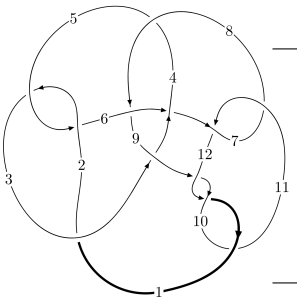
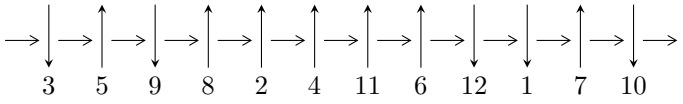
$12a_{0188}$ $(K12a_{0188})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -7.42605 \times 10^{1018} u^{118} - 1.10416 \times 10^{1019} u^{117} + \cdots + 2.49080 \times 10^{1022} b - 2.03299 \times 10^{1022}, \\ & 3.47903 \times 10^{1021} u^{118} + 6.79805 \times 10^{1021} u^{117} + \cdots + 6.61059 \times 10^{1024} a - 1.30130 \times 10^{1025}, \\ & u^{119} + 2u^{118} + \cdots + 8762u + 1327 \rangle \\ I_2^u = \langle & u^8 - 2u^6 + 2u^4 + u^3 + b - u + 1,\ a,\ u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 128 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. $\boldsymbol{I_1^u = \langle -7.43 \times 10^{1018} u^{118} - 1.10 \times 10^{1019} u^{117} + \cdots + 2.49 \times 10^{1022} b - 2.03 \times 10^{1022},\ 3.48 \times 10^{1021} u^{118} + 6.80 \times 10^{1021} u^{117} + \cdots + 6.61 \times 10^{1024} a - 1.30 \times 10^{1025},\ u^{119} + 2u^{118} + \cdots + 8762u + 1327 \rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -0.000526281u^{118} - 0.00102836u^{117} + \cdots - 12.9920u + 1.96851 \\ 0.000298139u^{118} + 0.000443295u^{117} + \cdots + 2.48668u + 0.816199 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.00204675u^{118} - 0.00374735u^{117} + \cdots - 44.8125u - 10.1681 \\ 0.000217932u^{118} + 0.000446866u^{117} + \cdots + 2.65443u + 1.01512 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.00340766u^{118} - 0.00621070u^{117} + \cdots - 43.0873u - 17.5112 \\ -0.0000110966u^{118} - 0.0000853887u^{117} + \cdots + 0.224165u + 0.246586 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.00226468u^{118} - 0.00419422u^{117} + \cdots - 47.4669u - 11.1832 \\ 0.000217932u^{118} + 0.000446866u^{117} + \cdots + 2.65443u + 1.01512 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.000279013u^{118} + 0.000673242u^{117} + \cdots - 23.4449u + 9.53210 \\ 0.000478417u^{118} + 0.000913280u^{117} + \cdots + 4.42620u + 2.18078 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.000991558u^{118} + 0.00190829u^{117} + \cdots + 2.65205u + 5.62220 \\ 0.000451996u^{118} + 0.000840247u^{117} + \cdots + 8.82580u + 1.76896 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.00208611u^{118} - 0.00412377u^{117} + \cdots - 34.1619u - 20.6382 \\ -0.000442936u^{118} - 0.000823798u^{117} + \cdots - 10.8522u - 2.78052 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.00157316u^{118} - 0.00308242u^{117} + \cdots - 25.6536u - 17.7935 \\ -0.000473190u^{118} - 0.000917918u^{117} + \cdots - 10.0361u - 2.76001 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.00406489u^{118} - 0.00755589u^{117} + \cdots - 73.4388u - 20.9068 \\ -0.000730125u^{118} - 0.00137620u^{117} + \cdots - 12.0660u - 1.83313 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.00267969u^{118} + 0.00463437u^{117} + \cdots + 47.3827u + 19.3117$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{119} + 48u^{118} + \cdots - 10u - 1$
