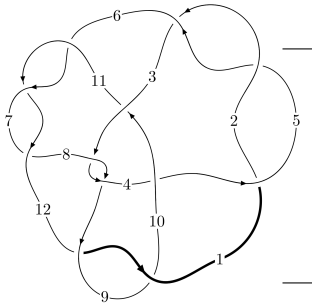
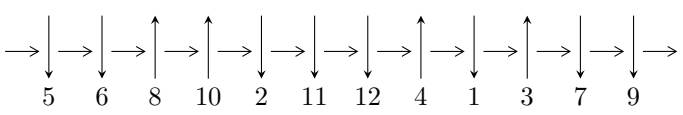
$12a_{1223}$ $(K12a_{1223})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 3.57598 \times 10^{170} u^{85} + 1.01646 \times 10^{170} u^{84} + \cdots + 2.31147 \times 10^{171} b - 4.59337 \times 10^{171},$$
$$8.19062 \times 10^{171} u^{85} + 1.94837 \times 10^{172} u^{84} + \cdots + 1.61803 \times 10^{172} a - 2.37902 \times 10^{173},\ u^{86} + 2u^{85} + \cdots - 43u$$
$$I_2^u = \langle u^7 - 4u^5 + u^4 + 4u^3 - 2u^2 + b + 1,$$
$$u^{15} - 9u^{13} + 2u^{12} + 31u^{11} - 14u^{10} - 48u^9 + 36u^8 + 26u^7 - 40u^6 + 8u^5 + 16u^4 - 8u^3 + a,$$
$$u^{18} - u^{17} + \cdots - u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 104 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. $\boldsymbol{I_1^u = \langle 3.58 \times 10^{170} u^{85} + 1.02 \times 10^{170} u^{84} + \cdots + 2.31 \times 10^{171} b - 4.59 \times 10^{171},\ 8.19 \times 10^{171} u^{85} + 1.95 \times 10^{172} u^{84} + \cdots + 1.62 \times 10^{172} a - 2.38 \times 10^{173},\ u^{86} + 2u^{85} + \cdots - 43u - 7 \rangle}$

(i) Arc colorings

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

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

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

$$a_{12} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.506210u^{85} - 1.20416u^{84} + \cdots + 19.3397u + 14.7032 \\ -0.154706u^{85} - 0.0439746u^{84} + \cdots + 0.0924782u + 1.98721 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} -0.660916u^{85} - 1.24814u^{84} + \cdots + 19.4322u + 16.6904 \\ -0.154706u^{85} - 0.0439746u^{84} + \cdots + 0.0924782u + 1.98721 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.0356140u^{85} + 0.948982u^{84} + \cdots - 85.0217u - 27.4994 \\ -1.04716u^{85} - 0.439822u^{84} + \cdots + 37.0962u + 3.37904 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 3.18148u^{85} + 2.79945u^{84} + \cdots - 96.9770u - 29.8437 \\ 2.86152u^{85} + 1.39695u^{84} + \cdots - 91.4443u - 18.0567 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.994047u^{85} - 1.13219u^{84} + \cdots + 98.6363u + 6.28721 \\ -0.776751u^{85} - 0.662827u^{84} + \cdots + 15.6810u + 7.57944 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.04225u^{85} - 1.40402u^{84} + \cdots + 33.9514u + 17.8765 \\ -0.397611u^{85} - 0.156340u^{84} + \cdots + 6.69560u + 3.09603 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 2.45518u^{85} + 1.64740u^{84} + \cdots - 104.010u - 27.7858 \\ 2.48561u^{85} + 1.37154u^{84} + \cdots - 43.7893u - 10.0526 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.959329u^{85} - 0.908484u^{84} + \cdots - 101.771u - 16.8438$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_5	$u^{86} + 6u^{85} + \cdots - 158u + 47$
