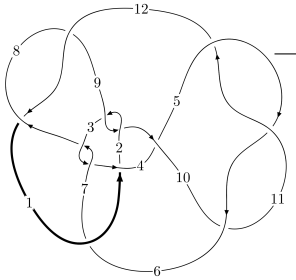
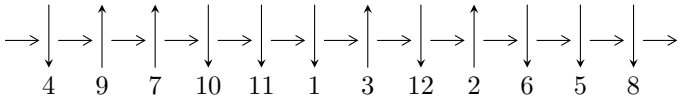
$12a_{1154}$ $(K12a_{1154})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.09583 \times 10^{187} u^{124} + 1.47205 \times 10^{187} u^{123} + \cdots + 1.32214 \times 10^{187} b - 3.17493 \times 10^{187}, \\ & 2.48538 \times 10^{188} u^{124} + 1.28444 \times 10^{188} u^{123} + \cdots + 3.04093 \times 10^{188} a + 2.28676 \times 10^{189}, \\ & u^{125} + u^{124} + \cdots + 19u - 23 \rangle \\ I_2^u = \langle & 2u^{26} + 27u^{24} + \cdots + b + 2,\ -u^{26} - 13u^{24} + \cdots + a - 3u,\ u^{28} + 15u^{26} + \cdots + 2u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 153 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. $\boldsymbol{I_1^u = \langle 1.10 \times 10^{187} u^{124} + 1.47 \times 10^{187} u^{123} + \cdots + 1.32 \times 10^{187} b - 3.17 \times 10^{187},\ 2.49 \times 10^{188} u^{124} + 1.28 \times 10^{188} u^{123} + \cdots + 3.04 \times 10^{188} a + 2.29 \times 10^{189},\ u^{125} + u^{124} + \cdots + 19u - 23 \rangle}$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.817311u^{124} - 0.422384u^{123} + \cdots + 21.4221u - 7.51993 \\ -0.828833u^{124} - 1.11339u^{123} + \cdots + 6.97604u + 2.40135 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^3 + 2u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.398063u^{124} - 0.00318916u^{123} + \cdots + 14.0713u - 8.86039 \\ -0.852392u^{124} - 0.544593u^{123} + \cdots + 14.0207u - 5.08153 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.763206u^{124} - 0.341190u^{123} + \cdots + 10.1704u - 0.273912 \\ -0.323077u^{124} - 1.56545u^{123} + \cdots - 18.7761u + 18.8635 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0347761u^{124} - 1.18286u^{123} + \cdots - 39.1572u + 22.7355 \\ 1.29484u^{124} + 1.59022u^{123} + \cdots - 24.4400u - 8.11008 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0322430u^{124} + 0.175512u^{123} + \cdots + 5.98930u - 2.90839 \\ 0.0416674u^{124} - 0.783353u^{123} + \cdots - 7.09724u + 12.7663 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.365198u^{124} - 0.237865u^{123} + \cdots + 13.2826u + 1.85461 \\ -0.109250u^{124} - 1.22652u^{123} + \cdots - 12.3287u + 18.9750 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.33472u^{124} - 1.85809u^{123} + \cdots + 18.7329u + 4.03182$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{125} - 5u^{124} + \cdots + 66970759u - 9604921$
c_2, c_9	$u^{125} + u^{124} + \cdots + 58283u + 322681$
c_3, c_7	$u^{125} - 3u^{124} + \cdots - 3384u + 306$
c_4	$u^{125} + u^{124} + \cdots + 5145656u + 1855180$
c_5, c_{10}, c_{11}	$u^{125} - u^{124} + \cdots + 19u + 23$
c_6	$u^{125} - u^{124} + \cdots + 11584u + 704$
c_8, c_{12}	$u^{125} + 3u^{124} + \cdots + 3u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{125} - 41y^{124} + \cdots + 3683462059155047y - 92254507416241$
c_2, c_9	$y^{125} + 95y^{124} + \cdots - 1169830550105y - 104123027761$
c_3, c_7	$y^{125} + 81y^{124} + \cdots - 2036412y - 93636$
c_4	$y^{125} - 27y^{124} + \cdots - 685380301864y - 3441692832400$
