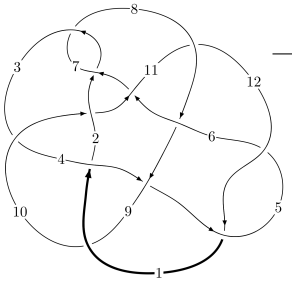
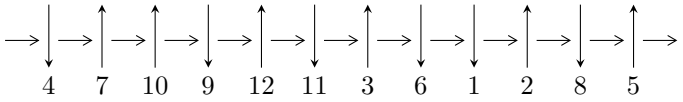
$12a_{1076}$ $(K12a_{1076})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.51635 \times 10^{1061} u^{177} - 1.25795 \times 10^{1062} u^{176} + \cdots + 1.40470 \times 10^{1063} b - 8.65454 \times 10^{1066}, \\ & 1.48578 \times 10^{1069} u^{177} + 3.21858 \times 10^{1069} u^{176} + \cdots + 1.03497 \times 10^{1070} a + 3.77579 \times 10^{1073}, \\ & u^{178} + 2u^{177} + \cdots + 2168879u + 237673 \rangle \\ I_2^u = \langle & -3.12220 \times 10^{39} u^{41} - 9.70960 \times 10^{39} u^{40} + \cdots + 5.62023 \times 10^{39} b - 9.01968 \times 10^{39}, \\ & - 9.07781 \times 10^{39} u^{41} - 6.68667 \times 10^{39} u^{40} + \cdots + 5.62023 \times 10^{39} a + 1.34444 \times 10^{41}, \ u^{42} + u^{41} + \cdots - 3u + \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 220 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. $\boldsymbol{I_1^u = \langle -6.52 \times 10^{1061} u^{177} - 1.26 \times 10^{1062} u^{176} + \cdots + 1.40 \times 10^{1063} b - 8.65 \times 10^{1066},\ 1.49 \times 10^{1069} u^{177} + 3.22 \times 10^{1069} u^{176} + \cdots + 1.03 \times 10^{1070} a + 3.78 \times 10^{1073},\ u^{178} + 2u^{177} + \cdots + 2168879u + 237673 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_{11} = \begin{pmatrix} -0.143559u^{177} - 0.310985u^{176} + \cdots - 8706.70u - 3648.23 \\ 0.0463895u^{177} + 0.0895526u^{176} + \cdots + 45107.3u + 6161.12 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.0399629u^{177} - 0.0548352u^{176} + \cdots - 139699.u - 15481.9 \\ -0.0464781u^{177} - 0.137170u^{176} + \cdots + 175912.u + 17797.0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0292828u^{177} + 0.154408u^{176} + \cdots - 245118.u - 25864.2 \\ -0.0397983u^{177} - 0.178705u^{176} + \cdots + 263781.u + 28156.8 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0216693u^{177} + 0.0288690u^{176} + \cdots + 95096.4u + 9916.14 \\ 0.0161521u^{177} + 0.0822877u^{176} + \cdots - 235942.u - 24443.3 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.133434u^{177} + 0.388951u^{176} + \cdots - 345828.u - 34551.6 \\ -0.0363532u^{177} - 0.123260u^{176} + \cdots + 109844.u + 12057.4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0356100u^{177} - 0.0596208u^{176} + \cdots - 90563.5u - 10087.6 \\ -0.0615594u^{177} - 0.161811u^{176} + \cdots + 126964.u + 12600.5 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.115818u^{177} + 0.283079u^{176} + \cdots - 139607.u - 11721.2 \\ -0.0477208u^{177} - 0.125972u^{176} + \cdots + 67851.1u + 6289.36 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0872571u^{177} - 0.186760u^{176} + \cdots + 124086.u + 10099.2 \\ 0.00876483u^{177} + 0.0448885u^{176} + \cdots - 19193.0u - 2288.77 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.125336u^{177} + 0.257783u^{176} + \cdots - 309492.u - 30772.4$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{178} - 16u^{177} + \cdots - 605422u + 32771$
c_2, c_7	$u^{178} + 2u^{177} + \cdots + 2168879u + 237673$
c_3	$4(4u^{178} + 4u^{177} + \cdots + 938639u + 398051)$
c_4	$u^{178} + 4u^{177} + \cdots - 416u + 16$
c_5, c_{12}	$u^{178} - 3u^{177} + \cdots + 80u + 1$
c_6	$4(4u^{178} - 24u^{177} + \cdots - 5.32279 \times 10^8 u + 2.88321 \times 10^8)$
c_8	$4(4u^{178} - 92u^{177} + \cdots - 82u + 1)$
c_9	$4(4u^{178} + 36u^{177} + \cdots - 382176u + 2413368)$
c_{10}	$u^{178} + 4u^{177} + \cdots - 4118858040u + 270945184$
c_{11}	$u^{178} - u^{177} + \cdots + 1782837u + 1531156$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{178} + 32y^{177} + \cdots + 157395480066y + 1073938441$
c_2, c_7	$y^{178} - 102y^{177} + \cdots - 2949679011171y + 56488454929$
c_3	$16(16y^{178} + 440y^{177} + \cdots + 1.25117 \times 10^{13}y + 1.58445 \times 10^{11})$
c_4	$y^{178} - 12y^{177} + \cdots + 33728y + 256$
c_5, c_{12}	$y^{178} + 133y^{177} + \cdots + 62y + 1$
c_6	$16(16y^{178} + 1096y^{177} + \cdots + 3.29466 \times 10^{18}y + 8.31289 \times 10^{16})$
c_8	$16(16y^{178} + 88y^{177} + \cdots - 752y + 1)$
c_9	16 $\cdot (16y^{178} - 904y^{177} + \cdots - 314751079538208y + 5824345103424)$
