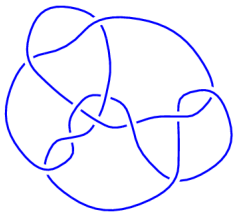
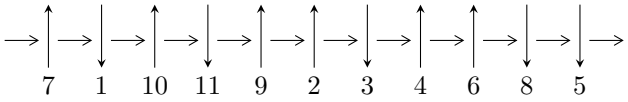
$11a_{189}$ $(K11a_{189})$



[1]

Arc Sequences



Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{2} I_i^u$$

$I_1^u = \langle u^{15} + 4u^{13} + 8u^{11} - u^{10} + 8u^9 - 3u^8 + 4u^7 - 5u^6 - 5u^4 - 3u^2 - 1,$
$-2u^{14} + u^{13} - 7u^{12} + 2u^{11} - 12u^{10} + 4u^9 - 10u^8 + 4u^7 - 3u^6 + 6u^5 + u^4 + 5u^3 + b + 3u + 1,$
$u^{14} - 2u^{13} + 4u^{12} - 7u^{11} + 7u^{10} - 13u^9 + 7u^8 - 12u^7 + 5u^6 - 6u^5 + 5u^4 - u^3 + 6u^2 + a - u + 2\rangle$

$I_2^u = \langle u^{89} + u^{88} + \cdots + u + 1,\ -2.31365 \times 10^{70} u^{88} - 2.97507 \times 10^{69} u^{87} + \cdots + 4.17972 \times 10^{70} b + 5.10076 \times 10^{70},$
$1.44260 \times 10^{71} u^{88} - 6.37445 \times 10^{69} u^{87} + \cdots + 4.17972 \times 10^{70} a - 2.17823 \times 10^{71}\rangle$

There are 2 irreducible components with 104 representations.

[1] The knot diagram image is adapter from "C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, http://www.indiana.edu/ knotinfo"

I.

$$\boldsymbol{I_1^u = \langle u^{15}+4u^{13}+\cdots-3u^2-1,\ -2u^{14}+u^{13}+\cdots+b+1,\ u^{14}-2u^{13}+\cdots+a+2\rangle}$$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_2 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix}-u^{14}+2u^{13}+\cdots+u-2\\2u^{14}-u^{13}+\cdots-3u-1\end{pmatrix}$$

$$a_4 = \begin{pmatrix}u^{14}+3u^{12}+4u^{10}-u^9+u^8-2u^7-u^6-2u^5-u^3+2u^2+u\\-2u^{13}+u^{12}+\cdots-2u+3\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-u^5-2u^3-u\\u^5+u^3+u\end{pmatrix}$$

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

$$a_9 = \begin{pmatrix}-u^{14}+u^{13}+\cdots-5u^2-2\\2u^{14}-u^{13}+\cdots+2u^2-2u\end{pmatrix}$$

