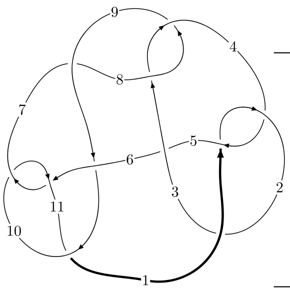
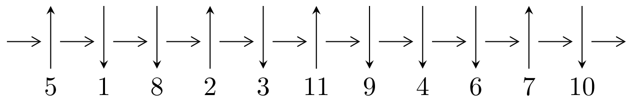
$11a_6$ ($K11a_6$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -u^3 + b - u,\ -u^{13} - u^{12} - 4u^{11} - 3u^{10} - 7u^9 - 5u^8 - 6u^7 - 4u^6 - 2u^5 - 2u^4 - 2u^3 - u^2 + a - 2u - 1,$$
$$u^{17} + u^{16} + \cdots + u + 1\rangle$$
$$I_2^u = \langle -u^{53} - 2u^{52} + \cdots + b - 1,\ -u^{52} - 2u^{51} + \cdots + a - 3,\ u^{54} + 2u^{53} + \cdots + u + 1\rangle$$
$$I_3^u = \langle b + u + 1,\ a + 1,\ u^2 + u + 1\rangle$$
$$I_4^u = \langle b - u,\ a - u - 1,\ u^2 + u + 1\rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 75 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. $\boldsymbol{I_1^u = \langle -u^3 + b - u,\ -u^{13} - u^{12} + \cdots + a - 1,\ u^{17} + u^{16} + \cdots + u + 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^{13} + u^{12} + \cdots + 2u + 1 \\ u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{16} - u^{15} + \cdots - u + 1 \\ -u^6 - 2u^4 - u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{13} + u^{12} + \cdots + 2u + 1 \\ -u^7 - u^5 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{16} - u^{15} + \cdots - u^3 + 1 \\ -u^8 - 2u^6 - 2u^4 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3 \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^8 + u^6 + u^4 + 1 \\ u^8 + 2u^6 + 2u^4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^8 + u^6 + u^4 + 1 \\ u^8 + 2u^6 + 2u^4 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{16} - 6u^{15} - 18u^{14} - 22u^{13} - 40u^{12} - 46u^{11} - 56u^{10} - 54u^9 - 54u^8 - 44u^7 - 44u^6 - 28u^5 - 26u^4 - 22u^3 - 12u^2 - 10u - 8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$u^{17} + u^{16} + \cdots + u + 1$
c_2, c_{11}	$u^{17} + 9u^{16} + \cdots - 3u - 1$
c_3, c_8	$u^{17} - 5u^{16} + \cdots - 8u + 4$
c_5, c_9	$u^{17} - u^{16} + \cdots - u + 2$
c_7	$u^{17} + 5u^{16} + \cdots + 56u^2 + 16$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$y^{17} + 9y^{16} + \cdots - 3y - 1$
c_2, c_{11}	$y^{17} + y^{16} + \cdots + 5y - 1$
c_3, c_8	$y^{17} - 5y^{16} + \cdots - 56y^2 - 16$
c_5, c_9	$y^{17} - 7y^{16} + \cdots + y - 4$
c_7	$y^{17} + 7y^{16} + \cdots - 1792y - 256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.364031 + 1.042940I$ $a = -2.23442 + 1.04009I$ $b = -0.775626 + 0.323135I$	$-3.22508 + 4.12748I$	$-8.88917 - 5.53460I$
$u = 0.364031 - 1.042940I$ $a = -2.23442 - 1.04009I$ $b = -0.775626 - 0.323135I$	$-3.22508 - 4.12748I$	$-8.88917 + 5.53460I$
$u = -0.783861 + 0.397949I$ $a = -0.183240 - 0.678603I$ $b = -0.893091 + 1.068470I$	$2.83523 + 5.37992I$	$0.58832 - 3.10862I$
$u = -0.783861 - 0.397949I$ $a = -0.183240 + 0.678603I$ $b = -0.893091 - 1.068470I$	$2.83523 - 5.37992I$	$0.58832 + 3.10862I$