c_5, c_{10}, c_{11}	$y^{125} + 113y^{124} + \cdots + 6847y - 529$
c_6	$y^{125} - 7y^{124} + \cdots + 22089728y - 495616$
c_8, c_{12}	$y^{125} + 69y^{124} + \cdots - 111y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.340848 + 0.915565I$ $a = -0.111395 - 0.905155I$ $b = -0.245831 - 1.381420I$	$-6.72206 + 2.98029I$	0
$u = 0.340848 - 0.915565I$ $a = -0.111395 + 0.905155I$ $b = -0.245831 + 1.381420I$	$-6.72206 - 2.98029I$	0
$u = -0.498938 + 0.924908I$ $a = 0.688406 - 0.880499I$ $b = 0.48397 - 1.38046I$	$-4.05699 - 9.38289I$	0
$u = -0.498938 - 0.924908I$ $a = 0.688406 + 0.880499I$ $b = 0.48397 + 1.38046I$	$-4.05699 + 9.38289I$	0
$u = 0.554728 + 0.898131I$ $a = 0.683786 + 1.018720I$ $b = 0.296850 + 1.257420I$	$-0.17442 + 2.83174I$	0
$u = 0.554728 - 0.898131I$ $a = 0.683786 - 1.018720I$ $b = 0.296850 - 1.257420I$	$-0.17442 - 2.83174I$	0
$u = 0.892864 + 0.219253I$ $a = -0.76444 - 1.60725I$ $b = -0.052315 - 1.161650I$	$-6.49982 + 2.60043I$	0
$u = 0.892864 - 0.219253I$ $a = -0.76444 + 1.60725I$ $b = -0.052315 + 1.161650I$	$-6.49982 - 2.60043I$	0
$u = 0.528377 + 0.967319I$ $a = -0.311887 - 1.052810I$ $b = 0.210188 - 1.235040I$	$-4.16882 - 7.58086I$	0
$u = 0.528377 - 0.967319I$ $a = -0.311887 + 1.052810I$ $b = 0.210188 + 1.235040I$	$-4.16882 + 7.58086I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.850392 + 0.264999I$ $a = 0.42054 + 2.18381I$ $b = -0.408670 + 1.342540I$	$-2.14965 - 7.71464I$	0
$u = 0.850392 - 0.264999I$ $a = 0.42054 - 2.18381I$ $b = -0.408670 - 1.342540I$	$-2.14965 + 7.71464I$	0
$u = -0.838995 + 0.248343I$ $a = 0.40094 - 2.33640I$ $b = -0.58804 - 1.44317I$	$-6.1658 + 14.1084I$	0
$u = -0.838995 - 0.248343I$ $a = 0.40094 + 2.33640I$ $b = -0.58804 + 1.44317I$	$-6.1658 - 14.1084I$	0
$u = -0.337040 + 0.791236I$ $a = 0.869377 - 1.016040I$ $b = -0.06119 - 1.42359I$	$-6.49330 + 2.52776I$	0
$u = -0.337040 - 0.791236I$ $a = 0.869377 + 1.016040I$ $b = -0.06119 + 1.42359I$	$-6.49330 - 2.52776I$	0
$u = -0.430247 + 1.089970I$ $a = -0.221108 + 1.056670I$ $b = -0.055668 + 1.115260I$	$-1.39054 + 1.02951I$	0
$u = -0.430247 - 1.089970I$ $a = -0.221108 - 1.056670I$ $b = -0.055668 - 1.115260I$	$-1.39054 - 1.02951I$	0
$u = 0.137475 + 1.166180I$ $a = -0.276095 - 0.958000I$ $b = 1.234540 + 0.499683I$	$1.21107 + 4.31656I$	0
$u = 0.137475 - 1.166180I$ $a = -0.276095 + 0.958000I$ $b = 1.234540 - 0.499683I$	$1.21107 - 4.31656I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.752600+0.314780I$ $a=\ \ 0.89107-2.05723I$ $b=-0.05083-1.49446I$	$-8.07623+1.52357I$	0
$u=-0.752600-0.314780I$ $a=\ \ 0.89107+2.05723I$ $b=-0.05083+1.49446I$	$-8.07623-1.52357I$	0
$u=-0.803752+0.134620I$ $a=-0.53608+2.00935I$ $b=\ \ 0.302285+1.050030I$	$-4.32587+3.37937I$	0
$u=-0.803752-0.134620I$ $a=-0.53608-2.00935I$ $b=\ \ 0.302285-1.050030I$	$-4.32587-3.37937I$	0
$u=\ \ 0.776254+0.221110I$ $a=-1.00138-2.14211I$ $b=\ \ 0.382207-1.337890I$	$-8.90871-7.12545I$	0
$u=\ \ 0.776254-0.221110I$ $a=-1.00138+2.14211I$ $b=\ \ 0.382207+1.337890I$	$-8.90871+7.12545I$	0