$$a_5 = \begin{pmatrix}2u^{14}-2u^{13}+\cdots+9u^2+3\\-u^{14}-3u^{12}-5u^{10}+u^9-3u^8+2u^7-u^6+3u^5+u^4+2u^3+u+1\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-u^{14}+2u^{13}+\cdots+u-2\\2u^{14}-u^{13}+\cdots+2u^2-3u\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-u^{14}+2u^{13}+\cdots+u-2\\2u^{14}-u^{13}+\cdots+2u^2-3u\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.730319-0.473087I$ $a=\ 0.14167+1.52077I$ $b=\ 0.201324-1.125277I$	$0.29078-2.83345I$	$2.46812+4.57300I$
$u=-0.730319+0.473087I$ $a=\ 0.14167-1.52077I$ $b=\ 0.201324+1.125277I$	$0.29078+2.83345I$	$2.46812-4.57300I$
$u=-0.566587-1.091474I$ $a=-1.81128-0.28846I$ $b=\ 0.63179+1.77883I$	$-1.62575+7.79387I$	$-1.04019-8.56161I$
$u=-0.566587+1.091474I$ $a=-1.81128+0.28846I$ $b=\ 0.63179-1.77883I$	$-1.62575-7.79387I$	$-1.04019+8.56161I$
$u=-0.345145-1.038182I$ $a=\ 1.78107-0.62388I$ $b=-0.79089-2.03055I$	$-3.32177-0.98994I$	$-4.43129+2.79552I$
$u=-0.345145+1.038182I$ $a=\ 1.78107+0.62388I$ $b=-0.79089+2.03055I$	$-3.32177+0.98994I$	$-4.43129-2.79552I$
$u=-0.169950-0.765535I$ $a=\ 0.08979-1.47418I$ $b=-1.10345+1.29921I$	$-2.02887+3.34950I$	$-5.67040-7.67904I$
$u=-0.169950+0.765535I$ $a=\ 0.08979+1.47418I$ $b=-1.10345-1.29921I$	$-2.02887-3.34950I$	$-5.67040+7.67904I$
$u=\ 0.430598-0.629019I$ $a=\ 0.75507+1.77444I$ $b=-0.301019+0.576431I$	$3.03538-0.81175I$	$4.74302+6.70940I$
$u=\ 0.430598+0.629019I$ $a=\ 0.75507-1.77444I$ $b=-0.301019-0.576431I$	$3.03538+0.81175I$	$4.74302-6.70940I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.436895 - 1.241648I$ $a = -0.097999 + 0.734099I$ $b = -1.049550 - 0.257193I$	$-6.62917 - 4.72492I$	$6.04899 + 6.78091I$
$u = 0.436895 + 1.241648I$ $a = -0.097999 - 0.734099I$ $b = -1.049550 + 0.257193I$	$-6.62917 + 4.72492I$	$6.04899 - 6.78091I$
$u = 0.474783 - 1.014416I$ $a = 0.742680 + 0.533725I$ $b = -1.21353 - 0.76708I$	$1.74022 - 3.03027I$	$6.59174 + 2.91144I$
$u = 0.474783 + 1.014416I$ $a = 0.742680 - 0.533725I$ $b = -1.21353 + 0.76708I$	$1.74022 + 3.03027I$	$6.59174 - 2.91144I$
$u = 0.939449$ $a = 0.797996$ $b = -0.749350$	-2.66084	10.5800

II.

$\boldsymbol{I_2^u = \langle u^{89}+u^{88}+\cdots+u+1,\ -2.31\times10^{70}u^{88}-2.98\times10^{69}u^{87}+\cdots+4.18\times10^{70}b+5.10\times10^{70},\ 1.44\times10^{71}u^{88}-6.37\times10^{69}u^{87}+\cdots+4.18\times10^{70}a-2.18\times10^{71}\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_2 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix}-3.45144u^{88}+0.152509u^{87}+\cdots-14.7103u+5.21142\\0.553542u^{88}+0.0711787u^{87}+\cdots+0.183538u-1.22036\end{pmatrix}$$

$$a_4 = \begin{pmatrix}2.02227u^{88}+3.79936u^{87}+\cdots-3.53679u+8.06370\\-1.85573u^{88}-1.81438u^{87}+\cdots-4.16380u-3.73212\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-u^5-2u^3-u\\u^5+u^3+u\end{pmatrix}$$

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

$$a_9 = \begin{pmatrix}-3.20291u^{88}+0.300880u^{87}+\cdots-16.5155u+7.39233\\-0.0226504u^{88}-0.425271u^{87}+\cdots+2.13704u-3.50142\end{pmatrix}$$