$u = -0.228107 + 1.129710I$ $a = 1.006760 + 0.533745I$ $b = 0.633379 - 0.135717I$	$-6.66052 + 0.33441I$	$-12.27972 + 0.14725I$
$u = -0.228107 - 1.129710I$ $a = 1.006760 - 0.533745I$ $b = 0.633379 + 0.135717I$	$-6.66052 - 0.33441I$	$-12.27972 - 0.14725I$
$u = 0.701375 + 0.463501I$ $a = 0.486517 - 0.757070I$ $b = 0.594363 + 1.047950I$	$3.82884 + 0.36538I$	$2.43059 - 2.03934I$
$u = 0.701375 - 0.463501I$ $a = 0.486517 + 0.757070I$ $b = 0.594363 - 1.047950I$	$3.82884 - 0.36538I$	$2.43059 + 2.03934I$
$u = 0.572214 + 1.088100I$ $a = -2.74846 - 1.45002I$ $b = -1.27288 + 0.86865I$	$0.06925 + 9.48553I$	$-4.16847 - 7.65622I$
$u = 0.572214 - 1.088100I$ $a = -2.74846 + 1.45002I$ $b = -1.27288 - 0.86865I$	$0.06925 - 9.48553I$	$-4.16847 + 7.65622I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.451021+1.148490I$ $a=\ 2.21759-0.36414I$ $b=\ 1.241950+0.334481I$	$-8.03366-8.05681I$	$-11.19202+7.52466I$
$u=-0.451021-1.148490I$ $a=\ 2.21759+0.36414I$ $b=\ 1.241950-0.334481I$	$-8.03366+8.05681I$	$-11.19202-7.52466I$
$u=-0.601205+1.123530I$ $a=\ 2.35978-1.49796I$ $b=\ 1.45822+0.92357I$	$-1.4738-15.8440I$	$-5.36436+10.86165I$
$u=-0.601205-1.123530I$ $a=\ 2.35978+1.49796I$ $b=\ 1.45822-0.92357I$	$-1.4738+15.8440I$	$-5.36436-10.86165I$
$u=\ 0.237306+0.655876I$ $a=\ 0.689506+1.196060I$ $b=-0.055578+0.484541I$	$-0.38141+1.45461I$	$-4.03529-4.09951I$
$u=\ 0.237306-0.655876I$ $a=\ 0.689506-1.196060I$ $b=-0.055578-0.484541I$	$-0.38141-1.45461I$	$-4.03529+4.09951I$
$u=-0.621462$ $a=-0.188062$ $b=-0.861480$	-1.88169	-4.17970

II.

$$\boldsymbol{I_2^u = \langle -u^{53}-2u^{52}+\cdots+b-1,\ -u^{52}-2u^{51}+\cdots+a-3,\ u^{54}+2u^{53}+\cdots+u+1\rangle}$$

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix} u^{52}+2u^{51}+\cdots+3u+3 \\ u^{53}+2u^{52}+\cdots+3u+1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^{52}+u^{51}+\cdots+u+3 \\ u^{53}+2u^{52}+\cdots+2u+1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u^3+u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^3 \\ u^5+u^3+u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{53}+u^{52}+\cdots+3u+4 \\ u^{53}+4u^{52}+\cdots+4u+3 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2u^{53}-u^{52}+\cdots+u+3 \\ u^{53}+4u^{52}+\cdots+3u+3 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^3 \\ u^3+u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^8+u^6+u^4+1 \\ u^8+2u^6+2u^4 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^8+u^6+u^4+1 \\ u^8+2u^6+2u^4 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -5u^{53}-8u^{52}+\cdots-15u-5$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$u^{54} + 2u^{53} + \cdots + u + 1$
c_2, c_{11}	$u^{54} + 24u^{53} + \cdots + 5u + 1$
c_3, c_8	$(u^{27} + 2u^{26} + \cdots + 3u + 2)^2$
c_5, c_9	$u^{54} - 2u^{53} + \cdots - 145u + 17$
