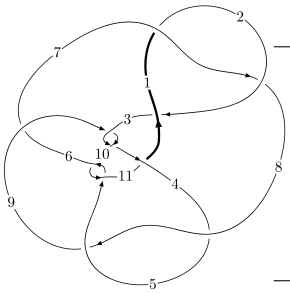
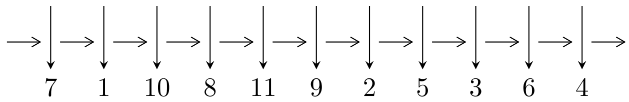
$11a_{244}$ ($K11a_{244}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

Ideals for irreducible components[2] of $X_{\mathbf{par}}$

$$I_1^u = \langle -4.39064 \times 10^{39} u^{31} + 4.83121 \times 10^{39} u^{30} + \cdots + 3.73404 \times 10^{41} b + 3.85648 \times 10^{41},$$
$$5.47363 \times 10^{41} u^{31} - 1.44531 \times 10^{42} u^{30} + \cdots + 1.94170 \times 10^{43} a + 9.06455 \times 10^{42},$$
$$u^{32} - 3u^{31} + \cdots + 114u - 26 \rangle$$
$$I_2^u = \langle 2u^{23} a + 2u^{23} + \cdots + 3a + 2,\ 4u^{23} a - 10u^{23} + \cdots + 4a - 8,\ u^{24} + u^{23} + \cdots + 2u + 1 \rangle$$
$$I_3^u = \langle b + u,\ 4a^2 - 12au - 2a + 3u - 8,\ u^2 + 1 \rangle$$
$$I_4^u = \langle b + 1,\ 6a - u + 2,\ u^2 - 2 \rangle$$

$$I_1^v = \langle a,\ b - 1,\ v + 1 \rangle$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 87 representations.

[1]The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2]All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $\boldsymbol{I^u_1 = \langle -4.39\times 10^{39}u^{31} + 4.83\times 10^{39}u^{30} + \cdots + 3.73\times 10^{41}b + 3.86\times 10^{41},\ 5.47\times 10^{41}u^{31} - 1.45\times 10^{42}u^{30} + \cdots + 1.94\times 10^{43}a + 9.06\times 10^{42},\ u^{32} - 3u^{31} + \cdots + 114u - 26\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0281899u^{31} + 0.0744353u^{30} + \cdots + 6.65054u - 0.466836 \\ 0.0117584u^{31} - 0.0129383u^{30} + \cdots + 4.93202u - 1.03279 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0176665u^{31} - 0.0552376u^{30} + \cdots + 0.409548u + 0.504274 \\ 0.00785720u^{31} - 0.0192778u^{30} + \cdots + 0.867861u - 0.446163 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0164315u^{31} + 0.0614970u^{30} + \cdots + 11.5826u - 1.49963 \\ 0.0117584u^{31} - 0.0129383u^{30} + \cdots + 4.93202u - 1.03279 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0234202u^{31} - 0.0628944u^{30} + \cdots + 8.74105u - 1.33147 \\ 0.00391087u^{31} + 0.00194896u^{30} + \cdots + 1.97724u - 0.532828 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0295883u^{31} + 0.0920957u^{30} + \cdots + 1.53443u + 1.13656 \\ 0.0239060u^{31} - 0.0827478u^{30} + \cdots - 3.89581u + 0.819535 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.0149220u^{31} - 0.0655790u^{30} + \cdots - 10.0660u + 1.54772 \\ -0.00696861u^{31} + 0.0183587u^{30} + \cdots + 1.25096u - 0.0818115 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0519253u^{31} + 0.163878u^{30} + \cdots + 3.90769u + 0.830841 \\ 0.0106080u^{31} - 0.0452849u^{30} + \cdots - 2.64731u + 0.637885 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0519253u^{31} + 0.163878u^{30} + \cdots + 3.90769u + 0.830841 \\ 0.0106080u^{31} - 0.0452849u^{30} + \cdots - 2.64731u + 0.637885 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.141620u^{31} + 0.504992u^{30} + \cdots + 51.3458u - 23.3173$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{32} + 3u^{31} + \cdots - 46u - 10$
