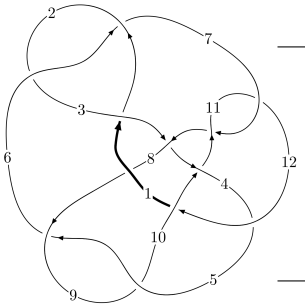
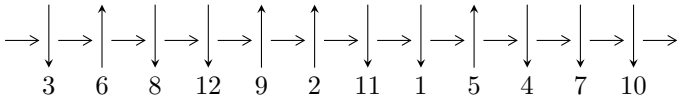
$12a_{0337}$ $(K12a_{0337})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 3.92593 \times 10^{1072} u^{168} - 9.52356 \times 10^{1071} u^{167} + \cdots + 4.19834 \times 10^{1074} b - 8.86904 \times 10^{1076},$$
$$- 2.28852 \times 10^{1076} u^{168} - 4.03439 \times 10^{1075} u^{167} + \cdots + 8.24512 \times 10^{1078} a + 7.56272 \times 10^{1080},$$
$$u^{169} - u^{168} + \cdots - 396102u - 19639 \rangle$$
$$I_2^u = \langle -5.26255 \times 10^{26} u^{39} - 1.81471 \times 10^{27} u^{38} + \cdots + 2.28462 \times 10^{25} b + 8.10299 \times 10^{26},$$
$$- 1.63791 \times 10^{27} u^{39} - 6.96735 \times 10^{27} u^{38} + \cdots + 2.28462 \times 10^{25} a - 9.46245 \times 10^{26},\ u^{40} + 4u^{39} + \cdots - 3u +$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 209 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. $\boldsymbol{I_1^u = \langle 3.93 \times 10^{1072} u^{168} - 9.52 \times 10^{1071} u^{167} + \cdots + 4.20 \times 10^{1074} b - 8.87 \times 10^{1076},\ -2.29 \times 10^{1076} u^{168} - 4.03 \times 10^{1075} u^{167} + \cdots + 8.25 \times 10^{1078} a + 7.56 \times 10^{1080},\ u^{169} - u^{168} + \cdots - 396102u - 19639 \rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.00277560u^{168} + 0.000489306u^{167} + \cdots - 1770.17u - 91.7235 \\ -0.00935115u^{168} + 0.00226841u^{167} + \cdots + 4433.82u + 211.251 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -0.00248672u^{168} + 0.00363328u^{167} + \cdots - 128.783u - 16.7451 \\ -0.00408883u^{168} - 0.000875564u^{167} + \cdots + 2792.44u + 136.272 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.00274440u^{168} + 0.000612743u^{167} + \cdots + 1315.91u + 55.4079 \\ -0.00423005u^{168} + 0.000818225u^{167} + \cdots + 2187.83u + 105.268 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0141723u^{168} + 0.00354478u^{167} + \cdots + 7349.15u + 355.698 \\ 0.0232313u^{168} - 0.0194908u^{167} + \cdots - 5114.51u - 230.461 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0149427u^{168} + 0.0204386u^{167} + \cdots - 19447.8u - 966.256 \\ -0.0280194u^{168} + 0.0124714u^{167} + \cdots + 11581.6u + 549.700 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0195512u^{168} + 0.0521669u^{167} + \cdots - 13686.9u - 715.490 \\ -0.00373791u^{168} - 0.00854166u^{167} + \cdots + 6735.90u + 334.898 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.00324757u^{168} + 0.0252228u^{167} + \cdots - 14948.1u - 750.981 \\ 0.00709202u^{168} - 0.0161873u^{167} + \cdots + 3582.84u + 189.182 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0348428u^{168} - 0.0745046u^{167} + \cdots + 15120.9u + 809.421 \\ -0.000778314u^{168} + 0.0204357u^{167} + \cdots - 9398.65u - 477.367 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.0562127u^{168} + 0.0360147u^{167} + \cdots + 18248.3u + 848.574$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{169} + 82u^{168} + \cdots - 2175796u - 290521$
c_2, c_6	$u^{169} + 41u^{167} + \cdots + 3738u + 539$
c_3	$u^{169} - 3u^{168} + \cdots + 179265310u + 1814710771$
c_4	$u^{169} + 5u^{168} + \cdots - 536700u + 54209$
c_5, c_9	$u^{169} - 4u^{168} + \cdots - 251625u + 225625$
c_7, c_{11}	$u^{169} + u^{168} + \cdots - 396102u + 19639$
c_8	$u^{169} + 3u^{168} + \cdots - 5120400u + 678325$
c_{10}	$u^{169} - 2u^{168} + \cdots + 16242719u + 2056633$
c_{12}	$u^{169} - 15u^{168} + \cdots - 22u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{169} + 30y^{168} + \cdots + 30317871838072y - 84402451441$
c_2, c_6	$y^{169} + 82y^{168} + \cdots - 2175796y - 290521$
c_3	$y^{169} + 49y^{168} + \cdots - 1.47 \times 10^{20}y - 3.29 \times 10^{18}$
c_4	$y^{169} - 25y^{168} + \cdots + 99052632400y - 2938615681$
c_5, c_9	$y^{169} + 110y^{168} + \cdots - 2073635640625y - 50906640625$
c_7, c_{11}	$y^{169} + 99y^{168} + \cdots - 26158246040y - 385690321$
c_8	$y^{169} - 11y^{168} + \cdots - 7757553615350y - 460124805625$
