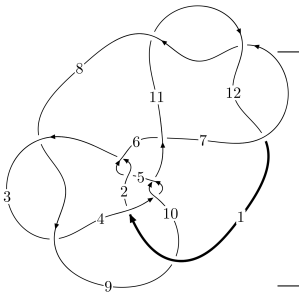
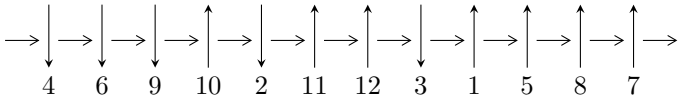
$12a_{0917}$ $(K12a_{0917})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -3.88633 \times 10^{471} u^{113} + 1.54579 \times 10^{470} u^{112} + \cdots + 7.97071 \times 10^{471} b + 1.97275 \times 10^{474}, \\ & 7.18453 \times 10^{474} u^{113} + 6.27512 \times 10^{473} u^{112} + \cdots + 5.89036 \times 10^{474} a - 5.31194 \times 10^{477}, \\ & u^{114} - u^{113} + \cdots + 3336u + 739 \rangle \\ I_2^u = \langle & u^{17} - u^{15} + u^{14} - 2u^{13} - u^{12} + 4u^{11} - 2u^{10} + u^8 - 5u^7 + 2u^5 - 2u^4 + 2u^3 - u^2 + b - u, \\ & -2u^{17} + 3u^{16} + \cdots + a - 8, \\ & u^{18} - 2u^{16} + u^{15} - u^{14} - 2u^{13} + 6u^{12} - u^{11} - 4u^{10} + 3u^9 - 5u^8 - u^7 + 7u^6 - 2u^5 + u^3 - 3u^2 + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 132 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. $\boldsymbol{I_1^u = \langle -3.89 \times 10^{471} u^{113} + 1.55 \times 10^{470} u^{112} + \cdots + 7.97 \times 10^{471} b + 1.97 \times 10^{474},\ 7.18 \times 10^{474} u^{113} + 6.28 \times 10^{473} u^{112} + \cdots + 5.89 \times 10^{474} a - 5.31 \times 10^{477},\ u^{114} - u^{113} + \cdots + 3336u + 739 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.21971u^{113} - 0.106532u^{112} + \cdots + 4748.64u + 901.802 \\ 0.487577u^{113} - 0.0193933u^{112} + \cdots - 1361.90u - 247.500 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.702049u^{113} - 0.0653924u^{112} + \cdots + 3470.05u + 644.021 \\ 0.845663u^{113} - 0.192654u^{112} + \cdots - 3774.60u - 650.263 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0422999u^{113} - 0.195938u^{112} + \cdots + 427.605u + 115.860 \\ 1.02739u^{113} - 0.224671u^{112} + \cdots - 4564.07u - 787.343 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.732134u^{113} - 0.125925u^{112} + \cdots + 3386.74u + 654.302 \\ 0.487577u^{113} - 0.0193933u^{112} + \cdots - 1361.90u - 247.500 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.168656u^{113} - 0.108635u^{112} + \cdots + 315.475u + 96.2647 \\ -0.565787u^{113} + 0.0498570u^{112} + \cdots + 2951.46u + 531.758 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.444496u^{113} + 0.325385u^{112} + \cdots + 1254.43u + 185.049 \\ 0.196882u^{113} + 0.141099u^{112} + \cdots - 654.563u - 145.912 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.393672u^{113} + 0.129234u^{112} + \cdots + 1069.44u + 180.809 \\ -0.748105u^{113} + 0.105672u^{112} + \cdots + 2739.36u + 481.056 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.316425u^{113} - 0.0597294u^{112} + \cdots - 1059.92u - 181.231 \\ 0.570528u^{113} - 0.0518741u^{112} + \cdots - 2263.23u - 397.890 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.538110u^{113} - 0.379647u^{112} + \cdots - 40.7556u + 70.1323$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{114} - 4u^{113} + \cdots - 26u + 1$