c_2, c_5	$u^{119} + 2u^{118} + \cdots - 10u - 1$
c_3	$u^{119} - 6u^{118} + \cdots - 3844u - 1441$
c_4	$u^{119} - 2u^{118} + \cdots + 8762u - 1327$
c_6	$u^{119} + 12u^{118} + \cdots - 2u - 1$
c_7, c_{11}	$u^{119} - u^{118} + \cdots + 4096u - 512$
c_8	$u^{119} + 10u^{118} + \cdots - 2u - 1$
c_9, c_{10}, c_{12}	$u^{119} - 10u^{118} + \cdots + 14u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{119} + 48y^{118} + \cdots - 1922y - 1$
c_2, c_5	$y^{119} + 48y^{118} + \cdots - 10y - 1$
c_3	$y^{119} - 108y^{118} + \cdots - 880963674y - 2076481$
c_4	$y^{119} - 132y^{118} + \cdots + 73112778y - 1760929$
c_6	$y^{119} + 100y^{117} + \cdots - 10y - 1$
c_7, c_{11}	$y^{119} + 57y^{118} + \cdots - 1572864y - 262144$
c_8	$y^{119} - 12y^{118} + \cdots + 10y - 1$
c_9, c_{10}, c_{12}	$y^{119} - 108y^{118} + \cdots - 162y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.081525+0.998574I$ $a=-1.41965+0.28773I$ $b=-1.59460-0.55588I$	$-13.32730+0.47174I$	0
$u=-0.081525-0.998574I$ $a=-1.41965-0.28773I$ $b=-1.59460+0.55588I$	$-13.32730-0.47174I$	0
$u=-0.970650+0.184323I$ $a=\ \ 0.271720+1.164900I$ $b=\ \ 0.118861+0.924692I$	$-1.80179+3.47511I$	0
$u=-0.970650-0.184323I$ $a=\ \ 0.271720-1.164900I$ $b=\ \ 0.118861-0.924692I$	$-1.80179-3.47511I$	0
$u=-0.910650+0.368955I$ $a=\ \ 0.869458+0.182486I$ $b=\ \ 0.1018280-0.0457066I$	$3.48096-0.06555I$	0
$u=-0.910650-0.368955I$ $a=\ \ 0.869458-0.182486I$ $b=\ \ 0.1018280+0.0457066I$	$3.48096+0.06555I$	0
$u=\ \ 0.704399+0.664447I$ $a=\ \ 0.226012-0.547602I$ $b=-0.360213-0.109997I$	$-1.94863+2.48320I$	0
$u=\ \ 0.704399-0.664447I$ $a=\ \ 0.226012+0.547602I$ $b=-0.360213+0.109997I$	$-1.94863-2.48320I$	0
$u=-0.433604+0.853701I$ $a=\ \ 1.036840-0.408640I$ $b=\ \ 1.89884+0.99868I$	$-5.55472-1.58319I$	0
$u=-0.433604-0.853701I$ $a=\ \ 1.036840+0.408640I$ $b=\ \ 1.89884-0.99868I$	$-5.55472+1.58319I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.931340 + 0.171300I$ $a = -0.818031 - 1.114670I$ $b = -0.761271 - 0.977888I$	$-4.83003 + 9.97536I$	0
$u = 0.931340 - 0.171300I$ $a = -0.818031 + 1.114670I$ $b = -0.761271 + 0.977888I$	$-4.83003 - 9.97536I$	0
$u = 0.518141 + 0.954046I$ $a = -0.262584 + 1.029370I$ $b = 0.359089 + 0.250456I$	$-6.98001 + 4.13299I$	0
$u = 0.518141 - 0.954046I$ $a = -0.262584 - 1.029370I$ $b = 0.359089 - 0.250456I$	$-6.98001 - 4.13299I$	0
$u = 0.291778 + 0.865633I$ $a = 0.064896 + 0.287778I$ $b = -0.293621 - 1.142710I$	$0.59145 - 2.37148I$	0
$u = 0.291778 - 0.865633I$ $a = 0.064896 - 0.287778I$ $b = -0.293621 + 1.142710I$	$0.59145 + 2.37148I$	0
