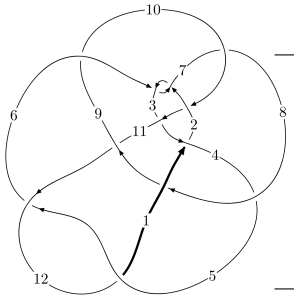
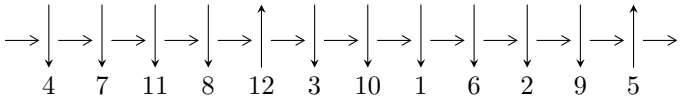
$12a_{1098}$ $(K12a_{1098})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.26039 \times 10^{1096} u^{194} - 5.54845 \times 10^{1096} u^{193} + \cdots + 8.23984 \times 10^{1095} b + 9.42064 \times 10^{1099}, \\ & 2.37059 \times 10^{1099} u^{194} - 6.13693 \times 10^{1099} u^{193} + \cdots + 4.63779 \times 10^{1099} a - 5.55624 \times 10^{1103}, \\ & u^{195} - 4u^{194} + \cdots + 113416u - 11257 \rangle \\ I_2^u = \langle & 1.09077 \times 10^{50} u^{48} - 2.47702 \times 10^{51} u^{47} + \cdots + 9.36422 \times 10^{50} b + 5.62660 \times 10^{51}, \\ & - 2.12833 \times 10^{51} u^{48} + 2.10958 \times 10^{51} u^{47} + \cdots + 2.34105 \times 10^{51} a - 1.43194 \times 10^{51}, \ u^{49} - u^{48} + \cdots + u - 1 \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 244 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. $\boldsymbol{I_1^u = \langle 1.26 \times 10^{1096} u^{194} - 5.55 \times 10^{1096} u^{193} + \cdots + 8.24 \times 10^{1095} b + 9.42 \times 10^{1099},\ 2.37 \times 10^{1099} u^{194} - 6.14 \times 10^{1099} u^{193} + \cdots + 4.64 \times 10^{1099} a - 5.56 \times 10^{1103},\ u^{195} - 4u^{194} + \cdots + 113416u - 11257 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.511146u^{194} + 1.32324u^{193} + \cdots - 111315.u + 11980.3 \\ -1.52962u^{194} + 6.73368u^{193} + \cdots + 145905.u - 11433.0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.47117u^{194} + 4.65577u^{193} + \cdots - 211659.u + 23522.7 \\ -0.673752u^{194} + 3.08530u^{193} + \cdots + 111463.u - 9696.62 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1.01848u^{194} - 5.41044u^{193} + \cdots - 257220.u + 23413.4 \\ -1.52962u^{194} + 6.73368u^{193} + \cdots + 145905.u - 11433.0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.586225u^{194} - 1.53369u^{193} + \cdots + 165820.u - 17237.5 \\ -1.34404u^{194} + 5.86482u^{193} + \cdots + 77525.5u - 5505.19 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.151020u^{194} - 0.597552u^{193} + \cdots + 44952.6u - 4866.48 \\ 0.439914u^{194} - 1.61276u^{193} + \cdots - 25671.4u + 1685.20 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.120201u^{194} - 1.70426u^{193} + \cdots - 233869.u + 22632.2 \\ -1.08301u^{194} + 4.59774u^{193} + \cdots + 87405.6u - 6433.53 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.394897u^{194} + 2.63210u^{193} + \cdots + 215956.u - 21265.2 \\ -0.0681673u^{194} + 0.197496u^{193} + \cdots - 22256.9u + 2233.41 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.97245u^{194} - 7.45707u^{193} + \cdots - 14130.9u - 2521.77 \\ -0.169214u^{194} + 0.611793u^{193} + \cdots - 22516.2u + 2913.54 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.69583u^{194} + 0.189744u^{193} + \cdots - 1.88279 \times 10^6 u + 187667.$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{195} - 16u^{194} + \cdots - 2141u + 88$
c_2, c_6	$u^{195} + 4u^{194} + \cdots + 113416u + 11257$
c_3	$u^{195} - 3u^{194} + \cdots + 217741u + 10918$
c_4	$u^{195} + 4u^{194} + \cdots + 51821u + 2894$
c_5, c_{12}	$u^{195} - 3u^{194} + \cdots + 23431u + 1133$
c_7	$u^{195} + 11u^{194} + \cdots + 218148168u + 31728989$
c_8	$2(2u^{195} + 7u^{194} + \cdots - 49u + 5)$
c_9	$2(2u^{195} - 9u^{194} + \cdots - 5.76855 \times 10^7 u + 4.42253 \times 10^7)$
c_{10}	$2(2u^{195} + 25u^{194} + \cdots + 1.02982 \times 10^7 u + 574285)$
c_{11}	$u^{195} + 8u^{194} + \cdots + 12939u + 1819$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{195} + 62y^{194} + \cdots - 185895y - 7744$
c_2, c_6	$y^{195} + 116y^{194} + \cdots - 6845116264y - 126720049$
c_3	$y^{195} + 45y^{194} + \cdots + 993877489y - 119202724$
c_4	$y^{195} - 28y^{194} + \cdots + 583712209y - 8375236$
c_5, c_{12}	$y^{195} + 147y^{194} + \cdots + 20891003y - 1283689$
c_7	$y^{195} + 9y^{194} + \cdots - 60843014639712268y - 1006728742962121$
c_8	$4(4y^{195} - 73y^{194} + \cdots + 211y - 25)$
c_9	$4 \cdot (4y^{195} - 261y^{194} + \cdots + 8953659438498701y - 1955874418122361)$
c_{10}	$4(4y^{195} + 159y^{194} + \cdots + 1.74880 \times 10^{13}y - 3.29803 \times 10^{11})$
c_{11}	$y^{195} - 42y^{194} + \cdots - 2071600293y - 3308761$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.229847+0.974311I$ $a=\ \ 0.30308+1.40779I$ $b=\ \ 0.55537-1.33039I$	$-1.80544+4.08060I$	0
$u=-0.229847-0.974311I$ $a=\ \ 0.30308-1.40779I$ $b=\ \ 0.55537+1.33039I$	$-1.80544-4.08060I$	0
