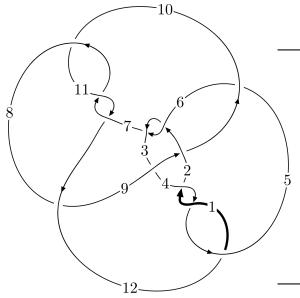
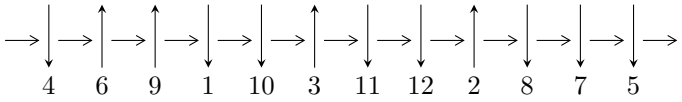
$12a_{0942}$ $(K12a_{0942})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -6.67572 \times 10^{88} u^{91} + 2.35834 \times 10^{89} u^{90} + \cdots + 2.42279 \times 10^{90} b + 9.70979 \times 10^{89},$$
$$1.80595 \times 10^{90} u^{91} + 3.65341 \times 10^{90} u^{90} + \cdots + 2.18051 \times 10^{91} a + 1.03035 \times 10^{91},\ u^{92} + 3u^{91} + \cdots + 49u + 9$$
$$I_2^u = \langle -9u^2 a - 18au - 3u^2 + 23b - 3a - 6u - 1,\ -3u^2 a + 3a^2 + 3au + 3u^2 - 3a + 4,\ u^3 - u^2 + 2u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 98 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. $\boldsymbol{I_1^u = \langle -6.68 \times 10^{88} u^{91} + 2.36 \times 10^{89} u^{90} + \cdots + 2.42 \times 10^{90} b + 9.71 \times 10^{89},\ 1.81 \times 10^{90} u^{91} + 3.65 \times 10^{90} u^{90} + \cdots + 2.18 \times 10^{91} a + 1.03 \times 10^{91},\ u^{92} + 3u^{91} + \cdots + 49u + 9 \rangle}$