$u = 0.523885 + 0.730221I$ $a = -0.611989 - 0.224963I$ $b = -2.12194 - 0.87948I$	$-1.23906 + 2.78377I$	0
$u = 0.523885 - 0.730221I$ $a = -0.611989 + 0.224963I$ $b = -2.12194 + 0.87948I$	$-1.23906 - 2.78377I$	0
$u = 0.724182 + 0.506626I$ $a = -1.127460 + 0.362906I$ $b = -0.0086126 - 0.1190020I$	$2.82823 + 5.08911I$	0
$u = 0.724182 - 0.506626I$ $a = -1.127460 - 0.362906I$ $b = -0.0086126 + 0.1190020I$	$2.82823 - 5.08911I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.502056 + 0.713507I$ $a = -1.39012 - 0.71219I$ $b = -0.967306 + 0.461819I$	$-1.69763 + 1.29769I$	0
$u = 0.502056 - 0.713507I$ $a = -1.39012 + 0.71219I$ $b = -0.967306 - 0.461819I$	$-1.69763 - 1.29769I$	0
$u = -0.745569 + 0.426426I$ $a = 0.694020 + 0.823774I$ $b = 2.13911 - 0.28284I$	$-2.17047 - 4.66203I$	0
$u = -0.745569 - 0.426426I$ $a = 0.694020 - 0.823774I$ $b = 2.13911 + 0.28284I$	$-2.17047 + 4.66203I$	0
$u = 0.740896 + 0.427649I$ $a = 1.58637 + 0.79586I$ $b = 1.146940 - 0.360044I$	$-5.78573 + 11.06080I$	0
$u = 0.740896 - 0.427649I$ $a = 1.58637 - 0.79586I$ $b = 1.146940 + 0.360044I$	$-5.78573 - 11.06080I$	0
$u = -0.829751 + 0.136679I$ $a = -0.483041 - 0.984009I$ $b = -0.273688 - 0.903224I$	$2.95353 + 0.44405I$	0
$u = -0.829751 - 0.136679I$ $a = -0.483041 + 0.984009I$ $b = -0.273688 + 0.903224I$	$2.95353 - 0.44405I$	0
$u = 0.787526 + 0.854331I$ $a = -0.392445 - 0.361964I$ $b = -1.80353 + 0.05459I$	$-1.25021 + 2.82984I$	0
$u = 0.787526 - 0.854331I$ $a = -0.392445 + 0.361964I$ $b = -1.80353 - 0.05459I$	$-1.25021 - 2.82984I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.617088+0.990171I$ $a=-0.997532+0.173407I$ $b=-2.21128-0.72234I$	$-4.33720-6.36777I$	0
$u=-0.617088-0.990171I$ $a=-0.997532-0.173407I$ $b=-2.21128+0.72234I$	$-4.33720+6.36777I$	0
$u=0.594816+1.013270I$ $a=1.054630+0.553578I$ $b=1.59441-0.55796I$	$-8.87900+3.08041I$	0
$u=0.594816-1.013270I$ $a=1.054630-0.553578I$ $b=1.59441+0.55796I$	$-8.87900-3.08041I$	0
$u=0.757632+0.275547I$ $a=0.963052+0.883677I$ $b=0.94899+1.06285I$	$0.50738+6.41058I$	0
$u=0.757632-0.275547I$ $a=0.963052-0.883677I$ $b=0.94899-1.06285I$	$0.50738-6.41058I$	0
$u=-0.236873+0.768309I$ $a=1.61254-0.81420I$ $b=0.833484+0.489209I$	$-2.46876-5.01134I$	0
$u=-0.236873-0.768309I$ $a=1.61254+0.81420I$ $b=0.833484-0.489209I$	$-2.46876+5.01134I$	0
$u=0.798401+0.033833I$ $a=-0.685721-0.579893I$ $b=-2.47569+0.92651I$	$0.107706+0.619941I$	0
$u=0.798401-0.033833I$ $a=-0.685721+0.579893I$ $b=-2.47569-0.92651I$	$0.107706-0.619941I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.795147$ $a=\ \ 0.431976$ $b=\ \ 0.315267$	1.04484	10.3180
$u=-0.129379+0.766634I$ $a=-0.03485-1.95282I$ $b=-0.036462+0.168045I$	$-4.11769+1.69954I$	$-15.5018+0.I$
$u=-0.129379-0.766634I$ $a=-0.03485+1.95282I$ $b=-0.036462-0.168045I$	$-4.11769-1.69954I$	$-15.5018+0.I$
