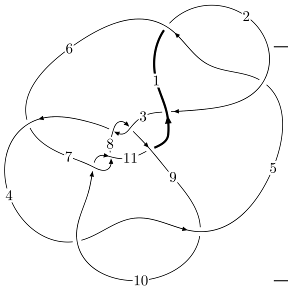
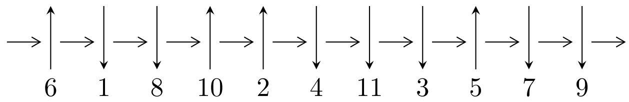
$11a_{132}$ ($K11a_{132}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -116u^{48} - 310u^{47} + \cdots + 2304b - 8416,\ -4487u^{49} - 19250u^{48} + \cdots + 71424a - 445724,$$
$$u^{50} + 4u^{49} + \cdots + 255u + 62\rangle$$
$$I_2^u = \langle b^2 - bu + u,\ a - u + 1,\ u^2 - u + 1\rangle$$
$$I_3^u = \langle b + u,\ a - 2,\ u^2 - u + 1\rangle$$
$$I_4^u = \langle b^2au + b^3 + bu + au + b + u - 1,\ u^2 - u + 1\rangle$$

$$I_1^v = \langle a,\ b^3 + b - 1,\ v - 1\rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 59 representations.
* 1 irreducible components of $\dim_{\mathbb{C}} = 1$

