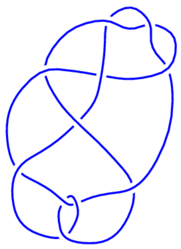
$11a_{185}$ ($K11a_{185}$)



[1]

Arc Sequences

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

Solving Sequence

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

Representation Ideals

$$I = I_1^u$$

$$I_1^u = \langle u^{54} - u^{53} + \cdots - u + 1 \rangle$$

There are 1 irreducible components with 54 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. $I_1^u = \langle u^{54} - u^{53} + \cdots - u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^7 - u^5 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^4 + u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{12} - 3u^{10} - 5u^8 - 4u^6 - 2u^4 + u^2 + 1 \\ u^{12} + 2u^{10} + 2u^8 + u^4 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{31} - 8u^{29} + \cdots - 12u^7 - 4u^5 \\ u^{31} + 7u^{29} + \cdots - 2u^{13} + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{46} + 13u^{44} + \cdots - 2u^4 + 1 \\ u^{48} + 12u^{46} + \cdots + 20u^{10} + 8u^8 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{16} + 5u^{14} + 11u^{12} + 12u^{10} + 5u^8 - 2u^6 - 2u^4 + 1 \\ u^{18} + 4u^{16} + 7u^{14} + 4u^{12} - 3u^{10} - 6u^8 - 2u^6 + u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{16} + 5u^{14} + 11u^{12} + 12u^{10} + 5u^8 - 2u^6 - 2u^4 + 1 \\ u^{18} + 4u^{16} + 7u^{14} + 4u^{12} - 3u^{10} - 6u^8 - 2u^6 + u^2 \end{pmatrix}$$

(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
$u = -0.803336 - 0.074667I$	$-8.69949 + 0.21899I$	$-3.12382 - 0.07866I$
$u = -0.803336 + 0.074667I$	$-8.69949 - 0.21899I$	$-3.12382 + 0.07866I$
$u = -0.793006 - 0.135744I$	$-1.35714 - 5.52569I$	$3.45218 + 5.82582I$
$u = -0.793006 + 0.135744I$	$-1.35714 + 5.52569I$	$3.45218 - 5.82582I$
$u = -0.555404 - 0.618983I$	$-2.66786 - 4.19841I$	$2.85328 + 2.26313I$
$u = -0.555404 + 0.618983I$	$-2.66786 + 4.19841I$	$2.85328 - 2.26313I$
$u = -0.542871 - 0.222612I$	$1.223041 + 0.207996I$	$8.65252 - 1.10768I$
$u = -0.542871 + 0.222612I$	$1.223041 - 0.207996I$	$8.65252 + 1.10768I$
$u = -0.542026 - 0.876210I$	$-3.38874 + 8.60756I$	$0.88746 - 8.62489I$
$u = -0.542026 + 0.876210I$	$-3.38874 - 8.60756I$	$0.88746 + 8.62489I$
$u = -0.514528 - 0.758613I$	$0.15792 + 2.10554I$	$4.75076 - 4.16265I$
$u = -0.514528 + 0.758613I$	$0.15792 - 2.10554I$	$4.75076 + 4.16265I$
$u = -0.508429 - 1.190653I$	$-4.45647 + 10.31745I$	$0.34822 - 8.78564I$
$u = -0.508429 + 1.190653I$	$-4.45647 - 10.31745I$	$0.34822 + 8.78564I$
$u = -0.486868 - 1.204309I$	$-12.02494 + 4.47153I$	$-6.19061 - 3.19196I$
$u = -0.486868 + 1.204309I$	$-12.02494 - 4.47153I$	$-6.19061 + 3.19196I$
$u = -0.465718 - 1.132140I$	$-1.40488 + 3.87836I$	$4.23189 - 3.27485I$
$u = -0.465718 + 1.132140I$	$-1.40488 - 3.87836I$	$4.23189 + 3.27485I$
$u = -0.459955 - 0.798537I$	$0.23556 + 1.92632I$	$2.54464 - 3.58852I$
$u = -0.459955 + 0.798537I$	$0.23556 - 1.92632I$	$2.54464 + 3.58852I$
$u = -0.415619 - 1.215680I$	$-12.53211 + 4.46314I$	$-6.98408 - 3.48914I$
$u = -0.415619 + 1.215680I$	$-12.53211 - 4.46314I$	$-6.98408 + 3.48914I$
$u = -0.382721 - 1.204175I$	$-5.34368 - 1.56137I$	$-1.34670 + 2.59690I$
$u = -0.382721 + 1.204175I$	$-5.34368 + 1.56137I$	$-1.34670 - 2.59690I$
$u = -0.063963 - 0.969473I$	$-2.01199 + 1.57241I$	$-2.93647 - 4.70910I$
$u = -0.063963 + 0.969473I$	$-2.01199 - 1.57241I$	$-2.93647 + 4.70910I$
$u = 0.068795 - 1.043574I$	$-7.55344 - 4.33327I$	$-6.71453 + 3.78697I$
$u = 0.068795 + 1.043574I$	$-7.55344 + 4.33327I$	$-6.71453 - 3.78697I$
$u = 0.378306 - 1.216653I$	$-11.00630 + 4.98743I$	$-5.44012 - 2.56031I$
$u = 0.378306 + 1.216653I$	$-11.00630 - 4.98743I$	$-5.44012 + 2.56031I$

	Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.403427 - 1.196669I$	$-6.22025 - 2.29095I$	$-3.47483 + 3.73518I$
$u =$	$0.403427 + 1.196669I$	$-6.22025 + 2.29095I$	$-3.47483 - 3.73518I$
$u =$	$0.404606 - 0.965250I$	$-5.19453 - 0.85164I$	$-2.69916 + 2.79194I$
$u =$	$0.404606 + 0.965250I$	$-5.19453 + 0.85164I$	$-2.69916 - 2.79194I$
$u =$	$0.409939 - 1.110805I$	$-5.37080 - 0.77260I$	$-1.83369 + 0.52088I$
$u =$	$0.409939 + 1.110805I$	$-5.37080 + 0.77260I$	$-1.83369 - 0.52088I$
$u =$	$0.492150 - 1.152335I$	$-4.72150 - 7.14315I$	$-0.51437 + 6.91242I$
$u =$	$0.492150 + 1.152335I$	$-4.72150 + 7.14315I$	$-0.51437 - 6.91242I$
$u =$	$0.494467 - 1.187320I$	$-5.57287 - 6.38943I$	$-2.23719 + 3.19897I$
$u =$	$0.494467 + 1.187320I$	$-5.57287 + 6.38943I$	$-2.23719 - 3.19897I$
$u =$	$0.513281 - 1.197090I$	$-10.0524 - 13.8722I$	$-3.82831 + 8.77565I$
$u =$	$0.513281 + 1.197090I$	$-10.0524 + 13.8722I$	$-3.82831 - 8.77565I$
$u =$	$0.521169 - 0.661679I$	$2.37968 + 0.93113I$	$8.32580 - 1.37232I$
$u =$	$0.521169 + 0.661679I$	$2.37968 - 0.93113I$	$8.32580 + 1.37232I$
$u =$	$0.526458 - 0.850149I$	$1.84506 - 5.20730I$	$6.07211 + 8.44255I$
$u =$	$0.526458 + 0.850149I$	$1.84506 + 5.20730I$	$6.07211 - 8.44255I$
$u =$	$0.553091 - 0.375407I$	$-3.44062 - 3.02821I$	$2.33743 + 2.90410I$
$u =$	$0.553091 + 0.375407I$	$-3.44062 + 3.02821I$	$2.33743 - 2.90410I$
$u =$	$0.688011 - 0.172752I$	$-1.90661 + 2.65629I$	$2.99397 - 3.57576I$
$u =$	$0.688011 + 0.172752I$	$-1.90661 - 2.65629I$	$2.99397 + 3.57576I$
$u =$	$0.768273 - 0.105402I$	$-2.42732 + 1.73641I$	$0.699777 + 0.008860I$
$u =$	$0.768273 + 0.105402I$	$-2.42732 - 1.73641I$	$0.699777 - 0.008860I$
$u =$	$0.812471 - 0.137850I$	$-6.92259 + 9.00910I$	$-0.82614 - 5.72677I$
$u =$	$0.812471 + 0.137850I$	$-6.92259 - 9.00910I$	$-0.82614 + 5.72677I$

II. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_6	$(u^{54} + u^{53} + \cdots + u + 1)$
c_2	$(u^{54} + 29u^{53} + \cdots - u + 1)$
c_3	$(u^{54} + 7u^{53} + \cdots + 47u + 5)$
c_4	$(u^{54} + u^{53} + \cdots + u + 1)$
c_5	$(u^{54} + u^{53} + \cdots + u + 1)$
c_7, c_{11}	$(u^{54} + u^{53} + \cdots - u + 1)$
c_8	$(u^{54} + u^{53} + \cdots + 11u + 1)$
c_9	$(u^{54} + u^{53} + \cdots + u + 1)$
c_{10}	$(u^{54} + 11u^{53} + \cdots + 1951u + 187)$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_6	$(y^{54} + 29y^{53} + \cdots - y + 1)$
c_2	$(y^{54} - 7y^{53} + \cdots - 5y + 1)$
c_3	$(y^{54} - 3y^{53} + \cdots + 631y + 25)$
c_4	$(y^{54} + 49y^{53} + \cdots - y + 1)$
c_5, c_9	$(y^{54} + 49y^{53} + \cdots - y + 1)$
c_7, c_{11}	$(y^{54} - 43y^{53} + \cdots - 97y + 1)$
c_8	$(y^{54} + 5y^{53} + \cdots - 49y + 1)$
c_{10}	$(y^{54} + 21y^{53} + \cdots + 184179y + 34969)$