$$a_5 = \begin{pmatrix}2.88371u^{88}+0.681693u^{87}+\cdots+14.8096u-1.08462\\1.10236u^{88}+0.497652u^{87}+\cdots+3.04432u+0.872062\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-3.73352u^{88}-0.197630u^{87}+\cdots-17.2960u+6.64918\\-0.328846u^{88}-0.607386u^{87}+\cdots+1.14673u-3.38074\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-3.73352u^{88}-0.197630u^{87}+\cdots-17.2960u+6.64918\\-0.328846u^{88}-0.607386u^{87}+\cdots+1.14673u-3.38074\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.00045$ $a=-0.366435$ $b=\ \ 0.119766$	-3.01024	-14.1893
$u=-0.865000-0.277810I$ $a=\ \ 0.84399-1.78985I$ $b=-1.12983+1.45385I$	$-0.85217-12.06676I$	$1.59078+6.75135I$
$u=-0.865000+0.277810I$ $a=\ \ 0.84399+1.78985I$ $b=-1.12983-1.45385I$	$-0.85217+12.06676I$	$1.59078-6.75135I$
$u=-0.790380-0.010764I$ $a=\ \ 0.871319-0.419020I$ $b=-1.001952+0.346658I$	$-3.43024+0.04199I$	$-4.26255+1.50796I$
$u=-0.790380+0.010764I$ $a=\ \ 0.871319+0.419020I$ $b=-1.001952-0.346658I$	$-3.43024-0.04199I$	$-4.26255-1.50796I$
$u=-0.777765-0.486892I$ $a=-0.168873+1.086149I$ $b=\ \ 0.402474-1.019269I$	$0.082135-1.402704I$	$0.892672+0.911438I$
$u=-0.777765+0.486892I$ $a=-0.168873-1.086149I$ $b=\ \ 0.402474+1.019269I$	$0.082135+1.402704I$	$0.892672-0.911438I$
$u=-0.671064-0.370362I$ $a=-0.54867+2.25482I$ $b=\ \ 1.06737-1.01899I$	$1.47236-3.97526I$	$5.54466+7.11899I$
$u=-0.671064+0.370362I$ $a=-0.54867-2.25482I$ $b=\ \ 1.06737+1.01899I$	$1.47236+3.97526I$	$5.54466-7.11899I$
$u=-0.619673-0.725733I$ $a=-0.435210-0.658594I$ $b=\ \ 0.832746+0.108470I$	$5.28492+4.09985I$	$7.22225-5.31367I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.619673+0.725733I$ $a=-0.435210+0.658594I$ $b=\ \ 0.832746-0.108470I$	$5.28492-4.09985I$	$7.22225+5.31367I$
$u=-0.607672-0.312499I$ $a=\ \ 0.329702+1.337648I$ $b=\ \ 0.438938-1.168584I$	$-0.07957-2.04453I$	$1.68178+3.11842I$
$u=-0.607672+0.312499I$ $a=\ \ 0.329702-1.337648I$ $b=\ \ 0.438938+1.168584I$	$-0.07957+2.04453I$	$1.68178-3.11842I$
$u=-0.589900-0.848273I$ $a=\ \ 0.259884+1.037416I$ $b=\ \ 0.260252+0.191583I$	$4.93245+0.64307I$	$7.39513-2.13919I$
$u=-0.589900+0.848273I$ $a=\ \ 0.259884-1.037416I$ $b=\ \ 0.260252-0.191583I$	$4.93245-0.64307I$	$7.39513+2.13919I$
$u=-0.585765-1.090061I$ $a=-1.46990-0.11476I$ $b=\ \ 0.46376+1.56469I$	$-1.77198+6.54158I$	$-1.95190-4.07828I$
$u=-0.585765+1.090061I$ $a=-1.46990+0.11476I$ $b=\ \ 0.46376-1.56469I$	$-1.77198-6.54158I$	$-1.95190+4.07828I$
$u=-0.578762-1.177819I$ $a=\ \ 1.88021-0.39864I$ $b=-1.38100-1.90642I$	$-3.5526+17.3742I$	$-1.29719-10.00923I$
