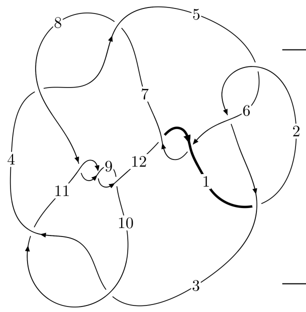
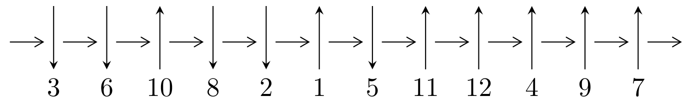
$12a_{0436}$ ($K12a_{0436}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2u^{79} + u^{78} + \cdots + b - u,\ -u^{78} - u^{77} + \cdots + a + 3,\ u^{80} - 2u^{79} + \cdots - u - 1\rangle$$
$$I_2^u = \langle -u^6 + 2u^4 + u^3 - u^2 + b - u - 1,\ -u^7 - u^6 + 2u^5 + 2u^4 - u^3 - u^2 + a - u - 1,$$
$$u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 89 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.

$$\boldsymbol{I_1^u = \langle -2u^{79}+u^{78}+\cdots+b-u,\ -u^{78}-u^{77}+\cdots+a+3,\ u^{80}-2u^{79}+\cdots-u-1\rangle}$$