c_{10}	$y^{178} - 54y^{177} + \cdots - 1913910999604112960y + 73411292732793856$
c_{11}	$y^{178} - 35y^{177} + \cdots - 71460060485001y + 2344438696336$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.992066+0.124390I$ $a=-0.63283-3.63308I$ $b=\ \ 0.34212+3.18715I$	$-0.249247-0.444738I$	0
$u=-0.992066-0.124390I$ $a=-0.63283+3.63308I$ $b=\ \ 0.34212-3.18715I$	$-0.249247+0.444738I$	0
$u=-0.951762+0.303922I$ $a=-0.644042-0.552691I$ $b=\ \ 1.68598-0.05086I$	$0.93011-5.92977I$	0
$u=-0.951762-0.303922I$ $a=-0.644042+0.552691I$ $b=\ \ 1.68598+0.05086I$	$0.93011+5.92977I$	0
$u=\ \ 0.941384+0.331508I$ $a=-0.931740+0.118114I$ $b=\ \ 1.91732+0.26610I$	$-4.26633+11.58410I$	0
$u=\ \ 0.941384-0.331508I$ $a=-0.931740-0.118114I$ $b=\ \ 1.91732-0.26610I$	$-4.26633-11.58410I$	0
$u=-0.144472+0.976497I$ $a=-0.337305-0.177126I$ $b=\ \ 0.802291-0.933690I$	$-0.58334+6.80390I$	0
$u=-0.144472-0.976497I$ $a=-0.337305+0.177126I$ $b=\ \ 0.802291+0.933690I$	$-0.58334-6.80390I$	0
$u=\ \ 0.764869+0.667454I$ $a=\ \ 1.38737-0.41751I$ $b=-1.27121-1.31239I$	$-3.18610+5.10989I$	0
$u=\ \ 0.764869-0.667454I$ $a=\ \ 1.38737+0.41751I$ $b=-1.27121+1.31239I$	$-3.18610-5.10989I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.844597+0.564609I$ $a=-0.697997+0.138323I$ $b=\ \ 1.169480-0.454082I$	$-5.67242-5.51938I$	0
$u=-0.844597-0.564609I$ $a=-0.697997-0.138323I$ $b=\ \ 1.169480+0.454082I$	$-5.67242+5.51938I$	0
$u=-0.948425+0.253612I$ $a=-0.57640-1.98012I$ $b=\ \ 0.706136+0.403744I$	$-0.06955-4.08946I$	0
$u=-0.948425-0.253612I$ $a=-0.57640+1.98012I$ $b=\ \ 0.706136-0.403744I$	$-0.06955+4.08946I$	0
$u=\ \ 1.010860+0.142052I$ $a=-1.76203+2.82034I$ $b=\ \ 1.79676-2.26343I$	$0.499148+0.057032I$	0
$u=\ \ 1.010860-0.142052I$ $a=-1.76203-2.82034I$ $b=\ \ 1.79676+2.26343I$	$0.499148-0.057032I$	0
$u=-0.958878+0.362118I$ $a=\ \ 0.30751+2.53486I$ $b=-0.738092-0.805989I$	$-4.35015-11.90080I$	0
$u=-0.958878-0.362118I$ $a=\ \ 0.30751-2.53486I$ $b=-0.738092+0.805989I$	$-4.35015+11.90080I$	0
$u=-0.962702+0.366035I$ $a=\ \ 0.446022-0.451866I$ $b=-1.326000+0.418979I$	$-4.81662-3.98534I$	0
$u=-0.962702-0.366035I$ $a=\ \ 0.446022+0.451866I$ $b=-1.326000-0.418979I$	$-4.81662+3.98534I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.998282 + 0.333232I$ $a = -0.42169 + 2.25993I$ $b = 0.307168 - 0.919678I$	$-4.30048 + 3.99901I$	0
$u = 0.998282 - 0.333232I$ $a = -0.42169 - 2.25993I$ $b = 0.307168 + 0.919678I$	$-4.30048 - 3.99901I$	0
$u = 0.923944 + 0.209596I$ $a = 0.642333 - 0.117151I$ $b = 1.070200 + 0.457354I$	$-3.01826 - 1.56812I$	0
$u = 0.923944 - 0.209596I$ $a = 0.642333 + 0.117151I$ $b = 1.070200 - 0.457354I$	$-3.01826 + 1.56812I$	0
$u = 0.246482 + 1.028850I$ $a = 0.221927 - 0.074361I$ $b = -0.660009 - 1.083060I$	$1.76182 - 8.94119I$	0
$u = 0.246482 - 1.028850I$ $a = 0.221927 + 0.074361I$ $b = -0.660009 + 1.083060I$	$1.76182 + 8.94119I$	0
$u = 0.919418 + 0.164483I$ $a = 1.011820 + 0.495778I$ $b = -1.76923 - 0.66787I$	$0.30003 + 1.85304I$	0
$u = 0.919418 - 0.164483I$ $a = 1.011820 - 0.495778I$ $b = -1.76923 + 0.66787I$	$0.30003 - 1.85304I$	0
$u = 0.906373 + 0.171500I$ $a = 1.22542 - 2.76344I$ $b = -0.277232 + 0.657619I$	$-3.16479 + 3.31194I$	0
$u = 0.906373 - 0.171500I$ $a = 1.22542 + 2.76344I$ $b = -0.277232 - 0.657619I$	$-3.16479 - 3.31194I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.893114 + 0.188520I$ $a = -0.83363 + 2.30303I$ $b = 0.83591 - 1.21738I$	$0.279103 - 0.153407I$	0
$u = 0.893114 - 0.188520I$ $a = -0.83363 - 2.30303I$ $b = 0.83591 + 1.21738I$	$0.279103 + 0.153407I$	0
$u = -1.086920 + 0.102199I$ $a = 0.88426 - 1.32927I$ $b = 0.373921 + 1.109980I$	$6.69875 - 0.68350I$	0
$u = -1.086920 - 0.102199I$ $a = 0.88426 + 1.32927I$ $b = 0.373921 - 1.109980I$	$6.69875 + 0.68350I$	0
$u = -0.772319 + 0.477625I$ $a = -0.667584 - 1.127800I$ $b = -0.447458 - 0.272416I$	$-3.86498 - 2.00649I$	0
$u = -0.772319 - 0.477625I$ $a = -0.667584 + 1.127800I$ $b = -0.447458 + 0.272416I$	$-3.86498 + 2.00649I$	0
$u = 0.853439 + 0.294497I$ $a = 0.03046 - 2.68974I$ $b = -0.844719 + 0.684577I$	$0.37963 + 5.26113I$	0
