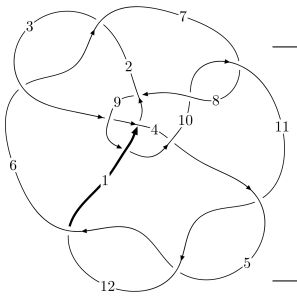
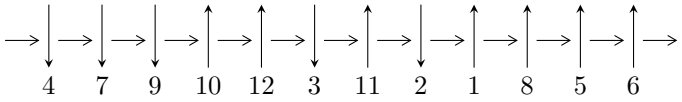
$12a_{1054}$ $(K12a_{1054})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 2.15321 \times 10^{634} u^{158} - 5.10063 \times 10^{634} u^{157} + \cdots + 7.40198 \times 10^{634} b - 2.87813 \times 10^{636},$$
$$- 1.60326 \times 10^{635} u^{158} + 4.19807 \times 10^{635} u^{157} + \cdots + 1.29871 \times 10^{636} a + 3.54875 \times 10^{637},$$
$$u^{159} - u^{158} + \cdots - 2628u - 193 \rangle$$
$$I_2^u = \langle -3.16298 \times 10^{25} u^{45} - 2.36685 \times 10^{25} u^{44} + \cdots + 1.74991 \times 10^{25} b - 3.55828 \times 10^{26},$$
$$4.06958 \times 10^{26} u^{45} + 3.57978 \times 10^{26} u^{44} + \cdots + 5.24973 \times 10^{25} a + 1.16350 \times 10^{27},\ u^{46} + 2u^{45} + \cdots + 7u + 3$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 205 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. $\boldsymbol{I_1^u = \langle 2.15 \times 10^{634} u^{158} - 5.10 \times 10^{634} u^{157} + \cdots + 7.40 \times 10^{634} b - 2.88 \times 10^{636},\ -1.60 \times 10^{635} u^{158} + 4.20 \times 10^{635} u^{157} + \cdots + 1.30 \times 10^{636} a + 3.55 \times 10^{637},\ u^{159} - u^{158} + \cdots - 2628u - 193 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.123450u^{158} - 0.323249u^{157} + \cdots - 307.540u - 27.3251 \\ -0.290897u^{158} + 0.689091u^{157} + \cdots + 483.939u + 38.8833 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.414347u^{158} - 1.01234u^{157} + \cdots - 791.479u - 66.2084 \\ -0.290897u^{158} + 0.689091u^{157} + \cdots + 483.939u + 38.8833 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -1.09858u^{158} + 2.52398u^{157} + \cdots + 1949.19u + 151.364 \\ 1.01751u^{158} - 2.21497u^{157} + \cdots - 2093.91u - 162.844 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2.82070u^{158} + 6.50241u^{157} + \cdots + 5629.10u + 439.227 \\ -0.470943u^{158} + 1.22959u^{157} + \cdots + 686.317u + 52.3871 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.458496u^{158} - 1.13570u^{157} + \cdots - 955.257u - 72.1383 \\ -0.287925u^{158} + 0.710940u^{157} + \cdots + 443.599u + 32.8072 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.828370u^{158} - 2.00213u^{157} + \cdots - 1693.31u - 130.632 \\ -0.485796u^{158} + 1.14028u^{157} + \cdots + 910.425u + 69.5863 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.51656u^{158} + 3.41746u^{157} + \cdots + 2800.47u + 217.244 \\ 0.135899u^{158} - 0.219030u^{157} + \cdots - 365.250u - 27.9326 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -5.99897u^{158} + 12.6571u^{157} + \cdots + 12926.8u + 1026.83$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{159} - 11u^{158} + \cdots - 43u + 11$
c_2, c_6	$u^{159} - 3u^{158} + \cdots - 71881u - 10679$
c_3	$u^{159} + u^{158} + \cdots + 527u - 25$
c_4	$u^{159} - u^{158} + \cdots + 46182518u - 10020811$
c_5, c_{11}, c_{12}	$u^{159} - u^{158} + \cdots - 2628u - 193$
c_7, c_{10}	$u^{159} - 12u^{158} + \cdots + 53726u + 16181$
c_8	$u^{159} - u^{158} + \cdots - 8791546u - 1048243$
c_9	$u^{159} - 5u^{158} + \cdots - 16779u + 1957$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{159} + 7y^{158} + \cdots - 6709y - 121$
c_2, c_6	$y^{159} + 97y^{158} + \cdots - 5702976927y - 114041041$
c_3	$y^{159} + 17y^{158} + \cdots - 58921y - 625$
c_4	$y^{159} - 15y^{158} + \cdots + 1162437248935440y - 100416653097721$
c_5, c_{11}, c_{12}	$y^{159} - 159y^{158} + \cdots - 2425166y - 37249$
c_7, c_{10}	$y^{159} + 70y^{158} + \cdots - 10616690872y - 261824761$
c_8	$y^{159} + 11y^{158} + \cdots - 57826335947932y - 1098813387049$
c_9	$y^{159} - 21y^{158} + \cdots + 100453631y - 3829849$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.931695+0.357791I$ $a=-0.97351-1.30496I$ $b=\ \ 0.004696-0.961026I$	$-3.10088-3.11572I$	0