(i) Arc colorings

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

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

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

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

$$a_3 = \begin{pmatrix} -0.0828225u^{91} - 0.167548u^{90} + \cdots - 3.52927u - 0.472529 \\ 0.0275538u^{91} - 0.0973397u^{90} + \cdots - 1.86772u - 0.400769 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^4 - u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0509100u^{91} + 0.622642u^{90} + \cdots + 12.8628u + 2.47080 \\ -0.324534u^{91} - 1.12865u^{90} + \cdots - 16.5700u - 3.59604 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.000609590u^{91} + 0.892534u^{90} + \cdots - 5.59951u - 1.33977 \\ -1.01318u^{91} - 2.80973u^{90} + \cdots - 41.4443u - 9.83553 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.210669u^{91} - 0.186692u^{90} + \cdots - 7.66553u - 4.08858 \\ -0.171606u^{91} - 0.788526u^{90} + \cdots - 11.2024u - 3.44047 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0567726u^{91} + 0.233111u^{90} + \cdots + 5.88148u + 1.02278 \\ 0.283527u^{91} + 0.499883u^{90} + \cdots + 13.4607u + 2.66381 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -0.161712u^{91} + 0.315650u^{90} + \cdots - 3.68445u - 0.838694 \\ -0.539534u^{91} - 1.79824u^{90} + \cdots - 33.6623u - 8.52519 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.692795u^{91} - 2.25332u^{90} + \cdots - 40.8738u - 9.09423$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_{12}	$u^{92} - 4u^{91} + \cdots - 4u + 1$
c_2, c_6	$u^{92} - 4u^{91} + \cdots - 4u + 1$
c_3	$27(27u^{92} - 27u^{91} + \cdots + 133643u - 6581)$
c_5	$27(27u^{92} - 54u^{91} + \cdots + 1430027u + 751139)$
c_7, c_{10}, c_{11}	$u^{92} - 3u^{91} + \cdots - 49u + 9$
c_8	$u^{92} + 3u^{91} + \cdots + 30601u + 21969$
c_9	$u^{92} + 3u^{91} + \cdots + 4320u + 5184$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{92} + 88y^{91} + \cdots - 10y + 1$
c_2, c_6	$y^{92} - 52y^{91} + \cdots - 10y + 1$
c_3	$729(729y^{92} - 38313y^{91} + \cdots - 6.42023 \times 10^9 y + 4.33096 \times 10^7)$
c_5	729 $\cdot (729y^{92} + 16362y^{91} + \cdots + 1522568388484 1y + 564209797321)$
c_7, c_{10}, c_{11}	$y^{92} + 83y^{91} + \cdots - 169y + 81$
c_8	$y^{92} - y^{91} + \cdots + 12026870567y + 482636961$
c_9	$y^{92} - 35y^{91} + \cdots - 347120640y + 26873856$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.582390+0.791689I$ $a=\ \ 0.753577-0.347209I$ $b=-1.251090+0.475634I$	$9.25726-8.18208I$	0
$u=-0.582390-0.791689I$ $a=\ \ 0.753577+0.347209I$ $b=-1.251090-0.475634I$	$9.25726+8.18208I$	0
$u=\ \ 0.736262+0.628121I$ $a=\ \ 1.049820+0.457055I$ $b=-0.887252+0.284095I$	$3.94303-3.83126I$	0
$u=\ \ 0.736262-0.628121I$ $a=\ \ 1.049820-0.457055I$ $b=-0.887252-0.284095I$	$3.94303+3.83126I$	0
$u=\ \ 0.926342+0.164936I$ $a=\ \ 0.460377+0.377356I$ $b=-0.729328+0.179095I$	$2.52480-1.25642I$	0
$u=\ \ 0.926342-0.164936I$ $a=\ \ 0.460377-0.377356I$ $b=-0.729328-0.179095I$	$2.52480+1.25642I$	0
$u=\ \ 0.323996+1.013050I$ $a=\ \ 0.630042-0.069778I$ $b=-0.265885-0.472333I$	$5.03694-3.16909I$	0