c_3, c_8	$u^{86} - 24u^{84} + \cdots + 2u + 1$
c_4	$u^{86} - u^{85} + \cdots - 33283u + 13877$
c_6, c_7, c_{11}	$u^{86} - 2u^{85} + \cdots + 43u - 7$
c_9, c_{12}	$u^{86} - 2u^{85} + \cdots + 46u - 1$
c_{10}	$u^{86} + 3u^{85} + \cdots + 1643283u + 1221183$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$y^{86} - 100y^{85} + \cdots - 128552y + 2209$
c_3, c_8	$y^{86} - 48y^{85} + \cdots - 36y + 1$
c_4	$y^{86} + 33y^{85} + \cdots - 67871217y + 192571129$
c_6, c_7, c_{11}	$y^{86} - 92y^{85} + \cdots - 3039y + 49$
c_9, c_{12}	$y^{86} - 72y^{85} + \cdots - 8784y + 1$
c_{10}	$y^{86} + 45y^{85} + \cdots + 22828629889629y + 1491287919489$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.789217+0.531072I$ $a=-0.333546+1.319880I$ $b=\ 1.57228-0.20818I$	$-10.78230+6.15211I$	0
$u=-0.789217-0.531072I$ $a=-0.333546-1.319880I$ $b=\ 1.57228+0.20818I$	$-10.78230-6.15211I$	0
$u=\ 0.504496+0.785795I$ $a=-0.224964-1.153010I$ $b=\ 0.630992+0.646745I$	$-0.62218-8.31784I$	0
$u=\ 0.504496-0.785795I$ $a=-0.224964+1.153010I$ $b=\ 0.630992-0.646745I$	$-0.62218+8.31784I$	0
$u=\ 0.693135+0.815814I$ $a=-0.560371+0.113537I$ $b=\ 0.469055-0.386035I$	$-1.03113+2.97558I$	0
$u=\ 0.693135-0.815814I$ $a=-0.560371-0.113537I$ $b=\ 0.469055+0.386035I$	$-1.03113-2.97558I$	0
$u=-0.555192+0.689225I$ $a=\ 0.52969-1.71387I$ $b=-1.48386+0.12467I$	$-3.00766+5.60382I$	0
$u=-0.555192-0.689225I$ $a=\ 0.52969+1.71387I$ $b=-1.48386-0.12467I$	$-3.00766-5.60382I$	0
$u=\ 0.796633+0.316728I$ $a=\ 1.116010-0.334984I$ $b=\ 0.528452+0.300147I$	$-1.225560+0.382406I$	0
$u=\ 0.796633-0.316728I$ $a=\ 1.116010+0.334984I$ $b=\ 0.528452-0.300147I$	$-1.225560-0.382406I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.555636+0.644693I$ $a=\ \ 0.736530-0.444696I$ $b=-1.44874-0.02658I$	$-2.96973-0.99166I$	0
$u=-0.555636-0.644693I$ $a=\ \ 0.736530+0.444696I$ $b=-1.44874+0.02658I$	$-2.96973+0.99166I$	0
$u=-0.213002+1.133890I$ $a=-0.989144+0.204843I$ $b=\ \ 1.53849+0.08270I$	$-8.25387-0.91603I$	0
$u=-0.213002-1.133890I$ $a=-0.989144-0.204843I$ $b=\ \ 1.53849-0.08270I$	$-8.25387+0.91603I$	0
$u=\ \ 0.666006+0.942281I$ $a=\ \ 0.480118+1.083050I$ $b=-1.56944-0.19659I$	$-7.92614-11.41240I$	0
$u=\ \ 0.666006-0.942281I$ $a=\ \ 0.480118-1.083050I$ $b=-1.56944+0.19659I$	$-7.92614+11.41240I$	0
