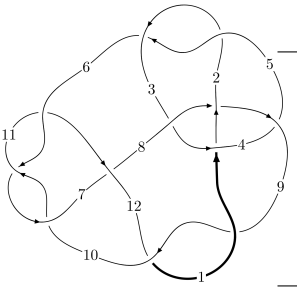
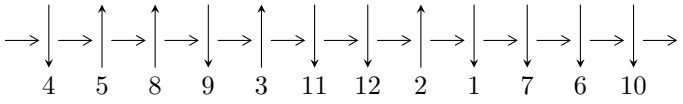
$12a_{0834}$ $(K12a_{0834})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -3.22741 \times 10^{27} u^{88} + 3.46788 \times 10^{27} u^{87} + \cdots + 1.49349 \times 10^{28} b + 5.73350 \times 10^{27},$$
$$8.41565 \times 10^{28} u^{88} - 1.02242 \times 10^{29} u^{87} + \cdots + 1.49349 \times 10^{28} a + 2.07042 \times 10^{29},\ u^{89} - 2u^{88} + \cdots + u - 1 \rangle$$
$$I_2^u = \langle b - 1,\ -2u^2 + a + 2u - 3,\ u^3 - u^2 + 2u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 92 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.

$\boldsymbol{I_1^u = \langle -3.23\times 10^{27}u^{88}+3.47\times 10^{27}u^{87}+\cdots+1.49\times 10^{28}b+5.73\times 10^{27},\ 8.42\times 10^{28}u^{88}-1.02\times 10^{29}u^{87}+\cdots+1.49\times 10^{28}a+2.07\times 10^{29},\ u^{89}-2u^{88}+\cdots+u-1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -5.63488u^{88} + 6.84586u^{87} + \cdots - 19.6801u - 13.8629 \\ 0.216098u^{88} - 0.232199u^{87} + \cdots + 1.17195u - 0.383899 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^4 - u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -4.24061u^{88} + 4.90905u^{87} + \cdots - 12.0676u - 9.67457 \\ 1.46774u^{88} - 1.53556u^{87} + \cdots + 4.56613u + 1.46782 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 5.24438u^{88} - 6.38436u^{87} + \cdots + 18.1075u + 13.9322 \\ -0.135606u^{88} + 0.0712031u^{87} + \cdots - 1.31220u + 0.464403 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.00290u^{88} + 1.84480u^{87} + \cdots - 3.68274u - 1.52239 \\ 0.839015u^{88} - 1.67801u^{87} + \cdots - 0.719508u + 0.838993 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^7 - 3u^5 - 2u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^9 + 4u^7 + 5u^5 + 2u^3 + u \\ u^{11} + 5u^9 + 8u^7 + 3u^5 - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6.14068u^{88} - 3.32136u^{87} + \cdots + 42.7937u + 19.8607$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{89} - 15u^{88} + \cdots + 36u - 8$
c_2, c_5	$u^{89} + 4u^{88} + \cdots + 20u + 1$
c_3	$u^{89} + u^{88} + \cdots + 1421584u + 441313$
c_4	$u^{89} - u^{88} + \cdots + 6214u + 1559$
c_6, c_{10}, c_{11}	$u^{89} + 2u^{88} + \cdots + u + 1$
c_7	$u^{89} - 2u^{88} + \cdots - 13911u + 4113$
c_8	$u^{89} - 4u^{88} + \cdots - u + 1$
c_9, c_{12}	$u^{89} - 12u^{88} + \cdots - 1943u + 163$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{89} + 21y^{88} + \cdots - 560y - 64$
c_2, c_5	$y^{89} - 70y^{88} + \cdots + 348y - 1$
c_3	$y^{89} + 39y^{88} + \cdots + 7318297870790y - 194757163969$