$u=-0.578762+1.177819I$ $a=\ \ 1.88021+0.39864I$ $b=-1.38100+1.90642I$	$-3.5526-17.3742I$	$-1.29719+10.00923I$
$u=-0.542682-1.092710I$ $a=-1.99921+0.20925I$ $b=\ \ 1.57197+1.85640I$	$-0.63006+8.68382I$	$2.39425-11.64061I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.542682+1.092710I$ $a=-1.99921-0.20925I$ $b=\ \ 1.57197-1.85640I$	$-0.63006-8.68382I$	$2.39425+11.64061I$
$u=-0.503689-1.088910I$ $a=-1.53594-0.04219I$ $b=\ \ 0.37146+2.05787I$	$-2.27469+6.43119I$	$-1.34869-6.67205I$
$u=-0.503689+1.088910I$ $a=-1.53594+0.04219I$ $b=\ \ 0.37146-2.05787I$	$-2.27469-6.43119I$	$-1.34869+6.67205I$
$u=-0.472289-1.197746I$ $a=\ \ 0.576750-0.613075I$ $b=-0.995124-0.786018I$	$-6.87250+4.47387I$	$-7.58133-3.11530I$
$u=-0.472289+1.197746I$ $a=\ \ 0.576750+0.613075I$ $b=-0.995124+0.786018I$	$-6.87250-4.47387I$	$-7.58133+3.11530I$
$u=-0.459303-1.080262I$ $a=-0.702196+0.221563I$ $b=\ \ 0.773768-0.795600I$	$0.74745+3.52422I$	$-1.88153-4.75882I$
$u=-0.459303+1.080262I$ $a=-0.702196-0.221563I$ $b=\ \ 0.773768+0.795600I$	$0.74745-3.52422I$	$-1.88153+4.75882I$
$u=-0.453707-1.212610I$ $a=-0.189513-0.892622I$ $b=-1.068586+0.227658I$	$-7.01352+4.49963I$	$-10.17665+1.38005I$
$u=-0.453707+1.212610I$ $a=-0.189513+0.892622I$ $b=-1.068586-0.227658I$	$-7.01352-4.49963I$	$-10.17665-1.38005I$
$u=-0.442335-0.764836I$ $a=-0.623944-0.957136I$ $b=-1.30580+0.71908I$	$-1.82833+5.02044I$	$-0.46352-9.08677I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.442335+0.764836I$ $a=-0.623944+0.957136I$ $b=-1.30580-0.71908I$	$-1.82833-5.02044I$	$-0.46352+9.08677I$
$u=-0.440358-1.055425I$ $a=\ \ 2.40455-0.49414I$ $b=-1.02099-1.69354I$	$-2.85121+0.37716I$	$-1.49051-1.49123I$
$u=-0.440358+1.055425I$ $a=\ \ 2.40455+0.49414I$ $b=-1.02099+1.69354I$	$-2.85121-0.37716I$	$-1.49051+1.49123I$
$u=-0.381750-1.280000I$ $a=-0.506392+0.164127I$ $b=\ \ 0.324802+0.256162I$	$-7.33407+4.81411I$	$-9.37616-7.40257I$
$u=-0.381750+1.280000I$ $a=-0.506392-0.164127I$ $b=\ \ 0.324802-0.256162I$	$-7.33407-4.81411I$	$-9.37616+7.40257I$
$u=-0.336596-0.487930I$ $a=\ \ 0.96274-2.95735I$ $b=-0.81587+1.25992I$	$-1.06082+3.18631I$	$2.86781-5.39903I$
$u=-0.336596+0.487930I$ $a=\ \ 0.96274+2.95735I$ $b=-0.81587-1.25992I$	$-1.06082-3.18631I$	$2.86781+5.39903I$
$u=-0.336434-0.992836I$ $a=\ \ 1.383122+0.239642I$ $b=-0.61946-1.95265I$	$-2.24793-1.87180I$	$-0.28363+4.20866I$
$u=-0.336434+0.992836I$ $a=\ \ 1.383122-0.239642I$ $b=-0.61946+1.95265I$	$-2.24793+1.87180I$	$-0.28363-4.20866I$
$u=-0.293249-0.396160I$ $a=-1.30341+2.50347I$ $b=-0.384855+0.423433I$	$2.87128+0.16130I$	$2.26530+3.31981I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.293249+0.396160I$ $a=-1.30341-2.50347I$ $b=-0.384855-0.423433I$	$2.87128-0.16130I$	$2.26530-3.31981I$