c_2, c_5	$u^{114} + u^{113} + \cdots - 712u - 329$
c_3, c_8	$u^{114} + u^{113} + \cdots + 35970u + 3559$
c_4, c_{10}	$u^{114} - u^{113} + \cdots + 3336u + 739$
c_6	$u^{114} + u^{113} + \cdots + 57678u - 19897$
c_7, c_{11}, c_{12}	$u^{114} - u^{113} + \cdots + 12u - 1$
c_9	$u^{114} - 2u^{113} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{114} - 16y^{113} + \cdots - 48y + 1$
c_2, c_5	$y^{114} - 77y^{113} + \cdots - 6990876y + 108241$
c_3, c_8	$y^{114} - 73y^{113} + \cdots - 385996944y + 12666481$
c_4, c_{10}	$y^{114} - 63y^{113} + \cdots - 24991058y + 546121$
c_6	$y^{114} - 13y^{113} + \cdots - 36931949010y + 395890609$
c_7, c_{11}, c_{12}	$y^{114} + 103y^{113} + \cdots - 100y + 1$
c_9	$y^{114} - 10y^{113} + \cdots - 56y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.969088+0.204379I$ $a=\ \ 0.414722-0.810630I$ $b=-1.42649+0.70549I$	$-3.50634-4.69984I$	0
$u=-0.969088-0.204379I$ $a=\ \ 0.414722+0.810630I$ $b=-1.42649-0.70549I$	$-3.50634+4.69984I$	0
$u=\ \ 0.877583+0.445562I$ $a=-0.21000+1.84305I$ $b=\ \ 0.358065+0.009637I$	$-2.36151+5.03253I$	0
$u=\ \ 0.877583-0.445562I$ $a=-0.21000-1.84305I$ $b=\ \ 0.358065-0.009637I$	$-2.36151-5.03253I$	0
$u=-0.006438+1.028020I$ $a=-0.155991+0.265312I$ $b=\ \ 1.074920+0.501547I$	$-6.60704-3.50811I$	0
$u=-0.006438-1.028020I$ $a=-0.155991-0.265312I$ $b=\ \ 1.074920-0.501547I$	$-6.60704+3.50811I$	0
$u=-0.695698+0.757499I$ $a=\ \ 0.452586-0.492180I$ $b=\ \ 0.345815+0.231181I$	$-3.24887-2.33723I$	0
$u=-0.695698-0.757499I$ $a=\ \ 0.452586+0.492180I$ $b=\ \ 0.345815-0.231181I$	$-3.24887+2.33723I$	0
$u=\ \ 0.968126+0.073076I$ $a=\ \ 0.650180+1.183770I$ $b=-1.58042-0.93058I$	$1.51276+0.70933I$	0
$u=\ \ 0.968126-0.073076I$ $a=\ \ 0.650180-1.183770I$ $b=-1.58042+0.93058I$	$1.51276-0.70933I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.949489 + 0.055564I$ $a = 0.55669 - 1.61663I$ $b = 0.061562 + 0.974667I$	$1.41876 + 0.03926I$	0
$u = 0.949489 - 0.055564I$ $a = 0.55669 + 1.61663I$ $b = 0.061562 - 0.974667I$	$1.41876 - 0.03926I$	0
$u = 0.954829 + 0.446281I$ $a = -0.06902 - 2.04103I$ $b = -0.582983 + 0.860904I$	$-5.06278 + 6.04773I$	0
$u = 0.954829 - 0.446281I$ $a = -0.06902 + 2.04103I$ $b = -0.582983 - 0.860904I$	$-5.06278 - 6.04773I$	0
$u = 0.914791 + 0.236855I$ $a = -1.58640 + 1.57134I$ $b = 0.297054 + 0.009562I$	$-9.57486 - 0.48554I$	0
