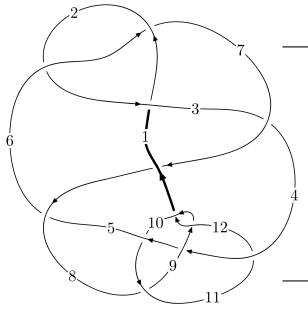
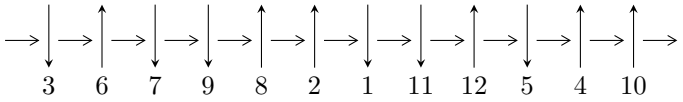
$12a_{0214}$ $(K12a_{0214})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle 1.93994 \times 10^{450} u^{129} + 4.30877 \times 10^{450} u^{128} + \cdots + 4.13780 \times 10^{449} b + 1.94502 \times 10^{450},$
$6.48985 \times 10^{449} u^{129} + 1.44403 \times 10^{450} u^{128} + \cdots + 2.06890 \times 10^{449} a + 4.51017 \times 10^{449},\ u^{130} + 3u^{129} + \cdots +$
$I_2^u = \langle b^2 - b + 1,\ a - 1,\ u - 1 \rangle$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 132 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. $\boldsymbol{I_1^u = \langle 1.94 \times 10^{450} u^{129} + 4.31 \times 10^{450} u^{128} + \cdots + 4.14 \times 10^{449} b + 1.95 \times 10^{450},\ 6.49 \times 10^{449} u^{129} + 1.44 \times 10^{450} u^{128} + \cdots + 2.07 \times 10^{449} a + 4.51 \times 10^{449},\ u^{130} + 3u^{129} + \cdots + 6u + 1 \rangle}$

(i) Arc colorings

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

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

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

$$a_4 = \begin{pmatrix} -3.13686u^{129} - 6.97970u^{128} + \cdots - 0.718419u - 2.17998 \\ -4.68833u^{129} - 10.4132u^{128} + \cdots - 25.8623u - 4.70060 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 0.688229u^{129} + 1.91659u^{128} + \cdots + 23.5319u + 2.80523 \\ -6.83080u^{129} - 15.1988u^{128} + \cdots - 38.4640u - 7.10686 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.178952u^{129} - 0.322850u^{128} + \cdots - 15.4701u - 2.97465 \\ -0.203119u^{129} - 0.342260u^{128} + \cdots + 3.55349u - 0.286047 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.127207u^{129} - 0.274547u^{128} + \cdots - 3.51528u - 1.21382 \\ 0.126131u^{129} + 0.262206u^{128} + \cdots + 3.00004u + 0.106749 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.00107554u^{129} - 0.0123410u^{128} + \cdots - 0.515235u - 1.10707 \\ 0.126131u^{129} + 0.262206u^{128} + \cdots + 3.00004u + 0.106749 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -1.80077u^{129} - 3.86071u^{128} + \cdots + 2.72723u - 1.64091 \\ -1.70303u^{129} - 3.14021u^{128} + \cdots - 10.6563u - 1.80268 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.417240u^{129} - 1.50730u^{128} + \cdots - 28.9400u - 3.28010 \\ 0.0678887u^{129} - 0.183675u^{128} + \cdots + 3.18011u - 0.444522 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -3.06909u^{129} - 6.85322u^{128} + \cdots - 4.64774u - 3.01184 \\ -2.12072u^{129} - 4.95178u^{128} + \cdots - 12.9002u - 2.74315 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 8.59696u^{129} + 20.3475u^{128} + \cdots + 46.5185u + 8.91533$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{130}+62u^{129}+\cdots+5u+1$
