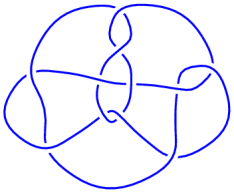
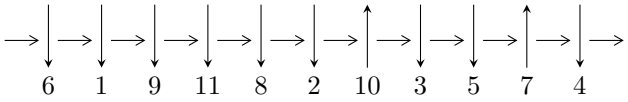
$11a_{213}$ $(K11a_{213})$



[1]

Arc Sequences



Solving Sequence

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

Representation Ideals

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

$I_1^u = \langle u^{20} - 6u^{18} + \cdots + u + 1,\ 21u^{19} - 10u^{18} + \cdots + b + 23,\ 26u^{19} - 16u^{18} + \cdots + a + 31 \rangle$

$I_2^u = \langle u^{92} - u^{91} + \cdots - u - 1,\ 1.67422 \times 10^{222} u^{91} - 2.57888 \times 10^{222} u^{90} + \cdots + 2.72339 \times 10^{221} a - 4.21029 \times 10^{2}$
$4.59610 \times 10^{222} u^{91} - 6.94766 \times 10^{222} u^{90} + \cdots + 2.72339 \times 10^{221} b - 1.01661 \times 10^{223} \rangle$

There are 2 irreducible components with 112 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. $I_1^u =$
$\langle u^{20}-6u^{18}+\cdots+u+1,\ 21u^{19}-10u^{18}+\cdots+b+23,\ 26u^{19}-16u^{18}+\cdots+a+31\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-26u^{19}+16u^{18}+\cdots+25u-31\\-21u^{19}+10u^{18}+\cdots+19u-23\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-u^{18}+5u^{16}+\cdots-5u^2+u\\12u^{19}-10u^{18}+\cdots-10u+15\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-4u^{19}+21u^{17}+\cdots+5u^2+4u\\-21u^{19}+10u^{18}+\cdots+15u-22\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-5u^{19}+6u^{18}+\cdots+6u-8\\-21u^{19}+10u^{18}+\cdots+19u-23\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_2 = \begin{pmatrix}20u^{19}-6u^{18}+\cdots-18u+21\\-7u^{19}+5u^{18}+\cdots+7u-6\end{pmatrix}$$
$$a_8 = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-5u^{19}+5u^{18}+\cdots+3u-10\\9u^{19}-7u^{18}+\cdots-7u+11\end{pmatrix}$$
$$a_7 = \begin{pmatrix}27u^{19}-21u^{18}+\cdots-20u+42\\27u^{19}-16u^{18}+\cdots-24u+34\end{pmatrix}$$
$$a_7 = \begin{pmatrix}27u^{19}-21u^{18}+\cdots-20u+42\\27u^{19}-16u^{18}+\cdots-24u+34\end{pmatrix}$$

(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
$u=-1.49942-0.05369I$ $a=-0.069581-0.382174I$ $b=\ \ 0.355541-0.485353I$	$-5.59805+1.77453I$	$-16.1663-4.7993I$
$u=-1.49942+0.05369I$ $a=-0.069581+0.382174I$ $b=\ \ 0.355541+0.485353I$	$-5.59805-1.77453I$	$-16.1663+4.7993I$
$u=-1.197310-0.297467I$ $a=-1.058624-0.032070I$ $b=\ \ 0.456437+1.060243I$	$-0.69775-5.95580I$	$-9.18910+5.63264I$
$u=-1.197310+0.297467I$ $a=-1.058624+0.032070I$ $b=\ \ 0.456437-1.060243I$	$-0.69775+5.95580I$	$-9.18910-5.63264I$
$u=-0.677664-0.019148I$ $a=\ \ 0.40530+1.85930I$ $b=-0.36367+1.45018I$	$1.86097+4.40401I$	$-13.93839-1.85189I$
$u=-0.677664+0.019148I$ $a=\ \ 0.40530-1.85930I$ $b=-0.36367-1.45018I$	$1.86097-4.40401I$	$-13.93839+1.85189I$