$u = 0.914791 - 0.236855I$ $a = -1.58640 - 1.57134I$ $b = 0.297054 - 0.009562I$	$-9.57486 + 0.48554I$	0
$u = 0.922232 + 0.144218I$ $a = 1.174010 - 0.065866I$ $b = 1.123630 - 0.011538I$	$-9.76533 + 2.14261I$	0
$u = 0.922232 - 0.144218I$ $a = 1.174010 + 0.065866I$ $b = 1.123630 + 0.011538I$	$-9.76533 - 2.14261I$	0
$u = 1.046070 + 0.239058I$ $a = -0.85138 - 1.97274I$ $b = 1.09363 + 2.03591I$	$-5.37492 + 8.65829I$	0
$u = 1.046070 - 0.239058I$ $a = -0.85138 + 1.97274I$ $b = 1.09363 - 2.03591I$	$-5.37492 - 8.65829I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.264647+0.883793I$ $a=-0.536581-0.273213I$ $b=\ \ 1.216060-0.609753I$	$-13.92120+2.15412I$	0
$u=-0.264647-0.883793I$ $a=-0.536581+0.273213I$ $b=\ \ 1.216060+0.609753I$	$-13.92120-2.15412I$	0
$u=-1.010120+0.380788I$ $a=-0.68331-1.26299I$ $b=\ \ 0.318750+0.019761I$	$-3.47032-1.40711I$	0
$u=-1.010120-0.380788I$ $a=-0.68331+1.26299I$ $b=\ \ 0.318750-0.019761I$	$-3.47032+1.40711I$	0
$u=-0.817063+0.423429I$ $a=-0.16216-2.30139I$ $b=\ \ 0.353188-0.037404I$	$-7.84408-8.47218I$	0
$u=-0.817063-0.423429I$ $a=-0.16216+2.30139I$ $b=\ \ 0.353188+0.037404I$	$-7.84408+8.47218I$	0
$u=-0.746591+0.520694I$ $a=\ \ 0.950966+0.221898I$ $b=\ \ 1.073110+0.087222I$	$-8.00719+4.52766I$	0
$u=-0.746591-0.520694I$ $a=\ \ 0.950966-0.221898I$ $b=\ \ 1.073110-0.087222I$	$-8.00719-4.52766I$	0
$u=-0.902077+0.094311I$ $a=\ \ 0.12308+2.02544I$ $b=-1.11520-1.36298I$	$-0.19599-3.84624I$	0
$u=-0.902077-0.094311I$ $a=\ \ 0.12308-2.02544I$ $b=-1.11520+1.36298I$	$-0.19599+3.84624I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.086250+0.162157I$ $a=\ \ 0.06438+2.12014I$ $b=\ \ 0.14911-1.94929I$	$1.30462-4.38742I$	0
$u=-1.086250-0.162157I$ $a=\ \ 0.06438-2.12014I$ $b=\ \ 0.14911+1.94929I$	$1.30462+4.38742I$	0
$u=-1.035270+0.478756I$ $a=-0.30223+1.61442I$ $b=-0.806669-0.959995I$	$0.34780-4.65325I$	0
$u=-1.035270-0.478756I$ $a=-0.30223-1.61442I$ $b=-0.806669+0.959995I$	$0.34780+4.65325I$	0
$u=-1.117830+0.247816I$ $a=-0.20281+1.52575I$ $b=-1.04943-0.98275I$	$0.41343-3.70509I$	0
$u=-1.117830-0.247816I$ $a=-0.20281-1.52575I$ $b=-1.04943+0.98275I$	$0.41343+3.70509I$	0
$u=-0.847341$ $a=\ \ 1.23534$ $b=\ \ 1.13631$	-5.38924	0
$u=-0.329500+0.765976I$ $a=\ \ 0.326623+0.507359I$ $b=\ \ 1.100880+0.290094I$	$-5.80128-3.00091I$	0
$u=-0.329500-0.765976I$ $a=\ \ 0.326623-0.507359I$ $b=\ \ 1.100880-0.290094I$	$-5.80128+3.00091I$	0
$u=\ \ 0.618576+0.540685I$ $a=\ \ 0.083599+0.252147I$ $b=-1.052880-0.515640I$	$-6.05839-2.02378I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.618576 - 0.540685I$ $a = 0.083599 - 0.252147I$ $b = -1.052880 + 0.515640I$	$-6.05839 + 2.02378I$	0