c_4	$y^{89} + 111y^{88} + \cdots - 44278234y - 2430481$
c_6, c_{10}, c_{11}	$y^{89} + 84y^{88} + \cdots + 7y - 1$
c_7	$y^{89} + 36y^{88} + \cdots - 395194221y - 16916769$
c_8	$y^{89} - 16y^{88} + \cdots + 7y - 1$
c_9, c_{12}	$y^{89} + 84y^{88} + \cdots + 271727y - 26569$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.186824 + 1.001010I$ $a = -0.553297 - 0.442816I$ $b = 1.183560 - 0.268162I$	$3.51936 - 4.77245I$	0
$u = 0.186824 - 1.001010I$ $a = -0.553297 + 0.442816I$ $b = 1.183560 + 0.268162I$	$3.51936 + 4.77245I$	0
$u = -0.620945 + 0.565816I$ $a = -1.037750 + 0.358176I$ $b = 1.302120 - 0.095640I$	$8.53612 - 0.43548I$	$4.95570 + 0.I$
$u = -0.620945 - 0.565816I$ $a = -1.037750 - 0.358176I$ $b = 1.302120 + 0.095640I$	$8.53612 + 0.43548I$	$4.95570 + 0.I$
$u = -0.720530 + 0.429057I$ $a = -0.91242 + 1.45256I$ $b = 1.288110 + 0.140305I$	$8.04617 + 4.93945I$	$3.54197 - 5.91371I$
$u = -0.720530 - 0.429057I$ $a = -0.91242 - 1.45256I$ $b = 1.288110 - 0.140305I$	$8.04617 - 4.93945I$	$3.54197 + 5.91371I$
$u = -0.199195 + 0.809899I$ $a = -0.636456 + 0.180505I$ $b = 1.241680 - 0.317786I$	$3.66713 - 4.80341I$	$0. + 4.71638I$
$u = -0.199195 - 0.809899I$ $a = -0.636456 - 0.180505I$ $b = 1.241680 + 0.317786I$	$3.66713 + 4.80341I$	$0. - 4.71638I$
$u = 0.706611 + 0.428170I$ $a = -1.40688 - 1.84307I$ $b = 1.45020 - 0.50983I$	$8.7954 - 13.3610I$	$0. + 8.90502I$
$u = 0.706611 - 0.428170I$ $a = -1.40688 + 1.84307I$ $b = 1.45020 + 0.50983I$	$8.7954 + 13.3610I$	$0. - 8.90502I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.616128 + 0.547042I$ $a = -1.031070 - 0.355615I$ $b = 1.45184 + 0.48379I$	$9.23088 + 8.93550I$	$1.46945 - 3.15188I$
$u = 0.616128 - 0.547042I$ $a = -1.031070 + 0.355615I$ $b = 1.45184 - 0.48379I$	$9.23088 - 8.93550I$	$1.46945 + 3.15188I$
$u = -0.048243 + 1.175430I$ $a = -0.829588 + 0.561532I$ $b = 0.220153 + 0.721163I$	$0.493634 - 1.143620I$	0
$u = -0.048243 - 1.175430I$ $a = -0.829588 - 0.561532I$ $b = 0.220153 - 0.721163I$	$0.493634 + 1.143620I$	0
$u = 0.653621 + 0.454879I$ $a = 1.68141 + 1.55340I$ $b = -1.56986 + 0.64185I$	$7.92409 - 4.26600I$	$4.93804 + 6.41768I$
$u = 0.653621 - 0.454879I$ $a = 1.68141 - 1.55340I$ $b = -1.56986 - 0.64185I$	$7.92409 + 4.26600I$	$4.93804 - 6.41768I$
$u = 0.668755 + 0.428865I$ $a = 1.230110 + 0.273390I$ $b = -0.183511 + 1.236830I$	$3.64043 - 7.32953I$	$-1.17277 + 8.99350I$
$u = 0.668755 - 0.428865I$ $a = 1.230110 - 0.273390I$ $b = -0.183511 - 1.236830I$	$3.64043 + 7.32953I$	$-1.17277 - 8.99350I$
$u = 0.635432 + 0.474349I$ $a = 0.822221 + 0.986528I$ $b = -1.59447 - 0.59522I$	$8.00335 + 0.00682I$	$5.30054 + 0.I$