$u=-0.248167+1.185700I$ $a=-0.0296371+0.0905982I$ $b=-0.716422+0.562301I$	$-0.691660+0.431217I$	0
$u=-0.248167-1.185700I$ $a=-0.0296371-0.0905982I$ $b=-0.716422-0.562301I$	$-0.691660-0.431217I$	0
$u=-0.304361+1.180290I$ $a=-0.344166+0.730427I$ $b=-0.429143+0.995944I$	$-0.868368+0.641181I$	0
$u=-0.304361-1.180290I$ $a=-0.344166-0.730427I$ $b=-0.429143-0.995944I$	$-0.868368-0.641181I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.773750 + 0.042966I$ $a = 0.61397 - 2.46697I$ $b = 0.80451 - 1.46360I$	$-5.86642 - 3.85477I$	$-11.74688 + 4.39207I$
$u = 0.773750 - 0.042966I$ $a = 0.61397 + 2.46697I$ $b = 0.80451 + 1.46360I$	$-5.86642 + 3.85477I$	$-11.74688 - 4.39207I$
$u = -0.768739 + 0.089705I$ $a = -0.02139 + 1.92761I$ $b = 0.594173 + 0.892727I$	$-4.17195 + 3.26627I$	$-10.00650 - 1.32057I$
$u = -0.768739 - 0.089705I$ $a = -0.02139 - 1.92761I$ $b = 0.594173 - 0.892727I$	$-4.17195 - 3.26627I$	$-10.00650 + 1.32057I$
$u = 0.330357 + 1.215530I$ $a = -1.021080 - 0.409132I$ $b = -0.61662 - 1.52243I$	$-2.26524 - 0.14116I$	0
$u = 0.330357 - 1.215530I$ $a = -1.021080 + 0.409132I$ $b = -0.61662 + 1.52243I$	$-2.26524 + 0.14116I$	0
$u = -0.196324 + 1.250600I$ $a = -1.70270 + 1.86146I$ $b = -0.057845 + 0.889279I$	$1.44511 - 2.61518I$	0
$u = -0.196324 - 1.250600I$ $a = -1.70270 - 1.86146I$ $b = -0.057845 - 0.889279I$	$1.44511 + 2.61518I$	0
$u = -0.726759 + 0.065859I$ $a = -0.060633 + 1.051140I$ $b = 0.591286 + 0.340079I$	$-4.05104 + 3.15610I$	$-10.70719 - 3.30707I$
$u = -0.726759 - 0.065859I$ $a = -0.060633 - 1.051140I$ $b = 0.591286 - 0.340079I$	$-4.05104 - 3.15610I$	$-10.70719 + 3.30707I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.693099 + 0.183068I$ $a = -1.292300 + 0.422705I$ $b = -1.391280 + 0.066544I$	$-1.38758 - 7.40448I$	$-7.02296 + 8.37839I$
$u = 0.693099 - 0.183068I$ $a = -1.292300 - 0.422705I$ $b = -1.391280 - 0.066544I$	$-1.38758 + 7.40448I$	$-7.02296 - 8.37839I$
$u = -0.046635 + 1.287770I$ $a = -0.758284 + 0.544829I$ $b = 0.635654 - 0.597846I$	$4.28680 - 1.45348I$	0
$u = -0.046635 - 1.287770I$ $a = -0.758284 - 0.544829I$ $b = 0.635654 + 0.597846I$	$4.28680 + 1.45348I$	0
$u = -0.564516 + 0.429347I$ $a = 0.818053 - 0.144908I$ $b = -0.123678 - 1.009990I$	$0.06775 + 1.89749I$	$-7.90333 - 4.35554I$
$u = -0.564516 - 0.429347I$ $a = 0.818053 + 0.144908I$ $b = -0.123678 + 1.009990I$	$0.06775 - 1.89749I$	$-7.90333 + 4.35554I$
$u = -0.652661 + 0.267575I$ $a = -0.587740 - 0.137136I$ $b = -0.811569 - 0.060542I$	$2.26408 + 3.22254I$	$-0.33234 - 5.25463I$
$u = -0.652661 - 0.267575I$ $a = -0.587740 + 0.137136I$ $b = -0.811569 + 0.060542I$	$2.26408 - 3.22254I$	$-0.33234 + 5.25463I$
$u = -0.219087 + 1.276410I$ $a = 1.127680 - 0.827768I$ $b = 0.24438 - 2.07383I$	$-3.67207 + 2.44301I$	0
$u = -0.219087 - 1.276410I$ $a = 1.127680 + 0.827768I$ $b = 0.24438 + 2.07383I$	$-3.67207 - 2.44301I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.215442 + 1.279850I$ $a = -1.83572 - 1.07105I$ $b = 0.226682 - 1.009400I$	$3.02162 - 1.87519I$	0
$u = 0.215442 - 1.279850I$ $a = -1.83572 + 1.07105I$ $b = 0.226682 + 1.009400I$	$3.02162 + 1.87519I$	0