$u=-0.931695-0.357791I$ $a=-0.97351+1.30496I$ $b=\ \ 0.004696+0.961026I$	$-3.10088+3.11572I$	0
$u=\ \ 0.168571+0.972045I$ $a=\ \ 0.26892+1.60345I$ $b=\ \ 0.250633+1.204880I$	$-2.82090+2.76288I$	0
$u=\ \ 0.168571-0.972045I$ $a=\ \ 0.26892-1.60345I$ $b=\ \ 0.250633-1.204880I$	$-2.82090-2.76288I$	0
$u=\ \ 0.458881+0.956536I$ $a=\ \ 0.31707-1.71133I$ $b=-0.664222-1.214920I$	$0.9763+15.2232I$	0
$u=\ \ 0.458881-0.956536I$ $a=\ \ 0.31707+1.71133I$ $b=-0.664222+1.214920I$	$0.9763-15.2232I$	0
$u=\ \ 0.639690+0.887084I$ $a=\ \ 0.185987+0.895267I$ $b=-0.489570+0.646391I$	$1.65184+1.81096I$	0
$u=\ \ 0.639690-0.887084I$ $a=\ \ 0.185987-0.895267I$ $b=-0.489570-0.646391I$	$1.65184-1.81096I$	0
$u=-0.528201+0.999238I$ $a=-0.19425-1.59774I$ $b=\ \ 0.388374-1.012770I$	$-1.51699-4.68944I$	0
$u=-0.528201-0.999238I$ $a=-0.19425+1.59774I$ $b=\ \ 0.388374+1.012770I$	$-1.51699+4.68944I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.638750 + 0.582865I$ $a = 0.814828 + 0.739374I$ $b = -0.289334 + 0.388871I$	$1.56860 + 1.91000I$	0
$u = 0.638750 - 0.582865I$ $a = 0.814828 - 0.739374I$ $b = -0.289334 - 0.388871I$	$1.56860 - 1.91000I$	0
$u = -0.721937 + 0.473511I$ $a = -0.455318 - 1.317190I$ $b = 0.581524 - 1.284450I$	$0.48072 - 6.90966I$	0
$u = -0.721937 - 0.473511I$ $a = -0.455318 + 1.317190I$ $b = 0.581524 + 1.284450I$	$0.48072 + 6.90966I$	0
$u = 0.414790 + 0.756611I$ $a = -0.472518 + 0.338296I$ $b = -1.066210 + 0.353597I$	$3.66257 + 9.07043I$	0
$u = 0.414790 - 0.756611I$ $a = -0.472518 - 0.338296I$ $b = -1.066210 - 0.353597I$	$3.66257 - 9.07043I$	0
$u = 0.956897 + 0.615982I$ $a = -0.089603 + 0.314750I$ $b = -0.529731 + 0.880357I$	$2.75523 - 0.19630I$	0
$u = 0.956897 - 0.615982I$ $a = -0.089603 - 0.314750I$ $b = -0.529731 - 0.880357I$	$2.75523 + 0.19630I$	0
$u = -0.411723 + 0.748664I$ $a = 0.43991 + 2.19502I$ $b = -0.515799 + 1.108660I$	$-2.52177 - 9.07559I$	0
$u = -0.411723 - 0.748664I$ $a = 0.43991 - 2.19502I$ $b = -0.515799 - 1.108660I$	$-2.52177 + 9.07559I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.400836 + 1.077030I$ $a = 0.37746 - 1.40274I$ $b = -0.564630 - 0.986860I$	$0.56231 + 6.26018I$	0
$u = 0.400836 - 1.077030I$ $a = 0.37746 + 1.40274I$ $b = -0.564630 + 0.986860I$	$0.56231 - 6.26018I$	0
$u = 0.564617 + 0.634758I$ $a = 0.52541 - 1.89259I$ $b = -0.595660 - 0.351204I$	$4.28308 - 4.47208I$	0
$u = 0.564617 - 0.634758I$ $a = 0.52541 + 1.89259I$ $b = -0.595660 + 0.351204I$	$4.28308 + 4.47208I$	0
$u = 1.162030 + 0.179115I$ $a = 1.067080 - 0.683283I$ $b = 0.029357 - 0.888191I$	$1.055130 + 0.194599I$	0
$u = 1.162030 - 0.179115I$ $a = 1.067080 + 0.683283I$ $b = 0.029357 + 0.888191I$	$1.055130 - 0.194599I$	0
$u = -1.153970 + 0.230467I$ $a = 0.045014 - 0.836283I$ $b = 0.201484 - 1.114320I$	$1.80742 - 4.76661I$	0
$u = -1.153970 - 0.230467I$ $a = 0.045014 + 0.836283I$ $b = 0.201484 + 1.114320I$	$1.80742 + 4.76661I$	0
$u = 1.030560 + 0.574716I$ $a = 1.21600 - 1.14196I$ $b = -0.620859 - 0.793677I$	$3.09533 + 4.35647I$	0
$u = 1.030560 - 0.574716I$ $a = 1.21600 + 1.14196I$ $b = -0.620859 + 0.793677I$	$3.09533 - 4.35647I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.722581+0.380203I$ $a=-1.03917-1.19458I$ $b=-0.400454-0.823490I$	$-1.63826+4.76979I$	0
$u=-0.722581-0.380203I$ $a=-1.03917+1.19458I$ $b=-0.400454+0.823490I$	$-1.63826-4.76979I$	0
$u=-0.136279+0.782606I$ $a=0.312504+1.346250I$ $b=-0.318155+0.828940I$	$-1.31506+1.03769I$	0
$u=-0.136279-0.782606I$ $a=0.312504-1.346250I$ $b=-0.318155-0.828940I$	$-1.31506-1.03769I$	0
$u=0.850317+0.864003I$ $a=-0.518250+0.783787I$ $b=-0.549421+1.113070I$	$2.05790-9.12170I$	0
$u=0.850317-0.864003I$ $a=-0.518250-0.783787I$ $b=-0.549421-1.113070I$	$2.05790+9.12170I$	0
$u=-1.210660+0.081806I$ $a=-0.24605-1.62594I$ $b=0.42389-1.37878I$	$0.86122-6.29681I$	0
$u=-1.210660-0.081806I$ $a=-0.24605+1.62594I$ $b=0.42389+1.37878I$	$0.86122+6.29681I$	0