c_7	$(u^{27} + 10u^{26} + \cdots + 25u + 4)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$y^{54} + 24y^{53} + \cdots + 5y + 1$
c_2, c_{11}	$y^{54} + 12y^{53} + \cdots + 53y + 1$
c_3, c_8	$(y^{27} - 10y^{26} + \cdots + 25y - 4)^2$
c_5, c_9	$y^{54} + 38y^{52} + \cdots - 4637y + 289$
c_7	$(y^{27} + 14y^{26} + \cdots - 95y - 16)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.349223+0.956682I$ $a=-1.49999-0.14653I$ $b=-0.583952-1.234060I$	$-1.01872-3.73043I$	$-9.17515+3.57270I$
$u=-0.349223-0.956682I$ $a=-1.49999+0.14653I$ $b=-0.583952+1.234060I$	$-1.01872+3.73043I$	$-9.17515-3.57270I$
$u=\ \ 0.748850+0.603065I$ $a=\ \ 0.217497+0.802869I$ $b=\ \ 1.22625-0.91458I$	$1.90449+7.58447I$	$-1.82775-8.11380I$
$u=\ \ 0.748850-0.603065I$ $a=\ \ 0.217497-0.802869I$ $b=\ \ 1.22625+0.91458I$	$1.90449-7.58447I$	$-1.82775+8.11380I$
$u=-0.239448+0.923216I$ $a=\ \ 0.896353+0.856395I$ $b=-0.055765+1.171120I$	$-0.538859+1.164110I$	$-6.09920-3.89817I$
$u=-0.239448-0.923216I$ $a=\ \ 0.896353-0.856395I$ $b=-0.055765-1.171120I$	$-0.538859-1.164110I$	$-6.09920+3.89817I$
$u=\ \ 0.227574+1.026590I$ $a=-2.62355-1.10867I$ $b=-1.066100-0.705684I$	$-2.23363-2.56106I$	$-7.40701+2.25118I$
$u=\ \ 0.227574-1.026590I$ $a=-2.62355+1.10867I$ $b=-1.066100+0.705684I$	$-2.23363+2.56106I$	$-7.40701-2.25118I$
$u=\ \ 0.622213+0.701611I$ $a=-0.125307+0.872732I$ $b=\ \ 0.359087+0.295131I$	$-0.538859+1.164110I$	$-6.09920-3.89817I$
$u=\ \ 0.622213-0.701611I$ $a=-0.125307-0.872732I$ $b=\ \ 0.359087-0.295131I$	$-0.538859-1.164110I$	$-6.09920+3.89817I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.725685 + 0.567873I$ $a = -0.020644 - 0.712194I$ $b = -0.639257 + 1.031450I$	$3.74831 + 2.63920I$	$1.74271 - 3.37289I$
$u = 0.725685 - 0.567873I$ $a = -0.020644 + 0.712194I$ $b = -0.639257 - 1.031450I$	$3.74831 - 2.63920I$	$1.74271 + 3.37289I$
$u = 0.626309 + 0.880271I$ $a = 0.459060 - 0.105789I$ $b = 0.567055 - 0.431109I$	$-1.01872 + 3.73043I$	$-9.17515 - 3.57270I$
$u = 0.626309 - 0.880271I$ $a = 0.459060 + 0.105789I$ $b = 0.567055 + 0.431109I$	$-1.01872 - 3.73043I$	$-9.17515 + 3.57270I$
$u = 0.312561 + 0.860769I$ $a = 1.090150 + 0.590870I$ $b = 0.301084 + 0.372364I$	$-0.36265 + 1.51655I$	$-2.55288 - 3.58996I$
$u = 0.312561 - 0.860769I$ $a = 1.090150 - 0.590870I$ $b = 0.301084 - 0.372364I$	$-0.36265 - 1.51655I$	$-2.55288 + 3.58996I$
$u = -0.809979 + 0.388169I$ $a = 0.387729 + 0.682238I$ $b = 1.40169 - 0.91902I$	$0.71725 + 10.56860I$	$-2.49476 - 7.09212I$
$u = -0.809979 - 0.388169I$ $a = 0.387729 - 0.682238I$ $b = 1.40169 + 0.91902I$	$0.71725 - 10.56860I$	$-2.49476 + 7.09212I$
$u = -0.155842 + 1.113420I$ $a = -1.28841 + 0.90918I$ $b = -0.921991 + 0.867194I$	$-2.12405 + 3.04478I$	$-5.96953 + 0.I$