$u = 0.853439 - 0.294497I$ $a = 0.03046 + 2.68974I$ $b = -0.844719 - 0.684577I$	$0.37963 - 5.26113I$	0
$u = 0.238321 + 1.071310I$ $a = -0.210554 + 0.514909I$ $b = 0.633979 + 0.298378I$	$-5.36564 - 5.11807I$	0
$u = 0.238321 - 1.071310I$ $a = -0.210554 - 0.514909I$ $b = 0.633979 - 0.298378I$	$-5.36564 + 5.11807I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.852253+0.284723I$ $a=-0.06558-1.98271I$ $b=\ 0.177684+0.442031I$	$-1.04567-3.08109I$	0
$u=-0.852253-0.284723I$ $a=-0.06558+1.98271I$ $b=\ 0.177684-0.442031I$	$-1.04567+3.08109I$	0
$u=\ 1.038730+0.378712I$ $a=-0.54269-1.86180I$ $b=-0.42909+1.69485I$	$3.09094+2.07590I$	0
$u=\ 1.038730-0.378712I$ $a=-0.54269+1.86180I$ $b=-0.42909-1.69485I$	$3.09094-2.07590I$	0
$u=\ 0.907504+0.636818I$ $a=-0.403607+1.067780I$ $b=\ 0.509626-0.072616I$	$-4.33576+4.93505I$	0
$u=\ 0.907504-0.636818I$ $a=-0.403607-1.067780I$ $b=\ 0.509626+0.072616I$	$-4.33576-4.93505I$	0
$u=\ 0.429869+1.027370I$ $a=\ 0.082714-0.196731I$ $b=\ 0.097270+0.379378I$	$-1.12509+2.76923I$	0
$u=\ 0.429869-1.027370I$ $a=\ 0.082714+0.196731I$ $b=\ 0.097270-0.379378I$	$-1.12509-2.76923I$	0
$u=\ 1.051490+0.394008I$ $a=\ 1.064240+0.479016I$ $b=\ 0.475919-0.792781I$	$4.96440+2.00153I$	0
$u=\ 1.051490-0.394008I$ $a=\ 1.064240-0.479016I$ $b=\ 0.475919+0.792781I$	$4.96440-2.00153I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.973166 + 0.569240I$ $a = 0.54569 + 1.72414I$ $b = 1.07132 - 1.54059I$	$-2.48803 - 0.24024I$	0
$u = 0.973166 - 0.569240I$ $a = 0.54569 - 1.72414I$ $b = 1.07132 + 1.54059I$	$-2.48803 + 0.24024I$	0
$u = -0.657614 + 0.558091I$ $a = -0.23361 + 1.75163I$ $b = -0.652192 - 0.786852I$	$-6.17320 + 1.09241I$	0
$u = -0.657614 - 0.558091I$ $a = -0.23361 - 1.75163I$ $b = -0.652192 + 0.786852I$	$-6.17320 - 1.09241I$	0
$u = -0.842512 + 0.175852I$ $a = 0.33518 + 1.45955I$ $b = -1.60015 - 0.42872I$	$-0.63643 + 2.23657I$	0
$u = -0.842512 - 0.175852I$ $a = 0.33518 - 1.45955I$ $b = -1.60015 + 0.42872I$	$-0.63643 - 2.23657I$	0
$u = 0.775834 + 0.358846I$ $a = -0.249485 + 0.663032I$ $b = 1.346820 + 0.417826I$	$0.23027 - 2.28578I$	0
$u = 0.775834 - 0.358846I$ $a = -0.249485 - 0.663032I$ $b = 1.346820 - 0.417826I$	$0.23027 + 2.28578I$	0
$u = -0.843318 + 0.053176I$ $a = 0.17336 - 2.60537I$ $b = -0.254398 + 0.495897I$	$-0.85587 - 3.32407I$	0
$u = -0.843318 - 0.053176I$ $a = 0.17336 + 2.60537I$ $b = -0.254398 - 0.495897I$	$-0.85587 + 3.32407I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.181740+1.142040I$ $a=-0.113914-0.097963I$ $b=\ \ 0.430165-0.687731I$	$-1.68087+4.09715I$	0
$u=-0.181740-1.142040I$ $a=-0.113914+0.097963I$ $b=\ \ 0.430165+0.687731I$	$-1.68087-4.09715I$	0
$u=\ \ 0.293993+0.776463I$ $a=-0.494108+0.422731I$ $b=\ \ 0.727460+1.066370I$	$2.64356-2.13931I$	0
$u=\ \ 0.293993-0.776463I$ $a=-0.494108-0.422731I$ $b=\ \ 0.727460-1.066370I$	$2.64356+2.13931I$	0
$u=-1.119540+0.348508I$ $a=\ \ 0.953059-0.917562I$ $b=\ \ 0.178718+1.177460I$	$6.83838-1.00109I$	0
$u=-1.119540-0.348508I$ $a=\ \ 0.953059+0.917562I$ $b=\ \ 0.178718-1.177460I$	$6.83838+1.00109I$	0
$u=\ \ 0.316539+1.129880I$ $a=\ \ 0.296503+0.327216I$ $b=-0.616398-0.869509I$	$-5.94640-6.09820I$	0
$u=\ \ 0.316539-1.129880I$ $a=\ \ 0.296503-0.327216I$ $b=-0.616398+0.869509I$	$-5.94640+6.09820I$	0
$u=\ \ 0.548030+0.614702I$ $a=-0.0943050-0.0184205I$ $b=-1.108010+0.240709I$	$-5.25827-0.13528I$	0
$u=\ \ 0.548030-0.614702I$ $a=-0.0943050+0.0184205I$ $b=-1.108010-0.240709I$	$-5.25827+0.13528I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.170713 + 0.800024I$ $a = -0.375182 - 0.444478I$ $b = 0.397389 - 0.772112I$	$2.67912 + 2.52906I$	0
$u = 0.170713 - 0.800024I$ $a = -0.375182 + 0.444478I$ $b = 0.397389 + 0.772112I$	$2.67912 - 2.52906I$	0
$u = -0.870477 + 0.812039I$ $a = -1.055090 + 0.554271I$ $b = 0.14046 - 1.59803I$	$-3.37542 - 3.03142I$	0
$u = -0.870477 - 0.812039I$ $a = -1.055090 - 0.554271I$ $b = 0.14046 + 1.59803I$	$-3.37542 + 3.03142I$	0
$u = 1.117310 + 0.411318I$ $a = -0.85356 - 1.13764I$ $b = 0.091685 + 1.385490I$	$3.35582 + 0.82505I$	0
$u = 1.117310 - 0.411318I$ $a = -0.85356 + 1.13764I$ $b = 0.091685 - 1.385490I$	$3.35582 - 0.82505I$	0
