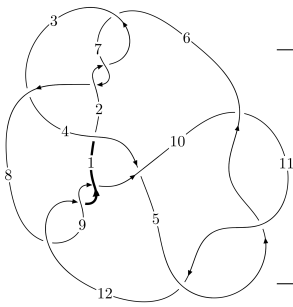
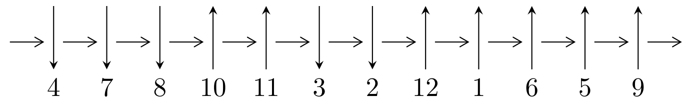
$12a_{1032}$ ($K12a_{1032}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$3{,}6 \xrightarrow[c_6]{} 7 \xrightarrow[c_2]{} 2 \xrightarrow[c_7]{} 8 \xrightarrow[c_3]{} 4 \xrightarrow[c_1]{} 1{,}11 \xrightarrow[c_5]{} 5 \xrightarrow[c_{11}]{} 12 \xrightarrow[c_{10}]{} 10 \xrightarrow[c_9]{} 9 \twoheadrightarrow c_4, c_8, c_{12}$$

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

$$\begin{aligned}
I_1^u = \langle & -5.13488 \times 10^{22} u^{77} + 6.96847 \times 10^{23} u^{76} + \cdots + 1.38959 \times 10^{24} b + 9.38953 \times 10^{23}, \\
& 1.56764 \times 10^{24} u^{77} + 2.54331 \times 10^{24} u^{76} + \cdots + 4.16876 \times 10^{24} a - 1.01501 \times 10^{25},\ u^{78} + 2u^{77} + \cdots - 3u - 3
\end{aligned}$$

$$I_2^u = \langle b,\ -u^2 + a - 1,\ u^3 + u^2 + 2u + 1 \rangle$$

$$I_3^u = \langle u^2 a - 2au + 3u^2 + 5b - a - u + 2,\ -2u^2 a + a^2 + 9u^2 - 2a - 7u + 18,\ u^3 - u^2 + 2u - 1 \rangle$$

* 3 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.

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$\boldsymbol{I_1^u = \langle -5.13\times 10^{22}u^{77} + 6.97\times 10^{23}u^{76} + \cdots + 1.39\times 10^{24}b + 9.39\times 10^{23},\ 1.57\times 10^{24}u^{77} + 2.54\times 10^{24}u^{76} + \cdots + 4.17\times 10^{24}a - 1.02\times 10^{25},\ u^{78} + 2u^{77} + \cdots - 3u - 3\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^5 - 2u^3 - u \\ -u^7 - 3u^5 - 2u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^9 + 4u^7 + 5u^5 + 2u^3 + u \\ u^{11} + 5u^9 + 8u^7 + 3u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.376045u^{77} - 0.610088u^{76} + \cdots + 1.32049u + 2.43481 \\ 0.0369526u^{77} - 0.501478u^{76} + \cdots + 0.585143u - 0.675707 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1.26294u^{77} + 2.25066u^{76} + \cdots - 2.84986u - 1.41015 \\ -0.307268u^{77} - 0.831343u^{76} + \cdots + 3.63374u + 0.384719 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.259199u^{77} + 0.274703u^{76} + \cdots + 2.57149u - 0.449948 \\ 0.0447472u^{77} + 0.572456u^{76} + \cdots - 1.87435u + 0.827634 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.412998u^{77} - 0.108610u^{76} + \cdots + 0.735348u + 3.11052 \\ 0.0369526u^{77} - 0.501478u^{76} + \cdots + 0.585143u - 0.675707 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.454996u^{77} - 0.635848u^{76} + \cdots + 2.02928u + 2.79107 \\ -0.00885144u^{77} - 0.531385u^{76} + \cdots + 0.546815u - 0.805065 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{2155115887218372860035718}{694792694815903195651135}u^{77} + \frac{4180801602356197336101919}{694792694815903195651135}u^{76} + \cdots + \frac{9214508540967252021234482}{694792694815903195651135}u - \frac{2286501097268875425262962}{694792694815903195651135}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{78} - 16u^{77} + \cdots - 227379u + 30627$
