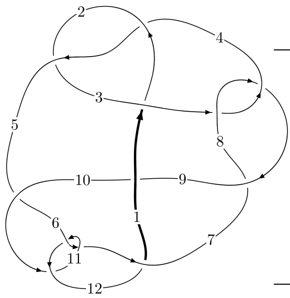
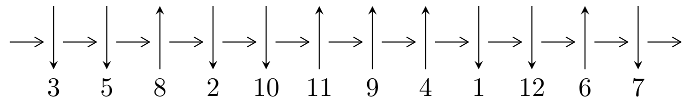
$12a_{0098}$ ($K12a_{0098}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{99} - 2u^{98} + \cdots + b + 1,\ u^{98} - u^{97} + \cdots + a + 1,\ u^{100} - 2u^{99} + \cdots + 3u - 1\rangle$$
$$I_2^u = \langle b,\ u^2 + a - u + 1,\ u^5 - u^4 + 2u^3 - u^2 + u - 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 105 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.

$$\boldsymbol{I_1^u = \langle u^{99} - 2u^{98} + \cdots + b + 1,\ u^{98} - u^{97} + \cdots + a + 1,\ u^{100} - 2u^{99} + \cdots + 3u - 1\rangle}$$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -u^{98} + u^{97} + \cdots + 2u - 1 \\ -u^{99} + 2u^{98} + \cdots + 2u - 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{95} + u^{94} + \cdots + 4u - 2 \\ -u^{52} - 14u^{50} + \cdots - 2u^3 + 2u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^6 - u^4 + 1 \\ -u^8 - 2u^6 - 2u^4 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{98} - u^{97} + \cdots + 5u - 2 \\ u^{99} - 2u^{98} + \cdots - 3u + 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{11} + 2u^9 + 2u^7 + u^3 \\ -u^{11} - 3u^9 - 4u^7 - u^5 + u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^{22} + 5u^{20} + 12u^{18} + 15u^{16} + 10u^{14} + 2u^{12} - u^8 - u^6 - u^4 + 1 \\ -u^{22} - 6u^{20} - 17u^{18} - 26u^{16} - 20u^{14} + 13u^{10} + 10u^8 + u^6 - 2u^4 - u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{99} - 15u^{98} + \cdots - 24u + 7$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{100} + 54u^{99} + \cdots + 5u + 1$
c_2, c_4	$u^{100} - 6u^{99} + \cdots + 5u - 1$
c_3, c_8	$u^{100} + u^{99} + \cdots + 64u + 32$
c_5, c_{12}	$u^{100} + 2u^{99} + \cdots - 9u - 1$
c_6, c_{11}	$u^{100} - 2u^{99} + \cdots + 3u - 1$
c_7	$u^{100} - 33u^{99} + \cdots - 23040u + 1024$
c_9	$u^{100} - 14u^{99} + \cdots - 5687u + 409$
c_{10}	$u^{100} + 54u^{99} + \cdots + 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{100} - 10y^{99} + \cdots + 11y + 1$
c_2, c_4	$y^{100} - 54y^{99} + \cdots - 5y + 1$
c_3, c_8	$y^{100} - 33y^{99} + \cdots - 23040y + 1024$
c_5, c_{12}	$y^{100} - 82y^{99} + \cdots + 149y + 1$
c_6, c_{11}	$y^{100} + 54y^{99} + \cdots + 5y + 1$
c_7	$y^{100} + 59y^{99} + \cdots - 17432576y + 1048576$
c_9	$y^{100} - 22y^{99} + \cdots + 9736769y + 167281$
c_{10}	$y^{100} - 14y^{99} + \cdots - 3y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.487101 + 0.887376I$ $a = -0.64534 + 1.56978I$ $b = 0.237262 + 0.339303I$	$-2.85974 - 3.13345I$	0
$u = -0.487101 - 0.887376I$ $a = -0.64534 - 1.56978I$ $b = 0.237262 - 0.339303I$	$-2.85974 + 3.13345I$	0