$u=0.454232+0.625845I$ $a=1.44301-0.82043I$ $b=0.121314-0.823882I$	$-0.600113+1.209260I$	0
$u=0.454232-0.625845I$ $a=1.44301+0.82043I$ $b=0.121314+0.823882I$	$-0.600113-1.209260I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.371163+0.677094I$ $a=\ \ 0.947785+1.026760I$ $b=\ \ 0.671300+1.092560I$	$1.42108+2.82655I$	0
$u=-0.371163-0.677094I$ $a=\ \ 0.947785-1.026760I$ $b=\ \ 0.671300-1.092560I$	$1.42108-2.82655I$	0
$u=-0.858849+0.905931I$ $a=\ \ 0.383528+0.894239I$ $b=\ \ 0.296817+0.800963I$	$-0.61365-1.80334I$	0
$u=-0.858849-0.905931I$ $a=\ \ 0.383528-0.894239I$ $b=\ \ 0.296817-0.800963I$	$-0.61365+1.80334I$	0
$u=-0.551113+0.504840I$ $a=-0.546386+0.093186I$ $b=-0.617600-0.232784I$	$-0.09662-4.64291I$	0
$u=-0.551113-0.504840I$ $a=-0.546386-0.093186I$ $b=-0.617600+0.232784I$	$-0.09662+4.64291I$	0
$u=-0.408274+0.614483I$ $a=-0.74827-2.25429I$ $b=\ \ 0.71594-1.23111I$	$1.58655-6.66027I$	0
$u=-0.408274-0.614483I$ $a=-0.74827+2.25429I$ $b=\ \ 0.71594+1.23111I$	$1.58655+6.66027I$	0
$u=\ \ 1.227840+0.352016I$ $a=\ \ 1.040870-0.350463I$ $b=-0.307789-1.262900I$	$0.525800-0.977489I$	0
$u=\ \ 1.227840-0.352016I$ $a=\ \ 1.040870+0.350463I$ $b=-0.307789+1.262900I$	$0.525800+0.977489I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.019675+0.715420I$ $a=\ \ 0.54348+1.86853I$ $b=-0.02084+1.47937I$	$-3.34625+4.87878I$	0
$u=-0.019675-0.715420I$ $a=\ \ 0.54348-1.86853I$ $b=-0.02084-1.47937I$	$-3.34625-4.87878I$	0
$u=-1.291310+0.029784I$ $a=-0.379499-0.246496I$ $b=\ \ 1.60211-0.00566I$	$7.30726-0.73701I$	0
$u=-1.291310-0.029784I$ $a=-0.379499+0.246496I$ $b=\ \ 1.60211+0.00566I$	$7.30726+0.73701I$	0
$u=\ \ 0.022301+0.703115I$ $a=\ \ 0.79751+2.18010I$ $b=\ \ 0.339751+1.119380I$	$-2.28791+3.07987I$	0
$u=\ \ 0.022301-0.703115I$ $a=\ \ 0.79751-2.18010I$ $b=\ \ 0.339751-1.119380I$	$-2.28791-3.07987I$	0
$u=-1.284890+0.205283I$ $a=-0.430504-0.817113I$ $b=\ \ 0.23389-1.68704I$	$0.48722-8.11144I$	0
$u=-1.284890-0.205283I$ $a=-0.430504+0.817113I$ $b=\ \ 0.23389+1.68704I$	$0.48722+8.11144I$	0
$u=-1.283800+0.221289I$ $a=-0.782575-0.927549I$ $b=\ \ 0.78429-1.17981I$	$3.97453-5.44709I$	0
$u=-1.283800-0.221289I$ $a=-0.782575+0.927549I$ $b=\ \ 0.78429+1.17981I$	$3.97453+5.44709I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.314770 + 0.077694I$ $a = 0.77067 - 1.68076I$ $b = 0.004316 - 1.185900I$	$0.067288 + 1.080550I$	0
$u = 1.314770 - 0.077694I$ $a = 0.77067 + 1.68076I$ $b = 0.004316 + 1.185900I$	$0.067288 - 1.080550I$	0
$u = 1.095250 + 0.735475I$ $a = 0.719596 - 0.756499I$ $b = -0.041103 - 1.003400I$	$-0.19776 + 3.09810I$	0
$u = 1.095250 - 0.735475I$ $a = 0.719596 + 0.756499I$ $b = -0.041103 + 1.003400I$	$-0.19776 - 3.09810I$	0
$u = -1.318980 + 0.035231I$ $a = 0.00139720 - 0.00797920I$ $b = 1.109680 + 0.362951I$	$6.39638 + 1.30516I$	0
$u = -1.318980 - 0.035231I$ $a = 0.00139720 + 0.00797920I$ $b = 1.109680 - 0.362951I$	$6.39638 - 1.30516I$	0
$u = 1.321030 + 0.059859I$ $a = -2.55640 - 0.32526I$ $b = 0.325584 - 0.575208I$	$6.92869 + 5.31563I$	0
$u = 1.321030 - 0.059859I$ $a = -2.55640 + 0.32526I$ $b = 0.325584 + 0.575208I$	$6.92869 - 5.31563I$	0
$u = -1.332590 + 0.078140I$ $a = 1.282100 + 0.157203I$ $b = -0.908274 + 0.830569I$	$1.88414 - 6.30321I$	0
$u = -1.332590 - 0.078140I$ $a = 1.282100 - 0.157203I$ $b = -0.908274 - 0.830569I$	$1.88414 + 6.30321I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.298718 + 0.589731I$ $a = -0.01885 + 1.66110I$ $b = 0.402194 + 1.065340I$	$-1.03327 + 2.63979I$	0
$u = 0.298718 - 0.589731I$ $a = -0.01885 - 1.66110I$ $b = 0.402194 - 1.065340I$	$-1.03327 - 2.63979I$	0
$u = 1.338920 + 0.057220I$ $a = -0.098082 + 0.936959I$ $b = -0.18981 + 1.48523I$	$0.63136 + 2.46814I$	0
$u = 1.338920 - 0.057220I$ $a = -0.098082 - 0.936959I$ $b = -0.18981 - 1.48523I$	$0.63136 - 2.46814I$	0
