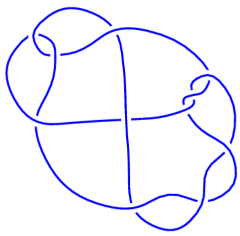
$11a_{207}$ ($K11a_{207}$)



[1]

Arc Sequences

$$\rightarrow \overset{\uparrow}{7} \rightarrow \overset{\downarrow}{1} \rightarrow \overset{\uparrow}{9} \rightarrow \overset{\uparrow}{11} \rightarrow \overset{\uparrow}{10} \rightarrow \overset{\uparrow}{2} \rightarrow \overset{\downarrow}{6} \rightarrow \overset{\uparrow}{3} \rightarrow \overset{\uparrow}{4} \rightarrow \overset{\uparrow}{5} \rightarrow \overset{\uparrow}{8} \rightarrow$$

Solving Sequence

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

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{42} - u^{41} + \cdots - u - 1 \rangle$$

There are 1 irreducible components with 42 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. $I_1^u = \langle u^{42} - u^{41} + \cdots - u - 1 \rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^2 + 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^9 + 2u^7 + 3u^5 + 2u^3 + u \\ -u^9 - u^7 - u^5 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{16} - 3u^{14} - 7u^{12} - 10u^{10} - 11u^8 - 8u^6 - 4u^4 + 1 \\ u^{16} + 2u^{14} + 4u^{12} + 4u^{10} + 2u^8 - 2u^4 - 2u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{23} - 4u^{21} + \cdots + 4u^3 + 2u \\ u^{23} + 3u^{21} + \cdots - 2u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{34} - 5u^{32} + \cdots - 3u^2 + 1 \\ u^{36} + 6u^{34} + \cdots - 5u^4 - 2u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^8 - u^6 - u^4 + 1 \\ u^{10} + 2u^8 + 3u^6 + 2u^4 + u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^8 - u^6 - u^4 + 1 \\ u^{10} + 2u^8 + 3u^6 + 2u^4 + u^2 \end{pmatrix}$$

(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
$u=-0.841363-0.744779I$	$10.66198-2.16328I$	$14.13258+0.47169I$
$u=-0.841363+0.744779I$	$10.66198+2.16328I$	$14.13258-0.47169I$
$u=-0.758015-0.997433I$	$9.88329+8.13672I$	$12.75687-5.51016I$
$u=-0.758015+0.997433I$	$9.88329-8.13672I$	$12.75687+5.51016I$
$u=-0.728684-0.860039I$	$1.35453+2.76686I$	$9.42200-3.38146I$
$u=-0.728684+0.860039I$	$1.35453-2.76686I$	$9.42200+3.38146I$
$u=-0.722751-0.696436I$	$-1.39593-2.80686I$	$6.44866+3.03706I$
$u=-0.722751+0.696436I$	$-1.39593+2.80686I$	$6.44866-3.03706I$
$u=-0.694059-0.879366I$	$1.34684+2.67555I$	$7.55600-2.24740I$
$u=-0.694059+0.879366I$	$1.34684-2.67555I$	$7.55600+2.24740I$
$u=-0.690110-0.978739I$	$-2.22914+8.22632I$	$4.50088-8.18402I$
$u=-0.690110+0.978739I$	$-2.22914-8.22632I$	$4.50088+8.18402I$
$u=-0.671666-0.036924I$	$2.88132+4.48173I$	$10.66614-3.36950I$
$u=-0.671666+0.036924I$	$2.88132-4.48173I$	$10.66614+3.36950I$
$u=-0.323855$	0.588838	16.8684
$u=-0.277522-0.987513I$	$-0.153213-1.320922I$	$4.68472-0.52178I$
$u=-0.277522+0.987513I$	$-0.153213+1.320922I$	$4.68472+0.52178I$
$u=-0.224112-1.029961I$	$-0.56467+7.40547I$	$3.83012-6.62304I$
$u=-0.224112+1.029961I$	$-0.56467-7.40547I$	$3.83012+6.62304I$
$u=-0.072276-0.903533I$	$-1.92633+1.23641I$	$3.06440-5.84978I$
$u=-0.072276+0.903533I$	$-1.92633-1.23641I$	$3.06440+5.84978I$
$u=\ \ 0.075109-0.999901I$	$-6.86790-2.94706I$	$-1.97649+4.29078I$
$u=\ \ 0.075109+0.999901I$	$-6.86790+2.94706I$	$-1.97649-4.29078I$
$u=\ \ 0.246720-1.011485I$	$3.58400-3.03568I$	$8.16735+3.88704I$
$u=\ \ 0.246720+1.011485I$	$3.58400+3.03568I$	$8.16735-3.88704I$
$u=\ \ 0.453214-0.294902I$	$-3.04850-1.58009I$	$6.29997+4.16737I$
$u=\ \ 0.453214+0.294902I$	$-3.04850+1.58009I$	$6.29997-4.16737I$
$u=\ \ 0.596103-0.909008I$	$-4.04030-2.27723I$	$1.67983+2.86942I$
$u=\ \ 0.596103+0.909008I$	$-4.04030+2.27723I$	$1.67983-2.86942I$
$u=\ \ 0.672481$	6.83608	14.4990

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.708799 - 0.946673I$	$2.69787 - 5.64894I$	$10.88515 + 7.96618I$
$u = 0.708799 + 0.946673I$	$2.69787 + 5.64894I$	$10.88515 - 7.96618I$
$u = 0.731738 - 0.769080I$	$3.23539 + 0.14490I$	$12.69254 - 2.12339I$
$u = 0.731738 + 0.769080I$	$3.23539 - 0.14490I$	$12.69254 + 2.12339I$
$u = 0.752856 - 1.004648I$	$5.61722 - 12.73555I$	$8.72438 + 8.18114I$
$u = 0.752856 + 1.004648I$	$5.61722 + 12.73555I$	$8.72438 - 8.18114I$
$u = 0.762062 - 0.987644I$	$6.25079 - 3.47148I$	$9.66765 + 2.16153I$
$u = 0.762062 + 0.987644I$	$6.25079 + 3.47148I$	$9.66765 - 2.16153I$
$u = 0.837346 - 0.758926I$	$6.95625 - 2.50407I$	$10.88098 + 2.88645I$
$u = 0.837346 + 0.758926I$	$6.95625 + 2.50407I$	$10.88098 - 2.88645I$
$u = 0.842297 - 0.731719I$	$6.45725 + 6.77734I$	$10.23255 - 3.27382I$
$u = 0.842297 + 0.731719I$	$6.45725 - 6.77734I$	$10.23255 + 3.27382I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_6	$(u^{42} + u^{41} + \cdots + u - 1)$
c_2, c_7	$(u^{42} + 13u^{41} + \cdots - 7u + 1)$
c_3, c_8, c_9	$(u^{42} + u^{41} + \cdots - 7u - 1)$
c_4, c_5, c_{10}	$(u^{42} + u^{41} + \cdots - u - 1)$
c_{11}	$(u^{42} + 5u^{41} + \cdots - 536u - 112)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_6	$(y^{42} + 13y^{41} + \cdots - 7y + 1)$
c_2, c_7	$(y^{42} + 33y^{41} + \cdots - 83y + 1)$
c_3, c_8, c_9	$(y^{42} - 43y^{41} + \cdots + 9y + 1)$
c_4, c_5, c_{10}	$(y^{42} + 33y^{41} + \cdots - 7y + 1)$
c_{11}	$(y^{42} - 15y^{41} + \cdots - 104736y + 12544)$