$u=-0.635598+0.766858I$ $a=\ \ 0.175078-0.073876I$ $b=-0.615392-1.058350I$	$-4.27809-4.36087I$	0
$u=-0.635598-0.766858I$ $a=\ \ 0.175078+0.073876I$ $b=-0.615392+1.058350I$	$-4.27809+4.36087I$	0
$u=-0.213608+0.982090I$ $a=-0.284603+0.247759I$ $b=-1.11742-1.69158I$	$-2.58548+5.44227I$	0
$u=-0.213608-0.982090I$ $a=-0.284603-0.247759I$ $b=-1.11742+1.69158I$	$-2.58548-5.44227I$	0
$u=\ \ 0.044460+1.009420I$ $a=-1.76948+0.19269I$ $b=-0.775797-0.693267I$	$1.66899-5.60569I$	0
$u=\ \ 0.044460-1.009420I$ $a=-1.76948-0.19269I$ $b=-0.775797+0.693267I$	$1.66899+5.60569I$	0
$u=\ \ 0.081752+1.008600I$ $a=\ \ 1.42458+1.07381I$ $b=\ \ 0.352065-0.913459I$	$3.96016+0.37043I$	0
$u=\ \ 0.081752-1.008600I$ $a=\ \ 1.42458-1.07381I$ $b=\ \ 0.352065+0.913459I$	$3.96016-0.37043I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.340357+0.927028I$ $a=\ \ 0.99354-1.55193I$ $b=\ \ 0.153232-0.041064I$	$-3.83954+6.18863I$	0
$u=-0.340357-0.927028I$ $a=\ \ 0.99354+1.55193I$ $b=\ \ 0.153232+0.041064I$	$-3.83954-6.18863I$	0
$u=-0.949863+0.352493I$ $a=\ \ 0.331428+0.731583I$ $b=-0.145725+0.629283I$	$-1.59057+0.63800I$	0
$u=-0.949863-0.352493I$ $a=\ \ 0.331428-0.731583I$ $b=-0.145725-0.629283I$	$-1.59057-0.63800I$	0
$u=\ \ 0.985579+0.005049I$ $a=\ \ 0.820488+0.440894I$ $b=\ \ 0.875081+0.811497I$	$-3.41252-2.70500I$	0
$u=\ \ 0.985579-0.005049I$ $a=\ \ 0.820488-0.440894I$ $b=\ \ 0.875081-0.811497I$	$-3.41252+2.70500I$	0
$u=-0.279959+0.939793I$ $a=-0.482096-0.337591I$ $b=-1.94105-0.40614I$	$1.84118+6.62127I$	0
$u=-0.279959-0.939793I$ $a=-0.482096+0.337591I$ $b=-1.94105+0.40614I$	$1.84118-6.62127I$	0
$u=-0.956595+0.206169I$ $a=\ \ 0.488973+1.095580I$ $b=\ \ 0.690719+0.974454I$	$-0.50653-4.70693I$	0
$u=-0.956595-0.206169I$ $a=\ \ 0.488973-1.095580I$ $b=\ \ 0.690719-0.974454I$	$-0.50653+4.70693I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.215211 + 1.000710I$ $a = -1.101110 + 0.746345I$ $b = -1.71977 + 0.31148I$	$-2.79903 - 1.55519I$	0
$u = 0.215211 - 1.000710I$ $a = -1.101110 - 0.746345I$ $b = -1.71977 - 0.31148I$	$-2.79903 + 1.55519I$	0
$u = -0.151109 + 1.016340I$ $a = 0.89528 - 1.95590I$ $b = -0.218993 + 0.567699I$	$3.11920 + 5.88513I$	0
$u = -0.151109 - 1.016340I$ $a = 0.89528 + 1.95590I$ $b = -0.218993 - 0.567699I$	$3.11920 - 5.88513I$	0
$u = 0.842804 + 0.455707I$ $a = -0.344177 + 1.272260I$ $b = -0.84360 + 1.17309I$	$-2.98538 + 5.10576I$	0
$u = 0.842804 - 0.455707I$ $a = -0.344177 - 1.272260I$ $b = -0.84360 - 1.17309I$	$-2.98538 - 5.10576I$	0
$u = -0.998905 + 0.299241I$ $a = 0.700680 - 1.097540I$ $b = 0.581880 - 0.818240I$	$-0.77731 + 7.34371I$	0
$u = -0.998905 - 0.299241I$ $a = 0.700680 + 1.097540I$ $b = 0.581880 + 0.818240I$	$-0.77731 - 7.34371I$	0
$u = 0.463041 + 0.837478I$ $a = 1.32810 + 0.70895I$ $b = -0.040835 + 1.061810I$	$0.80944 + 4.01559I$	0
$u = 0.463041 - 0.837478I$ $a = 1.32810 - 0.70895I$ $b = -0.040835 - 1.061810I$	$0.80944 - 4.01559I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.005129 + 0.954379I$ $a = -1.41357 - 0.26872I$ $b = -0.347241 + 0.838567I$	$3.55479 - 0.87622I$	0
$u = 0.005129 - 0.954379I$ $a = -1.41357 + 0.26872I$ $b = -0.347241 - 0.838567I$	$3.55479 + 0.87622I$	0
$u = -0.910905 + 0.261615I$ $a = 1.208150 + 0.557838I$ $b = 0.843854 + 0.550938I$	$-5.82793 - 1.97974I$	0
$u = -0.910905 - 0.261615I$ $a = 1.208150 - 0.557838I$ $b = 0.843854 - 0.550938I$	$-5.82793 + 1.97974I$	0
$u = -0.352869 + 0.999237I$ $a = 1.309980 + 0.124605I$ $b = 1.123490 - 0.168123I$	$-2.66413 + 5.29690I$	0
$u = -0.352869 - 0.999237I$ $a = 1.309980 - 0.124605I$ $b = 1.123490 + 0.168123I$	$-2.66413 - 5.29690I$	0
$u = 0.326697 + 1.014140I$ $a = 0.561261 - 0.508035I$ $b = 1.94125 - 0.64929I$	$-2.65706 - 12.16010I$	0
$u = 0.326697 - 1.014140I$ $a = 0.561261 + 0.508035I$ $b = 1.94125 + 0.64929I$	$-2.65706 + 12.16010I$	0
$u = 0.926967 + 0.113254I$ $a = -0.184218 + 0.754293I$ $b = 0.311515 + 0.714463I$	$-0.528284 - 0.958478I$	0
$u = 0.926967 - 0.113254I$ $a = -0.184218 - 0.754293I$ $b = 0.311515 - 0.714463I$	$-0.528284 + 0.958478I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.193536+1.054740I$ $a=\ \ 0.032676+0.585986I$ $b=\ \ 1.71292+1.77353I$	$-0.939947-0.000035I$	0
$u=-0.193536-1.054740I$ $a=\ \ 0.032676-0.585986I$ $b=\ \ 1.71292-1.77353I$	$-0.939947+0.000035I$	0
$u=\ \ 0.334551+1.021810I$ $a=-0.486973-0.143961I$ $b=-0.697169+0.461883I$	$1.55837-2.94938I$	0
$u=\ \ 0.334551-1.021810I$ $a=-0.486973+0.143961I$ $b=-0.697169-0.461883I$	$1.55837+2.94938I$	0