$u = 0.584109 + 0.576538I$ $a = 0.809406 - 0.387011I$ $b = 1.091560 - 0.150137I$	$-3.16752 - 0.88507I$	0
$u = 0.584109 - 0.576538I$ $a = 0.809406 + 0.387011I$ $b = 1.091560 + 0.150137I$	$-3.16752 + 0.88507I$	0
$u = -0.045428 + 1.189570I$ $a = -0.167656 - 0.108204I$ $b = 1.009570 - 0.563654I$	$-4.97274 + 7.84212I$	0
$u = -0.045428 - 1.189570I$ $a = -0.167656 + 0.108204I$ $b = 1.009570 + 0.563654I$	$-4.97274 - 7.84212I$	0
$u = -1.165720 + 0.323722I$ $a = 0.31893 + 1.56945I$ $b = -0.694903 - 1.156700I$	$0.94177 - 4.19901I$	0
$u = -1.165720 - 0.323722I$ $a = 0.31893 - 1.56945I$ $b = -0.694903 + 1.156700I$	$0.94177 + 4.19901I$	0
$u = 1.109390 + 0.508395I$ $a = -0.43713 - 1.64769I$ $b = -0.859732 + 0.839961I$	$-4.47538 + 3.22869I$	0
$u = 1.109390 - 0.508395I$ $a = -0.43713 + 1.64769I$ $b = -0.859732 - 0.839961I$	$-4.47538 - 3.22869I$	0
$u = 0.232527 + 0.731714I$ $a = -0.488149 + 0.051820I$ $b = -0.795646 - 0.709438I$	$-6.98909 + 1.36802I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.232527 - 0.731714I$ $a = -0.488149 - 0.051820I$ $b = -0.795646 + 0.709438I$	$-6.98909 - 1.36802I$	0
$u = 1.245280 + 0.019562I$ $a = 1.06744 - 0.93533I$ $b = -1.23246 + 0.91844I$	$2.68980 - 0.40449I$	0
$u = 1.245280 - 0.019562I$ $a = 1.06744 + 0.93533I$ $b = -1.23246 - 0.91844I$	$2.68980 + 0.40449I$	0
$u = 1.202270 + 0.346526I$ $a = -0.33320 - 1.47123I$ $b = -1.010690 + 0.890754I$	$2.71109 + 7.20053I$	0
$u = 1.202270 - 0.346526I$ $a = -0.33320 + 1.47123I$ $b = -1.010690 - 0.890754I$	$2.71109 - 7.20053I$	0
$u = -0.721422 + 0.177839I$ $a = 1.08111 + 2.16726I$ $b = -0.182614 - 0.720205I$	$-4.27000 + 2.72633I$	0
$u = -0.721422 - 0.177839I$ $a = 1.08111 - 2.16726I$ $b = -0.182614 + 0.720205I$	$-4.27000 - 2.72633I$	0
$u = -0.980319 + 0.788998I$ $a = 0.172281 - 0.636795I$ $b = 0.349510 + 0.174258I$	$-3.27096 - 2.36971I$	0
$u = -0.980319 - 0.788998I$ $a = 0.172281 + 0.636795I$ $b = 0.349510 - 0.174258I$	$-3.27096 + 2.36971I$	0
$u = 0.115666 + 1.254400I$ $a = -0.200394 + 0.043848I$ $b = 0.994452 + 0.610560I$	$-10.4311 - 11.7658I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.115666 - 1.254400I$ $a = -0.200394 - 0.043848I$ $b = 0.994452 - 0.610560I$	$-10.4311 + 11.7658I$	0
$u = 1.036480 + 0.717931I$ $a = -0.288516 - 1.248700I$ $b = -0.777232 + 1.034550I$	$-4.38648 + 4.09702I$	0
$u = 1.036480 - 0.717931I$ $a = -0.288516 + 1.248700I$ $b = -0.777232 - 1.034550I$	$-4.38648 - 4.09702I$	0
$u = 1.270480 + 0.167881I$ $a = 0.165225 + 1.112440I$ $b = 0.662819 - 0.915343I$	$3.06266 - 1.23525I$	0
$u = 1.270480 - 0.167881I$ $a = 0.165225 - 1.112440I$ $b = 0.662819 + 0.915343I$	$3.06266 + 1.23525I$	0