$u = 0.512139 + 0.884085I$ $a = 0.85983 - 1.96917I$ $b = 2.12852 + 0.82152I$	$-2.46262 + 5.68656I$	0
$u = 0.512139 - 0.884085I$ $a = 0.85983 + 1.96917I$ $b = 2.12852 - 0.82152I$	$-2.46262 - 5.68656I$	0
$u = -0.535428 + 0.873146I$ $a = -0.102230 + 0.397660I$ $b = 0.983013 + 0.192627I$	$1.71894 - 6.57445I$	0
$u = -0.535428 - 0.873146I$ $a = -0.102230 - 0.397660I$ $b = 0.983013 - 0.192627I$	$1.71894 + 6.57445I$	0
$u = 0.061097 + 1.022580I$ $a = -0.064633 + 0.226670I$ $b = 0.076689 + 0.466636I$	$-2.29873 + 2.42299I$	0
$u = 0.061097 - 1.022580I$ $a = -0.064633 - 0.226670I$ $b = 0.076689 - 0.466636I$	$-2.29873 - 2.42299I$	0
$u = -0.014877 + 1.027310I$ $a = -1.90233 + 0.83604I$ $b = 0.90903 - 1.15393I$	$-6.01004 - 1.32650I$	0
$u = -0.014877 - 1.027310I$ $a = -1.90233 - 0.83604I$ $b = 0.90903 + 1.15393I$	$-6.01004 + 1.32650I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.281502 + 0.988175I$ $a = 1.171170 + 0.536052I$ $b = -0.644688 - 0.009719I$	$-0.57782 + 2.38994I$	0
$u = 0.281502 - 0.988175I$ $a = 1.171170 - 0.536052I$ $b = -0.644688 + 0.009719I$	$-0.57782 - 2.38994I$	0
$u = -0.544624 + 0.786486I$ $a = -0.96241 - 1.40714I$ $b = -1.38076 + 0.76706I$	$4.62351 - 4.68716I$	0
$u = -0.544624 - 0.786486I$ $a = -0.96241 + 1.40714I$ $b = -1.38076 - 0.76706I$	$4.62351 + 4.68716I$	0
$u = -0.549344 + 0.893780I$ $a = -0.75864 - 1.80248I$ $b = -2.01660 + 0.64147I$	$-0.99980 - 11.63300I$	0
$u = -0.549344 - 0.893780I$ $a = -0.75864 + 1.80248I$ $b = -2.01660 - 0.64147I$	$-0.99980 + 11.63300I$	0
$u = 0.440563 + 0.839915I$ $a = 0.601924 + 0.493045I$ $b = -0.771261 + 0.570745I$	$-0.05742 + 1.93114I$	0
$u = 0.440563 - 0.839915I$ $a = 0.601924 - 0.493045I$ $b = -0.771261 - 0.570745I$	$-0.05742 - 1.93114I$	0
$u = 0.055568 + 1.074490I$ $a = 1.82687 + 0.75760I$ $b = -1.10849 - 0.96099I$	$-5.21910 + 6.98392I$	0
$u = 0.055568 - 1.074490I$ $a = 1.82687 - 0.75760I$ $b = -1.10849 + 0.96099I$	$-5.21910 - 6.98392I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.544396+0.739925I$ $a=\ \ 0.072681+1.149840I$ $b=\ \ 1.49172+0.43095I$	$4.75608+0.29953I$	0
$u=-0.544396-0.739925I$ $a=\ \ 0.072681-1.149840I$ $b=\ \ 1.49172-0.43095I$	$4.75608-0.29953I$	0
$u=\ \ 0.481773+0.978864I$ $a=\ \ 0.50337+1.72394I$ $b=-0.521962+0.138752I$	$-2.30351-1.49233I$	0
$u=\ \ 0.481773-0.978864I$ $a=\ \ 0.50337-1.72394I$ $b=-0.521962-0.138752I$	$-2.30351+1.49233I$	0
$u=\ \ 0.435072+0.741485I$ $a=\ \ 1.233090-0.445011I$ $b=\ \ 0.325832+1.179420I$	$0.21908+1.78940I$	$0.70752-5.47893I$
$u=\ \ 0.435072-0.741485I$ $a=\ \ 1.233090+0.445011I$ $b=\ \ 0.325832-1.179420I$	$0.21908-1.78940I$	$0.70752+5.47893I$
$u=\ \ 0.824459+0.135370I$ $a=-0.035450-1.023230I$ $b=-2.22486+1.32612I$	$-4.76000-12.04300I$	$-3.90865+7.83863I$