$u=-0.287834-1.065657I$ $a=1.257010-0.593329I$ $b=-0.728105-1.055933I$	$-3.77027+0.40204I$	$-7.60841-1.19387I$
$u=-0.287834+1.065657I$ $a=1.257010+0.593329I$ $b=-0.728105+1.055933I$	$-3.77027-0.40204I$	$-7.60841+1.19387I$
$u=-0.249612-1.242622I$ $a=-1.046309-0.293697I$ $b=-0.32865+1.54263I$	$-5.82286-8.54509I$	$-3.82869+5.08532I$
$u=-0.249612+1.242622I$ $a=-1.046309+0.293697I$ $b=-0.32865-1.54263I$	$-5.82286+8.54509I$	$-3.82869-5.08532I$
$u=0.018061-0.803740I$ $a=0.838491+0.059519I$ $b=-1.06480-1.01189I$	$-2.06773-2.36101I$	$-4.09762+0.96506I$
$u=0.018061+0.803740I$ $a=0.838491-0.059519I$ $b=-1.06480+1.01189I$	$-2.06773+2.36101I$	$-4.09762-0.96506I$
$u=0.178272-1.211206I$ $a=-0.456373-0.364320I$ $b=0.310186-1.154496I$	$-6.30667-0.58881I$	$-7.30713+0.39875I$
$u=0.178272+1.211206I$ $a=-0.456373+0.364320I$ $b=0.310186+1.154496I$	$-6.30667+0.58881I$	$-7.30713-0.39875I$
$u=0.291843-0.990916I$ $a=0.052285+0.699579I$ $b=-0.515292-0.761840I$	$-0.74312-2.38513I$	$0.92796+4.04958I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.291843 + 0.990916I$ $a = 0.052285 - 0.699579I$ $b = -0.515292 + 0.761840I$	$-0.74312 + 2.38513I$	$0.92796 - 4.04958I$
$u = 0.303444 - 1.169719I$ $a = 1.319445 - 0.460729I$ $b = 0.58982 + 1.70755I$	$-1.33196 + 2.44177I$	$-0.30547 - 4.00021I$
$u = 0.303444 + 1.169719I$ $a = 1.319445 + 0.460729I$ $b = 0.58982 - 1.70755I$	$-1.33196 - 2.44177I$	$-0.30547 + 4.00021I$
$u = 0.338503 - 1.177373I$ $a = -1.51674 - 0.04199I$ $b = 0.646632 - 1.129374I$	$-8.23912 + 1.98284I$	$-6.23612 - 1.21125I$
$u = 0.338503 + 1.177373I$ $a = -1.51674 + 0.04199I$ $b = 0.646632 + 1.129374I$	$-8.23912 - 1.98284I$	$-6.23612 + 1.21125I$
$u = 0.413378 - 1.110139I$ $a = 1.165662 + 0.701434I$ $b = -0.69624 + 2.12309I$	$-4.70888 - 0.05763I$	$-6.21342 + 0.79195I$
$u = 0.413378 + 1.110139I$ $a = 1.165662 - 0.701434I$ $b = -0.69624 - 2.12309I$	$-4.70888 + 0.05763I$	$-6.21342 - 0.79195I$
$u = 0.419502 - 1.033537I$ $a = -0.465323 + 0.337565I$ $b = -0.050021 - 1.178309I$	$-0.66030 - 2.49036I$	$1.19350 + 2.71078I$
$u = 0.419502 + 1.033537I$ $a = -0.465323 - 0.337565I$ $b = -0.050021 + 1.178309I$	$-0.66030 + 2.49036I$	$1.19350 - 2.71078I$
$u = 0.451500 - 0.555687I$ $a = 0.272568 - 0.180303I$ $b = 0.632393 + 0.100276I$	$0.725380 - 1.180738I$	$4.24551 + 4.64635I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.451500 + 0.555687I$ $a = 0.272568 + 0.180303I$ $b = 0.632393 - 0.100276I$	$0.725380 + 1.180738I$	$4.24551 - 4.64635I$