(i) Arc colorings

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

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

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

$$a_{10} = \begin{pmatrix} u^{78} + u^{77} + \cdots - u - 3 \\ 2u^{79} - u^{78} + \cdots - 4u^2 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{17} - 4u^{15} + 7u^{13} - 4u^{11} - 3u^9 + 6u^7 - 2u^5 + u \\ u^{17} - 5u^{15} + 11u^{13} - 12u^{11} + 5u^9 + 2u^7 - 2u^5 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^{78} + u^{77} + \cdots + u - 2 \\ -u^{78} + u^{77} + \cdots - 2u^3 + 2u \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} u^5 - 2u^3 + u \\ u^7 - u^5 + u \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -u^9 + 2u^7 - u^5 - 2u^3 + u \\ -u^9 + 3u^7 - 3u^5 + u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^8 + 3u^6 - 3u^4 + 1 \\ -u^{10} + 2u^8 - u^6 - 2u^4 + u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{77} - u^{76} + \cdots + 2u^2 - 2 \\ u^{79} - u^{78} + \cdots - u^2 + 2u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6u^{79} + 9u^{78} + \cdots - 29u - 1$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{80} + 42u^{79} + \cdots + 9u + 1$
c_2, c_5	$u^{80} + 2u^{79} + \cdots + u - 1$
c_3, c_{10}	$u^{80} + u^{79} + \cdots - 768u^2 + 512$
c_4, c_7	$u^{80} - 6u^{79} + \cdots + 1829u + 145$
c_6, c_{12}	$u^{80} + 6u^{79} + \cdots - 577u + 53$
c_8, c_9, c_{11}	$u^{80} + 10u^{79} + \cdots - 7u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{80} - 6y^{79} + \cdots - 41y + 1$
c_2, c_5	$y^{80} - 42y^{79} + \cdots - 9y + 1$
c_3, c_{10}	$y^{80} - 57y^{79} + \cdots - 786432y + 262144$
c_4, c_7	$y^{80} + 66y^{79} + \cdots - 1478221y + 21025$
c_6, c_{12}	$y^{80} + 54y^{79} + \cdots - 584997y + 2809$
c_8, c_9, c_{11}	$y^{80} - 82y^{79} + \cdots - 5y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.788241 + 0.593267I$ $a = 2.89714 + 1.16358I$ $b = 0.97355 + 2.78858I$	$6.24334 - 5.11064I$	$8.14762 + 6.48257I$
$u = 0.788241 - 0.593267I$ $a = 2.89714 - 1.16358I$ $b = 0.97355 - 2.78858I$	$6.24334 + 5.11064I$	$8.14762 - 6.48257I$
$u = 0.813592 + 0.609570I$ $a = -2.93002 - 1.26264I$ $b = -1.10331 - 2.68448I$	$13.2744 - 9.2224I$	0
$u = 0.813592 - 0.609570I$ $a = -2.93002 + 1.26264I$ $b = -1.10331 + 2.68448I$	$13.2744 + 9.2224I$	0
$u = -0.772569 + 0.598380I$ $a = 1.07413 + 1.28706I$ $b = 1.42261 + 0.64929I$	$8.47306 + 2.34861I$	$9.12486 - 3.37977I$
$u = -0.772569 - 0.598380I$ $a = 1.07413 - 1.28706I$ $b = 1.42261 - 0.64929I$	$8.47306 - 2.34861I$	$9.12486 + 3.37977I$
$u = 1.03436$ $a = 1.16159$ $b = 0.0399622$	3.30231	0
$u = 0.755447 + 0.596084I$ $a = -2.64657 - 0.97416I$ $b = -0.97087 - 2.78244I$	$6.33746 + 0.43474I$	$8.59846 + 0.I$
$u = 0.755447 - 0.596084I$ $a = -2.64657 + 0.97416I$ $b = -0.97087 + 2.78244I$	$6.33746 - 0.43474I$	$8.59846 + 0.I$