$u = -0.436624 + 0.534366I$ $a = 0.220494 + 1.214380I$ $b = 0.522002 + 0.167498I$	$3.29281 + 0.31372I$	$2.80843 - 2.31824I$
$u = -0.436624 - 0.534366I$ $a = 0.220494 - 1.214380I$ $b = 0.522002 - 0.167498I$	$3.29281 - 0.31372I$	$2.80843 + 2.31824I$
$u = 0.235106 + 1.293160I$ $a = 0.364121 + 0.469129I$ $b = -0.664795 - 0.272996I$	$2.65156 - 3.08213I$	0
$u = 0.235106 - 1.293160I$ $a = 0.364121 - 0.469129I$ $b = -0.664795 + 0.272996I$	$2.65156 + 3.08213I$	0
$u = 0.015582 + 1.317400I$ $a = -1.105350 + 0.317627I$ $b = 0.582769 - 0.267389I$	$4.64909 - 1.58007I$	0
$u = 0.015582 - 1.317400I$ $a = -1.105350 - 0.317627I$ $b = 0.582769 + 0.267389I$	$4.64909 + 1.58007I$	0
$u = 0.180831 + 1.309650I$ $a = -0.473535 + 0.469984I$ $b = 0.583290 + 1.103680I$	$4.17335 - 1.66212I$	0
$u = 0.180831 - 1.309650I$ $a = -0.473535 - 0.469984I$ $b = 0.583290 - 1.103680I$	$4.17335 + 1.66212I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.289761+1.293060I$ $a=\ \ 0.989142-0.706229I$ $b=-0.515539-0.025648I$	$0.17001+6.83659I$	0
$u=-0.289761-1.293060I$ $a=\ \ 0.989142+0.706229I$ $b=-0.515539+0.025648I$	$0.17001-6.83659I$	0
$u=\ \ 0.324771+1.290360I$ $a=\ \ 1.21073+1.45302I$ $b=-0.97037+1.41136I$	$-1.71317-7.81386I$	0
$u=\ \ 0.324771-1.290360I$ $a=\ \ 1.21073-1.45302I$ $b=-0.97037-1.41136I$	$-1.71317+7.81386I$	0
$u=\ \ 0.583415+0.324812I$ $a=\ \ 0.884511-0.373097I$ $b=\ \ 0.485412+0.570737I$	$-0.90225-2.30911I$	$-6.85264+3.71826I$
$u=\ \ 0.583415-0.324812I$ $a=\ \ 0.884511+0.373097I$ $b=\ \ 0.485412-0.570737I$	$-0.90225+2.30911I$	$-6.85264-3.71826I$
$u=\ \ 0.237555+1.314120I$ $a=\ \ 0.77250+1.77537I$ $b=-0.137155+1.280630I$	$3.43939-4.12769I$	0
$u=\ \ 0.237555-1.314120I$ $a=\ \ 0.77250-1.77537I$ $b=-0.137155-1.280630I$	$3.43939+4.12769I$	0
$u=-0.259989+1.318720I$ $a=-1.62738+0.84298I$ $b=\ \ 0.51699+1.68221I$	$-3.06692+3.75009I$	0
$u=-0.259989-1.318720I$ $a=-1.62738-0.84298I$ $b=\ \ 0.51699-1.68221I$	$-3.06692-3.75009I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.131633+1.345770I$ $a=-0.948560+0.286504I$ $b=\ \ 0.635017-0.928309I$	$4.08121-2.20068I$	0
$u=-0.131633-1.345770I$ $a=-0.948560-0.286504I$ $b=\ \ 0.635017+0.928309I$	$4.08121+2.20068I$	0
$u=-0.255230+1.336010I$ $a=\ \ 1.39709-1.94966I$ $b=-0.393229-1.132540I$	$2.51040+8.71926I$	0
$u=-0.255230-1.336010I$ $a=\ \ 1.39709+1.94966I$ $b=-0.393229+1.132540I$	$2.51040-8.71926I$	0
$u=-0.328695+1.323660I$ $a=\ \ 1.13195-1.24233I$ $b=-0.741610-0.824456I$	$0.26251+7.23113I$	0
$u=-0.328695-1.323660I$ $a=\ \ 1.13195+1.24233I$ $b=-0.741610+0.824456I$	$0.26251-7.23113I$	0
$u=-0.624072+0.099925I$ $a=-0.08161+3.84243I$ $b=\ \ 0.296658+1.005020I$	$-2.03739+5.50074I$	$-8.48984-8.67497I$
$u=-0.624072-0.099925I$ $a=-0.08161-3.84243I$ $b=\ \ 0.296658-1.005020I$	$-2.03739-5.50074I$	$-8.48984+8.67497I$
$u=-0.619521+0.063745I$ $a=\ \ 0.51334-3.33762I$ $b=-0.31870-1.84051I$	$-7.44741+0.52198I$	$-11.59595+3.31315I$
$u=-0.619521-0.063745I$ $a=\ \ 0.51334+3.33762I$ $b=-0.31870+1.84051I$	$-7.44741-0.52198I$	$-11.59595-3.31315I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.619300$ $a = 0.345528$ $b = 0.581666$	-1.40150	-6.65070