$u=\ \ 0.323996-1.013050I$ $a=\ \ 0.630042+0.069778I$ $b=-0.265885+0.472333I$	$5.03694+3.16909I$	0
$u=-0.094010+1.097530I$ $a=-1.038130+0.233071I$ $b=\ \ 0.418611+0.766435I$	$0.233678-0.500797I$	0
$u=-0.094010-1.097530I$ $a=-1.038130-0.233071I$ $b=\ \ 0.418611-0.766435I$	$0.233678+0.500797I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.818478+0.331482I$ $a=\ \ 0.76020-1.33742I$ $b=-1.295560-0.541975I$	$7.8020+13.0110I$	$0.-8.15881I$
$u=-0.818478-0.331482I$ $a=\ \ 0.76020+1.33742I$ $b=-1.295560+0.541975I$	$7.8020-13.0110I$	$0.+8.15881I$
$u=-0.437432+0.765002I$ $a=-0.719368+0.448533I$ $b=\ \ 1.213080-0.455397I$	$2.95349-4.88268I$	$-4.00000+4.50142I$
$u=-0.437432-0.765002I$ $a=-0.719368-0.448533I$ $b=\ \ 1.213080+0.455397I$	$2.95349+4.88268I$	$-4.00000-4.50142I$
$u=\ \ 0.000013+1.147790I$ $a=\ \ 0.344767-0.348258I$ $b=-0.829604+0.540806I$	$3.51439-1.54001I$	0
$u=\ \ 0.000013-1.147790I$ $a=\ \ 0.344767+0.348258I$ $b=-0.829604-0.540806I$	$3.51439+1.54001I$	0
$u=\ \ 0.374112+1.092450I$ $a=-0.830199-0.416954I$ $b=\ \ 0.927867-0.309390I$	$1.93950-4.31636I$	0
$u=\ \ 0.374112-1.092450I$ $a=-0.830199+0.416954I$ $b=\ \ 0.927867+0.309390I$	$1.93950+4.31636I$	0
$u=-0.374410+0.730981I$ $a=\ \ 0.902557-0.188982I$ $b=-0.056183-0.815962I$	$5.65365-3.41644I$	$-0.205199+1.266815I$
$u=-0.374410-0.730981I$ $a=\ \ 0.902557+0.188982I$ $b=-0.056183+0.815962I$	$5.65365+3.41644I$	$-0.205199-1.266815I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.819573$ $a = 0.0197403$ $b = 0.744911$	-1.38150	-13.5870
$u = -0.760866 + 0.288446I$ $a = -0.62010 + 1.40146I$ $b = 1.286890 + 0.560835I$	$1.36094 + 9.14769I$	$-3.11665 - 8.62512I$
$u = -0.760866 - 0.288446I$ $a = -0.62010 - 1.40146I$ $b = 1.286890 - 0.560835I$	$1.36094 - 9.14769I$	$-3.11665 + 8.62512I$
$u = 0.756425 + 0.260905I$ $a = 0.485720 + 0.109400I$ $b = -0.302020 - 0.238032I$	$2.69497 - 1.07990I$	$-4.94046 + 1.01805I$
$u = 0.756425 - 0.260905I$ $a = 0.485720 - 0.109400I$ $b = -0.302020 + 0.238032I$	$2.69497 + 1.07990I$	$-4.94046 - 1.01805I$
$u = 0.703199 + 0.371330I$ $a = -0.929795 - 0.803087I$ $b = 0.871833 - 0.211011I$	$-0.61831 - 2.08055I$	$-9.77125 + 9.25183I$
$u = 0.703199 - 0.371330I$ $a = -0.929795 + 0.803087I$ $b = 0.871833 + 0.211011I$	$-0.61831 + 2.08055I$	$-9.77125 - 9.25183I$
$u = -0.736185 + 0.281983I$ $a = -0.479375 + 0.643889I$ $b = -0.102011 + 1.017520I$	$4.08651 + 7.45020I$	$-2.56752 - 6.27902I$
$u = -0.736185 - 0.281983I$ $a = -0.479375 - 0.643889I$ $b = -0.102011 - 1.017520I$	$4.08651 - 7.45020I$	$-2.56752 + 6.27902I$
$u = -0.142124 + 1.263210I$ $a = 1.52577 - 0.30777I$ $b = -0.745186 - 0.965258I$	$2.80330 + 4.03627I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.142124-1.263210I$ $a=\ 1.52577+0.30777I$ $b=-0.745186+0.965258I$	$2.80330-4.03627I$	0
$u=\ 0.164963+1.270790I$ $a=\ 0.050965-0.698499I$ $b=-0.577119-0.165305I$	$3.85258-2.03665I$	0
$u=\ 0.164963-1.270790I$ $a=\ 0.050965+0.698499I$ $b=-0.577119+0.165305I$	$3.85258+2.03665I$	0
$u=-0.656857+0.267157I$ $a=\ 0.44312-1.61945I$ $b=-1.248510-0.587775I$	$1.84603+4.13199I$	$-1.86475-5.14943I$