$u = -1.180150 + 0.184098I$ $a = -1.05967 + 1.14293I$ $b = -0.089854 - 0.506560I$	$0.56645 + 2.67316I$	0
$u = -1.180150 - 0.184098I$ $a = -1.05967 - 1.14293I$ $b = -0.089854 + 0.506560I$	$0.56645 - 2.67316I$	0
$u = -0.293054 + 1.167860I$ $a = 0.374049 - 0.058859I$ $b = -0.690678 + 1.086860I$	$-3.6579 + 14.3843I$	0
$u = -0.293054 - 1.167860I$ $a = 0.374049 + 0.058859I$ $b = -0.690678 - 1.086860I$	$-3.6579 - 14.3843I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.316856+0.723613I$ $a=\ \ 1.270620-0.534417I$ $b=-0.339015+0.985907I$	$0.97954-2.75769I$	0
$u=-0.316856-0.723613I$ $a=\ \ 1.270620+0.534417I$ $b=-0.339015-0.985907I$	$0.97954+2.75769I$	0
$u=\ \ 0.679241+0.397556I$ $a=\ \ 0.85061-2.46054I$ $b=-0.974226+0.659872I$	$-5.03312-8.43363I$	0
$u=\ \ 0.679241-0.397556I$ $a=\ \ 0.85061+2.46054I$ $b=-0.974226-0.659872I$	$-5.03312+8.43363I$	0
$u=-0.633352+1.041090I$ $a=-0.415317-0.101570I$ $b=\ \ 0.464425-0.484680I$	$-5.72391-1.32214I$	0
$u=-0.633352-1.041090I$ $a=-0.415317+0.101570I$ $b=\ \ 0.464425+0.484680I$	$-5.72391+1.32214I$	0
$u=-0.197956+1.211950I$ $a=\ \ 0.273083+0.422005I$ $b=-0.160174-0.120393I$	$-4.84625-5.62322I$	0
$u=-0.197956-1.211950I$ $a=\ \ 0.273083-0.422005I$ $b=-0.160174+0.120393I$	$-4.84625+5.62322I$	0
$u=-0.126936+0.755082I$ $a=-0.194448-0.096238I$ $b=-0.699847+0.569804I$	$-1.26849+1.70352I$	0
$u=-0.126936-0.755082I$ $a=-0.194448+0.096238I$ $b=-0.699847-0.569804I$	$-1.26849-1.70352I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.626451+0.429735I$ $a=\ 0.0222997-0.0245084I$ $b=\ 1.30983-0.60491I$	$-5.34170+8.53462I$	0
$u=-0.626451-0.429735I$ $a=\ 0.0222997+0.0245084I$ $b=\ 1.30983+0.60491I$	$-5.34170-8.53462I$	0
$u=-1.134630+0.506165I$ $a=\ 0.42743-1.68732I$ $b=\ 1.15374+1.31124I$	$2.65056-6.98031I$	0
$u=-1.134630-0.506165I$ $a=\ 0.42743+1.68732I$ $b=\ 1.15374-1.31124I$	$2.65056+6.98031I$	0
$u=\ 0.221336+1.228940I$ $a=\ 0.365100+0.499759I$ $b=\ 0.045519-1.019030I$	$-1.96796+6.42419I$	0
$u=\ 0.221336-1.228940I$ $a=\ 0.365100-0.499759I$ $b=\ 0.045519+1.019030I$	$-1.96796-6.42419I$	0
$u=-0.582525+0.471611I$ $a=-0.13021-2.13301I$ $b=\ 0.435923+0.694935I$	$-5.88598+0.51406I$	0
$u=-0.582525-0.471611I$ $a=-0.13021+2.13301I$ $b=\ 0.435923-0.694935I$	$-5.88598-0.51406I$	0
$u=-1.206720+0.357422I$ $a=\ 0.746857-1.154740I$ $b=\ 0.579182+0.926785I$	$4.87028-5.07993I$	0
$u=-1.206720-0.357422I$ $a=\ 0.746857+1.154740I$ $b=\ 0.579182-0.926785I$	$4.87028+5.07993I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.283058+1.229960I$ $a=-0.235189+0.124909I$ $b=\ \ 0.393444+0.659046I$	$-2.82697-6.04884I$	0
$u=-0.283058-1.229960I$ $a=-0.235189-0.124909I$ $b=\ \ 0.393444-0.659046I$	$-2.82697+6.04884I$	0
$u=\ \ 0.657861+0.330814I$ $a=-0.846774-0.360459I$ $b=\ \ 0.548575+0.242477I$	$1.19127+0.97093I$	0
$u=\ \ 0.657861-0.330814I$ $a=-0.846774+0.360459I$ $b=\ \ 0.548575-0.242477I$	$1.19127-0.97093I$	0
$u=\ \ 1.167140+0.565782I$ $a=-0.43603-1.73496I$ $b=-0.93392+1.64537I$	$5.22086+7.22345I$	0
$u=\ \ 1.167140-0.565782I$ $a=-0.43603+1.73496I$ $b=-0.93392-1.64537I$	$5.22086-7.22345I$	0
$u=-1.200670+0.491325I$ $a=\ \ 0.26022-1.64116I$ $b=\ \ 0.852565+1.098650I$	$1.92389-6.34357I$	0
$u=-1.200670-0.491325I$ $a=\ \ 0.26022+1.64116I$ $b=\ \ 0.852565-1.098650I$	$1.92389+6.34357I$	0
$u=\ \ 1.245310+0.373200I$ $a=-0.977596-0.851469I$ $b=-0.397960+0.671146I$	$5.38085+6.47645I$	0
$u=\ \ 1.245310-0.373200I$ $a=-0.977596+0.851469I$ $b=-0.397960-0.671146I$	$5.38085-6.47645I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.291780+0.168080I$ $a=-1.091320-0.692244I$ $b=\ \ 1.53382+0.77309I$	$0.674591+0.780455I$	0
$u=-1.291780-0.168080I$ $a=-1.091320+0.692244I$ $b=\ \ 1.53382-0.77309I$	$0.674591-0.780455I$	0
$u=\ \ 1.305850+0.061233I$ $a=\ \ 0.31674+1.43670I$ $b=\ \ 0.499354-1.144520I$	$3.92251+3.48447I$	0
$u=\ \ 1.305850-0.061233I$ $a=\ \ 0.31674-1.43670I$ $b=\ \ 0.499354+1.144520I$	$3.92251-3.48447I$	0
$u=-1.123700+0.674982I$ $a=-0.215814+0.976341I$ $b=-0.684718-0.984670I$	$-3.96186-4.90193I$	0
$u=-1.123700-0.674982I$ $a=-0.215814-0.976341I$ $b=-0.684718+0.984670I$	$-3.96186+4.90193I$	0