$u=-1.17555$ $a=\ \ 1.35986$ $b=\ \ 1.06692$	0.921670	0
$u=-0.152567+0.809303I$ $a=\ \ 1.006560+0.126524I$ $b=-0.479008-0.309869I$	$-1.40654+0.45091I$	0
$u=-0.152567-0.809303I$ $a=\ \ 1.006560-0.126524I$ $b=-0.479008+0.309869I$	$-1.40654-0.45091I$	0
$u=\ \ 0.794490+0.120729I$ $a=-1.35076+1.02036I$ $b=-1.49966+0.07263I$	$-7.85799+0.61029I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.794490 - 0.120729I$ $a = -1.35076 - 1.02036I$ $b = -1.49966 - 0.07263I$	$-7.85799 - 0.61029I$	0
$u = 0.455465 + 0.649631I$ $a = -1.08140 - 1.18633I$ $b = 1.48458 + 0.06927I$	$-6.18326 - 2.15194I$	0
$u = 0.455465 - 0.649631I$ $a = -1.08140 + 1.18633I$ $b = 1.48458 - 0.06927I$	$-6.18326 + 2.15194I$	0
$u = -0.447792 + 0.591674I$ $a = 0.03198 + 1.54449I$ $b = 0.422429 - 0.502306I$	$3.23618 + 3.43219I$	$0. - 7.59193I$
$u = -0.447792 - 0.591674I$ $a = 0.03198 - 1.54449I$ $b = 0.422429 + 0.502306I$	$3.23618 - 3.43219I$	$0. + 7.59193I$
$u = 0.728943$ $a = 0.704489$ $b = 0.348138$	-1.42668	-5.68360
$u = 0.732516 + 1.109930I$ $a = 0.518848 + 0.350147I$ $b = -1.53688 + 0.10163I$	$-7.82387 + 4.66675I$	0
$u = 0.732516 - 1.109930I$ $a = 0.518848 - 0.350147I$ $b = -1.53688 - 0.10163I$	$-7.82387 - 4.66675I$	0
$u = -0.639962$ $a = -1.66888$ $b = 0.425683$	3.24162	7.90500
$u = -0.448279 + 0.438995I$ $a = -0.814157 - 0.936435I$ $b = 0.463919 + 0.389009I$	$3.01283 + 0.20437I$	$1.047842 + 0.913639I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.448279-0.438995I$ $a=-0.814157+0.936435I$ $b=\ \ 0.463919-0.389009I$	$3.01283-0.20437I$	$1.047842-0.913639I$
$u=\ \ 0.301148+0.545313I$ $a=\ \ 0.049969+1.231930I$ $b=\ \ 0.351841-0.788610I$	$0.23561-3.61201I$	$-3.68648+6.73668I$
$u=\ \ 0.301148-0.545313I$ $a=\ \ 0.049969-1.231930I$ $b=\ \ 0.351841+0.788610I$	$0.23561+3.61201I$	$-3.68648-6.73668I$
$u=-1.378730+0.010185I$ $a=-0.225333-0.989484I$ $b=-0.532361+0.659791I$	$-5.07390+2.06341I$	0
$u=-1.378730-0.010185I$ $a=-0.225333+0.989484I$ $b=-0.532361-0.659791I$	$-5.07390-2.06341I$	0
$u=-0.550593+0.279146I$ $a=\ \ 0.050258-1.209990I$ $b=-0.657179+0.743375I$	$-3.42725+2.76216I$	$-11.9294-7.8140I$
$u=-0.550593-0.279146I$ $a=\ \ 0.050258+1.209990I$ $b=-0.657179-0.743375I$	$-3.42725-2.76216I$	$-11.9294+7.8140I$
$u=-1.378290+0.151019I$ $a=-0.051213-0.853728I$ $b=-0.555720+0.673304I$	$-5.10950+2.50442I$	0
$u=-1.378290-0.151019I$ $a=-0.051213+0.853728I$ $b=-0.555720-0.673304I$	$-5.10950-2.50442I$	0