c_{10}	$y^{169} + 28y^{168} + \cdots - 311436565903035y - 4229739296689$
c_{12}	$y^{169} - 31y^{168} + \cdots - 68y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.044658 + 1.006500I$ $a = 0.996465 + 0.535032I$ $b = -1.43140 + 0.97912I$	$4.07610 - 0.13098I$	0
$u = 0.044658 - 1.006500I$ $a = 0.996465 - 0.535032I$ $b = -1.43140 - 0.97912I$	$4.07610 + 0.13098I$	0
$u = -0.396532 + 0.907773I$ $a = -0.879383 - 0.331628I$ $b = 2.45190 + 1.07462I$	$-3.76122 + 10.95180I$	0
$u = -0.396532 - 0.907773I$ $a = -0.879383 + 0.331628I$ $b = 2.45190 - 1.07462I$	$-3.76122 - 10.95180I$	0
$u = -0.981868 + 0.268384I$ $a = -0.536866 - 0.625015I$ $b = -0.139872 - 0.451873I$	$-3.21924 - 1.51303I$	0
$u = -0.981868 - 0.268384I$ $a = -0.536866 + 0.625015I$ $b = -0.139872 + 0.451873I$	$-3.21924 + 1.51303I$	0
$u = -0.171939 + 0.966185I$ $a = -0.697577 - 0.328817I$ $b = 2.02253 + 1.39734I$	$-4.74972 + 3.36342I$	0
$u = -0.171939 - 0.966185I$ $a = -0.697577 + 0.328817I$ $b = 2.02253 - 1.39734I$	$-4.74972 - 3.36342I$	0
$u = 0.093339 + 0.971134I$ $a = 0.48303 - 1.78499I$ $b = -0.690468 + 0.841642I$	$2.16298 + 1.20126I$	0
$u = 0.093339 - 0.971134I$ $a = 0.48303 + 1.78499I$ $b = -0.690468 - 0.841642I$	$2.16298 - 1.20126I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.013160+0.152109I$ $a=-0.517938-1.096390I$ $b=-0.031377+0.201783I$	$1.61645-8.36601I$	0
$u=-1.013160-0.152109I$ $a=-0.517938+1.096390I$ $b=-0.031377-0.201783I$	$1.61645+8.36601I$	0
$u=0.255344+0.994298I$ $a=-0.50826+1.76913I$ $b=0.654381-0.952277I$	$1.46223-4.10465I$	0
$u=0.255344-0.994298I$ $a=-0.50826-1.76913I$ $b=0.654381+0.952277I$	$1.46223+4.10465I$	0
$u=0.529439+0.880204I$ $a=-1.26930+2.16055I$ $b=1.51032-1.75216I$	$-0.220436-0.346158I$	0
$u=0.529439-0.880204I$ $a=-1.26930-2.16055I$ $b=1.51032+1.75216I$	$-0.220436+0.346158I$	0
$u=0.117310+1.021390I$ $a=-0.749632+0.443480I$ $b=1.71239-0.64949I$	$2.25549-1.65445I$	0
$u=0.117310-1.021390I$ $a=-0.749632-0.443480I$ $b=1.71239+0.64949I$	$2.25549+1.65445I$	0
$u=-0.243111+1.006920I$ $a=0.05471-1.87049I$ $b=-0.545638+0.917625I$	$-0.38728+5.60268I$	0
$u=-0.243111-1.006920I$ $a=0.05471+1.87049I$ $b=-0.545638-0.917625I$	$-0.38728-5.60268I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.487958 + 0.822863I$ $a = 1.35922 + 0.44746I$ $b = -1.72022 - 0.45455I$	$-0.47180 - 3.31768I$	0
$u = 0.487958 - 0.822863I$ $a = 1.35922 - 0.44746I$ $b = -1.72022 + 0.45455I$	$-0.47180 + 3.31768I$	0
$u = 0.164962 + 1.030540I$ $a = -1.006610 - 0.788628I$ $b = 1.47748 - 0.73298I$	$1.08617 - 5.18124I$	0
$u = 0.164962 - 1.030540I$ $a = -1.006610 + 0.788628I$ $b = 1.47748 + 0.73298I$	$1.08617 + 5.18124I$	0
$u = 0.637612 + 0.827670I$ $a = 0.287707 + 0.683609I$ $b = -0.899194 - 0.137007I$	$-1.15857 - 2.50493I$	0
$u = 0.637612 - 0.827670I$ $a = 0.287707 - 0.683609I$ $b = -0.899194 + 0.137007I$	$-1.15857 + 2.50493I$	0
$u = 0.918343 + 0.499765I$ $a = -0.294949 + 0.622152I$ $b = -0.0997323 - 0.0246033I$	$-2.67503 - 1.97184I$	0
$u = 0.918343 - 0.499765I$ $a = -0.294949 - 0.622152I$ $b = -0.0997323 + 0.0246033I$	$-2.67503 + 1.97184I$	0
$u = 0.909378 + 0.180627I$ $a = 0.691868 - 1.066250I$ $b = 0.388140 + 0.094170I$	$-7.02483 + 5.88488I$	0
$u = 0.909378 - 0.180627I$ $a = 0.691868 + 1.066250I$ $b = 0.388140 - 0.094170I$	$-7.02483 - 5.88488I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.665089 + 0.841948I$ $a = -1.44303 - 0.65524I$ $b = 1.71644 + 0.47777I$	$-0.935542 - 0.093932I$	0
$u = 0.665089 - 0.841948I$ $a = -1.44303 + 0.65524I$ $b = 1.71644 - 0.47777I$	$-0.935542 + 0.093932I$	0
$u = 0.850717 + 0.353274I$ $a = -0.393947 - 0.813121I$ $b = 0.638918 - 0.558945I$	$-4.73336 + 0.52961I$	0
$u = 0.850717 - 0.353274I$ $a = -0.393947 + 0.813121I$ $b = 0.638918 + 0.558945I$	$-4.73336 - 0.52961I$	0
$u = -0.919592 + 0.049951I$ $a = 0.602634 + 1.089060I$ $b = 0.072369 - 0.282821I$	$3.12409 - 3.25295I$	0
$u = -0.919592 - 0.049951I$ $a = 0.602634 - 1.089060I$ $b = 0.072369 + 0.282821I$	$3.12409 + 3.25295I$	0
