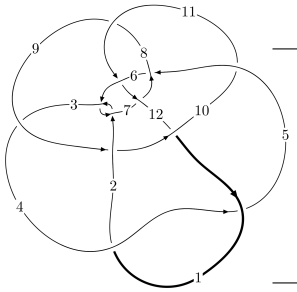
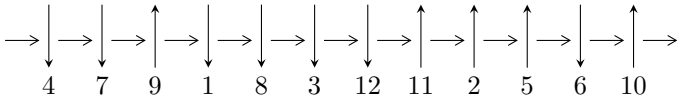
$12a_{1065}$ $(K12a_{1065})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 6.60026 \times 10^{1371} u^{205} + 1.40844 \times 10^{1372} u^{204} + \cdots + 4.43512 \times 10^{1372} b - 7.21056 \times 10^{1376}, \\ & 1.27492 \times 10^{1377} u^{205} + 4.66649 \times 10^{1376} u^{204} + \cdots + 1.02057 \times 10^{1377} a - 1.52758 \times 10^{1381}, \\ & u^{206} + 50 u^{204} + \cdots + 14240 u - 23011 \rangle \\ I_2^u = \langle & -2.24645 \times 10^{57} u^{55} + 3.87827 \times 10^{56} u^{54} + \cdots + 9.69748 \times 10^{54} b + 6.73301 \times 10^{57}, \\ & - 4.34769 \times 10^{57} u^{55} + 9.99420 \times 10^{57} u^{54} + \cdots + 9.69748 \times 10^{54} a - 3.76270 \times 10^{58}, \ u^{56} - u^{55} + \cdots + u - 1 \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 262 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. $\boldsymbol{I_1^u = \langle 6.60 \times 10^{1371} u^{205} + 1.41 \times 10^{1372} u^{204} + \cdots + 4.44 \times 10^{1372} b - 7.21 \times 10^{1376},\ 1.27 \times 10^{1377} u^{205} + 4.67 \times 10^{1376} u^{204} + \cdots + 1.02 \times 10^{1377} a - 1.53 \times 10^{1381},\ u^{206} + 50 u^{204} + \cdots + 14240 u - 23011 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_{12} = \begin{pmatrix} -1.24923u^{205} - 0.457245u^{204} + \cdots + 49046.6u + 14968.0 \\ -0.148818u^{205} - 0.317566u^{204} + \cdots - 1675.80u + 16257.9 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 2.07913u^{205} + 2.01660u^{204} + \cdots - 54117.4u - 89525.8 \\ -0.387228u^{205} + 0.221741u^{204} + \cdots + 22547.3u - 12920.9 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.835289u^{205} - 1.85164u^{204} + \cdots + 2325.95u + 84466.1 \\ 0.403162u^{205} - 0.455726u^{204} + \cdots - 26105.0u + 23498.0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.39805u^{205} - 0.774811u^{204} + \cdots + 47370.8u + 31225.8 \\ -0.148818u^{205} - 0.317566u^{204} + \cdots - 1675.80u + 16257.9 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.112651u^{205} + 0.795357u^{204} + \cdots + 18504.6u - 39304.5 \\ -0.566387u^{205} + 0.141147u^{204} + \cdots + 27229.9u - 8443.97 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.71560u^{205} + 1.16243u^{204} + \cdots - 55839.1u - 50267.9 \\ 0.0904229u^{205} - 0.118107u^{204} + \cdots - 5227.31u + 5260.12 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.02977u^{205} - 2.13736u^{204} + \cdots + 1410.29u + 94281.4 \\ 0.560273u^{205} - 0.495833u^{204} + \cdots - 39580.4u + 26176.1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.190370u^{205} + 0.948223u^{204} + \cdots + 8284.65u - 46005.8 \\ -0.415373u^{205} + 0.213807u^{204} + \cdots + 21806.0u - 11627.6 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4.45801u^{205} - 3.78212u^{204} + \cdots + 131136.u + 149244.$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{206} - 4u^{205} + \cdots - 6646u + 279$
c_2, c_6	$u^{206} + 50u^{204} + \cdots - 14240u - 23011$
c_3	$u^{206} - 23u^{204} + \cdots + 680803696640u - 49121591296$
c_5	$u^{206} - 12u^{205} + \cdots + 188u - 8$
c_7	$u^{206} - 7u^{204} + \cdots + 307888522u - 10416143$
c_8	$u^{206} - 14u^{205} + \cdots + 82275u + 1921$
c_9	$u^{206} - 3u^{205} + \cdots + 549559u - 340933$
c_{10}	$u^{206} - 2u^{205} + \cdots - 252875824155u - 41030919307$
c_{11}	$u^{206} - 4u^{205} + \cdots - 85u + 3$
c_{12}	$u^{206} - 12u^{205} + \cdots - 1031021376u - 198007488$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{206} + 142y^{205} + \cdots + 261434y + 77841$
c_2, c_6	$y^{206} + 100y^{205} + \cdots + 27689085610y + 529506121$
c_3	$y^{206} - 46y^{205} + \cdots - 1.93 \times 10^{23}y + 2.41 \times 10^{21}$
c_5	$y^{206} + 2y^{205} + \cdots + 9776y + 64$
c_7	$y^{206} - 14y^{205} + \cdots + 8508975757402814y + 108496034996449$
c_8	$y^{206} - 36y^{205} + \cdots - 4238192811y + 3690241$
c_9	$y^{206} - 21y^{205} + \cdots - 16612307091225y + 116235310489$
c_{10}	$y^{206} - 98y^{205} + \cdots - 1.61 \times 10^{23}y + 1.68 \times 10^{21}$
c_{11}	$y^{206} - 10y^{205} + \cdots - 283y + 9$
c_{12}	$y^{206} - 60y^{205} + \cdots - 3145705022699527680y + 39206965304070144$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.852378+0.499579I$ $a=\ \ 0.221394+0.192372I$ $b=-0.462433+0.321891I$	$3.63058+3.34731I$	0
$u=-0.852378-0.499579I$ $a=\ \ 0.221394-0.192372I$ $b=-0.462433-0.321891I$	$3.63058-3.34731I$	0
$u=\ \ 0.415178+0.924701I$ $a=-1.37433+1.15611I$ $b=-0.210343-0.935141I$	$6.62024-5.22982I$	0
$u=\ \ 0.415178-0.924701I$ $a=-1.37433-1.15611I$ $b=-0.210343+0.935141I$	$6.62024+5.22982I$	0
