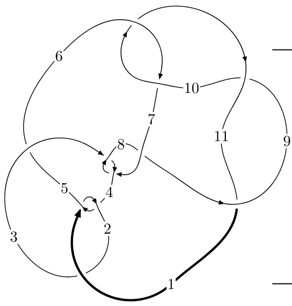
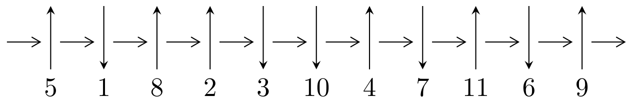
$11a_5$ ($K11a_5$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{55} + 2u^{54} + \cdots + 2b - 2,\ -3u^{55} - 9u^{54} + \cdots + 2a - 1,\ u^{56} + 3u^{55} + \cdots + 2u + 1\rangle$$
$$I_2^u = \langle b + u,\ a - u + 1,\ u^2 - u + 1\rangle$$
$$I_3^u = \langle -u^3 + b - u,\ u^3 + a,\ u^{10} + 2u^8 + 3u^6 - u^5 + 2u^4 - u^3 + u^2 - u + 1\rangle$$
$$I_4^u = \langle b - u + 1,\ a - 1,\ u^2 - u + 1\rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 70 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.

$$I^u_1 = \langle u^{55}+2u^{54}+\cdots+2b-2,\ -3u^{55}-9u^{54}+\cdots+2a-1,\ u^{56}+3u^{55}+\cdots+2u+1\rangle$$