$u = 0.480150 + 0.784625I$ $a = 1.42087 - 1.31084I$ $b = -1.98518 + 0.98754I$	$-0.51792 - 3.83639I$	0
$u = 0.480150 - 0.784625I$ $a = 1.42087 + 1.31084I$ $b = -1.98518 - 0.98754I$	$-0.51792 + 3.83639I$	0
$u = 0.634756 + 0.660746I$ $a = 0.862405 + 0.649285I$ $b = -1.177500 + 0.152789I$	$-1.42111 - 2.39910I$	0
$u = 0.634756 - 0.660746I$ $a = 0.862405 - 0.649285I$ $b = -1.177500 - 0.152789I$	$-1.42111 + 2.39910I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.337055+1.033500I$ $a=\ \ 0.03805+1.73437I$ $b=\ \ 0.495058-0.843473I$	$-2.63977+11.53680I$	0
$u=-0.337055-1.033500I$ $a=\ \ 0.03805-1.73437I$ $b=\ \ 0.495058+0.843473I$	$-2.63977-11.53680I$	0
$u=\ \ 0.744470+0.802902I$ $a=\ \ 0.252829-0.637078I$ $b=\ \ 0.317423-0.123344I$	$-3.74753+0.87759I$	0
$u=\ \ 0.744470-0.802902I$ $a=\ \ 0.252829+0.637078I$ $b=\ \ 0.317423+0.123344I$	$-3.74753-0.87759I$	0
$u=-0.518056+0.739375I$ $a=\ \ 0.26197+1.47711I$ $b=-0.076528+0.214474I$	$-4.22824-7.18268I$	0
$u=-0.518056-0.739375I$ $a=\ \ 0.26197-1.47711I$ $b=-0.076528-0.214474I$	$-4.22824+7.18268I$	0
$u=-0.325716+1.051690I$ $a=-0.524341-0.026961I$ $b=\ \ 1.39349-0.97278I$	$1.78089-0.06211I$	0
$u=-0.325716-1.051690I$ $a=-0.524341+0.026961I$ $b=\ \ 1.39349+0.97278I$	$1.78089+0.06211I$	0
$u=-0.139866+0.883342I$ $a=-0.20598+2.41360I$ $b=\ \ 0.63697-1.28102I$	$-6.97912+1.85496I$	0
$u=-0.139866-0.883342I$ $a=-0.20598-2.41360I$ $b=\ \ 0.63697+1.28102I$	$-6.97912-1.85496I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.362552+1.052220I$ $a=\ \ 0.820612+0.232915I$ $b=-2.17809-0.99651I$	$-1.25299+6.67767I$	0
$u=-0.362552-1.052220I$ $a=\ \ 0.820612-0.232915I$ $b=-2.17809+0.99651I$	$-1.25299-6.67767I$	0
$u=-0.316884+0.827161I$ $a=-1.42786-0.54097I$ $b=\ \ 1.44083+1.13167I$	$-6.59870+0.31411I$	0
$u=-0.316884-0.827161I$ $a=-1.42786+0.54097I$ $b=\ \ 1.44083-1.13167I$	$-6.59870-0.31411I$	0
$u=\ \ 0.722812+0.849666I$ $a=-0.312481-0.251647I$ $b=\ \ 1.126120-0.443018I$	$-3.70060-6.37509I$	0
$u=\ \ 0.722812-0.849666I$ $a=-0.312481+0.251647I$ $b=\ \ 1.126120+0.443018I$	$-3.70060+6.37509I$	0
$u=-0.113414+0.863598I$ $a=-0.20814+1.50975I$ $b=-0.152741+0.235958I$	$-5.25151-1.93825I$	0
$u=-0.113414-0.863598I$ $a=-0.20814-1.50975I$ $b=-0.152741-0.235958I$	$-5.25151+1.93825I$	0
$u=\ \ 0.861467+0.732944I$ $a=-0.601544-0.457562I$ $b=\ \ 1.30603-0.54276I$	$-3.77410-6.48687I$	0
$u=\ \ 0.861467-0.732944I$ $a=-0.601544+0.457562I$ $b=\ \ 1.30603+0.54276I$	$-3.77410+6.48687I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.277299+0.815257I$ $a=\ \ 1.021070-0.012828I$ $b=-0.95184+1.20117I$	$3.78329+1.09562I$	0
$u=-0.277299-0.815257I$ $a=\ \ 1.021070+0.012828I$ $b=-0.95184-1.20117I$	$3.78329-1.09562I$	0
$u=\ \ 0.094182+0.843364I$ $a=-1.281380-0.429444I$ $b=\ \ 1.74284-1.24981I$	$0.27541+3.96070I$	0
$u=\ \ 0.094182-0.843364I$ $a=-1.281380+0.429444I$ $b=\ \ 1.74284+1.24981I$	$0.27541-3.96070I$	0
$u=\ \ 0.556157+1.017880I$ $a=\ \ 1.052950-0.039822I$ $b=-1.75925+0.32260I$	$-0.95403-3.29831I$	0
$u=\ \ 0.556157-1.017880I$ $a=\ \ 1.052950+0.039822I$ $b=-1.75925-0.32260I$	$-0.95403+3.29831I$	0
$u=-0.128532+1.158210I$ $a=\ \ 0.735181-0.664534I$ $b=-1.54167-0.44711I$	$2.89877+3.44612I$	0
$u=-0.128532-1.158210I$ $a=\ \ 0.735181+0.664534I$ $b=-1.54167+0.44711I$	$2.89877-3.44612I$	0
$u=\ \ 0.191760+0.805520I$ $a=\ \ 0.59127-1.30945I$ $b=\ \ 0.190963-0.241863I$	$-5.12988-5.13411I$	0
$u=\ \ 0.191760-0.805520I$ $a=\ \ 0.59127+1.30945I$ $b=\ \ 0.190963+0.241863I$	$-5.12988+5.13411I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.528840 + 1.047660I$ $a = 1.36975 + 0.63166I$ $b = -1.68830 - 0.46136I$	$0.423917 - 0.974746I$	0
$u = 0.528840 - 1.047660I$ $a = 1.36975 - 0.63166I$ $b = -1.68830 + 0.46136I$	$0.423917 + 0.974746I$	0
$u = 0.383343 + 1.112420I$ $a = 0.869750 + 0.003265I$ $b = -1.83620 - 0.31470I$	$-0.61499 - 3.61164I$	0
$u = 0.383343 - 1.112420I$ $a = 0.869750 - 0.003265I$ $b = -1.83620 + 0.31470I$	$-0.61499 + 3.61164I$	0