$u=-1.42209+0.12454I$ $a=\ \ 0.33476+1.43001I$ $b=\ \ 1.53896-0.19132I$	$-11.92440+5.10845I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.42209-0.12454I$ $a=\ \ 0.33476-1.43001I$ $b=\ \ 1.53896+0.19132I$	$-11.92440-5.10845I$	0
$u=\ \ 1.43671+0.10420I$ $a=-0.841755-1.016560I$ $b=-0.489916+0.093972I$	$-6.58825-4.01957I$	0
$u=\ \ 1.43671-0.10420I$ $a=-0.841755+1.016560I$ $b=-0.489916-0.093972I$	$-6.58825+4.01957I$	0
$u=-0.550897$ $a=-0.646774$ $b=-1.15486$	-2.44460	4.14310
$u=\ \ 1.44643+0.10189I$ $a=-0.039747+0.577367I$ $b=\ \ 0.474440-0.652725I$	$-2.94499-2.06223I$	0
$u=\ \ 1.44643-0.10189I$ $a=-0.039747-0.577367I$ $b=\ \ 0.474440+0.652725I$	$-2.94499+2.06223I$	0
$u=-1.44932+0.15031I$ $a=-0.055491-0.603649I$ $b=\ \ 0.262382+1.153010I$	$-5.46589+6.01776I$	0
$u=-1.44932-0.15031I$ $a=-0.055491+0.603649I$ $b=\ \ 0.262382-1.153010I$	$-5.46589-6.01776I$	0
$u=\ \ 1.47482+0.01278I$ $a=\ \ 1.39413-1.35914I$ $b=\ \ 1.55105+0.02316I$	$-13.62500+3.61708I$	0
$u=\ \ 1.47482-0.01278I$ $a=\ \ 1.39413+1.35914I$ $b=\ \ 1.55105-0.02316I$	$-13.62500-3.61708I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.48243+0.00101I$ $a=-0.547223+0.505995I$ $b=-1.84865-0.43880I$	$-12.06140-1.11145I$	0
$u=-1.48243-0.00101I$ $a=-0.547223-0.505995I$ $b=-1.84865+0.43880I$	$-12.06140+1.11145I$	0
$u=\ \ 1.49657+0.10349I$ $a=-0.577335+0.591255I$ $b=-1.58583-0.20548I$	$-9.77886-1.28438I$	0
$u=\ \ 1.49657-0.10349I$ $a=-0.577335-0.591255I$ $b=-1.58583+0.20548I$	$-9.77886+1.28438I$	0
$u=\ \ 1.50078+0.07624I$ $a=-0.287601+0.644186I$ $b=-0.938000-1.046720I$	$-10.10640-4.04965I$	0
$u=\ \ 1.50078-0.07624I$ $a=-0.287601-0.644186I$ $b=-0.938000+1.046720I$	$-10.10640+4.04965I$	0
$u=\ \ 1.49571+0.18966I$ $a=\ \ 0.442239-0.965539I$ $b=\ \ 0.528911+0.591680I$	$-3.13918-6.25627I$	0
$u=\ \ 1.49571-0.18966I$ $a=\ \ 0.442239+0.965539I$ $b=\ \ 0.528911-0.591680I$	$-3.13918+6.25627I$	0
$u=-1.47770+0.31519I$ $a=\ \ 0.241795+1.031910I$ $b=\ \ 1.55911-0.19231I$	$-12.16490+5.62093I$	0
$u=-1.47770-0.31519I$ $a=\ \ 0.241795-1.031910I$ $b=\ \ 1.55911+0.19231I$	$-12.16490-5.62093I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.48644 + 0.31043I$ $a = 0.194147 + 0.776740I$ $b = -0.565736 - 0.086897I$	$-6.86869 - 4.70358I$	0
$u = 1.48644 - 0.31043I$ $a = 0.194147 - 0.776740I$ $b = -0.565736 + 0.086897I$	$-6.86869 + 4.70358I$	0
$u = -1.51990 + 0.26159I$ $a = 0.360201 + 0.874167I$ $b = 0.806729 - 0.781995I$	$-7.21157 + 12.10600I$	0
$u = -1.51990 - 0.26159I$ $a = 0.360201 - 0.874167I$ $b = 0.806729 + 0.781995I$	$-7.21157 - 12.10600I$	0