$u = 0.204019 + 1.372700I$ $a = -1.165870 - 0.153117I$ $b = 0.751535 - 0.653099I$	$4.83855 - 3.02411I$	0
$u = 0.204019 - 1.372700I$ $a = -1.165870 + 0.153117I$ $b = 0.751535 + 0.653099I$	$4.83855 + 3.02411I$	0
$u = -0.330062 + 1.351050I$ $a = 1.35822 - 1.09139I$ $b = -0.477296 - 1.049090I$	$0.35641 + 7.44685I$	0
$u = -0.330062 - 1.351050I$ $a = 1.35822 + 1.09139I$ $b = -0.477296 + 1.049090I$	$0.35641 - 7.44685I$	0
$u = 0.607240 + 0.039411I$ $a = 0.82030 - 3.43028I$ $b = 0.019276 - 1.113790I$	$-0.833655 - 1.062870I$	$-7.01204 + 0.41551I$
$u = 0.607240 - 0.039411I$ $a = 0.82030 + 3.43028I$ $b = 0.019276 + 1.113790I$	$-0.833655 + 1.062870I$	$-7.01204 - 0.41551I$
$u = 0.287452 + 1.368380I$ $a = -0.208589 - 0.915806I$ $b = 1.52695 + 0.07920I$	$3.52636 - 10.98350I$	0
$u = 0.287452 - 1.368380I$ $a = -0.208589 + 0.915806I$ $b = 1.52695 - 0.07920I$	$3.52636 + 10.98350I$	0
$u = 0.074472 + 1.406220I$ $a = 0.656615 + 0.928710I$ $b = -1.008110 + 0.516408I$	$6.41012 + 3.33269I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.074472 - 1.406220I$ $a = 0.656615 - 0.928710I$ $b = -1.008110 - 0.516408I$	$6.41012 - 3.33269I$	0
$u = -0.26664 + 1.39566I$ $a = -0.303603 + 0.452845I$ $b = 1.002100 + 0.003869I$	$7.54029 + 6.59891I$	0
$u = -0.26664 - 1.39566I$ $a = -0.303603 - 0.452845I$ $b = 1.002100 - 0.003869I$	$7.54029 - 6.59891I$	0
$u = 0.02155 + 1.42183I$ $a = -0.510261 - 0.583351I$ $b = 0.094077 + 1.084020I$	$0.31179 + 2.77482I$	0
$u = 0.02155 - 1.42183I$ $a = -0.510261 + 0.583351I$ $b = 0.094077 - 1.084020I$	$0.31179 - 2.77482I$	0
$u = 0.31879 + 1.39304I$ $a = 1.70653 + 0.82296I$ $b = -0.455915 + 1.284890I$	$-3.78527 - 11.08900I$	0
$u = 0.31879 - 1.39304I$ $a = 1.70653 - 0.82296I$ $b = -0.455915 - 1.284890I$	$-3.78527 + 11.08900I$	0
$u = 0.21554 + 1.42069I$ $a = -0.210078 + 0.845689I$ $b = -0.452322 - 0.455638I$	$4.68890 - 5.22665I$	0
$u = 0.21554 - 1.42069I$ $a = -0.210078 - 0.845689I$ $b = -0.452322 + 0.455638I$	$4.68890 + 5.22665I$	0
$u = -0.20624 + 1.43699I$ $a = -0.782670 - 0.689086I$ $b = 0.180937 + 0.830169I$	$6.00745 + 4.68503I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.20624-1.43699I$ $a=-0.782670+0.689086I$ $b=\ \ 0.180937-0.830169I$	$6.00745-4.68503I$	0
$u=\ \ 0.39742+1.39796I$ $a=\ \ 1.021840+0.660904I$ $b=-0.053927+1.050550I$	$-1.40294-2.04394I$	0
$u=\ \ 0.39742-1.39796I$ $a=\ \ 1.021840-0.660904I$ $b=-0.053927-1.050550I$	$-1.40294+2.04394I$	0
$u=-0.34687+1.41358I$ $a=-1.40436+1.18585I$ $b=\ \ 0.67058+1.45363I$	$-0.8873+18.3885I$	0
$u=-0.34687-1.41358I$ $a=-1.40436-1.18585I$ $b=\ \ 0.67058-1.45363I$	$-0.8873-18.3885I$	0
$u=\ \ 0.202120+0.498143I$ $a=\ \ 0.14612-2.07077I$ $b=\ \ 0.850224-0.031379I$	$0.47675+4.38194I$	$-0.75562-2.42095I$
$u=\ \ 0.202120-0.498143I$ $a=\ \ 0.14612+2.07077I$ $b=\ \ 0.850224+0.031379I$	$0.47675-4.38194I$	$-0.75562+2.42095I$
$u=\ \ 0.35037+1.42014I$ $a=-1.22090-1.13620I$ $b=\ \ 0.50501-1.36972I$	$3.20142-12.04610I$	0
$u=\ \ 0.35037-1.42014I$ $a=-1.22090+1.13620I$ $b=\ \ 0.50501+1.36972I$	$3.20142+12.04610I$	0