$u=\ \ 0.648840+0.789093I$ $a=\ \ 0.362405-0.696253I$ $b=\ \ 0.025672-0.202908I$	$4.12915+0.21751I$	0
$u=\ \ 0.648840-0.789093I$ $a=\ \ 0.362405+0.696253I$ $b=\ \ 0.025672+0.202908I$	$4.12915-0.21751I$	0
$u=-0.299755+0.985648I$ $a=\ \ 0.17545+1.94630I$ $b=-0.081399-1.132500I$	$4.18133+0.96771I$	0
$u=-0.299755-0.985648I$ $a=\ \ 0.17545-1.94630I$ $b=-0.081399+1.132500I$	$4.18133-0.96771I$	0
$u=-0.247149+1.010070I$ $a=-1.42325-1.58111I$ $b=\ \ 0.48621+1.68214I$	$8.65376+0.73150I$	0
$u=-0.247149-1.010070I$ $a=-1.42325+1.58111I$ $b=\ \ 0.48621-1.68214I$	$8.65376-0.73150I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.196900 + 1.039640I$ $a = -0.27451 - 1.91756I$ $b = -0.099253 + 1.145380I$	$8.78142 - 0.45494I$	0
$u = 0.196900 - 1.039640I$ $a = -0.27451 + 1.91756I$ $b = -0.099253 - 1.145380I$	$8.78142 + 0.45494I$	0
$u = -0.919057 + 0.524548I$ $a = -0.507244 + 0.608003I$ $b = -0.270865 + 0.186214I$	$0.27564 + 5.22638I$	0
$u = -0.919057 - 0.524548I$ $a = -0.507244 - 0.608003I$ $b = -0.270865 - 0.186214I$	$0.27564 - 5.22638I$	0
$u = -0.011444 + 0.936367I$ $a = -1.92823 + 1.05959I$ $b = 2.26010 - 0.55093I$	$4.64921 + 0.77443I$	0
$u = -0.011444 - 0.936367I$ $a = -1.92823 - 1.05959I$ $b = 2.26010 + 0.55093I$	$4.64921 - 0.77443I$	0
$u = 0.121941 + 1.056860I$ $a = -0.98991 + 2.05783I$ $b = 0.55495 - 2.05384I$	$4.18537 - 0.25383I$	0
$u = 0.121941 - 1.056860I$ $a = -0.98991 - 2.05783I$ $b = 0.55495 + 2.05384I$	$4.18537 + 0.25383I$	0
$u = 0.914468 + 0.197123I$ $a = -0.047993 - 0.236538I$ $b = -0.746350 - 0.718300I$	$2.76022 - 6.79685I$	0
$u = 0.914468 - 0.197123I$ $a = -0.047993 + 0.236538I$ $b = -0.746350 + 0.718300I$	$2.76022 + 6.79685I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.816119+0.426958I$ $a=\ \ 1.077320+0.791595I$ $b=\ \ 0.868748-0.888779I$	$4.24470+4.76496I$	0
$u=-0.816119-0.426958I$ $a=\ \ 1.077320-0.791595I$ $b=\ \ 0.868748+0.888779I$	$4.24470-4.76496I$	0
$u=\ \ 0.279578+0.866302I$ $a=\ \ 0.42576+2.75431I$ $b=-1.07454-1.15296I$	$-0.0946138+0.0931659I$	0
$u=\ \ 0.279578-0.866302I$ $a=\ \ 0.42576-2.75431I$ $b=-1.07454+1.15296I$	$-0.0946138-0.0931659I$	0
$u=\ \ 0.380299+1.022350I$ $a=\ \ 0.67042-1.95304I$ $b=\ \ 0.13729+1.53736I$	$6.87881-0.71094I$	0
$u=\ \ 0.380299-1.022350I$ $a=\ \ 0.67042+1.95304I$ $b=\ \ 0.13729-1.53736I$	$6.87881+0.71094I$	0
$u=-0.384170+0.817717I$ $a=-0.15915-2.83800I$ $b=-0.89962+1.09241I$	$-3.10470+4.33797I$	0
$u=-0.384170-0.817717I$ $a=-0.15915+2.83800I$ $b=-0.89962-1.09241I$	$-3.10470-4.33797I$	0
$u=-1.077140+0.218578I$ $a=-0.002824-0.315354I$ $b=-0.832742-0.964996I$	$-1.02001-6.68521I$	0
$u=-1.077140-0.218578I$ $a=-0.002824+0.315354I$ $b=-0.832742+0.964996I$	$-1.02001+6.68521I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.265527 + 0.859681I$ $a = -0.546821 + 0.022818I$ $b = 1.51083 - 0.58470I$	$-0.14831 - 2.62345I$	0
$u = 0.265527 - 0.859681I$ $a = -0.546821 - 0.022818I$ $b = 1.51083 + 0.58470I$	$-0.14831 + 2.62345I$	0
$u = 0.609674 + 0.644447I$ $a = 0.194304 + 0.179284I$ $b = -0.991421 - 0.189066I$	$-1.57551 - 5.11041I$	0
$u = 0.609674 - 0.644447I$ $a = 0.194304 - 0.179284I$ $b = -0.991421 + 0.189066I$	$-1.57551 + 5.11041I$	0
$u = 1.112390 + 0.107441I$ $a = 0.284219 - 0.318587I$ $b = -0.252935 - 0.027578I$	$-2.61789 + 0.31689I$	0
$u = 1.112390 - 0.107441I$ $a = 0.284219 + 0.318587I$ $b = -0.252935 + 0.027578I$	$-2.61789 - 0.31689I$	0
$u = -0.107963 + 1.115960I$ $a = 0.81574 + 1.88221I$ $b = -0.88592 - 2.14946I$	$4.58557 - 0.30273I$	0
$u = -0.107963 - 1.115960I$ $a = 0.81574 - 1.88221I$ $b = -0.88592 + 2.14946I$	$4.58557 + 0.30273I$	0
$u = -0.476820 + 1.021780I$ $a = 0.404735 + 1.165530I$ $b = 0.142026 - 0.170506I$	$2.29162 - 0.22801I$	0
$u = -0.476820 - 1.021780I$ $a = 0.404735 - 1.165530I$ $b = 0.142026 + 0.170506I$	$2.29162 + 0.22801I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.358266 + 1.074370I$ $a = -1.29758 + 0.75212I$ $b = 0.71239 - 1.32851I$	$7.42750 + 3.00839I$	0
$u = 0.358266 - 1.074370I$ $a = -1.29758 - 0.75212I$ $b = 0.71239 + 1.32851I$	$7.42750 - 3.00839I$	0
$u = 0.759917 + 0.412152I$ $a = 1.67316 - 0.72560I$ $b = 0.923789 - 0.335686I$	$-1.57514 - 2.05589I$	0
$u = 0.759917 - 0.412152I$ $a = 1.67316 + 0.72560I$ $b = 0.923789 + 0.335686I$	$-1.57514 + 2.05589I$	0
$u = -0.403296 + 0.759359I$ $a = -0.160593 - 0.156643I$ $b = 1.231220 + 0.608968I$	$-3.24962 - 0.85600I$	0
$u = -0.403296 - 0.759359I$ $a = -0.160593 + 0.156643I$ $b = 1.231220 - 0.608968I$	$-3.24962 + 0.85600I$	0
$u = -0.456692 + 1.049510I$ $a = 0.403526 + 1.281480I$ $b = 0.150743 - 0.224019I$	$2.29639 - 0.22767I$	0