c_2, c_6, c_7	$u^{78} + 2u^{77} + \cdots - 3u - 3$
c_3	$u^{78} - 2u^{77} + \cdots - 1479u - 867$
c_4	$u^{78} - u^{77} + \cdots + 4032u + 3112$
c_5, c_{10}, c_{11}	$u^{78} + u^{77} + \cdots - 32u^2 + 8$
c_8, c_9, c_{12}	$u^{78} - 4u^{77} + \cdots - 108u - 17$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{78} + 32y^{77} + \cdots + 2934785691y + 938013129$
c_2, c_6, c_7	$y^{78} + 72y^{77} + \cdots - 129y + 9$
c_3	$y^{78} + 8y^{77} + \cdots + 5081487y + 751689$
c_4	$y^{78} - 13y^{77} + \cdots - 77550976y + 9684544$
c_5, c_{10}, c_{11}	$y^{78} + 71y^{77} + \cdots - 512y + 64$
c_8, c_9, c_{12}	$y^{78} - 74y^{77} + \cdots + 5540y + 289$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.192957 + 1.111600I$ $a = 1.19779 + 2.02532I$ $b = -0.168435 + 1.396140I$	$-3.81969 - 3.89814I$	0
$u = 0.192957 - 1.111600I$ $a = 1.19779 - 2.02532I$ $b = -0.168435 - 1.396140I$	$-3.81969 + 3.89814I$	0
$u = 0.320913 + 1.119940I$ $a = -0.94949 - 2.09661I$ $b = 0.262940 - 1.340440I$	$1.05376 - 7.02286I$	0
$u = 0.320913 - 1.119940I$ $a = -0.94949 + 2.09661I$ $b = 0.262940 + 1.340440I$	$1.05376 + 7.02286I$	0
$u = -0.473389 + 0.686908I$ $a = 0.08281 - 1.56208I$ $b = 0.33298 - 1.38387I$	$2.38668 - 7.05623I$	$4.04957 + 2.76916I$
$u = -0.473389 - 0.686908I$ $a = 0.08281 + 1.56208I$ $b = 0.33298 + 1.38387I$	$2.38668 + 7.05623I$	$4.04957 - 2.76916I$
$u = -0.079678 + 1.178770I$ $a = 0.286269 - 0.635203I$ $b = -0.475807 - 0.361911I$	$1.71847 + 1.56145I$	0
$u = -0.079678 - 1.178770I$ $a = 0.286269 + 0.635203I$ $b = -0.475807 + 0.361911I$	$1.71847 - 1.56145I$	0
$u = -0.747048 + 0.324353I$ $a = 1.52805 - 2.73924I$ $b = -0.33672 - 1.41782I$	$1.11303 + 11.32630I$	$1.74011 - 7.84897I$
$u = -0.747048 - 0.324353I$ $a = 1.52805 + 2.73924I$ $b = -0.33672 + 1.41782I$	$1.11303 - 11.32630I$	$1.74011 + 7.84897I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.030969 + 1.197970I$ $a = -1.68028 - 1.82896I$ $b = 0.12649 - 1.43914I$	$-1.033450 - 0.444387I$	0
$u = 0.030969 - 1.197970I$ $a = -1.68028 + 1.82896I$ $b = 0.12649 + 1.43914I$	$-1.033450 + 0.444387I$	0
$u = 0.717522 + 0.354101I$ $a = -0.151776 + 1.187950I$ $b = -0.818337 + 0.262522I$	$6.45672 - 7.14735I$	$6.13824 + 6.79892I$
$u = 0.717522 - 0.354101I$ $a = -0.151776 - 1.187950I$ $b = -0.818337 - 0.262522I$	$6.45672 + 7.14735I$	$6.13824 - 6.79892I$
$u = 0.506406 + 0.609564I$ $a = 0.129930 - 0.090005I$ $b = 0.805112 + 0.201005I$	$7.40344 + 2.95162I$	$8.38298 - 0.93021I$
$u = 0.506406 - 0.609564I$ $a = 0.129930 + 0.090005I$ $b = 0.805112 - 0.201005I$	$7.40344 - 2.95162I$	$8.38298 + 0.93021I$
$u = 0.771376 + 0.082944I$ $a = -0.44711 - 3.10641I$ $b = -0.231533 - 1.297700I$	$-2.11544 + 3.03018I$	$0.27772 - 2.58777I$