$u = -0.155842 - 1.113420I$ $a = -1.28841 - 0.90918I$ $b = -0.921991 - 0.867194I$	$-2.12405 - 3.04478I$	$-5.96953 + 0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.708611 + 0.447215I$ $a = 0.247473 - 0.847336I$ $b = 0.405789 + 1.281900I$	$3.74831 + 2.63920I$	$1.74271 - 3.37289I$
$u = -0.708611 - 0.447215I$ $a = 0.247473 + 0.847336I$ $b = 0.405789 - 1.281900I$	$3.74831 - 2.63920I$	$1.74271 + 3.37289I$
$u = -0.151780 + 1.152760I$ $a = 2.17540 - 0.88692I$ $b = 1.38571 - 0.79831I$	$-4.41486 + 8.03203I$	0
$u = -0.151780 - 1.152760I$ $a = 2.17540 + 0.88692I$ $b = 1.38571 + 0.79831I$	$-4.41486 - 8.03203I$	0
$u = 0.511133 + 1.056250I$ $a = -0.62752 - 1.87534I$ $b = -0.480147 - 0.104188I$	$-2.23363 + 2.56106I$	0
$u = 0.511133 - 1.056250I$ $a = -0.62752 + 1.87534I$ $b = -0.480147 + 0.104188I$	$-2.23363 - 2.56106I$	0
$u = -0.751654 + 0.335841I$ $a = 0.096897 + 0.981834I$ $b = 0.419969 - 0.185771I$	$-2.12405 + 3.04478I$	$-5.96953 - 2.28005I$
$u = -0.751654 - 0.335841I$ $a = 0.096897 - 0.981834I$ $b = 0.419969 + 0.185771I$	$-2.12405 - 3.04478I$	$-5.96953 + 2.28005I$
$u = -0.664646 + 0.482177I$ $a = -0.369465 + 1.094390I$ $b = -1.04005 - 1.12862I$	$2.43288 - 2.48370I$	$-0.17393 + 1.70527I$
$u = -0.664646 - 0.482177I$ $a = -0.369465 - 1.094390I$ $b = -1.04005 + 1.12862I$	$2.43288 + 2.48370I$	$-0.17393 - 1.70527I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.709728 + 0.409816I$ $a = -0.797906 + 0.871398I$ $b = -1.19348 - 0.92713I$	$2.05766 - 4.56252I$	$-0.66909 + 3.14948I$
$u = 0.709728 - 0.409816I$ $a = -0.797906 - 0.871398I$ $b = -1.19348 + 0.92713I$	$2.05766 + 4.56252I$	$-0.66909 - 3.14948I$
$u = 0.645440 + 0.992497I$ $a = -0.430435 + 1.133340I$ $b = 1.13054 + 0.89132I$	$0.74861 - 2.30237I$	0
$u = 0.645440 - 0.992497I$ $a = -0.430435 - 1.133340I$ $b = 1.13054 - 0.89132I$	$0.74861 + 2.30237I$	0
$u = 0.616080 + 1.011230I$ $a = 1.033840 - 0.596746I$ $b = -0.494676 - 1.009080I$	$2.43288 + 2.48370I$	0
$u = 0.616080 - 1.011230I$ $a = 1.033840 + 0.596746I$ $b = -0.494676 + 1.009080I$	$2.43288 - 2.48370I$	0
$u = -0.425486 + 1.115580I$ $a = -1.66016 + 0.73542I$ $b = -1.086700 - 0.177414I$	$-4.91302 - 3.80494I$	0
$u = -0.425486 - 1.115580I$ $a = -1.66016 - 0.73542I$ $b = -1.086700 + 0.177414I$	$-4.91302 + 3.80494I$	0
$u = -0.564050 + 1.052370I$ $a = 0.555172 + 1.140900I$ $b = -0.99305 + 1.25524I$	$0.74861 - 2.30237I$	0
$u = -0.564050 - 1.052370I$ $a = 0.555172 - 1.140900I$ $b = -0.99305 - 1.25524I$	$0.74861 + 2.30237I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.578440 + 1.064250I$ $a = 2.17032 + 0.76831I$ $b = 0.709634 - 0.960278I$	$2.05766 + 4.56252I$	0
$u = 0.578440 - 1.064250I$ $a = 2.17032 - 0.76831I$ $b = 0.709634 + 0.960278I$	$2.05766 - 4.56252I$	0
$u = -0.387985 + 1.148030I$ $a = 1.72235 - 1.44568I$ $b = 1.087670 - 0.153410I$	-8.45612	0