$u = -0.456692 - 1.049510I$ $a = 0.403526 - 1.281480I$ $b = 0.150743 + 0.224019I$	$2.29639 + 0.22767I$	0
$u = 0.915348 + 0.694450I$ $a = 0.104046 - 0.419376I$ $b = 0.569474 + 0.310786I$	$-1.227550 - 0.435334I$	0
$u = 0.915348 - 0.694450I$ $a = 0.104046 + 0.419376I$ $b = 0.569474 - 0.310786I$	$-1.227550 + 0.435334I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.532731 + 1.025950I$ $a = -0.885459 + 0.487937I$ $b = -0.859686 + 0.034392I$	$0.12635 - 2.70025I$	0
$u = 0.532731 - 1.025950I$ $a = -0.885459 - 0.487937I$ $b = -0.859686 - 0.034392I$	$0.12635 + 2.70025I$	0
$u = -0.107066 + 0.833430I$ $a = 1.334520 + 0.048843I$ $b = -1.31665 - 0.52950I$	$4.62180 - 0.51584I$	0
$u = -0.107066 - 0.833430I$ $a = 1.334520 - 0.048843I$ $b = -1.31665 + 0.52950I$	$4.62180 + 0.51584I$	0
$u = -0.665342 + 0.952042I$ $a = -0.904490 - 0.486367I$ $b = -0.402480 + 0.491378I$	$2.05534 + 4.67725I$	0
$u = -0.665342 - 0.952042I$ $a = -0.904490 + 0.486367I$ $b = -0.402480 - 0.491378I$	$2.05534 - 4.67725I$	0
$u = 0.826394 + 0.127642I$ $a = 0.361916 + 0.024212I$ $b = 0.950630 - 0.523871I$	$-0.98212 + 1.37040I$	0
$u = 0.826394 - 0.127642I$ $a = 0.361916 - 0.024212I$ $b = 0.950630 + 0.523871I$	$-0.98212 - 1.37040I$	0
$u = -0.419673 + 0.717810I$ $a = 0.137164 - 0.568619I$ $b = -1.269710 + 0.347068I$	$1.39966 + 8.61799I$	0
$u = -0.419673 - 0.717810I$ $a = 0.137164 + 0.568619I$ $b = -1.269710 - 0.347068I$	$1.39966 - 8.61799I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.822934+0.081342I$ $a=\ \ 1.76184+0.42924I$ $b=\ \ 1.039030+0.914148I$	$3.99123+7.92047I$	0
$u=-0.822934-0.081342I$ $a=\ \ 1.76184-0.42924I$ $b=\ \ 1.039030-0.914148I$	$3.99123-7.92047I$	0
$u=-0.438018+1.095550I$ $a=\ \ 0.01326+2.15202I$ $b=\ \ 1.22517-0.83549I$	$3.45836+11.03310I$	0
$u=-0.438018-1.095550I$ $a=\ \ 0.01326-2.15202I$ $b=\ \ 1.22517+0.83549I$	$3.45836-11.03310I$	0
$u=-0.707653+0.945252I$ $a=-0.501513+0.431326I$ $b=\ \ 0.775148+0.143708I$	$2.09667-4.14322I$	0
$u=-0.707653-0.945252I$ $a=-0.501513-0.431326I$ $b=\ \ 0.775148-0.143708I$	$2.09667+4.14322I$	0
$u=-0.705918+0.415082I$ $a=\ \ 0.466083-0.033394I$ $b=\ \ 1.055500+0.327775I$	$-0.250568-0.890470I$	0
$u=-0.705918-0.415082I$ $a=\ \ 0.466083+0.033394I$ $b=\ \ 1.055500-0.327775I$	$-0.250568+0.890470I$	0
$u=\ \ 0.535241+0.614850I$ $a=-1.28423+3.02459I$ $b=-0.619608-0.936648I$	$2.44673-8.59776I$	0
$u=\ \ 0.535241-0.614850I$ $a=-1.28423-3.02459I$ $b=-0.619608+0.936648I$	$2.44673+8.59776I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.033252+0.811950I$ $a=-1.22833-1.92504I$ $b=\ \ 1.226220+0.478441I$	$1.50486+2.03777I$	0
$u=-0.033252-0.811950I$ $a=-1.22833+1.92504I$ $b=\ \ 1.226220-0.478441I$	$1.50486-2.03777I$	0
$u=-0.549754+1.054020I$ $a=-0.25095-1.73819I$ $b=-0.981344+0.496292I$	$1.58501+5.67095I$	0
$u=-0.549754-1.054020I$ $a=-0.25095+1.73819I$ $b=-0.981344-0.496292I$	$1.58501-5.67095I$	0
$u=\ \ 0.378154+1.127360I$ $a=\ \ 1.16278-1.30964I$ $b=\ \ 0.145935+0.401150I$	$8.21574+3.38820I$	0
$u=\ \ 0.378154-1.127360I$ $a=\ \ 1.16278+1.30964I$ $b=\ \ 0.145935-0.401150I$	$8.21574-3.38820I$	0
$u=-0.524164+1.070540I$ $a=-0.805203-1.019350I$ $b=-0.831685+0.534672I$	$2.58286+7.16096I$	0
$u=-0.524164-1.070540I$ $a=-0.805203+1.019350I$ $b=-0.831685-0.534672I$	$2.58286-7.16096I$	0
$u=\ \ 0.421647+1.115260I$ $a=\ \ 1.42759+0.15198I$ $b=\ \ 0.719870+0.083101I$	$5.27680-11.23860I$	0
$u=\ \ 0.421647-1.115260I$ $a=\ \ 1.42759-0.15198I$ $b=\ \ 0.719870-0.083101I$	$5.27680+11.23860I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.375545 + 1.138710I$ $a = -0.24375 - 2.01328I$ $b = 0.935732 + 0.798136I$	$2.12136 - 7.40092I$	0
$u = 0.375545 - 1.138710I$ $a = -0.24375 + 2.01328I$ $b = 0.935732 - 0.798136I$	$2.12136 + 7.40092I$	0
$u = 1.200120 + 0.041594I$ $a = 1.092250 + 0.248745I$ $b = 1.17798 + 1.27007I$	$-1.02024 + 1.69563I$	0
$u = 1.200120 - 0.041594I$ $a = 1.092250 - 0.248745I$ $b = 1.17798 - 1.27007I$	$-1.02024 - 1.69563I$	0
$u = 0.167997 + 0.772634I$ $a = 1.22340 + 1.97951I$ $b = -0.362203 - 0.024099I$	$-0.50571 - 2.98010I$	0
$u = 0.167997 - 0.772634I$ $a = 1.22340 - 1.97951I$ $b = -0.362203 + 0.024099I$	$-0.50571 + 2.98010I$	0
$u = 0.506674 + 1.102510I$ $a = -0.16737 + 1.81510I$ $b = -1.076060 - 0.739460I$	$1.74707 - 5.94836I$	0
$u = 0.506674 - 1.102510I$ $a = -0.16737 - 1.81510I$ $b = -1.076060 + 0.739460I$	$1.74707 + 5.94836I$	0
$u = 1.121240 + 0.464967I$ $a = 0.088981 + 0.384115I$ $b = -0.93261 + 1.20327I$	$-2.88716 + 1.88909I$	0
$u = 1.121240 - 0.464967I$ $a = 0.088981 - 0.384115I$ $b = -0.93261 - 1.20327I$	$-2.88716 - 1.88909I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.526374+1.094230I$ $a=-0.65069-1.85443I$ $b=-0.462201+0.597448I$	$1.32353+7.10432I$	0