$u = 0.771376 - 0.082944I$ $a = -0.44711 + 3.10641I$ $b = -0.231533 + 1.297700I$	$-2.11544 - 3.03018I$	$0.27772 + 2.58777I$
$u = -0.290042 + 1.206290I$ $a = 0.139811 + 0.526105I$ $b = 0.621955 + 0.111558I$	$5.66191 + 3.76271I$	0
$u = -0.290042 - 1.206290I$ $a = 0.139811 - 0.526105I$ $b = 0.621955 - 0.111558I$	$5.66191 - 3.76271I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.655866+0.382150I$ $a=-0.807968+0.893907I$ $b=-0.474927+0.866530I$	$4.52645+2.56217I$	$4.50484-2.46419I$
$u=-0.655866-0.382150I$ $a=-0.807968-0.893907I$ $b=-0.474927-0.866530I$	$4.52645-2.56217I$	$4.50484+2.46419I$
$u=-0.693288+0.304422I$ $a=-1.95436+2.45062I$ $b=\ \ 0.272595+1.371760I$	$-4.48416+7.09115I$	$-2.04061-7.55095I$
$u=-0.693288-0.304422I$ $a=-1.95436-2.45062I$ $b=\ \ 0.272595-1.371760I$	$-4.48416-7.09115I$	$-2.04061+7.55095I$
$u=-0.550306+0.508147I$ $a=-0.71523+1.43481I$ $b=\ \ 0.411750+0.974001I$	$5.00598+1.43831I$	$5.56279-3.99254I$
$u=-0.550306-0.508147I$ $a=-0.71523-1.43481I$ $b=\ \ 0.411750-0.974001I$	$5.00598-1.43831I$	$5.56279+3.99254I$
$u=-0.742831$ $a=-0.898304$ $b=-0.609293$	1.96168	5.99100
$u=\ \ 0.088144+1.269300I$ $a=-0.813357+0.841995I$ $b=\ \ 0.443490+0.349624I$	$4.80145-1.58760I$	0
$u=\ \ 0.088144-1.269300I$ $a=-0.813357-0.841995I$ $b=\ \ 0.443490-0.349624I$	$4.80145+1.58760I$	0
$u=\ \ 0.625985+0.307354I$ $a=-0.280689-1.134010I$ $b=\ \ 0.662399-0.196150I$	$0.48579-3.66760I$	$3.12377+7.79182I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.625985 - 0.307354I$ $a = -0.280689 + 1.134010I$ $b = 0.662399 + 0.196150I$	$0.48579 + 3.66760I$	$3.12377 - 7.79182I$
$u = -0.374022 + 0.584619I$ $a = 0.281584 + 1.126590I$ $b = -0.229914 + 1.337150I$	$-3.29505 - 3.31684I$	$0.37580 + 2.22795I$
$u = -0.374022 - 0.584619I$ $a = 0.281584 - 1.126590I$ $b = -0.229914 - 1.337150I$	$-3.29505 + 3.31684I$	$0.37580 - 2.22795I$
$u = 0.671062 + 0.114541I$ $a = 0.46437 + 3.46215I$ $b = 0.109881 + 1.399800I$	$-6.76019 + 0.61306I$	$-7.17730 + 0.24747I$
$u = 0.671062 - 0.114541I$ $a = 0.46437 - 3.46215I$ $b = 0.109881 - 1.399800I$	$-6.76019 - 0.61306I$	$-7.17730 - 0.24747I$
$u = -0.607811 + 0.306243I$ $a = 2.18924 - 1.51724I$ $b = -0.195606 - 1.287310I$	$-2.60345 + 2.27614I$	$0.75235 - 3.81852I$
$u = -0.607811 - 0.306243I$ $a = 2.18924 + 1.51724I$ $b = -0.195606 + 1.287310I$	$-2.60345 - 2.27614I$	$0.75235 + 3.81852I$
$u = 0.321608 + 1.293240I$ $a = 0.86084 + 1.56808I$ $b = 0.198523 + 1.256840I$	$2.16962 - 0.91182I$	0
$u = 0.321608 - 1.293240I$ $a = 0.86084 - 1.56808I$ $b = 0.198523 - 1.256840I$	$2.16962 + 0.91182I$	0
$u = 0.251582 + 1.328590I$ $a = -0.98352 - 1.56576I$ $b = -0.07092 - 1.41475I$	$-2.23585 - 2.71517I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.251582 - 1.328590I$ $a = -0.98352 + 1.56576I$ $b = -0.07092 + 1.41475I$	$-2.23585 + 2.71517I$	0
