
$u = 0.006183 + 1.390720I$ $a = 0.772448 - 0.725439I$ $b = -0.608232 + 0.017464I$	$5.24284 - 1.96480I$	0
$u = 0.006183 - 1.390720I$ $a = 0.772448 + 0.725439I$ $b = -0.608232 - 0.017464I$	$5.24284 + 1.96480I$	0
$u = -0.060647 + 0.596741I$ $a = -0.164880 - 0.885796I$ $b = 1.45808 - 0.11795I$	$-3.07499 + 8.07629I$	$-9.56631 - 6.66944I$
$u = -0.060647 - 0.596741I$ $a = -0.164880 + 0.885796I$ $b = 1.45808 + 0.11795I$	$-3.07499 - 8.07629I$	$-9.56631 + 6.66944I$
$u = 1.285340 + 0.557109I$ $a = -0.153701 - 0.082501I$ $b = -0.996480 + 0.292406I$	$-3.74166 + 1.85997I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.285340 - 0.557109I$ $a = -0.153701 + 0.082501I$ $b = -0.996480 - 0.292406I$	$-3.74166 - 1.85997I$	0
$u = 1.42783 + 0.04521I$ $a = 0.354262 + 0.235727I$ $b = 0.918573 - 0.249081I$	$-4.19186 + 3.80881I$	0
$u = 1.42783 - 0.04521I$ $a = 0.354262 - 0.235727I$ $b = 0.918573 + 0.249081I$	$-4.19186 - 3.80881I$	0
$u = 0.29952 + 1.42582I$ $a = -0.259863 + 0.459733I$ $b = 0.439838 - 0.275947I$	$1.85604 - 2.01319I$	0
$u = 0.29952 - 1.42582I$ $a = -0.259863 - 0.459733I$ $b = 0.439838 + 0.275947I$	$1.85604 + 2.01319I$	0
$u = 0.76366 + 1.25343I$ $a = -0.070074 + 1.184620I$ $b = -1.131970 - 0.537323I$	$-1.30729 - 9.05066I$	0
$u = 0.76366 - 1.25343I$ $a = -0.070074 - 1.184620I$ $b = -1.131970 + 0.537323I$	$-1.30729 + 9.05066I$	0
$u = -0.057885 + 0.526494I$ $a = -0.61500 + 4.47144I$ $b = 0.486904 - 0.449428I$	$-3.06413 + 1.15341I$	$-4.48050 - 7.14460I$
$u = -0.057885 - 0.526494I$ $a = -0.61500 - 4.47144I$ $b = 0.486904 + 0.449428I$	$-3.06413 - 1.15341I$	$-4.48050 + 7.14460I$
$u = 0.03744 + 1.49501I$ $a = -0.493033 + 0.711832I$ $b = 0.594880 - 0.087702I$	$4.23209 - 6.98802I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.03744 - 1.49501I$ $a = -0.493033 - 0.711832I$ $b = 0.594880 + 0.087702I$	$4.23209 + 6.98802I$	0
$u = 1.47046 + 0.40220I$ $a = 0.213563 + 0.169355I$ $b = 0.962670 - 0.272821I$	$-4.39013 - 1.65137I$	0
$u = 1.47046 - 0.40220I$ $a = 0.213563 - 0.169355I$ $b = 0.962670 + 0.272821I$	$-4.39013 + 1.65137I$	0
$u = 0.67745 + 1.37172I$ $a = -0.082112 - 1.173210I$ $b = 1.167440 + 0.503445I$	$-0.82242 - 5.74929I$	0
$u = 0.67745 - 1.37172I$ $a = -0.082112 + 1.173210I$ $b = 1.167440 - 0.503445I$	$-0.82242 + 5.74929I$	0
$u = 0.236842$ $a = 2.72539$ $b = 1.36364$	-7.84349	-19.3370

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{46} - 25u^{45} + \dots - 35u + 1)(u^{183} + 82u^{182} + \dots + 16u + 1)$
c_2	$(u^{46} + 3u^{45} + \dots + 7u - 1)(u^{183} + 4u^{182} + \dots + 20u + 1)$
c_3	$(u^{46} - u^{45} + \dots - u - 1)(u^{183} + 2u^{182} + \dots + 136040u + 44287)$
c_4	$(u^{46} + u^{45} + \dots + 20u^2 - 1)(u^{183} + 2u^{182} + \dots + 30967u + 8921)$
c_5	$(u^{46} - 3u^{45} + \dots - 7u - 1)(u^{183} + 4u^{182} + \dots + 20u + 1)$
c_6	$(u^{46} - u^{45} + \dots + u - 1)(u^{183} - 2u^{182} + \dots + 10862u + 527)$
c_7	$(u^{46} - u^{45} + \dots + 20u^2 - 1)(u^{183} + 2u^{182} + \dots + 30967u + 8921)$
c_8	$(u^{46} - 18u^{45} + \dots - 97u + 7)(u^{183} + 13u^{182} + \dots + 6260u + 3952)$
c_9	$(u^{46} + 6u^{44} + \dots - 46u + 7)$ $\cdot (u^{183} - u^{182} + \dots + 36530383u + 15439309)$
c_{10}	$(u^{46} - 4u^{45} + \dots - 3u + 1)(u^{183} - 13u^{182} + \dots + 808u + 1)$
c_{11}	$(u^{46} + 18u^{45} + \dots + 97u + 7)(u^{183} + 13u^{182} + \dots + 6260u + 3952)$
c_{12}	$(u^{46} - 7u^{45} + \dots + 27u - 7)(u^{183} + 8u^{182} + \dots - 9354518u + 728723)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{46} + 3y^{45} + \dots - 67y + 1)(y^{183} + 50y^{182} + \dots + 4624y - 1)$
c_2, c_5	$(y^{46} - 25y^{45} + \dots - 35y + 1)(y^{183} - 82y^{182} + \dots + 16y - 1)$
c_3	$(y^{46} - 19y^{45} + \dots + y + 1)$ $\cdot (y^{183} + 4y^{182} + \dots - 261117339144y - 1961338369)$
c_4, c_7	$(y^{46} - 27y^{45} + \dots - 40y + 1)$ $\cdot (y^{183} - 100y^{182} + \dots + 3828341213y - 79584241)$
c_6	$(y^{46} + 23y^{45} + \dots + 15y + 1)$ $\cdot (y^{183} + 26y^{182} + \dots - 28715838y - 277729)$
c_8, c_{11}	$(y^{46} + 24y^{45} + \dots + 657y + 49)$ $\cdot (y^{183} + 99y^{182} + \dots - 447121808y - 15618304)$
c_9	$(y^{46} + 12y^{45} + \dots - 3642y + 49)$ $\cdot (y^{183} - y^{182} + \dots + 6862895901260619y - 238372262397481)$
c_{10}	$(y^{46} - 12y^{45} + \dots + 35y + 1)(y^{183} + 15y^{182} + \dots + 315098y - 1)$
c_{12}	$(y^{46} - 21y^{45} + \dots - 281y + 49)$ $\cdot (y^{183} + 2y^{182} + \dots - 44241446103030y - 531037210729)$