$u = 0.731741 + 0.621831I$ $a = 2.26610 + 1.17730I$ $b = 0.78459 + 2.79549I$	$13.5099 + 4.4268I$	$10.35839 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.731741 - 0.621831I$ $a = 2.26610 - 1.17730I$ $b = 0.78459 - 2.79549I$	$13.5099 - 4.4268I$	$10.35839 + 0.I$
$u = -0.877134 + 0.339225I$ $a = 1.21807 - 1.37277I$ $b = 0.81822 - 1.38163I$	$0.06759 + 3.08443I$	$2.43309 - 8.76495I$
$u = -0.877134 - 0.339225I$ $a = 1.21807 + 1.37277I$ $b = 0.81822 + 1.38163I$	$0.06759 - 3.08443I$	$2.43309 + 8.76495I$
$u = -0.770687 + 0.535889I$ $a = -0.521106 - 0.626440I$ $b = -0.657130 - 0.323997I$	$2.28869 + 2.16821I$	$1.72867 - 4.00408I$
$u = -0.770687 - 0.535889I$ $a = -0.521106 + 0.626440I$ $b = -0.657130 + 0.323997I$	$2.28869 - 2.16821I$	$1.72867 + 4.00408I$
$u = -0.967844 + 0.492553I$ $a = -1.03957 + 1.74058I$ $b = -0.42685 + 2.01970I$	$6.45001 + 4.97903I$	0
$u = -0.967844 - 0.492553I$ $a = -1.03957 - 1.74058I$ $b = -0.42685 - 2.01970I$	$6.45001 - 4.97903I$	0
$u = 0.850210 + 0.090701I$ $a = -0.438624 - 0.409673I$ $b = 0.1052960 + 0.0201192I$	$-1.39732 - 0.27454I$	$-6.35667 + 0.34095I$
$u = 0.850210 - 0.090701I$ $a = -0.438624 + 0.409673I$ $b = 0.1052960 - 0.0201192I$	$-1.39732 + 0.27454I$	$-6.35667 - 0.34095I$
$u = -1.127480 + 0.258399I$ $a = -0.133039 + 1.121980I$ $b = -0.965050 + 0.962471I$	$7.10133 + 5.72796I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.127480 - 0.258399I$ $a = -0.133039 - 1.121980I$ $b = -0.965050 - 0.962471I$	$7.10133 - 5.72796I$	0
$u = 0.205648 + 0.805086I$ $a = -2.13997 + 0.84059I$ $b = -0.44039 - 1.84984I$	$10.2271 + 10.5873I$	$8.12464 - 5.54004I$
$u = 0.205648 - 0.805086I$ $a = -2.13997 - 0.84059I$ $b = -0.44039 + 1.84984I$	$10.2271 - 10.5873I$	$8.12464 + 5.54004I$
$u = 0.754822 + 0.340700I$ $a = 0.270589 + 1.097730I$ $b = -0.621443 - 0.083376I$	$2.17846 - 1.57925I$	$3.82899 + 3.54363I$
$u = 0.754822 - 0.340700I$ $a = 0.270589 - 1.097730I$ $b = -0.621443 + 0.083376I$	$2.17846 + 1.57925I$	$3.82899 - 3.54363I$
$u = -1.139280 + 0.328895I$ $a = 0.804519 - 0.439781I$ $b = 1.79318 - 1.05870I$	$-0.07200 + 2.42458I$	0
$u = -1.139280 - 0.328895I$ $a = 0.804519 + 0.439781I$ $b = 1.79318 + 1.05870I$	$-0.07200 - 2.42458I$	0
$u = 0.207211 + 0.779709I$ $a = 2.31171 - 0.83656I$ $b = 0.22750 + 1.53793I$	$3.51520 + 6.34636I$	$6.24074 - 5.42401I$
$u = 0.207211 - 0.779709I$ $a = 2.31171 + 0.83656I$ $b = 0.22750 - 1.53793I$	$3.51520 - 6.34636I$	$6.24074 + 5.42401I$
$u = -0.219389 + 0.769412I$ $a = 0.587178 - 0.807351I$ $b = -0.709890 - 1.068920I$	$5.91566 - 3.66945I$	$7.65776 + 2.47936I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.219389 - 0.769412I$ $a = 0.587178 + 0.807351I$ $b = -0.709890 + 1.068920I$	$5.91566 + 3.66945I$	$7.65776 - 2.47936I$
