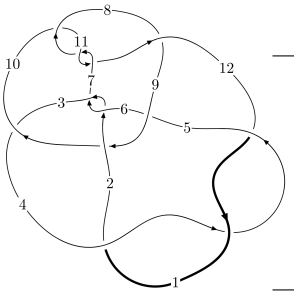
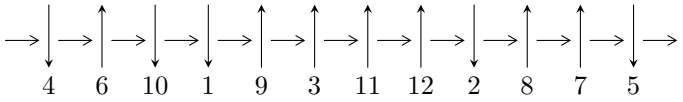
$12a_{0971}$ $(K12a_{0971})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle 3.15928 \times 10^{85} u^{86} - 7.95197 \times 10^{85} u^{85} + \cdots + 1.03342 \times 10^{86} b - 3.69881 \times 10^{86},$
$1.34443 \times 10^{86} u^{86} - 4.14253 \times 10^{86} u^{85} + \cdots + 9.30081 \times 10^{86} a - 2.18852 \times 10^{87},\ u^{87} - 3u^{86} + \cdots - 13u +$
$I_2^u = \langle 45u^2 a + 18au + 15u^2 + 7b + 75a + 6u + 25,\ 3u^2 a + 3a^2 + 3au - 3u^2 + 3a - 6u - 2,\ u^3 + u^2 + 2u + 1 \rangle$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 93 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. $I_1^u =$
$\langle \mathbf{3.16\times 10^{85} u^{86} - 7.95\times 10^{85} u^{85} + \cdots + 1.03\times 10^{86} b - 3.70\times 10^{86},\ 1.34\times 10^{86} u^{86} - 4.14\times 10^{86} u^{85} + \cdots + 9.30\times 10^{86} a - 2.19\times 10^{87},\ u^{87} - 3u^{86} + \cdots - 13u + 9} \rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.144550u^{86} + 0.445394u^{85} + \cdots - 6.95630u + 2.35304 \\ -0.305710u^{86} + 0.769478u^{85} + \cdots - 0.412694u + 3.57918 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^4 - u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.196170u^{86} + 0.344284u^{85} + \cdots - 9.70216u + 7.17387 \\ -0.674955u^{86} + 2.27956u^{85} + \cdots - 11.0701u + 6.12964 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.223344u^{86} + 0.899644u^{85} + \cdots - 1.51984u - 0.0494108 \\ -0.504613u^{86} + 1.23884u^{85} + \cdots - 1.07566u + 2.53142 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.00372110u^{86} + 0.0603299u^{85} + \cdots - 1.93409u + 3.70671 \\ -0.148462u^{86} + 0.292758u^{85} + \cdots - 6.49964u - 1.68499 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.0688365u^{86} + 0.324718u^{85} + \cdots - 7.35333u + 2.58991 \\ -0.632808u^{86} + 1.81422u^{85} + \cdots - 4.84845u + 8.01765 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.0565534u^{86} - 0.521293u^{85} + \cdots + 5.25049u - 5.64642 \\ 0.0666287u^{86} - 0.601748u^{85} + \cdots + 2.76442u - 1.49161 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.04216u^{86} + 4.97559u^{85} + \cdots - 2.37897u + 25.2364$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_{12}	$u^{87} - 4u^{86} + \cdots - 4u + 1$
c_2, c_6	$u^{87} - 4u^{86} + \cdots + 4u - 1$
c_3	$27(27u^{87} + 27u^{86} + \cdots - 601649u + 71363)$
c_5	$27(27u^{87} - 162u^{86} + \cdots - 5.84990 \times 10^7 u + 8628139)$
c_7, c_{10}, c_{11}	$u^{87} + 3u^{86} + \cdots - 13u - 9$
c_8	$u^{87} - 3u^{86} + \cdots + 408781u - 71217$