$u=\ \ 0.570836+0.500629I$ $a=-0.800374-0.918343I$ $b=-1.084630+0.861172I$	$-1.31680+1.56421I$	0
$u=\ \ 0.570836-0.500629I$ $a=-0.800374+0.918343I$ $b=-1.084630-0.861172I$	$-1.31680-1.56421I$	0
$u=\ \ 0.375955+0.638900I$ $a=\ \ 0.616240+1.141540I$ $b=\ \ 0.822308-0.452547I$	$0.04303-1.98692I$	$0.+4.49673I$
$u=\ \ 0.375955-0.638900I$ $a=\ \ 0.616240-1.141540I$ $b=\ \ 0.822308+0.452547I$	$0.04303+1.98692I$	$0.-4.49673I$
$u=\ \ 1.054010+0.697456I$ $a=\ \ 0.322664+0.886342I$ $b=\ \ 0.722677+0.463877I$	$-6.92350+1.57130I$	0
$u=\ \ 1.054010-0.697456I$ $a=\ \ 0.322664-0.886342I$ $b=\ \ 0.722677-0.463877I$	$-6.92350-1.57130I$	0
$u=\ \ 1.014670+0.830117I$ $a=-0.766257-0.441071I$ $b=-2.02808+0.97952I$	$0.08564+3.67293I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.014670 - 0.830117I$ $a = -0.766257 + 0.441071I$ $b = -2.02808 - 0.97952I$	$0.08564 - 3.67293I$	0
$u = -1.116610 + 0.688150I$ $a = -0.373991 - 0.625653I$ $b = -0.1133530 - 0.0550594I$	$4.34687 - 3.34050I$	0
$u = -1.116610 - 0.688150I$ $a = -0.373991 + 0.625653I$ $b = -0.1133530 + 0.0550594I$	$4.34687 + 3.34050I$	0
$u = -0.676280 + 1.140850I$ $a = 1.067190 - 0.086743I$ $b = 2.17392 + 0.53136I$	$-10.1820 - 10.3208I$	0
$u = -0.676280 - 1.140850I$ $a = 1.067190 + 0.086743I$ $b = 2.17392 - 0.53136I$	$-10.1820 + 10.3208I$	0
$u = 0.511226 + 0.390425I$ $a = -1.70638 - 0.87752I$ $b = -2.16463 + 0.33752I$	$-2.26487 + 7.17835I$	$4.62024 - 8.19598I$
$u = 0.511226 - 0.390425I$ $a = -1.70638 + 0.87752I$ $b = -2.16463 - 0.33752I$	$-2.26487 - 7.17835I$	$4.62024 + 8.19598I$
$u = 1.296190 + 0.410510I$ $a = 0.165584 + 0.450411I$ $b = -0.0681928 + 0.0242347I$	$1.45890 + 7.13045I$	0
$u = 1.296190 - 0.410510I$ $a = 0.165584 - 0.450411I$ $b = -0.0681928 - 0.0242347I$	$1.45890 - 7.13045I$	0
$u = 0.598724 + 0.193737I$ $a = 1.20330 + 1.00148I$ $b = 2.18553 - 0.49392I$	$2.70873 + 3.86349I$	$10.51829 - 7.88352I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.598724 - 0.193737I$ $a = 1.20330 - 1.00148I$ $b = 2.18553 + 0.49392I$	$2.70873 - 3.86349I$	$10.51829 + 7.88352I$
$u = -1.325130 + 0.391603I$ $a = -0.069220 + 0.506720I$ $b = 0.0222037 + 0.0793625I$	$2.16952 - 1.09292I$	0
$u = -1.325130 - 0.391603I$ $a = -0.069220 - 0.506720I$ $b = 0.0222037 - 0.0793625I$	$2.16952 + 1.09292I$	0
$u = 0.557060 + 0.245089I$ $a = -1.95713 - 1.42702I$ $b = -0.762500 + 0.329644I$	$-0.29654 + 5.98543I$	$-0.0311 - 14.6386I$
$u = 0.557060 - 0.245089I$ $a = -1.95713 + 1.42702I$ $b = -0.762500 - 0.329644I$	$-0.29654 - 5.98543I$	$-0.0311 + 14.6386I$
$u = 1.103720 + 0.847498I$ $a = 0.376493 - 0.597122I$ $b = 0.0712315 + 0.0826993I$	$2.91318 + 8.94395I$	0
$u = 1.103720 - 0.847498I$ $a = 0.376493 + 0.597122I$ $b = 0.0712315 - 0.0826993I$	$2.91318 - 8.94395I$	0