$u = 0.252868 + 0.657555I$ $a = -1.179630 - 0.653715I$ $b = -0.692015 + 0.913812I$	$-6.45845 + 6.96970I$	$-4.16064 - 5.87209I$
$u = 0.252868 - 0.657555I$ $a = -1.179630 + 0.653715I$ $b = -0.692015 - 0.913812I$	$-6.45845 - 6.96970I$	$-4.16064 + 5.87209I$
$u = -1.197800 + 0.494846I$ $a = -0.45391 - 1.80764I$ $b = 1.37331 + 1.33078I$	$-10.98250 - 7.15840I$	0
$u = -1.197800 - 0.494846I$ $a = -0.45391 + 1.80764I$ $b = 1.37331 - 1.33078I$	$-10.98250 + 7.15840I$	0
$u = -1.240560 + 0.391878I$ $a = -0.39027 + 1.45245I$ $b = -1.002840 - 0.851978I$	$-2.34084 - 10.75460I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.240560-0.391878I$ $a=-0.39027-1.45245I$ $b=-1.002840+0.851978I$	$-2.34084+10.75460I$	0
$u=-1.301500+0.288205I$ $a=\ \ 0.165188-0.997801I$ $b=\ \ 0.736668+0.805372I$	$6.42560-2.65652I$	0
$u=-1.301500-0.288205I$ $a=\ \ 0.165188+0.997801I$ $b=\ \ 0.736668-0.805372I$	$6.42560+2.65652I$	0
$u=-1.324720+0.172615I$ $a=\ \ 0.746766-0.575376I$ $b=-0.924036+0.681271I$	$-2.14648-4.49574I$	0
$u=-1.324720-0.172615I$ $a=\ \ 0.746766+0.575376I$ $b=-0.924036-0.681271I$	$-2.14648+4.49574I$	0
$u=-1.34105$ $a=-1.92897$ $b=\ \ 2.59537$	3.15607	0
$u=\ \ 1.329470+0.219256I$ $a=-1.40678+1.09962I$ $b=\ \ 2.13472-0.89832I$	$-0.49690+6.12941I$	0
$u=\ \ 1.329470-0.219256I$ $a=-1.40678-1.09962I$ $b=\ \ 2.13472+0.89832I$	$-0.49690-6.12941I$	0
$u=-0.393840+0.496891I$ $a=\ \ 0.227651+0.005701I$ $b=-0.856839+0.304726I$	$-1.47794+0.42376I$	$-6.92289+0.66239I$
$u=-0.393840-0.496891I$ $a=\ \ 0.227651-0.005701I$ $b=-0.856839-0.304726I$	$-1.47794-0.42376I$	$-6.92289-0.66239I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.626665 + 0.070513I$ $a = -0.31959 + 3.28267I$ $b = -0.30771 - 1.56112I$	$-6.93246 - 6.74464I$	$-4.54421 + 3.69045I$
$u = 0.626665 - 0.070513I$ $a = -0.31959 - 3.28267I$ $b = -0.30771 + 1.56112I$	$-6.93246 + 6.74464I$	$-4.54421 - 3.69045I$
$u = 1.325510 + 0.388709I$ $a = 0.146422 + 0.905816I$ $b = 0.803835 - 0.718166I$	$2.20215 + 6.61785I$	0
$u = 1.325510 - 0.388709I$ $a = 0.146422 - 0.905816I$ $b = 0.803835 + 0.718166I$	$2.20215 - 6.61785I$	0
$u = -1.306190 + 0.483235I$ $a = 0.133723 + 1.262820I$ $b = -0.766311 - 1.066690I$	$1.29239 - 4.31334I$	0
$u = -1.306190 - 0.483235I$ $a = 0.133723 - 1.262820I$ $b = -0.766311 + 1.066690I$	$1.29239 + 4.31334I$	0
$u = 1.33405 + 0.53018I$ $a = -0.36634 + 1.44906I$ $b = 1.35537 - 1.10565I$	$-2.47218 + 9.05795I$	0
$u = 1.33405 - 0.53018I$ $a = -0.36634 - 1.44906I$ $b = 1.35537 + 1.10565I$	$-2.47218 - 9.05795I$	0
$u = -0.243615 + 0.493296I$ $a = -0.355017 + 0.564310I$ $b = -0.651893 + 0.612044I$	$-1.56487 + 0.86576I$	$-1.91780 + 0.15431I$