$u = -1.337850 + 0.154218I$ $a = -0.820299 - 0.851912I$ $b = 0.75951 - 1.21647I$	$4.02258 - 5.41832I$	0
$u = -1.337850 - 0.154218I$ $a = -0.820299 + 0.851912I$ $b = 0.75951 + 1.21647I$	$4.02258 + 5.41832I$	0
$u = -0.466896 + 0.455188I$ $a = 1.75758 + 2.07227I$ $b = -0.144834 + 0.967416I$	$-4.39473 - 0.09566I$	0
$u = -0.466896 - 0.455188I$ $a = 1.75758 - 2.07227I$ $b = -0.144834 - 0.967416I$	$-4.39473 + 0.09566I$	0
$u = -1.370540 + 0.066014I$ $a = 1.128630 + 0.118563I$ $b = -0.681412 + 1.057000I$	$0.902932 + 0.200404I$	0
$u = -1.370540 - 0.066014I$ $a = 1.128630 - 0.118563I$ $b = -0.681412 - 1.057000I$	$0.902932 - 0.200404I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.177538+0.600671I$ $a=\ \ 0.30217-1.90024I$ $b=\ \ 0.867301-0.346693I$	$3.51690-2.84292I$	0
$u=-0.177538-0.600671I$ $a=\ \ 0.30217+1.90024I$ $b=\ \ 0.867301+0.346693I$	$3.51690+2.84292I$	0
$u=-1.378330+0.074768I$ $a=-2.08571-0.10656I$ $b=\ \ 0.364320-0.907084I$	$0.40706-1.50294I$	0
$u=-1.378330-0.074768I$ $a=-2.08571+0.10656I$ $b=\ \ 0.364320+0.907084I$	$0.40706+1.50294I$	0
$u=\ \ 1.388500+0.051731I$ $a=-1.116240-0.730545I$ $b=\ \ 0.713806-1.052560I$	$7.10758+0.01309I$	0
$u=\ \ 1.388500-0.051731I$ $a=-1.116240+0.730545I$ $b=\ \ 0.713806+1.052560I$	$7.10758-0.01309I$	0
$u=-1.350030+0.357793I$ $a=-0.683759-1.067420I$ $b=\ \ 0.56717-1.40892I$	$1.84585-7.37591I$	0
$u=-1.350030-0.357793I$ $a=-0.683759+1.067420I$ $b=\ \ 0.56717+1.40892I$	$1.84585+7.37591I$	0
$u=-1.400070+0.052677I$ $a=-0.233145-0.040223I$ $b=\ \ 1.173810-0.234102I$	$6.88923-1.28555I$	0
$u=-1.400070-0.052677I$ $a=-0.233145+0.040223I$ $b=\ \ 1.173810+0.234102I$	$6.88923+1.28555I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.370970 + 0.305438I$ $a = -0.96432 + 1.48794I$ $b = 0.728868 + 0.665527I$	$8.32683 + 6.27843I$	0
$u = 1.370970 - 0.305438I$ $a = -0.96432 - 1.48794I$ $b = 0.728868 - 0.665527I$	$8.32683 - 6.27843I$	0
$u = -0.565622 + 0.128512I$ $a = 0.190594 + 0.337028I$ $b = 0.579153 - 0.884869I$	$1.70519 - 4.26840I$	0
$u = -0.565622 - 0.128512I$ $a = 0.190594 - 0.337028I$ $b = 0.579153 + 0.884869I$	$1.70519 + 4.26840I$	0
$u = -0.191983 + 0.525498I$ $a = 0.250650 + 0.740430I$ $b = -0.248514 + 0.348960I$	$-1.09960 + 1.08757I$	0
$u = -0.191983 - 0.525498I$ $a = 0.250650 - 0.740430I$ $b = -0.248514 - 0.348960I$	$-1.09960 - 1.08757I$	0
$u = 1.43107 + 0.17304I$ $a = -0.420519 + 0.575180I$ $b = 1.34660 - 0.56614I$	$10.13580 + 2.21608I$	0
$u = 1.43107 - 0.17304I$ $a = -0.420519 - 0.575180I$ $b = 1.34660 + 0.56614I$	$10.13580 - 2.21608I$	0
$u = -0.292413 + 0.473691I$ $a = -0.45016 - 1.92160I$ $b = -0.609628 - 0.857502I$	$-1.75464 + 4.92023I$	$-5.37026 - 7.32741I$
$u = -0.292413 - 0.473691I$ $a = -0.45016 + 1.92160I$ $b = -0.609628 + 0.857502I$	$-1.75464 - 4.92023I$	$-5.37026 + 7.32741I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.351358+0.412823I$ $a=\ 0.742839-0.514320I$ $b=\ 1.242720+0.342769I$	$4.40556+0.06208I$	$11.82669+0.I$
$u=-0.351358-0.412823I$ $a=\ 0.742839+0.514320I$ $b=\ 1.242720-0.342769I$	$4.40556-0.06208I$	$11.82669+0.I$
$u=\ 1.46796$ $a=\ 0.426301$ $b=-0.336778$	3.87262	0
$u=-1.45094+0.24308I$ $a=\ 1.213200+0.280376I$ $b=-0.039614+0.583269I$	$5.46874-4.46278I$	0
$u=-1.45094-0.24308I$ $a=\ 1.213200-0.280376I$ $b=-0.039614-0.583269I$	$5.46874+4.46278I$	0
$u=\ 0.501253+0.154163I$ $a=\ 0.816710+0.156869I$ $b=\ 0.407850+0.201888I$	$1.080960+0.623121I$	$6.75127-1.70339I$
$u=\ 0.501253-0.154163I$ $a=\ 0.816710-0.156869I$ $b=\ 0.407850-0.201888I$	$1.080960-0.623121I$	$6.75127+1.70339I$
$u=\ 1.47269+0.10716I$ $a=-0.403418-0.070648I$ $b=\ 1.36521-0.58544I$	$10.23810+1.97905I$	0
$u=\ 1.47269-0.10716I$ $a=-0.403418+0.070648I$ $b=\ 1.36521+0.58544I$	$10.23810-1.97905I$	0
$u=\ 1.47339+0.14681I$ $a=-1.50065-0.09515I$ $b=\ 0.490174+1.124370I$	$4.83410+8.94728I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.47339 - 0.14681I$ $a = -1.50065 + 0.09515I$ $b = 0.490174 - 1.124370I$	$4.83410 - 8.94728I$	0