$u=\ \ 0.824459-0.135370I$ $a=-0.035450+1.023230I$ $b=-2.22486-1.32612I$	$-4.76000+12.04300I$	$-3.90865-7.83863I$
$u=-0.825648+0.079549I$ $a=\ \ 0.654212+0.474789I$ $b=-0.026542+0.835432I$	$-6.39732-2.29666I$	$-5.74508+3.83085I$
$u=-0.825648-0.079549I$ $a=\ \ 0.654212-0.474789I$ $b=-0.026542-0.835432I$	$-6.39732+2.29666I$	$-5.74508-3.83085I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.578115 + 0.594628I$ $a = 0.66753 + 1.49885I$ $b = 1.70331 + 0.41644I$	$-0.16037 + 7.14748I$	$-0.19098 - 4.78426I$
$u = -0.578115 - 0.594628I$ $a = 0.66753 - 1.49885I$ $b = 1.70331 - 0.41644I$	$-0.16037 - 7.14748I$	$-0.19098 + 4.78426I$
$u = -0.543322 + 0.623428I$ $a = -0.500926 - 0.937819I$ $b = -0.592010 + 0.346478I$	$2.41952 + 2.21533I$	$3.55808 - 1.03686I$
$u = -0.543322 - 0.623428I$ $a = -0.500926 + 0.937819I$ $b = -0.592010 - 0.346478I$	$2.41952 - 2.21533I$	$3.55808 + 1.03686I$
$u = 0.808693 + 0.134012I$ $a = -0.042565 + 0.155136I$ $b = 1.43091 - 0.46157I$	$-1.75864 - 6.90513I$	$-0.71442 + 4.85382I$
$u = 0.808693 - 0.134012I$ $a = -0.042565 - 0.155136I$ $b = 1.43091 + 0.46157I$	$-1.75864 + 6.90513I$	$-0.71442 - 4.85382I$
$u = -0.808227 + 0.119737I$ $a = 0.001013 - 1.118540I$ $b = 2.18276 + 1.75899I$	$-5.96708 + 5.74079I$	$-5.45196 - 4.06598I$
$u = -0.808227 - 0.119737I$ $a = 0.001013 + 1.118540I$ $b = 2.18276 - 1.75899I$	$-5.96708 - 5.74079I$	$-5.45196 + 4.06598I$
$u = 0.432154 + 1.101560I$ $a = 1.41814 - 0.54319I$ $b = -0.682213 + 0.652652I$	$-0.54978 + 2.70789I$	0
$u = 0.432154 - 1.101560I$ $a = 1.41814 + 0.54319I$ $b = -0.682213 - 0.652652I$	$-0.54978 - 2.70789I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.804661 + 0.108864I$ $a = -0.773190 + 0.547526I$ $b = -0.216473 + 0.828174I$	$-6.30355 - 2.94906I$	$-5.62609 + 3.05585I$
$u = 0.804661 - 0.108864I$ $a = -0.773190 - 0.547526I$ $b = -0.216473 - 0.828174I$	$-6.30355 + 2.94906I$	$-5.62609 - 3.05585I$
$u = -0.800011$ $a = 0.579040$ $b = -0.453790$	-3.31846	3.13170
$u = 0.362513 + 1.145170I$ $a = -1.23658 + 1.82457I$ $b = 0.406691 - 0.980808I$	$-1.70065 - 1.90512I$	0
$u = 0.362513 - 1.145170I$ $a = -1.23658 - 1.82457I$ $b = 0.406691 + 0.980808I$	$-1.70065 + 1.90512I$	0
$u = -0.789568 + 0.093306I$ $a = 0.195595 + 0.130891I$ $b = -1.317430 - 0.428608I$	$-3.06121 + 1.43669I$	$-2.47302 - 0.11715I$
$u = -0.789568 - 0.093306I$ $a = 0.195595 - 0.130891I$ $b = -1.317430 + 0.428608I$	$-3.06121 - 1.43669I$	$-2.47302 + 0.11715I$
$u = 0.498648 + 0.587209I$ $a = -0.62990 + 1.82971I$ $b = -1.73628 + 0.37315I$	$-1.64770 - 1.50599I$	$-1.92217 + 0.80453I$