$u=\ \ 0.623008+0.662516I$ $a=\ \ 0.100188-0.348881I$ $b=\ \ 0.984468-0.203862I$	$-2.15925-1.04139I$	0
$u=\ \ 0.623008-0.662516I$ $a=\ \ 0.100188+0.348881I$ $b=\ \ 0.984468+0.203862I$	$-2.15925+1.04139I$	0
$u=\ \ 0.188072+0.885745I$ $a=\ \ 0.18189-3.35363I$ $b=\ \ 0.445617+0.277728I$	$-3.11330-10.34180I$	0
$u=\ \ 0.188072-0.885745I$ $a=\ \ 0.18189+3.35363I$ $b=\ \ 0.445617-0.277728I$	$-3.11330+10.34180I$	0
$u=-0.135708+0.881152I$ $a=\ \ 0.817279+0.782255I$ $b=\ \ 1.55399-0.16843I$	$-0.893570+0.937338I$	0
$u=-0.135708-0.881152I$ $a=\ \ 0.817279-0.782255I$ $b=\ \ 1.55399+0.16843I$	$-0.893570-0.937338I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.109500 + 0.139095I$ $a = -0.733889 + 1.065730I$ $b = -0.714813 + 0.933276I$	$-4.29066 + 5.83447I$	0
$u = 1.109500 - 0.139095I$ $a = -0.733889 - 1.065730I$ $b = -0.714813 - 0.933276I$	$-4.29066 - 5.83447I$	0
$u = -1.119570 + 0.106898I$ $a = -0.617179 - 0.802897I$ $b = -0.756292 - 0.934165I$	$0.78469 - 9.60406I$	0
$u = -1.119570 - 0.106898I$ $a = -0.617179 + 0.802897I$ $b = -0.756292 + 0.934165I$	$0.78469 + 9.60406I$	0
$u = 0.846829 + 0.209085I$ $a = -0.731495 + 0.502899I$ $b = -0.530183 - 0.112186I$	$-1.33087 - 0.72319I$	0
$u = 0.846829 - 0.209085I$ $a = -0.731495 - 0.502899I$ $b = -0.530183 + 0.112186I$	$-1.33087 + 0.72319I$	0
$u = 0.018353 + 0.866884I$ $a = 0.556628 + 0.523527I$ $b = 1.70481 - 0.51962I$	$-0.751573 + 0.863225I$	0
$u = 0.018353 - 0.866884I$ $a = 0.556628 - 0.523527I$ $b = 1.70481 + 0.51962I$	$-0.751573 - 0.863225I$	0
$u = -0.679044 + 0.533411I$ $a = 0.47379 + 1.50522I$ $b = 0.842970 + 0.400250I$	$-4.49809 - 1.53846I$	0
$u = -0.679044 - 0.533411I$ $a = 0.47379 - 1.50522I$ $b = 0.842970 - 0.400250I$	$-4.49809 + 1.53846I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.083240+0.346377I$ $a=\ 0.191066+0.952447I$ $b=\ 0.513660+1.092630I$	$-0.76440-5.39606I$	0
$u=-1.083240-0.346377I$ $a=\ 0.191066-0.952447I$ $b=\ 0.513660-1.092630I$	$-0.76440+5.39606I$	0
$u=\ 0.442759+0.739069I$ $a=-1.21870+1.35018I$ $b=-1.334780-0.103594I$	$-5.38476-1.87072I$	0
$u=\ 0.442759-0.739069I$ $a=-1.21870-1.35018I$ $b=-1.334780+0.103594I$	$-5.38476+1.87072I$	0
$u=\ 1.136230+0.150504I$ $a=\ 0.678927-0.928671I$ $b=\ 0.784452-1.006980I$	$-3.9314+15.3997I$	0
$u=\ 1.136230-0.150504I$ $a=\ 0.678927+0.928671I$ $b=\ 0.784452+1.006980I$	$-3.9314-15.3997I$	0
$u=-0.153559+0.829785I$ $a=\ 0.56388+1.32275I$ $b=\ 1.27739-0.74715I$	$-0.980231+0.971067I$	0
$u=-0.153559-0.829785I$ $a=\ 0.56388-1.32275I$ $b=\ 1.27739+0.74715I$	$-0.980231-0.971067I$	0
$u=\ 0.307891+0.782104I$ $a=\ 2.23721-0.81181I$ $b=\ 1.031530-0.280647I$	$-3.18370+7.94529I$	0
$u=\ 0.307891-0.782104I$ $a=\ 2.23721+0.81181I$ $b=\ 1.031530+0.280647I$	$-3.18370-7.94529I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.367754 + 0.750622I$ $a = 0.619310 - 0.632085I$ $b = 0.103268 + 1.395740I$	$0.21899 - 3.47149I$	0
$u = 0.367754 - 0.750622I$ $a = 0.619310 + 0.632085I$ $b = 0.103268 - 1.395740I$	$0.21899 + 3.47149I$	0
$u = 0.449827 + 0.704123I$ $a = -1.49036 + 0.95298I$ $b = -1.184490 + 0.057036I$	$-5.39959 - 1.93014I$	0
$u = 0.449827 - 0.704123I$ $a = -1.49036 - 0.95298I$ $b = -1.184490 - 0.057036I$	$-5.39959 + 1.93014I$	0
$u = 0.388291 + 0.733947I$ $a = -1.11660 + 1.74454I$ $b = -0.845393 - 0.215975I$	$-5.34851 - 1.73934I$	0
$u = 0.388291 - 0.733947I$ $a = -1.11660 - 1.74454I$ $b = -0.845393 + 0.215975I$	$-5.34851 + 1.73934I$	0
$u = -0.165308 + 0.810412I$ $a = 0.56082 + 1.75127I$ $b = 0.882583 - 0.457074I$	$-1.02632 + 0.98406I$	0
$u = -0.165308 - 0.810412I$ $a = 0.56082 - 1.75127I$ $b = 0.882583 + 0.457074I$	$-1.02632 - 0.98406I$	0
$u = 0.510817 + 0.641566I$ $a = -1.25258 - 0.84716I$ $b = -0.685795 - 0.555487I$	$1.66372 - 4.31307I$	0
$u = 0.510817 - 0.641566I$ $a = -1.25258 + 0.84716I$ $b = -0.685795 + 0.555487I$	$1.66372 + 4.31307I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.178310 + 0.184999I$ $a = -0.332329 + 0.562029I$ $b = -0.395717 + 0.845977I$	$0.08757 + 1.83094I$	0
$u = 1.178310 - 0.184999I$ $a = -0.332329 - 0.562029I$ $b = -0.395717 - 0.845977I$	$0.08757 - 1.83094I$	0
$u = -0.372361 + 1.149840I$ $a = -0.878604 + 0.187577I$ $b = -0.153649 + 0.984248I$	$4.10607 - 0.82015I$	0
$u = -0.372361 - 1.149840I$ $a = -0.878604 - 0.187577I$ $b = -0.153649 - 0.984248I$	$4.10607 + 0.82015I$	0
$u = -0.506388 + 1.097430I$ $a = 1.324170 + 0.324307I$ $b = 1.048280 - 0.866838I$	$-2.63620 + 6.15137I$	0