$u=-1.256750+0.395790I$ $a=-0.02162+1.67322I$ $b=-0.70124-1.55626I$	$6.92386-6.68059I$	0
$u=-1.256750-0.395790I$ $a=-0.02162-1.67322I$ $b=-0.70124+1.55626I$	$6.92386+6.68059I$	0
$u=\ \ 0.565709+0.359661I$ $a=-0.186736+0.799368I$ $b=-1.052790-0.572471I$	$-5.57284-0.94798I$	0
$u=\ \ 0.565709-0.359661I$ $a=-0.186736-0.799368I$ $b=-1.052790+0.572471I$	$-5.57284+0.94798I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.582817+0.312591I$ $a=\ \ 0.73182+2.36882I$ $b=-1.132540-0.184172I$	$-0.17684+3.11359I$	0
$u=-0.582817-0.312591I$ $a=\ \ 0.73182-2.36882I$ $b=-1.132540+0.184172I$	$-0.17684-3.11359I$	0
$u=\ \ 0.253804+1.319740I$ $a=-0.277689-0.213306I$ $b=\ \ 0.460895+0.909333I$	$-5.36469-4.31576I$	0
$u=\ \ 0.253804-1.319740I$ $a=-0.277689+0.213306I$ $b=\ \ 0.460895-0.909333I$	$-5.36469+4.31576I$	0
$u=-0.176739+0.609292I$ $a=-0.478810+0.851063I$ $b=-0.614341+0.812358I$	$0.04368+2.58447I$	0
$u=-0.176739-0.609292I$ $a=-0.478810-0.851063I$ $b=-0.614341-0.812358I$	$0.04368-2.58447I$	0
$u=\ \ 1.281600+0.472941I$ $a=-0.530255-1.095740I$ $b=-0.231119+0.842902I$	$2.04173+2.74581I$	0
$u=\ \ 1.281600-0.472941I$ $a=-0.530255+1.095740I$ $b=-0.231119-0.842902I$	$2.04173-2.74581I$	0
$u=-1.263760+0.558138I$ $a=-0.09888+1.68890I$ $b=-1.04488-1.48862I$	$2.84900-12.31260I$	0
$u=-1.263760-0.558138I$ $a=-0.09888-1.68890I$ $b=-1.04488+1.48862I$	$2.84900+12.31260I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.166333 + 0.588622I$ $a = -1.071340 + 0.115868I$ $b = 0.124880 + 0.873076I$	$1.00374 + 1.61284I$	0
$u = 0.166333 - 0.588622I$ $a = -1.071340 - 0.115868I$ $b = 0.124880 - 0.873076I$	$1.00374 - 1.61284I$	0
$u = -0.540140 + 0.285066I$ $a = -0.436021 - 0.194406I$ $b = -0.919783 + 0.103673I$	$-1.79405 + 0.11705I$	0
$u = -0.540140 - 0.285066I$ $a = -0.436021 + 0.194406I$ $b = -0.919783 - 0.103673I$	$-1.79405 - 0.11705I$	0
$u = 1.341970 + 0.365025I$ $a = 0.691531 + 0.502081I$ $b = 0.074773 - 0.757888I$	$4.24596 - 2.08932I$	0
$u = 1.341970 - 0.365025I$ $a = 0.691531 - 0.502081I$ $b = 0.074773 + 0.757888I$	$4.24596 + 2.08932I$	0
$u = 1.361410 + 0.291926I$ $a = -0.014410 + 1.060550I$ $b = 0.585731 - 1.011550I$	$4.07089 + 0.81130I$	0
$u = 1.361410 - 0.291926I$ $a = -0.014410 - 1.060550I$ $b = 0.585731 + 1.011550I$	$4.07089 - 0.81130I$	0
$u = -1.368930 + 0.260398I$ $a = -0.596047 + 0.990948I$ $b = -0.067578 - 1.067370I$	$7.36700 + 4.49431I$	0
$u = -1.368930 - 0.260398I$ $a = -0.596047 - 0.990948I$ $b = -0.067578 + 1.067370I$	$7.36700 - 4.49431I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.257180 + 0.608930I$ $a = 0.37722 + 1.58954I$ $b = 0.91115 - 1.47058I$	$4.9036 + 14.8208I$	0
$u = 1.257180 - 0.608930I$ $a = 0.37722 - 1.58954I$ $b = 0.91115 + 1.47058I$	$4.9036 - 14.8208I$	0
$u = 1.268080 + 0.602078I$ $a = 0.143273 - 1.039010I$ $b = -1.13474 + 0.96550I$	$-2.11410 + 11.06540I$	0
$u = 1.268080 - 0.602078I$ $a = 0.143273 + 1.039010I$ $b = -1.13474 - 0.96550I$	$-2.11410 - 11.06540I$	0
$u = 1.261680 + 0.631085I$ $a = 0.26840 + 1.61104I$ $b = 0.72573 - 1.29863I$	$-2.88964 + 12.30580I$	0
$u = 1.261680 - 0.631085I$ $a = 0.26840 - 1.61104I$ $b = 0.72573 + 1.29863I$	$-2.88964 - 12.30580I$	0
$u = -1.13233 + 0.86296I$ $a = 0.462940 - 0.528770I$ $b = 0.417200 + 1.058860I$	$-0.13177 - 3.61101I$	0
$u = -1.13233 - 0.86296I$ $a = 0.462940 + 0.528770I$ $b = 0.417200 - 1.058860I$	$-0.13177 + 3.61101I$	0
$u = 1.36205 + 0.41824I$ $a = 0.17345 - 1.51094I$ $b = -0.83086 + 1.43967I$	$2.49783 + 11.28010I$	0
$u = 1.36205 - 0.41824I$ $a = 0.17345 + 1.51094I$ $b = -0.83086 - 1.43967I$	$2.49783 - 11.28010I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.23012 + 0.72678I$ $a = -0.499559 - 1.209410I$ $b = -0.197879 + 1.261400I$	$2.56249 + 3.35739I$	0
$u = 1.23012 - 0.72678I$ $a = -0.499559 + 1.209410I$ $b = -0.197879 - 1.261400I$	$2.56249 - 3.35739I$	0
$u = -1.36127 + 0.44511I$ $a = -0.664678 + 1.172870I$ $b = -0.456148 - 0.955991I$	$3.13138 - 11.83270I$	0
$u = -1.36127 - 0.44511I$ $a = -0.664678 - 1.172870I$ $b = -0.456148 + 0.955991I$	$3.13138 + 11.83270I$	0
$u = -1.31195 + 0.59479I$ $a = -0.178632 + 1.271450I$ $b = -0.85637 - 1.17308I$	$1.92945 - 10.19790I$	0