c_9	$u^{87} - 3u^{86} + \cdots - 9504u + 5184$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$y^{87} + 86y^{86} + \cdots - 18y - 1$
c_2, c_6	$y^{87} - 54y^{86} + \cdots - 18y - 1$
c_3	$729(729y^{87} + 24381y^{86} + \cdots - 3.17475 \times 10^{11}y - 5.09268 \times 10^{9})$
c_5	729 $\cdot (729y^{87} - 46332y^{86} + \cdots + 2022353001484271y - 74444782603321)$
c_7, c_{10}, c_{11}	$y^{87} + 73y^{86} + \cdots + 997y - 81$
c_8	$y^{87} - 51y^{86} + \cdots + 33659194645y - 5071861089$
c_9	$y^{87} + 35y^{86} + \cdots - 405347328y - 26873856$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.475527+0.805833I$ $a=\ 0.089835-0.551135I$ $b=\ 1.177780-0.150566I$	$2.70092-3.44890I$	0
$u=-0.475527-0.805833I$ $a=\ 0.089835+0.551135I$ $b=\ 1.177780+0.150566I$	$2.70092+3.44890I$	0
$u=\ 0.888902+0.205924I$ $a=\ 0.900561-0.992055I$ $b=-1.37273-0.49704I$	$13.2047+12.4115I$	0
$u=\ 0.888902-0.205924I$ $a=\ 0.900561+0.992055I$ $b=-1.37273+0.49704I$	$13.2047-12.4115I$	0
$u=\ 0.391672+1.023860I$ $a=\ 0.362478+0.178317I$ $b=\ 1.359590-0.374736I$	$3.54190-4.23526I$	0
$u=\ 0.391672-1.023860I$ $a=\ 0.362478-0.178317I$ $b=\ 1.359590+0.374736I$	$3.54190+4.23526I$	0
$u=-1.065520+0.285270I$ $a=\ 0.418557+0.401893I$ $b=-1.193590+0.046738I$	$11.06060-1.56959I$	0
$u=-1.065520-0.285270I$ $a=\ 0.418557-0.401893I$ $b=-1.193590-0.046738I$	$11.06060+1.56959I$	0
$u=\ 0.338354+1.064750I$ $a=\ 0.956882-1.019130I$ $b=\ 0.207604-0.939172I$	$5.89914-2.67054I$	0
$u=\ 0.338354-1.064750I$ $a=\ 0.956882+1.019130I$ $b=\ 0.207604+0.939172I$	$5.89914+2.67054I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.845496+0.226103I$ $a=-0.748389-0.724804I$ $b=\ \ 1.153110-0.049488I$	$4.62127-1.17888I$	$15.3214+4.9222I$
$u=-0.845496-0.226103I$ $a=-0.748389+0.724804I$ $b=\ \ 1.153110+0.049488I$	$4.62127+1.17888I$	$15.3214-4.9222I$
$u=\ \ 0.819931+0.174938I$ $a=-1.046840+0.926330I$ $b=\ \ 1.39190+0.49516I$	$6.16197+8.62937I$	$7.26098-7.48664I$
$u=\ \ 0.819931-0.174938I$ $a=-1.046840-0.926330I$ $b=\ \ 1.39190-0.49516I$	$6.16197-8.62937I$	$7.26098+7.48664I$
$u=\ \ 0.532196+1.037870I$ $a=-0.348925-0.031244I$ $b=-1.348470+0.419542I$	$10.66350-7.41245I$	0
$u=\ \ 0.532196-1.037870I$ $a=-0.348925+0.031244I$ $b=-1.348470-0.419542I$	$10.66350+7.41245I$	0
$u=-0.765759+0.895014I$ $a=-0.010074+0.631456I$ $b=-1.198210+0.136520I$	$9.18914-4.57999I$	0
$u=-0.765759-0.895014I$ $a=-0.010074-0.631456I$ $b=-1.198210-0.136520I$	$9.18914+4.57999I$	0
$u=\ \ 0.802888+0.153108I$ $a=-0.262672+0.297332I$ $b=\ \ 0.066528+1.077300I$	$8.68088+6.86862I$	$7.73382-5.25997I$