$u = -0.207338 + 1.164470I$ $a = 0.632980 + 0.316638I$ $b = -1.22898 + 1.05563I$	$5.46852 + 1.26241I$	0
$u = -0.207338 - 1.164470I$ $a = 0.632980 - 0.316638I$ $b = -1.22898 - 1.05563I$	$5.46852 - 1.26241I$	0
$u = -0.482216 + 1.114650I$ $a = 1.307440 + 0.079070I$ $b = -2.20536 - 0.60713I$	$0.46009 + 6.79623I$	0
$u = -0.482216 - 1.114650I$ $a = 1.307440 - 0.079070I$ $b = -2.20536 + 0.60713I$	$0.46009 - 6.79623I$	0
$u = 0.644814 + 1.035320I$ $a = -1.37569 - 0.65556I$ $b = 1.70413 + 0.46411I$	$-0.30092 - 5.14241I$	0
$u = 0.644814 - 1.035320I$ $a = -1.37569 + 0.65556I$ $b = 1.70413 - 0.46411I$	$-0.30092 + 5.14241I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.018602 + 1.222640I$ $a = -0.765291 + 0.453535I$ $b = 1.71467 + 0.50154I$	$4.73347 - 1.96451I$	0
$u = 0.018602 - 1.222640I$ $a = -0.765291 - 0.453535I$ $b = 1.71467 - 0.50154I$	$4.73347 + 1.96451I$	0
$u = -0.587870 + 0.505579I$ $a = -0.58178 - 1.44431I$ $b = 0.003890 - 0.265746I$	$-2.98450 - 2.85543I$	0
$u = -0.587870 - 0.505579I$ $a = -0.58178 + 1.44431I$ $b = 0.003890 + 0.265746I$	$-2.98450 + 2.85543I$	0
$u = -0.209643 + 1.206600I$ $a = 1.50917 + 0.38301I$ $b = -2.03434 - 0.73278I$	$4.70660 - 1.76368I$	0
$u = -0.209643 - 1.206600I$ $a = 1.50917 - 0.38301I$ $b = -2.03434 + 0.73278I$	$4.70660 + 1.76368I$	0
$u = -0.686146 + 0.340725I$ $a = -0.445255 - 1.340220I$ $b = -0.310313 + 0.072750I$	$-1.86442 - 2.29085I$	0
$u = -0.686146 - 0.340725I$ $a = -0.445255 + 1.340220I$ $b = -0.310313 - 0.072750I$	$-1.86442 + 2.29085I$	0
$u = 1.226690 + 0.147268I$ $a = -0.410408 + 0.826608I$ $b = -0.300675 + 0.005803I$	$-1.19680 + 8.26372I$	0
$u = 1.226690 - 0.147268I$ $a = -0.410408 - 0.826608I$ $b = -0.300675 - 0.005803I$	$-1.19680 - 8.26372I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.293350+1.207820I$ $a=-0.525166-0.288634I$ $b=\ \ 1.24314-1.11002I$	$3.96218+6.03076I$	0
$u=-0.293350-1.207820I$ $a=-0.525166+0.288634I$ $b=\ \ 1.24314+1.11002I$	$3.96218-6.03076I$	0
$u=-0.665318+0.343719I$ $a=\ \ 1.25428+0.69189I$ $b=\ \ 0.082099-0.574218I$	$-8.19155+2.92580I$	0
$u=-0.665318-0.343719I$ $a=\ \ 1.25428-0.69189I$ $b=\ \ 0.082099+0.574218I$	$-8.19155-2.92580I$	0
$u=-0.318853+1.226120I$ $a=-1.44155-0.27889I$ $b=\ \ 2.10623+0.65335I$	$6.55505+4.24519I$	0
$u=-0.318853-1.226120I$ $a=-1.44155+0.27889I$ $b=\ \ 2.10623-0.65335I$	$6.55505-4.24519I$	0
$u=-0.000042+0.728443I$ $a=\ \ 0.342818-0.698682I$ $b=-1.76952+0.79957I$	$0.06361+2.18446I$	0
$u=-0.000042-0.728443I$ $a=\ \ 0.342818+0.698682I$ $b=-1.76952-0.79957I$	$0.06361-2.18446I$	0
$u=\ \ 1.255590+0.254380I$ $a=\ \ 0.346889-0.888709I$ $b=\ \ 0.326558-0.042064I$	$-3.2316+13.8484I$	0
$u=\ \ 1.255590-0.254380I$ $a=\ \ 0.346889+0.888709I$ $b=\ \ 0.326558+0.042064I$	$-3.2316-13.8484I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.582790+1.154330I$ $a=\ \ 0.916458+0.039625I$ $b=-2.16637-0.68246I$	$-0.45705+6.98667I$	0
$u=-0.582790-1.154330I$ $a=\ \ 0.916458-0.039625I$ $b=-2.16637+0.68246I$	$-0.45705-6.98667I$	0
$u=\ \ 1.232070+0.438258I$ $a=-0.442382-0.286960I$ $b=-0.142081+0.140800I$	$-0.76855-4.21281I$	0
$u=\ \ 1.232070-0.438258I$ $a=-0.442382+0.286960I$ $b=-0.142081-0.140800I$	$-0.76855+4.21281I$	0
$u=-1.273540+0.310163I$ $a=\ \ 0.242050+0.531416I$ $b=\ \ 0.139648+0.547227I$	$-4.53192+3.12942I$	0
$u=-1.273540-0.310163I$ $a=\ \ 0.242050-0.531416I$ $b=\ \ 0.139648-0.547227I$	$-4.53192-3.12942I$	0
$u=\ \ 1.327600+0.140216I$ $a=-0.030135+0.451964I$ $b=\ \ 0.0007879+0.0206459I$	$-1.12285+2.47491I$	0
$u=\ \ 1.327600-0.140216I$ $a=-0.030135-0.451964I$ $b=\ \ 0.0007879-0.0206459I$	$-1.12285-2.47491I$	0
$u=\ \ 0.757225+1.109600I$ $a=\ \ 0.264675-0.004598I$ $b=-0.126733-0.572629I$	$-3.75113+1.49726I$	0
$u=\ \ 0.757225-1.109600I$ $a=\ \ 0.264675+0.004598I$ $b=-0.126733+0.572629I$	$-3.75113-1.49726I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.363671+0.526614I$ $a=-1.65798-0.32573I$ $b=\ \ 1.46736+1.39803I$	$-4.20799-8.46012I$	0
$u=-0.363671-0.526614I$ $a=-1.65798+0.32573I$ $b=\ \ 1.46736-1.39803I$	$-4.20799+8.46012I$	0