$u=-0.526374-1.094230I$ $a=-0.65069+1.85443I$ $b=-0.462201-0.597448I$	$1.32353-7.10432I$	0
$u=-0.668922+1.020000I$ $a=\ \ 0.80898+1.74359I$ $b=\ \ 1.25535-1.10118I$	$5.84970+5.51677I$	0
$u=-0.668922-1.020000I$ $a=\ \ 0.80898-1.74359I$ $b=\ \ 1.25535+1.10118I$	$5.84970-5.51677I$	0
$u=-0.362972+1.166880I$ $a=-0.05599-1.57405I$ $b=-1.55200+0.63923I$	$8.51017+7.88042I$	0
$u=-0.362972-1.166880I$ $a=-0.05599+1.57405I$ $b=-1.55200-0.63923I$	$8.51017-7.88042I$	0
$u=\ \ 0.476971+1.128190I$ $a=-0.179142+1.118020I$ $b=-0.579401-0.358466I$	$1.17039-3.51010I$	0
$u=\ \ 0.476971-1.128190I$ $a=-0.179142-1.118020I$ $b=-0.579401+0.358466I$	$1.17039+3.51010I$	0
$u=\ \ 0.376067+1.168630I$ $a=-0.32751-1.58525I$ $b=\ \ 0.411466+0.521518I$	$1.62907-4.76673I$	0
$u=\ \ 0.376067-1.168630I$ $a=-0.32751+1.58525I$ $b=\ \ 0.411466-0.521518I$	$1.62907+4.76673I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.171800 + 0.366630I$ $a = 0.1145440 + 0.0374509I$ $b = 1.02374 - 1.00274I$	$3.9713 + 15.2623I$	0
$u = 1.171800 - 0.366630I$ $a = 0.1145440 - 0.0374509I$ $b = 1.02374 + 1.00274I$	$3.9713 - 15.2623I$	0
$u = -0.506245 + 0.582562I$ $a = 0.266304 - 0.349512I$ $b = -0.918459 - 0.814549I$	$4.82578 - 0.57935I$	0
$u = -0.506245 - 0.582562I$ $a = 0.266304 + 0.349512I$ $b = -0.918459 + 0.814549I$	$4.82578 + 0.57935I$	0
$u = 0.536719 + 1.107140I$ $a = 0.33564 - 2.01729I$ $b = 1.39714 + 1.12530I$	$6.09694 - 10.26220I$	0
$u = 0.536719 - 1.107140I$ $a = 0.33564 + 2.01729I$ $b = 1.39714 - 1.12530I$	$6.09694 + 10.26220I$	0
$u = -0.358651 + 1.178810I$ $a = 1.110370 - 0.368430I$ $b = 0.875274 + 0.099673I$	$-0.26702 + 4.90685I$	0
$u = -0.358651 - 1.178810I$ $a = 1.110370 + 0.368430I$ $b = 0.875274 - 0.099673I$	$-0.26702 - 4.90685I$	0
$u = -0.328779 + 1.187870I$ $a = -0.25669 + 1.77124I$ $b = 0.563631 - 1.058650I$	$8.43895 + 6.37109I$	0
$u = -0.328779 - 1.187870I$ $a = -0.25669 - 1.77124I$ $b = 0.563631 + 1.058650I$	$8.43895 - 6.37109I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.045265 + 0.764393I$ $a = -1.04052 + 1.35969I$ $b = -0.826361 - 0.719990I$	$5.69181 - 5.01829I$	0
$u = 0.045265 - 0.764393I$ $a = -1.04052 - 1.35969I$ $b = -0.826361 + 0.719990I$	$5.69181 + 5.01829I$	0
$u = 0.521106 + 1.129770I$ $a = -0.32844 + 1.97416I$ $b = -0.165289 - 0.817778I$	$7.16871 - 11.13770I$	0
$u = 0.521106 - 1.129770I$ $a = -0.32844 - 1.97416I$ $b = -0.165289 + 0.817778I$	$7.16871 + 11.13770I$	0
$u = 0.661751 + 0.356658I$ $a = -0.192693 + 0.555665I$ $b = -1.16055 + 0.86487I$	$3.89196 + 5.58337I$	0
$u = 0.661751 - 0.356658I$ $a = -0.192693 - 0.555665I$ $b = -1.16055 - 0.86487I$	$3.89196 - 5.58337I$	0
$u = 0.644698 + 0.376463I$ $a = 0.552251 - 0.139413I$ $b = 0.639162 + 0.250368I$	$-1.210990 - 0.728827I$	0
$u = 0.644698 - 0.376463I$ $a = 0.552251 + 0.139413I$ $b = 0.639162 - 0.250368I$	$-1.210990 + 0.728827I$	0
$u = -0.047271 + 0.741986I$ $a = 0.571426 - 0.737223I$ $b = 1.150000 - 0.100853I$	$-1.59689 + 2.82313I$	0
$u = -0.047271 - 0.741986I$ $a = 0.571426 + 0.737223I$ $b = 1.150000 + 0.100853I$	$-1.59689 - 2.82313I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.639156+0.366421I$ $a=\ 0.647854-0.964296I$ $b=\ 0.550908+0.465381I$	$-0.80345-2.53442I$	0
$u=-0.639156-0.366421I$ $a=\ 0.647854+0.964296I$ $b=\ 0.550908-0.465381I$	$-0.80345+2.53442I$	0
$u=\ 1.107870+0.612613I$ $a=\ 0.105082+0.220991I$ $b=\ 1.008960-0.925342I$	$3.90029+1.98715I$	0
$u=\ 1.107870-0.612613I$ $a=\ 0.105082-0.220991I$ $b=\ 1.008960+0.925342I$	$3.90029-1.98715I$	0
$u=-0.724392+0.061562I$ $a=-0.163608-0.294618I$ $b=-0.955230-0.748090I$	$-0.00820-5.47176I$	0
$u=-0.724392-0.061562I$ $a=-0.163608+0.294618I$ $b=-0.955230+0.748090I$	$-0.00820+5.47176I$	0
$u=-0.366325+1.220980I$ $a=-0.667991-0.742299I$ $b=\ 0.258657+1.127310I$	$3.85356-1.28006I$	0
$u=-0.366325-1.220980I$ $a=-0.667991+0.742299I$ $b=\ 0.258657-1.127310I$	$3.85356+1.28006I$	0
$u=-0.493672+1.175810I$ $a=\ 0.12178+1.86176I$ $b=\ 1.19515-1.12533I$	$3.10291+10.00470I$	0
$u=-0.493672-1.175810I$ $a=\ 0.12178-1.86176I$ $b=\ 1.19515+1.12533I$	$3.10291-10.00470I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.320977 + 1.234760I$ $a = 0.11876 + 1.48707I$ $b = -1.55461 - 0.87276I$	$4.21648 - 2.83698I$	0
$u = 0.320977 - 1.234760I$ $a = 0.11876 - 1.48707I$ $b = -1.55461 + 0.87276I$	$4.21648 + 2.83698I$	0
$u = -1.227180 + 0.377158I$ $a = 0.152244 - 0.076691I$ $b = 1.005490 + 0.987514I$	$-0.88981 - 9.23577I$	0
$u = -1.227180 - 0.377158I$ $a = 0.152244 + 0.076691I$ $b = 1.005490 - 0.987514I$	$-0.88981 + 9.23577I$	0
$u = 0.029285 + 0.708957I$ $a = -2.65155 - 0.34743I$ $b = -0.787678 + 0.170716I$	$-0.93716 + 2.89635I$	0
