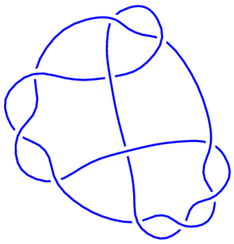
$11a_{188}$ ($K11a_{188}$)



[1]

Arc Sequences

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

Solving Sequence

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

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{33} + u^{32} + \cdots + u + 1 \rangle$$

There are 1 irreducible components with 33 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. $I_1^u = \langle u^{33} + u^{32} + \cdots + u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2+1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^4+u^2+1 \\ u^4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^7-2u^5-2u^3 \\ -u^7-u^5+u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{10}-3u^8-4u^6-u^4+u^2+1 \\ -u^{10}-2u^8-u^6+2u^4+u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{13}+4u^{11}+7u^9+4u^7-2u^5-4u^3-u \\ u^{13}+3u^{11}+3u^9-2u^7-4u^5-u^3+u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{13}+4u^{11}+7u^9+4u^7-2u^5-4u^3-u \\ -u^{15}-3u^{13}-4u^{11}-u^9+u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{27}-8u^{25}+\cdots-8u^5-u^3 \\ u^{29}+7u^{27}+\cdots+u^3+u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{24}+7u^{22}+\cdots+2u^2+1 \\ u^{24}+6u^{22}+16u^{20}+20u^{18}+4u^{16}-22u^{14}-26u^{12}-6u^{10}+9u^8+6u^6 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{24}+7u^{22}+\cdots+2u^2+1 \\ u^{24}+6u^{22}+16u^{20}+20u^{18}+4u^{16}-22u^{14}-26u^{12}-6u^{10}+9u^8+6u^6 \end{pmatrix}$$

(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
$u=-0.886168-0.052602I$	$-14.6375-5.7063I$	$-5.36041+2.74970I$
$u=-0.886168+0.052602I$	$-14.6375+5.7063I$	$-5.36041-2.74970I$
$u=-0.838926$	-3.83643	0.489419
$u=-0.493804-1.247129I$	$-18.2479+10.6589I$	$-8.33630-5.76013I$
$u=-0.493804+1.247129I$	$-18.2479-10.6589I$	$-8.33630+5.76013I$
$u=-0.485062-0.729693I$	$-5.83685+2.02148I$	$-0.99941-3.85889I$
$u=-0.485062+0.729693I$	$-5.83685-2.02148I$	$-0.99941+3.85889I$
$u=-0.462112-1.233248I$	$-7.51632+4.64153I$	$-2.88542-3.11188I$
$u=-0.462112+1.233248I$	$-7.51632-4.64153I$	$-2.88542+3.11188I$
$u=-0.458384-0.334801I$	$0.01425-1.43543I$	$1.18967+5.27444I$
$u=-0.458384+0.334801I$	$0.01425+1.43543I$	$1.18967-5.27444I$
$u=-0.445676-0.997772I$	$-1.74331+5.24520I$	$-3.08967-9.50750I$
$u=-0.445676+0.997772I$	$-1.74331-5.24520I$	$-3.08967+9.50750I$
$u=-0.436548-1.264152I$	$-18.6687-1.0564I$	$-8.98350-0.31108I$
$u=-0.436548+1.264152I$	$-18.6687+1.0564I$	$-8.98350+0.31108I$
$u=-0.227096-1.016238I$	$-3.26709+0.39865I$	$-8.78755+0.39915I$
$u=-0.227096+1.016238I$	$-3.26709-0.39865I$	$-8.78755-0.39915I$
$u=\ \ 0.204926-1.114762I$	$-11.31286+0.47869I$	$-9.60581+0.30489I$
$u=\ \ 0.204926+1.114762I$	$-11.31286-0.47869I$	$-9.60581-0.30489I$
$u=\ \ 0.342813-0.584733I$	$0.489336-1.105194I$	$3.80448+5.83190I$
$u=\ \ 0.342813+0.584733I$	$0.489336+1.105194I$	$3.80448-5.83190I$
$u=\ \ 0.382717-0.930696I$	$-0.50516-2.21066I$	$1.15388+3.33162I$
$u=\ \ 0.382717+0.930696I$	$-0.50516+2.21066I$	$1.15388-3.33162I$
$u=\ \ 0.443985-1.246908I$	$-10.12334-1.05032I$	$-7.28000-0.76825I$
$u=\ \ 0.443985+1.246908I$	$-10.12334+1.05032I$	$-7.28000+0.76825I$
$u=\ \ 0.481420-1.238392I$	$-9.85167-8.36620I$	$-6.60862+7.12105I$
$u=\ \ 0.481420+1.238392I$	$-9.85167+8.36620I$	$-6.60862-7.12105I$
$u=\ \ 0.488200-1.038919I$	$-9.24914-7.07591I$	$-5.57084+7.00139I$
$u=\ \ 0.488200+1.038919I$	$-9.24914+7.07591I$	$-5.57084-7.00139I$
$u=\ \ 0.609769-0.310509I$	$-7.21966+2.79655I$	$-2.22554-2.58040I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=\ \ 0.609769+0.310509I$	$-7.21966-2.79655I$	$-2.22554+2.58040I$
$u=\ \ 0.860484-0.036663I$	$-6.24327+3.55068I$	$-3.65965-4.08940I$
$u=\ \ 0.860484+0.036663I$	$-6.24327-3.55068I$	$-3.65965+4.08940I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_6	$(u^{33} + u^{32} + \cdots + u + 1)$
c_2	$(u^{33} + 19u^{32} + \cdots - 3u - 1)$
c_3, c_7, c_8	$(u^{33} + u^{32} + \cdots + u - 5)$
c_4, c_5, c_9 c_{10}	$(u^{33} + u^{32} + \cdots - u - 1)$
c_{11}	$(u^{33} + 11u^{32} + \cdots + 825u + 187)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_6	$(y^{33} + 19y^{32} + \cdots - 3y - 1)$
c_2	$(y^{33} - 9y^{32} + \cdots - 15y - 1)$
c_3, c_7, c_8	$(y^{33} - 37y^{32} + \cdots + 281y - 25)$
c_4, c_5, c_9 c_{10}	$(y^{33} + 39y^{32} + \cdots - 3y - 1)$
c_{11}	$(y^{33} - 21y^{32} + \cdots + 34353y - 34969)$