(i) Arc colorings

$$a_6 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}\frac{3}{2}u^{55}+\frac{9}{2}u^{54}+\cdots+3u+\frac{1}{2}\\-\frac{1}{2}u^{55}-u^{54}+\cdots+\frac{1}{2}u+1\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-\frac{1}{2}u^{55}-\frac{3}{2}u^{54}+\cdots+2u-\frac{1}{2}\\\frac{1}{2}u^{55}+u^{54}+\cdots-\frac{7}{2}u^2+\frac{3}{2}u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-u^3\\u^3+u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^5-u\\u^5+u^3+u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}u^{55}+\frac{3}{2}u^{54}+\cdots+\frac{1}{2}u-\frac{1}{2}\\\frac{3}{2}u^{55}+5u^{54}+\cdots+\frac{9}{2}u+3\end{pmatrix}$$
$$a_8 = \begin{pmatrix}u^5+u\\u^7+u^5+2u^3+u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}\frac{3}{2}u^{55}+\frac{13}{2}u^{54}+\cdots+4u+\frac{3}{2}\\-\frac{3}{2}u^{55}-5u^{54}+\cdots-\frac{3}{2}u-1\end{pmatrix}$$
$$a_4 = \begin{pmatrix}\frac{3}{2}u^{55}+\frac{13}{2}u^{54}+\cdots+4u+\frac{3}{2}\\-\frac{3}{2}u^{55}-5u^{54}+\cdots-\frac{3}{2}u-1\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{3}{2}u^{55}+6u^{54}+\cdots+\frac{21}{2}u+10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{56} + 3u^{55} + \cdots + 4u + 1$
c_2	$u^{56} + 27u^{55} + \cdots + 12u + 1$
c_3, c_7	$u^{56} + 4u^{55} + \cdots + 48u + 16$
c_5	$u^{56} - 3u^{55} + \cdots - 228u + 73$
c_6, c_{10}	$u^{56} - 3u^{55} + \cdots - 2u + 1$
c_8	$u^{56} + 20u^{55} + \cdots + 1920u + 256$
c_9, c_{11}	$u^{56} - 19u^{55} + \cdots - 12u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{56} + 27y^{55} + \cdots + 12y + 1$
c_2	$y^{56} + 7y^{55} + \cdots + 20y + 1$
c_3, c_7	$y^{56} + 20y^{55} + \cdots + 1920y + 256$
c_5	$y^{56} - 13y^{55} + \cdots - 28332y + 5329$
c_6, c_{10}	$y^{56} + 19y^{55} + \cdots + 12y + 1$
c_8	$y^{56} + 20y^{55} + \cdots + 1892352y + 65536$
c_9, c_{11}	$y^{56} + 39y^{55} + \cdots + 68y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.741413 + 0.672947I$ $a = 1.020640 + 0.124604I$ $b = 1.190130 - 0.747746I$	$-1.83234 + 3.68509I$	$-1.91791 - 2.59302I$
$u = 0.741413 - 0.672947I$ $a = 1.020640 - 0.124604I$ $b = 1.190130 + 0.747746I$	$-1.83234 - 3.68509I$	$-1.91791 + 2.59302I$
$u = -0.039032 + 1.025260I$ $a = -0.99762 + 2.58381I$ $b = 1.10990 - 1.02405I$	$3.63474 + 3.50294I$	$5.73768 - 2.63577I$
$u = -0.039032 - 1.025260I$ $a = -0.99762 - 2.58381I$ $b = 1.10990 + 1.02405I$	$3.63474 - 3.50294I$	$5.73768 + 2.63577I$
$u = -0.806293 + 0.635602I$ $a = 0.090255 - 0.375739I$ $b = 1.002180 + 0.966962I$	$-1.57743 - 4.56872I$	$-0.30810 + 2.29944I$
$u = -0.806293 - 0.635602I$ $a = 0.090255 + 0.375739I$ $b = 1.002180 - 0.966962I$	$-1.57743 + 4.56872I$	$-0.30810 - 2.29944I$
$u = -0.648386 + 0.715887I$ $a = 0.630315 + 1.140640I$ $b = 0.74941 - 1.25701I$	$-0.80063 + 3.06781I$	$-2.68598 - 1.92704I$
$u = -0.648386 - 0.715887I$ $a = 0.630315 - 1.140640I$ $b = 0.74941 + 1.25701I$	$-0.80063 - 3.06781I$	$-2.68598 + 1.92704I$