$u = 1.46345 + 0.23430I$ $a = -1.31836 + 1.03633I$ $b = 0.81534 + 1.28944I$	$7.62959 + 9.80409I$	0
$u = 1.46345 - 0.23430I$ $a = -1.31836 - 1.03633I$ $b = 0.81534 - 1.28944I$	$7.62959 - 9.80409I$	0
$u = -0.362663 + 0.350323I$ $a = -2.81206 - 0.77285I$ $b = 0.404377 - 1.286590I$	$-1.25845 - 6.99954I$	$-4.17211 + 13.42945I$
$u = -0.362663 - 0.350323I$ $a = -2.81206 + 0.77285I$ $b = 0.404377 + 1.286590I$	$-1.25845 + 6.99954I$	$-4.17211 - 13.42945I$
$u = 0.500156 + 0.015550I$ $a = 4.95931 + 0.73632I$ $b = -0.320466 + 0.517218I$	$3.71284 - 4.66487I$	$9.0118 + 12.8913I$
$u = 0.500156 - 0.015550I$ $a = 4.95931 - 0.73632I$ $b = -0.320466 - 0.517218I$	$3.71284 + 4.66487I$	$9.0118 - 12.8913I$
$u = 1.49467 + 0.17066I$ $a = 0.155240 - 0.269531I$ $b = -0.987357 + 0.238390I$	$6.54604 + 7.10323I$	0
$u = 1.49467 - 0.17066I$ $a = 0.155240 + 0.269531I$ $b = -0.987357 - 0.238390I$	$6.54604 - 7.10323I$	0
$u = 1.48836 + 0.24626I$ $a = 0.170102 + 0.130987I$ $b = 0.754556 - 0.929982I$	$7.53675 + 0.62630I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.48836 - 0.24626I$ $a = 0.170102 - 0.130987I$ $b = 0.754556 + 0.929982I$	$7.53675 - 0.62630I$	0
$u = -1.48460 + 0.28531I$ $a = 0.169242 + 0.267085I$ $b = -1.242400 - 0.517460I$	$9.7977 - 12.8826I$	0
$u = -1.48460 - 0.28531I$ $a = 0.169242 - 0.267085I$ $b = -1.242400 + 0.517460I$	$9.7977 + 12.8826I$	0
$u = 1.48688 + 0.27880I$ $a = 1.05542 - 1.19823I$ $b = -0.618520 - 1.212020I$	$3.63215 + 12.83220I$	0
$u = 1.48688 - 0.27880I$ $a = 1.05542 + 1.19823I$ $b = -0.618520 + 1.212020I$	$3.63215 - 12.83220I$	0
$u = -1.50770 + 0.14571I$ $a = 1.31015 + 1.42006I$ $b = -0.444311 + 0.972515I$	$10.70290 - 6.10955I$	0
$u = -1.50770 - 0.14571I$ $a = 1.31015 - 1.42006I$ $b = -0.444311 - 0.972515I$	$10.70290 + 6.10955I$	0
$u = -1.51216 + 0.28226I$ $a = 0.340649 + 0.038337I$ $b = -0.849876 - 0.578465I$	$8.38285 - 5.76284I$	0
$u = -1.51216 - 0.28226I$ $a = 0.340649 - 0.038337I$ $b = -0.849876 + 0.578465I$	$8.38285 + 5.76284I$	0
$u = 1.54088 + 0.11850I$ $a = -0.353609 - 0.161222I$ $b = 0.729254 + 0.456350I$	$8.79398 + 5.60217I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.54088 - 0.11850I$ $a = -0.353609 + 0.161222I$ $b = 0.729254 - 0.456350I$	$8.79398 - 5.60217I$	0
$u = -1.53819 + 0.18668I$ $a = 0.78477 + 1.26639I$ $b = -0.513190 + 0.858403I$	$11.29140 + 1.39396I$	0
$u = -1.53819 - 0.18668I$ $a = 0.78477 - 1.26639I$ $b = -0.513190 - 0.858403I$	$11.29140 - 1.39396I$	0
$u = 1.50952 + 0.37884I$ $a = 0.921714 - 0.899533I$ $b = -0.593164 - 0.934675I$	$3.85643 + 3.57895I$	0
$u = 1.50952 - 0.37884I$ $a = 0.921714 + 0.899533I$ $b = -0.593164 + 0.934675I$	$3.85643 - 3.57895I$	0
$u = 1.55341 + 0.20323I$ $a = -0.743180 + 0.640639I$ $b = 0.83808 + 1.26385I$	$7.89314 + 9.65549I$	0
$u = 1.55341 - 0.20323I$ $a = -0.743180 - 0.640639I$ $b = 0.83808 - 1.26385I$	$7.89314 - 9.65549I$	0
$u = -1.53059 + 0.35669I$ $a = 1.02882 + 1.03461I$ $b = -0.77526 + 1.25094I$	$7.3822 - 19.9850I$	0
$u = -1.53059 - 0.35669I$ $a = 1.02882 - 1.03461I$ $b = -0.77526 - 1.25094I$	$7.3822 + 19.9850I$	0
$u = 1.54654 + 0.34681I$ $a = -0.706708 + 1.118290I$ $b = 0.525601 + 1.187570I$	$5.18187 + 9.52844I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.54654 - 0.34681I$ $a = -0.706708 - 1.118290I$ $b = 0.525601 - 1.187570I$	$5.18187 - 9.52844I$	0
$u = -1.54209 + 0.38476I$ $a = 0.993573 + 0.923596I$ $b = -0.683229 + 1.069820I$	$6.87908 - 11.47640I$	0
$u = -1.54209 - 0.38476I$ $a = 0.993573 - 0.923596I$ $b = -0.683229 - 1.069820I$	$6.87908 + 11.47640I$	0
$u = -0.338812 + 0.163818I$ $a = -0.221109 + 0.640892I$ $b = 1.241800 + 0.228531I$	$4.12538 - 0.72845I$	$23.1595 + 2.5796I$
$u = -0.338812 - 0.163818I$ $a = -0.221109 - 0.640892I$ $b = 1.241800 - 0.228531I$	$4.12538 + 0.72845I$	$23.1595 - 2.5796I$