$u = 1.55340 + 0.22517I$ $a = -0.70812 + 1.46505I$ $b = -1.53653 - 0.16703I$	$-9.98549 - 8.95683I$	0
$u = 1.55340 - 0.22517I$ $a = -0.70812 - 1.46505I$ $b = -1.53653 + 0.16703I$	$-9.98549 + 8.95683I$	0
$u = 1.59072 + 0.16952I$ $a = 0.556696 - 0.964732I$ $b = 1.67598 + 0.27758I$	$-18.6620 - 8.8164I$	0
$u = 1.59072 - 0.16952I$ $a = 0.556696 + 0.964732I$ $b = 1.67598 - 0.27758I$	$-18.6620 + 8.8164I$	0
$u = 0.231835 + 0.323647I$ $a = 0.69062 + 1.23900I$ $b = -0.301055 - 0.322396I$	$-0.206463 - 0.876909I$	$-4.71593 + 7.65224I$
$u = 0.231835 - 0.323647I$ $a = 0.69062 - 1.23900I$ $b = -0.301055 + 0.322396I$	$-0.206463 + 0.876909I$	$-4.71593 - 7.65224I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.60372+0.06660I$ $a=\ 0.307257+0.415115I$ $b=\ 0.536103-0.041755I$	$-9.65329+0.15213I$	0
$u=-1.60372-0.06660I$ $a=\ 0.307257-0.415115I$ $b=\ 0.536103+0.041755I$	$-9.65329-0.15213I$	0
$u=-1.63067$ $a=\ 0.612409$ $b=\ 0.508496$	-9.66712	0
$u=-1.60323+0.30921I$ $a=-0.502737-1.166510I$ $b=-1.63933+0.24572I$	$-15.3320+16.0041I$	0
$u=-1.60323-0.30921I$ $a=-0.502737+1.166510I$ $b=-1.63933-0.24572I$	$-15.3320-16.0041I$	0
$u=\ 1.60103+0.45329I$ $a=\ 0.161139-0.880209I$ $b=\ 1.56979+0.01972I$	$-14.2347-5.0655I$	0
$u=\ 1.60103-0.45329I$ $a=\ 0.161139+0.880209I$ $b=\ 1.56979-0.01972I$	$-14.2347+5.0655I$	0
$u=-1.67558$ $a=-1.40435$ $b=-1.55197$	-16.7542	0
$u=-0.140424+0.272759I$ $a=-3.81925-0.22914I$ $b=-0.428162+0.296323I$	$-1.27530+2.62216I$	$-8.64557-11.14295I$
$u=-0.140424-0.272759I$ $a=-3.81925+0.22914I$ $b=-0.428162-0.296323I$	$-1.27530-2.62216I$	$-8.64557+11.14295I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.70594+0.15407I$ $a=-0.733525-0.538845I$ $b=-1.56345+0.01074I$	$-16.9023+0.3370I$	0
$u=-1.70594-0.15407I$ $a=-0.733525+0.538845I$ $b=-1.56345-0.01074I$	$-16.9023-0.3370I$	0
$u=0.274418+0.016499I$ $a=0.11655+2.14778I$ $b=-1.64428-0.30370I$	$-6.03987-1.09293I$	$-21.9287+6.9762I$
$u=0.274418-0.016499I$ $a=0.11655-2.14778I$ $b=-1.64428+0.30370I$	$-6.03987+1.09293I$	$-21.9287-6.9762I$
$u=-0.186864+0.089463I$ $a=0.37438+9.46767I$ $b=1.51710+0.07808I$	$-7.83183-3.89836I$	$-12.6530+7.2106I$
$u=-0.186864-0.089463I$ $a=0.37438-9.46767I$ $b=1.51710-0.07808I$	$-7.83183+3.89836I$	$-12.6530-7.2106I$

II. $I_2^u =$