$u = 0.008056 + 1.044520I$ $a = 0.34660 - 2.52615I$ $b = -0.490688 + 1.158840I$	$5.16329 - 1.49959I$	$8.12934 + 2.79503I$
$u = 0.008056 - 1.044520I$ $a = 0.34660 + 2.52615I$ $b = -0.490688 - 1.158840I$	$5.16329 + 1.49959I$	$8.12934 - 2.79503I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.834318 + 0.632612I$ $a = -0.315424 + 0.311362I$ $b = -1.45314 - 0.83959I$	$-3.88812 - 9.72427I$	$-3.19194 + 6.02733I$
$u = -0.834318 - 0.632612I$ $a = -0.315424 - 0.311362I$ $b = -1.45314 + 0.83959I$	$-3.88812 + 9.72427I$	$-3.19194 - 6.02733I$
$u = 0.706240 + 0.782080I$ $a = 0.903733 + 0.855262I$ $b = 0.714932 + 0.213648I$	$-3.30596 - 3.25886I$	$-4.12694 + 4.42129I$
$u = 0.706240 - 0.782080I$ $a = 0.903733 - 0.855262I$ $b = 0.714932 - 0.213648I$	$-3.30596 + 3.25886I$	$-4.12694 - 4.42129I$
$u = -0.809142 + 0.690374I$ $a = -0.132159 + 0.772752I$ $b = -0.590956 - 0.245751I$	$-6.42626 - 1.81700I$	$-6.48917 + 0.44041I$
$u = -0.809142 - 0.690374I$ $a = -0.132159 - 0.772752I$ $b = -0.590956 + 0.245751I$	$-6.42626 + 1.81700I$	$-6.48917 - 0.44041I$
$u = 0.665776 + 0.647788I$ $a = -0.675953 - 0.217460I$ $b = -0.562560 + 0.722572I$	$0.195314 - 0.858584I$	$1.89444 + 2.20489I$
$u = 0.665776 - 0.647788I$ $a = -0.675953 + 0.217460I$ $b = -0.562560 - 0.722572I$	$0.195314 + 0.858584I$	$1.89444 - 2.20489I$
$u = 0.086309 + 1.094900I$ $a = -0.93440 - 2.23738I$ $b = 0.764499 + 1.035920I$	$4.65334 - 3.96415I$	$6.86507 + 3.56024I$
$u = 0.086309 - 1.094900I$ $a = -0.93440 + 2.23738I$ $b = 0.764499 - 1.035920I$	$4.65334 + 3.96415I$	$6.86507 - 3.56024I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.421784 + 1.014200I$ $a = 0.369064 + 0.535358I$ $b = -0.703989 - 0.419272I$	$-1.28541 - 4.22699I$	$-4.01501 + 5.50631I$
$u = 0.421784 - 1.014200I$ $a = 0.369064 - 0.535358I$ $b = -0.703989 + 0.419272I$	$-1.28541 + 4.22699I$	$-4.01501 - 5.50631I$
$u = 0.108576 + 1.120700I$ $a = 1.47683 + 2.12600I$ $b = -1.31016 - 0.90819I$	$2.65983 - 9.01317I$	$3.42509 + 7.90773I$
$u = 0.108576 - 1.120700I$ $a = 1.47683 - 2.12600I$ $b = -1.31016 + 0.90819I$	$2.65983 + 9.01317I$	$3.42509 - 7.90773I$
$u = -0.756492 + 0.867475I$ $a = 0.290517 + 0.800213I$ $b = 1.159040 - 0.076045I$	$-5.43275 + 2.85613I$	0
$u = -0.756492 - 0.867475I$ $a = 0.290517 - 0.800213I$ $b = 1.159040 + 0.076045I$	$-5.43275 - 2.85613I$	0
$u = 0.681299 + 0.928530I$ $a = 0.26406 - 1.76753I$ $b = 0.591539 - 0.113186I$	$-2.85461 - 2.07470I$	0
$u = 0.681299 - 0.928530I$ $a = 0.26406 + 1.76753I$ $b = 0.591539 + 0.113186I$	$-2.85461 + 2.07470I$	0
$u = 0.369086 + 0.757930I$ $a = -0.437703 - 0.094511I$ $b = 0.097678 + 0.366408I$	$0.21918 - 1.44616I$	$1.49529 + 5.27661I$
$u = 0.369086 - 0.757930I$ $a = -0.437703 + 0.094511I$ $b = 0.097678 - 0.366408I$	$0.21918 + 1.44616I$	$1.49529 - 5.27661I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.795058 + 0.843444I$ $a = -0.417311 - 1.090260I$ $b = -1.180470 - 0.171813I$	$-8.93548 - 1.17781I$	0