$u=\ \ 0.802888-0.153108I$ $a=-0.262672-0.297332I$ $b=\ \ 0.066528-1.077300I$	$8.68088-6.86862I$	$7.73382+5.25997I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.800674 + 0.019599I$ $a = -0.936657 - 0.466941I$ $b = 1.38632 - 0.56584I$	$12.75210 + 0.90095I$	$12.11282 - 0.46988I$
$u = 0.800674 - 0.019599I$ $a = -0.936657 + 0.466941I$ $b = 1.38632 + 0.56584I$	$12.75210 - 0.90095I$	$12.11282 + 0.46988I$
$u = 0.305617 + 1.178510I$ $a = -0.611784 - 0.323868I$ $b = -1.46949 + 0.37280I$	$2.59890 + 0.60226I$	0
$u = 0.305617 - 1.178510I$ $a = -0.611784 + 0.323868I$ $b = -1.46949 - 0.37280I$	$2.59890 - 0.60226I$	0
$u = 0.769265 + 0.092137I$ $a = 1.145640 - 0.694778I$ $b = -1.42038 - 0.52171I$	$5.88995 + 3.31153I$	$8.97619 - 2.85612I$
$u = 0.769265 - 0.092137I$ $a = 1.145640 + 0.694778I$ $b = -1.42038 + 0.52171I$	$5.88995 - 3.31153I$	$8.97619 + 2.85612I$
$u = -0.305917 + 0.699060I$ $a = 0.961569 - 0.906753I$ $b = 0.192565 - 0.474320I$	$5.14665 - 2.63882I$	$2.93112 + 4.29984I$
$u = -0.305917 - 0.699060I$ $a = 0.961569 + 0.906753I$ $b = 0.192565 + 0.474320I$	$5.14665 + 2.63882I$	$2.93112 - 4.29984I$
$u = -0.216484 + 1.229130I$ $a = 1.61808 + 2.33237I$ $b = 0.825856 + 0.217856I$	$4.04804 - 2.25597I$	0
$u = -0.216484 - 1.229130I$ $a = 1.61808 - 2.33237I$ $b = 0.825856 - 0.217856I$	$4.04804 + 2.25597I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.135515+1.243750I$ $a=-1.23739+0.76717I$ $b=\ \ 1.212330-0.016055I$	$3.39034-1.96317I$	0
$u=-0.135515-1.243750I$ $a=-1.23739-0.76717I$ $b=\ \ 1.212330+0.016055I$	$3.39034+1.96317I$	0
$u=-0.723811+0.167188I$ $a=\ \ 0.971888-0.512753I$ $b=\ \ 0.279767-0.169511I$	$7.07270-0.88904I$	$5.36870+1.21419I$
$u=-0.723811-0.167188I$ $a=\ \ 0.971888+0.512753I$ $b=\ \ 0.279767+0.169511I$	$7.07270+0.88904I$	$5.36870-1.21419I$
$u=\ \ 0.257760+1.249610I$ $a=-1.18240+1.27452I$ $b=-0.330391+1.218780I$	$-2.18501+0.51193I$	0
$u=\ \ 0.257760-1.249610I$ $a=-1.18240-1.27452I$ $b=-0.330391-1.218780I$	$-2.18501-0.51193I$	0
$u=\ \ 0.129759+1.281340I$ $a=\ \ 0.11451-2.07191I$ $b=-0.762915-0.936611I$	$-3.43050+4.05346I$	0
$u=\ \ 0.129759-1.281340I$ $a=\ \ 0.11451+2.07191I$ $b=-0.762915+0.936611I$	$-3.43050-4.05346I$	0
$u=\ \ 0.349523+1.243660I$ $a=\ \ 0.04825+2.17506I$ $b=\ \ 1.29439+0.65520I$	$8.97149+3.24317I$	0
$u=\ \ 0.349523-1.243660I$ $a=\ \ 0.04825-2.17506I$ $b=\ \ 1.29439-0.65520I$	$8.97149-3.24317I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.162052+1.282820I$ $a=-0.999751-0.932121I$ $b=-0.507012-0.172579I$	$-2.33280-2.04828I$	0
$u=-0.162052-1.282820I$ $a=-0.999751+0.932121I$ $b=-0.507012+0.172579I$	$-2.33280+2.04828I$	0
$u=0.699346+0.071790I$ $a=0.214536-0.019613I$ $b=-0.090287-1.176220I$	$1.41523+2.90127I$	$9.26737-6.98869I$