$\langle u^7-4u^5+u^4+4u^3-2u^2+b+1,\ u^{15}-9u^{13}+\cdots-8u^3+a,\ u^{18}-u^{17}+\cdots-u+1\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u \\ -u^3+u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{15}+9u^{13}+\cdots-16u^4+8u^3 \\ -u^7+4u^5-u^4-4u^3+2u^2-1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^2+1 \\ -u^4+2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{15}+9u^{13}+\cdots+2u^2-1 \\ -u^7+4u^5-u^4-4u^3+2u^2-1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{14}+8u^{12}+\cdots-2u+1 \\ -u^{14}+8u^{12}+\cdots+4u^2-1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^{17}-10u^{15}+\cdots+3u-2 \\ u^{17}-10u^{15}+\cdots-6u^2+u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^7+4u^5-u^4-4u^3+2u^2 \\ -u^9+5u^7-u^6-7u^5+3u^4+u^3-2u^2+2u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{15}-u^{14}+\cdots-22u^4+4u^2 \\ -u^{16}+9u^{14}+\cdots+2u^2-1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{16}-9u^{14}+\cdots-3u+1 \\ u^{16}-9u^{14}+\cdots+u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^{17}-12u^{15}+59u^{13}-7u^{12}-149u^{11}+53u^{10}+187u^9-146u^8-72u^7+168u^6-52u^5-57u^4+33u^3-14u^2-3u-10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$u^{18} - u^{17} + \cdots + 4u - 1$
c_3	$u^{18} + u^{17} + \cdots + 4u - 1$
c_4	$u^{18} + 2u^{16} + \cdots + 5u + 1$
c_5	$u^{18} + u^{17} + \cdots - 4u - 1$
c_6, c_7	$u^{18} - u^{17} + \cdots - u + 1$
c_8	$u^{18} - u^{17} + \cdots - 4u - 1$
c_9	$u^{18} + 3u^{17} + \cdots + 8u + 1$
c_{10}	$u^{18} + 2u^{16} + \cdots - 3u + 1$
c_{11}	$u^{18} + u^{17} + \cdots + u + 1$
c_{12}	$u^{18} - 3u^{17} + \cdots - 8u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$y^{18} - 25y^{17} + \cdots - 6y + 1$
c_3, c_8	$y^{18} - 17y^{17} + \cdots - 30y + 1$
c_4	$y^{18} + 4y^{17} + \cdots - 11y + 1$
c_6, c_7, c_{11}	$y^{18} - 21y^{17} + \cdots + 3y + 1$
c_9, c_{12}	$y^{18} - 21y^{17} + \cdots - 126y + 1$
c_{10}	$y^{18} + 4y^{17} + \cdots - 17y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.04652$ $a=\ \ 1.35774$ $b=\ \ 0.929235$	1.68470	-2.89640
$u=\ \ 0.421317+0.719343I$ $a=-0.88354-1.48981I$ $b=\ \ 1.49998-0.07412I$	$-7.24260+3.06692I$	$-6.84701-0.28152I$
$u=\ \ 0.421317-0.719343I$ $a=-0.88354+1.48981I$ $b=\ \ 1.49998+0.07412I$	$-7.24260-3.06692I$	$-6.84701+0.28152I$
$u=\ \ 0.736639$ $a=-0.280998$ $b=-1.05817$	-2.80594	-18.8820
$u=-0.710637$ $a=-1.48023$ $b=\ \ 0.557070$	2.91571	-17.3300
$u=\ \ 0.335739+0.515313I$ $a=\ \ 0.362599+1.098660I$ $b=-0.228311+0.286762I$	$-1.19486+1.88580I$	$-7.38603-0.40266I$
$u=\ \ 0.335739-0.515313I$ $a=\ \ 0.362599-1.098660I$ $b=-0.228311-0.286762I$	$-1.19486-1.88580I$	$-7.38603+0.40266I$
$u=\ \ 1.41202+0.17279I$ $a=\ \ 0.303163+0.821591I$ $b=-0.090569-0.602651I$	$-5.33102-4.37921I$	$-7.08751+4.02776I$