$u = -0.506388 - 1.097430I$ $a = 1.324170 - 0.324307I$ $b = 1.048280 + 0.866838I$	$-2.63620 - 6.15137I$	0
$u = -0.210718 + 1.200420I$ $a = -1.93286 - 0.95517I$ $b = -0.302380 + 0.548108I$	$-0.11642 + 10.43800I$	0
$u = -0.210718 - 1.200420I$ $a = -1.93286 + 0.95517I$ $b = -0.302380 - 0.548108I$	$-0.11642 - 10.43800I$	0
$u = 0.137406 + 0.761054I$ $a = 0.06117 + 2.33645I$ $b = -1.030270 - 0.538505I$	$-3.73260 - 0.24421I$	0
$u = 0.137406 - 0.761054I$ $a = 0.06117 - 2.33645I$ $b = -1.030270 + 0.538505I$	$-3.73260 + 0.24421I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.479556+0.605344I$ $a=-1.153710-0.634733I$ $b=-0.004544+1.319820I$	$-4.64115+8.81274I$	0
$u=-0.479556-0.605344I$ $a=-1.153710+0.634733I$ $b=-0.004544-1.319820I$	$-4.64115-8.81274I$	0
$u=\ \ 0.299411+1.236170I$ $a=-0.748937+0.304351I$ $b=-1.07207-1.58322I$	$6.31344-6.96124I$	0
$u=\ \ 0.299411-1.236170I$ $a=-0.748937-0.304351I$ $b=-1.07207+1.58322I$	$6.31344+6.96124I$	0
$u=-0.052808+1.271950I$ $a=\ \ 0.278427+0.256074I$ $b=\ \ 0.906983-0.694726I$	$0.431813-1.106830I$	0
$u=-0.052808-1.271950I$ $a=\ \ 0.278427-0.256074I$ $b=\ \ 0.906983+0.694726I$	$0.431813+1.106830I$	0
$u=\ \ 0.354885+1.224060I$ $a=\ \ 1.086860-0.149759I$ $b=\ \ 0.87940+1.63490I$	$4.45659+0.15218I$	0
$u=\ \ 0.354885-1.224060I$ $a=\ \ 1.086860+0.149759I$ $b=\ \ 0.87940-1.63490I$	$4.45659-0.15218I$	0
$u=\ \ 0.633338+0.350421I$ $a=\ \ 1.379980-0.182928I$ $b=\ \ 0.817694+0.991932I$	$-2.86630-3.64019I$	0
$u=\ \ 0.633338-0.350421I$ $a=\ \ 1.379980+0.182928I$ $b=\ \ 0.817694-0.991932I$	$-2.86630+3.64019I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.577370 + 1.140060I$ $a = -1.42478 + 0.29961I$ $b = -0.92725 - 1.54153I$	$-0.80504 - 10.41690I$	0
$u = 0.577370 - 1.140060I$ $a = -1.42478 - 0.29961I$ $b = -0.92725 + 1.54153I$	$-0.80504 + 10.41690I$	0
$u = -0.368101 + 1.226320I$ $a = -1.080950 - 0.415193I$ $b = -0.89686 + 1.37051I$	$7.49769 + 3.89385I$	0
$u = -0.368101 - 1.226320I$ $a = -1.080950 + 0.415193I$ $b = -0.89686 - 1.37051I$	$7.49769 - 3.89385I$	0
$u = -0.139441 + 0.700337I$ $a = 0.203060 - 1.058000I$ $b = 0.28403 + 1.68291I$	$-3.51779 - 3.48385I$	0
$u = -0.139441 - 0.700337I$ $a = 0.203060 + 1.058000I$ $b = 0.28403 - 1.68291I$	$-3.51779 + 3.48385I$	0
$u = 1.272620 + 0.222164I$ $a = 0.251473 - 0.258741I$ $b = 0.476464 - 0.306762I$	$-2.99459 + 0.12417I$	0
$u = 1.272620 - 0.222164I$ $a = 0.251473 + 0.258741I$ $b = 0.476464 + 0.306762I$	$-2.99459 - 0.12417I$	0
$u = -0.226214 + 0.666099I$ $a = 0.480709 + 0.585526I$ $b = 1.20437 + 0.85048I$	$-2.70083 - 1.84377I$	0
$u = -0.226214 - 0.666099I$ $a = 0.480709 - 0.585526I$ $b = 1.20437 - 0.85048I$	$-2.70083 + 1.84377I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.362697+1.248230I$		
$a=$	$1.13143-0.89815I$	$1.58429-7.17628I$	0
$b=$	$0.866124+1.034900I$		
$u=$	$0.362697-1.248230I$		
$a=$	$1.13143+0.89815I$	$1.58429+7.17628I$	0
$b=$	$0.866124-1.034900I$		
$u=$	$-1.262870+0.334599I$		
$a=$	$-0.428168-0.197736I$	$-7.77382+5.70633I$	0
$b=$	$-0.499047-0.318651I$		
$u=$	$-1.262870-0.334599I$		
$a=$	$-0.428168+0.197736I$	$-7.77382-5.70633I$	0
$b=$	$-0.499047+0.318651I$		
$u=$	$-0.494471+1.212680I$		
$a=$	$1.162890+0.768592I$	$-2.80980+7.06401I$	0
$b=$	$0.848949-0.746215I$		
$u=$	$-0.494471-1.212680I$		
$a=$	$1.162890-0.768592I$	$-2.80980-7.06401I$	0
$b=$	$0.848949+0.746215I$		
$u=$	$0.576452+1.178660I$		
$a=$	$-0.536668+0.005522I$	$0.11515-2.22983I$	0
$b=$	$0.153852-0.581480I$		
$u=$	$0.576452-1.178660I$		
$a=$	$-0.536668-0.005522I$	$0.11515+2.22983I$	0
$b=$	$0.153852+0.581480I$		
$u=$	$0.110893+1.309760I$		
$a=$	$0.83843-1.28027I$	$5.85335-4.03857I$	0
$b=$	$0.105652+0.712097I$		
$u=$	$0.110893-1.309760I$		
$a=$	$0.83843+1.28027I$	$5.85335+4.03857I$	0
$b=$	$0.105652-0.712097I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.623896 + 1.159380I$ $a = -1.079530 - 0.457573I$ $b = -0.305937 - 1.331450I$	$2.59358 - 8.76112I$	0
$u = 0.623896 - 1.159380I$ $a = -1.079530 + 0.457573I$ $b = -0.305937 + 1.331450I$	$2.59358 + 8.76112I$	0
$u = -0.426208 + 0.527754I$ $a = -1.22790 + 1.38094I$ $b = -0.634378 + 0.090765I$	$-4.89355 - 2.86718I$	0
$u = -0.426208 - 0.527754I$ $a = -1.22790 - 1.38094I$ $b = -0.634378 - 0.090765I$	$-4.89355 + 2.86718I$	0
$u = 0.326129 + 1.283490I$ $a = -1.093660 + 0.170774I$ $b = -0.181131 - 0.489329I$	$3.23059 - 3.12658I$	0
$u = 0.326129 - 1.283490I$ $a = -1.093660 - 0.170774I$ $b = -0.181131 + 0.489329I$	$3.23059 + 3.12658I$	0