$u = 0.498648 - 0.587209I$ $a = -0.62990 - 1.82971I$ $b = -1.73628 - 0.37315I$	$-1.64770 + 1.50599I$	$-1.92217 - 0.80453I$
$u = -0.435541 + 1.155600I$ $a = 0.09357 + 3.60800I$ $b = 1.11804 - 1.66899I$	$-4.86062 - 2.24576I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.435541 - 1.155600I$ $a = 0.09357 - 3.60800I$ $b = 1.11804 + 1.66899I$	$-4.86062 + 2.24576I$	0
$u = 0.737955 + 0.179606I$ $a = -0.253244 - 1.053450I$ $b = -0.82591 + 1.17880I$	$2.13680 - 5.42672I$	$1.72948 + 6.28208I$
$u = 0.737955 - 0.179606I$ $a = -0.253244 + 1.053450I$ $b = -0.82591 - 1.17880I$	$2.13680 + 5.42672I$	$1.72948 - 6.28208I$
$u = 0.495377 + 1.145420I$ $a = 0.81566 + 2.36176I$ $b = -1.45498 - 0.50738I$	$0.07482 + 5.02620I$	0
$u = 0.495377 - 1.145420I$ $a = 0.81566 - 2.36176I$ $b = -1.45498 + 0.50738I$	$0.07482 - 5.02620I$	0
$u = 0.453852 + 1.167430I$ $a = 0.375656 - 0.273528I$ $b = 0.587582 - 0.060312I$	$-6.15358 + 4.16473I$	0
$u = 0.453852 - 1.167430I$ $a = 0.375656 + 0.273528I$ $b = 0.587582 + 0.060312I$	$-6.15358 - 4.16473I$	0
$u = -0.472406 + 1.164010I$ $a = -2.77759 - 2.12300I$ $b = 0.55876 + 2.02590I$	$-4.58329 - 5.97967I$	0
$u = -0.472406 - 1.164010I$ $a = -2.77759 + 2.12300I$ $b = 0.55876 - 2.02590I$	$-4.58329 + 5.97967I$	0
$u = 0.507155 + 1.162800I$ $a = 0.91044 - 2.82854I$ $b = 0.76397 + 1.44828I$	$-0.72084 + 10.09420I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.507155 - 1.162800I$ $a = 0.91044 + 2.82854I$ $b = 0.76397 - 1.44828I$	$-0.72084 - 10.09420I$	0
$u = 0.381540 + 1.214470I$ $a = 1.90375 + 0.08418I$ $b = -1.32632 + 0.72565I$	$-5.81050 - 2.87951I$	0
$u = 0.381540 - 1.214470I$ $a = 1.90375 - 0.08418I$ $b = -1.32632 - 0.72565I$	$-5.81050 + 2.87951I$	0
$u = -0.407140 + 1.208730I$ $a = -1.92802 + 0.11186I$ $b = 1.24526 + 0.74300I$	$-6.90359 - 2.70005I$	0
$u = -0.407140 - 1.208730I$ $a = -1.92802 - 0.11186I$ $b = 1.24526 - 0.74300I$	$-6.90359 + 2.70005I$	0
$u = 0.584288 + 0.428222I$ $a = 0.331398 + 1.168580I$ $b = 1.042000 + 0.223440I$	$-0.74199 + 5.73096I$	$-0.46933 - 5.70886I$
$u = 0.584288 - 0.428222I$ $a = 0.331398 - 1.168580I$ $b = 1.042000 - 0.223440I$	$-0.74199 - 5.73096I$	$-0.46933 + 5.70886I$
$u = -0.390582 + 1.215960I$ $a = 3.52756 + 1.57398I$ $b = -1.95856 - 1.94901I$	$-9.96791 + 1.65394I$	0
$u = -0.390582 - 1.215960I$ $a = 3.52756 - 1.57398I$ $b = -1.95856 + 1.94901I$	$-9.96791 - 1.65394I$	0
$u = 0.397348 + 1.215000I$ $a = -0.153885 + 0.492319I$ $b = 0.220508 - 1.046930I$	$-10.25340 + 1.17144I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.397348 - 1.215000I$ $a = -0.153885 - 0.492319I$ $b = 0.220508 + 1.046930I$	$-10.25340 - 1.17144I$	0
$u = 0.378815 + 1.225050I$ $a = -3.23541 + 1.04754I$ $b = 2.06321 - 1.49338I$	$-8.88797 - 7.96569I$	0