$u = 0.272716 + 0.749664I$ $a = 2.07259 - 0.63049I$ $b = 0.774645 + 0.671760I$	$11.39820 - 2.75257I$	$9.62649 + 1.18045I$
$u = 0.272716 - 0.749664I$ $a = 2.07259 + 0.63049I$ $b = 0.774645 - 0.671760I$	$11.39820 + 2.75257I$	$9.62649 - 1.18045I$
$u = -0.079116 + 0.793763I$ $a = -0.273217 - 0.675415I$ $b = -1.057360 + 0.708134I$	$2.72585 - 4.14449I$	$6.24638 + 3.84786I$
$u = -0.079116 - 0.793763I$ $a = -0.273217 + 0.675415I$ $b = -1.057360 - 0.708134I$	$2.72585 + 4.14449I$	$6.24638 - 3.84786I$
$u = 1.163210 + 0.326788I$ $a = 0.185302 + 1.026710I$ $b = -0.411450 + 0.171697I$	$1.76495 + 0.23636I$	0
$u = 1.163210 - 0.326788I$ $a = 0.185302 - 1.026710I$ $b = -0.411450 - 0.171697I$	$1.76495 - 0.23636I$	0
$u = 0.226952 + 0.751765I$ $a = -2.32110 + 0.59136I$ $b = -0.256373 - 1.002050I$	$3.98475 + 0.88483I$	$7.59092 + 0.37098I$
$u = 0.226952 - 0.751765I$ $a = -2.32110 - 0.59136I$ $b = -0.256373 + 1.002050I$	$3.98475 - 0.88483I$	$7.59092 - 0.37098I$
$u = -1.177730 + 0.334016I$ $a = -0.472654 - 0.401659I$ $b = -2.13844 + 0.19517I$	$-0.65300 - 2.79770I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.177730 - 0.334016I$ $a = -0.472654 + 0.401659I$ $b = -2.13844 - 0.19517I$	$-0.65300 + 2.79770I$	0
$u = 1.167430 + 0.376595I$ $a = -0.002258 - 0.504828I$ $b = 0.295211 - 0.022642I$	$-3.96959 - 0.86076I$	0
$u = 1.167430 - 0.376595I$ $a = -0.002258 + 0.504828I$ $b = 0.295211 + 0.022642I$	$-3.96959 + 0.86076I$	0
$u = -1.150850 + 0.438169I$ $a = 1.26868 - 1.79458I$ $b = 0.29661 - 2.76608I$	$-2.44030 + 2.93931I$	0
$u = -1.150850 - 0.438169I$ $a = 1.26868 + 1.79458I$ $b = 0.29661 + 2.76608I$	$-2.44030 - 2.93931I$	0
$u = -0.166236 + 0.742708I$ $a = -0.347964 + 0.352578I$ $b = 0.365823 + 0.491960I$	$-0.13713 - 2.80838I$	$-0.38510 + 3.25626I$
$u = -0.166236 - 0.742708I$ $a = -0.347964 - 0.352578I$ $b = 0.365823 - 0.491960I$	$-0.13713 + 2.80838I$	$-0.38510 - 3.25626I$
$u = 1.154970 + 0.462037I$ $a = -0.067535 - 0.742060I$ $b = 1.304340 - 0.231466I$	$-2.26506 - 5.18346I$	0
$u = 1.154970 - 0.462037I$ $a = -0.067535 + 0.742060I$ $b = 1.304340 + 0.231466I$	$-2.26506 + 5.18346I$	0
$u = -1.199980 + 0.328265I$ $a = -0.111881 + 0.662316I$ $b = 1.80309 + 0.35042I$	$5.92061 - 6.93082I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.199980 - 0.328265I$ $a = -0.111881 - 0.662316I$ $b = 1.80309 - 0.35042I$	$5.92061 + 6.93082I$	0
$u = -0.491306 + 0.571190I$ $a = 1.91932 - 0.18659I$ $b = 1.09981 - 1.13296I$	$7.80506 - 0.69666I$	$10.81571 + 0.01021I$
$u = -0.491306 - 0.571190I$ $a = 1.91932 + 0.18659I$ $b = 1.09981 + 1.13296I$	$7.80506 + 0.69666I$	$10.81571 - 0.01021I$
$u = 1.175660 + 0.429014I$ $a = 0.607234 + 0.484749I$ $b = -0.402768 + 0.642166I$	$-5.55054 - 2.10141I$	0
$u = 1.175660 - 0.429014I$ $a = 0.607234 - 0.484749I$ $b = -0.402768 - 0.642166I$	$-5.55054 + 2.10141I$	0