$u=-0.519354+1.270280I$ $a=-1.274990-0.239578I$ $b=\ \ 2.16460+0.54618I$	$6.79965+8.43394I$	0
$u=-0.519354-1.270280I$ $a=-1.274990+0.239578I$ $b=\ \ 2.16460-0.54618I$	$6.79965-8.43394I$	0
$u=-0.239871+0.579754I$ $a=\ \ 1.67666+0.49489I$ $b=-1.29378-1.27662I$	$-1.62566-3.26204I$	0
$u=-0.239871-0.579754I$ $a=\ \ 1.67666-0.49489I$ $b=-1.29378+1.27662I$	$-1.62566+3.26204I$	0
$u=\ \ 0.540659+1.270770I$ $a=-1.197940+0.213044I$ $b=\ \ 2.15563-0.81380I$	$-3.61165-11.22870I$	0
$u=\ \ 0.540659-1.270770I$ $a=-1.197940-0.213044I$ $b=\ \ 2.15563+0.81380I$	$-3.61165+11.22870I$	0
$u=-0.576016+1.272930I$ $a=\ \ 1.240810+0.244965I$ $b=-2.18341-0.52278I$	$5.0586+14.0423I$	0
$u=-0.576016-1.272930I$ $a=\ \ 1.240810-0.244965I$ $b=-2.18341+0.52278I$	$5.0586-14.0423I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.265110 + 1.382750I$ $a = -0.645073 + 0.193523I$ $b = 1.98855 + 0.50675I$	$4.78214 - 5.13382I$	0
$u = 0.265110 - 1.382750I$ $a = -0.645073 - 0.193523I$ $b = 1.98855 - 0.50675I$	$4.78214 + 5.13382I$	0
$u = -0.46830 + 1.33841I$ $a = 0.741914 - 0.108517I$ $b = -1.266170 + 0.374003I$	$7.26581 + 1.79041I$	0
$u = -0.46830 - 1.33841I$ $a = 0.741914 + 0.108517I$ $b = -1.266170 - 0.374003I$	$7.26581 - 1.79041I$	0
$u = -0.34749 + 1.39273I$ $a = -0.758234 + 0.134625I$ $b = 1.39656 - 0.41072I$	$6.71077 - 3.44794I$	0
$u = -0.34749 - 1.39273I$ $a = -0.758234 - 0.134625I$ $b = 1.39656 + 0.41072I$	$6.71077 + 3.44794I$	0
$u = -0.73227 + 1.25988I$ $a = -0.833476 + 0.058405I$ $b = 2.12716 + 0.59779I$	$-1.49455 + 3.77562I$	0
$u = -0.73227 - 1.25988I$ $a = -0.833476 - 0.058405I$ $b = 2.12716 - 0.59779I$	$-1.49455 - 3.77562I$	0
$u = 0.32907 + 1.43356I$ $a = -0.886738 + 0.351406I$ $b = 1.64787 - 0.67670I$	$4.78181 - 3.24134I$	0
$u = 0.32907 - 1.43356I$ $a = -0.886738 - 0.351406I$ $b = 1.64787 + 0.67670I$	$4.78181 + 3.24134I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.513098+0.121413I$ $a=\ 1.16758-1.16839I$ $b=\ 0.410054+0.623830I$	$2.59583+1.09690I$	0
$u=-0.513098-0.121413I$ $a=\ 1.16758+1.16839I$ $b=\ 0.410054-0.623830I$	$2.59583-1.09690I$	0
$u=\ 0.41144+1.41659I$ $a=\ 1.028130-0.327334I$ $b=-1.85859+0.76330I$	$5.04319-9.59843I$	0
$u=\ 0.41144-1.41659I$ $a=\ 1.028130+0.327334I$ $b=-1.85859-0.76330I$	$5.04319+9.59843I$	0
$u=\ 0.34534+1.43585I$ $a=\ 0.598256-0.141155I$ $b=-2.09257-0.47590I$	$2.98863-10.43970I$	0
$u=\ 0.34534-1.43585I$ $a=\ 0.598256+0.141155I$ $b=-2.09257+0.47590I$	$2.98863+10.43970I$	0
$u=\ 0.516897$ $a=\ 1.20945$ $b=-0.125668$	-0.954100	-10.2530
$u=\ 0.61551+1.35109I$ $a=\ 1.120190-0.173640I$ $b=-2.13192+0.68711I$	$2.6413-14.6849I$	0
$u=\ 0.61551-1.35109I$ $a=\ 1.120190+0.173640I$ $b=-2.13192-0.68711I$	$2.6413+14.6849I$	0
$u=\ 0.66522+1.33692I$ $a=-1.119940+0.142465I$ $b=\ 2.17290-0.65713I$	$0.2507-20.5629I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.66522 - 1.33692I$ $a = -1.119940 - 0.142465I$ $b = 2.17290 + 0.65713I$	$0.2507 + 20.5629I$	0
$u = 0.42550 + 1.44228I$ $a = -0.748181 + 0.262604I$ $b = 1.50489 - 0.43185I$	$4.60926 - 3.32511I$	0
$u = 0.42550 - 1.44228I$ $a = -0.748181 - 0.262604I$ $b = 1.50489 + 0.43185I$	$4.60926 + 3.32511I$	0
$u = 0.56368 + 1.40805I$ $a = 0.766645 - 0.176668I$ $b = -1.60840 + 0.34267I$	$3.24405 - 9.02008I$	0
$u = 0.56368 - 1.40805I$ $a = 0.766645 + 0.176668I$ $b = -1.60840 - 0.34267I$	$3.24405 + 9.02008I$	0
$u = -0.71656 + 1.33979I$ $a = -0.753847 - 0.227477I$ $b = 1.044230 + 0.464363I$	$-0.02247 + 11.32870I$	0
$u = -0.71656 - 1.33979I$ $a = -0.753847 + 0.227477I$ $b = 1.044230 - 0.464363I$	$-0.02247 - 11.32870I$	0
$u = -0.49822 + 1.46653I$ $a = 0.748044 + 0.015582I$ $b = -1.97028 - 0.60927I$	$-0.12102 + 5.34600I$	0
$u = -0.49822 - 1.46653I$ $a = 0.748044 - 0.015582I$ $b = -1.97028 + 0.60927I$	$-0.12102 - 5.34600I$	0
$u = -1.56335 + 0.07332I$ $a = 0.032674 + 0.474991I$ $b = 0.025260 + 0.615076I$	$-5.77700 - 1.72256I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.56335-0.07332I$ $a=\ \ 0.032674-0.474991I$ $b=\ \ 0.025260-0.615076I$	$-5.77700+1.72256I$	0