$u = 0.029285 - 0.708957I$ $a = -2.65155 + 0.34743I$ $b = -0.787678 - 0.170716I$	$-0.93716 - 2.89635I$	0
$u = 0.651493 + 0.275231I$ $a = -0.35287 + 1.64686I$ $b = 0.347229 - 0.647416I$	$4.69712 + 6.54557I$	0
$u = 0.651493 - 0.275231I$ $a = -0.35287 - 1.64686I$ $b = 0.347229 + 0.647416I$	$4.69712 - 6.54557I$	0
$u = 0.136428 + 1.291980I$ $a = 0.730581 + 0.487452I$ $b = -0.472760 - 0.131455I$	$0.06666 - 2.58174I$	0
$u = 0.136428 - 1.291980I$ $a = 0.730581 - 0.487452I$ $b = -0.472760 + 0.131455I$	$0.06666 + 2.58174I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.386360 + 0.583380I$ $a = 0.640460 + 0.139417I$ $b = 1.024960 + 0.106701I$	$-1.327010 + 0.308275I$	0
$u = 0.386360 - 0.583380I$ $a = 0.640460 - 0.139417I$ $b = 1.024960 - 0.106701I$	$-1.327010 - 0.308275I$	0
$u = -0.468323 + 1.222100I$ $a = 1.116960 + 0.772472I$ $b = -1.13087 - 1.72999I$	$7.6886 + 12.4448I$	0
$u = -0.468323 - 1.222100I$ $a = 1.116960 - 0.772472I$ $b = -1.13087 + 1.72999I$	$7.6886 - 12.4448I$	0
$u = 0.451546 + 1.251300I$ $a = -0.02296 - 1.71775I$ $b = 1.05313 + 1.25599I$	$6.93363 - 11.35020I$	0
$u = 0.451546 - 1.251300I$ $a = -0.02296 + 1.71775I$ $b = 1.05313 - 1.25599I$	$6.93363 + 11.35020I$	0
$u = -0.608367 + 0.266864I$ $a = 1.168620 + 0.527328I$ $b = 0.392295 + 0.593931I$	$0.43871 - 2.75508I$	0
$u = -0.608367 - 0.266864I$ $a = 1.168620 - 0.527328I$ $b = 0.392295 - 0.593931I$	$0.43871 + 2.75508I$	0
$u = 0.042841 + 0.654641I$ $a = -1.48464 + 3.12373I$ $b = 0.821388 - 0.187262I$	$5.64945 - 5.84406I$	0
$u = 0.042841 - 0.654641I$ $a = -1.48464 - 3.12373I$ $b = 0.821388 + 0.187262I$	$5.64945 + 5.84406I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.641449 + 1.181410I$ $a = 0.340434 + 0.607677I$ $b = 1.010350 - 0.655057I$	$4.01723 + 3.52507I$	0
$u = 0.641449 - 1.181410I$ $a = 0.340434 - 0.607677I$ $b = 1.010350 + 0.655057I$	$4.01723 - 3.52507I$	0
$u = 0.483975 + 1.254960I$ $a = 0.977025 - 0.781346I$ $b = -0.97315 + 1.66864I$	$3.06047 - 6.96857I$	0
$u = 0.483975 - 1.254960I$ $a = 0.977025 + 0.781346I$ $b = -0.97315 - 1.66864I$	$3.06047 + 6.96857I$	0
$u = -0.578899 + 1.253330I$ $a = 0.824389 + 0.570641I$ $b = -0.90245 - 1.34868I$	$6.86275 + 0.88219I$	0
$u = -0.578899 - 1.253330I$ $a = 0.824389 - 0.570641I$ $b = -0.90245 + 1.34868I$	$6.86275 - 0.88219I$	0
$u = 0.803577 + 1.128320I$ $a = -0.484065 + 0.399023I$ $b = -0.497657 - 0.412129I$	$4.73045 - 6.26396I$	0
$u = 0.803577 - 1.128320I$ $a = -0.484065 - 0.399023I$ $b = -0.497657 + 0.412129I$	$4.73045 + 6.26396I$	0
$u = -0.457075 + 1.316180I$ $a = 0.022975 - 1.249120I$ $b = -1.94992 + 0.79489I$	$7.72901 - 2.85077I$	0
$u = -0.457075 - 1.316180I$ $a = 0.022975 + 1.249120I$ $b = -1.94992 - 0.79489I$	$7.72901 + 2.85077I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.674436 + 1.225800I$ $a = 0.42559 - 1.50628I$ $b = 1.33122 + 1.31365I$	$-0.33423 - 8.29676I$	0
$u = 0.674436 - 1.225800I$ $a = 0.42559 + 1.50628I$ $b = 1.33122 - 1.31365I$	$-0.33423 + 8.29676I$	0
$u = -0.605311 + 1.267640I$ $a = 0.24613 + 1.53081I$ $b = 1.25977 - 1.30425I$	$2.25972 + 12.64170I$	0
$u = -0.605311 - 1.267640I$ $a = 0.24613 - 1.53081I$ $b = 1.25977 + 1.30425I$	$2.25972 - 12.64170I$	0
$u = -0.139301 + 1.400190I$ $a = -0.006531 - 1.026620I$ $b = -0.383177 + 1.350500I$	$5.11164 - 1.97608I$	0
$u = -0.139301 - 1.400190I$ $a = -0.006531 + 1.026620I$ $b = -0.383177 - 1.350500I$	$5.11164 + 1.97608I$	0
$u = -0.356540 + 0.462735I$ $a = -0.685647 - 0.540715I$ $b = -1.246610 - 0.552328I$	$1.39368 - 7.44206I$	0
$u = -0.356540 - 0.462735I$ $a = -0.685647 + 0.540715I$ $b = -1.246610 + 0.552328I$	$1.39368 + 7.44206I$	0
$u = -0.195061 + 0.544042I$ $a = 1.92191 - 4.40898I$ $b = -0.206824 - 0.148804I$	$-2.60924 - 2.39781I$	0
$u = -0.195061 - 0.544042I$ $a = 1.92191 + 4.40898I$ $b = -0.206824 + 0.148804I$	$-2.60924 + 2.39781I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.69440 + 1.27289I$ $a = -0.38479 + 1.59070I$ $b = -1.21982 - 1.12592I$	$6.8691 - 21.8699I$	0
$u = 0.69440 - 1.27289I$ $a = -0.38479 - 1.59070I$ $b = -1.21982 + 1.12592I$	$6.8691 + 21.8699I$	0
$u = 0.03716 + 1.45902I$ $a = 0.510054 - 1.078360I$ $b = -0.535979 + 0.994689I$	$11.61090 - 1.61773I$	0
$u = 0.03716 - 1.45902I$ $a = 0.510054 + 1.078360I$ $b = -0.535979 - 0.994689I$	$11.61090 + 1.61773I$	0
$u = 0.084173 + 0.532324I$ $a = -1.049450 + 0.056851I$ $b = -1.085340 + 0.455507I$	$-0.36464 + 4.75294I$	0
$u = 0.084173 - 0.532324I$ $a = -1.049450 - 0.056851I$ $b = -1.085340 - 0.455507I$	$-0.36464 - 4.75294I$	0
$u = -0.70192 + 1.29041I$ $a = -0.38147 - 1.54927I$ $b = -1.19889 + 1.08545I$	$2.0841 + 16.0213I$	0