$u = -0.603058 + 0.015289I$ $a = 1.088510 + 0.710096I$ $b = 0.601039 + 1.237240I$	$-0.08315 - 2.49375I$	$7.75933 + 3.67875I$
$u = -0.603058 - 0.015289I$ $a = 1.088510 - 0.710096I$ $b = 0.601039 - 1.237240I$	$-0.08315 + 2.49375I$	$7.75933 - 3.67875I$
$u = -1.072730 + 0.905260I$ $a = 0.385966 + 0.803671I$ $b = 0.145591 + 0.084751I$	$-0.86473 - 6.53924I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.072730-0.905260I$ $a=\ 0.385966-0.803671I$ $b=\ 0.145591-0.084751I$	$-0.86473+6.53924I$	0
$u=\ 0.882941+1.103200I$ $a=-0.400091-0.764413I$ $b=-1.020920+0.649386I$	$-4.94221-5.12424I$	0
$u=\ 0.882941-1.103200I$ $a=-0.400091+0.764413I$ $b=-1.020920-0.649386I$	$-4.94221+5.12424I$	0
$u=-0.318663+0.484259I$ $a=-2.37762+0.02970I$ $b=-1.085800-0.168980I$	$-4.38510-6.20836I$	$0.22006+4.93300I$
$u=-0.318663-0.484259I$ $a=-2.37762-0.02970I$ $b=-1.085800+0.168980I$	$-4.38510+6.20836I$	$0.22006-4.93300I$
$u=-0.330925+0.466879I$ $a=-1.28779-0.89418I$ $b=-0.512426-0.110999I$	$-2.62882+0.46286I$	$-2.15164+0.44651I$
$u=-0.330925-0.466879I$ $a=-1.28779+0.89418I$ $b=-0.512426+0.110999I$	$-2.62882-0.46286I$	$-2.15164-0.44651I$
$u=\ 0.84400+1.19676I$ $a=\ 0.994191+0.229453I$ $b=\ 1.54118-0.33264I$	$-8.51063+5.18393I$	0
$u=\ 0.84400-1.19676I$ $a=\ 0.994191-0.229453I$ $b=\ 1.54118+0.33264I$	$-8.51063-5.18393I$	0
$u=\ 1.15226+0.92165I$ $a=\ 0.803741+0.336916I$ $b=\ 2.21004-0.75116I$	$2.23345+8.79850I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.15226 - 0.92165I$ $a = 0.803741 - 0.336916I$ $b = 2.21004 + 0.75116I$	$2.23345 - 8.79850I$	0
$u = -0.59957 + 1.37808I$ $a = -0.998240 + 0.354091I$ $b = -1.60534 - 0.54541I$	$-11.57620 - 7.68806I$	0
$u = -0.59957 - 1.37808I$ $a = -0.998240 - 0.354091I$ $b = -1.60534 + 0.54541I$	$-11.57620 + 7.68806I$	0
$u = -1.05545 + 1.08481I$ $a = 0.757720 - 0.368846I$ $b = 2.02465 + 0.94664I$	$-1.77422 - 9.13916I$	0
$u = -1.05545 - 1.08481I$ $a = 0.757720 + 0.368846I$ $b = 2.02465 - 0.94664I$	$-1.77422 + 9.13916I$	0
$u = -0.340103 + 0.282381I$ $a = -1.06544 - 3.17807I$ $b = -0.211295 - 0.068606I$	$-3.81372 - 3.40916I$	$-13.1889 + 9.5632I$
$u = -0.340103 - 0.282381I$ $a = -1.06544 + 3.17807I$ $b = -0.211295 + 0.068606I$	$-3.81372 + 3.40916I$	$-13.1889 - 9.5632I$
$u = 1.22430 + 1.02374I$ $a = -0.851388 - 0.295378I$ $b = -2.20754 + 0.59133I$	$-3.21741 + 13.29190I$	0
$u = 1.22430 - 1.02374I$ $a = -0.851388 + 0.295378I$ $b = -2.20754 - 0.59133I$	$-3.21741 - 13.29190I$	0
$u = -0.325900 + 0.217465I$ $a = -0.14200 - 2.00590I$ $b = -1.81687 + 0.09571I$	$1.44329 - 2.36124I$	$8.29903 + 4.18833I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.325900-0.217465I$ $a=-0.14200+2.00590I$ $b=-1.81687-0.09571I$	$1.44329+2.36124I$	$8.29903-4.18833I$
$u=1.15293+1.14161I$ $a=-0.317074+0.765092I$ $b=-0.105663-0.104933I$	$-2.84169+12.19540I$	0