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[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. $I_1^u = \langle -116u^{48} - 310u^{47} + \cdots + 2304b - 8416,\ -4487u^{49} - 19250u^{48} + \cdots + 71424a - 445724,\ u^{50} + 4u^{49} + \cdots + 255u + 62\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0628220u^{49} + 0.269517u^{48} + \cdots + 24.7408u + 6.24054 \\ 0.0503472u^{48} + 0.134549u^{47} + \cdots + 9.09288u + 3.65278 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.0628220u^{49} + 0.319864u^{48} + \cdots + 33.8336u + 9.89331 \\ 0.0503472u^{48} + 0.134549u^{47} + \cdots + 9.09288u + 3.65278 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0753528u^{49} + 0.332661u^{48} + \cdots + 20.5942u + 5.51184 \\ 0.0104167u^{49} + 0.0559896u^{48} + \cdots + 3.65495u + 0.393229 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.176103u^{49} + 0.671427u^{48} + \cdots + 38.7086u + 8.87769 \\ 0.0625000u^{49} + 0.159722u^{48} + \cdots + 4.80382u + 1.71528 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0727487u^{49} - 0.228495u^{48} + \cdots - 18.8299u - 4.29049 \\ 0.0625000u^{49} + 0.190104u^{48} + \cdots + 3.84115u - 0.151042 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.0408546u^{49} + 0.0874636u^{48} + \cdots - 6.34781u - 1.55343 \\ 0.0156250u^{49} - 0.0447049u^{48} + \cdots - 12.4293u - 3.52170 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.0408546u^{49} + 0.0874636u^{48} + \cdots - 6.34781u - 1.55343 \\ 0.0156250u^{49} - 0.0447049u^{48} + \cdots - 12.4293u - 3.52170 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{625}{864}u^{49} + \frac{5359}{1728}u^{48} + \cdots + \frac{43991}{216}u + \frac{193}{4}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{50} + 4u^{49} + \cdots + 255u + 62$
c_2	$u^{50} + 20u^{49} + \cdots + 27851u + 3844$
c_3, c_8	$9(9u^{50} + 9u^{49} + \cdots - 6u + 1)$
c_4, c_9	$9(9u^{50} + 9u^{49} + \cdots + 8u + 1)$
c_6	$16(16u^{50} - 32u^{49} + \cdots - 26298u + 5463)$
c_7, c_{10}	$u^{50} - 6u^{49} + \cdots - 7031u + 1274$
c_{11}	$16(16u^{50} - 16u^{49} + \cdots + 612u + 63)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{50} + 20y^{49} + \cdots + 27851y + 3844$
c_2	$y^{50} + 20y^{49} + \cdots + 97271135y + 14776336$
c_3, c_8	$81(81y^{50} + 2457y^{49} + \cdots - 2y + 1)$
c_4, c_9	$81(81y^{50} + 2781y^{49} + \cdots - 2y + 1)$
c_6	$256(256y^{50} - 1408y^{49} + \cdots - 8.62735 \times 10^7 y + 2.98444 \times 10^7)$
c_7, c_{10}	$y^{50} - 34y^{49} + \cdots + 15979843y + 1623076$
c_{11}	$256(256y^{50} - 1920y^{49} + \cdots + 153522y + 3969)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.092353 + 1.013550I$ $a = -0.004651 - 0.358199I$ $b = 0.717415 + 0.391005I$	$-2.36463 + 4.68098I$	$-6.72560 - 6.42701I$
$u = 0.092353 - 1.013550I$ $a = -0.004651 + 0.358199I$ $b = 0.717415 - 0.391005I$	$-2.36463 - 4.68098I$	$-6.72560 + 6.42701I$
$u = -0.777689 + 0.592166I$ $a = 1.48088 + 0.63093I$ $b = -1.077960 - 0.011537I$	$3.41598 + 5.21199I$	$0.12705 - 3.56799I$
$u = -0.777689 - 0.592166I$ $a = 1.48088 - 0.63093I$ $b = -1.077960 + 0.011537I$	$3.41598 - 5.21199I$	$0.12705 + 3.56799I$
$u = -0.813463 + 0.649972I$ $a = -1.136810 - 0.407519I$ $b = 0.746378 - 0.288180I$	$6.17950 + 0.24137I$	$3.95341 + 1.60515I$
$u = -0.813463 - 0.649972I$ $a = -1.136810 + 0.407519I$ $b = 0.746378 + 0.288180I$	$6.17950 - 0.24137I$	$3.95341 - 1.60515I$
$u = 0.736653 + 0.765266I$ $a = -0.584317 - 1.167250I$ $b = 0.120988 + 1.046830I$	$-3.34886 + 2.77656I$	$-9.46596 - 3.37700I$
$u = 0.736653 - 0.765266I$ $a = -0.584317 + 1.167250I$ $b = 0.120988 - 1.046830I$	$-3.34886 - 2.77656I$	$-9.46596 + 3.37700I$
$u = 0.941593 + 0.502895I$ $a = 0.691476 - 0.854824I$ $b = -0.51438 + 1.34602I$	$-0.83094 - 10.80580I$	$-3.00000 + 5.61837I$
$u = 0.941593 - 0.502895I$ $a = 0.691476 + 0.854824I$ $b = -0.51438 - 1.34602I$	$-0.83094 + 10.80580I$	$-3.00000 - 5.61837I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.447528 + 0.991757I$ $a = 0.195342 + 1.153440I$ $b = 0.109550 - 0.264828I$	$-0.55196 + 1.45362I$	$0.849896 + 0.307578I$
$u = 0.447528 - 0.991757I$ $a = 0.195342 - 1.153440I$ $b = 0.109550 + 0.264828I$	$-0.55196 - 1.45362I$	$0.849896 - 0.307578I$
$u = -0.672195 + 0.888770I$ $a = -0.642949 + 1.017540I$ $b = 0.177110 - 0.103647I$	$-0.22553 - 2.62229I$	$0.95524 + 3.73688I$
$u = -0.672195 - 0.888770I$ $a = -0.642949 - 1.017540I$ $b = 0.177110 + 0.103647I$	$-0.22553 + 2.62229I$	$0.95524 - 3.73688I$
