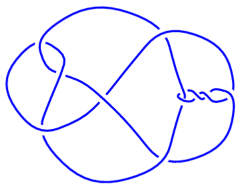
$11a_{84}$ $(K11a_{84})$



[1]

Arc Sequences

$$\rightarrow \downarrow_{5} \rightarrow \downarrow_{1} \rightarrow \downarrow_{9} \rightarrow \uparrow_{11} \rightarrow \downarrow_{2} \rightarrow \uparrow_{3} \rightarrow \uparrow_{10} \rightarrow \downarrow_{4} \rightarrow \uparrow_{8} \rightarrow \uparrow_{7} \rightarrow \uparrow_{6} \rightarrow$$

Solving Sequence

$$4,9 \xrightarrow[c_3]{} 3 \xrightarrow[c_8]{} 8 \xrightarrow[c_9]{} 10 \xrightarrow[c_7]{} 7 \xrightarrow[c_{10}]{} 11 \xrightarrow[c_4]{} 5 \xrightarrow[c_6]{} 6 \xrightarrow[c_{11}]{} 1 \xrightarrow[c_2]{} 2 \twoheadrightarrow c_1, c_5$$

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{50} - u^{49} + \cdots + u + 1 \rangle$$

There are 1 irreducible components with 50 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. $I^u_1 = \langle u^{50} - u^{49} + \cdots + u + 1\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^3 \\ u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^5 + u \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^7 + 2u^3 \\ u^7 + u^5 + 2u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{14} - u^{12} - 4u^{10} - 3u^8 - 4u^6 - 2u^4 + 1 \\ -u^{14} - 2u^{12} - 5u^{10} - 6u^8 - 6u^6 - 4u^4 - u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^7 - 2u^3 \\ u^9 + u^7 + 3u^5 + 2u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^{23} + 2u^{21} + 8u^{19} + 12u^{17} + 22u^{15} + 24u^{13} + 24u^{11} + 16u^9 + 9u^7 + 2u^3 \\ -u^{25} - 3u^{23} + \cdots + 2u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{46} + 5u^{44} + \cdots - 2u^4 + 1 \\ -u^{48} - 6u^{46} + \cdots - 4u^4 - 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{46} + 5u^{44} + \cdots - 2u^4 + 1 \\ -u^{48} - 6u^{46} + \cdots - 4u^4 - 2u^2 \end{pmatrix}$$

(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
$u=-0.852019-0.801997I$	$-2.15185+2.58590I$	$0.827994-0.674583I$
$u=-0.852019+0.801997I$	$-2.15185-2.58590I$	$0.827994+0.674583I$
$u=-0.845830-0.890740I$	$-9.32972+0.72052I$	$-6.40734-1.20993I$
$u=-0.845830+0.890740I$	$-9.32972-0.72052I$	$-6.40734+1.20993I$
$u=-0.836263-0.917270I$	$-9.24690-6.97433I$	$-6.10425+6.45667I$
$u=-0.836263+0.917270I$	$-9.24690+6.97433I$	$-6.10425-6.45667I$
$u=-0.811513-0.797475I$	$-1.169712+0.163979I$	$1.95677-0.52892I$
$u=-0.811513+0.797475I$	$-1.169712-0.163979I$	$1.95677+0.52892I$
$u=-0.792536-0.977055I$	$-1.60913-8.71493I$	$1.84023+5.52498I$
$u=-0.792536+0.977055I$	$-1.60913+8.71493I$	$1.84023-5.52498I$
$u=-0.771222-0.962943I$	$-0.66571-6.10737I$	$2.87976+5.65000I$
$u=-0.771222+0.962943I$	$-0.66571+6.10737I$	$2.87976-5.65000I$
$u=-0.630218-0.101743I$	$0.59402+6.02058I$	$-1.82523-5.20463I$
$u=-0.630218+0.101743I$	$0.59402-6.02058I$	$-1.82523+5.20463I$
$u=-0.492805-0.206145I$	$-1.73630-0.52214I$	$-5.82516+0.81274I$
$u=-0.492805+0.206145I$	$-1.73630+0.52214I$	$-5.82516-0.81274I$
$u=-0.332618-0.672808I$	$0.174284-1.327382I$	$1.54374+5.34383I$
$u=-0.332618+0.672808I$	$0.174284+1.327382I$	$1.54374-5.34383I$
$u=-0.318075-0.994530I$	$3.36572-9.34553I$	$4.11417+9.06753I$
$u=-0.318075+0.994530I$	$3.36572+9.34553I$	$4.11417-9.06753I$
$u=-0.308256-0.923731I$	$0.40552-2.46934I$	$0.87793+4.65157I$
$u=-0.308256+0.923731I$	$0.40552+2.46934I$	$0.87793-4.65157I$
$u=-0.219529-0.986047I$	$3.94354+3.43046I$	$5.76669-1.67529I$
$u=-0.219529+0.986047I$	$3.94354-3.43046I$	$5.76669+1.67529I$
$u=-0.085415-0.824761I$	$1.16249-1.82384I$	$6.57065+4.44419I$
$u=-0.085415+0.824761I$	$1.16249+1.82384I$	$6.57065-4.44419I$
$u=\ \ 0.246085-0.982711I$	$5.58031+1.62349I$	$8.34360-3.64621I$
$u=\ \ 0.246085+0.982711I$	$5.58031-1.62349I$	$8.34360+3.64621I$
$u=\ \ 0.298826-0.987833I$	$5.26972+4.23270I$	$7.37704-4.53289I$
$u=\ \ 0.298826+0.987833I$	$5.26972-4.23270I$	$7.37704+4.53289I$

	Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.483537-0.734912I$	$-1.95260+5.09579I$	$-2.40884-8.50757I$
$u=$	$0.483537+0.734912I$	$-1.95260-5.09579I$	$-2.40884+8.50757I$
$u=$	$0.488576-0.512324I$	$-2.60376-1.44363I$	$-5.78396+0.53575I$
$u=$	$0.488576+0.512324I$	$-2.60376+1.44363I$	$-5.78396-0.53575I$
$u=$	$0.605378-0.059120I$	$2.43882-1.09952I$	$1.50149+0.50378I$
$u=$	$0.605378+0.059120I$	$2.43882+1.09952I$	$1.50149-0.50378I$
$u=$	$0.757117-0.952106I$	$-1.93934+1.09281I$	$0.794199-0.205543I$
$u=$	$0.757117+0.952106I$	$-1.93934-1.09281I$	$0.794199+0.205543I$
$u=$	$0.775854-0.801832I$	$-2.39389+4.71062I$	$-0.14636-5.46565I$
$u=$	$0.775854+0.801832I$	$-2.39389-4.71062I$	$-0.14636+5.46565I$
$u=$	$0.798650-0.982182I$	$-3.7340+13.8696I$	$-1.22767-9.53503I$
$u=$	$0.798650+0.982182I$	$-3.7340-13.8696I$	$-1.22767+9.53503I$
$u=$	$0.802884-0.962136I$	$-6.49492+6.35925I$	$-4.66465-4.46034I$
$u=$	$0.802884+0.962136I$	$-6.49492-6.35925I$	$-4.66465+4.46034I$
$u=$	$0.825284-0.899193I$	$-6.17694+3.07827I$	$-2.11070-2.72625I$
$u=$	$0.825284+0.899193I$	$-6.17694-3.07827I$	$-2.11070+2.72625I$
$u=$	$0.850278-0.827510I$	$-6.91480-0.19952I$	$-5.59281-0.60037I$
$u=$	$0.850278+0.827510I$	$-6.91480+0.19952I$	$-5.59281+0.60037I$
$u=$	$0.863831-0.802647I$	$-4.29327-7.68607I$	$-2.29729+4.73536I$
$u=$	$0.863831+0.802647I$	$-4.29327+7.68607I$	$-2.29729-4.73536I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_5	$(u^{50} + u^{49} + \cdots - u + 1)$
c_2	$(u^{50} + 23u^{49} + \cdots - u + 1)$
c_3, c_8	$(u^{50} + u^{49} + \cdots - u + 1)$
c_4, c_6	$(u^{50} + u^{49} + \cdots + 165u + 25)$
c_7, c_9, c_{10}	$(u^{50} + 13u^{49} + \cdots + u + 1)$
c_{11}	$(u^{50} + 3u^{49} + \cdots + u + 3)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1	$(y^{50} - 23y^{49} + \cdots + y + 1)$
c_2	$(y^{50} + 9y^{49} + \cdots + y + 1)$
c_3, c_8	$(y^{50} + 13y^{49} + \cdots + y + 1)$
c_4, c_6	$(y^{50} - 31y^{49} + \cdots - 16275y + 625)$
c_5	$(y^{50} - 23y^{49} + \cdots + y + 1)$
c_7, c_9, c_{10}	$(y^{50} + 49y^{49} + \cdots - 7y + 1)$
c_{11}	$(y^{50} + 5y^{49} + \cdots + 521y + 9)$