$u=-0.10501+1.46551I$ $a=\ \ 0.408836-0.564242I$ $b=-0.677651-0.532628I$	$9.79659+2.19888I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.10501-1.46551I$ $a=\ \ 0.408836+0.564242I$ $b=-0.677651+0.532628I$	$9.79659-2.19888I$	0
$u=\ \ 0.317198+0.402312I$ $a=\ \ 0.683787+0.402424I$ $b=-0.552303+0.623163I$	$-0.265890-0.837359I$	$-4.82968+3.51480I$
$u=\ \ 0.317198-0.402312I$ $a=\ \ 0.683787-0.402424I$ $b=-0.552303-0.623163I$	$-0.265890+0.837359I$	$-4.82968-3.51480I$
$u=-0.31524+1.45625I$ $a=-1.072850+0.701761I$ $b=\ \ 0.14270+1.47379I$	$-2.36914+5.44091I$	0
$u=-0.31524-1.45625I$ $a=-1.072850-0.701761I$ $b=\ \ 0.14270-1.47379I$	$-2.36914-5.44091I$	0
$u=\ \ 0.01936+1.53146I$ $a=\ \ 0.256955-0.074790I$ $b=-0.491608+1.106410I$	$4.43014-8.61440I$	0
$u=\ \ 0.01936-1.53146I$ $a=\ \ 0.256955+0.074790I$ $b=-0.491608-1.106410I$	$4.43014+8.61440I$	0
$u=\ \ 0.440159+0.028034I$ $a=\ \ 1.15770+1.31874I$ $b=-0.529648+0.847643I$	$0.048012-0.664722I$	$-7.90784-0.62638I$
$u=\ \ 0.440159-0.028034I$ $a=\ \ 1.15770-1.31874I$ $b=-0.529648-0.847643I$	$0.048012+0.664722I$	$-7.90784+0.62638I$
$u=\ \ 0.225269+0.328304I$ $a=\ \ 0.928812+0.365169I$ $b=-0.268086+0.558395I$	$-0.279242-0.947732I$	$-5.53508+6.63588I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.225269 - 0.328304I$ $a = \ 0.928812 - 0.365169I$ $b = -0.268086 - 0.558395I$	$-0.279242 + 0.947732I$	$-5.53508 - 6.63588I$
$u = -0.301626 + 0.215018I$ $a = \ 1.187790 + 0.289335I$ $b = -0.618065 + 0.863757I$	$-0.78665 - 3.87297I$	$-3.92014 - 1.05250I$
$u = -0.301626 - 0.215018I$ $a = \ 1.187790 - 0.289335I$ $b = -0.618065 - 0.863757I$	$-0.78665 + 3.87297I$	$-3.92014 + 1.05250I$
$u = \ 0.04458 + 1.64060I$ $a = -0.121030 - 0.260865I$ $b = -0.227644 - 1.058130I$	$8.73285 + 1.07898I$	0
$u = \ 0.04458 - 1.64060I$ $a = -0.121030 + 0.260865I$ $b = -0.227644 + 1.058130I$	$8.73285 - 1.07898I$	0

II. $I_2^u =$
$\langle 2u^{26}+27u^{24}+\cdots+b+2,\ -u^{26}-13u^{24}+\cdots+a-3u,\ u^{28}+15u^{26}+\cdots+2u+1\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^2+1 \\ u^4+2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{26}+13u^{24}+\cdots-6u^2+3u \\ -2u^{26}-27u^{24}+\cdots-2u-2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^3+2u \\ u^3+u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^{26}+13u^{24}+\cdots+2u-1 \\ u^{27}-3u^{26}+\cdots-3u-3 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{27}+12u^{25}+\cdots+6u^2-u \\ -2u^{27}-2u^{26}+\cdots-u^2-3u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -2u^{27}+u^{26}+\cdots+5u-1 \\ -u^{27}-13u^{25}+\cdots+u^2+u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 3u^{26}+u^{25}+\cdots+u+4 \\ u^{27}-u^{26}+\cdots-2u-1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{26}+u^{25}+\cdots-u+3 \\ u^{27}-2u^{26}+\cdots-2u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= -3u^{27}+7u^{26}-45u^{25}+92u^{24}-296u^{23}+524u^{22}-1112u^{21}+1672u^{20}-2578u^{19}+3181u^{18}-3623u^{17}+3391u^{16}-2511u^{15}+1187u^{14}+469u^{13}-1521u^{12}+2285u^{11}-1895u^{10}+1340u^9-421u^8-178u^7+418u^6-377u^5+213u^4-55u^3+2u^2+11u-5$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 10u^{27} + \cdots - 10u + 1$