c_2	$u^{32} + 17u^{31} + \cdots + 596u + 100$
c_3, c_4, c_8 c_9	$u^{32} + u^{31} + \cdots - 8u - 1$
c_5, c_{10}	$u^{32} + 3u^{31} + \cdots - 114u - 26$
c_6, c_{11}	$16(16u^{32} - 32u^{31} + \cdots + 20u + 1)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{32} - 17y^{31} + \cdots - 596y + 100$
c_2	$y^{32} - y^{31} + \cdots - 264816y + 10000$
c_3, c_4, c_8 c_9	$y^{32} - 11y^{31} + \cdots - 24y + 1$
c_5, c_{10}	$y^{32} + 13y^{31} + \cdots + 8740y + 676$
c_6, c_{11}	$256(256y^{32} + 1664y^{31} + \cdots - 136y + 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.247680 + 0.984503I$ $a = 0.230631 + 0.815096I$ $b = 0.374640 + 0.105048I$	$1.44688 - 2.10542I$	$-10.64510 + 3.10426I$
$u = -0.247680 - 0.984503I$ $a = 0.230631 - 0.815096I$ $b = 0.374640 - 0.105048I$	$1.44688 + 2.10542I$	$-10.64510 - 3.10426I$
$u = 0.322065 + 1.002960I$ $a = -0.79959 + 1.57315I$ $b = 0.494847 - 1.304260I$	$3.40906 - 3.86825I$	$-10.66165 + 7.93865I$
$u = 0.322065 - 1.002960I$ $a = -0.79959 - 1.57315I$ $b = 0.494847 + 1.304260I$	$3.40906 + 3.86825I$	$-10.66165 - 7.93865I$
$u = 0.749051 + 0.842571I$ $a = 0.838998 - 0.649336I$ $b = 0.805918 + 0.420403I$	$1.15662 - 1.21443I$	$-10.34690 + 5.00886I$
$u = 0.749051 - 0.842571I$ $a = 0.838998 + 0.649336I$ $b = 0.805918 - 0.420403I$	$1.15662 + 1.21443I$	$-10.34690 - 5.00886I$
$u = -0.261685 + 1.100560I$ $a = 0.69752 + 1.32278I$ $b = -0.560070 - 1.085440I$	$4.73730 - 0.53503I$	$-5.59189 - 1.15953I$
$u = -0.261685 - 1.100560I$ $a = 0.69752 - 1.32278I$ $b = -0.560070 + 1.085440I$	$4.73730 + 0.53503I$	$-5.59189 + 1.15953I$
$u = 1.159410 + 0.253577I$ $a = -0.235640 - 0.264464I$ $b = -1.242110 + 0.484247I$	$-6.13645 + 10.98730I$	$-16.3430 - 7.4849I$
$u = 1.159410 - 0.253577I$ $a = -0.235640 + 0.264464I$ $b = -1.242110 - 0.484247I$	$-6.13645 - 10.98730I$	$-16.3430 + 7.4849I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.140650 + 0.360946I$ $a = 0.307006 - 0.172337I$ $b = 1.128760 + 0.444978I$	$-3.38197 - 5.23032I$	$-13.5291 + 4.8406I$
$u = -1.140650 - 0.360946I$ $a = 0.307006 + 0.172337I$ $b = 1.128760 - 0.444978I$	$-3.38197 + 5.23032I$	$-13.5291 - 4.8406I$
$u = 0.141488 + 0.788388I$ $a = -0.36135 + 2.04053I$ $b = 0.099839 - 1.311650I$	$2.29463 + 1.59601I$	$-17.2362 + 0.3937I$
$u = 0.141488 - 0.788388I$ $a = -0.36135 - 2.04053I$ $b = 0.099839 + 1.311650I$	$2.29463 - 1.59601I$	$-17.2362 - 0.3937I$
$u = -0.736458 + 1.048230I$ $a = -0.625364 - 1.039090I$ $b = -0.962297 + 0.501826I$	$1.70241 + 7.23076I$	$-10.37930 - 9.14942I$
$u = -0.736458 - 1.048230I$ $a = -0.625364 + 1.039090I$ $b = -0.962297 - 0.501826I$	$1.70241 - 7.23076I$	$-10.37930 + 9.14942I$
$u = -0.097231 + 1.300930I$ $a = 0.428856 + 0.829956I$ $b = -0.638240 - 0.573688I$	$3.55297 - 1.35902I$	$-6.22009 + 3.91725I$
$u = -0.097231 - 1.300930I$ $a = 0.428856 - 0.829956I$ $b = -0.638240 + 0.573688I$	$3.55297 + 1.35902I$	$-6.22009 - 3.91725I$