$u = -0.202356 + 1.364250I$ $a = -0.368264 - 0.065956I$ $b = -0.067803 + 0.563459I$	$3.79199 + 3.49836I$	0
$u = -0.202356 - 1.364250I$ $a = -0.368264 + 0.065956I$ $b = -0.067803 - 0.563459I$	$3.79199 - 3.49836I$	0
$u = 0.546679 + 0.273991I$ $a = -1.04542 - 3.63991I$ $b = -0.04558 - 1.51756I$	$-3.36178 - 1.38887I$	$2.35610 + 5.10659I$
$u = 0.546679 - 0.273991I$ $a = -1.04542 + 3.63991I$ $b = -0.04558 + 1.51756I$	$-3.36178 + 1.38887I$	$2.35610 - 5.10659I$
$u = -0.435351 + 0.389359I$ $a = 0.491782 - 0.204328I$ $b = 0.084335 - 1.208670I$	$-2.01640 + 0.97897I$	$2.34600 - 4.48200I$
$u = -0.435351 - 0.389359I$ $a = 0.491782 + 0.204328I$ $b = 0.084335 + 1.208670I$	$-2.01640 - 0.97897I$	$2.34600 + 4.48200I$
$u = -0.18432 + 1.40986I$ $a = -0.225592 - 0.553357I$ $b = -0.152154 + 1.055850I$	$3.63556 + 3.32279I$	0
$u = -0.18432 - 1.40986I$ $a = -0.225592 + 0.553357I$ $b = -0.152154 - 1.055850I$	$3.63556 - 3.32279I$	0
$u = 0.21945 + 1.40861I$ $a = 0.96270 + 1.46545I$ $b = 0.04850 + 1.56203I$	$2.03927 - 4.24747I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.21945 - 1.40861I$ $a = 0.96270 - 1.46545I$ $b = 0.04850 - 1.56203I$	$2.03927 + 4.24747I$	0
$u = -0.548507 + 0.166008I$ $a = 0.530033 - 0.629098I$ $b = 0.218693 - 0.435531I$	$-1.097180 + 0.763622I$	$-4.24671 - 2.11774I$
$u = -0.548507 - 0.166008I$ $a = 0.530033 + 0.629098I$ $b = 0.218693 + 0.435531I$	$-1.097180 - 0.763622I$	$-4.24671 + 2.11774I$
$u = 0.18767 + 1.41646I$ $a = -1.098180 - 0.416185I$ $b = 0.692130 + 0.004260I$	$6.83413 - 1.96589I$	0
$u = 0.18767 - 1.41646I$ $a = -1.098180 + 0.416185I$ $b = 0.692130 - 0.004260I$	$6.83413 + 1.96589I$	0
$u = -0.13742 + 1.42992I$ $a = -0.531214 + 0.250911I$ $b = 0.273097 - 1.263130I$	$2.91353 - 1.53997I$	0
$u = -0.13742 - 1.42992I$ $a = -0.531214 - 0.250911I$ $b = 0.273097 + 1.263130I$	$2.91353 + 1.53997I$	0
$u = -0.23677 + 1.41753I$ $a = -2.11985 + 0.25168I$ $b = 0.258918 + 1.274390I$	$2.91240 + 5.38467I$	0
$u = -0.23677 - 1.41753I$ $a = -2.11985 - 0.25168I$ $b = 0.258918 - 1.274390I$	$2.91240 - 5.38467I$	0
$u = 0.24246 + 1.42058I$ $a = 0.977967 + 0.877470I$ $b = -0.728763 + 0.193605I$	$6.02055 - 6.85421I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.24246 - 1.42058I$ $a = 0.977967 - 0.877470I$ $b = -0.728763 - 0.193605I$	$6.02055 + 6.85421I$	0
$u = 0.402539 + 0.377206I$ $a = 0.601844 + 0.257905I$ $b = -0.569286 - 0.073408I$	$1.200540 + 0.389375I$	$7.11392 - 0.40347I$
$u = 0.402539 - 0.377206I$ $a = 0.601844 - 0.257905I$ $b = -0.569286 + 0.073408I$	$1.200540 - 0.389375I$	$7.11392 + 0.40347I$
$u = -0.26934 + 1.42381I$ $a = 2.25229 - 0.97254I$ $b = -0.301520 - 1.376090I$	$1.04570 + 10.59920I$	0
$u = -0.26934 - 1.42381I$ $a = 2.25229 + 0.97254I$ $b = -0.301520 + 1.376090I$	$1.04570 - 10.59920I$	0
$u = -0.29110 + 1.43833I$ $a = -2.01002 + 1.33863I$ $b = 0.34949 + 1.43466I$	$6.7579 + 15.1002I$	0