$u = -1.31195 - 0.59479I$ $a = -0.178632 - 1.271450I$ $b = -0.85637 + 1.17308I$	$1.92945 + 10.19790I$	0
$u = 1.30278 + 0.63648I$ $a = 0.416515 + 0.512693I$ $b = 0.461519 - 0.758326I$	$5.40110 + 2.90863I$	0
$u = 1.30278 - 0.63648I$ $a = 0.416515 - 0.512693I$ $b = 0.461519 + 0.758326I$	$5.40110 - 2.90863I$	0
$u = -1.29735 + 0.65738I$ $a = 0.27605 - 1.57970I$ $b = 0.91277 + 1.50118I$	$-0.4471 - 20.8429I$	0
$u = -1.29735 - 0.65738I$ $a = 0.27605 + 1.57970I$ $b = 0.91277 - 1.50118I$	$-0.4471 + 20.8429I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.16326+0.89742I$ $a=-0.551601+1.258840I$ $b=-0.13362-1.42873I$	$1.43348-3.75983I$	0
$u=-1.16326-0.89742I$ $a=-0.551601-1.258840I$ $b=-0.13362+1.42873I$	$1.43348+3.75983I$	0
$u=1.48351+0.15772I$ $a=-0.547091-0.858642I$ $b=-0.090189+0.891734I$	$3.00661-9.46017I$	0
$u=1.48351-0.15772I$ $a=-0.547091+0.858642I$ $b=-0.090189-0.891734I$	$3.00661+9.46017I$	0
$u=1.35847+0.67164I$ $a=-0.23786-1.40556I$ $b=-0.74118+1.33379I$	$-1.75223+11.22300I$	0
$u=1.35847-0.67164I$ $a=-0.23786+1.40556I$ $b=-0.74118-1.33379I$	$-1.75223-11.22300I$	0
$u=-1.54334+0.19777I$ $a=0.313887-0.921850I$ $b=0.297957+0.738807I$	$1.65802-1.48864I$	0
$u=-1.54334-0.19777I$ $a=0.313887+0.921850I$ $b=0.297957-0.738807I$	$1.65802+1.48864I$	0
$u=-1.40853+0.66770I$ $a=0.228864-1.337370I$ $b=0.195328+1.225050I$	$3.30186-3.35392I$	0
$u=-1.40853-0.66770I$ $a=0.228864+1.337370I$ $b=0.195328-1.225050I$	$3.30186+3.35392I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.087113+0.412462I$ $a=-1.084410-0.845425I$ $b=-1.112940+0.287127I$	$-2.29927+1.72407I$	$-2.87770-0.40483I$
$u=-0.087113-0.412462I$ $a=-1.084410+0.845425I$ $b=-1.112940-0.287127I$	$-2.29927-1.72407I$	$-2.87770+0.40483I$
$u=1.56736+0.41953I$ $a=0.311998+1.268370I$ $b=0.239231-1.084570I$	$2.90899+0.55522I$	0
$u=1.56736-0.41953I$ $a=0.311998-1.268370I$ $b=0.239231+1.084570I$	$2.90899-0.55522I$	0
$u=-1.59388+0.39612I$ $a=0.145546-0.604297I$ $b=0.523839+0.604047I$	$1.92049-1.15988I$	0
$u=-1.59388-0.39612I$ $a=0.145546+0.604297I$ $b=0.523839-0.604047I$	$1.92049+1.15988I$	0
$u=-0.342875+0.013845I$ $a=-2.24342+0.48732I$ $b=0.249623+0.685391I$	$-1.15186+3.27411I$	$3.06724-2.25669I$
$u=-0.342875-0.013845I$ $a=-2.24342-0.48732I$ $b=0.249623-0.685391I$	$-1.15186-3.27411I$	$3.06724+2.25669I$

II.

$\boldsymbol{I_2^u = \langle -3.12\times 10^{39}u^{41} - 9.71\times 10^{39}u^{40} + \cdots + 5.62\times 10^{39}b - 9.02\times 10^{39},\ -9.08\times 10^{39}u^{41} - 6.69\times 10^{39}u^{40} + \cdots + 5.62\times 10^{39}a + 1.34\times 10^{41},\ u^{42} + u^{41} + \cdots - 3u + 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_{11} = \begin{pmatrix} 1.61520u^{41} + 1.18975u^{40} + \cdots - 0.0740124u - 23.9215 \\ 0.555529u^{41} + 1.72762u^{40} + \cdots - 2.98029u + 1.60486 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 5.50568u^{41} + 5.91107u^{40} + \cdots + 5.79784u - 25.9518 \\ -0.209389u^{41} + 1.31146u^{40} + \cdots - 1.58236u + 2.43571 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 50.8551u^{41} + 83.4086u^{40} + \cdots + 108.578u - 95.3650 \\ -17.1298u^{41} - 29.7198u^{40} + \cdots - 49.5381u + 25.4088 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -53.2736u^{41} - 85.4767u^{40} + \cdots - 126.556u + 82.7345 \\ 17.8702u^{41} + 30.8244u^{40} + \cdots + 51.7705u - 17.3977 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 11.5895u^{41} + 20.4612u^{40} + \cdots + 35.6834u + 0.980313 \\ 3.01478u^{41} + 3.30092u^{40} + \cdots - 2.85750u - 20.0688 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 4.66368u^{41} + 4.69135u^{40} + \cdots - 0.143183u - 23.1748 \\ -2.49295u^{41} - 1.77398u^{40} + \cdots - 2.91112u + 0.858225 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 38.8554u^{41} + 59.3436u^{40} + \cdots + 56.8908u - 74.1945 \\ -21.8069u^{41} - 33.2716u^{40} + \cdots - 38.3343u + 32.8957 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -17.9014u^{41} - 25.4714u^{40} + \cdots - 21.1845u + 47.4250 \\ 1.22267u^{41} - 1.48382u^{40} + \cdots - 18.8135u + 8.91055 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -16.8769u^{41} - 17.1155u^{40} + \cdots + 80.7442u + 53.3077$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{42} - 3u^{41} + \cdots + 2u + 1$