$u = -0.66504 + 1.26287I$ $a = -0.08339 - 1.53240I$ $b = -1.242040 + 0.607992I$	$-0.46603 + 11.63550I$	$-10.91066 - 6.70327I$
$u = -0.66504 - 1.26287I$ $a = -0.08339 + 1.53240I$ $b = -1.242040 - 0.607992I$	$-0.46603 - 11.63550I$	$-10.91066 + 6.70327I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.64627 + 1.29426I$ $a = -0.04894 - 1.63210I$ $b = 1.30934 + 0.63525I$	$-2.8457 - 17.3477I$	$-13.2852 + 10.0205I$
$u = 0.64627 - 1.29426I$ $a = -0.04894 + 1.63210I$ $b = 1.30934 - 0.63525I$	$-2.8457 + 17.3477I$	$-13.2852 - 10.0205I$
$u = 1.38769 + 0.52320I$ $a = -0.203571 - 0.024919I$ $b = -1.092060 + 0.243675I$	$-9.14170 + 1.02273I$	$-18.9526 - 6.3910I$
$u = 1.38769 - 0.52320I$ $a = -0.203571 + 0.024919I$ $b = -1.092060 - 0.243675I$	$-9.14170 - 1.02273I$	$-18.9526 + 6.3910I$
$u = 0.75214 + 1.28922I$ $a = -0.023703 - 1.211370I$ $b = 1.242430 + 0.458182I$	$-6.39323 - 8.37491I$	$-16.6922 + 6.0879I$
$u = 0.75214 - 1.28922I$ $a = -0.023703 + 1.211370I$ $b = 1.242430 - 0.458182I$	$-6.39323 + 8.37491I$	$-16.6922 - 6.0879I$
$u = 0.15834 + 1.54684I$ $a = -0.519510 + 0.469576I$ $b = 0.921773 - 0.411908I$	$0.43477 + 5.74906I$	$-12.0210 - 8.3466I$
$u = 0.15834 - 1.54684I$ $a = -0.519510 - 0.469576I$ $b = 0.921773 + 0.411908I$	$0.43477 - 5.74906I$	$-12.0210 + 8.3466I$
$u = -1.61248$ $a = -0.366965$ $b = -0.861180$	-7.60439	-2.56870
$u = -0.027688 + 0.377024I$ $a = 0.62467 + 1.38038I$ $b = 0.136888 + 0.524281I$	$1.38354 - 2.30080I$	$-9.19830 + 4.85013I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.027688 - 0.377024I$ $a = 0.62467 - 1.38038I$ $b = 0.136888 - 0.524281I$	$1.38354 + 2.30080I$	$-9.19830 - 4.85013I$
$u = 0.332429$ $a = 0.529099$ $b = 0.305964$	-0.575721	-17.4050

II. $\boldsymbol{I_2^u =}$
$\boldsymbol{\langle 2u^{23}a+2u^{23}+\cdots+3a+2,\ 4u^{23}a-10u^{23}+\cdots+4a-8,\ u^{24}+u^{23}+\cdots+2u+1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} a \\ -2u^{23}a - 2u^{23} + \cdots - 3a - 2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -2u^{22}a + 12u^{23} + \cdots + 2a + 11 \\ 2u^{22} + 2u^{21} + \cdots + 4u + 5 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -2u^{23}a - 2u^{23} + \cdots - 2a - 2 \\ -2u^{23}a - 2u^{23} + \cdots - 3a - 2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -2u^{22}a - 2u^{23} + \cdots - a + 12 \\ -2u^{23}a - 4u^{23} + \cdots - 3a - 2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -3u^{23}a - 2u^{23} + \cdots - 4a - 6 \\ -u^{23}a - 2u^{23} + \cdots - 2a - 4 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 2u^{23}a - 8u^{23} + \cdots - 2a + 10 \\ 2u^{23}a + u^{22}a + \cdots + 3a + 2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -2u^{23}a - u^{22} + \cdots - 2a - 4 \\ -1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -2u^{23}a - u^{22} + \cdots - 2a - 4 \\ -1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -4u^{23} - 4u^{22} - 24u^{21} - 20u^{20} - 68u^{19} - 52u^{18} - 108u^{17} - 80u^{16} - 96u^{15} - 84u^{14} - 32u^{13} - 52u^{12} + 24u^{11} - 8u^{10} + 32u^9 + 28u^8 + 16u^7 + 20u^6 + 4u^4 + 4u^3 - 4u^2 - 4u - 18$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$(u^{24} - u^{23} + \cdots - 2u^3 + 1)^2$