$u = -0.795058 - 0.843444I$ $a = -0.417311 + 1.090260I$ $b = -1.180470 + 0.171813I$	$-8.93548 + 1.17781I$	0
$u = 0.577211 + 1.017300I$ $a = -1.49312 + 0.43889I$ $b = 0.429824 - 0.916159I$	$1.69732 - 2.56463I$	0
$u = 0.577211 - 1.017300I$ $a = -1.49312 - 0.43889I$ $b = 0.429824 + 0.916159I$	$1.69732 + 2.56463I$	0
$u = 0.655505 + 0.994545I$ $a = -1.32569 + 1.66014I$ $b = -0.714267 - 0.869296I$	$1.21543 - 4.31655I$	0
$u = 0.655505 - 0.994545I$ $a = -1.32569 - 1.66014I$ $b = -0.714267 + 0.869296I$	$1.21543 + 4.31655I$	0
$u = -0.778721 + 0.902615I$ $a = -0.629642 - 0.554140I$ $b = -1.246570 + 0.251884I$	$-8.75518 + 7.07324I$	0
$u = -0.778721 - 0.902615I$ $a = -0.629642 + 0.554140I$ $b = -1.246570 - 0.251884I$	$-8.75518 - 7.07324I$	0
$u = -0.665461 + 0.998554I$ $a = 1.47958 + 0.98153I$ $b = -0.27691 - 1.41551I$	$1.02494 + 7.31006I$	0
$u = -0.665461 - 0.998554I$ $a = 1.47958 - 0.98153I$ $b = -0.27691 + 1.41551I$	$1.02494 - 7.31006I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.726835 + 0.312138I$ $a = -0.281181 + 0.377427I$ $b = -1.23922 - 0.75437I$	$-2.11906 - 6.68125I$	$-3.63435 + 7.13506I$
$u = 0.726835 - 0.312138I$ $a = -0.281181 - 0.377427I$ $b = -1.23922 + 0.75437I$	$-2.11906 + 6.68125I$	$-3.63435 - 7.13506I$
$u = 0.684722 + 0.999142I$ $a = 1.33070 - 2.19241I$ $b = 1.27007 + 0.81194I$	$-0.85456 - 9.13704I$	0
$u = 0.684722 - 0.999142I$ $a = 1.33070 + 2.19241I$ $b = 1.27007 - 0.81194I$	$-0.85456 + 9.13704I$	0
$u = -0.719216 + 1.009090I$ $a = -0.27108 - 1.52502I$ $b = -0.514131 + 0.310292I$	$-5.45723 + 7.56306I$	0
$u = -0.719216 - 1.009090I$ $a = -0.27108 + 1.52502I$ $b = -0.514131 - 0.310292I$	$-5.45723 - 7.56306I$	0
$u = -0.700131 + 1.033130I$ $a = 0.87411 + 2.07026I$ $b = 1.01430 - 1.05715I$	$-0.38077 + 10.23850I$	0
$u = -0.700131 - 1.033130I$ $a = 0.87411 - 2.07026I$ $b = 1.01430 + 1.05715I$	$-0.38077 - 10.23850I$	0
$u = -0.709774 + 1.044140I$ $a = -0.66819 - 2.43467I$ $b = -1.47739 + 0.89292I$	$-2.6410 + 15.5012I$	0
$u = -0.709774 - 1.044140I$ $a = -0.66819 + 2.43467I$ $b = -1.47739 - 0.89292I$	$-2.6410 - 15.5012I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.654147+0.158059I$ $a=-0.118708+0.847351I$ $b=-0.691669+0.136107I$	$-3.78376+0.44619I$	$-7.44405+0.06553I$
$u = 0.654147-0.158059I$ $a=-0.118708-0.847351I$ $b=-0.691669-0.136107I$	$-3.78376-0.44619I$	$-7.44405-0.06553I$
$u=-0.027758+0.510281I$ $a=-1.52541-0.24229I$ $b= 0.103096+0.749181I$	$0.62233-1.37834I$	$4.03273+4.63788I$
$u=-0.027758-0.510281I$ $a=-1.52541+0.24229I$ $b= 0.103096-0.749181I$	$0.62233+1.37834I$	$4.03273-4.63788I$
$u=-0.297177+0.240208I$ $a= 2.14718+0.27245I$ $b= 0.755501-0.780989I$	$-0.23364+2.60586I$	$1.42060-2.60390I$
$u=-0.297177-0.240208I$ $a= 2.14718-0.27245I$ $b= 0.755501+0.780989I$	$-0.23364-2.60586I$	$1.42060+2.60390I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 8u - 1$