$u=-0.596304-0.330171I$ $a=\ \ 1.61836-0.73634I$ $b=-0.918717-0.754673I$	$-1.49168-3.77521I$	$-5.50553+6.05932I$
$u=-0.596304+0.330171I$ $a=\ \ 1.61836+0.73634I$ $b=-0.918717+0.754673I$	$-1.49168+3.77521I$	$-5.50553-6.05932I$
$u=-0.034514-1.030531I$ $a=\ \ 0.30014+1.99818I$ $b=-0.117330+0.725388I$	$2.26277-1.45555I$	$6.55534+4.54077I$
$u=-0.034514+1.030531I$ $a=\ \ 0.30014-1.99818I$ $b=-0.117330-0.725388I$	$2.26277+1.45555I$	$6.55534-4.54077I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.020502 - 1.009614I$ $a = 0.127758 + 1.255248I$ $b = -0.111980 + 1.179691I$	$4.05337 + 2.46535I$	$-3.03812 - 2.80384I$
$u = 0.020502 + 1.009614I$ $a = 0.127758 - 1.255248I$ $b = -0.111980 - 1.179691I$	$4.05337 - 2.46535I$	$-3.03812 + 2.80384I$
$u = 0.739186 - 0.254368I$ $a = 0.69748 + 1.41104I$ $b = -0.11506 + 1.54761I$	$2.49233 + 2.11946I$	$-10.71875 - 4.52605I$
$u = 0.739186 + 0.254368I$ $a = 0.69748 - 1.41104I$ $b = -0.11506 - 1.54761I$	$2.49233 - 2.11946I$	$-10.71875 + 4.52605I$
$u = 0.834862 - 0.376425I$ $a = -2.37873 - 0.97568I$ $b = 0.473306 - 0.639860I$	$-4.11080 + 6.47940I$	$-11.0697 - 10.5057I$
$u = 0.834862 + 0.376425I$ $a = -2.37873 + 0.97568I$ $b = 0.473306 + 0.639860I$	$-4.11080 - 6.47940I$	$-11.0697 + 10.5057I$
$u = 0.989760 - 0.468800I$ $a = 0.953403 + 0.600808I$ $b = -0.46915 + 1.35496I$	$1.31973 + 1.14762I$	$-5.60070 - 2.26738I$
$u = 0.989760 + 0.468800I$ $a = 0.953403 - 0.600808I$ $b = -0.46915 - 1.35496I$	$1.31973 - 1.14762I$	$-5.60070 + 2.26738I$
$u = 1.42090 - 0.17879I$ $a = -0.595500 - 0.636464I$ $b = -0.189379 - 0.489956I$	$-6.67062 - 3.74046I$	$-13.8287 + 3.4251I$
$u = 1.42090 + 0.17879I$ $a = -0.595500 + 0.636464I$ $b = -0.189379 + 0.489956I$	$-6.67062 + 3.74046I$	$-13.8287 - 3.4251I$

II. $I_2^u =$
$\langle u^{92}-u^{91}+\cdots-u-1,\ 1.67\times10^{222}u^{91}-2.58\times10^{222}u^{90}+\cdots+2.72\times10^{221}a-4.21\times10^{222},\ 4.60\times10^{222}u^{91}-6.95\times10^{222}u^{90}+\cdots+2.72\times10^{221}b-1.02\times10^{223}\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-6.14754u^{91}+9.46936u^{90}+\cdots-20.1319u+15.4597\\-16.8764u^{91}+25.5110u^{90}+\cdots-40.6206u+37.3287\end{pmatrix}$$
$$a_5 = \begin{pmatrix}11.4198u^{91}-18.6265u^{90}+\cdots+26.8279u-28.8392\\-4.48198u^{91}+6.96790u^{90}+\cdots-21.3086u+14.8116\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}5.28893u^{91}-7.49597u^{90}+\cdots+10.8597u-8.11508\\-17.1968u^{91}+24.5024u^{90}+\cdots-44.4107u+35.8919\end{pmatrix}$$
$$a_1 = \begin{pmatrix}10.7288u^{91}-16.0417u^{90}+\cdots+20.4887u-21.8690\\-16.8764u^{91}+25.5110u^{90}+\cdots-40.6206u+37.3287\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-11.2348u^{91}+18.9978u^{90}+\cdots-36.0229u+34.6600\\2.18240u^{91}-2.39881u^{90}+\cdots+15.0995u-5.11898\end{pmatrix}$$