$u = -0.387985 - 1.148030I$ $a = 1.72235 + 1.44568I$ $b = 1.087670 + 0.153410I$	-8.45612	0
$u = -0.578445 + 1.073080I$ $a = -1.171830 - 0.616273I$ $b = 0.35175 - 1.39829I$	$1.90449 - 7.58447I$	0
$u = -0.578445 - 1.073080I$ $a = -1.171830 + 0.616273I$ $b = 0.35175 + 1.39829I$	$1.90449 + 7.58447I$	0
$u = -0.567778 + 1.119960I$ $a = 0.778236 - 1.171470I$ $b = 0.449802 + 0.299411I$	$-4.41486 - 8.03203I$	0
$u = -0.567778 - 1.119960I$ $a = 0.778236 + 1.171470I$ $b = 0.449802 - 0.299411I$	$-4.41486 + 8.03203I$	0
$u = -0.595230 + 1.111930I$ $a = -2.04660 + 0.90398I$ $b = -0.97525 - 1.09368I$	$0.71725 - 10.56860I$	0
$u = -0.595230 - 1.111930I$ $a = -2.04660 - 0.90398I$ $b = -0.97525 + 1.09368I$	$0.71725 + 10.56860I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.721512 + 0.069386I$ $a = 0.646399 - 0.423989I$ $b = 1.086050 - 0.333117I$	$-4.91302 + 3.80494I$	$-7.92053 - 4.08050I$
$u = -0.721512 - 0.069386I$ $a = 0.646399 + 0.423989I$ $b = 1.086050 + 0.333117I$	$-4.91302 - 3.80494I$	$-7.92053 + 4.08050I$
$u = 0.347654 + 0.291444I$ $a = 0.18494 + 1.84096I$ $b = -0.351655 + 0.475282I$	$-0.36265 + 1.51655I$	$-2.55288 - 3.58996I$
$u = 0.347654 - 0.291444I$ $a = 0.18494 - 1.84096I$ $b = -0.351655 - 0.475282I$	$-0.36265 - 1.51655I$	$-2.55288 + 3.58996I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 8u + 4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.500000 + 0.866025I$ $a = -1.00000$ $b = -0.500000 - 0.866025I$	$-4.05977I$	$0. + 6.92820I$
$u = -0.500000 - 0.866025I$ $a = -1.00000$ $b = -0.500000 + 0.866025I$	$4.05977I$	$0. - 6.92820I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.500000 + 0.866025I$ $a = \ \ 0.500000 + 0.866025I$ $b = -0.500000 + 0.866025I$	0	-3.00000
$u = -0.500000 - 0.866025I$ $a = \ \ 0.500000 - 0.866025I$ $b = -0.500000 - 0.866025I$	0	-3.00000

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$((u^2+u+1)^2)(u^{17}+u^{16}+\cdots+u+1)(u^{54}+2u^{53}+\cdots+u+1)$
c_2, c_{11}	$((u^2+u+1)^2)(u^{17}+9u^{16}+\cdots-3u-1)(u^{54}+24u^{53}+\cdots+5u+1)$
c_3, c_8	$u^4(u^{17}-5u^{16}+\cdots-8u+4)(u^{27}+2u^{26}+\cdots+3u+2)^2$
c_4, c_{10}	$((u^2-u+1)^2)(u^{17}+u^{16}+\cdots+u+1)(u^{54}+2u^{53}+\cdots+u+1)$
c_5, c_9	$((u^2+u+1)^2)(u^{17}-u^{16}+\cdots-u+2)(u^{54}-2u^{53}+\cdots-145u+17)$
c_7	$u^4(u^{17}+5u^{16}+\cdots+56u^2+16)(u^{27}+10u^{26}+\cdots+25u+4)^2$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$((y^2+y+1)^2)(y^{17}+9y^{16}+\cdots-3y-1)(y^{54}+24y^{53}+\cdots+5y+1)$
c_2, c_{11}	$((y^2+y+1)^2)(y^{17}+y^{16}+\cdots+5y-1)(y^{54}+12y^{53}+\cdots+53y+1)$
c_3, c_8	$y^4(y^{17}-5y^{16}+\cdots-56y^2-16)(y^{27}-10y^{26}+\cdots+25y-4)^2$
c_5, c_9	$((y^2+y+1)^2)(y^{17}-7y^{16}+\cdots+y-4)$ $\cdot(y^{54}+38y^{52}+\cdots-4637y+289)$
c_7	$y^4(y^{17}+7y^{16}+\cdots-1792y-256)(y^{27}+14y^{26}+\cdots-95y-16)^2$