c_2	$u^{42} - u^{41} + \cdots + 3u + 1$
c_3	$4(4u^{42} - 32u^{41} + \cdots + 3u + 7)$
c_4	$u^{42} + u^{41} + \cdots - 4u + 8$
c_5	$u^{42} + 16u^{40} + \cdots - 28u + 1$
c_6	$4(4u^{42} + 20u^{41} + \cdots + 90u + 27)$
c_7	$u^{42} + u^{41} + \cdots - 3u + 1$
c_8	$4(4u^{42} - 8u^{41} + \cdots - 4u + 1)$
c_9	$4(4u^{42} - 16u^{41} + \cdots - 2u + 1)$
c_{10}	$u^{42} - 5u^{41} + \cdots - 4u + 8$
c_{11}	$u^{42} - 4u^{41} + \cdots + 11u + 7$
c_{12}	$u^{42} + 16u^{40} + \cdots + 28u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{42} + 7y^{41} + \cdots + 18y + 1$
c_2, c_7	$y^{42} - 23y^{41} + \cdots - 31y + 1$
c_3	$16(16y^{42} - 344y^{41} + \cdots - 23y + 49)$
c_4	$y^{42} - 9y^{41} + \cdots - 128y + 64$
c_5, c_{12}	$y^{42} + 32y^{41} + \cdots - 374y + 1$
c_6	$16(16y^{42} - 200y^{41} + \cdots - 1782y + 729)$
c_8	$16(16y^{42} - 440y^{41} + \cdots + 8y + 1)$
c_9	$16(16y^{42} + 168y^{41} + \cdots + 30y + 1)$
c_{10}	$y^{42} - 3y^{41} + \cdots + 640y + 64$
c_{11}	$y^{42} - 8y^{41} + \cdots + 509y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.208551 + 0.980749I$ $a = -0.331107 - 0.134392I$ $b = -0.270728 + 0.464096I$	$-1.13423 + 3.27786I$	$0.28175 - 8.90573I$
$u = 0.208551 - 0.980749I$ $a = -0.331107 + 0.134392I$ $b = -0.270728 - 0.464096I$	$-1.13423 - 3.27786I$	$0.28175 + 8.90573I$
$u = -0.621731 + 0.747909I$ $a = -1.105130 - 0.478816I$ $b = 0.851485 - 0.858094I$	$-2.78722 - 4.19163I$	$-1.24690 + 4.22241I$
$u = -0.621731 - 0.747909I$ $a = -1.105130 + 0.478816I$ $b = 0.851485 + 0.858094I$	$-2.78722 + 4.19163I$	$-1.24690 - 4.22241I$
$u = -1.024010 + 0.175007I$ $a = -1.17868 + 1.01188I$ $b = -0.373872 - 1.049150I$	$5.58699 - 0.72514I$	$2.17295 - 0.73273I$
$u = -1.024010 - 0.175007I$ $a = -1.17868 - 1.01188I$ $b = -0.373872 + 1.049150I$	$5.58699 + 0.72514I$	$2.17295 + 0.73273I$
$u = 0.609917 + 0.700692I$ $a = 0.262798 - 0.168219I$ $b = -0.502592 - 0.902925I$	$-2.22582 + 4.58276I$	$-0.37324 - 5.02846I$
$u = 0.609917 - 0.700692I$ $a = 0.262798 + 0.168219I$ $b = -0.502592 + 0.902925I$	$-2.22582 - 4.58276I$	$-0.37324 + 5.02846I$
$u = 0.905505 + 0.189953I$ $a = 0.49328 - 2.49648I$ $b = -0.345773 + 0.414757I$	$-0.94382 + 3.94252I$	$-3.21770 - 12.03709I$
$u = 0.905505 - 0.189953I$ $a = 0.49328 + 2.49648I$ $b = -0.345773 - 0.414757I$	$-0.94382 - 3.94252I$	$-3.21770 + 12.03709I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.834088+0.700622I$ $a=-0.146508+0.775837I$ $b=\ \ 0.366795-0.247192I$	$-6.14512-2.71847I$	$-8.12422+2.94471I$
$u=-0.834088-0.700622I$ $a=-0.146508-0.775837I$ $b=\ \ 0.366795+0.247192I$	$-6.14512+2.71847I$	$-8.12422-2.94471I$
$u=\ \ 1.036510+0.336870I$ $a=-0.89434-1.46030I$ $b=-0.16219+1.52601I$	$3.49285+1.34718I$	$9.57551-2.82282I$
$u=\ \ 1.036510-0.336870I$ $a=-0.89434+1.46030I$ $b=-0.16219-1.52601I$	$3.49285-1.34718I$	$9.57551+2.82282I$
$u=-1.116440+0.125543I$ $a=\ \ 2.67138+1.56517I$ $b=-2.95044-1.23313I$	$0.369866+0.223836I$	$-12.84475-2.38819I$
$u=-1.116440-0.125543I$ $a=\ \ 2.67138-1.56517I$ $b=-2.95044+1.23313I$	$0.369866-0.223836I$	$-12.84475+2.38819I$
$u=\ \ 0.835256+0.255507I$ $a=\ \ 0.264747+1.129720I$ $b=\ \ 1.294200-0.150987I$	$-0.99646-1.78569I$	$-5.15129-2.42788I$
$u=\ \ 0.835256-0.255507I$ $a=\ \ 0.264747-1.129720I$ $b=\ \ 1.294200+0.150987I$	$-0.99646+1.78569I$	$-5.15129+2.42788I$
$u=-0.313619+0.693229I$ $a=-1.037810+0.170571I$ $b=\ \ 0.580120+0.130149I$	$-5.77877-2.43116I$	$-5.09011+3.76700I$
$u=-0.313619-0.693229I$ $a=-1.037810-0.170571I$ $b=\ \ 0.580120-0.130149I$	$-5.77877+2.43116I$	$-5.09011-3.76700I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.144520+0.476956I$ $a=\ \ 0.26779-1.67408I$ $b=\ \ 1.18912+1.15539I$	$2.44366-7.17417I$	$-3.3751+19.1980I$
$u=-1.144520-0.476956I$ $a=\ \ 0.26779+1.67408I$ $b=\ \ 1.18912-1.15539I$	$2.44366+7.17417I$	$-3.3751-19.1980I$
$u=\ \ 1.188650+0.584797I$ $a=-0.546788-0.503969I$ $b=-0.482387+0.791507I$	$5.15161+2.92373I$	0