$$a_8 = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}13.4484u^{91}-22.4378u^{90}+\cdots+32.7548u-36.7310\\-2.53485u^{91}+3.73696u^{90}+\cdots-15.6276u+8.70253\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-4.97114u^{91}+5.69526u^{90}+\cdots-16.4325u+7.23098\\-14.9240u^{91}+21.0249u^{90}+\cdots-36.6876u+27.4447\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-4.97114u^{91}+5.69526u^{90}+\cdots-16.4325u+7.23098\\-14.9240u^{91}+21.0249u^{90}+\cdots-36.6876u+27.4447\end{pmatrix}$$

(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
$u=-1.67230-0.27921I$ $a=\ \ 0.154066-0.235835I$ $b=\ \ 0.280703-0.948609I$	$-5.78137+4.82781I$	$-9.17282-7.04724I$
$u=-1.67230+0.27921I$ $a=\ \ 0.154066+0.235835I$ $b=\ \ 0.280703+0.948609I$	$-5.78137-4.82781I$	$-9.17282+7.04724I$
$u=-1.332467-0.247847I$ $a=-0.115541+0.394237I$ $b=\ \ 0.891796-0.453277I$	$-9.35815-2.58044I$	$-16.1597+1.0589I$
$u=-1.332467+0.247847I$ $a=-0.115541-0.394237I$ $b=\ \ 0.891796+0.453277I$	$-9.35815+2.58044I$	$-16.1597-1.0589I$
$u=-1.32427-0.73631I$ $a=-0.727070+1.140965I$ $b=\ \ 0.573497+1.208662I$	$0.67671-11.20377I$	$-6.92619+7.92555I$
$u=-1.32427+0.73631I$ $a=-0.727070-1.140965I$ $b=\ \ 0.573497-1.208662I$	$0.67671+11.20377I$	$-6.92619-7.92555I$
$u=-1.239092-0.559867I$ $a=\ \ 0.152181-0.270942I$ $b=\ \ 0.719530-0.877837I$	$-5.59330-0.95533I$	$-12.38774+1.72132I$
$u=-1.239092+0.559867I$ $a=\ \ 0.152181+0.270942I$ $b=\ \ 0.719530+0.877837I$	$-5.59330+0.95533I$	$-12.38774-1.72132I$
$u=-1.214927-0.377226I$ $a=-0.80172+1.27470I$ $b=\ \ 0.341035+1.090414I$	$-2.70208-3.30839I$	$-9.28440+3.89929I$
$u=-1.214927+0.377226I$ $a=-0.80172-1.27470I$ $b=\ \ 0.341035-1.090414I$	$-2.70208+3.30839I$	$-9.28440-3.89929I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.209365-0.632518I$ $a=\ \ 0.79326-1.31851I$ $b=-0.62241-1.34712I$	$-0.21837-11.40935I$	$-7.13984+6.72897I$
$u=-1.209365+0.632518I$ $a=\ \ 0.79326+1.31851I$ $b=-0.62241+1.34712I$	$-0.21837+11.40935I$	$-7.13984-6.72897I$
$u=-1.173999-0.359773I$ $a=-1.68334+0.22751I$ $b=\ \ 0.226488+1.189200I$	$-1.14890-7.16658I$	$-9.47049+10.11507I$
$u=-1.173999+0.359773I$ $a=-1.68334-0.22751I$ $b=\ \ 0.226488-1.189200I$	$-1.14890+7.16658I$	$-9.47049-10.11507I$
$u=-1.154864-0.486853I$ $a=-0.093143+0.220654I$ $b=\ \ 1.38485-0.30163I$	$-6.02464-10.31346I$	$-11.8446+8.5679I$
$u=-1.154864+0.486853I$ $a=-0.093143-0.220654I$ $b=\ \ 1.38485+0.30163I$	$-6.02464+10.31346I$	$-11.8446-8.5679I$
$u=-1.138519-0.338863I$ $a=-1.005564+0.568814I$ $b=\ \ 0.63181+1.36847I$	$0.30466-3.87854I$	$-8.12512+2.55427I$