c_2	$(u^{24} + 11u^{23} + \cdots - 2u^2 + 1)^2$
c_3, c_4, c_8 c_9	$u^{48} + u^{47} + \cdots + 60u + 17$
c_5, c_{10}	$(u^{24} - u^{23} + \cdots - 2u + 1)^2$
c_6, c_{11}	$u^{48} + 19u^{47} + \cdots - 5852u + 617$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y^{24} - 11y^{23} + \cdots - 2y^2 + 1)^2$
c_2	$(y^{24} + 5y^{23} + \cdots - 4y + 1)^2$
c_3, c_4, c_8 c_9	$y^{48} - 29y^{47} + \cdots - 2036y + 289$
c_5, c_{10}	$(y^{24} + 13y^{23} + \cdots - 2y^2 + 1)^2$
c_6, c_{11}	$y^{48} - 17y^{47} + \cdots + 4462208y + 380689$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.539628 + 0.849352I$ $a = 0.543922 + 0.247508I$ $b = -1.51045 + 0.21810I$	$-5.72979 - 5.71321I$	$-16.1082 + 7.5036I$
$u = 0.539628 + 0.849352I$ $a = -0.33191 - 2.03598I$ $b = 1.039360 + 0.760521I$	$-5.72979 - 5.71321I$	$-16.1082 + 7.5036I$
$u = 0.539628 - 0.849352I$ $a = 0.543922 - 0.247508I$ $b = -1.51045 - 0.21810I$	$-5.72979 + 5.71321I$	$-16.1082 - 7.5036I$
$u = 0.539628 - 0.849352I$ $a = -0.33191 + 2.03598I$ $b = 1.039360 - 0.760521I$	$-5.72979 + 5.71321I$	$-16.1082 - 7.5036I$
$u = -0.096397 + 0.986281I$ $a = 4.87120 + 4.00215I$ $b = 1.080380 + 0.019593I$	$-1.54603 + 2.05721I$	$-7.72702 - 4.01793I$
$u = -0.096397 + 0.986281I$ $a = 4.84423 - 6.02369I$ $b = -0.896362 + 0.034778I$	$-1.54603 + 2.05721I$	$-7.72702 - 4.01793I$
$u = -0.096397 - 0.986281I$ $a = 4.87120 - 4.00215I$ $b = 1.080380 - 0.019593I$	$-1.54603 - 2.05721I$	$-7.72702 + 4.01793I$
$u = -0.096397 - 0.986281I$ $a = 4.84423 + 6.02369I$ $b = -0.896362 - 0.034778I$	$-1.54603 - 2.05721I$	$-7.72702 + 4.01793I$
$u = -0.414627 + 0.808476I$ $a = 0.00257518 - 0.01121480I$ $b = 1.306580 + 0.198887I$	$-3.23391 + 1.77225I$	$-11.98912 - 4.04184I$
$u = -0.414627 + 0.808476I$ $a = 0.35931 - 2.22876I$ $b = -0.979446 + 0.498112I$	$-3.23391 + 1.77225I$	$-11.98912 - 4.04184I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.414627 - 0.808476I$ $a = 0.00257518 + 0.01121480I$ $b = 1.306580 - 0.198887I$	$-3.23391 - 1.77225I$	$-11.98912 + 4.04184I$
$u = -0.414627 - 0.808476I$ $a = 0.35931 + 2.22876I$ $b = -0.979446 - 0.498112I$	$-3.23391 - 1.77225I$	$-11.98912 + 4.04184I$
$u = 0.542169 + 0.664263I$ $a = 0.666243 - 0.437409I$ $b = -1.306800 + 0.469542I$	$-6.25412 + 1.34320I$	$-18.0296 - 0.6200I$
$u = 0.542169 + 0.664263I$ $a = -0.14319 - 1.94467I$ $b = 1.290650 + 0.487392I$	$-6.25412 + 1.34320I$	$-18.0296 - 0.6200I$
$u = 0.542169 - 0.664263I$ $a = 0.666243 + 0.437409I$ $b = -1.306800 - 0.469542I$	$-6.25412 - 1.34320I$	$-18.0296 + 0.6200I$
$u = 0.542169 - 0.664263I$ $a = -0.14319 + 1.94467I$ $b = 1.290650 - 0.487392I$	$-6.25412 - 1.34320I$	$-18.0296 + 0.6200I$
$u = -0.796432 + 0.144602I$ $a = -0.786039 - 0.575477I$ $b = -0.017969 + 0.851963I$	$-2.49287 - 6.17959I$	$-13.7852 + 5.0455I$