$u = -0.243615 - 0.493296I$ $a = -0.355017 - 0.564310I$ $b = -0.651893 - 0.612044I$	$-1.56487 - 0.86576I$	$-1.91780 - 0.15431I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.35532+0.58830I$ $a=-0.23377-1.42513I$ $b=\ \ 1.27991+1.09026I$	$-0.89098-14.03350I$	0
$u=-1.35532-0.58830I$ $a=-0.23377+1.42513I$ $b=\ \ 1.27991-1.09026I$	$-0.89098+14.03350I$	0
$u=\ \ 0.488332+0.161092I$ $a=\ \ 1.42208+0.46414I$ $b=-0.053684-0.385948I$	$1.047010+0.262830I$	$9.61906-0.97019I$
$u=\ \ 0.488332-0.161092I$ $a=\ \ 1.42208-0.46414I$ $b=-0.053684+0.385948I$	$1.047010-0.262830I$	$9.61906+0.97019I$
$u=\ \ 1.34991+0.62686I$ $a=\ \ 0.019466-1.152680I$ $b=-0.770642+1.054510I$	$3.46283+8.04487I$	0
$u=\ \ 1.34991-0.62686I$ $a=\ \ 0.019466+1.152680I$ $b=-0.770642-1.054510I$	$3.46283-8.04487I$	0
$u=\ \ 1.35219+0.62928I$ $a=-0.15913+1.44219I$ $b=\ \ 1.24121-1.09914I$	$-6.5551+18.2830I$	0
$u=\ \ 1.35219-0.62928I$ $a=-0.15913-1.44219I$ $b=\ \ 1.24121+1.09914I$	$-6.5551-18.2830I$	0
$u=\ \ 1.14136+0.96847I$ $a=\ \ 0.365788+0.227527I$ $b=-0.476207-0.460376I$	$-4.64691-1.49220I$	0
$u=\ \ 1.14136-0.96847I$ $a=\ \ 0.365788-0.227527I$ $b=-0.476207+0.460376I$	$-4.64691+1.49220I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.36045+0.70486I$ $a=-0.027443+1.107860I$ $b=-0.772979-1.053780I$	$-1.63443-11.72660I$	0
$u=-1.36045-0.70486I$ $a=-0.027443-1.107860I$ $b=-0.772979+1.053780I$	$-1.63443+11.72660I$	0
$u=-0.094724+0.406140I$ $a=-2.10949-0.11649I$ $b=-0.553631-0.843286I$	$-0.92379-4.02696I$	$1.18917+6.48927I$
$u=-0.094724-0.406140I$ $a=-2.10949+0.11649I$ $b=-0.553631+0.843286I$	$-0.92379+4.02696I$	$1.18917-6.48927I$
$u=-0.293063+0.073000I$ $a=3.07136+1.35063I$ $b=-0.267005+0.556962I$	$-1.97974+2.07861I$	$4.21828-3.72577I$
$u=-0.293063-0.073000I$ $a=3.07136-1.35063I$ $b=-0.267005-0.556962I$	$-1.97974-2.07861I$	$4.21828+3.72577I$
$u=-0.96235+1.41625I$ $a=0.245544-0.160016I$ $b=-0.311505+0.324669I$	$-0.793524-0.596169I$	0
$u=-0.96235-1.41625I$ $a=0.245544+0.160016I$ $b=-0.311505-0.324669I$	$-0.793524+0.596169I$	0
$u=1.37233+1.31365I$ $a=0.033456+0.294436I$ $b=0.175248-0.245317I$	$-0.167709-0.500264I$	0
$u=1.37233-1.31365I$ $a=0.033456-0.294436I$ $b=0.175248+0.245317I$	$-0.167709+0.500264I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.22942 + 1.54957I$ $a = 0.191189 + 0.219742I$ $b = -0.180136 - 0.413746I$	$-5.43486 + 3.13452I$	0
$u = 1.22942 - 1.54957I$ $a = 0.191189 - 0.219742I$ $b = -0.180136 + 0.413746I$	$-5.43486 - 3.13452I$	0
$u = -1.28821 + 1.56434I$ $a = 0.088177 - 0.260039I$ $b = 0.114998 + 0.350495I$	$-4.83629 + 3.61821I$	0
$u = -1.28821 - 1.56434I$ $a = 0.088177 + 0.260039I$ $b = 0.114998 - 0.350495I$	$-4.83629 - 3.61821I$	0

II.