$u = 0.635432 - 0.474349I$ $a = 0.822221 - 0.986528I$ $b = -1.59447 + 0.59522I$	$8.00335 - 0.00682I$	$5.30054 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.605334 + 0.494722I$ $a = -0.648146 + 0.252052I$ $b = -0.237306 - 1.205620I$	$3.91183 + 3.11100I$	$-0.25921 - 2.86336I$
$u = 0.605334 - 0.494722I$ $a = -0.648146 - 0.252052I$ $b = -0.237306 + 1.205620I$	$3.91183 - 3.11100I$	$-0.25921 + 2.86336I$
$u = -0.631916 + 0.451263I$ $a = 3.21792 - 1.12316I$ $b = -1.134390 - 0.014055I$	$5.44595 + 2.07449I$	$-17.7402 - 1.7776I$
$u = -0.631916 - 0.451263I$ $a = 3.21792 + 1.12316I$ $b = -1.134390 + 0.014055I$	$5.44595 - 2.07449I$	$-17.7402 + 1.7776I$
$u = -0.646012 + 0.423346I$ $a = -0.072596 - 0.739156I$ $b = -0.223514 - 0.368374I$	$3.49478 + 3.09238I$	$-1.72304 - 2.11901I$
$u = -0.646012 - 0.423346I$ $a = -0.072596 + 0.739156I$ $b = -0.223514 + 0.368374I$	$3.49478 - 3.09238I$	$-1.72304 + 2.11901I$
$u = -0.599733 + 0.464946I$ $a = -0.636254 + 0.368078I$ $b = -0.299671 + 0.334219I$	$3.68292 + 0.99040I$	$-0.83517 - 4.70946I$
$u = -0.599733 - 0.464946I$ $a = -0.636254 - 0.368078I$ $b = -0.299671 - 0.334219I$	$3.68292 - 0.99040I$	$-0.83517 + 4.70946I$
$u = 0.718124 + 0.121384I$ $a = 0.696924 - 0.479554I$ $b = 1.147890 + 0.156346I$	$0.82958 + 1.21576I$	$0.08046 - 5.50881I$
$u = 0.718124 - 0.121384I$ $a = 0.696924 + 0.479554I$ $b = 1.147890 - 0.156346I$	$0.82958 - 1.21576I$	$0.08046 + 5.50881I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.684438+0.175505I$ $a=\ 0.26626+1.65738I$ $b=\ 1.267190+0.412877I$	$1.50927+8.27164I$	$-3.69410-8.67253I$
$u=-0.684438-0.175505I$ $a=\ 0.26626-1.65738I$ $b=\ 1.267190-0.412877I$	$1.50927-8.27164I$	$-3.69410+8.67253I$
$u=\ 0.153919+1.287670I$ $a=-0.556228+0.142914I$ $b=\ 0.047805+0.139825I$	$2.98737-2.41032I$	0
$u=\ 0.153919-1.287670I$ $a=-0.556228-0.142914I$ $b=\ 0.047805-0.139825I$	$2.98737+2.41032I$	0
$u=\ 0.080784+1.301410I$ $a=-0.81013-1.51262I$ $b=-0.751023-0.026185I$	$4.46740-1.57474I$	0
$u=\ 0.080784-1.301410I$ $a=-0.81013+1.51262I$ $b=-0.751023+0.026185I$	$4.46740+1.57474I$	0
$u=\ 0.132994+1.322700I$ $a=\ 3.11220+4.00074I$ $b=-1.009110+0.076392I$	$5.08256-2.31872I$	0
$u=\ 0.132994-1.322700I$ $a=\ 3.11220-4.00074I$ $b=-1.009110-0.076392I$	$5.08256+2.31872I$	0
$u=-0.199595+1.316790I$ $a=\ 0.750885-0.065218I$ $b=\ 0.029505-1.017910I$	$2.22525+6.49294I$	0
$u=-0.199595-1.316790I$ $a=\ 0.750885+0.065218I$ $b=\ 0.029505+1.017910I$	$2.22525-6.49294I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.291643 + 1.302160I$ $a = -0.743264 - 1.113150I$ $b = 1.143230 + 0.075944I$	$5.26574 - 2.44320I$	0