$u = -0.644197 + 0.200716I$ $a = -0.88078 + 1.13185I$ $b = -0.490297 + 0.900541I$	$3.46263 + 0.22284I$	0
$u = -0.644197 - 0.200716I$ $a = -0.88078 - 1.13185I$ $b = -0.490297 - 0.900541I$	$3.46263 - 0.22284I$	0
$u = 0.642104 + 0.207298I$ $a = 0.68091 + 1.71487I$ $b = 0.308661 + 0.979102I$	$0.37407 + 3.74845I$	0
$u = 0.642104 - 0.207298I$ $a = 0.68091 - 1.71487I$ $b = 0.308661 - 0.979102I$	$0.37407 - 3.74845I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.259993+1.300060I$ $a=-0.156358-0.370591I$ $b=-0.361718+1.247940I$	$3.99196+4.44691I$	0
$u=-0.259993-1.300060I$ $a=-0.156358+0.370591I$ $b=-0.361718-1.247940I$	$3.99196-4.44691I$	0
$u=-0.636845+1.167840I$ $a=\ \ 0.831072-0.376574I$ $b=\ \ 0.075837-1.093130I$	$5.68797+4.80355I$	0
$u=-0.636845-1.167840I$ $a=\ \ 0.831072+0.376574I$ $b=\ \ 0.075837+1.093130I$	$5.68797-4.80355I$	0
$u=-0.219484+1.328130I$ $a=-0.750643-0.202419I$ $b=-0.185583+0.999627I$	$5.34455-1.34959I$	0
$u=-0.219484-1.328130I$ $a=-0.750643+0.202419I$ $b=-0.185583-0.999627I$	$5.34455+1.34959I$	0
$u=\ \ 0.395945+1.289550I$ $a=\ \ 0.595238-0.244193I$ $b=\ \ 0.55376+1.34863I$	$3.95036-5.48260I$	0
$u=\ \ 0.395945-1.289550I$ $a=\ \ 0.595238+0.244193I$ $b=\ \ 0.55376-1.34863I$	$3.95036+5.48260I$	0
$u=-0.394962+1.311720I$ $a=\ \ 0.970654+0.143863I$ $b=\ \ 1.06317-1.51083I$	$4.13157+11.88080I$	0
$u=-0.394962-1.311720I$ $a=\ \ 0.970654-0.143863I$ $b=\ \ 1.06317+1.51083I$	$4.13157-11.88080I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.553556+1.255890I$ $a=\ \ 1.232930+0.226818I$ $b=\ \ 0.94888-1.40156I$	$2.77894+10.18640I$	0
$u=-0.553556-1.255890I$ $a=\ \ 1.232930-0.226818I$ $b=\ \ 0.94888+1.40156I$	$2.77894-10.18640I$	0
$u=\ \ 0.384354+1.322650I$ $a=-0.746341+0.174150I$ $b=-0.808352-0.555650I$	$2.44037-3.90329I$	0
$u=\ \ 0.384354-1.322650I$ $a=-0.746341-0.174150I$ $b=-0.808352+0.555650I$	$2.44037+3.90329I$	0
$u=-0.628809+1.247520I$ $a=-0.805776-0.374540I$ $b=-0.696367+0.851964I$	$-4.72209+0.68037I$	0
$u=-0.628809-1.247520I$ $a=-0.805776+0.374540I$ $b=-0.696367-0.851964I$	$-4.72209-0.68037I$	0
$u=\ \ 0.592743+1.280260I$ $a=-0.939740-0.046938I$ $b=-0.558136-0.697709I$	$2.64763-4.39184I$	0
$u=\ \ 0.592743-1.280260I$ $a=-0.939740+0.046938I$ $b=-0.558136+0.697709I$	$2.64763+4.39184I$	0
$u=-0.65366+1.27170I$ $a=\ \ 1.136980+0.054923I$ $b=\ \ 0.67441-1.43205I$	$2.18738+11.66960I$	0
$u=-0.65366-1.27170I$ $a=\ \ 1.136980-0.054923I$ $b=\ \ 0.67441+1.43205I$	$2.18738-11.66960I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.58048 + 1.30852I$ $a = -1.322450 + 0.215495I$ $b = -1.07992 - 1.27686I$	$-0.61344 - 11.78460I$	0
$u = 0.58048 - 1.30852I$ $a = -1.322450 - 0.215495I$ $b = -1.07992 + 1.27686I$	$-0.61344 + 11.78460I$	0
$u = 0.58827 + 1.30589I$ $a = 0.773708 - 0.243526I$ $b = 0.858180 + 0.989293I$	$0.60484 - 6.35364I$	0
$u = 0.58827 - 1.30589I$ $a = 0.773708 + 0.243526I$ $b = 0.858180 - 0.989293I$	$0.60484 + 6.35364I$	0
$u = 0.53244 + 1.33872I$ $a = 0.899233 - 0.535014I$ $b = 0.86241 + 1.26024I$	$0.75870 - 8.17500I$	0
$u = 0.53244 - 1.33872I$ $a = 0.899233 + 0.535014I$ $b = 0.86241 - 1.26024I$	$0.75870 + 8.17500I$	0
$u = -1.42848 + 0.18982I$ $a = -0.275326 - 0.395570I$ $b = -0.369474 - 0.351096I$	$-7.54006 - 6.01896I$	0
$u = -1.42848 - 0.18982I$ $a = -0.275326 + 0.395570I$ $b = -0.369474 + 0.351096I$	$-7.54006 + 6.01896I$	0
$u = -0.57583 + 1.32388I$ $a = -1.124210 - 0.313311I$ $b = -0.94205 + 1.33809I$	$4.6052 + 15.5689I$	0
$u = -0.57583 - 1.32388I$ $a = -1.124210 + 0.313311I$ $b = -0.94205 - 1.33809I$	$4.6052 - 15.5689I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.310629+0.458457I$ $a=-0.61560-1.75299I$ $b=-0.752385+0.957594I$	$0.65813-3.78742I$	0
$u=-0.310629-0.458457I$ $a=-0.61560+1.75299I$ $b=-0.752385-0.957594I$	$0.65813+3.78742I$	0
$u=0.59821+1.31905I$ $a=1.238980-0.285148I$ $b=0.99929+1.35594I$	$-0.2538-21.5084I$	0
$u=0.59821-1.31905I$ $a=1.238980+0.285148I$ $b=0.99929-1.35594I$	$-0.2538+21.5084I$	0
$u=-0.462562+0.297552I$ $a=1.02575+2.20517I$ $b=0.243731+0.407486I$	$-4.45374-1.88808I$	0
$u=-0.462562-0.297552I$ $a=1.02575-2.20517I$ $b=0.243731-0.407486I$	$-4.45374+1.88808I$	0
$u=0.26891+1.42620I$ $a=0.417370+0.259720I$ $b=0.201851+1.187590I$	$1.34723+0.60662I$	0
$u=0.26891-1.42620I$ $a=0.417370-0.259720I$ $b=0.201851-1.187590I$	$1.34723-0.60662I$	0
$u=-0.70248+1.27394I$ $a=0.967120-0.039615I$ $b=0.473947-0.618860I$	$0.93876+5.52381I$	0