$\boldsymbol{I_2^u = \langle u^{17}-u^{15}+\cdots+b-u,\ -2u^{17}+3u^{16}+\cdots+a-8,\ u^{18}-2u^{16}+\cdots-3u^2+1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2u^{17} - 3u^{16} + \cdots - 5u + 8 \\ -u^{17} + u^{15} + \cdots + u^2 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 5u^{17} - 8u^{16} + \cdots - 14u + 18 \\ -u^{17} + u^{15} + \cdots + u + 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 3u^{17} - 6u^{16} + \cdots - 10u + 13 \\ -2u^{17} + u^{16} + \cdots + 3u - 2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^{17} - 3u^{16} + \cdots - 4u + 8 \\ -u^{17} + u^{15} + \cdots + u^2 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 15u^{17} - 4u^{16} + \cdots - 32u + 12 \\ u^{17} - 2u^{15} + \cdots + u^2 - 3u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -12u^{17} + 15u^{16} + \cdots + 30u - 31 \\ u^{16} - 2u^{14} + \cdots + u - 3 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -16u^{17} + 8u^{16} + \cdots + 34u - 18 \\ -2u^{17} + 3u^{15} + \cdots + 6u - 1 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -17u^{17} + 10u^{16} + \cdots + 30u - 19 \\ -6u^{17} + 4u^{16} + \cdots + 13u - 9 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 6u^{17} + 6u^{16} - 7u^{15} - 3u^{14} - 4u^{13} - 18u^{12} + 16u^{11} + 21u^{10} - 17u^9 - 12u^7 - 38u^6 + 16u^5 + 12u^4 - 4u^3 + 9u^2 - 4u - 15$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} - 9u^{17} + \cdots + 12u - 1$
c_2	$u^{18} + 6u^{17} + \cdots + 4u + 1$
c_3	$u^{18} - 3u^{16} + \cdots - 2u^2 + 1$
c_4	$u^{18} - 2u^{16} + \cdots - 3u^2 + 1$
c_5	$u^{18} - 6u^{17} + \cdots - 4u + 1$
c_6	$u^{18} + 2u^{17} + \cdots - 2u + 1$
c_7	$u^{18} - 2u^{17} + \cdots - 4u + 1$
c_8	$u^{18} - 3u^{16} + \cdots - 2u^2 + 1$
c_9	$u^{18} - 3u^{17} + \cdots + 8u^2 - 1$
c_{10}	$u^{18} - 2u^{16} + \cdots - 3u^2 + 1$
c_{11}, c_{12}	$u^{18} + 2u^{17} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{18} - 9y^{17} + \cdots - 24y + 1$
c_2, c_5	$y^{18} - 18y^{17} + \cdots - 12y + 1$
c_3, c_8	$y^{18} - 6y^{17} + \cdots - 4y + 1$
c_4, c_{10}	$y^{18} - 4y^{17} + \cdots - 6y + 1$
c_6	$y^{18} - 6y^{17} + \cdots - 6y + 1$
c_7, c_{11}, c_{12}	$y^{18} + 18y^{17} + \cdots - 12y + 1$
c_9	$y^{18} - 7y^{17} + \cdots - 16y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.096816+1.007410I$ $a=\ \ 0.390122-0.308395I$ $b=-0.506042-0.048045I$	$-0.485458+0.758770I$	$3.16986+0.63690I$
$u=-0.096816-1.007410I$ $a=\ \ 0.390122+0.308395I$ $b=-0.506042+0.048045I$	$-0.485458-0.758770I$	$3.16986-0.63690I$
$u=\ \ 0.089985+0.923596I$ $a=\ \ 0.710395+0.462376I$ $b=-0.462339+0.048441I$	$-5.33231-3.64992I$	$-2.50782+2.22962I$
$u=\ \ 0.089985-0.923596I$ $a=\ \ 0.710395-0.462376I$ $b=-0.462339-0.048441I$	$-5.33231+3.64992I$	$-2.50782-2.22962I$
$u=-1.001410+0.392393I$ $a=-0.17851+1.97212I$ $b=-0.76401-1.22705I$	$0.00272-5.19069I$	$-0.60885+12.36479I$