$u=-1.138519+0.338863I$ $a=-1.005564-0.568814I$ $b=\ \ 0.63181-1.36847I$	$0.30466+3.87854I$	$-8.12512-2.55427I$
$u=-1.021633-0.504770I$ $a=\ \ 0.777160-0.617758I$ $b=-0.86024-1.12424I$	$0.75507-2.54974I$	$-7.36280+4.61770I$
$u=-1.021633+0.504770I$ $a=\ \ 0.777160+0.617758I$ $b=-0.86024+1.12424I$	$0.75507+2.54974I$	$-7.36280-4.61770I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.020121-0.571742I$ $a=\ \ 0.461890-1.235264I$ $b=-0.522961-0.901176I$	$-2.64428-2.01886I$	$-9.46898+3.13006I$
$u=-1.020121+0.571742I$ $a=\ \ 0.461890+1.235264I$ $b=-0.522961+0.901176I$	$-2.64428+2.01886I$	$-9.46898-3.13006I$
$u=-1.002299-0.321909I$ $a=\ \ 0.249869+0.034760I$ $b=-0.832463+0.052849I$	$-0.877139-0.912194I$	$-7.35158+0.85240I$
$u=-1.002299+0.321909I$ $a=\ \ 0.249869-0.034760I$ $b=-0.832463-0.052849I$	$-0.877139+0.912194I$	$-7.35158-0.85240I$
$u=-0.899956-0.428154I$ $a=\ \ 1.86646-0.40818I$ $b=\ \ 0.010890-0.885762I$	$1.37334+1.58152I$	$-5.02157-2.18933I$
$u=-0.899956+0.428154I$ $a=\ \ 1.86646+0.40818I$ $b=\ \ 0.010890+0.885762I$	$1.37334-1.58152I$	$-5.02157+2.18933I$
$u=-0.695203-0.103878I$ $a=-1.92596-0.22320I$ $b=\ \ 0.465075-0.827446I$	$0.57404-1.64965I$	$-7.09706+2.07909I$
$u=-0.695203+0.103878I$ $a=-1.92596+0.22320I$ $b=\ \ 0.465075+0.827446I$	$0.57404+1.64965I$	$-7.09706-2.07909I$
$u=-0.656303-0.240252I$ $a=-0.29231-2.73702I$ $b=-0.182748-1.312792I$	$2.33729-4.89796I$	$-3.19840+10.75719I$
$u=-0.656303+0.240252I$ $a=-0.29231+2.73702I$ $b=-0.182748+1.312792I$	$2.33729+4.89796I$	$-3.19840-10.75719I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.461263-0.018499I$ $a=-0.762495+0.334184I$ $b=-0.02599+1.55300I$	$2.80824+1.36127I$	$-5.48968+3.29803I$
$u=-0.461263+0.018499I$ $a=-0.762495-0.334184I$ $b=-0.02599-1.55300I$	$2.80824-1.36127I$	$-5.48968-3.29803I$
$u=-0.45586-1.35944I$ $a=-0.194735+1.142769I$ $b=-0.341442+1.074565I$	$3.67608+3.90107I$	$-7.31663-7.35287I$
$u=-0.45586+1.35944I$ $a=-0.194735-1.142769I$ $b=-0.341442-1.074565I$	$3.67608-3.90107I$	$-7.31663+7.35287I$
$u=-0.385836-0.811407I$ $a=\ \ 0.56371-1.67639I$ $b=-0.693377-0.983781I$	$-2.86301-4.52369I$	$-11.40560+5.17779I$
$u=-0.385836+0.811407I$ $a=\ \ 0.56371+1.67639I$ $b=-0.693377+0.983781I$	$-2.86301+4.52369I$	$-11.40560-5.17779I$
$u=-0.379215$ $a=\ \ 0.239425$ $b=-0.409798$	-0.736675	-13.9254
$u=-0.363192-1.037263I$ $a=\ \ 0.58303-1.39249I$ $b=\ \ 0.385879-1.192381I$	$2.46469+5.43660I$	$-4.15642-3.04128I$
$u=-0.363192+1.037263I$ $a=\ \ 0.58303+1.39249I$ $b=\ \ 0.385879+1.192381I$	$2.46469-5.43660I$	$-4.15642+3.04128I$
$u=-0.188195-0.589028I$ $a=\ \ 0.26170-1.56174I$ $b=-0.909144+0.168813I$	$-3.25055+5.97769I$	$-10.01627-5.34702I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.188195+0.589028I$ $a=\ 0.26170+1.56174I$ $b=-0.909144-0.168813I$	$-3.25055-5.97769I$	$-10.01627+5.34702I$