$u=-0.70248-1.27394I$ $a=0.967120+0.039615I$ $b=0.473947+0.618860I$	$0.93876-5.52381I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.29851 + 1.42421I$ $a = 0.448293 - 0.374327I$ $b = 0.101987 + 0.938016I$	$5.94885 - 3.34941I$	0
$u = 0.29851 - 1.42421I$ $a = 0.448293 + 0.374327I$ $b = 0.101987 - 0.938016I$	$5.94885 + 3.34941I$	0
$u = 0.59712 + 1.33150I$ $a = -0.979471 + 0.267124I$ $b = -0.634266 - 1.178940I$	$3.80062 - 8.07010I$	0
$u = 0.59712 - 1.33150I$ $a = -0.979471 - 0.267124I$ $b = -0.634266 + 1.178940I$	$3.80062 + 8.07010I$	0
$u = 0.15427 + 1.45226I$ $a = -0.169698 + 0.878937I$ $b = -0.231098 - 0.621990I$	$4.60019 - 4.07663I$	0
$u = 0.15427 - 1.45226I$ $a = -0.169698 - 0.878937I$ $b = -0.231098 + 0.621990I$	$4.60019 + 4.07663I$	0
$u = 0.265244 + 0.455280I$ $a = -0.488246 - 0.338092I$ $b = 0.436577 + 0.357347I$	$-0.73398 - 1.49888I$	0
$u = 0.265244 - 0.455280I$ $a = -0.488246 + 0.338092I$ $b = 0.436577 - 0.357347I$	$-0.73398 + 1.49888I$	0
$u = -0.62924 + 1.35231I$ $a = -0.875013 - 0.176121I$ $b = -0.901093 + 0.891946I$	$-3.65305 + 12.79600I$	0
$u = -0.62924 - 1.35231I$ $a = -0.875013 + 0.176121I$ $b = -0.901093 - 0.891946I$	$-3.65305 - 12.79600I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.011579 + 0.503771I$ $a = -2.22896 - 0.84535I$ $b = -0.882161 - 0.522619I$	$1.69153 - 4.45056I$	0
$u = 0.011579 - 0.503771I$ $a = -2.22896 + 0.84535I$ $b = -0.882161 + 0.522619I$	$1.69153 + 4.45056I$	0
$u = -0.48820 + 1.44425I$ $a = -0.643416 + 0.308013I$ $b = -0.413515 + 1.001360I$	$2.99696 - 0.87405I$	0
$u = -0.48820 - 1.44425I$ $a = -0.643416 - 0.308013I$ $b = -0.413515 - 1.001360I$	$2.99696 + 0.87405I$	0
$u = 0.278459 + 0.384259I$ $a = 0.97840 - 2.67230I$ $b = 0.826515 + 0.977698I$	$-4.39607 + 9.22108I$	0
$u = 0.278459 - 0.384259I$ $a = 0.97840 + 2.67230I$ $b = 0.826515 - 0.977698I$	$-4.39607 - 9.22108I$	0
$u = -0.34033 + 1.49173I$ $a = 0.441383 - 0.026782I$ $b = -0.081675 - 0.794215I$	$6.19379 - 4.00888I$	0
$u = -0.34033 - 1.49173I$ $a = 0.441383 + 0.026782I$ $b = -0.081675 + 0.794215I$	$6.19379 + 4.00888I$	0
$u = 0.429968 + 0.166853I$ $a = -1.131500 - 0.474636I$ $b = 0.589030 - 0.513629I$	$-0.900359 + 0.184523I$	0
$u = 0.429968 - 0.166853I$ $a = -1.131500 + 0.474636I$ $b = 0.589030 + 0.513629I$	$-0.900359 - 0.184523I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.30686 + 1.51328I$ $a = -0.390550 - 0.151171I$ $b = 0.117648 - 0.934794I$	$1.77509 + 9.87081I$	0
$u = 0.30686 - 1.51328I$ $a = -0.390550 + 0.151171I$ $b = 0.117648 + 0.934794I$	$1.77509 - 9.87081I$	0
$u = 0.83420 + 1.34418I$ $a = 0.530296 + 0.380105I$ $b = 0.251483 + 0.637070I$	$2.66429 - 2.24040I$	0
$u = 0.83420 - 1.34418I$ $a = 0.530296 - 0.380105I$ $b = 0.251483 - 0.637070I$	$2.66429 + 2.24040I$	0
$u = 0.378757$ $a = -1.40842$ $b = 0.221544$	-0.944907	-10.9120

II.

$\boldsymbol{I_2^u = \langle 1.09\times 10^{50}u^{48}-2.48\times 10^{51}u^{47}+\cdots+9.36\times 10^{50}b+5.63\times 10^{51},\ -2.13\times 10^{51}u^{48}+2.11\times 10^{51}u^{47}+\cdots+2.34\times 10^{51}a-1.43\times 10^{51},\ u^{49}-u^{48}+\cdots+u-1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_3 = \begin{pmatrix}1\\u^2\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}0.909133u^{48} - 0.901122u^{47} + \cdots + 8.28169u + 0.611665\\-0.116483u^{48} + 2.64520u^{47} + \cdots + 5.31523u - 6.00862\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-6.75824u^{48} + 3.76581u^{47} + \cdots + 17.3063u - 0.677026\\0.291839u^{48} - 4.15847u^{47} + \cdots - 6.42113u + 4.65766\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}1.02562u^{48} - 3.54632u^{47} + \cdots + 2.96646u + 6.62028\\-0.116483u^{48} + 2.64520u^{47} + \cdots + 5.31523u - 6.00862\end{pmatrix}$$

$$a_4 = \begin{pmatrix}1.58587u^{48} + 2.47027u^{47} + \cdots - 8.03438u - 4.11760\\-5.36933u^{48} + 5.62418u^{47} + \cdots + 10.8700u + 0.830989\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-4.67629u^{48} + 6.49319u^{47} + \cdots + 8.82716u - 6.92639\\3.44387u^{48} - 4.08605u^{47} + \cdots - 6.69889u + 2.01104\end{pmatrix}$$

$$a_6 = \begin{pmatrix}u\\u^3+u\end{pmatrix}$$

$$a_9 = \begin{pmatrix}0.755496u^{48} - 1.87997u^{47} + \cdots + 5.50709u + 3.98718\\-0.130340u^{48} + 1.70431u^{47} + \cdots + 3.51948u - 3.76558\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}-0.364427u^{48} + 6.80674u^{47} + \cdots + 9.13874u - 4.70856\\-0.937274u^{48} + 2.61591u^{47} + \cdots + 8.29118u - 3.67247\end{pmatrix}$$