$u = 1.019770 + 0.461213I$ $a = -0.478079 + 0.501193I$ $b = 0.402304 - 1.083860I$	$3.76854 - 4.51039I$	$0. + 5.29534I$
$u = 1.019770 - 0.461213I$ $a = -0.478079 - 0.501193I$ $b = 0.402304 + 1.083860I$	$3.76854 + 4.51039I$	$0. - 5.29534I$
$u = -0.757822 + 0.403687I$ $a = -0.635336 - 1.216680I$ $b = 0.53792 + 1.33201I$	$-5.06249 + 5.26813I$	$-6.22611 - 3.60097I$
$u = -0.757822 - 0.403687I$ $a = -0.635336 + 1.216680I$ $b = 0.53792 - 1.33201I$	$-5.06249 - 5.26813I$	$-6.22611 + 3.60097I$
$u = -0.289618 + 0.801801I$ $a = -1.43783 + 0.89732I$ $b = 0.224512 + 0.714675I$	$-2.47998 - 1.07634I$	$-10.74745 - 1.48815I$
$u = -0.289618 - 0.801801I$ $a = -1.43783 - 0.89732I$ $b = 0.224512 - 0.714675I$	$-2.47998 + 1.07634I$	$-10.74745 + 1.48815I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.117739 + 1.161840I$ $a = -0.382470 - 0.726071I$ $b = -0.28062 - 1.44993I$	$-10.17260 + 2.94051I$	$-12.16356 - 1.23495I$
$u = -0.117739 - 1.161840I$ $a = -0.382470 + 0.726071I$ $b = -0.28062 + 1.44993I$	$-10.17260 - 2.94051I$	$-12.16356 + 1.23495I$
$u = -0.563809 + 1.077480I$ $a = -1.70743 - 0.59740I$ $b = 0.427612 - 1.164930I$	$-2.46832 - 6.35887I$	$0. + 6.52323I$
$u = -0.563809 - 1.077480I$ $a = -1.70743 + 0.59740I$ $b = 0.427612 + 1.164930I$	$-2.46832 + 6.35887I$	$0. - 6.52323I$
$u = -1.121410 + 0.484988I$ $a = 0.399214 - 0.478349I$ $b = -0.210445 + 1.103920I$	$-0.91613 - 5.10341I$	$0. + 10.19626I$
$u = -1.121410 - 0.484988I$ $a = 0.399214 + 0.478349I$ $b = -0.210445 - 1.103920I$	$-0.91613 + 5.10341I$	$0. - 10.19626I$
$u = -0.686258 + 1.016050I$ $a = 0.805119 + 0.489405I$ $b = -0.883363 - 0.123330I$	$5.05351 - 5.86110I$	0
$u = -0.686258 - 1.016050I$ $a = 0.805119 - 0.489405I$ $b = -0.883363 + 0.123330I$	$5.05351 + 5.86110I$	0
$u = -0.660397 + 1.034530I$ $a = -1.17709 - 0.84449I$ $b = 1.218970 - 0.134344I$	$2.08583 - 10.64970I$	$0. + 8.66549I$
$u = -0.660397 - 1.034530I$ $a = -1.17709 + 0.84449I$ $b = 1.218970 + 0.134344I$	$2.08583 + 10.64970I$	$0. - 8.66549I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.718487 + 0.241043I$ $a = 0.617067 + 0.760645I$ $b = -0.443255 + 0.080226I$	$1.86829 + 2.54813I$	$2.68166 - 3.38783I$
$u = 0.718487 - 0.241043I$ $a = 0.617067 - 0.760645I$ $b = -0.443255 - 0.080226I$	$1.86829 - 2.54813I$	$2.68166 + 3.38783I$
$u = -0.601973 + 1.087870I$ $a = 1.90278 + 0.36506I$ $b = -0.61493 + 1.48243I$	$-7.03977 - 10.39490I$	0
$u = -0.601973 - 1.087870I$ $a = 1.90278 - 0.36506I$ $b = -0.61493 - 1.48243I$	$-7.03977 + 10.39490I$	0
$u = -0.045175 + 1.293490I$ $a = -0.187844 - 0.818979I$ $b = 0.313266 - 1.365130I$	$-7.73894 - 8.36358I$	0
$u = -0.045175 - 1.293490I$ $a = -0.187844 + 0.818979I$ $b = 0.313266 + 1.365130I$	$-7.73894 + 8.36358I$	0
$u = -0.445173 + 1.219660I$ $a = 0.768913 + 0.623393I$ $b = -0.017515 + 1.152480I$	$-4.31677 - 1.36210I$	0
$u = -0.445173 - 1.219660I$ $a = 0.768913 - 0.623393I$ $b = -0.017515 - 1.152480I$	$-4.31677 + 1.36210I$	0
$u = -0.599521 + 0.343884I$ $a = 0.830282 + 0.552154I$ $b = -0.337189 - 0.937740I$	$-0.46677 + 1.70599I$	$-3.14456 - 3.69461I$
$u = -0.599521 - 0.343884I$ $a = 0.830282 - 0.552154I$ $b = -0.337189 + 0.937740I$	$-0.46677 - 1.70599I$	$-3.14456 + 3.69461I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.691337 + 1.130820I$ $a = -1.87160 + 0.33845I$ $b = 0.54431 + 1.42511I$	$-2.7651 + 16.7788I$	0
$u = 0.691337 - 1.130820I$ $a = -1.87160 - 0.33845I$ $b = 0.54431 - 1.42511I$	$-2.7651 - 16.7788I$	0
$u = 0.209377 + 0.627431I$ $a = 0.907953 + 0.723087I$ $b = -0.282187 - 0.534606I$	$0.051801 + 1.349280I$	$-0.36388 - 5.58397I$
$u = 0.209377 - 0.627431I$ $a = 0.907953 - 0.723087I$ $b = -0.282187 + 0.534606I$	$0.051801 - 1.349280I$	$-0.36388 + 5.58397I$
$u = 0.701751 + 1.159990I$ $a = 1.47811 - 0.36399I$ $b = -0.458469 - 1.232360I$	$1.61095 + 10.69360I$	0
$u = 0.701751 - 1.159990I$ $a = 1.47811 + 0.36399I$ $b = -0.458469 + 1.232360I$	$1.61095 - 10.69360I$	0
$u = -0.304509 + 1.329570I$ $a = 0.428450 + 0.613658I$ $b = -0.012890 + 1.171490I$	$-4.37509 - 1.36766I$	0
$u = -0.304509 - 1.329570I$ $a = 0.428450 - 0.613658I$ $b = -0.012890 - 1.171490I$	$-4.37509 + 1.36766I$	0
$u = 0.89791 + 1.14735I$ $a = -0.799502 - 0.240995I$ $b = 0.092862 + 1.140070I$	$-3.45411 + 3.73566I$	0
$u = 0.89791 - 1.14735I$ $a = -0.799502 + 0.240995I$ $b = 0.092862 - 1.140070I$	$-3.45411 - 3.73566I$	0