$u = 0.378815 - 1.225050I$ $a = -3.23541 - 1.04754I$ $b = 2.06321 + 1.49338I$	$-8.88797 + 7.96569I$	0
$u = 0.680366 + 0.201848I$ $a = -0.077511 + 0.618875I$ $b = 1.313020 - 0.208942I$	$2.79666 - 0.53221I$	$3.73788 - 0.05845I$
$u = 0.680366 - 0.201848I$ $a = -0.077511 - 0.618875I$ $b = 1.313020 + 0.208942I$	$2.79666 + 0.53221I$	$3.73788 + 0.05845I$
$u = -0.493166 + 1.196550I$ $a = -1.11383 + 1.86850I$ $b = 1.57907 - 0.45097I$	$-6.29130 - 6.13018I$	0
$u = -0.493166 - 1.196550I$ $a = -1.11383 - 1.86850I$ $b = 1.57907 + 0.45097I$	$-6.29130 + 6.13018I$	0
$u = -0.413146 + 1.227640I$ $a = -0.014578 + 0.657209I$ $b = 0.053942 - 1.014040I$	$-10.32580 - 6.60037I$	0
$u = -0.413146 - 1.227640I$ $a = -0.014578 - 0.657209I$ $b = 0.053942 + 1.014040I$	$-10.32580 + 6.60037I$	0
$u = -0.455587 + 1.212890I$ $a = -0.917999 + 0.410244I$ $b = 0.444463 - 0.011374I$	$-6.88676 - 4.49128I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.455587-1.212890I$ $a=-0.917999-0.410244I$ $b=0.444463+0.011374I$	$-6.88676+4.49128I$	0
$u=0.501005+1.199870I$ $a=1.012660-0.468509I$ $b=0.376071+0.795331I$	$-9.51720+7.72554I$	0
$u=0.501005-1.199870I$ $a=1.012660+0.468509I$ $b=0.376071-0.795331I$	$-9.51720-7.72554I$	0
$u=0.511051+1.196640I$ $a=0.92636+1.94812I$ $b=-1.63284-0.49708I$	$-4.89488+11.74760I$	0
$u=0.511051-1.196640I$ $a=0.92636-1.94812I$ $b=-1.63284+0.49708I$	$-4.89488-11.74760I$	0
$u=-0.505714+1.199280I$ $a=0.27473-4.54256I$ $b=-2.35444+1.89934I$	$-9.15153-10.55260I$	0
$u=-0.505714-1.199280I$ $a=0.27473+4.54256I$ $b=-2.35444-1.89934I$	$-9.15153+10.55260I$	0
$u=0.514998+1.202160I$ $a=-0.63872-4.05356I$ $b=2.37010+1.41332I$	$-7.9226+16.9439I$	0
$u=0.514998-1.202160I$ $a=-0.63872+4.05356I$ $b=2.37010-1.41332I$	$-7.9226-16.9439I$	0
$u=-0.492233+1.213360I$ $a=-1.127970-0.340973I$ $b=-0.116806+0.827372I$	$-9.76185-2.48344I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.492233-1.213360I$ $a=-1.127970+0.340973I$ $b=-0.116806-0.827372I$	$-9.76185+2.48344I$	0
$u=-0.669706+0.085937I$ $a=\ \ 0.594226-0.989167I$ $b=-0.54335+1.59916I$	$-1.54837+1.65311I$	$-2.30876-3.97340I$
$u=-0.669706-0.085937I$ $a=\ \ 0.594226+0.989167I$ $b=-0.54335-1.59916I$	$-1.54837-1.65311I$	$-2.30876+3.97340I$
$u=\ \ 0.674398$ $a=-1.27425$ $b=-0.524099$	-2.93668	0.594550
$u=-0.397234+0.514555I$ $a=-0.43988+1.63914I$ $b=-0.698089+0.059413I$	$-1.95778-0.78971I$	$-2.64817-0.48190I$
$u=-0.397234-0.514555I$ $a=-0.43988-1.63914I$ $b=-0.698089-0.059413I$	$-1.95778+0.78971I$	$-2.64817+0.48190I$
$u=-0.263931+0.581955I$ $a=-0.72627+1.86741I$ $b=-0.564883-0.162134I$	$-1.93880-0.78358I$	$-3.76235-2.11912I$