$$a_5 = \begin{pmatrix}14.4499u^{48} - 17.3422u^{47} + \cdots - 46.1752u + 7.81691\\-1.63501u^{48} + 2.87456u^{47} + \cdots + 4.36227u + 0.687865\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -28.5235u^{48} + 44.4612u^{47} + \cdots + 72.8197u - 30.6786$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{49} - 3u^{48} + \cdots + 125u - 16$
c_2	$u^{49} - u^{48} + \cdots + u - 1$
c_3	$u^{49} + 16u^{47} + \cdots - 17u + 6$
c_4	$u^{49} + 3u^{48} + \cdots - u - 6$
c_5	$u^{49} + 21u^{47} + \cdots - 8u + 1$
c_6	$u^{49} + u^{48} + \cdots + u + 1$
c_7	$u^{49} - 12u^{48} + \cdots + 165u - 5$
c_8	$2(2u^{49} - u^{48} + \cdots - 14u - 1)$
c_9	$2(2u^{49} - 11u^{48} + \cdots - 56u - 9)$
c_{10}	$2(2u^{49} - 11u^{48} + \cdots + 7u - 1)$
c_{11}	$u^{49} + 19u^{48} + \cdots + 66u + 5$
c_{12}	$u^{49} + 21u^{47} + \cdots - 8u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{49} + 17y^{48} + \cdots - 6711y - 256$
c_2, c_6	$y^{49} + 27y^{48} + \cdots - 27y - 1$
c_3	$y^{49} + 32y^{48} + \cdots + 421y - 36$
c_4	$y^{49} - 5y^{48} + \cdots + 205y - 36$
c_5, c_{12}	$y^{49} + 42y^{48} + \cdots - 24y - 1$
c_7	$y^{49} - 20y^{48} + \cdots + 12105y - 25$
c_8	$4(4y^{49} - 45y^{48} + \cdots + 32y - 1)$
c_9	$4(4y^{49} - 73y^{48} + \cdots + 3046y - 81)$
c_{10}	$4(4y^{49} - 5y^{48} + \cdots - 43y - 1)$
c_{11}	$y^{49} - 23y^{48} + \cdots + 136y - 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.188959 + 0.981263I$ $a = -0.143520 + 0.549754I$ $b = -2.19733 + 1.11310I$	$-0.942663 - 0.159201I$	$-22.5869 + 18.4049I$
$u = 0.188959 - 0.981263I$ $a = -0.143520 - 0.549754I$ $b = -2.19733 - 1.11310I$	$-0.942663 + 0.159201I$	$-22.5869 - 18.4049I$
$u = -0.183744 + 0.965735I$ $a = 0.406272 - 0.785388I$ $b = 0.61408 + 1.55027I$	$-2.70027 + 5.07314I$	$-14.2068 + 0.9096I$
$u = -0.183744 - 0.965735I$ $a = 0.406272 + 0.785388I$ $b = 0.61408 - 1.55027I$	$-2.70027 - 5.07314I$	$-14.2068 - 0.9096I$
$u = -0.916701 + 0.347704I$ $a = 0.133869 + 1.209820I$ $b = 0.655333 + 1.101740I$	$-1.62968 - 5.55597I$	$-11.46152 + 8.23802I$
$u = -0.916701 - 0.347704I$ $a = 0.133869 - 1.209820I$ $b = 0.655333 - 1.101740I$	$-1.62968 + 5.55597I$	$-11.46152 - 8.23802I$
$u = 1.015600 + 0.105450I$ $a = -0.236161 + 0.518753I$ $b = 0.197731 + 0.715989I$	$0.329735 - 0.576007I$	$-0.273875 - 0.907726I$
$u = 1.015600 - 0.105450I$ $a = -0.236161 - 0.518753I$ $b = 0.197731 - 0.715989I$	$0.329735 + 0.576007I$	$-0.273875 + 0.907726I$
$u = -0.574235 + 0.858187I$ $a = 1.55403 - 0.46063I$ $b = 0.507295 - 0.731813I$	$-0.03318 + 6.36851I$	$-8.00000 - 8.22142I$
$u = -0.574235 - 0.858187I$ $a = 1.55403 + 0.46063I$ $b = 0.507295 + 0.731813I$	$-0.03318 - 6.36851I$	$-8.00000 + 8.22142I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.175274 + 0.863770I$ $a = -0.67843 + 1.46849I$ $b = -1.40852 - 0.54524I$	$-0.733049 - 0.941447I$	$13.11065 - 2.55502I$
$u = 0.175274 - 0.863770I$ $a = -0.67843 - 1.46849I$ $b = -1.40852 + 0.54524I$	$-0.733049 + 0.941447I$	$13.11065 + 2.55502I$
$u = -0.351709 + 0.790248I$ $a = 1.50059 + 1.93010I$ $b = 1.42594 - 0.11478I$	$-4.62288 + 1.60572I$	$-9.53892 - 2.91137I$
$u = -0.351709 - 0.790248I$ $a = 1.50059 - 1.93010I$ $b = 1.42594 + 0.11478I$	$-4.62288 - 1.60572I$	$-9.53892 + 2.91137I$
$u = -0.147081 + 0.804917I$ $a = 0.88940 - 1.29917I$ $b = 0.946314 - 0.007184I$	$2.17734 + 5.19829I$	$-4.03795 - 7.60271I$
$u = -0.147081 - 0.804917I$ $a = 0.88940 + 1.29917I$ $b = 0.946314 + 0.007184I$	$2.17734 - 5.19829I$	$-4.03795 + 7.60271I$
$u = 0.060289 + 0.789565I$ $a = -0.26086 - 2.68961I$ $b = -0.728877 + 0.387542I$	$-3.09221 - 9.64003I$	$-8.07524 + 4.27006I$
$u = 0.060289 - 0.789565I$ $a = -0.26086 + 2.68961I$ $b = -0.728877 - 0.387542I$	$-3.09221 + 9.64003I$	$-8.07524 - 4.27006I$
$u = -0.184376 + 1.225160I$ $a = -0.98325 - 1.03259I$ $b = -0.714989 + 0.219067I$	$-0.92145 + 10.01710I$	0
$u = -0.184376 - 1.225160I$ $a = -0.98325 + 1.03259I$ $b = -0.714989 - 0.219067I$	$-0.92145 - 10.01710I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.297501+0.697450I$ $a=-0.214720+0.608890I$ $b=-0.391206-1.126260I$	$-3.19753-2.97879I$	$-9.24185-0.84704I$
$u=-0.297501-0.697450I$ $a=-0.214720-0.608890I$ $b=-0.391206+1.126260I$	$-3.19753+2.97879I$	$-9.24185+0.84704I$
$u=\ \ 0.707864+0.017124I$ $a=-1.36238-0.64472I$ $b=-0.864672-0.871342I$	$-3.07012-3.12345I$	$-15.0934+5.2189I$
$u=\ \ 0.707864-0.017124I$ $a=-1.36238+0.64472I$ $b=-0.864672+0.871342I$	$-3.07012+3.12345I$	$-15.0934-5.2189I$
$u=\ \ 1.29515$ $a=-0.0354736$ $b=-0.294822$	-2.82144	0