$u=0.699346-0.071790I$ $a=0.214536+0.019613I$ $b=-0.090287+1.176220I$	$1.41523-2.90127I$	$9.26737+6.98869I$
$u=-0.260689+1.294790I$ $a=1.05542+2.01164I$ $b=-1.091180+0.113305I$	$-0.90408-3.29830I$	0
$u=-0.260689-1.294790I$ $a=1.05542-2.01164I$ $b=-1.091180-0.113305I$	$-0.90408+3.29830I$	0
$u=0.003905+1.322550I$ $a=-1.25108+0.82381I$ $b=-0.829014+0.579445I$	$-2.87276-1.53737I$	0
$u=0.003905-1.322550I$ $a=-1.25108-0.82381I$ $b=-0.829014-0.579445I$	$-2.87276+1.53737I$	0
$u=0.351469+1.275860I$ $a=0.804976+0.104885I$ $b=1.46360-0.48078I$	$8.72609+5.04964I$	0
$u=0.351469-1.275860I$ $a=0.804976-0.104885I$ $b=1.46360+0.48078I$	$8.72609-5.04964I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.652792$ $a=\ \ 3.59295$ $b=-1.08207$	3.16347	-17.1830
$u=\ \ 0.296966+1.318480I$ $a=\ \ 0.95642-1.47053I$ $b=\ \ 0.080443-1.241100I$	$-2.95953+6.52773I$	0
$u=\ \ 0.296966-1.318480I$ $a=\ \ 0.95642+1.47053I$ $b=\ \ 0.080443+1.241100I$	$-2.95953-6.52773I$	0
$u=\ \ 0.038704+1.351680I$ $a=-0.05490+1.69619I$ $b=\ \ 0.485783+0.766327I$	$-6.18107-0.41670I$	0
$u=\ \ 0.038704-1.351680I$ $a=-0.05490-1.69619I$ $b=\ \ 0.485783-0.766327I$	$-6.18107+0.41670I$	0
$u=-0.232682+1.343270I$ $a=-0.157176+0.632391I$ $b=\ \ 0.030830+0.298245I$	$-3.33629-3.42016I$	0
$u=-0.232682-1.343270I$ $a=-0.157176-0.632391I$ $b=\ \ 0.030830-0.298245I$	$-3.33629+3.42016I$	0
$u=\ \ 0.329123+1.325740I$ $a=-0.14606-2.13239I$ $b=-1.38903-0.63090I$	$1.43892+7.28022I$	0
$u=\ \ 0.329123-1.325740I$ $a=-0.14606+2.13239I$ $b=-1.38903+0.63090I$	$1.43892-7.28022I$	0
$u=-0.317690+1.355920I$ $a=\ \ 0.441890-0.785584I$ $b=\ \ 0.085383-0.416658I$	$2.27643-4.70266I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.317690-1.355920I$ $a=\ \ 0.441890+0.785584I$ $b=\ \ 0.085383+0.416658I$	$2.27643+4.70266I$	0
$u=\ \ 0.344313+1.360690I$ $a=-0.80926+1.41488I$ $b=-0.029807+1.138480I$	$3.90795+11.01110I$	0
$u=\ \ 0.344313-1.360690I$ $a=-0.80926-1.41488I$ $b=-0.029807-1.138480I$	$3.90795-11.01110I$	0
$u=-0.574564+0.097485I$ $a=-0.526522+0.500182I$ $b=-0.133040+0.144638I$	$1.248450-0.464743I$	$7.84413-0.22520I$
$u=-0.574564-0.097485I$ $a=-0.526522-0.500182I$ $b=-0.133040-0.144638I$	$1.248450+0.464743I$	$7.84413+0.22520I$
$u=\ \ 0.34983+1.37354I$ $a=\ \ 0.15121+2.06930I$ $b=\ \ 1.38648+0.57465I$	$1.27287+12.84900I$	0
$u=\ \ 0.34983-1.37354I$ $a=\ \ 0.15121-2.06930I$ $b=\ \ 1.38648-0.57465I$	$1.27287-12.84900I$	0
$u=-0.36460+1.37318I$ $a=\ \ 0.064420-1.281370I$ $b=\ \ 1.127220-0.195815I$	$-0.38189-5.55156I$	0
$u=-0.36460-1.37318I$ $a=\ \ 0.064420+1.281370I$ $b=\ \ 1.127220+0.195815I$	$-0.38189+5.55156I$	0
