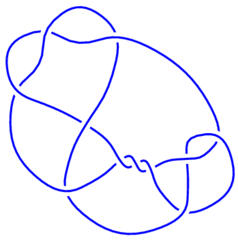
$11a_{180}$ ($K11a_{180}$)



[1]

Arc Sequences

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

Solving Sequence

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

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{44} + u^{43} + \cdots + u^2 + 1 \rangle$$

There are 1 irreducible components with 44 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. $I^u_1 = \langle u^{44} + u^{43} + \cdots + u^2 + 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^7 - 2u^5 - 2u^3 \\ -u^7 - u^5 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{10} - 3u^8 - 4u^6 - u^4 + u^2 + 1 \\ -u^{10} - 2u^8 - u^6 + 2u^4 + u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{13} + 4u^{11} + 7u^9 + 4u^7 - 2u^5 - 4u^3 - u \\ u^{13} + 3u^{11} + 3u^9 - 2u^7 - 4u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{24} + 7u^{22} + \cdots + 2u^2 + 1 \\ u^{24} + 6u^{22} + 16u^{20} + 20u^{18} + 4u^{16} - 22u^{14} - 26u^{12} - 6u^{10} + 9u^8 + 6u^6 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{38} - 11u^{36} + \cdots + 2u^2 + 1 \\ -u^{38} - 10u^{36} + \cdots + 2u^4 + u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{24} + 7u^{22} + \cdots + 2u^2 + 1 \\ u^{26} + 8u^{24} + \cdots + 2u^4 + u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{24} + 7u^{22} + \cdots + 2u^2 + 1 \\ u^{26} + 8u^{24} + \cdots + 2u^4 + u^2 \end{pmatrix}$$