(iv) u-Polynomials at the component

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

(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_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.500000 + 0.866025I$ $a = -0.500000 + 0.866025I$ $b = -0.500000 - 0.866025I$	$-4.05977I$	$3.00000 + 6.92820I$
$u = 0.500000 - 0.866025I$ $a = -0.500000 - 0.866025I$ $b = -0.500000 + 0.866025I$	$4.05977I$	$3.00000 - 6.92820I$

III. $\boldsymbol{I^u_3 = \langle -u^3 + b - u,\ u^3 + a,\ u^{10} + 2u^8 + 3u^6 - u^5 + 2u^4 - u^3 + u^2 - u + 1\rangle}$

(i) Arc colorings

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

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

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

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

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

$$a_5 = \begin{pmatrix} u^6 + u^4 + 1 \\ -u^6 - 2u^4 - u^2 \end{pmatrix}$$

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

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

$$a_2 = \begin{pmatrix} u^7 \\ -u^7 - u^5 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^5 + u \\ u^7 + u^5 + 2u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^8 - u^6 - u^4 - 1 \\ u^8 + 2u^6 + 2u^4 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^8 - u^6 - u^4 - 1 \\ u^8 + 2u^6 + 2u^4 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^5 + 4u^3 + 4u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$u^{10} + 2u^8 + 3u^6 + u^5 + 2u^4 + u^3 + u^2 + u + 1$
c_2	$u^{10} + 4u^9 + 10u^8 + 16u^7 + 19u^6 + 17u^5 + 12u^4 + 7u^3 + 3u^2 + u + 1$
c_3, c_7	$(u^2 - u + 1)^5$
c_5	$u^{10} + 2u^8 - 2u^7 + 5u^6 - 3u^5 + 8u^4 + u^3 + 5u^2 - 5u + 1$
c_8	$(u^2 + u + 1)^5$
c_9, c_{11}	$u^{10} - 4u^9 + 10u^8 - 16u^7 + 19u^6 - 17u^5 + 12u^4 - 7u^3 + 3u^2 - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$y^{10} + 4y^9 + 10y^8 + 16y^7 + 19y^6 + 17y^5 + 12y^4 + 7y^3 + 3y^2 + y + 1$
c_2, c_9, c_{11}	$y^{10} + 4y^9 + 10y^8 + 12y^7 + 7y^6 - 3y^5 + 8y^4 + 27y^3 + 19y^2 + 5y + 1$
c_3, c_7, c_8	$(y^2 + y + 1)^5$
c_5	$y^{10} + 4y^9 + \cdots - 15y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.163836 + 1.020860I$ $a = 0.507833 + 0.981695I$ $b = -0.343996 + 0.039167I$	$-2.02988I$	$0. + 3.46410I$
$u = 0.163836 - 1.020860I$ $a = 0.507833 - 0.981695I$ $b = -0.343996 - 0.039167I$	$2.02988I$	$0. - 3.46410I$
$u = -0.697277 + 0.652229I$ $a = -0.550857 - 0.673872I$ $b = -0.146420 + 1.326100I$	$-2.02988I$	$0. + 3.46410I$
$u = -0.697277 - 0.652229I$ $a = -0.550857 + 0.673872I$ $b = -0.146420 - 1.326100I$	$2.02988I$	$0. - 3.46410I$
$u = -0.650894 + 0.972612I$ $a = -1.57143 - 0.31611I$ $b = 0.92053 + 1.28873I$	$2.02988I$	$0. - 3.46410I$
$u = -0.650894 - 0.972612I$ $a = -1.57143 + 0.31611I$ $b = 0.92053 - 1.28873I$	$-2.02988I$	$0. + 3.46410I$
$u = 0.542795 + 1.051680I$ $a = 1.64111 + 0.23362I$ $b = -1.098320 + 0.818054I$	$2.02988I$	$0. - 3.46410I$
$u = 0.542795 - 1.051680I$ $a = 1.64111 - 0.23362I$ $b = -1.098320 - 0.818054I$	$-2.02988I$	$0. + 3.46410I$
$u = 0.641539 + 0.351198I$ $a = -0.026658 - 0.390314I$ $b = 0.668197 + 0.741512I$	$-2.02988I$	$0. + 3.46410I$
$u = 0.641539 - 0.351198I$ $a = -0.026658 + 0.390314I$ $b = 0.668197 - 0.741512I$	$2.02988I$	$0. - 3.46410I$

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

(i) Arc colorings

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

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

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

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

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

$$a_5 = \begin{pmatrix} -u+2 \\ u \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

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

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

$$a_4 = \begin{pmatrix} 1 \\ u-1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