$u=-0.656857-0.267157I$ $a=\ 0.44312+1.61945I$ $b=-1.248510+0.587775I$	$1.84603-4.13199I$	$-1.86475+5.14943I$
$u=\ 0.128671+1.295620I$ $a=-3.84498+0.47312I$ $b=\ 1.203540-0.042147I$	$9.63383-2.00341I$	0
$u=\ 0.128671-1.295620I$ $a=-3.84498-0.47312I$ $b=\ 1.203540+0.042147I$	$9.63383+2.00341I$	0
$u=-0.581029+0.359352I$ $a=-0.222451+0.196065I$ $b=\ 1.348550-0.386647I$	$8.85704+2.47164I$	$3.01205-4.35204I$
$u=-0.581029-0.359352I$ $a=-0.222451-0.196065I$ $b=\ 1.348550+0.386647I$	$8.85704-2.47164I$	$3.01205+4.35204I$
$u=-0.642174+0.199804I$ $a=\ 0.535662-0.867543I$ $b=\ 0.182287-1.052460I$	$-2.15457+3.40976I$	$-5.90227-8.24087I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.642174-0.199804I$ $a=\ 0.535662+0.867543I$ $b=\ 0.182287+1.052460I$	$-2.15457-3.40976I$	$-5.90227+8.24087I$
$u=\ 0.671704$ $a=-0.310781$ $b=\ 0.215837$	-1.55032	-7.74090
$u=\ 0.259605+1.309660I$ $a=-0.247077+0.013717I$ $b=\ 0.097376+0.288479I$	$2.60983-3.35368I$	0
$u=\ 0.259605-1.309660I$ $a=-0.247077-0.013717I$ $b=\ 0.097376-0.288479I$	$2.60983+3.35368I$	0
$u=-0.516057+0.400667I$ $a=-0.76365+2.13859I$ $b=\ 1.185740+0.507231I$	$9.09275+1.02296I$	$3.55453-4.18776I$
$u=-0.516057-0.400667I$ $a=-0.76365-2.13859I$ $b=\ 1.185740-0.507231I$	$9.09275-1.02296I$	$3.55453+4.18776I$
$u=\ 0.503851+1.248960I$ $a=\ 1.103600+0.557191I$ $b=-0.967384+0.312417I$	$6.83291-6.37350I$	0
$u=\ 0.503851-1.248960I$ $a=\ 1.103600-0.557191I$ $b=-0.967384-0.312417I$	$6.83291+6.37350I$	0
$u=\ 0.163438+1.344350I$ $a=-0.54876+2.14293I$ $b=\ 0.884445+0.234151I$	$10.19730-2.39866I$	0
$u=\ 0.163438-1.344350I$ $a=-0.54876-2.14293I$ $b=\ 0.884445-0.234151I$	$10.19730+2.39866I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.223299 + 1.351700I$ $a = 2.70863 + 1.95015I$ $b = -1.068200 + 0.141951I$	$5.06193 - 3.40170I$	0
$u = 0.223299 - 1.351700I$ $a = 2.70863 - 1.95015I$ $b = -1.068200 - 0.141951I$	$5.06193 + 3.40170I$	0
$u = -0.188713 + 1.361780I$ $a = -0.486402 - 0.868672I$ $b = -0.389728 + 1.216040I$	$3.87314 + 0.69064I$	0
$u = -0.188713 - 1.361780I$ $a = -0.486402 + 0.868672I$ $b = -0.389728 - 1.216040I$	$3.87314 - 0.69064I$	0
$u = -0.251021 + 1.379070I$ $a = 0.729238 + 0.669618I$ $b = 0.135336 - 1.223050I$	$2.87331 + 6.66260I$	0
$u = -0.251021 - 1.379070I$ $a = 0.729238 - 0.669618I$ $b = 0.135336 + 1.223050I$	$2.87331 - 6.66260I$	0
$u = 0.574264 + 0.111966I$ $a = 0.22466 + 2.92931I$ $b = -0.931822 + 0.094872I$	$0.395763 - 0.494287I$	$4.29552 - 12.70736I$
$u = 0.574264 - 0.111966I$ $a = 0.22466 - 2.92931I$ $b = -0.931822 - 0.094872I$	$0.395763 + 0.494287I$	$4.29552 + 12.70736I$
$u = -0.14834 + 1.40864I$ $a = 2.08410 - 0.83521I$ $b = -1.48389 + 0.31155I$	$8.76204 + 0.97088I$	0
$u = -0.14834 - 1.40864I$ $a = 2.08410 + 0.83521I$ $b = -1.48389 - 0.31155I$	$8.76204 - 0.97088I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.28623 + 1.39773I$ $a = 0.315348 + 0.116776I$ $b = -0.023245 - 0.439811I$	$7.95406 - 4.80757I$	0
$u = 0.28623 - 1.39773I$ $a = 0.315348 - 0.116776I$ $b = -0.023245 + 0.439811I$	$7.95406 + 4.80757I$	0
$u = -0.25957 + 1.40499I$ $a = 2.14568 - 1.00660I$ $b = -1.35135 - 0.65463I$	$7.18270 + 7.48451I$	0