$u = -0.796432 + 0.144602I$ $a = -0.197166 - 0.175593I$ $b = -1.233680 - 0.435221I$	$-2.49287 - 6.17959I$	$-13.7852 + 5.0455I$
$u = -0.796432 - 0.144602I$ $a = -0.786039 + 0.575477I$ $b = -0.017969 - 0.851963I$	$-2.49287 + 6.17959I$	$-13.7852 - 5.0455I$
$u = -0.796432 - 0.144602I$ $a = -0.197166 + 0.175593I$ $b = -1.233680 + 0.435221I$	$-2.49287 + 6.17959I$	$-13.7852 - 5.0455I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.472424 + 1.121720I$ $a = -0.004693 - 1.220150I$ $b = -0.070699 + 0.850066I$	$-2.54173 + 3.77265I$	$-13.8919 - 3.4911I$
$u = -0.472424 + 1.121720I$ $a = -0.225989 + 1.326630I$ $b = 1.276130 - 0.388706I$	$-2.54173 + 3.77265I$	$-13.8919 - 3.4911I$
$u = -0.472424 - 1.121720I$ $a = -0.004693 + 1.220150I$ $b = -0.070699 - 0.850066I$	$-2.54173 - 3.77265I$	$-13.8919 + 3.4911I$
$u = -0.472424 - 1.121720I$ $a = -0.225989 - 1.326630I$ $b = 1.276130 + 0.388706I$	$-2.54173 - 3.77265I$	$-13.8919 + 3.4911I$
$u = 0.766849 + 0.083191I$ $a = 0.769852 - 0.382628I$ $b = 0.169700 + 0.594156I$	$-0.655501 + 1.182900I$	$-10.60754 - 0.39910I$
$u = 0.766849 + 0.083191I$ $a = 0.400701 - 0.069987I$ $b = 1.032180 - 0.364777I$	$-0.655501 + 1.182900I$	$-10.60754 - 0.39910I$
$u = 0.766849 - 0.083191I$ $a = 0.769852 + 0.382628I$ $b = 0.169700 - 0.594156I$	$-0.655501 - 1.182900I$	$-10.60754 + 0.39910I$
$u = 0.766849 - 0.083191I$ $a = 0.400701 + 0.069987I$ $b = 1.032180 + 0.364777I$	$-0.655501 - 1.182900I$	$-10.60754 + 0.39910I$
$u = -0.376287 + 1.204930I$ $a = 0.475135 + 0.983255I$ $b = 0.513121 - 0.339665I$	$1.53995 - 2.24524I$	$-8.97303 + 1.89383I$
$u = -0.376287 + 1.204930I$ $a = -0.408284 + 0.298929I$ $b = 0.696267 + 0.307021I$	$1.53995 - 2.24524I$	$-8.97303 + 1.89383I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.376287 - 1.204930I$ $a = 0.475135 - 0.983255I$ $b = 0.513121 + 0.339665I$	$1.53995 + 2.24524I$	$-8.97303 - 1.89383I$
$u = -0.376287 - 1.204930I$ $a = -0.408284 - 0.298929I$ $b = 0.696267 - 0.307021I$	$1.53995 + 2.24524I$	$-8.97303 - 1.89383I$
$u = 0.413902 + 1.197930I$ $a = -0.198548 + 1.325430I$ $b = -0.820849 - 0.486407I$	$3.07007 - 2.92383I$	$-6.70980 + 3.29300I$
$u = 0.413902 + 1.197930I$ $a = 0.375753 - 0.333805I$ $b = -0.476232 + 0.580933I$	$3.07007 - 2.92383I$	$-6.70980 + 3.29300I$
$u = 0.413902 - 1.197930I$ $a = -0.198548 - 1.325430I$ $b = -0.820849 + 0.486407I$	$3.07007 + 2.92383I$	$-6.70980 - 3.29300I$
$u = 0.413902 - 1.197930I$ $a = 0.375753 + 0.333805I$ $b = -0.476232 - 0.580933I$	$3.07007 + 2.92383I$	$-6.70980 - 3.29300I$
$u = 0.486243 + 1.189530I$ $a = 0.531403 - 1.075720I$ $b = -0.278243 + 1.022640I$	$2.55519 - 5.78082I$	$-7.62473 + 3.72629I$
$u = 0.486243 + 1.189530I$ $a = 0.12458 + 1.60566I$ $b = -1.184610 - 0.672538I$	$2.55519 - 5.78082I$	$-7.62473 + 3.72629I$
$u = 0.486243 - 1.189530I$ $a = 0.531403 + 1.075720I$ $b = -0.278243 - 1.022640I$	$2.55519 + 5.78082I$	$-7.62473 - 3.72629I$