$u = -1.63468 + 0.11838I$ $a = 0.219364 + 0.296757I$ $b = -0.465733 - 0.717038I$	$11.55050 - 2.34092I$	0
$u = -1.63468 - 0.11838I$ $a = 0.219364 - 0.296757I$ $b = -0.465733 + 0.717038I$	$11.55050 + 2.34092I$	0
$u = 1.62343 + 0.22757I$ $a = 0.385744 + 0.224945I$ $b = -0.584740 + 0.761048I$	$4.41907 - 1.12604I$	0
$u = 1.62343 - 0.22757I$ $a = 0.385744 - 0.224945I$ $b = -0.584740 - 0.761048I$	$4.41907 + 1.12604I$	0
$u = 1.64649 + 0.17516I$ $a = -0.045299 - 0.166825I$ $b = 0.253111 - 0.395959I$	$8.10119 + 5.59287I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.64649 - 0.17516I$ $a = -0.045299 + 0.166825I$ $b = 0.253111 + 0.395959I$	$8.10119 - 5.59287I$	0
$u = -0.022925 + 0.287765I$ $a = -2.00999 + 7.06978I$ $b = 0.114216 + 0.998923I$	$-4.15566 + 0.36214I$	$-11.07078 + 3.27158I$
$u = -0.022925 - 0.287765I$ $a = -2.00999 - 7.06978I$ $b = 0.114216 - 0.998923I$	$-4.15566 - 0.36214I$	$-11.07078 - 3.27158I$
$u = -1.72244 + 0.09815I$ $a = 0.131144 - 0.104566I$ $b = -0.455987 - 0.840080I$	$11.38150 + 5.35929I$	0
$u = -1.72244 - 0.09815I$ $a = 0.131144 + 0.104566I$ $b = -0.455987 + 0.840080I$	$11.38150 - 5.35929I$	0
$u = 0.005886 + 0.272803I$ $a = 1.73695 - 3.51245I$ $b = -0.355338 - 1.178860I$	$-3.63512 - 1.30843I$	$-3.60876 - 1.31626I$
$u = 0.005886 - 0.272803I$ $a = 1.73695 + 3.51245I$ $b = -0.355338 + 1.178860I$	$-3.63512 + 1.30843I$	$-3.60876 + 1.31626I$
$u = -0.022402 + 0.198160I$ $a = -2.35093 - 3.33822I$ $b = 0.701447 + 0.648221I$	$2.36703 + 0.79844I$	$7.52249 - 4.73450I$
$u = -0.022402 - 0.198160I$ $a = -2.35093 + 3.33822I$ $b = 0.701447 - 0.648221I$	$2.36703 - 0.79844I$	$7.52249 + 4.73450I$

II.

$\boldsymbol{I_2^u = \langle -3.16\times 10^{25}u^{45} - 2.37\times 10^{25}u^{44} + \cdots + 1.75\times 10^{25}b - 3.56\times 10^{26},\ 4.07\times 10^{26}u^{45} + 3.58\times 10^{26}u^{44} + \cdots + 5.25\times 10^{25}a + 1.16\times 10^{27},\ u^{46} + 2u^{45} + \cdots + 7u + 3\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -7.75199u^{45} - 6.81899u^{44} + \cdots - 35.7653u - 22.1631 \\ 1.80751u^{45} + 1.35256u^{44} + \cdots + 11.1428u + 20.3341 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -9.55950u^{45} - 8.17155u^{44} + \cdots - 46.9081u - 42.4972 \\ 1.80751u^{45} + 1.35256u^{44} + \cdots + 11.1428u + 20.3341 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -4.54914u^{45} - 10.2767u^{44} + \cdots + 3.92663u - 16.0517 \\ 16.6483u^{45} + 18.1889u^{44} + \cdots + 34.5268u + 38.0811 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3.29260u^{45} - 4.41779u^{44} + \cdots + 45.6946u + 7.95029 \\ 26.5208u^{45} + 23.7564u^{44} + \cdots + 102.261u + 82.8852 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -5.46831u^{45} - 9.79680u^{44} + \cdots + 18.9714u + 6.41329 \\ -14.5791u^{45} - 14.4153u^{44} + \cdots - 58.8212u - 52.5172 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.767207u^{45} - 0.903238u^{44} + \cdots + 16.4051u + 15.6355 \\ -5.37130u^{45} - 7.73599u^{44} + \cdots - 22.0249u - 23.4241 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -10.2367u^{45} - 15.4569u^{44} + \cdots - 10.4014u - 26.5922 \\ 9.31305u^{45} + 9.43479u^{44} + \cdots + 24.4907u + 26.3369 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{1116350096426018096474073229}{1749909820833047846919042 7}u^{45} + \frac{6638423120559337620568901 48}{1749909820833047846919042 7}u^{44} + \cdots + \frac{4716754110200640029077974813}{1749909820833047846919042 7}u + \frac{2113567251442527480219668679}{1749909820833047846919042 7}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{46} - 6u^{45} + \cdots + 3u^2 + 1$
c_2	$u^{46} + 4u^{45} + \cdots + 2u + 1$
c_3	$u^{46} + 5u^{44} + \cdots - u^2 + 1$
c_4	$u^{46} + 9u^{44} + \cdots - 5u + 37$
c_5	$u^{46} - 2u^{45} + \cdots - 7u + 3$