$u=-0.13991+1.57030I$ $a=-0.071016-0.724131I$ $b=-0.053244+1.013660I$	$-4.60379-0.11635I$	0
$u=-0.13991-1.57030I$ $a=-0.071016+0.724131I$ $b=-0.053244-1.013660I$	$-4.60379+0.11635I$	0
$u=-0.71180+1.42727I$ $a=\ \ 0.609487+0.217093I$ $b=-0.813298-0.385846I$	$2.70580+5.01631I$	0
$u=-0.71180-1.42727I$ $a=\ \ 0.609487-0.217093I$ $b=-0.813298+0.385846I$	$2.70580-5.01631I$	0
$u=\ \ 0.26526+1.57649I$ $a=-0.543832+0.050609I$ $b=\ \ 1.272850+0.319374I$	$4.96537+2.30342I$	0
$u=\ \ 0.26526-1.57649I$ $a=-0.543832-0.050609I$ $b=\ \ 1.272850-0.319374I$	$4.96537-2.30342I$	0
$u=\ \ 0.14844+1.60083I$ $a=\ \ 0.584165-0.016214I$ $b=-1.43509-0.41691I$	$3.72137+8.14450I$	0
$u=\ \ 0.14844-1.60083I$ $a=\ \ 0.584165+0.016214I$ $b=-1.43509+0.41691I$	$3.72137-8.14450I$	0
$u=-0.65479+1.47102I$ $a=-0.763133+0.023821I$ $b=\ \ 2.03800+0.56334I$	$-1.03443+9.28196I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.65479-1.47102I$ $a=-0.763133-0.023821I$ $b=\ \ 2.03800-0.56334I$	$-1.03443-9.28196I$	0
$u=-0.312303+0.141967I$ $a=-1.79930+1.20496I$ $b=-0.933733-0.762846I$	$0.71234-3.47484I$	$-4.37987+2.72449I$
$u=-0.312303-0.141967I$ $a=-1.79930-1.20496I$ $b=-0.933733+0.762846I$	$0.71234+3.47484I$	$-4.37987-2.72449I$
$u=-1.67143+0.46273I$ $a=-0.001414+0.219486I$ $b=\ \ 0.122682-0.292817I$	$-3.28837-3.59752I$	0
$u=-1.67143-0.46273I$ $a=-0.001414-0.219486I$ $b=\ \ 0.122682+0.292817I$	$-3.28837+3.59752I$	0
$u=\ \ 0.005281+0.192987I$ $a=\ \ 3.13386+1.51454I$ $b=-0.027463-0.989321I$	$0.59603-1.82802I$	$1.51402+2.79741I$
$u=\ \ 0.005281-0.192987I$ $a=\ \ 3.13386-1.51454I$ $b=-0.027463+0.989321I$	$0.59603+1.82802I$	$1.51402-2.79741I$
$u=-0.0925270+0.0815445I$ $a=-4.51585+1.13805I$ $b=-0.733967+0.700652I$	$-0.24734+2.26571I$	$0.17025-2.28626I$
$u=-0.0925270-0.0815445I$ $a=-4.51585-1.13805I$ $b=-0.733967-0.700652I$	$-0.24734-2.26571I$	$0.17025+2.28626I$

II.

$\boldsymbol{I_2^u = \langle -5.26\times10^{26}u^{39}-1.81\times10^{27}u^{38}+\cdots+2.28\times10^{25}b+8.10\times10^{26},\ -1.64\times10^{27}u^{39}-6.97\times10^{27}u^{38}+\cdots+2.28\times10^{25}a-9.46\times10^{26},\ u^{40}+4u^{39}+\cdots-3u+1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix}1\\0\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$

$$a_8 = \begin{pmatrix}1\\u^2\end{pmatrix}$$

$$a_4 = \begin{pmatrix}71.6927u^{39}+304.968u^{38}+\cdots+113.975u+41.4180\\23.0347u^{39}+79.4314u^{38}+\cdots+109.874u-35.4675\end{pmatrix}$$

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

$$a_5 = \begin{pmatrix}100.796u^{39}+423.820u^{38}+\cdots+192.234u+46.9073\\-6.06818u^{39}-39.4214u^{38}+\cdots+31.6145u-40.9568\end{pmatrix}$$

$$a_3 = \begin{pmatrix}110.031u^{39}+449.316u^{38}+\cdots+240.952u+24.1471\\6.45267u^{39}+15.4222u^{38}+\cdots+44.5190u-26.4620\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}22.1557u^{39}+78.3082u^{38}+\cdots+77.2236u-14.4993\\-15.0063u^{39}-56.8324u^{38}+\cdots-46.1735u+9.55384\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-25.9099u^{39}-76.3397u^{38}+\cdots-183.151u+45.4235\\12.0462u^{39}+35.2174u^{38}+\cdots+83.2736u-26.4760\end{pmatrix}$$

$$a_2 = \begin{pmatrix}-20.2386u^{39}-67.8077u^{38}+\cdots-372.911u+101.042\\5.36737u^{39}+25.9113u^{38}+\cdots-119.655u+50.0139\end{pmatrix}$$

$$a_6 = \begin{pmatrix}-145.176u^{39}-597.572u^{38}+\cdots-217.380u-56.6715\\5.10195u^{39}+20.5067u^{38}+\cdots+66.6211u-18.0169\end{pmatrix}$$

$$a_9 = \begin{pmatrix}15.6404u^{39}+41.5610u^{38}+\cdots+139.695u-29.1116\\-6.31480u^{39}-14.4225u^{38}+\cdots-19.1735u+16.1019\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= -\frac{427543933696049908748178967 9}{228462173031039999005468 23}u^{39} - \frac{173118584064855086664299951 94}{228462173031039999005468 23}u^{38} + \cdots - \frac{201034834325369569558331737 38}{228462173031039999005468 23}u + \frac{247817369688344189795702491 7}{228462173031039999005468 23}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{40} - 27u^{39} + \cdots - 449u + 25$