$u = 0.486243 - 1.189530I$ $a = 0.12458 - 1.60566I$ $b = -1.184610 + 0.672538I$	$2.55519 + 5.78082I$	$-7.62473 - 3.72629I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.512242 + 1.189930I$ $a = -0.590726 - 1.274840I$ $b = 0.228910 + 1.166680I$	$0.58237 + 11.00000I$	$-10.68175 - 8.05284I$
$u = -0.512242 + 1.189930I$ $a = -0.24364 + 1.67429I$ $b = 1.30033 - 0.72492I$	$0.58237 + 11.00000I$	$-10.68175 - 8.05284I$
$u = -0.512242 - 1.189930I$ $a = -0.590726 + 1.274840I$ $b = 0.228910 - 1.166680I$	$0.58237 - 11.00000I$	$-10.68175 + 8.05284I$
$u = -0.512242 - 1.189930I$ $a = -0.24364 - 1.67429I$ $b = 1.30033 + 0.72492I$	$0.58237 - 11.00000I$	$-10.68175 + 8.05284I$
$u = -0.580381 + 0.259924I$ $a = -0.625985 - 0.961812I$ $b = -1.295020 - 0.005614I$	$-5.03285 + 0.40841I$	$-17.8720 - 0.7556I$
$u = -0.580381 + 0.259924I$ $a = -1.20872 - 0.75067I$ $b = 0.636772 + 0.510637I$	$-5.03285 + 0.40841I$	$-17.8720 - 0.7556I$
$u = -0.580381 - 0.259924I$ $a = -0.625985 + 0.961812I$ $b = -1.295020 + 0.005614I$	$-5.03285 - 0.40841I$	$-17.8720 + 0.7556I$
$u = -0.580381 - 0.259924I$ $a = -1.20872 + 0.75067I$ $b = 0.636772 - 0.510637I$	$-5.03285 - 0.40841I$	$-17.8720 + 0.7556I$

III. $I_3^u = \langle b+u,\ 4a^2-12au-2a+3u-8,\ u^2+1\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} a \\ -u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 2au + \frac{1}{2}a - \frac{3}{4}u + 3 \\ -au - 2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} a - u \\ -u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2au + \frac{3}{2}a - \frac{11}{4}u + \frac{11}{4} \\ -au - a + u - \frac{3}{2} \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} au + 2 \\ 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} \frac{1}{2}au + a - 2u + \frac{3}{4} \\ a - u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} au + 1 \\ 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} au + 1 \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 8a - 12u - 8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^4 - u^2 + 1$
c_2	$(u^2 + u + 1)^2$
c_3, c_4, c_5 c_8, c_9, c_{10}	$(u^2 + 1)^2$
c_6, c_{11}	$16(16u^4 - 16u^3 + 20u^2 - 8u + 1)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y^2 - y + 1)^2$
c_2	$(y^2 + y + 1)^2$
c_3, c_4, c_5 c_8, c_9, c_{10}	$(y + 1)^4$
c_6, c_{11}	$256(256y^4 + 384y^3 + 176y^2 - 24y + 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u		$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$1.000000I$		
$a=$	$0.250000+1.066990I$	$3.28987+2.02988I$	$-6.00000-3.46410I$
$b=$	$-1.000000I$		
$u=$	$1.000000I$		
$a=$	$0.25000+1.93301I$	$3.28987-2.02988I$	$-6.00000+3.46410I$
$b=$	$-1.000000I$		
$u=$	$-1.000000I$		
$a=$	$0.250000-1.066990I$	$3.28987-2.02988I$	$-6.00000+3.46410I$
$b=$	$1.000000I$		
$u=$	$-1.000000I$		
$a=$	$0.25000-1.93301I$	$3.28987+2.02988I$	$-6.00000-3.46410I$
$b=$	$1.000000I$		