$u=1.15293-1.14161I$ $a=-0.317074-0.765092I$ $b=-0.105663+0.104933I$	$-2.84169-12.19540I$	0
$u=-0.249672+0.209313I$ $a=3.07663-1.76750I$ $b=1.96638-0.09187I$	$-3.27191-0.12438I$	$1.90527-2.70040I$
$u=-0.249672-0.209313I$ $a=3.07663+1.76750I$ $b=1.96638+0.09187I$	$-3.27191+0.12438I$	$1.90527+2.70040I$
$u=-1.24988+1.12817I$ $a=-0.752006+0.280830I$ $b=-2.23877-0.75859I$	$0.2822-14.6365I$	0
$u=-1.24988-1.12817I$ $a=-0.752006-0.280830I$ $b=-2.23877+0.75859I$	$0.2822+14.6365I$	0
$u=0.124444+0.224899I$ $a=5.10009-0.80710I$ $b=0.417693+0.392036I$	$-3.34529+0.06544I$	$-11.29700+4.85801I$
$u=0.124444-0.224899I$ $a=5.10009+0.80710I$ $b=0.417693-0.392036I$	$-3.34529-0.06544I$	$-11.29700-4.85801I$
$u=-0.188157+0.086457I$ $a=5.51967-2.85856I$ $b=0.630832+0.163392I$	$0.52690-1.71924I$	$3.78431+7.93043I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.188157-0.086457I$ $a=\ \ 5.51967+2.85856I$ $b=\ \ 0.630832-0.163392I$	$0.52690+1.71924I$	$3.78431-7.93043I$
$u=-1.37274+1.21265I$ $a=\ \ 0.777638-0.240188I$ $b=\ \ 2.25489+0.59451I$	$-5.3195-19.3518I$	0
$u=-1.37274-1.21265I$ $a=\ \ 0.777638+0.240188I$ $b=\ \ 2.25489-0.59451I$	$-5.3195+19.3518I$	0
$u=-1.95924+0.85973I$ $a=-0.310014-0.040033I$ $b=-3.74304+0.55704I$	$-2.33120-1.65341I$	0
$u=-1.95924-0.85973I$ $a=-0.310014+0.040033I$ $b=-3.74304-0.55704I$	$-2.33120+1.65341I$	0
$u=-2.35812+0.35439I$ $a=\ \ 0.137818-0.327216I$ $b=\ \ 1.11173+2.05083I$	$-0.797814+0.550209I$	0
$u=-2.35812-0.35439I$ $a=\ \ 0.137818+0.327216I$ $b=\ \ 1.11173-2.05083I$	$-0.797814-0.550209I$	0
$u=-2.57879+0.46049I$ $a=-0.057094-0.485866I$ $b=-0.12860+1.44691I$	$-6.68223+1.86961I$	0
$u=-2.57879-0.46049I$ $a=-0.057094+0.485866I$ $b=-0.12860-1.44691I$	$-6.68223-1.86961I$	0
$u=\ \ 2.64863+0.49723I$ $a=\ \ 0.242317+0.383051I$ $b=\ \ 1.59480-1.47606I$	$-5.11734+2.47956I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 2.64863 - 0.49723I$ $a = 0.242317 - 0.383051I$ $b = 1.59480 + 1.47606I$	$-5.11734 - 2.47956I$	0
$u = 2.70878 + 0.21669I$ $a = -0.130551 + 0.295921I$ $b = -1.55050 - 2.44303I$	$0.027445 + 0.372128I$	0
$u = 2.70878 - 0.21669I$ $a = -0.130551 - 0.295921I$ $b = -1.55050 + 2.44303I$	$0.027445 - 0.372128I$	0
$u = 3.15822 + 0.45727I$ $a = 0.259108 - 0.002744I$ $b = 4.26093 + 0.09967I$	$-2.55503 - 2.22852I$	0
$u = 3.15822 - 0.45727I$ $a = 0.259108 + 0.002744I$ $b = 4.26093 - 0.09967I$	$-2.55503 + 2.22852I$	0
$u = -3.38066 + 0.13306I$ $a = 0.106654 + 0.261156I$ $b = 1.51121 - 2.90197I$	$-0.25612 + 3.85842I$	0
$u = -3.38066 - 0.13306I$ $a = 0.106654 - 0.261156I$ $b = 1.51121 + 2.90197I$	$-0.25612 - 3.85842I$	0
$u = -3.39963 + 0.04174I$ $a = -0.145484 - 0.352374I$ $b = -1.21167 + 1.96806I$	$-5.71911 + 7.03575I$	0
$u = -3.39963 - 0.04174I$ $a = -0.145484 + 0.352374I$ $b = -1.21167 - 1.96806I$	$-5.71911 - 7.03575I$	0

II.