c_2	$u^{40} - 3u^{39} + \cdots - u + 5$
c_3	$u^{40} + 2u^{39} + \cdots + 137u + 11$
c_4	$u^{40} - 4u^{38} + \cdots + 7u + 1$
c_5	$u^{40} + u^{39} + \cdots - 2u + 1$
c_6	$u^{40} + 3u^{39} + \cdots + u + 5$
c_7	$u^{40} + 4u^{39} + \cdots - 3u + 1$
c_8	$u^{40} + 2u^{39} + \cdots - 3u + 1$
c_9	$u^{40} - u^{39} + \cdots + 2u + 1$
c_{10}	$u^{40} - u^{39} + \cdots + 4u + 1$
c_{11}	$u^{40} - 4u^{39} + \cdots + 3u + 1$
c_{12}	$u^{40} + 6u^{39} + \cdots + 7u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{40} - 9y^{39} + \cdots + 6049y + 625$
c_2, c_6	$y^{40} + 27y^{39} + \cdots + 449y + 25$
c_3	$y^{40} - 2y^{39} + \cdots + 283y + 121$
c_4	$y^{40} - 8y^{39} + \cdots + 17y + 1$
c_5, c_9	$y^{40} + 23y^{39} + \cdots + 2y + 1$
c_7, c_{11}	$y^{40} + 20y^{39} + \cdots + 37y + 1$
c_8	$y^{40} - 26y^{39} + \cdots + 7y + 1$
c_{10}	$y^{40} - 15y^{39} + \cdots + 24y + 1$
c_{12}	$y^{40} - 26y^{39} + \cdots + 65y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000610 + 0.062722I$ $a = 0.132256 - 0.200534I$ $b = -0.224911 + 0.411976I$	$-1.55785 + 2.25792I$	$-8.89857 + 0.14152I$
$u = 1.000610 - 0.062722I$ $a = 0.132256 + 0.200534I$ $b = -0.224911 - 0.411976I$	$-1.55785 - 2.25792I$	$-8.89857 - 0.14152I$
$u = 0.635946 + 0.747629I$ $a = 0.562469 + 0.983131I$ $b = -1.018170 - 0.876142I$	$0.00567 - 2.92779I$	$3.79378 + 6.59323I$
$u = 0.635946 - 0.747629I$ $a = 0.562469 - 0.983131I$ $b = -1.018170 + 0.876142I$	$0.00567 + 2.92779I$	$3.79378 - 6.59323I$
$u = 0.522674 + 0.876851I$ $a = -1.08584 + 1.81764I$ $b = 1.36773 - 1.34829I$	$-0.241921 - 0.373650I$	$-53.6972 + 59.5490I$
$u = 0.522674 - 0.876851I$ $a = -1.08584 - 1.81764I$ $b = 1.36773 + 1.34829I$	$-0.241921 + 0.373650I$	$-53.6972 - 59.5490I$
$u = 0.481889 + 0.828528I$ $a = 1.86147 - 0.71669I$ $b = -2.44128 + 0.61397I$	$-0.44553 - 3.75219I$	$39.0996 + 5.1179I$
$u = 0.481889 - 0.828528I$ $a = 1.86147 + 0.71669I$ $b = -2.44128 - 0.61397I$	$-0.44553 + 3.75219I$	$39.0996 - 5.1179I$
$u = -0.276952 + 0.834432I$ $a = -0.934722 + 0.038138I$ $b = 1.07824 - 1.34037I$	$3.89568 + 0.61618I$	$0.59922 + 5.52526I$
$u = -0.276952 - 0.834432I$ $a = -0.934722 - 0.038138I$ $b = 1.07824 + 1.34037I$	$3.89568 - 0.61618I$	$0.59922 - 5.52526I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.090876 + 1.122960I$ $a = 0.816937 + 0.712026I$ $b = -1.245890 + 0.402876I$	$3.41587 - 3.99256I$	$2.16880 + 5.06425I$
$u = 0.090876 - 1.122960I$ $a = 0.816937 - 0.712026I$ $b = -1.245890 - 0.402876I$	$3.41587 + 3.99256I$	$2.16880 - 5.06425I$
$u = -0.100266 + 1.151600I$ $a = -0.779853 - 0.385178I$ $b = 1.230380 - 0.664511I$	$5.28386 + 1.08195I$	$3.60915 + 0.I$
$u = -0.100266 - 1.151600I$ $a = -0.779853 + 0.385178I$ $b = 1.230380 + 0.664511I$	$5.28386 - 1.08195I$	$3.60915 + 0.I$
$u = -0.046228 + 0.817962I$ $a = 1.235060 + 0.080695I$ $b = -1.80785 + 1.20462I$	$1.96343 + 3.70680I$	$2.69586 - 4.03700I$
$u = -0.046228 - 0.817962I$ $a = 1.235060 - 0.080695I$ $b = -1.80785 - 1.20462I$	$1.96343 - 3.70680I$	$2.69586 + 4.03700I$
$u = 0.118004 + 0.761801I$ $a = -0.11693 - 2.46603I$ $b = 0.674256 + 1.181060I$	$-7.24042 - 1.63239I$	$-15.7298 - 4.5825I$
$u = 0.118004 - 0.761801I$ $a = -0.11693 + 2.46603I$ $b = 0.674256 - 1.181060I$	$-7.24042 + 1.63239I$	$-15.7298 + 4.5825I$
$u = -0.557482 + 1.193090I$ $a = -0.895961 + 0.100987I$ $b = 2.12819 + 0.75855I$	$-1.93210 + 7.63734I$	0
$u = -0.557482 - 1.193090I$ $a = -0.895961 - 0.100987I$ $b = 2.12819 - 0.75855I$	$-1.93210 - 7.63734I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.234129 + 0.555315I$ $a = -0.19298 + 1.80509I$ $b = -1.23642 - 0.81326I$	$-1.54140 - 4.43294I$	$-3.67824 + 5.06813I$
$u = 0.234129 - 0.555315I$ $a = -0.19298 - 1.80509I$ $b = -1.23642 + 0.81326I$	$-1.54140 + 4.43294I$	$-3.67824 - 5.06813I$
$u = -0.079087 + 0.550668I$ $a = -0.58459 + 1.99369I$ $b = 0.110372 + 0.603197I$	$-5.47677 - 4.45923I$	$-9.32149 + 0.28916I$