c_2	$u^{28} + 14u^{26} + \cdots + 2u + 1$
c_3	$u^{28} - 2u^{27} + \cdots + 3u + 2$
c_4	$u^{28} + 3u^{26} + \cdots - 5u + 2$
c_5	$u^{28} + 15u^{26} + \cdots - 2u + 1$
c_6	$u^{28} + 3u^{26} + \cdots - u + 1$
c_7	$u^{28} + 2u^{27} + \cdots - 3u + 2$
c_8	$u^{28} + 2u^{27} + \cdots + 14u^2 + 1$
c_9	$u^{28} + 14u^{26} + \cdots - 2u + 1$
c_{10}, c_{11}	$u^{28} + 15u^{26} + \cdots + 2u + 1$
c_{12}	$u^{28} - 2u^{27} + \cdots + 14u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} - 4y^{27} + \cdots - 30y + 1$
c_2, c_9	$y^{28} + 28y^{27} + \cdots + 22y + 1$
c_3, c_7	$y^{28} + 18y^{27} + \cdots + 71y + 4$
c_4	$y^{28} + 6y^{27} + \cdots + 11y + 4$
c_5, c_{10}, c_{11}	$y^{28} + 30y^{27} + \cdots - 6y + 1$
c_6	$y^{28} + 6y^{27} + \cdots + 33y + 1$
c_8, c_{12}	$y^{28} + 22y^{27} + \cdots + 28y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.778529+0.035587I$ $a=\ \ 0.24886+2.25482I$ $b=\ \ 0.565210+0.978014I$	$-3.93399+4.15866I$	$-7.35805-8.15818I$
$u=-0.778529-0.035587I$ $a=\ \ 0.24886-2.25482I$ $b=\ \ 0.565210-0.978014I$	$-3.93399-4.15866I$	$-7.35805+8.15818I$
$u=\ \ 0.210222+1.217180I$ $a=-1.27922-0.71011I$ $b=-0.17565-1.94303I$	$-4.07314-1.83292I$	$-9.09138-2.53724I$
$u=\ \ 0.210222-1.217180I$ $a=-1.27922+0.71011I$ $b=-0.17565+1.94303I$	$-4.07314+1.83292I$	$-9.09138+2.53724I$
$u=\ \ 0.065094+1.253290I$ $a=-1.395570+0.043536I$ $b=\ \ 0.409308+0.734541I$	$3.68789+0.14613I$	$-1.61633-0.02582I$
$u=\ \ 0.065094-1.253290I$ $a=-1.395570-0.043536I$ $b=\ \ 0.409308-0.734541I$	$3.68789-0.14613I$	$-1.61633+0.02582I$
$u=-0.353305+1.212230I$ $a=-0.667718+0.778217I$ $b=-0.419531+1.065560I$	$-0.297546-0.059559I$	$-2.10687+3.72240I$
$u=-0.353305-1.212230I$ $a=-0.667718-0.778217I$ $b=-0.419531-1.065560I$	$-0.297546+0.059559I$	$-2.10687-3.72240I$
$u=-0.109867+1.303130I$ $a=-1.10193+1.28690I$ $b=\ \ 0.594337-0.532966I$	$2.87373-3.10091I$	$-0.94178+5.01865I$
$u=-0.109867-1.303130I$ $a=-1.10193-1.28690I$ $b=\ \ 0.594337+0.532966I$	$2.87373+3.10091I$	$-0.94178-5.01865I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.657676 + 0.189806I$ $a = -0.67657 - 2.83630I$ $b = 0.20458 - 1.72486I$	$-7.15292 - 1.18210I$	$-5.20751 + 5.59068I$
$u = 0.657676 - 0.189806I$ $a = -0.67657 + 2.83630I$ $b = 0.20458 + 1.72486I$	$-7.15292 + 1.18210I$	$-5.20751 - 5.59068I$
$u = -0.319927 + 1.295010I$ $a = 1.24413 - 1.54804I$ $b = -0.695097 - 0.907732I$	$0.21135 + 8.10164I$	$-3.85286 - 11.65103I$
$u = -0.319927 - 1.295010I$ $a = 1.24413 + 1.54804I$ $b = -0.695097 + 0.907732I$	$0.21135 - 8.10164I$	$-3.85286 + 11.65103I$
$u = 0.526728 + 0.314114I$ $a = 0.884783 - 0.478756I$ $b = -0.125715 + 0.662158I$	$1.02371 - 1.55335I$	$0.35772 + 2.80393I$
$u = 0.526728 - 0.314114I$ $a = 0.884783 + 0.478756I$ $b = -0.125715 - 0.662158I$	$1.02371 + 1.55335I$	$0.35772 - 2.80393I$
$u = -0.14266 + 1.40943I$ $a = 0.352307 - 0.274875I$ $b = 0.345115 + 0.582524I$	$4.11996 + 6.45098I$	$-2.73474 - 6.56598I$