II. $I_2^u = \langle b^2 - bu + u,\ a - u + 1,\ u^2 - u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ -u+1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u-1 \\ b \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} b+u-1 \\ b \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u \\ u-1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 2bu-b-u+1 \\ bu-u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} b+u-1 \\ b \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -b-u+1 \\ -b \end{pmatrix}$$
$$a_7 = \begin{pmatrix} b+u-1 \\ b \end{pmatrix}$$
$$a_7 = \begin{pmatrix} b+u-1 \\ b \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u + 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y^2 + y + 1)^2$
c_3, c_4, c_6 c_8, c_9	$y^4 + 3y^3 + 2y^2 + 1$
c_7, c_{10}	y^4
c_{11}	$y^4 - 5y^3 + 6y^2 + 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.500000 + 0.866025I$ $a = -0.500000 + 0.866025I$ $b = 0.621744 - 0.440597I$	$2.02988I$	$0. - 3.46410I$
$u = 0.500000 + 0.866025I$ $a = -0.500000 + 0.866025I$ $b = -0.121744 + 1.306620I$	$2.02988I$	$0. - 3.46410I$
$u = 0.500000 - 0.866025I$ $a = -0.500000 - 0.866025I$ $b = 0.621744 + 0.440597I$	$-2.02988I$	$0. + 3.46410I$
$u = 0.500000 - 0.866025I$ $a = -0.500000 - 0.866025I$ $b = -0.121744 - 1.306620I$	$-2.02988I$	$0. + 3.46410I$