$u=\ \ 0.636506+0.244611I$ $a=-0.755930+0.700498I$ $b=-0.821193+0.052728I$	$-2.39166-0.15754I$	$-17.0178-0.4986I$
$u=\ \ 0.636506-0.244611I$ $a=-0.755930-0.700498I$ $b=-0.821193-0.052728I$	$-2.39166+0.15754I$	$-17.0178+0.4986I$
$u=\ \ 0.299857+1.304520I$ $a=\ \ 0.432579-0.487710I$ $b=\ \ 0.540505+1.108750I$	$5.39975-4.96651I$	0
$u=\ \ 0.299857-1.304520I$ $a=\ \ 0.432579+0.487710I$ $b=\ \ 0.540505-1.108750I$	$5.39975+4.96651I$	0
$u=-0.598121+1.242950I$ $a=\ \ 1.246850+0.053188I$ $b=\ \ 0.84421-1.50043I$	$1.23890+11.22100I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.598121-1.242950I$ $a=\ \ 1.246850-0.053188I$ $b=\ \ 0.84421+1.50043I$	$1.23890-11.22100I$	0
$u=\ \ 0.517528+1.308160I$ $a=-0.980525+0.532462I$ $b=-0.86741-1.24623I$	$0.89107-8.02939I$	0
$u=\ \ 0.517528-1.308160I$ $a=-0.980525-0.532462I$ $b=-0.86741+1.24623I$	$0.89107+8.02939I$	0
$u=\ \ 0.05565+1.41379I$ $a=\ \ 0.042561-0.806234I$ $b=\ \ 0.283453+0.591147I$	$4.98689-4.40383I$	0
$u=\ \ 0.05565-1.41379I$ $a=\ \ 0.042561+0.806234I$ $b=\ \ 0.283453-0.591147I$	$4.98689+4.40383I$	0
$u=\ \ 0.20904+1.40582I$ $a=-0.616166+0.917200I$ $b=-0.119538-0.741508I$	$5.11423-3.73999I$	0
$u=\ \ 0.20904-1.40582I$ $a=-0.616166-0.917200I$ $b=-0.119538+0.741508I$	$5.11423+3.73999I$	0
$u=-0.35032+1.37835I$ $a=-0.716254+0.221141I$ $b=-0.560401+1.099150I$	$2.80448-1.29277I$	0
$u=-0.35032-1.37835I$ $a=-0.716254-0.221141I$ $b=-0.560401-1.099150I$	$2.80448+1.29277I$	0
$u=-1.45123+0.05010I$ $a=-0.228993+0.217199I$ $b=-0.020889+0.200080I$	$-7.36613+5.80434I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.45123-0.05010I$ $a=-0.228993-0.217199I$ $b=-0.020889-0.200080I$	$-7.36613-5.80434I$	0
$u=0.64740+1.30186I$ $a=0.649978+0.340741I$ $b=0.267851+0.513008I$	$2.46817-1.99964I$	0
$u=0.64740-1.30186I$ $a=0.649978-0.340741I$ $b=0.267851-0.513008I$	$2.46817+1.99964I$	0
$u=0.71352+1.29683I$ $a=-0.844644-0.136553I$ $b=-0.490704-0.675126I$	$2.83516-4.75502I$	0
$u=0.71352-1.29683I$ $a=-0.844644+0.136553I$ $b=-0.490704+0.675126I$	$2.83516+4.75502I$	0
$u=-0.370867+0.309970I$ $a=1.44623+2.43006I$ $b=1.083160-0.259473I$	$-4.60364-0.03482I$	$-15.5435-1.9910I$
$u=-0.370867-0.309970I$ $a=1.44623-2.43006I$ $b=1.083160+0.259473I$	$-4.60364+0.03482I$	$-15.5435+1.9910I$
$u=0.050811+0.340419I$ $a=-1.26280+2.23523I$ $b=-0.782718-0.856643I$	$-3.04508-2.82311I$	$-11.86694+3.34813I$
$u=0.050811-0.340419I$ $a=-1.26280-2.23523I$ $b=-0.782718+0.856643I$	$-3.04508+2.82311I$	$-11.86694-3.34813I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{49}-3u^{48}+\cdots+125u-16)(u^{195}-16u^{194}+\cdots-2141u+88)$
c_2	$(u^{49}-u^{48}+\cdots+u-1)(u^{195}+4u^{194}+\cdots+113416u+11257)$
c_3	$(u^{49}+16u^{47}+\cdots-17u+6)(u^{195}-3u^{194}+\cdots+217741u+10918)$
c_4	$(u^{49}+3u^{48}+\cdots-u-6)(u^{195}+4u^{194}+\cdots+51821u+2894)$
c_5	$(u^{49}+21u^{47}+\cdots-8u+1)(u^{195}-3u^{194}+\cdots+23431u+1133)$
c_6	$(u^{49}+u^{48}+\cdots+u+1)(u^{195}+4u^{194}+\cdots+113416u+11257)$
c_7	$(u^{49}-12u^{48}+\cdots+165u-5)$ $\cdot(u^{195}+11u^{194}+\cdots+218148168u+31728989)$
c_8	$4(2u^{49}-u^{48}+\cdots-14u-1)(2u^{195}+7u^{194}+\cdots-49u+5)$
c_9	$4(2u^{49}-11u^{48}+\cdots-56u-9)$ $\cdot(2u^{195}-9u^{194}+\cdots-57685501u+44225269)$
c_{10}	$4(2u^{49}-11u^{48}+\cdots+7u-1)$ $\cdot(2u^{195}+25u^{194}+\cdots+10298164u+574285)$
c_{11}	$(u^{49}+19u^{48}+\cdots+66u+5)(u^{195}+8u^{194}+\cdots+12939u+1819)$
c_{12}	$(u^{49}+21u^{47}+\cdots-8u-1)(u^{195}-3u^{194}+\cdots+23431u+1133)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{49}+17y^{48}+\cdots-6711y-256)$ $\cdot(y^{195}+62y^{194}+\cdots-185895y-7744)$
c_2, c_6	$(y^{49}+27y^{48}+\cdots-27y-1)$ $\cdot(y^{195}+116y^{194}+\cdots-6845116264y-126720049)$
c_3	$(y^{49}+32y^{48}+\cdots+421y-36)$ $\cdot(y^{195}+45y^{194}+\cdots+993877489y-119202724)$
c_4	$(y^{49}-5y^{48}+\cdots+205y-36)$ $\cdot(y^{195}-28y^{194}+\cdots+583712209y-8375236)$
c_5, c_{12}	$(y^{49}+42y^{48}+\cdots-24y-1)$ $\cdot(y^{195}+147y^{194}+\cdots+20891003y-1283689)$
c_7	$(y^{49}-20y^{48}+\cdots+12105y-25)$ $\cdot(y^{195}+9y^{194}+\cdots-60843014639712268y-1006728742962121)$
c_8	$16(4y^{49}-45y^{48}+\cdots+32y-1)(4y^{195}-73y^{194}+\cdots+211y-25)$
c_9	$16(4y^{49}-73y^{48}+\cdots+3046y-81)$ $\cdot(4y^{195}-261y^{194}+\cdots+8953659438498701y-1955874418122361)$
c_{10}	$16(4y^{49}-5y^{48}+\cdots-43y-1)$ $\cdot(4y^{195}+159y^{194}+\cdots+17488032576876y-329803261225)$
c_{11}	$(y^{49}-23y^{48}+\cdots+136y-25)$ $\cdot(y^{195}-42y^{194}+\cdots-2071600293y-3308761)$