$u = -0.29110 - 1.43833I$ $a = -2.01002 - 1.33863I$ $b = 0.34949 - 1.43466I$	$6.7579 - 15.1002I$	0
$u = -0.24762 + 1.44773I$ $a = 0.282106 + 0.053557I$ $b = 0.554115 - 0.871299I$	$10.39850 + 5.86579I$	0
$u = -0.24762 - 1.44773I$ $a = 0.282106 - 0.053557I$ $b = 0.554115 + 0.871299I$	$10.39850 - 5.86579I$	0
$u = 0.27412 + 1.44693I$ $a = -0.699548 - 0.987234I$ $b = 0.851132 - 0.286592I$	$12.2378 - 10.7588I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.27412 - 1.44693I$ $a = -0.699548 + 0.987234I$ $b = 0.851132 + 0.286592I$	$12.2378 + 10.7588I$	0
$u = -0.18060 + 1.46824I$ $a = 1.035470 - 0.448785I$ $b = -0.483271 - 1.049450I$	$11.37490 + 4.05500I$	0
$u = -0.18060 - 1.46824I$ $a = 1.035470 + 0.448785I$ $b = -0.483271 + 1.049450I$	$11.37490 - 4.05500I$	0
$u = -0.11112 + 1.47836I$ $a = 0.465603 + 0.258185I$ $b = -0.381985 + 1.359540I$	$9.34604 - 5.22928I$	0
$u = -0.11112 - 1.47836I$ $a = 0.465603 - 0.258185I$ $b = -0.381985 - 1.359540I$	$9.34604 + 5.22928I$	0
$u = 0.14455 + 1.47753I$ $a = 0.674222 + 0.188887I$ $b = -0.870359 - 0.159641I$	$14.11730 + 0.73561I$	0
$u = 0.14455 - 1.47753I$ $a = 0.674222 - 0.188887I$ $b = -0.870359 + 0.159641I$	$14.11730 - 0.73561I$	0
$u = 0.342782$ $a = 1.79263$ $b = -0.341913$	1.06094	13.3970

II. $I_2^u = \langle b,\ -u^2 + a - 1,\ u^3 + u^2 + 2u + 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u \\ -u^2 - u - 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 1 \\ u^2 + u + 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 - 1 \\ -u^2 - u - 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^2 + 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^2 + 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^2 + 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 2u^2 + 2 \\ u^2 + u + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -6u^2 - 4u - 4$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3	$u^3 + u^2 - 1$
c_2	$u^3 - u^2 + 2u - 1$
c_4, c_5, c_{10} c_{11}	u^3
c_6, c_7	$u^3 + u^2 + 2u + 1$
c_8, c_9	$(u+1)^3$
c_{12}	$(u-1)^3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$y^3 - y^2 + 2y - 1$
c_2, c_6, c_7	$y^3 + 3y^2 + 2y - 1$
c_4, c_5, c_{10} c_{11}	y^3
c_8, c_9, c_{12}	$(y-1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.215080 + 1.307140I$ $a = -0.662359 - 0.562280I$ $b = 0$	$4.66906 + 2.82812I$	$6.83447 - 1.85489I$
$u = -0.215080 - 1.307140I$ $a = -0.662359 + 0.562280I$ $b = 0$	$4.66906 - 2.82812I$	$6.83447 + 1.85489I$
$u = -0.569840$ $a = 1.32472$ $b = 0$	0.531480	-3.66890

III. $\boldsymbol{I^u_3 =}$