$u=\ \ 1.188650-0.584797I$ $a=-0.546788+0.503969I$ $b=-0.482387-0.791507I$	$5.15161-2.92373I$	0
$u=-0.620232+0.222877I$ $a=-0.57800-2.30339I$ $b=-0.632971-0.145072I$	$-4.00411-2.91005I$	$-8.76183+6.69107I$
$u=-0.620232-0.222877I$ $a=-0.57800+2.30339I$ $b=-0.632971+0.145072I$	$-4.00411+2.91005I$	$-8.76183-6.69107I$
$u=\ \ 0.654153+0.058044I$ $a=-1.48629-1.50369I$ $b=\ \ 1.42944+0.60088I$	$-0.399481+1.242960I$	$-2.79433+0.39423I$
$u=\ \ 0.654153-0.058044I$ $a=-1.48629+1.50369I$ $b=\ \ 1.42944-0.60088I$	$-0.399481-1.242960I$	$-2.79433-0.39423I$
$u=-0.531322+0.303237I$ $a=\ \ 0.61387+2.31392I$ $b=-1.339940+0.259438I$	$0.03181+3.54373I$	$4.5106-14.3768I$
$u=-0.531322-0.303237I$ $a=\ \ 0.61387-2.31392I$ $b=-1.339940-0.259438I$	$0.03181-3.54373I$	$4.5106+14.3768I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.01491+1.41560I$ $a=\ \ 0.141602+0.165991I$ $b=-0.309581-0.694632I$	$-4.42111-6.18378I$	0
$u=-0.01491-1.41560I$ $a=\ \ 0.141602-0.165991I$ $b=-0.309581+0.694632I$	$-4.42111+6.18378I$	0
$u=\ \ 1.37604+0.49945I$ $a=-0.030881+1.374680I$ $b=\ \ 0.91128-1.11107I$	$0.53597+12.42850I$	0
$u=\ \ 1.37604-0.49945I$ $a=-0.030881-1.374680I$ $b=\ \ 0.91128+1.11107I$	$0.53597-12.42850I$	0
$u=\ \ 1.42597+0.33897I$ $a=-0.353974-1.268380I$ $b=-0.212103+1.089610I$	$3.02192+1.98097I$	0
$u=\ \ 1.42597-0.33897I$ $a=-0.353974+1.268380I$ $b=-0.212103-1.089610I$	$3.02192-1.98097I$	0
$u=-1.29656+0.83536I$ $a=\ \ 0.411586-1.274340I$ $b=\ \ 0.181660+1.271200I$	$3.20817-3.94419I$	0
$u=-1.29656-0.83536I$ $a=\ \ 0.411586+1.274340I$ $b=\ \ 0.181660-1.271200I$	$3.20817+3.94419I$	0
$u=\ \ 0.382652+0.065485I$ $a=\ \ 2.13061+2.67486I$ $b=-1.226990+0.081598I$	$-4.84434+9.87435I$	$-1.48037-7.78471I$
$u=\ \ 0.382652-0.065485I$ $a=\ \ 2.13061-2.67486I$ $b=-1.226990-0.081598I$	$-4.84434-9.87435I$	$-1.48037+7.78471I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.60577+0.32274I$		
$a=-0.068146+0.856756I$	$1.61296-0.67598I$	0
$b=-0.494542-0.806555I$		
$u=-1.60577-0.32274I$		
$a=-0.068146-0.856756I$	$1.61296+0.67598I$	0
$b=-0.494542+0.806555I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{42}-3u^{41}+\cdots+2u+1)(u^{178}-16u^{177}+\cdots-605422u+32771)$
c_2	$(u^{42}-u^{41}+\cdots+3u+1)(u^{178}+2u^{177}+\cdots+2168879u+237673)$
c_3	$16(4u^{42}-32u^{41}+\cdots+3u+7)$ $\cdot(4u^{178}+4u^{177}+\cdots+938639u+398051)$
c_4	$(u^{42}+u^{41}+\cdots-4u+8)(u^{178}+4u^{177}+\cdots-416u+16)$
c_5	$(u^{42}+16u^{40}+\cdots-28u+1)(u^{178}-3u^{177}+\cdots+80u+1)$
c_6	$16(4u^{42}+20u^{41}+\cdots+90u+27)$ $\cdot(4u^{178}-24u^{177}+\cdots-532279328u+288320824)$
c_7	$(u^{42}+u^{41}+\cdots-3u+1)(u^{178}+2u^{177}+\cdots+2168879u+237673)$
c_8	$16(4u^{42}-8u^{41}+\cdots-4u+1)(4u^{178}-92u^{177}+\cdots-82u+1)$
c_9	$16(4u^{42}-16u^{41}+\cdots-2u+1)$ $\cdot(4u^{178}+36u^{177}+\cdots-382176u+2413368)$
c_{10}	$(u^{42}-5u^{41}+\cdots-4u+8)$ $\cdot(u^{178}+4u^{177}+\cdots-4118858040u+270945184)$
c_{11}	$(u^{42}-4u^{41}+\cdots+11u+7)(u^{178}-u^{177}+\cdots+1782837u+1531156)$
c_{12}	$(u^{42}+16u^{40}+\cdots+28u+1)(u^{178}-3u^{177}+\cdots+80u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{42}+7y^{41}+\cdots+18y+1)$ $\cdot(y^{178}+32y^{177}+\cdots+157395480066y+1073938441)$
c_2, c_7	$(y^{42}-23y^{41}+\cdots-31y+1)$ $\cdot(y^{178}-102y^{177}+\cdots-2949679011171y+56488454929)$
c_3	$256(16y^{42}-344y^{41}+\cdots-23y+49)$ $\cdot(16y^{178}+440y^{177}+\cdots+12511678076521y+158444598601)$
c_4	$(y^{42}-9y^{41}+\cdots-128y+64)(y^{178}-12y^{177}+\cdots+33728y+256)$
c_5, c_{12}	$(y^{42}+32y^{41}+\cdots-374y+1)(y^{178}+133y^{177}+\cdots+62y+1)$
c_6	$256(16y^{42}-200y^{41}+\cdots-1782y+729)$ $\cdot(16y^{178}+1096y^{177}+\cdots+3.29\times10^{18}y+8.31\times10^{16})$
c_8	$256(16y^{42}-440y^{41}+\cdots+8y+1)(16y^{178}+88y^{177}+\cdots-752y+1)$
c_9	$256(16y^{42}+168y^{41}+\cdots+30y+1)$ $\cdot(16y^{178}-904y^{177}+\cdots-314751079538208y+5824345103424)$
c_{10}	$(y^{42}-3y^{41}+\cdots+640y+64)$ $\cdot(y^{178}-54y^{177}+\cdots-1913910999604112960y+73411292732793856)$
c_{11}	$(y^{42}-8y^{41}+\cdots+509y+49)$ $\cdot(y^{178}-35y^{177}+\cdots-71460060485001y+2344438696336)$