$u=-0.05481+1.43158I$ $a=\ \ 0.086649-1.361050I$ $b=-0.281530-0.644862I$	$-1.53485-3.56929I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.05481-1.43158I$ $a=\ \ 0.086649+1.361050I$ $b=-0.281530+0.644862I$	$-1.53485+3.56929I$	0
$u=\ \ 0.37889+1.40071I$ $a=-0.13618-2.03758I$ $b=-1.36671-0.55316I$	$8.1224+16.9671I$	0
$u=\ \ 0.37889-1.40071I$ $a=-0.13618+2.03758I$ $b=-1.36671+0.55316I$	$8.1224-16.9671I$	0
$u=-0.07319+1.45408I$ $a=\ \ 1.06461-0.98320I$ $b=\ \ 1.010330-0.418689I$	$-4.52259-4.88007I$	0
$u=-0.07319-1.45408I$ $a=\ \ 1.06461+0.98320I$ $b=\ \ 1.010330+0.418689I$	$-4.52259+4.88007I$	0
$u=-0.48195+1.42073I$ $a=-0.157662+0.989615I$ $b=-1.168280+0.209592I$	$5.78078-7.09356I$	0
$u=-0.48195-1.42073I$ $a=-0.157662-0.989615I$ $b=-1.168280-0.209592I$	$5.78078+7.09356I$	0
$u=-0.13146+1.54608I$ $a=-0.835423+0.998254I$ $b=-1.094330+0.369463I$	$0.89140-7.47263I$	0
$u=-0.13146-1.54608I$ $a=-0.835423-0.998254I$ $b=-1.094330-0.369463I$	$0.89140+7.47263I$	0
$u=-0.235402+0.326790I$ $a=-1.67438+0.65469I$ $b=-1.079050+0.173980I$	$1.97105-0.98027I$	$2.19878-2.27327I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.235402-0.326790I$ $a=-1.67438-0.65469I$ $b=-1.079050-0.173980I$	$1.97105+0.98027I$	$2.19878+2.27327I$
$u=\ \ 0.086471+0.387614I$ $a=-1.28701+0.84711I$ $b=\ \ 0.070886+0.548596I$	$-0.894236-0.922911I$	$-4.05439+3.52210I$
$u=\ \ 0.086471-0.387614I$ $a=-1.28701-0.84711I$ $b=\ \ 0.070886-0.548596I$	$-0.894236+0.922911I$	$-4.05439-3.52210I$
$u=-0.387761+0.079628I$ $a=\ \ 3.05711+4.85214I$ $b=\ \ 1.003890+0.128798I$	$7.29634-0.17116I$	$10.73887-3.23742I$
$u=-0.387761-0.079628I$ $a=\ \ 3.05711-4.85214I$ $b=\ \ 1.003890-0.128798I$	$7.29634+0.17116I$	$10.73887+3.23742I$
$u=\ \ 0.371714+0.057427I$ $a=\ \ 1.249700+0.334115I$ $b=-0.596116-0.746232I$	$0.65359+2.22706I$	$-4.78903-5.61529I$
$u=\ \ 0.371714-0.057427I$ $a=\ \ 1.249700-0.334115I$ $b=-0.596116+0.746232I$	$0.65359-2.22706I$	$-4.78903+5.61529I$

II. $I_2^u = \langle 45u^2a + 18au + 15u^2 + 7b + 75a + 6u + 25,\ 3u^2a + 3a^2 + 3au - 3u^2 + 3a - 6u - 2,\ u^3 + u^2 + 2u + 1\rangle$

(i) Arc colorings

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

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

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

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