III. $I_3^u = \langle b+u,\ a-2,\ u^2-u+1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ -u+1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 2 \\ -u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u+2 \\ -u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u \\ u-1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u \\ u-1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u+2 \\ -u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u-2 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u+2 \\ -u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u+2 \\ -u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u+2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.500000 + 0.866025I$ $a = 2.00000$ $b = -0.500000 - 0.866025I$	$2.02988I$	$0. - 3.46410I$
$u = 0.500000 - 0.866025I$ $a = 2.00000$ $b = -0.500000 + 0.866025I$	$-2.02988I$	$0. + 3.46410I$

IV. $I_4^u = \langle b^2au + b^3 + bu + au + b + u - 1,\ u^2 - u + 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ -u+1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} a \\ b \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} b+a \\ b \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u \\ u-1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} b^2+ba+1 \\ b^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} b+a \\ b \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} bau + a^2u - a^2 - u \\ b^2u + bau - ba + u - 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -bau - a^2u + a^2 + b + a + u \\ -b^2u - bau + ba + b - u + 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -bau - a^2u + a^2 + b + a + u \\ -b^2u - bau + ba + b - u + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4u - 4$

(iv) u-Polynomials at the component : It cannot be defined for a positive dimension component.

(v) Riley Polynomials at the component : It cannot be defined for a positive dimension component.

(iv) Complex Volumes and Cusp Shapes

Solution to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \cdots$ $a = \cdots$ $b = \cdots$	$-1.64493 - 2.02988I$	$-6.00000 - 3.46410I$

V. $I_1^v = \langle a,\ b^3 + b - 1,\ v - 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ b \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} b \\ b \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} b^2 + 1 \\ b^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} b \\ b \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ -b^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} b + 1 \\ -b^2 + b \end{pmatrix}$$
$$a_7 = \begin{pmatrix} b + 1 \\ -b^2 + b \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	y^3
c_3, c_4, c_8 c_9, c_{11}	$y^3 + 2y^2 + y - 1$
c_6	$y^3 - 2y^2 + 5y - 1$
c_7, c_{10}	$(y-1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 1.00000$ $a = 0$ $b = -0.341164 + 1.161540I$	-1.64493	-6.00000
$v = 1.00000$ $a = 0$ $b = -0.341164 - 1.161540I$	-1.64493	-6.00000
$v = 1.00000$ $a = 0$ $b = 0.682328$	-1.64493	-6.00000

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^3(u^2-u+1)^3(u^{50}+4u^{49}+\cdots+255u+62)$
c_2	$u^3(u^2+u+1)^3(u^{50}+20u^{49}+\cdots+27851u+3844)$
c_3, c_8	$9(u^2-u+1)(u^3+u+1)(u^4+u^3+2u^2+2u+1)$ $\cdot(9u^{50}+9u^{49}+\cdots-6u+1)$
c_4, c_9	$9(u^2-u+1)(u^3+u+1)(u^4+u^3+2u^2+2u+1)$ $\cdot(9u^{50}+9u^{49}+\cdots+8u+1)$
c_6	$16(u^2-u+1)(u^3+2u^2+u-1)(u^4+u^3+2u^2+2u+1)$ $\cdot(16u^{50}-32u^{49}+\cdots-26298u+5463)$
c_7, c_{10}	$u^6(u+1)^3(u^{50}-6u^{49}+\cdots-7031u+1274)$
c_{11}	$16(u^2+u+1)(u^3+u+1)(u^4+3u^3+2u^2+1)$ $\cdot(16u^{50}-16u^{49}+\cdots+612u+63)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^3(y^2+y+1)^3(y^{50}+20y^{49}+\cdots+27851y+3844)$
c_2	$y^3(y^2+y+1)^3(y^{50}+20y^{49}+\cdots+9.72711\times10^7y+1.47763\times10^7)$
c_3, c_8	$81(y^2+y+1)(y^3+2y^2+y-1)(y^4+3y^3+2y^2+1)$ $\cdot(81y^{50}+2457y^{49}+\cdots-2y+1)$
c_4, c_9	$81(y^2+y+1)(y^3+2y^2+y-1)(y^4+3y^3+2y^2+1)$ $\cdot(81y^{50}+2781y^{49}+\cdots-2y+1)$
c_6	$256(y^2+y+1)(y^3-2y^2+5y-1)(y^4+3y^3+2y^2+1)$ $\cdot(256y^{50}-1408y^{49}+\cdots-86273478y+29844369)$
c_7, c_{10}	$y^6(y-1)^3(y^{50}-34y^{49}+\cdots+1.59798\times10^7y+1623076)$
c_{11}	$256(y^2+y+1)(y^3+2y^2+y-1)(y^4-5y^3+6y^2+4y+1)$ $\cdot(256y^{50}-1920y^{49}+\cdots+153522y+3969)$