$u=-0.181391-0.540978I$ $a=\ 1.22260-0.78233I$ $b=\ 0.433458-0.123479I$	$-0.74698-2.02785I$	$-4.64089+2.72591I$
$u=-0.181391+0.540978I$ $a=\ 1.22260+0.78233I$ $b=\ 0.433458+0.123479I$	$-0.74698+2.02785I$	$-4.64089-2.72591I$
$u=-0.167352-0.427245I$ $a=\ 0.895012-0.267505I$ $b=\ 0.133945-1.282941I$	$2.72282-1.44940I$	$-5.16116-0.05224I$
$u=-0.167352+0.427245I$ $a=\ 0.895012+0.267505I$ $b=\ 0.133945+1.282941I$	$2.72282+1.44940I$	$-5.16116+0.05224I$
$u=-0.058014-1.220802I$ $a=\ 0.10225+1.58396I$ $b=-0.174273+0.678980I$	$1.95041-1.39231I$	$-19.4755-0.8963I$
$u=-0.058014+1.220802I$ $a=\ 0.10225-1.58396I$ $b=-0.174273-0.678980I$	$1.95041+1.39231I$	$-19.4755+0.8963I$
$u=\ 0.034570-0.494786I$ $a=\ 1.08988+1.14127I$ $b=-0.111055-0.302643I$	$1.16594-1.89895I$	$-3.75763+6.23152I$
$u=\ 0.034570+0.494786I$ $a=\ 1.08988-1.14127I$ $b=-0.111055+0.302643I$	$1.16594+1.89895I$	$-3.75763-6.23152I$
$u=\ 0.243416-1.236134I$ $a=-0.327271-1.280143I$ $b=-0.489603-1.275897I$	$0.85125-10.84921I$	$-6.90992+7.84011I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.243416 + 1.236134I$ $a = -0.327271 + 1.280143I$ $b = -0.489603 + 1.275897I$	$0.85125 + 10.84921I$	$-6.90992 - 7.84011I$
$u = \ 0.288297 - 0.213692I$ $a = -0.415516 + 0.327919I$ $b = -0.45259 - 1.47014I$	$2.55253 - 4.41767I$	$-1.66349 + 3.27220I$
$u = \ 0.288297 + 0.213692I$ $a = -0.415516 - 0.327919I$ $b = -0.45259 + 1.47014I$	$2.55253 + 4.41767I$	$-1.66349 - 3.27220I$
$u = \ 0.325891 - 0.743657I$ $a = -0.386836 - 0.561978I$ $b = -0.791843 - 0.487373I$	$-4.17931 - 0.87104I$	$-12.11508 + 0.91752I$
$u = \ 0.325891 + 0.743657I$ $a = -0.386836 + 0.561978I$ $b = -0.791843 + 0.487373I$	$-4.17931 + 0.87104I$	$-12.11508 - 0.91752I$
$u = \ 0.359604 - 0.513145I$ $a = \ 0.99975 + 1.12966I$ $b = -0.10619 + 1.59127I$	$2.51053 + 4.14874I$	$-5.33756 - 6.38441I$
$u = \ 0.359604 + 0.513145I$ $a = \ 0.99975 - 1.12966I$ $b = -0.10619 - 1.59127I$	$2.51053 - 4.14874I$	$-5.33756 + 6.38441I$
$u = \ 0.593320 - 1.152025I$ $a = \ 0.435187 + 1.186650I$ $b = \ 0.187453 + 1.138275I$	$4.85118 + 0.81446I$	$-2.49749 + 0.89065I$
$u = \ 0.593320 + 1.152025I$ $a = \ 0.435187 - 1.186650I$ $b = \ 0.187453 - 1.138275I$	$4.85118 - 0.81446I$	$-2.49749 - 0.89065I$
$u = \ 0.635484 - 0.127279I$ $a = -3.54290 + 0.44348I$ $b = -0.057611 + 0.532891I$	$-3.86440 + 5.70624I$	$-8.10788 - 2.00819I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.635484 + 0.127279I$ $a = -3.54290 - 0.44348I$ $b = -0.057611 - 0.532891I$	$-3.86440 - 5.70624I$	$-8.10788 + 2.00819I$