$u = 0.291643 - 1.302160I$ $a = -0.743264 + 1.113150I$ $b = 1.143230 - 0.075944I$	$5.26574 + 2.44320I$	0
$u = -0.035448 + 1.346970I$ $a = -0.289975 - 0.454139I$ $b = -0.555222 + 0.719411I$	$4.96955 - 1.39741I$	0
$u = -0.035448 - 1.346970I$ $a = -0.289975 + 0.454139I$ $b = -0.555222 - 0.719411I$	$4.96955 + 1.39741I$	0
$u = -0.256781 + 1.333000I$ $a = -1.48167 + 1.52113I$ $b = 1.302130 + 0.460891I$	$6.23989 + 11.67750I$	0
$u = -0.256781 - 1.333000I$ $a = -1.48167 - 1.52113I$ $b = 1.302130 - 0.460891I$	$6.23989 - 11.67750I$	0
$u = -0.158173 + 1.352240I$ $a = 1.53661 - 1.34959I$ $b = -1.220590 - 0.636233I$	$6.70286 + 4.62002I$	0
$u = -0.158173 - 1.352240I$ $a = 1.53661 + 1.34959I$ $b = -1.220590 + 0.636233I$	$6.70286 - 4.62002I$	0
$u = -0.107849 + 1.363370I$ $a = 1.75828 - 0.87708I$ $b = -1.48488 + 0.23340I$	$7.55333 + 1.23341I$	0
$u = -0.107849 - 1.363370I$ $a = 1.75828 + 0.87708I$ $b = -1.48488 - 0.23340I$	$7.55333 - 1.23341I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.567953 + 0.227198I$ $a = -1.15850 - 0.86882I$ $b = 0.347206 - 0.379172I$	$-1.52582 - 0.95700I$	$-9.87795 + 4.21075I$
$u = 0.567953 - 0.227198I$ $a = -1.15850 + 0.86882I$ $b = 0.347206 + 0.379172I$	$-1.52582 + 0.95700I$	$-9.87795 - 4.21075I$
$u = -0.591935 + 0.127305I$ $a = 0.34472 - 1.48165I$ $b = 0.060856 - 0.888636I$	$-2.27566 + 3.62056I$	$-9.44307 - 7.65821I$
$u = -0.591935 - 0.127305I$ $a = 0.34472 + 1.48165I$ $b = 0.060856 + 0.888636I$	$-2.27566 - 3.62056I$	$-9.44307 + 7.65821I$
$u = 0.210272 + 1.386360I$ $a = -1.53349 - 0.48155I$ $b = 0.545025 - 0.309905I$	$3.62716 - 3.79171I$	0
$u = 0.210272 - 1.386360I$ $a = -1.53349 + 0.48155I$ $b = 0.545025 + 0.309905I$	$3.62716 + 3.79171I$	0
$u = -0.01165 + 1.46576I$ $a = -2.28540 + 0.25970I$ $b = 1.361610 - 0.247191I$	$10.61070 - 4.48770I$	0
$u = -0.01165 - 1.46576I$ $a = -2.28540 - 0.25970I$ $b = 1.361610 + 0.247191I$	$10.61070 + 4.48770I$	0
$u = 0.516833$ $a = -0.695251$ $b = 0.0489090$	-1.00847	-9.89690
$u = -0.23769 + 1.46614I$ $a = 0.195432 - 0.315957I$ $b = -0.213629 - 0.424957I$	$9.58671 + 6.32782I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.23769-1.46614I$ $a=\ \ 0.195432+0.315957I$ $b=-0.213629+0.424957I$	$9.58671-6.32782I$	0
$u=-0.21562+1.47090I$ $a=-0.262181+0.065389I$ $b=-0.352537+0.382462I$	$9.91923+3.97356I$	0
$u=-0.21562-1.47090I$ $a=-0.262181-0.065389I$ $b=-0.352537-0.382462I$	$9.91923-3.97356I$	0
$u=-0.476517+0.190593I$ $a=-0.67906-2.37641I$ $b=-1.100380-0.487121I$	$1.85802+2.29172I$	$-0.53042-8.83653I$