$u = -0.70192 - 1.29041I$ $a = -0.38147 + 1.54927I$ $b = -1.19889 - 1.08545I$	$2.0841 - 16.0213I$	0
$u = -0.56563 + 1.35626I$ $a = -0.145534 - 0.571325I$ $b = -0.446267 + 0.463935I$	$6.27303 + 3.07214I$	0
$u = -0.56563 - 1.35626I$ $a = -0.145534 + 0.571325I$ $b = -0.446267 - 0.463935I$	$6.27303 - 3.07214I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.40829+0.43607I$ $a=\ 0.1253120+0.0125376I$ $b=\ 0.005780-0.617427I$	$2.63595+5.46050I$	0
$u=-1.40829-0.43607I$ $a=\ 0.1253120-0.0125376I$ $b=\ 0.005780+0.617427I$	$2.63595-5.46050I$	0
$u=-0.71735+1.30546I$ $a=\ 0.245118+0.816148I$ $b=\ 0.438392-0.861213I$	$5.83739+1.69622I$	0
$u=-0.71735-1.30546I$ $a=\ 0.245118-0.816148I$ $b=\ 0.438392+0.861213I$	$5.83739-1.69622I$	0
$u=\ 0.37424+1.44855I$ $a=-0.176351+0.659562I$ $b=-0.258628-0.942065I$	$6.86873+0.80991I$	0
$u=\ 0.37424-1.44855I$ $a=-0.176351-0.659562I$ $b=-0.258628+0.942065I$	$6.86873-0.80991I$	0
$u=\ 0.248492+0.436183I$ $a=-0.53967+6.04016I$ $b=-0.097507+0.279493I$	$2.95112+7.90322I$	$-11.72728+0.I$
$u=\ 0.248492-0.436183I$ $a=-0.53967-6.04016I$ $b=-0.097507-0.279493I$	$2.95112-7.90322I$	$-11.72728+0.I$
$u=-0.71881+1.33293I$ $a=\ 0.060061+0.864948I$ $b=\ 0.655148-0.551931I$	$5.7306+13.3290I$	0
$u=-0.71881-1.33293I$ $a=\ 0.060061-0.864948I$ $b=\ 0.655148+0.551931I$	$5.7306-13.3290I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.78634 + 1.29740I$ $a = -0.48576 + 1.46260I$ $b = -1.13832 - 1.04309I$	$6.07299 - 9.19455I$	0
$u = 0.78634 - 1.29740I$ $a = -0.48576 - 1.46260I$ $b = -1.13832 + 1.04309I$	$6.07299 + 9.19455I$	0
$u = 0.72138 + 1.34508I$ $a = 0.070887 - 0.799420I$ $b = 0.521826 + 0.569984I$	$1.31693 - 7.57818I$	0
$u = 0.72138 - 1.34508I$ $a = 0.070887 + 0.799420I$ $b = 0.521826 - 0.569984I$	$1.31693 + 7.57818I$	0
$u = -0.01373 + 1.54505I$ $a = 0.397177 + 1.034390I$ $b = -0.623102 - 1.103850I$	$6.83442 - 4.36734I$	0
$u = -0.01373 - 1.54505I$ $a = 0.397177 - 1.034390I$ $b = -0.623102 + 1.103850I$	$6.83442 + 4.36734I$	0
$u = 0.06420 + 1.55259I$ $a = 0.423506 - 0.963799I$ $b = -0.558011 + 1.162220I$	$11.2815 + 10.4644I$	0
$u = 0.06420 - 1.55259I$ $a = 0.423506 + 0.963799I$ $b = -0.558011 - 1.162220I$	$11.2815 - 10.4644I$	0
$u = 0.433934 + 0.033315I$ $a = 0.691515 + 0.669849I$ $b = -0.307387 + 0.897449I$	$4.41264 - 2.39072I$	$2.62892 + 0.74652I$
$u = 0.433934 - 0.033315I$ $a = 0.691515 - 0.669849I$ $b = -0.307387 - 0.897449I$	$4.41264 + 2.39072I$	$2.62892 - 0.74652I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.55852+0.28108I$ $a=\ \ 0.0367913+0.0766865I$ $b=-0.278376-0.083200I$	$2.34172-5.95973I$	0
$u=-1.55852-0.28108I$ $a=\ \ 0.0367913-0.0766865I$ $b=-0.278376+0.083200I$	$2.34172+5.95973I$	0
$u=\ \ 1.62445$ $a=\ \ 0.141167$ $b=-0.226331$	-2.38440	0
$u=-0.246531+0.228188I$ $a=\ \ 0.742955+0.543557I$ $b=-0.318938+0.571419I$	$1.44181-0.83110I$	$4.17490+0.90130I$
$u=-0.246531-0.228188I$ $a=\ \ 0.742955-0.543557I$ $b=-0.318938-0.571419I$	$1.44181+0.83110I$	$4.17490-0.90130I$
$u=-1.69976$ $a=-1.56894$ $b=-1.31258$	-6.39418	0

II.

$\boldsymbol{I_2^u = \langle -2.25\times 10^{57}u^{55}+3.88\times 10^{56}u^{54}+\cdots+9.70\times 10^{54}b+6.73\times 10^{57},\ -4.35\times 10^{57}u^{55}+9.99\times 10^{57}u^{54}+\cdots+9.70\times 10^{54}a-3.76\times 10^{58},\ u^{56}-u^{55}+\cdots+u-1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_{12} = \begin{pmatrix} 448.331u^{55} - 1030.60u^{54} + \cdots - 4831.19u + 3880.08 \\ 231.652u^{55} - 39.9925u^{54} + \cdots - 224.285u - 694.305 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -435.395u^{55} - 1100.37u^{54} + \cdots - 4017.11u + 6759.95 \\ -355.298u^{55} + 463.069u^{54} + \cdots + 1698.79u - 827.268 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 293.819u^{55} - 95.3107u^{54} + \cdots + 1247.14u - 1698.57 \\ 535.752u^{55} - 820.077u^{54} + \cdots - 2635.07u + 1618.84 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 679.984u^{55} - 1070.59u^{54} + \cdots - 5055.47u + 3185.78 \\ 231.652u^{55} - 39.9925u^{54} + \cdots - 224.285u - 694.305 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -496.520u^{55} + 933.332u^{54} + \cdots + 2034.30u - 1901.07 \\ -427.513u^{55} + 637.492u^{54} + \cdots + 2339.23u - 1392.01 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 997.863u^{55} - 1145.89u^{54} + \cdots - 3215.54u + 1030.90 \\ 425.607u^{55} - 1011.20u^{54} + \cdots - 2391.41u + 1888.83 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -470.359u^{55} - 380.083u^{54} + \cdots - 484.089u + 2626.85 \\ -483.312u^{55} + 746.426u^{54} + \cdots + 2693.48u - 1662.66 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -519.172u^{55} + 1033.46u^{54} + \cdots + 2018.10u - 2063.90 \\ -418.923u^{55} + 679.870u^{54} + \cdots + 2222.89u - 1477.36 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -1877.61u^{55} + 5392.85u^{54} + \cdots + 13666.2u - 16164.8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{56} - 9u^{55} + \cdots + 3u + 9$