$u=\ \ 1.41202-0.17279I$ $a=\ \ 0.303163-0.821591I$ $b=-0.090569+0.602651I$	$-5.33102+4.37921I$	$-7.08751-4.02776I$
$u=\ \ 1.41693+0.30832I$ $a=-0.098754-1.309610I$ $b=\ \ 1.49607+0.15929I$	$-11.01080-6.88296I$	$-10.04016+5.97512I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.41693 - 0.30832I$ $a = -0.098754 + 1.309610I$ $b = \quad 1.49607 - 0.15929I$	$-11.01080 + 6.88296I$	$-10.04016 - 5.97512I$
$u = -1.46458 + 0.10051I$ $a = -0.235538 - 0.626928I$ $b = -1.46470 + 0.46646I$	$-10.68550 + 2.64083I$	$-13.65203 - 2.66841I$
$u = -1.46458 - 0.10051I$ $a = -0.235538 + 0.626928I$ $b = -1.46470 - 0.46646I$	$-10.68550 - 2.64083I$	$-13.65203 + 2.66841I$
$u = \quad 1.50471$ $a = -0.745312$ $b = -1.83585$	-12.2233	-14.9920
$u = -0.161184 + 0.384390I$ $a = \quad 0.814554 - 0.868946I$ $b = -1.55890 - 0.19298I$	$-5.66306 - 0.87639I$	$-4.20175 - 2.57088I$
$u = -0.161184 - 0.384390I$ $a = \quad 0.814554 + 0.868946I$ $b = -1.55890 + 0.19298I$	$-5.66306 + 0.87639I$	$-4.20175 + 2.57088I$
$u = -1.66215$ $a = -0.582630$ $b = -0.435772$	-9.48097	16.0990
$u = -1.74253$ $a = \quad 1.20647$ $b = \quad 1.53636$	-16.2697	-2.56890

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u^{18}-u^{17}+\cdots+4u-1)(u^{86}+6u^{85}+\cdots-158u+47)$
c_3	$(u^{18}+u^{17}+\cdots+4u-1)(u^{86}-24u^{84}+\cdots+2u+1)$
c_4	$(u^{18}+2u^{16}+\cdots+5u+1)(u^{86}-u^{85}+\cdots-33283u+13877)$
c_5	$(u^{18}+u^{17}+\cdots-4u-1)(u^{86}+6u^{85}+\cdots-158u+47)$
c_6, c_7	$(u^{18}-u^{17}+\cdots-u+1)(u^{86}-2u^{85}+\cdots+43u-7)$
c_8	$(u^{18}-u^{17}+\cdots-4u-1)(u^{86}-24u^{84}+\cdots+2u+1)$
c_9	$(u^{18}+3u^{17}+\cdots+8u+1)(u^{86}-2u^{85}+\cdots+46u-1)$
c_{10}	$(u^{18}+2u^{16}+\cdots-3u+1)(u^{86}+3u^{85}+\cdots+1643283u+1221183)$
c_{11}	$(u^{18}+u^{17}+\cdots+u+1)(u^{86}-2u^{85}+\cdots+43u-7)$
c_{12}	$(u^{18}-3u^{17}+\cdots-8u+1)(u^{86}-2u^{85}+\cdots+46u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y^{18} - 25y^{17} + \cdots - 6y + 1)(y^{86} - 100y^{85} + \cdots - 128552y + 2209)$
c_3, c_8	$(y^{18} - 17y^{17} + \cdots - 30y + 1)(y^{86} - 48y^{85} + \cdots - 36y + 1)$
c_4	$(y^{18} + 4y^{17} + \cdots - 11y + 1)$ $\cdot (y^{86} + 33y^{85} + \cdots - 67871217y + 192571129)$
c_6, c_7, c_{11}	$(y^{18} - 21y^{17} + \cdots + 3y + 1)(y^{86} - 92y^{85} + \cdots - 3039y + 49)$
c_9, c_{12}	$(y^{18} - 21y^{17} + \cdots - 126y + 1)(y^{86} - 72y^{85} + \cdots - 8784y + 1)$
c_{10}	$(y^{18} + 4y^{17} + \cdots - 17y + 1)$ $\cdot (y^{86} + 45y^{85} + \cdots + 22828629889629y + 1491287919489)$