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

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 0 \\ -u^8+2u^6-2u^4-u^3+u-1 \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} 0 \\ -u^8+2u^6-2u^4-u^3+u-1 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} u^3 \\ -u^3+u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} u^6-u^4+1 \\ -u^6+2u^4-u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^8+3u^6-3u^4+1 \\ u^8-u^7-3u^6+2u^5+3u^4-2u^3-1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^3 \\ u^3-u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -5u^8+u^7+7u^6-6u^5-6u^4+7u^3-5u^2-7u+1$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.772920 + 0.510351I$ $a = 0$ $b = -0.225230 - 1.238240I$	$-3.42837 + 2.09337I$	$-4.41045 - 5.46639I$
$u = 0.772920 - 0.510351I$ $a = 0$ $b = -0.225230 + 1.238240I$	$-3.42837 - 2.09337I$	$-4.41045 + 5.46639I$
$u = -0.825933$ $a = 0$ $b = -1.77487$	-0.446489	-0.182090
$u = -1.173910 + 0.391555I$ $a = 0$ $b = -0.300113 - 0.434032I$	$2.72642 - 1.33617I$	$8.07941 + 3.55369I$
$u = -1.173910 - 0.391555I$ $a = 0$ $b = -0.300113 + 0.434032I$	$2.72642 + 1.33617I$	$8.07941 - 3.55369I$
$u = 0.141484 + 0.739668I$ $a = 0$ $b = -1.25758 + 1.97504I$	$-1.02799 - 2.45442I$	$-2.24638 - 6.63381I$
$u = 0.141484 - 0.739668I$ $a = 0$ $b = -1.25758 - 1.97504I$	$-1.02799 + 2.45442I$	$-2.24638 + 6.63381I$
$u = 1.172470 + 0.500383I$ $a = 0$ $b = 0.170352 - 0.451655I$	$1.95319 + 7.08493I$	$8.66846 - 5.33071I$
$u = 1.172470 - 0.500383I$ $a = 0$ $b = 0.170352 + 0.451655I$	$1.95319 - 7.08493I$	$8.66846 + 5.33071I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^{119}+48u^{118}+\cdots-10u-1)$
c_2	$(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot(u^{119}+2u^{118}+\cdots-10u-1)$
c_3	$(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^{119}-6u^{118}+\cdots-3844u-1441)$
c_4	$(u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1)$ $\cdot(u^{119}-2u^{118}+\cdots+8762u-1327)$
c_5	$(u^9+u^8+2u^7+u^6+3u^5+u^4+2u^3+u-1)$ $\cdot(u^{119}+2u^{118}+\cdots-10u-1)$
c_6	$(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{119}+12u^{118}+\cdots-2u-1)$
c_7, c_{11}	$u^9(u^{119}-u^{118}+\cdots+4096u-512)$
c_8	$(u^9-5u^8+12u^7-15u^6+9u^5+u^4-4u^3+2u^2+u-1)$ $\cdot(u^{119}+10u^{118}+\cdots-2u-1)$
c_9, c_{10}	$((u-1)^9)(u^{119}-10u^{118}+\cdots+14u-1)$
c_{12}	$((u+1)^9)(u^{119}-10u^{118}+\cdots+14u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot(y^{119}+48y^{118}+\cdots-1922y-1)$
c_2, c_5	$(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{119}+48y^{118}+\cdots-10y-1)$
c_3	$(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot(y^{119}-108y^{118}+\cdots-880963674y-2076481)$
c_4	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{119}-132y^{118}+\cdots+73112778y-1760929)$
c_6	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{119}+100y^{117}+\cdots-10y-1)$
c_7, c_{11}	$y^9(y^{119}+57y^{118}+\cdots-1572864y-262144)$
c_8	$(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(y^{119}-12y^{118}+\cdots+10y-1)$
c_9, c_{10}, c_{12}	$((y-1)^9)(y^{119}-108y^{118}+\cdots-162y-1)$