c_2	$u^{56} + u^{55} + \cdots - u - 1$
c_3	$u^{56} + u^{55} + \cdots + 2u - 7$
c_4	$u^{56} + 9u^{55} + \cdots - 3u + 9$
c_5	$u^{56} - 7u^{55} + \cdots + 3u - 1$
c_6	$u^{56} - u^{55} + \cdots + u - 1$
c_7	$u^{56} + 3u^{55} + \cdots + 75u - 7$
c_8	$u^{56} + 19u^{55} + \cdots + 2u - 1$
c_9	$u^{56} + 2u^{55} + \cdots + 10u - 1$
c_{10}	$u^{56} + 3u^{55} + \cdots - 4u + 1$
c_{11}	$u^{56} + 3u^{55} + \cdots + 6u + 1$
c_{12}	$u^{56} - 13u^{55} + \cdots - 97u + 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{56} + 33y^{55} + \cdots - 729y + 81$
c_2, c_6	$y^{56} + 19y^{55} + \cdots + 47y + 1$
c_3	$y^{56} - 3y^{55} + \cdots - 270y + 49$
c_5	$y^{56} - 19y^{55} + \cdots + 25y + 1$
c_7	$y^{56} - 39y^{55} + \cdots + 87y + 49$
c_8	$y^{56} - 25y^{55} + \cdots - 50y + 1$
c_9	$y^{56} + 2y^{55} + \cdots - 240y + 1$
c_{10}	$y^{56} - 31y^{55} + \cdots + 14y + 1$
c_{11}	$y^{56} - 7y^{55} + \cdots + 10y + 1$
c_{12}	$y^{56} - 25y^{55} + \cdots - 421y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.987027+0.228732I$ $a=-0.0266958+0.0616775I$ $b=\ \ 0.682895+0.594889I$	$-2.47457-1.09929I$	0
$u=-0.987027-0.228732I$ $a=-0.0266958-0.0616775I$ $b=\ \ 0.682895-0.594889I$	$-2.47457+1.09929I$	0
$u=\ \ 0.303481+0.974404I$ $a=-1.240360-0.411698I$ $b=-0.814241-0.063661I$	$-0.06127-3.91918I$	0
$u=\ \ 0.303481-0.974404I$ $a=-1.240360+0.411698I$ $b=-0.814241+0.063661I$	$-0.06127+3.91918I$	0
$u=-0.255639+0.988949I$ $a=\ \ 0.32852+2.04130I$ $b=\ \ 0.041199-1.400360I$	$3.83306+0.92520I$	0
$u=-0.255639-0.988949I$ $a=\ \ 0.32852-2.04130I$ $b=\ \ 0.041199+1.400360I$	$3.83306-0.92520I$	0
$u=\ \ 0.062695+1.023050I$ $a=-2.72332+2.19984I$ $b=\ \ 2.78098-2.39711I$	$4.74710+0.23615I$	$43.5438+42.7192I$
$u=\ \ 0.062695-1.023050I$ $a=-2.72332-2.19984I$ $b=\ \ 2.78098+2.39711I$	$4.74710-0.23615I$	$43.5438-42.7192I$
$u=\ \ 0.358902+0.895778I$ $a=\ \ 0.68785-2.02526I$ $b=-0.14519+1.49516I$	$7.60189-1.50261I$	0
$u=\ \ 0.358902-0.895778I$ $a=\ \ 0.68785+2.02526I$ $b=-0.14519-1.49516I$	$7.60189+1.50261I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.021640 + 0.233836I$ $a = -0.275468 - 0.010783I$ $b = -0.765364 - 0.703644I$	$0.54037 - 6.73447I$	0
$u = 1.021640 - 0.233836I$ $a = -0.275468 + 0.010783I$ $b = -0.765364 + 0.703644I$	$0.54037 + 6.73447I$	0
$u = -1.108160 + 0.026320I$ $a = -1.206640 - 0.221875I$ $b = -1.16352 - 1.02722I$	$-1.10897 + 1.60498I$	0
$u = -1.108160 - 0.026320I$ $a = -1.206640 + 0.221875I$ $b = -1.16352 + 1.02722I$	$-1.10897 - 1.60498I$	0
$u = 0.533534 + 0.694160I$ $a = -1.53114 + 2.42825I$ $b = -1.053200 - 0.338528I$	$5.06281 - 6.78289I$	$4.02542 + 10.90305I$
$u = 0.533534 - 0.694160I$ $a = -1.53114 - 2.42825I$ $b = -1.053200 + 0.338528I$	$5.06281 + 6.78289I$	$4.02542 - 10.90305I$
$u = -0.736110 + 0.874518I$ $a = -0.593791 - 0.244482I$ $b = -0.679598 + 0.509842I$	$4.14123 + 6.52310I$	0
$u = -0.736110 - 0.874518I$ $a = -0.593791 + 0.244482I$ $b = -0.679598 - 0.509842I$	$4.14123 - 6.52310I$	0
$u = 0.002263 + 1.178210I$ $a = -1.108750 + 0.371519I$ $b = 0.361328 - 0.181015I$	$0.39900 + 2.61266I$	0
$u = 0.002263 - 1.178210I$ $a = -1.108750 - 0.371519I$ $b = 0.361328 + 0.181015I$	$0.39900 - 2.61266I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.729531+0.943866I$ $a=-0.056568+0.534618I$ $b=-1.000470-0.819404I$	$4.10221-2.96218I$	0
$u=-0.729531-0.943866I$ $a=-0.056568-0.534618I$ $b=-1.000470+0.819404I$	$4.10221+2.96218I$	0
$u=-0.492202+1.097990I$ $a=-0.08809-1.77951I$ $b=-0.876103+0.595338I$	$0.33545+5.76360I$	0
$u=-0.492202-1.097990I$ $a=-0.08809+1.77951I$ $b=-0.876103-0.595338I$	$0.33545-5.76360I$	0
$u=0.703566+1.006330I$ $a=-0.483355+0.666259I$ $b=-0.464355-0.780723I$	$5.20948-3.10901I$	0
$u=0.703566-1.006330I$ $a=-0.483355-0.666259I$ $b=-0.464355+0.780723I$	$5.20948+3.10901I$	0
$u=0.456759+1.154750I$ $a=0.04409-1.94187I$ $b=1.31560+1.05508I$	$4.47767-10.70920I$	0
$u=0.456759-1.154750I$ $a=0.04409+1.94187I$ $b=1.31560-1.05508I$	$4.47767+10.70920I$	0
$u=0.486221+1.180120I$ $a=0.121082+1.185310I$ $b=0.166299-0.724334I$	$6.39974-11.18440I$	0
$u=0.486221-1.180120I$ $a=0.121082-1.185310I$ $b=0.166299+0.724334I$	$6.39974+11.18440I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.414286 + 1.219720I$ $a = 0.281989 - 1.225540I$ $b = 1.268020 + 0.589960I$	$7.28603 + 2.58764I$	0