IV. $I_4^u = \langle b+1,\ 6a-u+2,\ u^2-2 \rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} \frac{1}{6}u - \frac{1}{3} \\ -1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} \frac{1}{18}u + 1 \\ \frac{1}{3}u + \frac{7}{3} \end{pmatrix}$$
$$a_3 = \begin{pmatrix} \frac{1}{6}u - \frac{4}{3} \\ -1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{5}{18}u + \frac{2}{3} \\ \frac{2}{3}u + \frac{11}{3} \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ 3u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{1}{6}u - \frac{1}{3} \\ -1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -\frac{1}{6}u + \frac{2}{9} \\ \frac{2}{3}u + \frac{1}{3} \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{5}{6}u - \frac{1}{3} \\ -3u - 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{5}{6}u - \frac{1}{3} \\ -3u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -20$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5, c_7 c_{10}	$u^2 - 2$
c_2	$(u+2)^2$
c_3, c_8	$(u-1)^2$
c_4, c_9	$(u+1)^2$
c_6, c_{11}	$9(9u^2 + 6u - 1)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_7 c_{10}	$(y-2)^2$
c_2	$(y-4)^2$
c_3, c_4, c_8 c_9	$(y-1)^2$
c_6, c_{11}	$81(81y^2 - 54y + 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.41421$ $a = -0.0976311$ $b = -1.00000$	-8.22467	-20.0000
$u = -1.41421$ $a = -0.569036$ $b = -1.00000$	-8.22467	-20.0000

V. $\boldsymbol{I_1^v = \langle a,\ b-1,\ v+1 \rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_5 c_7, c_{10}	u
c_3, c_8	$u + 1$
c_4, c_6, c_9 c_{11}	$u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_7, c_{10}	y
c_3, c_4, c_6 c_8, c_9, c_{11}	$y-1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = -1.00000$ $a = 0$ $b = 1.00000$	-3.28987	-12.0000

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$u(u^2-2)(u^4-u^2+1)(u^{24}-u^{23}+\cdots-2u^3+1)^2$ $\cdot(u^{32}+3u^{31}+\cdots-46u-10)$
c_2	$u(u+2)^2(u^2+u+1)^2(u^{24}+11u^{23}+\cdots-2u^2+1)^2$ $\cdot(u^{32}+17u^{31}+\cdots+596u+100)$
c_3, c_8	$((u-1)^2)(u+1)(u^2+1)^2(u^{32}+u^{31}+\cdots-8u-1)$ $\cdot(u^{48}+u^{47}+\cdots+60u+17)$
c_4, c_9	$(u-1)(u+1)^2(u^2+1)^2(u^{32}+u^{31}+\cdots-8u-1)$ $\cdot(u^{48}+u^{47}+\cdots+60u+17)$
c_5, c_{10}	$u(u^2-2)(u^2+1)^2(u^{24}-u^{23}+\cdots-2u+1)^2$ $\cdot(u^{32}+3u^{31}+\cdots-114u-26)$
c_6, c_{11}	$2304(u-1)(9u^2+6u-1)(16u^4-16u^3+20u^2-8u+1)$ $\cdot(16u^{32}-32u^{31}+\cdots+20u+1)(u^{48}+19u^{47}+\cdots-5852u+617)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y(y-2)^2(y^2-y+1)^2(y^{24}-11y^{23}+\cdots-2y^2+1)^2$ $\cdot\,(y^{32}-17y^{31}+\cdots-596y+100)$
c_2	$y(y-4)^2(y^2+y+1)^2(y^{24}+5y^{23}+\cdots-4y+1)^2$ $\cdot\,(y^{32}-y^{31}+\cdots-264816y+10000)$
c_3, c_4, c_8 c_9	$((y-1)^3)(y+1)^4(y^{32}-11y^{31}+\cdots-24y+1)$ $\cdot\,(y^{48}-29y^{47}+\cdots-2036y+289)$
c_5, c_{10}	$y(y-2)^2(y+1)^4(y^{24}+13y^{23}+\cdots-2y^2+1)^2$ $\cdot\,(y^{32}+13y^{31}+\cdots+8740y+676)$
c_6, c_{11}	$5308416(y-1)(81y^2-54y+1)(256y^4+384y^3+\cdots-24y+1)$ $\cdot\,(256y^{32}+1664y^{31}+\cdots-136y+1)$ $\cdot\,(y^{48}-17y^{47}+\cdots+4462208y+380689)$