$u=-0.263931-0.581955I$ $a=-0.72627-1.86741I$ $b=-0.564883+0.162134I$	$-1.93880+0.78358I$	$-3.76235+2.11912I$
$u=\ \ 0.537250+0.344396I$ $a=-0.064717-0.765608I$ $b=\ \ 0.092979+0.350954I$	$1.59701+1.17190I$	$3.67208-1.41836I$
$u=\ \ 0.537250-0.344396I$ $a=-0.064717+0.765608I$ $b=\ \ 0.092979-0.350954I$	$1.59701-1.17190I$	$3.67208+1.41836I$

II. $I_2^u = \langle b,\ u^2 + a - u + 1,\ u^5 - u^4 + 2u^3 - u^2 + u - 1\rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -u^2 + u - 1 \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^3 - u^2 + u - 1 \\ u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^3 \\ u^4 - u^3 + u^2 + 1 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -u^2 + u - 1 \\ 0 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2u^4 + 7u^3 - 8u^2 + 6u - 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^5$
c_3, c_7, c_8	y^5
c_5, c_9, c_{12}	$y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1$
c_6, c_{11}	$y^5 + 3y^4 + 4y^3 + y^2 - y - 1$
c_{10}	$y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.339110 + 0.822375I$ $a = -0.77780 + 1.38013I$ $b = 0$	$-1.97403 - 1.53058I$	$-5.00899 + 6.23673I$
$u = -0.339110 - 0.822375I$ $a = -0.77780 - 1.38013I$ $b = 0$	$-1.97403 + 1.53058I$	$-5.00899 - 6.23673I$
$u = 0.766826$ $a = -0.821196$ $b = 0$	-4.04602	-9.63840
$u = 0.455697 + 1.200150I$ $a = 0.688402 + 0.106340I$ $b = 0$	$-7.51750 + 4.40083I$	$-13.17182 - 3.02310I$
$u = 0.455697 - 1.200150I$ $a = 0.688402 - 0.106340I$ $b = 0$	$-7.51750 - 4.40083I$	$-13.17182 + 3.02310I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^5)(u^{100}+54u^{99}+\cdots+5u+1)$
c_2	$((u-1)^5)(u^{100}-6u^{99}+\cdots+5u-1)$
c_3, c_8	$u^5(u^{100}+u^{99}+\cdots+64u+32)$
c_4	$((u+1)^5)(u^{100}-6u^{99}+\cdots+5u-1)$
c_5	$(u^5+u^4-2u^3-u^2+u-1)(u^{100}+2u^{99}+\cdots-9u-1)$
c_6	$(u^5-u^4+2u^3-u^2+u-1)(u^{100}-2u^{99}+\cdots+3u-1)$
c_7	$u^5(u^{100}-33u^{99}+\cdots-23040u+1024)$
c_9	$(u^5+u^4-2u^3-u^2+u-1)(u^{100}-14u^{99}+\cdots-5687u+409)$
c_{10}	$(u^5-3u^4+4u^3-u^2-u+1)(u^{100}+54u^{99}+\cdots+5u+1)$
c_{11}	$(u^5+u^4+2u^3+u^2+u+1)(u^{100}-2u^{99}+\cdots+3u-1)$
c_{12}	$(u^5-u^4-2u^3+u^2+u+1)(u^{100}+2u^{99}+\cdots-9u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^5)(y^{100}-10y^{99}+\cdots+11y+1)$
c_2, c_4	$((y-1)^5)(y^{100}-54y^{99}+\cdots-5y+1)$
c_3, c_8	$y^5(y^{100}-33y^{99}+\cdots-23040y+1024)$
c_5, c_{12}	$(y^5-5y^4+8y^3-3y^2-y-1)(y^{100}-82y^{99}+\cdots+149y+1)$
c_6, c_{11}	$(y^5+3y^4+4y^3+y^2-y-1)(y^{100}+54y^{99}+\cdots+5y+1)$
c_7	$y^5(y^{100}+59y^{99}+\cdots-1.74326\times 10^7 y+1048576)$
c_9	$(y^5-5y^4+8y^3-3y^2-y-1)$ $\cdot(y^{100}-22y^{99}+\cdots+9736769y+167281)$
c_{10}	$(y^5-y^4+8y^3-3y^2+3y-1)(y^{100}-14y^{99}+\cdots-3y+1)$