$u = 0.414286 - 1.219720I$ $a = 0.281989 + 1.225540I$ $b = 1.268020 - 0.589960I$	$7.28603 - 2.58764I$	0
$u = -0.616702 + 1.132330I$ $a = 0.42086 + 1.83127I$ $b = 1.10699 - 1.08954I$	$5.13123 + 8.68572I$	0
$u = -0.616702 - 1.132330I$ $a = 0.42086 - 1.83127I$ $b = 1.10699 + 1.08954I$	$5.13123 - 8.68572I$	0
$u = -0.563385 + 1.169690I$ $a = -0.333944 - 1.233470I$ $b = -0.244416 + 0.627394I$	$1.13472 + 6.37112I$	0
$u = -0.563385 - 1.169690I$ $a = -0.333944 + 1.233470I$ $b = -0.244416 - 0.627394I$	$1.13472 - 6.37112I$	0
$u = -0.323335 + 1.264510I$ $a = -0.322964 - 0.887158I$ $b = -0.238792 + 1.190860I$	$6.44758 - 0.97316I$	0
$u = -0.323335 - 1.264510I$ $a = -0.322964 + 0.887158I$ $b = -0.238792 - 1.190860I$	$6.44758 + 0.97316I$	0
$u = 0.296726 + 1.355560I$ $a = -0.393054 + 0.935029I$ $b = 0.063232 - 1.345250I$	$4.95973 + 1.29383I$	0
$u = 0.296726 - 1.355560I$ $a = -0.393054 - 0.935029I$ $b = 0.063232 + 1.345250I$	$4.95973 - 1.29383I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.173062+0.574704I$ $a=1.65207-0.14682I$ $b=1.002880+0.187293I$	$-2.11628-2.29306I$	$-9.54283+0.16020I$
$u=-0.173062-0.574704I$ $a=1.65207+0.14682I$ $b=1.002880-0.187293I$	$-2.11628+2.29306I$	$-9.54283-0.16020I$
$u=0.182485+0.550201I$ $a=0.214700+0.849383I$ $b=-1.31583+0.51831I$	$1.86771+7.53183I$	$7.97980-6.74130I$
$u=0.182485-0.550201I$ $a=0.214700-0.849383I$ $b=-1.31583-0.51831I$	$1.86771-7.53183I$	$7.97980+6.74130I$
$u=0.136795+0.540758I$ $a=-0.463988-0.685608I$ $b=-1.066520-0.384248I$	$-0.31002-5.11144I$	$0.52891+14.11168I$
$u=0.136795-0.540758I$ $a=-0.463988+0.685608I$ $b=-1.066520+0.384248I$	$-0.31002+5.11144I$	$0.52891-14.11168I$
$u=0.112521+0.519575I$ $a=1.09972+6.17717I$ $b=0.197842-0.631488I$	$3.24758+7.99563I$	$12.7719-9.9173I$
$u=0.112521-0.519575I$ $a=1.09972-6.17717I$ $b=0.197842+0.631488I$	$3.24758-7.99563I$	$12.7719+9.9173I$
$u=1.48183+0.05376I$ $a=-0.191175-0.003168I$ $b=-0.021798-0.189938I$	$2.48650+5.91994I$	0
$u=1.48183-0.05376I$ $a=-0.191175+0.003168I$ $b=-0.021798+0.189938I$	$2.48650-5.91994I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.066618+0.502328I$ $a=\ 0.02538+2.03818I$ $b=\ 1.093320-0.503702I$	$-0.62191-1.34384I$	$-2.21373+1.30993I$
$u=-0.066618-0.502328I$ $a=\ 0.02538-2.03818I$ $b=\ 1.093320+0.503702I$	$-0.62191+1.34384I$	$-2.21373-1.30993I$
$u=-0.052343+0.501137I$ $a=\ 2.96470-3.68951I$ $b=\ 0.533529+0.398093I$	$-2.54479-2.78313I$	$-6.14585+12.27119I$
$u=-0.052343-0.501137I$ $a=\ 2.96470+3.68951I$ $b=\ 0.533529-0.398093I$	$-2.54479+2.78313I$	$-6.14585-12.27119I$
$u=-1.59012$ $a=-0.181931$ $b=\ 0.162804$	-2.34895	0
$u=\ 1.69093$ $a=\ 1.57862$ $b=\ 1.30776$	-6.40287	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{56}-9u^{55}+\cdots+3u+9)(u^{206}-4u^{205}+\cdots-6646u+279)$
c_2	$(u^{56}+u^{55}+\cdots-u-1)(u^{206}+50u^{204}+\cdots-14240u-23011)$
c_3	$(u^{56}+u^{55}+\cdots+2u-7)$ $\cdot(u^{206}-23u^{204}+\cdots+680803696640u-49121591296)$
c_4	$(u^{56}+9u^{55}+\cdots-3u+9)(u^{206}-4u^{205}+\cdots-6646u+279)$
c_5	$(u^{56}-7u^{55}+\cdots+3u-1)(u^{206}-12u^{205}+\cdots+188u-8)$
c_6	$(u^{56}-u^{55}+\cdots+u-1)(u^{206}+50u^{204}+\cdots-14240u-23011)$
c_7	$(u^{56}+3u^{55}+\cdots+75u-7)$ $\cdot(u^{206}-7u^{204}+\cdots+307888522u-10416143)$
c_8	$(u^{56}+19u^{55}+\cdots+2u-1)(u^{206}-14u^{205}+\cdots+82275u+1921)$
c_9	$(u^{56}+2u^{55}+\cdots+10u-1)(u^{206}-3u^{205}+\cdots+549559u-340933)$
c_{10}	$(u^{56}+3u^{55}+\cdots-4u+1)$ $\cdot(u^{206}-2u^{205}+\cdots-252875824155u-41030919307)$
c_{11}	$(u^{56}+3u^{55}+\cdots+6u+1)(u^{206}-4u^{205}+\cdots-85u+3)$
c_{12}	$(u^{56}-13u^{55}+\cdots-97u+7)$ $\cdot(u^{206}-12u^{205}+\cdots-1031021376u-198007488)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{56}+33y^{55}+\cdots-729y+81)$ $\cdot(y^{206}+142y^{205}+\cdots+261434y+77841)$
c_2, c_6	$(y^{56}+19y^{55}+\cdots+47y+1)$ $\cdot(y^{206}+100y^{205}+\cdots+27689085610y+529506121)$
c_3	$(y^{56}-3y^{55}+\cdots-270y+49)$ $\cdot(y^{206}-46y^{205}+\cdots-1.93\times10^{23}y+2.41\times10^{21})$
c_5	$(y^{56}-19y^{55}+\cdots+25y+1)(y^{206}+2y^{205}+\cdots+9776y+64)$
c_7	$(y^{56}-39y^{55}+\cdots+87y+49)$ $\cdot(y^{206}-14y^{205}+\cdots+8508975757402814y+108496034996449)$
c_8	$(y^{56}-25y^{55}+\cdots-50y+1)$ $\cdot(y^{206}-36y^{205}+\cdots-4238192811y+3690241)$
c_9	$(y^{56}+2y^{55}+\cdots-240y+1)$ $\cdot(y^{206}-21y^{205}+\cdots-16612307091225y+116235310489)$
c_{10}	$(y^{56}-31y^{55}+\cdots+14y+1)$ $\cdot(y^{206}-98y^{205}+\cdots-1.61\times10^{23}y+1.68\times10^{21})$
c_{11}	$(y^{56}-7y^{55}+\cdots+10y+1)(y^{206}-10y^{205}+\cdots-283y+9)$
c_{12}	$(y^{56}-25y^{55}+\cdots-421y+49)$ $\cdot(y^{206}-60y^{205}+\cdots-3145705022699527680y+39206965304070144)$