$u=-1.001410-0.392393I$ $a=-0.17851-1.97212I$ $b=-0.76401+1.22705I$	$0.00272+5.19069I$	$-0.60885-12.36479I$
$u=\ \ 0.868689+0.267789I$ $a=-0.46427-2.83054I$ $b=\ \ 0.00027+1.46765I$	$-6.48227+7.96307I$	$-2.37210-7.51876I$
$u=\ \ 0.868689-0.267789I$ $a=-0.46427+2.83054I$ $b=\ \ 0.00027-1.46765I$	$-6.48227-7.96307I$	$-2.37210+7.51876I$
$u=\ \ 0.942785+0.573136I$ $a=-0.71182-1.34547I$ $b=-0.677013+0.793940I$	$-2.58928+4.11351I$	$1.68689-6.10181I$
$u=\ \ 0.942785-0.573136I$ $a=-0.71182+1.34547I$ $b=-0.677013-0.793940I$	$-2.58928-4.11351I$	$1.68689+6.10181I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.155315 + 1.136990I$ $a = 0.063332 + 0.230986I$ $b = -0.569634 + 0.067000I$	$-3.77907 + 1.85984I$	$-6.91962 - 3.56109I$
$u = 0.155315 - 1.136990I$ $a = 0.063332 - 0.230986I$ $b = -0.569634 - 0.067000I$	$-3.77907 - 1.85984I$	$-6.91962 + 3.56109I$
$u = 1.26242$ $a = 2.07810$ $b = -2.68438$	3.80243	16.1540
$u = -1.243120 + 0.272288I$ $a = 0.94065 + 1.28464I$ $b = -1.69262 - 0.99507I$	$0.36400 - 5.73078I$	$4.33366 + 6.25229I$
$u = -1.243120 - 0.272288I$ $a = 0.94065 - 1.28464I$ $b = -1.69262 + 0.99507I$	$0.36400 + 5.73078I$	$4.33366 - 6.25229I$
$u = 0.721288$ $a = 1.61014$ $b = 1.08445$	-5.70082	-15.0020
$u = -0.707276 + 0.038773I$ $a = 1.90599 + 1.07892I$ $b = 0.971354 - 0.215696I$	$-10.35790 + 1.42128I$	$-8.85789 + 0.00528I$
$u = -0.707276 - 0.038773I$ $a = 1.90599 - 1.07892I$ $b = 0.971354 + 0.215696I$	$-10.35790 - 1.42128I$	$-8.85789 - 0.00528I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{18}-9u^{17}+\cdots+12u-1)(u^{114}-4u^{113}+\cdots-26u+1)$
c_2	$(u^{18}+6u^{17}+\cdots+4u+1)(u^{114}+u^{113}+\cdots-712u-329)$
c_3	$(u^{18}-3u^{16}+\cdots-2u^2+1)(u^{114}+u^{113}+\cdots+35970u+3559)$
c_4	$(u^{18}-2u^{16}+\cdots-3u^2+1)(u^{114}-u^{113}+\cdots+3336u+739)$
c_5	$(u^{18}-6u^{17}+\cdots-4u+1)(u^{114}+u^{113}+\cdots-712u-329)$
c_6	$(u^{18}+2u^{17}+\cdots-2u+1)(u^{114}+u^{113}+\cdots+57678u-19897)$
c_7	$(u^{18}-2u^{17}+\cdots-4u+1)(u^{114}-u^{113}+\cdots+12u-1)$
c_8	$(u^{18}-3u^{16}+\cdots-2u^2+1)(u^{114}+u^{113}+\cdots+35970u+3559)$
c_9	$(u^{18}-3u^{17}+\cdots+8u^2-1)(u^{114}-2u^{113}+\cdots-2u+1)$
c_{10}	$(u^{18}-2u^{16}+\cdots-3u^2+1)(u^{114}-u^{113}+\cdots+3336u+739)$
c_{11}, c_{12}	$(u^{18}+2u^{17}+\cdots+4u+1)(u^{114}-u^{113}+\cdots+12u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{18}-9y^{17}+\cdots-24y+1)(y^{114}-16y^{113}+\cdots-48y+1)$
c_2, c_5	$(y^{18}-18y^{17}+\cdots-12y+1)$ $\cdot(y^{114}-77y^{113}+\cdots-6990876y+108241)$
c_3, c_8	$(y^{18}-6y^{17}+\cdots-4y+1)$ $\cdot(y^{114}-73y^{113}+\cdots-385996944y+12666481)$
c_4, c_{10}	$(y^{18}-4y^{17}+\cdots-6y+1)$ $\cdot(y^{114}-63y^{113}+\cdots-24991058y+546121)$
c_6	$(y^{18}-6y^{17}+\cdots-6y+1)$ $\cdot(y^{114}-13y^{113}+\cdots-36931949010y+395890609)$
c_7, c_{11}, c_{12}	$(y^{18}+18y^{17}+\cdots-12y+1)(y^{114}+103y^{113}+\cdots-100y+1)$
c_9	$(y^{18}-7y^{17}+\cdots-16y+1)(y^{114}-10y^{113}+\cdots-56y+1)$