$u = 0.482028 - 1.117081I$ $a = -2.17045 + 0.60966I$ $b = -0.01980 - 1.57973I$	$-4.21471 - 7.50514I$	$-4.41968 + 7.44793I$
$u = 0.482028 + 1.117081I$ $a = -2.17045 - 0.60966I$ $b = -0.01980 + 1.57973I$	$-4.21471 + 7.50514I$	$-4.41968 - 7.44793I$
$u = 0.489653 - 1.098572I$ $a = 1.53023 + 0.80550I$ $b = -1.76741 + 0.86686I$	$0.03725 - 4.55071I$	$1.15570 + 4.08431I$
$u = 0.489653 + 1.098572I$ $a = 1.53023 - 0.80550I$ $b = -1.76741 - 0.86686I$	$0.03725 + 4.55071I$	$1.15570 - 4.08431I$
$u = 0.523582 - 1.158445I$ $a = 1.288055 - 0.237336I$ $b = -0.50029 + 2.18182I$	$-6.96009 - 10.29767I$	$-3.87588 + 8.22605I$
$u = 0.523582 + 1.158445I$ $a = 1.288055 + 0.237336I$ $b = -0.50029 - 2.18182I$	$-6.96009 + 10.29767I$	$-3.87588 - 8.22605I$
$u = 0.543517 - 0.162280I$ $a = -0.48500 - 2.13577I$ $b = -0.52572 + 1.47533I$	$-1.64043 + 3.35164I$	$-1.30856 - 4.71347I$
$u = 0.543517 + 0.162280I$ $a = -0.48500 + 2.13577I$ $b = -0.52572 - 1.47533I$	$-1.64043 - 3.35164I$	$-1.30856 + 4.71347I$
$u = 0.544361 - 1.006050I$ $a = 0.422054 + 0.214218I$ $b = -0.580705 - 0.729575I$	$0.70886 - 2.35289I$	$0.110877 + 0.706205I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.544361 + 1.006050I$ $a = 0.422054 - 0.214218I$ $b = -0.580705 + 0.729575I$	$0.70886 + 2.35289I$	$0.110877 - 0.706205I$
$u = 0.545470 - 1.156984I$ $a = -1.95738 - 0.78932I$ $b = 1.64604 - 1.86066I$	$0.33138 - 10.71184I$	$1.08847 + 9.35125I$
$u = 0.545470 + 1.156984I$ $a = -1.95738 + 0.78932I$ $b = 1.64604 + 1.86066I$	$0.33138 + 10.71184I$	$1.08847 - 9.35125I$
$u = 0.555096 - 0.218663I$ $a = 1.92341 + 1.62580I$ $b = -1.029338 - 0.321104I$	$2.41961 + 0.34900I$	$5.67559 + 0.69336I$
$u = 0.555096 + 0.218663I$ $a = 1.92341 - 1.62580I$ $b = -1.029338 + 0.321104I$	$2.41961 - 0.34900I$	$5.67559 - 0.69336I$
$u = 0.607252 - 1.180509I$ $a = 1.295618 - 0.052884I$ $b = -0.580266 + 1.200793I$	$-3.38961 - 8.10177I$	$-4.69329 + 7.68917I$
$u = 0.607252 + 1.180509I$ $a = 1.295618 + 0.052884I$ $b = -0.580266 - 1.200793I$	$-3.38961 + 8.10177I$	$-4.69329 - 7.68917I$
$u = 0.620220 - 0.527821I$ $a = 0.920898 + 0.613728I$ $b = 0.157831 + 0.355835I$	$2.10633 - 2.24661I$	$4.49507 + 5.75755I$
$u = 0.620220 + 0.527821I$ $a = 0.920898 - 0.613728I$ $b = 0.157831 - 0.355835I$	$2.10633 + 2.24661I$	$4.49507 - 5.75755I$
$u = 0.744680 - 0.799489I$ $a = 0.128856 - 0.553555I$ $b = -0.501566 + 0.126612I$	$2.20718 - 9.21559I$	$2.94452 + 8.87306I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.744680 + 0.799489I$ $a = 0.128856 + 0.553555I$ $b = -0.501566 - 0.126612I$	$2.20718 + 9.21559I$	$2.94452 - 8.87306I$
$u = 0.753321 - 0.196905I$ $a = -0.48824 + 1.70355I$ $b = -0.468384 - 1.321864I$	$-4.17367 + 5.52755I$	$-1.11999 - 4.93863I$