c_2, c_6	$u^{130}-2u^{129}+\cdots-5u+1$
c_3	$u^{130}+2u^{129}+\cdots+41643u+4113$
c_4	$u^{130}+4u^{129}+\cdots+u+1$
c_5	$u^{130}+14u^{129}+\cdots-2746727u+111833$
c_7	$u^{130}-5u^{129}+\cdots-58912u+6976$
c_8	$u^{130}-21u^{129}+\cdots-12u+4$
c_9, c_{12}	$u^{130}+3u^{129}+\cdots+6u+1$
c_{10}	$u^{130}-2u^{129}+\cdots-19u+1$
c_{11}	$u^{130}-4u^{129}+\cdots-1271u+131$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{130}+14y^{129}+\cdots+97y+1$
c_2, c_6	$y^{130}+62y^{129}+\cdots+5y+1$
c_3	$y^{130}-34y^{129}+\cdots-460845135y+16916769$
c_4	$y^{130}+22y^{129}+\cdots+5y+1$
c_5	$y^{130}+50y^{129}+\cdots-7595894910367y+12506619889$
c_7	$y^{130}+17y^{129}+\cdots+4190851968y+48664576$
c_8	$y^{130}-15y^{129}+\cdots-360y+16$
c_9, c_{12}	$y^{130}-81y^{129}+\cdots+30y+1$
c_{10}	$y^{130}-118y^{129}+\cdots+121y+1$
c_{11}	$y^{130}-130y^{129}+\cdots-1175543y+17161$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.749532 + 0.664227I$ $a = -0.871953 + 0.384851I$ $b = 0.502067 - 0.431748I$	$1.95298 + 0.77909I$	0
$u = 0.749532 - 0.664227I$ $a = -0.871953 - 0.384851I$ $b = 0.502067 + 0.431748I$	$1.95298 - 0.77909I$	0
$u = 0.961298 + 0.290000I$ $a = -1.080940 + 0.022623I$ $b = 0.0561571 + 0.0027518I$	$1.86525 + 0.92233I$	0
$u = 0.961298 - 0.290000I$ $a = -1.080940 - 0.022623I$ $b = 0.0561571 - 0.0027518I$	$1.86525 - 0.92233I$	0
$u = 0.997565 + 0.149599I$ $a = -3.28445 - 0.12377I$ $b = -0.374638 - 1.113690I$	$-2.60529 + 0.52783I$	0
$u = 0.997565 - 0.149599I$ $a = -3.28445 + 0.12377I$ $b = -0.374638 + 1.113690I$	$-2.60529 - 0.52783I$	0
$u = -0.968506 + 0.163873I$ $a = -2.16914 + 0.57550I$ $b = -1.45050 + 1.08479I$	$1.75057 + 1.14387I$	0
$u = -0.968506 - 0.163873I$ $a = -2.16914 - 0.57550I$ $b = -1.45050 - 1.08479I$	$1.75057 - 1.14387I$	0
$u = -0.995720 + 0.222833I$ $a = 2.03831 - 0.62029I$ $b = 1.25938 - 1.29158I$	$2.64549 - 3.86577I$	0
$u = -0.995720 - 0.222833I$ $a = 2.03831 + 0.62029I$ $b = 1.25938 + 1.29158I$	$2.64549 + 3.86577I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.253514+0.997845I$ $a=-0.351240+0.216973I$ $b=-0.076787-0.822116I$	$-3.08998+1.62477I$	0
$u=-0.253514-0.997845I$ $a=-0.351240-0.216973I$ $b=-0.076787+0.822116I$	$-3.08998-1.62477I$	0
$u=-0.977192+0.341390I$ $a=-1.85611+0.59447I$ $b=-0.79872+1.39391I$	$-3.64756-3.52766I$	0
$u=-0.977192-0.341390I$ $a=-1.85611-0.59447I$ $b=-0.79872-1.39391I$	$-3.64756+3.52766I$	0
$u=1.034360+0.075510I$ $a=3.53031-0.10655I$ $b=0.669756+0.640893I$	$2.83600+1.66368I$	0
$u=1.034360-0.075510I$ $a=3.53031+0.10655I$ $b=0.669756-0.640893I$	$2.83600-1.66368I$	0
$u=1.030110+0.130980I$ $a=3.41041+0.07777I$ $b=0.609353+1.033790I$	$1.61147+3.27657I$	0