$u = -0.25957 - 1.40499I$ $a = 2.14568 + 1.00660I$ $b = -1.35135 + 0.65463I$	$7.18270 - 7.48451I$	0
$u = -0.08596 + 1.43421I$ $a = 0.312598 + 0.534930I$ $b = 0.323835 - 0.877940I$	$12.34400 - 2.20430I$	0
$u = -0.08596 - 1.43421I$ $a = 0.312598 - 0.534930I$ $b = 0.323835 + 0.877940I$	$12.34400 + 2.20430I$	0
$u = -0.19682 + 1.42934I$ $a = -2.02321 + 0.96049I$ $b = 1.239090 + 0.674351I$	$14.9149 + 3.6571I$	0
$u = -0.19682 - 1.42934I$ $a = -2.02321 - 0.96049I$ $b = 1.239090 - 0.674351I$	$14.9149 - 3.6571I$	0
$u = -0.22102 + 1.42800I$ $a = -1.79058 + 0.83116I$ $b = 1.47155 - 0.43333I$	$14.5709 + 5.4197I$	0
$u = -0.22102 - 1.42800I$ $a = -1.79058 - 0.83116I$ $b = 1.47155 + 0.43333I$	$14.5709 - 5.4197I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.29049+1.41717I$ $a=-0.693518-0.523001I$ $b=-0.075269+1.125750I$	$9.5099+11.1778I$	0
$u=-0.29049-1.41717I$ $a=-0.693518+0.523001I$ $b=-0.075269-1.125750I$	$9.5099-11.1778I$	0
$u=-0.313193+0.456137I$ $a=\ \ 0.441752-0.760209I$ $b=-1.228750+0.322684I$	$3.01576-0.85496I$	$1.23119-2.52327I$
$u=-0.313193-0.456137I$ $a=\ \ 0.441752+0.760209I$ $b=-1.228750-0.322684I$	$3.01576+0.85496I$	$1.23119+2.52327I$
$u=-0.30153+1.42217I$ $a=-2.13521+1.07097I$ $b=\ \ 1.35800+0.59500I$	$6.8199+13.0005I$	0
$u=-0.30153-1.42217I$ $a=-2.13521-1.07097I$ $b=\ \ 1.35800-0.59500I$	$6.8199-13.0005I$	0
$u=\ \ 0.29153+1.43750I$ $a=-1.85744-0.85644I$ $b=\ \ 1.076850-0.249443I$	$5.14012-5.77360I$	0
$u=\ \ 0.29153-1.43750I$ $a=-1.85744+0.85644I$ $b=\ \ 1.076850+0.249443I$	$5.14012+5.77360I$	0
$u=-0.05758+1.46635I$ $a=-2.22236+0.47583I$ $b=\ \ 1.352440-0.274412I$	$10.15940-3.63892I$	0
$u=-0.05758-1.46635I$ $a=-2.22236-0.47583I$ $b=\ \ 1.352440+0.274412I$	$10.15940+3.63892I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.32315+1.44956I$ $a=\ \ 2.11174-1.09178I$ $b=-1.34379-0.56775I$	$13.4980+17.1470I$	0
$u=-0.32315-1.44956I$ $a=\ \ 2.11174+1.09178I$ $b=-1.34379+0.56775I$	$13.4980-17.1470I$	0
$u=-0.491340+0.087310I$ $a=-0.82486+1.36513I$ $b=-0.518685+1.021610I$	$-0.82443-1.77338I$	$6.58787-6.08701I$
$u=-0.491340-0.087310I$ $a=-0.82486-1.36513I$ $b=-0.518685-1.021610I$	$-0.82443+1.77338I$	$6.58787+6.08701I$
$u=\ \ 0.475028+0.043866I$ $a=-5.16609+4.98938I$ $b=\ \ 1.030210+0.088639I$	$5.75586-0.13073I$	$-4.90020-5.98483I$
$u=\ \ 0.475028-0.043866I$ $a=-5.16609-4.98938I$ $b=\ \ 1.030210-0.088639I$	$5.75586+0.13073I$	$-4.90020+5.98483I$
$u=\ \ 0.29258+1.53406I$ $a=\ \ 1.83456+0.50035I$ $b=-1.107870+0.294999I$	$10.88590-7.72340I$	0
$u=\ \ 0.29258-1.53406I$ $a=\ \ 1.83456-0.50035I$ $b=-1.107870-0.294999I$	$10.88590+7.72340I$	0
$u=-0.06461+1.56283I$ $a=\ \ 2.00684-0.32098I$ $b=-1.306820+0.337330I$	$17.3400-6.1869I$	0
$u=-0.06461-1.56283I$ $a=\ \ 2.00684+0.32098I$ $b=-1.306820-0.337330I$	$17.3400+6.1869I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.105890 + 0.334666I$		
$a = -1.150010 - 0.432779I$	$-0.176718 - 0.984073I$	$-3.51434 + 6.22041I$
$b = -0.001375 + 0.424041I$		
$u = \quad 0.105890 - 0.334666I$		
$a = -1.150010 + 0.432779I$	$-0.176718 + 0.984073I$	$-3.51434 - 6.22041I$
$b = -0.001375 - 0.424041I$		