$u = 1.138020 + 0.537928I$ $a = -0.45342 - 1.67252I$ $b = 0.04188 - 2.69443I$	$8.86470 - 2.09320I$	0
$u = 1.138020 - 0.537928I$ $a = -0.45342 + 1.67252I$ $b = 0.04188 + 2.69443I$	$8.86470 + 2.09320I$	0
$u = -1.175440 + 0.467052I$ $a = -0.49611 + 1.66574I$ $b = 0.51823 + 1.94433I$	$-5.28059 + 6.34553I$	0
$u = -1.175440 - 0.467052I$ $a = -0.49611 - 1.66574I$ $b = 0.51823 - 1.94433I$	$-5.28059 - 6.34553I$	0
$u = 1.155270 + 0.526476I$ $a = 1.25110 + 1.63810I$ $b = 0.59528 + 3.31320I$	$1.27066 - 5.68261I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.155270 - 0.526476I$ $a = 1.25110 - 1.63810I$ $b = 0.59528 - 3.31320I$	$1.27066 + 5.68261I$	0
$u = -1.168040 + 0.507921I$ $a = 0.922596 - 0.067964I$ $b = 0.845713 - 0.551844I$	$-3.04347 + 7.48824I$	0
$u = -1.168040 - 0.507921I$ $a = 0.922596 + 0.067964I$ $b = 0.845713 + 0.551844I$	$-3.04347 - 7.48824I$	0
$u = -0.052039 + 0.722252I$ $a = 0.562731 + 0.651978I$ $b = 0.444609 - 0.874281I$	$-2.07776 - 1.97235I$	$-0.72819 + 4.37507I$
$u = -0.052039 - 0.722252I$ $a = 0.562731 - 0.651978I$ $b = 0.444609 + 0.874281I$	$-2.07776 + 1.97235I$	$-0.72819 - 4.37507I$
$u = 1.207880 + 0.410981I$ $a = -1.070520 + 0.052109I$ $b = -0.330465 - 0.774725I$	$-1.086150 - 0.034868I$	0
$u = 1.207880 - 0.410981I$ $a = -1.070520 - 0.052109I$ $b = -0.330465 + 0.774725I$	$-1.086150 + 0.034868I$	0
$u = -1.162360 + 0.529806I$ $a = -1.79136 + 0.10388I$ $b = -1.64200 + 0.99199I$	$3.15047 + 8.52143I$	0
$u = -1.162360 - 0.529806I$ $a = -1.79136 - 0.10388I$ $b = -1.64200 - 0.99199I$	$3.15047 - 8.52143I$	0
$u = 1.168930 + 0.529133I$ $a = -1.57379 - 2.15421I$ $b = -0.32158 - 3.94599I$	$0.69066 - 11.21750I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.168930 - 0.529133I$ $a = -1.57379 + 2.15421I$ $b = -0.32158 + 3.94599I$	$0.69066 + 11.21750I$	0
$u = -1.198680 + 0.484977I$ $a = -0.36067 - 1.77130I$ $b = -1.37224 - 1.41960I$	$-0.56388 + 8.80154I$	0
$u = -1.198680 - 0.484977I$ $a = -0.36067 + 1.77130I$ $b = -1.37224 + 1.41960I$	$-0.56388 - 8.80154I$	0
$u = 1.177620 + 0.535604I$ $a = 1.54399 + 2.51779I$ $b = -0.02257 + 4.06707I$	$7.3556 - 15.5480I$	0
$u = 1.177620 - 0.535604I$ $a = 1.54399 - 2.51779I$ $b = -0.02257 - 4.06707I$	$7.3556 + 15.5480I$	0
$u = 0.051946 + 0.647928I$ $a = -1.20181 - 0.95038I$ $b = 0.032509 + 0.883301I$	$0.779065 + 0.993473I$	$4.68420 + 0.71894I$
$u = 0.051946 - 0.647928I$ $a = -1.20181 + 0.95038I$ $b = 0.032509 - 0.883301I$	$0.779065 - 0.993473I$	$4.68420 - 0.71894I$
$u = -0.543478 + 0.231554I$ $a = -2.18956 + 0.34629I$ $b = -1.118450 + 0.604202I$	$1.049580 - 0.014357I$	$9.39150 - 0.35736I$
$u = -0.543478 - 0.231554I$ $a = -2.18956 - 0.34629I$ $b = -1.118450 - 0.604202I$	$1.049580 + 0.014357I$	$9.39150 + 0.35736I$
$u = -0.490124$ $a = -2.52204$ $b = -1.18809$	1.02225	10.6740