$u=1.030110-0.130980I$ $a=3.41041-0.07777I$ $b=0.609353-1.033790I$	$1.61147-3.27657I$	0
$u=0.328696+0.898113I$ $a=0.420332-0.284612I$ $b=-1.007830-0.093419I$	$0.60196+6.82261I$	0
$u=0.328696-0.898113I$ $a=0.420332+0.284612I$ $b=-1.007830+0.093419I$	$0.60196-6.82261I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.038030 + 0.147285I$ $a = -3.42187 - 0.13699I$ $b = -0.642604 - 1.156970I$	$-0.71281 + 8.13527I$	0
$u = 1.038030 - 0.147285I$ $a = -3.42187 + 0.13699I$ $b = -0.642604 + 1.156970I$	$-0.71281 - 8.13527I$	0
$u = -0.000698 + 1.049920I$ $a = 0.0343799 + 0.0694135I$ $b = -0.762613 - 0.819135I$	$-0.76360 + 1.63337I$	0
$u = -0.000698 - 1.049920I$ $a = 0.0343799 - 0.0694135I$ $b = -0.762613 + 0.819135I$	$-0.76360 - 1.63337I$	0
$u = 1.052110 + 0.040289I$ $a = -3.70281 + 0.10225I$ $b = -0.802349 - 0.356302I$	$1.64097 - 2.69111I$	0
$u = 1.052110 - 0.040289I$ $a = -3.70281 - 0.10225I$ $b = -0.802349 + 0.356302I$	$1.64097 + 2.69111I$	0
$u = -0.308603 + 1.013000I$ $a = 0.406602 - 0.292542I$ $b = -0.087122 + 0.849118I$	$-5.67692 - 2.95307I$	0
$u = -0.308603 - 1.013000I$ $a = 0.406602 + 0.292542I$ $b = -0.087122 - 0.849118I$	$-5.67692 + 2.95307I$	0
$u = -1.028110 + 0.311386I$ $a = 1.90194 - 0.65942I$ $b = 0.97779 - 1.54127I$	$1.09535 - 6.30085I$	0
$u = -1.028110 - 0.311386I$ $a = 1.90194 + 0.65942I$ $b = 0.97779 + 1.54127I$	$1.09535 + 6.30085I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.044560+0.333444I$ $a=-1.87493+0.68078I$ $b=-0.91797+1.63411I$	$-1.24102-11.41750I$	0
$u=-1.044560-0.333444I$ $a=-1.87493-0.68078I$ $b=-0.91797-1.63411I$	$-1.24102+11.41750I$	0
$u=0.883723+0.167045I$ $a=2.90602+0.27453I$ $b=-0.223286+1.021670I$	$-2.88331+0.66419I$	0
$u=0.883723-0.167045I$ $a=2.90602-0.27453I$ $b=-0.223286-1.021670I$	$-2.88331-0.66419I$	0
$u=-0.247591+1.073740I$ $a=0.269586-0.308543I$ $b=0.089589+1.050060I$	$-6.93321+4.86901I$	0
$u=-0.247591-1.073740I$ $a=0.269586+0.308543I$ $b=0.089589-1.050060I$	$-6.93321-4.86901I$	0
$u=0.390854+0.791811I$ $a=-0.504519+0.425158I$ $b=0.866825-0.042954I$	$2.26305+2.23337I$	0
$u=0.390854-0.791811I$ $a=-0.504519-0.425158I$ $b=0.866825+0.042954I$	$2.26305-2.23337I$	0
$u=-0.044947+1.123350I$ $a=-0.030537-0.197904I$ $b=0.740708+1.064570I$	$0.01779+6.20260I$	0
$u=-0.044947-1.123350I$ $a=-0.030537+0.197904I$ $b=0.740708-1.064570I$	$0.01779-6.20260I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.748193+0.441462I$ $a=\ \ 1.61678-0.31198I$ $b=\ \ 0.288025-0.755850I$	$-5.43884-3.19405I$	0
$u=-0.748193-0.441462I$ $a=\ \ 1.61678+0.31198I$ $b=\ \ 0.288025+0.755850I$	$-5.43884+3.19405I$	0
$u=-0.773867+0.390257I$ $a=\ \ 0.277986+0.438230I$ $b=\ \ 0.056039+1.165640I$	$-4.26513-8.43825I$	0