(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
$u = -0.863718 - 0.066869I$	$-1.08580 - 7.84259I$	$2.05689 + 4.83008I$
$u = -0.863718 + 0.066869I$	$-1.08580 + 7.84259I$	$2.05689 - 4.83008I$
$u = -0.851902 - 0.016900I$	$-4.16526 - 0.15305I$	$0.227540 - 0.929725I$
$u = -0.851902 + 0.016900I$	$-4.16526 + 0.15305I$	$0.227540 + 0.929725I$
$u = -0.500624 - 0.600662I$	$5.88050 + 3.43976I$	$7.80642 - 4.26326I$
$u = -0.500624 + 0.600662I$	$5.88050 - 3.43976I$	$7.80642 + 4.26326I$
$u = -0.495584 - 1.233930I$	$-4.58845 + 12.74278I$	$-0.93715 - 7.80504I$
$u = -0.495584 + 1.233930I$	$-4.58845 - 12.74278I$	$-0.93715 + 7.80504I$
$u = -0.483167 - 0.355123I$	$0.06888 - 1.57750I$	$1.83089 + 4.70926I$
$u = -0.483167 + 0.355123I$	$0.06888 + 1.57750I$	$1.83089 - 4.70926I$
$u = -0.475900 - 0.869448I$	$5.13647 + 0.61365I$	$5.93438 - 3.12019I$
$u = -0.475900 + 0.869448I$	$5.13647 - 0.61365I$	$5.93438 + 3.12019I$
$u = -0.471488 - 1.236162I$	$-7.81717 + 4.88382I$	$-2.90557 - 2.15624I$
$u = -0.471488 + 1.236162I$	$-7.81717 - 4.88382I$	$-2.90557 + 2.15624I$
$u = -0.459943 - 0.994175I$	$-1.64111 + 5.49885I$	$-2.09355 - 9.09752I$
$u = -0.459943 + 0.994175I$	$-1.64111 - 5.49885I$	$-2.09355 + 9.09752I$
$u = -0.453313 - 1.241958I$	$-7.95121 + 4.48081I$	$-3.24122 - 4.16997I$
$u = -0.453313 + 1.241958I$	$-7.95121 - 4.48081I$	$-3.24122 + 4.16997I$
$u = -0.425602 - 1.251041I$	$-5.09640 - 3.33447I$	$-1.80221 + 1.73069I$
$u = -0.425602 + 1.251041I$	$-5.09640 + 3.33447I$	$-1.80221 - 1.73069I$
$u = -0.209261 - 1.035203I$	$-3.42148 + 0.21799I$	$-7.97736 + 0.39083I$
$u = -0.209261 + 1.035203I$	$-3.42148 - 0.21799I$	$-7.97736 - 0.39083I$
$u = \quad 0.135446 - 1.060897I$	$1.11897 + 2.94236I$	$-2.27764 - 2.42780I$
$u = \quad 0.135446 + 1.060897I$	$1.11897 - 2.94236I$	$-2.27764 + 2.42780I$
$u = \quad 0.317028 - 1.058285I$	$-0.38378 - 3.13770I$	$-2.56284 + 4.58087I$
$u = \quad 0.317028 + 1.058285I$	$-0.38378 + 3.13770I$	$-2.56284 - 4.58087I$
$u = \quad 0.365950 - 0.575434I$	$0.553397 - 1.129406I$	$4.11708 + 5.53577I$
$u = \quad 0.365950 + 0.575434I$	$0.553397 + 1.129406I$	$4.11708 - 5.53577I$
$u = \quad 0.394804 - 0.937435I$	$-0.48387 - 2.27983I$	$1.28247 + 3.09777I$
$u = \quad 0.394804 + 0.937435I$	$-0.48387 + 2.27983I$	$1.28247 - 3.09777I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.437155 - 1.248616I$	$-10.14915 - 0.50010I$	$-6.30668 - 0.52370I$
$u = \quad 0.437155 + 1.248616I$	$-10.14915 + 0.50010I$	$-6.30668 + 0.52370I$
$u = \quad 0.461639 - 1.201323I$	$-0.91602 - 4.40703I$	$1.31845 + 3.43655I$
$u = \quad 0.461639 + 1.201323I$	$-0.91602 + 4.40703I$	$1.31845 - 3.43655I$
$u = \quad 0.486757 - 1.236477I$	$-9.78827 - 8.91254I$	$-5.51225 + 6.86117I$
$u = \quad 0.486757 + 1.236477I$	$-9.78827 + 8.91254I$	$-5.51225 - 6.86117I$
$u = \quad 0.497384 - 0.990195I$	$3.65546 - 8.74389I$	$3.01176 + 8.85489I$
$u = \quad 0.497384 + 0.990195I$	$3.65546 + 8.74389I$	$3.01176 - 8.85489I$
$u = \quad 0.566666 - 0.408808I$	$5.26596 + 4.49438I$	$6.59938 - 3.80484I$
$u = \quad 0.566666 + 0.408808I$	$5.26596 - 4.49438I$	$6.59938 + 3.80484I$
$u = \quad 0.589653$	2.59443	3.57298
$u = \quad 0.742968$	2.50705	4.49422
$u = \quad 0.861361 - 0.047901I$	$-6.22083 + 4.06637I$	$-2.60237 - 3.83342I$
$u = \quad 0.861361 + 0.047901I$	$-6.22083 - 4.06637I$	$-2.60237 + 3.83342I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_6	$(u^{44} + u^{43} + \cdots + u^2 + 1)$
c_2	$(u^{44} + 25u^{43} + \cdots + 2u + 1)$
c_3, c_7, c_8	$(u^{44} + u^{43} + \cdots - 16u + 5)$
c_4	$(u^{44} + 3u^{43} + \cdots + 8u + 3)$
c_5, c_9, c_{10}	$(u^{44} + u^{43} + \cdots + u^2 + 1)$
c_{11}	$(u^{44} + 11u^{43} + \cdots + 12u + 1)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_6	$(y^{44} + 25y^{43} + \cdots + 2y + 1)$
c_2	$(y^{44} - 11y^{43} + \cdots + 6y + 1)$
c_3, c_7, c_8	$(y^{44} - 47y^{43} + \cdots - 726y + 25)$
c_4	$(y^{44} + 5y^{43} + \cdots - 70y + 9)$
c_5	$(y^{44} - 39y^{43} + \cdots + 2y + 1)$
c_9, c_{10}	$(y^{44} - 39y^{43} + \cdots + 2y + 1)$
c_{11}	$(y^{44} + y^{43} + \cdots + 62y + 1)$