$$a_3 = \begin{pmatrix} a \\ -6.42857au^2 - 2.14286u^2 + \cdots - 10.7143a - 3.57143 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} \frac{15}{7}u^2a + \frac{12}{7}u^2 + \cdots + \frac{32}{7}a + \frac{20}{7} \\ -6.42857au^2 - 2.14286u^2 + \cdots - 10.7143a - 4.57143 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{30}{7}u^2a + \frac{3}{7}u^2 + \cdots + \frac{57}{7}a + \frac{12}{7} \\ -6.42857au^2 - 2.14286u^2 + \cdots - 10.7143a - 2.57143 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 3u^2a + au + 2u^2 + 6a + u + 3 \\ -7.71429au^2 - 2.57143u^2 + \cdots - 12.8571a - 5.28571 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} \frac{12}{7}u^2a + \frac{4}{7}u^2 + \cdots + \frac{27}{7}a + \frac{9}{7} \\ -9u^2a - 4au - 3u^2 - 15a - u - 5 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} \frac{39}{7}u^2a + \frac{13}{7}u^2 + \cdots + \frac{72}{7}a + \frac{24}{7} \\ -5.14286au^2 - 1.71429u^2 + \cdots - 8.57143a - 2.85714 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{36}{7}u^2a - \frac{13}{7}au + \frac{16}{7}u^2 - \frac{81}{7}a + \frac{64}{21}u + \frac{43}{7}$

(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
$u=-0.215080+1.307140I$ $a=\ 1.08379+0.96480I$ $b=\ 0.500000+0.866025I$	$-3.02413-0.79824I$	$-1.60261+0.67112I$
$u=-0.215080+1.307140I$ $a=-0.20635-1.70967I$ $b=\ 0.500000-0.866025I$	$-3.02413-4.85801I$	$3.02248+7.08665I$
$u=-0.215080-1.307140I$ $a=\ 1.08379-0.96480I$ $b=\ 0.500000-0.866025I$	$-3.02413+0.79824I$	$-1.60261-0.67112I$
$u=-0.215080-1.307140I$ $a=-0.20635+1.70967I$ $b=\ 0.500000+0.866025I$	$-3.02413+4.85801I$	$3.02248-7.08665I$
$u=-0.569840$ $a=-0.377439+0.076393I$ $b=\ 0.500000-0.866025I$	$1.11345-2.02988I$	$9.74680-0.93071I$
$u=-0.569840$ $a=-0.377439-0.076393I$ $b=\ 0.500000+0.866025I$	$1.11345+2.02988I$	$9.74680+0.93071I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$((u^2-u+1)^3)(u^{87}-4u^{86}+\cdots-4u+1)$
c_2	$((u^2+u+1)^3)(u^{87}-4u^{86}+\cdots+4u-1)$
c_3	$729(27u^6+9u^4+6u^2+1)(27u^{87}+27u^{86}+\cdots-601649u+71363)$
c_4	$((u^2+u+1)^3)(u^{87}-4u^{86}+\cdots-4u+1)$
c_5	$729(27u^6-27u^5+9u^4-3u^2+1)$ $\cdot(27u^{87}-162u^{86}+\cdots-58498985u+8628139)$
c_6	$((u^2-u+1)^3)(u^{87}-4u^{86}+\cdots+4u-1)$
c_7	$((u^3+u^2+2u+1)^2)(u^{87}+3u^{86}+\cdots-13u-9)$
c_8	$((u^3-u^2+1)^2)(u^{87}-3u^{86}+\cdots+408781u-71217)$
c_9	$u^6(u^{87}-3u^{86}+\cdots-9504u+5184)$
c_{10}, c_{11}	$((u^3-u^2+2u-1)^2)(u^{87}+3u^{86}+\cdots-13u-9)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_{12}	$((y^2+y+1)^3)(y^{87}+86y^{86}+\cdots-18y-1)$
c_2, c_6	$((y^2+y+1)^3)(y^{87}-54y^{86}+\cdots-18y-1)$
c_3	$531441(27y^3+9y^2+6y+1)^2$ $\cdot(729y^{87}+24381y^{86}+\cdots-317474738263y-5092677769)$
c_5	$531441(729y^6-243y^5-81y^4+27y^2-6y+1)$ $\cdot(729y^{87}-46332y^{86}+\cdots+2022353001484271y-74444782603321)$
c_7, c_{10}, c_{11}	$((y^3+3y^2+2y-1)^2)(y^{87}+73y^{86}+\cdots+997y-81)$
c_8	$(y^3-y^2+2y-1)^2$ $\cdot(y^{87}-51y^{86}+\cdots+33659194645y-5071861089)$
c_9	$y^6(y^{87}+35y^{86}+\cdots-4.05347\times10^8y-2.68739\times10^7)$