c_6	$u^{46} - 4u^{45} + \cdots - 2u + 1$
c_7	$u^{46} + 13u^{45} + \cdots + 7u + 1$
c_8	$u^{46} - 8u^{44} + \cdots + 29u + 21$
c_9	$u^{46} - 2u^{45} + \cdots - 11u^2 + 1$
c_{10}	$u^{46} - 13u^{45} + \cdots - 7u + 1$
c_{11}, c_{12}	$u^{46} + 2u^{45} + \cdots + 7u + 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{46} - 4y^{45} + \cdots + 6y + 1$
c_2, c_6	$y^{46} + 26y^{45} + \cdots + 36y + 1$
c_3	$y^{46} + 10y^{45} + \cdots - 2y + 1$
c_4	$y^{46} + 18y^{45} + \cdots + 5821y + 1369$
c_5, c_{11}, c_{12}	$y^{46} - 50y^{45} + \cdots - 229y + 9$
c_7, c_{10}	$y^{46} + 19y^{45} + \cdots + 45y + 1$
c_8	$y^{46} - 16y^{45} + \cdots + 2057y + 441$
c_9	$y^{46} - 12y^{45} + \cdots - 22y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.251827 + 0.908109I$ $a = 0.20061 + 1.62861I$ $b = 0.177810 + 1.204600I$	$-2.70915 + 3.16187I$	$0. - 11.70551I$
$u = 0.251827 - 0.908109I$ $a = 0.20061 - 1.62861I$ $b = 0.177810 - 1.204600I$	$-2.70915 - 3.16187I$	$0. + 11.70551I$
$u = -0.461403 + 0.770237I$ $a = -0.53163 - 1.45969I$ $b = 0.562847 - 1.067530I$	$0.25802 - 5.64989I$	$2.00000 + 5.24555I$
$u = -0.461403 - 0.770237I$ $a = -0.53163 + 1.45969I$ $b = 0.562847 + 1.067530I$	$0.25802 + 5.64989I$	$2.00000 - 5.24555I$
$u = 0.804750 + 0.279776I$ $a = -0.56379 + 1.34351I$ $b = -0.210539 + 1.041060I$	$-2.67306 + 1.99398I$	$1.37428 - 0.82708I$
$u = 0.804750 - 0.279776I$ $a = -0.56379 - 1.34351I$ $b = -0.210539 - 1.041060I$	$-2.67306 - 1.99398I$	$1.37428 + 0.82708I$
$u = -0.818965 + 0.813785I$ $a = -0.085041 + 1.063690I$ $b = 0.428297 + 0.682608I$	$1.75315 - 1.54371I$	0
$u = -0.818965 - 0.813785I$ $a = -0.085041 - 1.063690I$ $b = 0.428297 - 0.682608I$	$1.75315 + 1.54371I$	0
$u = 1.179940 + 0.090567I$ $a = 1.39121 - 0.28601I$ $b = -0.875975 - 0.808574I$	$0.81036 + 5.98093I$	0
$u = 1.179940 - 0.090567I$ $a = 1.39121 + 0.28601I$ $b = -0.875975 + 0.808574I$	$0.81036 - 5.98093I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.216110 + 0.140572I$ $a = 1.092000 - 0.350167I$ $b = -0.462289 - 1.168540I$	$-0.824269 - 0.316586I$	0
$u = 1.216110 - 0.140572I$ $a = 1.092000 + 0.350167I$ $b = -0.462289 + 1.168540I$	$-0.824269 + 0.316586I$	0
$u = 0.905822 + 0.823807I$ $a = 0.661209 - 0.874257I$ $b = 0.010054 - 0.850242I$	$-1.07932 + 2.70676I$	0
$u = 0.905822 - 0.823807I$ $a = 0.661209 + 0.874257I$ $b = 0.010054 + 0.850242I$	$-1.07932 - 2.70676I$	0
$u = -1.235550 + 0.049193I$ $a = 0.204097 - 1.282690I$ $b = 0.39285 - 1.47419I$	$1.42470 - 6.59663I$	0
$u = -1.235550 - 0.049193I$ $a = 0.204097 + 1.282690I$ $b = 0.39285 + 1.47419I$	$1.42470 + 6.59663I$	0
$u = -1.291290 + 0.070230I$ $a = -0.275179 - 0.219496I$ $b = 1.62590 + 0.04442I$	$7.46631 - 0.28005I$	0
$u = -1.291290 - 0.070230I$ $a = -0.275179 + 0.219496I$ $b = 1.62590 - 0.04442I$	$7.46631 + 0.28005I$	0
$u = 1.298140 + 0.069796I$ $a = 1.67461 - 1.07609I$ $b = -0.061800 - 1.035020I$	$-0.406107 + 0.268496I$	0
$u = 1.298140 - 0.069796I$ $a = 1.67461 + 1.07609I$ $b = -0.061800 + 1.035020I$	$-0.406107 - 0.268496I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.310450+0.156888I$ $a=\ \ 2.57763+0.78410I$ $b=-0.201881+0.517890I$	$6.74260-6.09926I$	0
$u=-1.310450-0.156888I$ $a=\ \ 2.57763-0.78410I$ $b=-0.201881-0.517890I$	$6.74260+6.09926I$	0
$u=\ \ 0.638347+0.133605I$ $a=-1.06576+1.03665I$ $b=-0.539488+0.731789I$	$-1.14174-5.08006I$	$9.37272+9.36027I$
$u=\ \ 0.638347-0.133605I$ $a=-1.06576-1.03665I$ $b=-0.539488-0.731789I$	$-1.14174+5.08006I$	$9.37272-9.36027I$
$u=-0.624222+0.007950I$ $a=-0.954029-0.008395I$ $b=\ \ 0.396731+1.338910I$	$-0.92068+6.24523I$	$0.17378-4.70056I$
$u=-0.624222-0.007950I$ $a=-0.954029+0.008395I$ $b=\ \ 0.396731-1.338910I$	$-0.92068-6.24523I$	$0.17378+4.70056I$
$u=-1.333270+0.355858I$ $a=-0.622675-1.029750I$ $b=\ \ 0.53989-1.46657I$	$2.08018-7.66208I$	0