II. $\boldsymbol{I_2^u = \langle -u^6 + 2u^4 + u^3 - u^2 + b - u - 1,\ -u^7 - u^6 + 2u^5 + 2u^4 - u^3 - u^2 + a - u - 1,\ u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1\rangle}$

(i) Arc colorings

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

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

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

$$a_{10} = \begin{pmatrix} u^7 + u^6 - 2u^5 - 2u^4 + u^3 + u^2 + u + 1 \\ u^6 - 2u^4 - u^3 + u^2 + u + 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^7 + u^6 - 2u^5 - 2u^4 + u^3 + u^2 + u + 1 \\ u^6 - 2u^4 - u^3 + u^2 + u + 1 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} u^5 - 2u^3 + u \\ u^7 - u^5 + u \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} u^8 - 3u^6 + 3u^4 - 1 \\ u^8 + u^7 - 3u^6 - 2u^5 + 3u^4 + 2u^3 - 1 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^8 + 3u^6 - 3u^4 + 1 \\ -u^8 - u^7 + 3u^6 + 2u^5 - 3u^4 - 2u^3 + 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^8 + u^7 - 2u^6 - 2u^5 + u^4 + u^3 + u^2 + u \\ u^8 + u^7 - 2u^6 - 2u^5 + u^4 + u^3 + u^2 + u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -u^8 - 6u^7 + u^6 + 12u^5 + 5u^4 - 10u^3 - 7u^2 - 7u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^9 - 5u^8 + 12u^7 - 15u^6 + 9u^5 + u^4 - 4u^3 + 2u^2 + u - 1$
c_2	$u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1$
c_3, c_{10}	u^9
c_4	$u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1$
c_5	$u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1$
c_6	$u^9 - 3u^8 + 8u^7 - 13u^6 + 17u^5 - 17u^4 + 12u^3 - 6u^2 + u + 1$
c_7	$u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1$
c_8, c_9	$(u+1)^9$
c_{11}	$(u-1)^9$
c_{12}	$u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$
c_2, c_5	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$
c_3, c_{10}	y^9
c_4, c_7	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_6, c_{12}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_8, c_9, c_{11}	$(y-1)^9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.772920 + 0.510351I$ $a = 0.147032 + 1.012940I$ $b = 0.848670 + 0.225310I$	$3.42837 + 2.09337I$	$10.43453 - 4.18932I$
$u = -0.772920 - 0.510351I$ $a = 0.147032 - 1.012940I$ $b = 0.848670 - 0.225310I$	$3.42837 - 2.09337I$	$10.43453 + 4.18932I$
$u = 0.825933$ $a = 1.95176$ $b = 1.33142$	0.446489	-4.72420
$u = 1.173910 + 0.391555I$ $a = -0.679689 - 0.626017I$ $b = -0.25695 - 1.39155I$	$-2.72642 - 1.33617I$	$0.549708 + 1.017936I$
$u = 1.173910 - 0.391555I$ $a = -0.679689 + 0.626017I$ $b = -0.25695 + 1.39155I$	$-2.72642 + 1.33617I$	$0.549708 - 1.017936I$
$u = -0.141484 + 0.739668I$ $a = 0.541407 - 0.753907I$ $b = -0.443165 + 0.284059I$	$1.02799 - 2.45442I$	$6.31821 + 2.62939I$
$u = -0.141484 - 0.739668I$ $a = 0.541407 + 0.753907I$ $b = -0.443165 - 0.284059I$	$1.02799 + 2.45442I$	$6.31821 - 2.62939I$
$u = -1.172470 + 0.500383I$ $a = -0.484630 - 0.655708I$ $b = -1.314260 - 0.168567I$	$-1.95319 + 7.08493I$	$3.05967 - 5.11095I$
$u = -1.172470 - 0.500383I$ $a = -0.484630 + 0.655708I$ $b = -1.314260 + 0.168567I$	$-1.95319 - 7.08493I$	$3.05967 + 5.11095I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^9 - 5u^8 + 12u^7 - 15u^6 + 9u^5 + u^4 - 4u^3 + 2u^2 + u - 1)$ $\cdot (u^{80} + 42u^{79} + \cdots + 9u + 1)$
c_2	$(u^9 + u^8 + \cdots - u - 1)(u^{80} + 2u^{79} + \cdots + u - 1)$
c_3, c_{10}	$u^9(u^{80} + u^{79} + \cdots - 768u^2 + 512)$
c_4	$(u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1)$ $\cdot (u^{80} - 6u^{79} + \cdots + 1829u + 145)$
c_5	$(u^9 - u^8 + \cdots - u + 1)(u^{80} + 2u^{79} + \cdots + u - 1)$
c_6	$(u^9 - 3u^8 + 8u^7 - 13u^6 + 17u^5 - 17u^4 + 12u^3 - 6u^2 + u + 1)$ $\cdot (u^{80} + 6u^{79} + \cdots - 577u + 53)$
c_7	$(u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1)$ $\cdot (u^{80} - 6u^{79} + \cdots + 1829u + 145)$
c_8, c_9	$((u + 1)^9)(u^{80} + 10u^{79} + \cdots - 7u - 1)$
c_{11}	$((u - 1)^9)(u^{80} + 10u^{79} + \cdots - 7u - 1)$
c_{12}	$(u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1)$ $\cdot (u^{80} + 6u^{79} + \cdots - 577u + 53)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1)$ $\cdot\,(y^{80} - 6y^{79} + \cdots - 41y + 1)$
c_2, c_5	$(y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1)$ $\cdot\,(y^{80} - 42y^{79} + \cdots - 9y + 1)$
c_3, c_{10}	$y^9(y^{80} - 57y^{79} + \cdots - 786432y + 262144)$
c_4, c_7	$(y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1)$ $\cdot\,(y^{80} + 66y^{79} + \cdots - 1478221y + 21025)$
c_6, c_{12}	$(y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1)$ $\cdot\,(y^{80} + 54y^{79} + \cdots - 584997y + 2809)$
c_8, c_9, c_{11}	$((y-1)^9)(y^{80} - 82y^{79} + \cdots - 5y + 1)$