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

(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	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.500000 + 0.866025I$ $a = \quad 1.00000$ $b = -0.500000 + 0.866025I$	0	0
$u = \quad 0.500000 - 0.866025I$ $a = \quad 1.00000$ $b = -0.500000 - 0.866025I$	0	0

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^2+u+1)^2(u^{10}+2u^8+3u^6+u^5+2u^4+u^3+u^2+u+1)$ $\cdot(u^{56}+3u^{55}+\cdots+4u+1)$
c_2	$(u^2+u+1)^2$ $\cdot(u^{10}+4u^9+10u^8+16u^7+19u^6+17u^5+12u^4+7u^3+3u^2+u+1)$ $\cdot(u^{56}+27u^{55}+\cdots+12u+1)$
c_3, c_7	$u^4(u^2-u+1)^5(u^{56}+4u^{55}+\cdots+48u+16)$
c_4	$(u^2-u+1)^2(u^{10}+2u^8+3u^6+u^5+2u^4+u^3+u^2+u+1)$ $\cdot(u^{56}+3u^{55}+\cdots+4u+1)$
c_5	$(u^2+u+1)^2(u^{10}+2u^8-2u^7+5u^6-3u^5+8u^4+u^3+5u^2-5u+1)$ $\cdot(u^{56}-3u^{55}+\cdots-228u+73)$
c_6	$(u^2-u+1)^2(u^{10}+2u^8+3u^6+u^5+2u^4+u^3+u^2+u+1)$ $\cdot(u^{56}-3u^{55}+\cdots-2u+1)$
c_8	$u^4(u^2+u+1)^5(u^{56}+20u^{55}+\cdots+1920u+256)$
c_9	$(u^2+u+1)^2$ $\cdot(u^{10}-4u^9+10u^8-16u^7+19u^6-17u^5+12u^4-7u^3+3u^2-u+1)$ $\cdot(u^{56}-19u^{55}+\cdots-12u+1)$
c_{10}	$(u^2+u+1)^2(u^{10}+2u^8+3u^6+u^5+2u^4+u^3+u^2+u+1)$ $\cdot(u^{56}-3u^{55}+\cdots-2u+1)$
c_{11}	$(u^2-u+1)^2$ $\cdot(u^{10}-4u^9+10u^8-16u^7+19u^6-17u^5+12u^4-7u^3+3u^2-u+1)$ $\cdot(u^{56}-19u^{55}+\cdots-12u+1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^2+y+1)^2$ $\cdot\,(y^{10}+4y^9+10y^8+16y^7+19y^6+17y^5+12y^4+7y^3+3y^2+y+1)$ $\cdot\,(y^{56}+27y^{55}+\cdots+12y+1)$
c_2	$(y^2+y+1)^2$ $\cdot\,(y^{10}+4y^9+10y^8+12y^7+7y^6-3y^5+8y^4+27y^3+19y^2+5y+1)$ $\cdot\,(y^{56}+7y^{55}+\cdots+20y+1)$
c_3, c_7	$y^4(y^2+y+1)^5(y^{56}+20y^{55}+\cdots+1920y+256)$
c_5	$((y^2+y+1)^2)(y^{10}+4y^9+\cdots-15y+1)$ $\cdot\,(y^{56}-13y^{55}+\cdots-28332y+5329)$
c_6, c_{10}	$(y^2+y+1)^2$ $\cdot\,(y^{10}+4y^9+10y^8+16y^7+19y^6+17y^5+12y^4+7y^3+3y^2+y+1)$ $\cdot\,(y^{56}+19y^{55}+\cdots+12y+1)$
c_8	$y^4(y^2+y+1)^5(y^{56}+20y^{55}+\cdots+1892352y+65536)$
c_9, c_{11}	$(y^2+y+1)^2$ $\cdot\,(y^{10}+4y^9+10y^8+12y^7+7y^6-3y^5+8y^4+27y^3+19y^2+5y+1)$ $\cdot\,(y^{56}+39y^{55}+\cdots+68y+1)$