$u=-0.476517-0.190593I$ $a=-0.67906+2.37641I$ $b=-1.100380+0.487121I$	$1.85802-2.29172I$	$-0.53042+8.83653I$
$u=-0.22812+1.47310I$ $a=\ \ 3.94764-1.14819I$ $b=-1.153190-0.026940I$	$11.65640+5.21992I$	0
$u=-0.22812-1.47310I$ $a=\ \ 3.94764+1.14819I$ $b=-1.153190+0.026940I$	$11.65640-5.21992I$	0
$u=\ \ 0.24459+1.47168I$ $a=\ \ 1.35920-0.87240I$ $b=-0.174652+1.279720I$	$9.7752-10.6673I$	0
$u=\ \ 0.24459-1.47168I$ $a=\ \ 1.35920+0.87240I$ $b=-0.174652-1.279720I$	$9.7752+10.6673I$	0
$u=\ \ 0.21041+1.48030I$ $a=-0.356488+1.319030I$ $b=-0.289225-1.238400I$	$10.28920+0.14526I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.21041 - 1.48030I$ $a = -0.356488 - 1.319030I$ $b = -0.289225 + 1.238400I$	$10.28920 - 0.14526I$	0
$u = 0.23458 + 1.47832I$ $a = 3.00495 + 0.89538I$ $b = -1.58752 + 0.68020I$	$14.1722 - 7.5096I$	0
$u = 0.23458 - 1.47832I$ $a = 3.00495 - 0.89538I$ $b = -1.58752 - 0.68020I$	$14.1722 + 7.5096I$	0
$u = 0.22444 + 1.48115I$ $a = 2.23509 + 1.47442I$ $b = -1.64007 - 0.59040I$	$14.3257 - 3.1289I$	0
$u = 0.22444 - 1.48115I$ $a = 2.23509 - 1.47442I$ $b = -1.64007 + 0.59040I$	$14.3257 + 3.1289I$	0
$u = 0.25953 + 1.47721I$ $a = -2.68774 - 1.36381I$ $b = 1.46198 - 0.52526I$	$14.9486 - 16.8872I$	0
$u = 0.25953 - 1.47721I$ $a = -2.68774 + 1.36381I$ $b = 1.46198 + 0.52526I$	$14.9486 + 16.8872I$	0
$u = -0.26452 + 1.48015I$ $a = -2.09557 + 1.31067I$ $b = 1.303210 + 0.172877I$	$14.2145 + 8.5330I$	0
$u = -0.26452 - 1.48015I$ $a = -2.09557 - 1.31067I$ $b = 1.303210 - 0.172877I$	$14.2145 - 8.5330I$	0
$u = 0.19817 + 1.49988I$ $a = -2.32503 - 0.71404I$ $b = 1.47701 + 0.46900I$	$15.8886 + 6.0076I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.19817 - 1.49988I$ $a = -2.32503 + 0.71404I$ $b = \ 1.47701 - 0.46900I$	$15.8886 - 6.0076I$	0
$u = -0.19383 + 1.50620I$ $a = -2.22103 + 0.36980I$ $b = \ 1.351270 - 0.081184I$	$15.2931 + 2.4799I$	0
$u = -0.19383 - 1.50620I$ $a = -2.22103 - 0.36980I$ $b = \ 1.351270 + 0.081184I$	$15.2931 - 2.4799I$	0
$u = \ 0.459004 + 0.059596I$ $a = -1.66860 + 5.99811I$ $b = -0.951109 + 0.022024I$	$0.753766 - 0.203656I$	$22.5346 - 14.4002I$
$u = \ 0.459004 - 0.059596I$ $a = -1.66860 - 5.99811I$ $b = -0.951109 - 0.022024I$	$0.753766 + 0.203656I$	$22.5346 + 14.4002I$
$u = \ 0.056793 + 0.423831I$ $a = -0.930309 - 0.128835I$ $b = -0.051016 + 0.551004I$	$-0.13700 - 1.45966I$	$-2.24355 + 4.15647I$
$u = \ 0.056793 - 0.423831I$ $a = -0.930309 + 0.128835I$ $b = -0.051016 - 0.551004I$	$-0.13700 + 1.45966I$	$-2.24355 - 4.15647I$
$u = -0.245590 + 0.252375I$ $a = -0.463084 - 0.961078I$ $b = -1.231150 + 0.180055I$	$2.58237 - 0.25412I$	$3.14425 - 3.55228I$