$u=-0.773867-0.390257I$ $a=\ \ 0.277986-0.438230I$ $b=\ \ 0.056039-1.165640I$	$-4.26513+8.43825I$	0
$u=-0.852307+0.061470I$ $a=-0.210768-1.318300I$ $b=-0.18942-1.68517I$	$1.10773-2.44446I$	0
$u=-0.852307-0.061470I$ $a=-0.210768+1.318300I$ $b=-0.18942+1.68517I$	$1.10773+2.44446I$	0
$u=\ \ 0.818290+0.804472I$ $a=\ \ 0.850507-0.315048I$ $b=-0.587697+0.724409I$	$-0.23288-3.80920I$	0
$u=\ \ 0.818290-0.804472I$ $a=\ \ 0.850507+0.315048I$ $b=-0.587697-0.724409I$	$-0.23288+3.80920I$	0
$u=\ \ 0.812762+0.193755I$ $a=\ \ 2.77598+0.45380I$ $b=-0.531184+0.968139I$	$-1.23884-6.87227I$	0
$u=\ \ 0.812762-0.193755I$ $a=\ \ 2.77598-0.45380I$ $b=-0.531184-0.968139I$	$-1.23884+6.87227I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.770981+0.321204I$ $a=-0.267104-0.610922I$ $b=-0.144345-1.229580I$	$-1.57828-3.67286I$	0
$u=-0.770981-0.321204I$ $a=-0.267104+0.610922I$ $b=-0.144345+1.229580I$	$-1.57828+3.67286I$	0
$u=\ \ 0.809501+0.148398I$ $a=-2.68553-0.36658I$ $b=\ \ 0.447773-0.823256I$	$1.08788-2.14422I$	0
$u=\ \ 0.809501-0.148398I$ $a=-2.68553+0.36658I$ $b=\ \ 0.447773+0.823256I$	$1.08788+2.14422I$	0
$u=-0.612842+0.542603I$ $a=\ \ 1.374370-0.173773I$ $b=\ \ 0.053565-0.427204I$	$-4.66525+4.55914I$	0
$u=-0.612842-0.542603I$ $a=\ \ 1.374370+0.173773I$ $b=\ \ 0.053565+0.427204I$	$-4.66525-4.55914I$	0
$u=-0.140788+1.173940I$ $a=-0.047975+0.337395I$ $b=-0.49629-1.33236I$	$-6.04376+5.27226I$	0
$u=-0.140788-1.173940I$ $a=-0.047975-0.337395I$ $b=-0.49629+1.33236I$	$-6.04376-5.27226I$	0
$u=-0.096709+1.190760I$ $a=-0.019172-0.321659I$ $b=\ \ 0.66614+1.34067I$	$-1.57307+8.12778I$	0
$u=-0.096709-1.190760I$ $a=-0.019172+0.321659I$ $b=\ \ 0.66614-1.34067I$	$-1.57307-8.12778I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.104792+1.213600I$ $a=\ \ 0.027843+0.355509I$ $b=-0.66769-1.43041I$	$-3.95604+13.11070I$	0
$u=-0.104792-1.213600I$ $a=\ \ 0.027843-0.355509I$ $b=-0.66769+1.43041I$	$-3.95604-13.11070I$	0
$u=-1.192160+0.355697I$ $a=-1.336410-0.412673I$ $b=-1.176380-0.213759I$	$1.92535-4.92635I$	0
$u=-1.192160-0.355697I$ $a=-1.336410+0.412673I$ $b=-1.176380+0.213759I$	$1.92535+4.92635I$	0
$u=\ \ 0.998683+0.752187I$ $a=\ \ 0.883674-0.312327I$ $b=-0.150347+0.864242I$	$-1.66663+3.50263I$	0
$u=\ \ 0.998683-0.752187I$ $a=\ \ 0.883674+0.312327I$ $b=-0.150347-0.864242I$	$-1.66663-3.50263I$	0
$u=-1.233710+0.251608I$ $a=-1.50115-0.59324I$ $b=-1.65071-0.54779I$	$5.17809+1.63501I$	0
$u=-1.233710-0.251608I$ $a=-1.50115+0.59324I$ $b=-1.65071+0.54779I$	$5.17809-1.63501I$	0
$u=-0.658777+0.332610I$ $a=-0.005057+0.582017I$ $b=\ \ 0.072587+1.322340I$	$-5.71245-0.34252I$	0
$u=-0.658777-0.332610I$ $a=-0.005057-0.582017I$ $b=\ \ 0.072587-1.322340I$	$-5.71245+0.34252I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.246970+0.284356I$ $a=\ \ 1.49821+0.51957I$ $b=\ \ 1.62719+0.36475I$	$6.94986-3.42908I$	0