$u = -0.14266 - 1.40943I$ $a = 0.352307 + 0.274875I$ $b = 0.345115 - 0.582524I$	$4.11996 - 6.45098I$	$-2.73474 + 6.56598I$
$u = 0.30687 + 1.39497I$ $a = 1.16214 + 0.86430I$ $b = -0.32218 + 1.54762I$	$-2.05813 - 4.77126I$	$-1.97602 + 1.45671I$
$u = 0.30687 - 1.39497I$ $a = 1.16214 - 0.86430I$ $b = -0.32218 - 1.54762I$	$-2.05813 + 4.77126I$	$-1.97602 - 1.45671I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.21634 + 1.41482I$ $a = -0.752783 + 0.841034I$ $b = 0.115990 - 0.537300I$	$6.54274 - 4.35709I$	$6.41774 + 0.I$
$u = 0.21634 - 1.41482I$ $a = -0.752783 - 0.841034I$ $b = 0.115990 + 0.537300I$	$6.54274 + 4.35709I$	$6.41774 + 0.I$
$u = 0.073163 + 0.534719I$ $a = -0.994839 + 0.505562I$ $b = -0.253177 + 0.928446I$	$1.08075 - 0.95344I$	$0.23996 + 1.39897I$
$u = 0.073163 - 0.534719I$ $a = -0.994839 - 0.505562I$ $b = -0.253177 - 0.928446I$	$1.08075 + 0.95344I$	$0.23996 - 1.39897I$
$u = -0.01763 + 1.61732I$ $a = 0.136878 - 0.273073I$ $b = 0.227311 - 0.991157I$	$8.85013 - 0.89694I$	$6.7097 - 12.9175I$
$u = -0.01763 - 1.61732I$ $a = 0.136878 + 0.273073I$ $b = 0.227311 + 0.991157I$	$8.85013 + 0.89694I$	$6.7097 + 12.9175I$
$u = -0.334174 + 0.117113I$ $a = -2.16046 + 1.55868I$ $b = -0.470510 - 0.604460I$	$-1.00494 + 4.65636I$	$-6.83956 - 7.09161I$
$u = -0.334174 - 0.117113I$ $a = -2.16046 - 1.55868I$ $b = -0.470510 + 0.604460I$	$-1.00494 - 4.65636I$	$-6.83956 + 7.09161I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{28}-10u^{27}+\cdots-10u+1)$ $\cdot(u^{125}-5u^{124}+\cdots+66970759u-9604921)$
c_2	$(u^{28}+14u^{26}+\cdots+2u+1)(u^{125}+u^{124}+\cdots+58283u+322681)$
c_3	$(u^{28}-2u^{27}+\cdots+3u+2)(u^{125}-3u^{124}+\cdots-3384u+306)$
c_4	$(u^{28}+3u^{26}+\cdots-5u+2)(u^{125}+u^{124}+\cdots+5145656u+1855180)$
c_5	$(u^{28}+15u^{26}+\cdots-2u+1)(u^{125}-u^{124}+\cdots+19u+23)$
c_6	$(u^{28}+3u^{26}+\cdots-u+1)(u^{125}-u^{124}+\cdots+11584u+704)$
c_7	$(u^{28}+2u^{27}+\cdots-3u+2)(u^{125}-3u^{124}+\cdots-3384u+306)$
c_8	$(u^{28}+2u^{27}+\cdots+14u^2+1)(u^{125}+3u^{124}+\cdots+3u+1)$
c_9	$(u^{28}+14u^{26}+\cdots-2u+1)(u^{125}+u^{124}+\cdots+58283u+322681)$
c_{10}, c_{11}	$(u^{28}+15u^{26}+\cdots+2u+1)(u^{125}-u^{124}+\cdots+19u+23)$
c_{12}	$(u^{28}-2u^{27}+\cdots+14u^2+1)(u^{125}+3u^{124}+\cdots+3u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{28} - 4y^{27} + \cdots - 30y + 1)$ $\cdot (y^{125} - 41y^{124} + \cdots + 3683462059155047y - 92254507416241)$
c_2, c_9	$(y^{28} + 28y^{27} + \cdots + 22y + 1)$ $\cdot (y^{125} + 95y^{124} + \cdots - 1169830550105y - 104123027761)$
c_3, c_7	$(y^{28} + 18y^{27} + \cdots + 71y + 4)$ $\cdot (y^{125} + 81y^{124} + \cdots - 2036412y - 93636)$
c_4	$(y^{28} + 6y^{27} + \cdots + 11y + 4)$ $\cdot (y^{125} - 27y^{124} + \cdots - 685380301864y - 3441692832400)$
c_5, c_{10}, c_{11}	$(y^{28} + 30y^{27} + \cdots - 6y + 1)(y^{125} + 113y^{124} + \cdots + 6847y - 529)$
c_6	$(y^{28} + 6y^{27} + \cdots + 33y + 1)$ $\cdot (y^{125} - 7y^{124} + \cdots + 22089728y - 495616)$
c_8, c_{12}	$(y^{28} + 22y^{27} + \cdots + 28y + 1)(y^{125} + 69y^{124} + \cdots - 111y - 1)$