$u = 0.753321 + 0.196905I$ $a = -0.48824 - 1.70355I$ $b = -0.468384 + 1.321864I$	$-4.17367 - 5.52755I$	$-1.11999 + 4.93863I$
$u = 0.766320 - 0.823140I$ $a = -0.267735 + 0.595438I$ $b = -0.0581263 + 0.0486986I$	$2.16092 + 3.60298I$	$3.50385 - 5.02035I$
$u = 0.766320 + 0.823140I$ $a = -0.267735 - 0.595438I$ $b = -0.0581263 - 0.0486986I$	$2.16092 - 3.60298I$	$3.50385 + 5.02035I$
$u = 0.778804 - 0.251726I$ $a = -1.17411 - 1.80646I$ $b = 1.34520 + 1.40674I$	$2.99214 + 5.76178I$	$4.73681 - 5.76242I$
$u = 0.778804 + 0.251726I$ $a = -1.17411 + 1.80646I$ $b = 1.34520 - 1.40674I$	$2.99214 - 5.76178I$	$4.73681 + 5.76242I$
$u = 0.917237 - 0.354895I$ $a = 0.267291 + 1.067796I$ $b = -0.257342 - 0.930372I$	$-0.83265 + 2.51437I$	$-4.70992 - 3.33907I$
$u = 0.917237 + 0.354895I$ $a = 0.267291 - 1.067796I$ $b = -0.257342 + 0.930372I$	$-0.83265 - 2.51437I$	$-4.70992 + 3.33907I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^{15}+4u^{13}+8u^{11}-u^{10}+8u^9-3u^8+4u^7-5u^6-5u^4-3u^2-1)$ $(u^{89}+u^{88}+\cdots+u+1)$
c_2	$(u^{15}+8u^{14}+\cdots-6u-1)(u^{89}+45u^{88}+\cdots-7u-1)$
c_3	$(u^{15}+u^{13}-u^{12}-2u^{11}-2u^9+4u^8+2u^7+u^5-4u^4+1)$ $(u^{89}+3u^{88}+\cdots+27u-1)$
c_4	$(u-1)(u^{15}-u^{14}+\cdots-u+1)(u^{88}+u^{87}+\cdots+729u+131)$
c_5	$(u^{15}-u^{14}+\cdots-u+1)(u^{89}-27u^{87}+\cdots+2u-1)$
c_6	$(u^{15}+4u^{13}+8u^{11}+u^{10}+8u^9+3u^8+4u^7+5u^6+5u^4+3u^2+1)$ $(u^{89}+u^{88}+\cdots+u+1)$
c_7	$(u^{15}-4u^{13}+\cdots+2u+1)(u^{89}+u^{88}+\cdots-219u-3737)$
c_8	$(u^{15}-4u^{11}+u^{10}+2u^8+4u^7-2u^6-2u^4-u^3+u^2+1)$ $(u^{89}+u^{88}+\cdots-11u+3)$
c_9	$(u^{15}+u^{14}+\cdots-u-1)(u^{89}-27u^{87}+\cdots+2u-1)$
c_{10}	$(u^{15}-4u^{13}+\cdots+7u+1)(u^{89}+11u^{88}+\cdots+2752u+593)$
c_{11}	$(u^{15}+u^{14}+\cdots-u-1)(u^{89}-30u^{87}+\cdots-598u-131)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_6	$(y^{15}+8y^{14}+\cdots-6y-1)(y^{89}+45y^{88}+\cdots-7y-1)$
c_2	$(y^{15}+16y^{13}+\cdots-2y-1)(y^{89}+y^{88}+\cdots-39y-1)$
c_3	$(y^{15}+2y^{14}+\cdots+8y^2-1)(y^{89}+3y^{88}+\cdots+143y-1)$
c_4	$(y^{15}-13y^{14}+\cdots+15y-1)(y^{89}-60y^{88}+\cdots+397166y-17161)$
c_5	$(y^{15}-15y^{14}+\cdots+13y-1)(y^{89}-54y^{88}+\cdots+32y-1)$
c_7	$(y^{15}-8y^{14}+\cdots-10y-1)$ $(y^{89}-43y^{88}+\cdots-186682455y-13965169)$
c_8	$(y^{15}-8y^{13}+\cdots-2y-1)(y^{89}+5y^{88}+\cdots+181y-9)$
c_9	$(y^{15}-15y^{14}+\cdots+13y-1)(y^{89}-54y^{88}+\cdots+32y-1)$
c_{10}	$(y^{15}-8y^{14}+\cdots+7y-1)(y^{89}-27y^{88}+\cdots+8974170y-351649)$
c_{11}	$(y^{15}-13y^{14}+\cdots+15y-1)(y^{89}-60y^{88}+\cdots+397166y-17161)$