$u = 0.687266 - 0.373381I$ $a = 0.99465 + 2.10243I$ $b = -0.127220 + 1.324109I$	$3.27963 + 2.01059I$	$0.68053 - 2.17901I$
$u = 0.687266 + 0.373381I$ $a = 0.99465 - 2.10243I$ $b = -0.127220 - 1.324109I$	$3.27963 - 2.01059I$	$0.68053 + 2.17901I$
$u = 0.781885 - 0.059041I$ $a = -1.51529 - 0.00607I$ $b = 1.007019 + 0.764873I$	$-2.08061 - 3.09402I$	$-11.78916 + 0.16171I$
$u = 0.781885 + 0.059041I$ $a = -1.51529 + 0.00607I$ $b = 1.007019 - 0.764873I$	$-2.08061 + 3.09402I$	$-11.78916 - 0.16171I$
$u = 0.802043 - 0.489858I$ $a = 1.34130 + 1.24627I$ $b = -0.146106 + 1.163068I$	$2.86848 + 1.82626I$	$-1.16065 - 4.60638I$
$u = 0.802043 + 0.489858I$ $a = 1.34130 - 1.24627I$ $b = -0.146106 - 1.163068I$	$2.86848 - 1.82626I$	$-1.16065 + 4.60638I$
$u = 1.026570 - 0.575028I$ $a = 0.860637 + 0.703361I$ $b = -0.50001 + 1.55156I$	$0.762842 + 0.362539I$	$-10.22819 + 3.23666I$
$u = 1.026570 + 0.575028I$ $a = 0.860637 - 0.703361I$ $b = -0.50001 - 1.55156I$	$0.762842 - 0.362539I$	$-10.22819 - 3.23666I$
$u = 1.093281 - 0.155448I$ $a = -0.138564 - 0.249946I$ $b = -0.797009 - 0.561932I$	$-3.87053 - 2.88480I$	$-11.21992 + 4.69459I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.093281 + 0.155448I$ $a = -0.138564 + 0.249946I$ $b = -0.797009 + 0.561932I$	$-3.87053 + 2.88480I$	$-11.21992 - 4.69459I$
$u = 1.098343 - 0.736969I$ $a = -0.68622 - 1.30403I$ $b = 0.653792 - 0.759457I$	$-5.90913 + 6.23883I$	$-14.1015 - 7.2126I$
$u = 1.098343 + 0.736969I$ $a = -0.68622 + 1.30403I$ $b = 0.653792 + 0.759457I$	$-5.90913 - 6.23883I$	$-14.1015 + 7.2126I$
$u = 1.098716 - 0.346642I$ $a = 0.041347 + 0.241799I$ $b = -1.258098 - 0.118180I$	$-4.08734 + 4.93913I$	$-10.54441 - 4.56759I$
$u = 1.098716 + 0.346642I$ $a = 0.041347 - 0.241799I$ $b = -1.258098 + 0.118180I$	$-4.08734 - 4.93913I$	$-10.54441 + 4.56759I$
$u = 1.123504 - 0.377477I$ $a = -0.856545 - 0.447867I$ $b = 0.97324 - 1.09916I$	$0.05662 + 7.54903I$	$-7.61957 - 10.58325I$
$u = 1.123504 + 0.377477I$ $a = -0.856545 + 0.447867I$ $b = 0.97324 + 1.09916I$	$0.05662 - 7.54903I$	$-7.61957 + 10.58325I$
$u = 1.173858 - 0.371541I$ $a = -1.23328 - 1.59162I$ $b = 0.536128 - 1.159261I$	$-7.03906 + 7.80694I$	$-12.7669 - 7.1805I$
$u = 1.173858 + 0.371541I$ $a = -1.23328 + 1.59162I$ $b = 0.536128 + 1.159261I$	$-7.03906 - 7.80694I$	$-12.7669 + 7.1805I$
$u = 1.175932 - 0.472649I$ $a = -0.28578 - 1.55829I$ $b = 0.347606 - 0.779093I$	$-6.23055 - 2.15767I$	$-11.79836 - 0.90491I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.175932 + 0.472649I$ $a = -0.28578 + 1.55829I$ $b = 0.347606 + 0.779093I$	$-6.23055 + 2.15767I$	$-11.79836 + 0.90491I$
$u = 1.177985 - 0.372709I$ $a = -1.248705 + 0.245539I$ $b = 0.130525 - 0.776176I$	$-0.68335 + 4.74170I$	$-8.08190 - 1.10088I$