II. $I_2^u = \langle -9u^2a - 18au - 3u^2 + 23b - 3a - 6u - 1,\ -3u^2a + 3a^2 + 3au + 3u^2 - 3a + 4,\ u^3 - u^2 + 2u - 1\rangle$

(i) Arc colorings

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

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

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

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

$$a_3 = \begin{pmatrix} a \\ 0.391304au^2 + 0.130435u^2 + \cdots + 0.130435a + 0.0434783 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 0.521739au^2 + 0.173913u^2 + \cdots + 1.17391a + 0.391304 \\ -0.391304au^2 - 0.130435u^2 + \cdots - 0.130435a - 0.0434783 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.130435au^2 - 1.04348u^2 + \cdots + 0.956522a - 0.347826 \\ 0.391304au^2 + 0.130435u^2 + \cdots + 0.130435a - 0.956522 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.260870au^2 + 0.913043u^2 + \cdots + 0.913043a + 1.30435 \\ 0.391304au^2 + 0.130435u^2 + \cdots + 0.130435a + 1.04348 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.652174au^2 - 0.217391u^2 + \cdots + 0.782609a + 0.260870 \\ 0.782609au^2 + 0.260870u^2 + \cdots + 0.260870a + 0.0869565 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ u^2 - u + 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.130435au^2 - 0.956522u^2 + \cdots + 1.04348a - 0.652174 \\ au - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{36}{23}u^2a - \frac{95}{23}au - \frac{104}{23}u^2 - \frac{81}{23}a + \frac{158}{69}u - \frac{165}{23}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6, c_{12}	$(u^2-u+1)^3$
c_2, c_4	$(u^2+u+1)^3$
c_3	$27(27u^6+9u^4+6u^2+1)$
c_5	$27(27u^6+27u^5+9u^4-3u^2+1)$
c_7	$(u^3-u^2+2u-1)^2$
c_8	$(u^3+u^2-1)^2$
c_9	u^6
c_{10}, c_{11}	$(u^3+u^2+2u+1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_{12}	$(y^2+y+1)^3$
c_3	$729(27y^3+9y^2+6y+1)^2$
c_5	$729(729y^6-243y^5-81y^4+27y^2-6y+1)$
c_7, c_{10}, c_{11}	$(y^3+3y^2+2y-1)^2$
c_8	$(y^3-y^2+2y-1)^2$
c_9	y^6