$u=-1.333270-0.355858I$ $a=-0.622675+1.029750I$ $b=\ \ 0.53989+1.46657I$	$2.08018+7.66208I$	0
$u=-1.319520+0.454633I$ $a=-0.923807-0.906759I$ $b=\ \ 0.681026-0.908786I$	$3.59666-4.02448I$	0
$u=-1.319520-0.454633I$ $a=-0.923807+0.906759I$ $b=\ \ 0.681026+0.908786I$	$3.59666+4.02448I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.44521 + 0.13696I$ $a = -0.484944 + 0.261687I$ $b = 1.277430 - 0.501237I$	$9.44453 + 2.36823I$	0
$u = 1.44521 - 0.13696I$ $a = -0.484944 - 0.261687I$ $b = 1.277430 + 0.501237I$	$9.44453 - 2.36823I$	0
$u = -0.401011 + 0.293648I$ $a = -4.11598 - 3.56165I$ $b = -0.042732 - 0.503196I$	$3.46832 + 4.37198I$	$-5.31117 + 2.96706I$
$u = -0.401011 - 0.293648I$ $a = -4.11598 + 3.56165I$ $b = -0.042732 + 0.503196I$	$3.46832 - 4.37198I$	$-5.31117 - 2.96706I$
$u = 1.51156 + 0.23961I$ $a = -1.047540 + 0.807868I$ $b = 0.716398 + 1.198340I$	$6.93784 + 9.13063I$	0
$u = 1.51156 - 0.23961I$ $a = -1.047540 - 0.807868I$ $b = 0.716398 - 1.198340I$	$6.93784 - 9.13063I$	0
$u = -1.54723 + 0.20961I$ $a = -0.311292 + 0.179594I$ $b = 0.601143 + 0.728508I$	$4.24537 + 1.07686I$	0
$u = -1.54723 - 0.20961I$ $a = -0.311292 - 0.179594I$ $b = 0.601143 - 0.728508I$	$4.24537 - 1.07686I$	0
$u = 1.61893 + 0.02327I$ $a = -0.743513 - 0.046836I$ $b = 0.143217 - 0.334092I$	$11.24770 + 3.58570I$	0
$u = 1.61893 - 0.02327I$ $a = -0.743513 + 0.046836I$ $b = 0.143217 + 0.334092I$	$11.24770 - 3.58570I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.311703 + 0.202329I$ $a = -4.68389 + 2.51116I$ $b = 0.153490 + 0.922949I$	$-3.86723 + 0.66458I$	$4.97144 - 11.90794I$
$u = 0.311703 - 0.202329I$ $a = -4.68389 - 2.51116I$ $b = 0.153490 - 0.922949I$	$-3.86723 - 0.66458I$	$4.97144 + 11.90794I$
$u = -1.64321 + 0.13971I$ $a = 0.237599 + 0.075650I$ $b = -0.117497 + 0.459227I$	$7.89465 - 5.92482I$	0
$u = -1.64321 - 0.13971I$ $a = 0.237599 - 0.075650I$ $b = -0.117497 - 0.459227I$	$7.89465 + 5.92482I$	0
$u = -0.196214 + 0.251213I$ $a = 0.036764 - 0.948542I$ $b = 1.305120 + 0.158730I$	$3.82381 - 0.78722I$	$-3.78166 + 8.80985I$
$u = -0.196214 - 0.251213I$ $a = 0.036764 + 0.948542I$ $b = 1.305120 - 0.158730I$	$3.82381 + 0.78722I$	$-3.78166 - 8.80985I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{46}-6u^{45}+\cdots+3u^2+1)(u^{159}-11u^{158}+\cdots-43u+11)$
c_2	$(u^{46}+4u^{45}+\cdots+2u+1)(u^{159}-3u^{158}+\cdots-71881u-10679)$
c_3	$(u^{46}+5u^{44}+\cdots-u^2+1)(u^{159}+u^{158}+\cdots+527u-25)$
c_4	$(u^{46}+9u^{44}+\cdots-5u+37)$ $\cdot(u^{159}-u^{158}+\cdots+46182518u-10020811)$
c_5	$(u^{46}-2u^{45}+\cdots-7u+3)(u^{159}-u^{158}+\cdots-2628u-193)$
c_6	$(u^{46}-4u^{45}+\cdots-2u+1)(u^{159}-3u^{158}+\cdots-71881u-10679)$
c_7	$(u^{46}+13u^{45}+\cdots+7u+1)(u^{159}-12u^{158}+\cdots+53726u+16181)$
c_8	$(u^{46}-8u^{44}+\cdots+29u+21)$ $\cdot(u^{159}-u^{158}+\cdots-8791546u-1048243)$
c_9	$(u^{46}-2u^{45}+\cdots-11u^2+1)(u^{159}-5u^{158}+\cdots-16779u+1957)$
c_{10}	$(u^{46}-13u^{45}+\cdots-7u+1)(u^{159}-12u^{158}+\cdots+53726u+16181)$
c_{11}, c_{12}	$(u^{46}+2u^{45}+\cdots+7u+3)(u^{159}-u^{158}+\cdots-2628u-193)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{46}-4y^{45}+\cdots+6y+1)(y^{159}+7y^{158}+\cdots-6709y-121)$
c_2, c_6	$(y^{46}+26y^{45}+\cdots+36y+1)$ $\cdot(y^{159}+97y^{158}+\cdots-5702976927y-114041041)$
c_3	$(y^{46}+10y^{45}+\cdots-2y+1)(y^{159}+17y^{158}+\cdots-58921y-625)$
c_4	$(y^{46}+18y^{45}+\cdots+5821y+1369)$ $\cdot(y^{159}-15y^{158}+\cdots+1162437248935440y-100416653097721)$
c_5, c_{11}, c_{12}	$(y^{46}-50y^{45}+\cdots-229y+9)$ $\cdot(y^{159}-159y^{158}+\cdots-2425166y-37249)$
c_7, c_{10}	$(y^{46}+19y^{45}+\cdots+45y+1)$ $\cdot(y^{159}+70y^{158}+\cdots-10616690872y-261824761)$
c_8	$(y^{46}-16y^{45}+\cdots+2057y+441)$ $\cdot(y^{159}+11y^{158}+\cdots-57826335947932y-1098813387049)$
c_9	$(y^{46}-12y^{45}+\cdots-22y+1)$ $\cdot(y^{159}-21y^{158}+\cdots+100453631y-3829849)$