$u = 1.177985 + 0.372709I$ $a = -1.248705 - 0.245539I$ $b = 0.130525 + 0.776176I$	$-0.68335 - 4.74170I$	$-8.08190 + 1.10088I$
$u = 1.178076 - 0.698481I$ $a = 0.698669 + 1.220536I$ $b = -0.482051 + 1.253937I$	$2.77259 + 5.73769I$	$-3.79433 - 3.76204I$
$u = 1.178076 + 0.698481I$ $a = 0.698669 - 1.220536I$ $b = -0.482051 - 1.253937I$	$2.77259 - 5.73769I$	$-3.79433 + 3.76204I$
$u = 1.200469 - 0.459585I$ $a = -0.238456 + 0.072672I$ $b = 0.851364 + 0.233369I$	$-2.24388 + 5.89877I$	$-8.97666 - 5.56060I$
$u = 1.200469 + 0.459585I$ $a = -0.238456 - 0.072672I$ $b = 0.851364 - 0.233369I$	$-2.24388 - 5.89877I$	$-8.97666 + 5.56060I$
$u = 1.30994$ $a = -0.355084$ $b = 0.647346$	-5.83140	-16.0269
$u = 1.32343 - 0.67031I$ $a = -0.81937 - 1.16088I$ $b = 0.71065 - 1.35618I$	$-2.5744 + 17.5099I$	$-9.32097 - 9.82682I$
$u = 1.32343 + 0.67031I$ $a = -0.81937 + 1.16088I$ $b = 0.71065 + 1.35618I$	$-2.5744 - 17.5099I$	$-9.32097 + 9.82682I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.62911 - 0.00058I$ $a = -0.190173 + 0.225218I$ $b = -0.011057 + 0.713112I$	$-5.05252 + 1.36520I$	$-5.73934 + 2.45909I$
$u = 1.62911 + 0.00058I$ $a = -0.190173 - 0.225218I$ $b = -0.011057 - 0.713112I$	$-5.05252 - 1.36520I$	$-5.73934 - 2.45909I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^{20}-5u^{18}+\cdots-2u+1)(u^{92}+u^{91}+\cdots-54u-143)$
c_2	$(u^{20}+10u^{19}+\cdots+12u+1)(u^{92}+41u^{91}+\cdots+295208u+20449)$
c_3	$(u^{20}-6u^{18}+\cdots+u+1)(u^{92}+u^{91}+\cdots+u-1)$
c_4	$(u^{20}+2u^{19}+\cdots+8u^2+1)(u^{92}+3u^{91}+\cdots-442u-347)$
c_5	$(u^{20}-4u^{19}+\cdots-4u+1)(u^{92}+3u^{91}+\cdots-678u+68)$
c_6	$(u^{20}-5u^{18}+\cdots+2u+1)(u^{92}+u^{91}+\cdots-54u-143)$
c_7	$(u^{20}+4u^{19}+\cdots+4u+1)(u^{92}+3u^{91}+\cdots+734u+79)$
c_8	$(u^{20}-6u^{18}+\cdots-u+1)(u^{92}+u^{91}+\cdots+u-1)$
c_9	$(u^{20}+4u^{17}+\cdots+u+1)(u^{92}+u^{91}+\cdots-3505u-387)$
c_{10}	$(u^{20}-4u^{19}+\cdots-4u+1)(u^{92}+3u^{91}+\cdots+734u+79)$
c_{11}	$(u^{20}-2u^{19}+\cdots+8u^2+1)(u^{92}+3u^{91}+\cdots-442u-347)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1	$(y^{20}-10y^{19}+\cdots-12y+1)(y^{92}-41y^{91}+\cdots-295208y+20449)$
c_2	$(y^{20}+10y^{19}+\cdots+4y+1)$ $(y^{92}+31y^{91}+\cdots-131051768y+418161601)$
c_3, c_8	$(y^{20}-12y^{19}+\cdots-11y+1)(y^{92}-51y^{91}+\cdots-27y+1)$
c_4, c_{11}	$(y^{20}+18y^{19}+\cdots+16y+1)$ $(y^{92}+59y^{91}+\cdots+3735452y+120409)$
c_5	$(y^{20}-2y^{19}+\cdots+8y+1)(y^{92}-17y^{91}+\cdots+950500y+4624)$
c_6	$(y^{20}-10y^{19}+\cdots-12y+1)(y^{92}-41y^{91}+\cdots-295208y+20449)$
c_7, c_{10}	$(y^{20}+8y^{19}+\cdots+12y+1)(y^{92}+49y^{91}+\cdots-26204y+6241)$
c_9	$(y^{20}-8y^{17}+\cdots+17y+1)(y^{92}-11y^{91}+\cdots-5497819y+149769)$