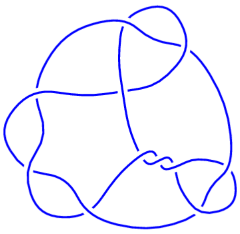
$11a_{75}$ $(K11a_{75})$



[1]

Arc Sequences

↑	↓	↓	↑	↑	↓	↓	↓	↑	↓	↓
6	1	7	10	2	3	4	11	5	9	8

Solving Sequence

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

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{41} - u^{40} + \cdots + u + 1 \rangle$$

There are 1 irreducible components with 41 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. $I_1^u = \langle u^{41} - u^{40} + \cdots + u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^7 - 2u^5 - 2u^3 \\ -u^7 - u^5 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{10} - 3u^8 - 4u^6 - u^4 + u^2 + 1 \\ -u^{10} - 2u^8 - u^6 + 2u^4 + u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{13} + 4u^{11} + 7u^9 + 4u^7 - 2u^5 - 4u^3 - u \\ u^{13} + 3u^{11} + 3u^9 - 2u^7 - 4u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{24} + 7u^{22} + \cdots + 2u^2 + 1 \\ u^{24} + 6u^{22} + 16u^{20} + 20u^{18} + 4u^{16} - 22u^{14} - 26u^{12} - 6u^{10} + 9u^8 + 6u^6 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{35} + 10u^{33} + \cdots - 7u^3 - 2u \\ u^{35} + 9u^{33} + \cdots - u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{35} + 10u^{33} + \cdots - 7u^3 - 2u \\ -u^{37} - 9u^{35} + \cdots + u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{35} + 10u^{33} + \cdots - 7u^3 - 2u \\ -u^{37} - 9u^{35} + \cdots + u^3 + u \end{pmatrix}$$

(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
$u=-0.826759-0.093182I$	$1.03604-1.75419I$	$-1.142381+0.318926I$
$u=-0.826759+0.093182I$	$1.03604+1.75419I$	$-1.142381-0.318926I$
$u=-0.805584$	-3.07852	-1.30901
$u=-0.579687-0.495426I$	$6.01823-3.75969I$	$2.08469+2.66327I$
$u=-0.579687+0.495426I$	$6.01823+3.75969I$	$2.08469-2.66327I$
$u=-0.521087-0.951326I$	$4.74123+8.14027I$	$-0.92451-8.45750I$
$u=-0.521087+0.951326I$	$4.74123-8.14027I$	$-0.92451+8.45750I$
$u=-0.498407-1.213509I$	$-2.29038+6.57620I$	$-4.18692-3.44855I$
$u=-0.498407+1.213509I$	$-2.29038-6.57620I$	$-4.18692+3.44855I$
$u=-0.458447-1.217193I$	$-6.66197+4.52417I$	$-4.64346-3.30102I$
$u=-0.458447+1.217193I$	$-6.66197-4.52417I$	$-4.64346+3.30102I$
$u=-0.419680-0.282475I$	$-0.31190-1.38897I$	$-2.22878+5.19649I$
$u=-0.419680+0.282475I$	$-0.31190+1.38897I$	$-2.22878-5.19649I$
$u=-0.413452-0.991560I$	$-2.13456+4.94858I$	$-7.01922-9.44337I$
$u=-0.413452+0.991560I$	$-2.13456-4.94858I$	$-7.01922+9.44337I$
$u=-0.408443-1.226141I$	$-2.92978+2.50596I$	$-5.15377-2.93090I$
$u=-0.408443+1.226141I$	$-2.92978-2.50596I$	$-5.15377+2.93090I$
$u=-0.235339-0.999224I$	$-3.36085+0.49947I$	$-12.33273-0.13229I$
$u=-0.235339+0.999224I$	$-3.36085-0.49947I$	$-12.33273+0.13229I$
$u=-0.028011-1.058192I$	$1.40338-2.86651I$	$-6.38250+2.83312I$
$u=-0.028011+1.058192I$	$1.40338+2.86651I$	$-6.38250-2.83312I$
$u=\ \ 0.319249-0.659184I$	$0.258138-1.315180I$	$0.82726+5.55607I$
$u=\ \ 0.319249+0.659184I$	$0.258138+1.315180I$	$0.82726-5.55607I$
$u=\ \ 0.364646-0.884514I$	$-0.38333-1.88364I$	$-0.67137+3.86434I$
$u=\ \ 0.364646+0.884514I$	$-0.38333+1.88364I$	$-0.67137-3.86434I$
$u=\ \ 0.409607-1.239190I$	$-3.60687+3.46651I$	$-6.32048-2.17214I$
$u=\ \ 0.409607+1.239190I$	$-3.60687-3.46651I$	$-6.32048+2.17214I$
$u=\ \ 0.445383-1.237319I$	$-10.01039-1.50035I$	$-11.08025-0.35088I$
$u=\ \ 0.445383+1.237319I$	$-10.01039+1.50035I$	$-11.08025+0.35088I$
$u=\ \ 0.475149-1.231301I$	$-9.79545-7.79305I$	$-10.43974+6.91622I$

	Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.475149+1.231301I$	$-9.79545+7.79305I$	$-10.43974-6.91622I$
$u=$	$0.501424-1.221002I$	$-2.94834-12.69196I$	$-5.29244+8.24315I$
$u=$	$0.501424+1.221002I$	$-2.94834+12.69196I$	$-5.29244-8.24315I$
$u=$	$0.519368-0.929928I$	$5.01543-2.00642I$	$-0.12467+3.31909I$
$u=$	$0.519368+0.929928I$	$5.01543+2.00642I$	$-0.12467-3.31909I$
$u=$	$0.568080-0.528628I$	$6.13950-2.34478I$	$2.43085+2.90580I$
$u=$	$0.568080+0.528628I$	$6.13950+2.34478I$	$2.43085-2.90580I$
$u=$	$0.844312-0.030001I$	$-6.20529+3.05813I$	$-7.49814-3.80729I$
$u=$	$0.844312+0.030001I$	$-6.20529-3.05813I$	$-7.49814+3.80729I$
$u=$	$0.844886-0.090367I$	$0.42502+7.80969I$	$-2.24693-5.23664I$
$u=$	$0.844886+0.090367I$	$0.42502-7.80969I$	$-2.24693+5.23664I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_5	$(u^{41} + u^{40} + \cdots + u - 1)$
c_2	$(u^{41} + 23u^{40} + \cdots - 3u - 1)$
c_3, c_6, c_7	$(u^{41} + u^{40} + \cdots - 7u + 1)$
c_4, c_9	$(u^{41} + u^{40} + \cdots + u + 1)$
c_8, c_{10}, c_{11}	$(u^{41} + 11u^{40} + \cdots - 3u - 1)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_5	$(y^{41} + 23y^{40} + \cdots - 3y - 1)$
c_2	$(y^{41} - 9y^{40} + \cdots - 19y - 1)$
c_3, c_6, c_7	$(y^{41} - 41y^{40} + \cdots - 51y - 1)$
c_4, c_9	$(y^{41} + 11y^{40} + \cdots - 3y - 1)$
c_8, c_{11}	$(y^{41} + 39y^{40} + \cdots - 11y - 1)$
c_{10}	$(y^{41} + 39y^{40} + \cdots - 11y - 1)$