$\boldsymbol{\langle u^2a-2au+3u^2+5b-a-u+2,\ -2u^2a+a^2+9u^2-2a-7u+18,\ u^3-u^2+2u-1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u \\ u^2 - u + 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 1 \\ u^2 - u + 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ u^2 - u + 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} a \\ -\frac{1}{5}u^2a - \frac{3}{5}u^2 + \cdots + \frac{1}{5}a - \frac{2}{5} \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{3}{5}u^2a - \frac{11}{5}u^2 + \cdots + \frac{2}{5}a - \frac{29}{5} \\ -2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -\frac{1}{5}u^2a - \frac{3}{5}u^2 + \cdots - \frac{4}{5}a - \frac{2}{5} \\ \frac{1}{5}u^2a + \frac{3}{5}u^2 + \cdots - \frac{1}{5}a + \frac{2}{5} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{1}{5}u^2a + \frac{3}{5}u^2 + \cdots + \frac{4}{5}a + \frac{2}{5} \\ -\frac{1}{5}u^2a - \frac{3}{5}u^2 + \cdots + \frac{1}{5}a - \frac{2}{5} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{1}{5}u^2a + \frac{8}{5}u^2 + \cdots + \frac{4}{5}a + \frac{7}{5} \\ -\frac{1}{5}u^2a + \frac{2}{5}u^2 + \cdots + \frac{1}{5}a + \frac{3}{5} \end{pmatrix}$$

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$(y^3 - y^2 + 2y - 1)^2$
c_2, c_6, c_7	$(y^3 + 3y^2 + 2y - 1)^2$
c_4, c_5, c_{10} c_{11}	$(y + 2)^6$
c_8, c_9, c_{12}	$(y - 1)^6$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.215080 + 1.307140I$ $a = -1.71575 - 1.02526I$ $b = -1.414210I$	$-0.26574 - 2.82812I$	$3.50976 + 2.97945I$
$u = 0.215080 + 1.307140I$ $a = 0.39103 + 2.14982I$ $b = 1.414210I$	$-0.26574 - 2.82812I$	$3.50976 + 2.97945I$
$u = 0.215080 - 1.307140I$ $a = -1.71575 + 1.02526I$ $b = 1.414210I$	$-0.26574 + 2.82812I$	$3.50976 - 2.97945I$
$u = 0.215080 - 1.307140I$ $a = 0.39103 - 2.14982I$ $b = -1.414210I$	$-0.26574 + 2.82812I$	$3.50976 - 2.97945I$
$u = 0.569840$ $a = 1.32472 + 3.89599I$ $b = 1.414210I$	-4.40332	-3.01950
$u = 0.569840$ $a = 1.32472 - 3.89599I$ $b = -1.414210I$	-4.40332	-3.01950

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^3+u^2-1)^3)(u^{78}-16u^{77}+\cdots-227379u+30627)$
c_2	$(u^3-u^2+2u-1)(u^3+u^2+2u+1)^2(u^{78}+2u^{77}+\cdots-3u-3)$
c_3	$((u^3-u^2+1)^2)(u^3+u^2-1)(u^{78}-2u^{77}+\cdots-1479u-867)$
c_4	$u^3(u^2+2)^3(u^{78}-u^{77}+\cdots+4032u+3112)$
c_5, c_{10}, c_{11}	$u^3(u^2+2)^3(u^{78}+u^{77}+\cdots-32u^2+8)$
c_6, c_7	$((u^3-u^2+2u-1)^2)(u^3+u^2+2u+1)(u^{78}+2u^{77}+\cdots-3u-3)$
c_8, c_9	$((u-1)^6)(u+1)^3(u^{78}-4u^{77}+\cdots-108u-17)$
c_{12}	$((u-1)^3)(u+1)^6(u^{78}-4u^{77}+\cdots-108u-17)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^3 - y^2 + 2y - 1)^3$ $\cdot (y^{78} + 32y^{77} + \cdots + 2934785691y + 938013129)$
c_2, c_6, c_7	$((y^3 + 3y^2 + 2y - 1)^3)(y^{78} + 72y^{77} + \cdots - 129y + 9)$
c_3	$((y^3 - y^2 + 2y - 1)^3)(y^{78} + 8y^{77} + \cdots + 5081487y + 751689)$
c_4	$y^3(y + 2)^6(y^{78} - 13y^{77} + \cdots - 7.75510 \times 10^7 y + 9684544)$
c_5, c_{10}, c_{11}	$y^3(y + 2)^6(y^{78} + 71y^{77} + \cdots - 512y + 64)$
c_8, c_9, c_{12}	$((y - 1)^9)(y^{78} - 74y^{77} + \cdots + 5540y + 289)$