$u = -0.245590 - 0.252375I$ $a = -0.463084 + 0.961078I$ $b = -1.231150 - 0.180055I$	$2.58237 + 0.25412I$	$3.14425 + 3.55228I$

II. $I_2^u = \langle b-1,\ -2u^2+a+2u-3,\ u^3-u^2+2u-1\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}2u^2-2u+3\\1\end{pmatrix}$$
$$a_8 = \begin{pmatrix}u\\u^2-u+1\end{pmatrix}$$
$$a_4 = \begin{pmatrix}u^2-u+2\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}2u^2-2u+4\\1\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-1\\0\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u\\u^2-u+1\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-1\\0\end{pmatrix}$$
$$a_9 = \begin{pmatrix}u^2+1\\u^2-u+1\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -u^2+3u-3$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	u^3
c_2	$(u+1)^3$
c_3, c_4	$u^3 - u - 1$
c_5	$(u-1)^3$
c_6	$u^3 - u^2 + 2u - 1$
c_7, c_8, c_9	$u^3 + u^2 - 1$
c_{10}, c_{11}	$u^3 + u^2 + 2u + 1$
c_{12}	$u^3 - u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	y^3
c_2, c_5	$(y-1)^3$
c_3, c_4	$y^3 - 2y^2 + y - 1$
c_6, c_{10}, c_{11}	$y^3 + 3y^2 + 2y - 1$
c_7, c_8, c_9 c_{12}	$y^3 - y^2 + 2y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.215080 + 1.307140I$ $a = -0.75488 - 1.48972I$ $b = 1.00000$	$4.66906 - 2.82812I$	$-0.69240 + 3.35914I$
$u = 0.215080 - 1.307140I$ $a = -0.75488 + 1.48972I$ $b = 1.00000$	$4.66906 + 2.82812I$	$-0.69240 - 3.35914I$
$u = 0.569840$ $a = 2.50976$ $b = 1.00000$	0.531480	-1.61520

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^3(u^{89}-15u^{88}+\cdots+36u-8)$
c_2	$((u+1)^3)(u^{89}+4u^{88}+\cdots+20u+1)$
c_3	$(u^3-u-1)(u^{89}+u^{88}+\cdots+1421584u+441313)$
c_4	$(u^3-u-1)(u^{89}-u^{88}+\cdots+6214u+1559)$
c_5	$((u-1)^3)(u^{89}+4u^{88}+\cdots+20u+1)$
c_6	$(u^3-u^2+2u-1)(u^{89}+2u^{88}+\cdots+u+1)$
c_7	$(u^3+u^2-1)(u^{89}-2u^{88}+\cdots-13911u+4113)$
c_8	$(u^3+u^2-1)(u^{89}-4u^{88}+\cdots-u+1)$
c_9	$(u^3+u^2-1)(u^{89}-12u^{88}+\cdots-1943u+163)$
c_{10}, c_{11}	$(u^3+u^2+2u+1)(u^{89}+2u^{88}+\cdots+u+1)$
c_{12}	$(u^3-u^2+1)(u^{89}-12u^{88}+\cdots-1943u+163)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^3(y^{89}+21y^{88}+\cdots-560y-64)$
c_2, c_5	$((y-1)^3)(y^{89}-70y^{88}+\cdots+348y-1)$
c_3	(y^3-2y^2+y-1) $\cdot(y^{89}+39y^{88}+\cdots+7318297870790y-194757163969)$
c_4	$(y^3-2y^2+y-1)(y^{89}+111y^{88}+\cdots-4.42782\times10^7y-2430481)$
c_6, c_{10}, c_{11}	$(y^3+3y^2+2y-1)(y^{89}+84y^{88}+\cdots+7y-1)$
c_7	$(y^3-y^2+2y-1)(y^{89}+36y^{88}+\cdots-3.95194\times10^8y-1.69168\times10^7)$
c_8	$(y^3-y^2+2y-1)(y^{89}-16y^{88}+\cdots+7y-1)$
c_9, c_{12}	$(y^3-y^2+2y-1)(y^{89}+84y^{88}+\cdots+271727y-26569)$