$u = -0.079087 - 0.550668I$ $a = -0.58459 - 1.99369I$ $b = 0.110372 - 0.603197I$	$-5.47677 + 4.45923I$	$-9.32149 - 0.28916I$
$u = -1.44497 + 0.01090I$ $a = 0.005785 + 0.412438I$ $b = 0.168252 + 0.743972I$	$-6.08921 - 1.45647I$	0
$u = -1.44497 - 0.01090I$ $a = 0.005785 - 0.412438I$ $b = 0.168252 - 0.743972I$	$-6.08921 + 1.45647I$	0
$u = -0.60234 + 1.33174I$ $a = 0.719988 - 0.000811I$ $b = -2.13684 - 0.61072I$	$-1.32162 + 5.30517I$	0
$u = -0.60234 - 1.33174I$ $a = 0.719988 + 0.000811I$ $b = -2.13684 + 0.61072I$	$-1.32162 - 5.30517I$	0
$u = 0.193233 + 0.468603I$ $a = 0.37755 - 1.79755I$ $b = 1.65344 + 0.60590I$	$-3.76917 - 9.47067I$	$-4.90618 + 8.41308I$
$u = 0.193233 - 0.468603I$ $a = 0.37755 + 1.79755I$ $b = 1.65344 - 0.60590I$	$-3.76917 + 9.47067I$	$-4.90618 - 8.41308I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.012772 + 0.504459I$ $a = 0.47686 - 1.99743I$ $b = 0.777355 - 0.509364I$	$-6.03538 - 2.46180I$	$-11.55347 + 2.14212I$
$u = 0.012772 - 0.504459I$ $a = 0.47686 + 1.99743I$ $b = 0.777355 + 0.509364I$	$-6.03538 + 2.46180I$	$-11.55347 - 2.14212I$
$u = 0.20221 + 1.52429I$ $a = -0.254992 + 0.693281I$ $b = 0.172944 - 0.972600I$	$-4.63393 + 0.45781I$	0
$u = 0.20221 - 1.52429I$ $a = -0.254992 - 0.693281I$ $b = 0.172944 + 0.972600I$	$-4.63393 - 0.45781I$	0
$u = -0.37124 + 1.49511I$ $a = -0.524784 - 0.310322I$ $b = 1.291470 + 0.172257I$	$3.75657 + 4.37121I$	0
$u = -0.37124 - 1.49511I$ $a = -0.524784 + 0.310322I$ $b = 1.291470 - 0.172257I$	$3.75657 - 4.37121I$	0
$u = -0.42280 + 1.50512I$ $a = 0.571761 + 0.235101I$ $b = -1.71395 - 0.16913I$	$2.10825 + 10.23110I$	0
$u = -0.42280 - 1.50512I$ $a = 0.571761 - 0.235101I$ $b = -1.71395 + 0.16913I$	$2.10825 - 10.23110I$	0
$u = -1.59097 + 0.33587I$ $a = 0.110505 - 0.283777I$ $b = 0.172693 + 0.027395I$	$-3.17310 - 3.39293I$	0
$u = -1.59097 - 0.33587I$ $a = 0.110505 + 0.283777I$ $b = 0.172693 - 0.027395I$	$-3.17310 + 3.39293I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{40}-27u^{39}+\cdots-449u+25)$ $\cdot(u^{169}+82u^{168}+\cdots-2175796u-290521)$
c_2	$(u^{40}-3u^{39}+\cdots-u+5)(u^{169}+41u^{167}+\cdots+3738u+539)$
c_3	$(u^{40}+2u^{39}+\cdots+137u+11)$ $\cdot(u^{169}-3u^{168}+\cdots+179265310u+1814710771)$
c_4	$(u^{40}-4u^{38}+\cdots+7u+1)(u^{169}+5u^{168}+\cdots-536700u+54209)$
c_5	$(u^{40}+u^{39}+\cdots-2u+1)(u^{169}-4u^{168}+\cdots-251625u+225625)$
c_6	$(u^{40}+3u^{39}+\cdots+u+5)(u^{169}+41u^{167}+\cdots+3738u+539)$
c_7	$(u^{40}+4u^{39}+\cdots-3u+1)(u^{169}+u^{168}+\cdots-396102u+19639)$
c_8	$(u^{40}+2u^{39}+\cdots-3u+1)(u^{169}+3u^{168}+\cdots-5120400u+678325)$
c_9	$(u^{40}-u^{39}+\cdots+2u+1)(u^{169}-4u^{168}+\cdots-251625u+225625)$
c_{10}	$(u^{40}-u^{39}+\cdots+4u+1)(u^{169}-2u^{168}+\cdots+1.62427\times10^{7}u+2056633)$
c_{11}	$(u^{40}-4u^{39}+\cdots+3u+1)(u^{169}+u^{168}+\cdots-396102u+19639)$
c_{12}	$(u^{40}+6u^{39}+\cdots+7u+1)(u^{169}-15u^{168}+\cdots-22u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{40} - 9y^{39} + \cdots + 6049y + 625)$ $\cdot (y^{169} + 30y^{168} + \cdots + 30317871838072y - 84402451441)$
c_2, c_6	$(y^{40} + 27y^{39} + \cdots + 449y + 25)$ $\cdot (y^{169} + 82y^{168} + \cdots - 2175796y - 290521)$
c_3	$(y^{40} - 2y^{39} + \cdots + 283y + 121)$ $\cdot (y^{169} + 49y^{168} + \cdots - 1.47 \times 10^{20}y - 3.29 \times 10^{18})$
c_4	$(y^{40} - 8y^{39} + \cdots + 17y + 1)$ $\cdot (y^{169} - 25y^{168} + \cdots + 99052632400y - 2938615681)$
c_5, c_9	$(y^{40} + 23y^{39} + \cdots + 2y + 1)$ $\cdot (y^{169} + 110y^{168} + \cdots - 2073635640625y - 50906640625)$
c_7, c_{11}	$(y^{40} + 20y^{39} + \cdots + 37y + 1)$ $\cdot (y^{169} + 99y^{168} + \cdots - 26158246040y - 385690321)$
c_8	$(y^{40} - 26y^{39} + \cdots + 7y + 1)$ $\cdot (y^{169} - 11y^{168} + \cdots - 7757553615350y - 460124805625)$
c_{10}	$(y^{40} - 15y^{39} + \cdots + 24y + 1)$ $\cdot (y^{169} + 28y^{168} + \cdots - 311436565903035y - 4229739296689)$
c_{12}	$(y^{40} - 26y^{39} + \cdots + 65y + 1)(y^{169} - 31y^{168} + \cdots - 68y - 1)$