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.215080 + 1.307140I$ $a = -1.083790 - 0.189897I$ $b = 0.500000 - 0.866025I$	$3.02413 - 4.85801I$	$1.60261 + 7.59932I$
$u = 0.215080 + 1.307140I$ $a = 0.206350 - 0.554965I$ $b = 0.500000 + 0.866025I$	$3.02413 - 0.79824I$	$-3.02248 + 0.15845I$
$u = 0.215080 - 1.307140I$ $a = -1.083790 + 0.189897I$ $b = 0.500000 + 0.866025I$	$3.02413 + 4.85801I$	$1.60261 - 7.59932I$
$u = 0.215080 - 1.307140I$ $a = 0.206350 + 0.554965I$ $b = 0.500000 - 0.866025I$	$3.02413 + 0.79824I$	$-3.02248 - 0.15845I$
$u = 0.569840$ $a = 0.377439 + 1.231090I$ $b = 0.500000 + 0.866025I$	$-1.11345 + 2.02988I$	$-9.74680 - 7.85891I$
$u = 0.569840$ $a = 0.377439 - 1.231090I$ $b = 0.500000 - 0.866025I$	$-1.11345 - 2.02988I$	$-9.74680 + 7.85891I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$((u^2-u+1)^3)(u^{92}-4u^{91}+\cdots-4u+1)$
c_2	$((u^2+u+1)^3)(u^{92}-4u^{91}+\cdots-4u+1)$
c_3	$729(27u^6+9u^4+6u^2+1)(27u^{92}-27u^{91}+\cdots+133643u-6581)$
c_4	$((u^2+u+1)^3)(u^{92}-4u^{91}+\cdots-4u+1)$
c_5	$729(27u^6+27u^5+9u^4-3u^2+1)$ $\cdot(27u^{92}-54u^{91}+\cdots+1430027u+751139)$
c_6	$((u^2-u+1)^3)(u^{92}-4u^{91}+\cdots-4u+1)$
c_7	$((u^3-u^2+2u-1)^2)(u^{92}-3u^{91}+\cdots-49u+9)$
c_8	$((u^3+u^2-1)^2)(u^{92}+3u^{91}+\cdots+30601u+21969)$
c_9	$u^6(u^{92}+3u^{91}+\cdots+4320u+5184)$
c_{10}, c_{11}	$((u^3+u^2+2u+1)^2)(u^{92}-3u^{91}+\cdots-49u+9)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$((y^2+y+1)^3)(y^{92}+88y^{91}+\cdots-10y+1)$
c_2, c_6	$((y^2+y+1)^3)(y^{92}-52y^{91}+\cdots-10y+1)$
c_3	$531441(27y^3+9y^2+6y+1)^2$ $\cdot(729y^{92}-38313y^{91}+\cdots-6420225317y+43309561)$
c_5	$531441(729y^6-243y^5-81y^4+27y^2-6y+1)$ $\cdot(729y^{92}+16362y^{91}+\cdots+1522568388484 1y+564209797321)$
c_7, c_{10}, c_{11}	$((y^3+3y^2+2y-1)^2)(y^{92}+83y^{91}+\cdots-169y+81)$
c_8	$((y^3-y^2+2y-1)^2)(y^{92}-y^{91}+\cdots+1.20269\times10^{10}y+4.82637\times10^8)$
c_9	$y^6(y^{92}-35y^{91}+\cdots-3.47121\times10^8y+2.68739\times10^7)$