$u=-1.246970-0.284356I$ $a=\ \ 1.49821-0.51957I$ $b=\ \ 1.62719-0.36475I$	$6.94986+3.42908I$	0
$u=-0.592491+0.396989I$ $a=-1.59933+0.04358I$ $b=-0.339061+0.402395I$	$-1.95725+0.30823I$	0
$u=-0.592491-0.396989I$ $a=-1.59933-0.04358I$ $b=-0.339061-0.402395I$	$-1.95725-0.30823I$	0
$u=-1.283670+0.345260I$ $a=\ \ 1.52690+0.37920I$ $b=\ \ 1.62326-0.03362I$	$7.11434-5.98173I$	0
$u=-1.283670-0.345260I$ $a=\ \ 1.52690-0.37920I$ $b=\ \ 1.62326+0.03362I$	$7.11434+5.98173I$	0
$u=-1.202700+0.573365I$ $a=\ \ 1.279780-0.054560I$ $b=\ \ 0.306679-0.673989I$	$-2.83859-2.68603I$	0
$u=-1.202700-0.573365I$ $a=\ \ 1.279780+0.054560I$ $b=\ \ 0.306679+0.673989I$	$-2.83859+2.68603I$	0
$u=-1.231540+0.558015I$ $a=-1.343070+0.028036I$ $b=-0.494661+0.767799I$	$0.00465-7.17572I$	0
$u=-1.231540-0.558015I$ $a=-1.343070-0.028036I$ $b=-0.494661-0.767799I$	$0.00465+7.17572I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.303180+0.370409I$ $a=-1.55027-0.32151I$ $b=-1.63696+0.22480I$	$5.49205-11.00070I$	0
$u=-1.303180-0.370409I$ $a=-1.55027+0.32151I$ $b=-1.63696-0.22480I$	$5.49205+11.00070I$	0
$u=-0.071932+0.631967I$ $a=-0.443623-0.591446I$ $b=-0.428077-0.178934I$	$-1.45737+1.34564I$	$-5.16191-2.88028I$
$u=-0.071932-0.631967I$ $a=-0.443623+0.591446I$ $b=-0.428077+0.178934I$	$-1.45737-1.34564I$	$-5.16191+2.88028I$
$u=0.632889+0.056471I$ $a=-1.96479+0.65777I$ $b=0.533131+0.222533I$	$2.00334+0.95224I$	$6.67676-3.59964I$
$u=0.632889-0.056471I$ $a=-1.96479-0.65777I$ $b=0.533131-0.222533I$	$2.00334-0.95224I$	$6.67676+3.59964I$
$u=-1.247660+0.591008I$ $a=1.370320-0.099055I$ $b=0.379186-0.985063I$	$-3.77053-10.74180I$	0
$u=-1.247660-0.591008I$ $a=1.370320+0.099055I$ $b=0.379186+0.985063I$	$-3.77053+10.74180I$	0
$u=-1.32444+0.53206I$ $a=-1.53535-0.00421I$ $b=-1.04502+1.13850I$	$3.30414-7.21217I$	0
$u=-1.32444-0.53206I$ $a=-1.53535+0.00421I$ $b=-1.04502-1.13850I$	$3.30414+7.21217I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.33615+0.55621I$ $a=\ \ 1.55324-0.04506I$ $b=\ \ 0.97391-1.32361I$	$4.05223-12.07700I$	0
$u=-1.33615-0.55621I$ $a=\ \ 1.55324+0.04506I$ $b=\ \ 0.97391+1.32361I$	$4.05223+12.07700I$	0
$u=\ \ 1.22734+0.77535I$ $a=-0.872026+0.366858I$ $b=-0.509193-1.125840I$	$-0.93303+3.18385I$	0
$u=\ \ 1.22734-0.77535I$ $a=-0.872026-0.366858I$ $b=-0.509193+1.125840I$	$-0.93303-3.18385I$	0
$u=-1.32436+0.59926I$ $a=-1.52322+0.12732I$ $b=-0.66644+1.46827I$	$-2.30658-11.45910I$	0
$u=-1.32436-0.59926I$ $a=-1.52322-0.12732I$ $b=-0.66644-1.46827I$	$-2.30658+11.45910I$	0
$u=-1.34445+0.59153I$ $a=\ \ 1.56362-0.11503I$ $b=\ \ 0.81208-1.55092I$	$2.3600-14.3318I$	0
$u=-1.34445-0.59153I$ $a=\ \ 1.56362+0.11503I$ $b=\ \ 0.81208+1.55092I$	$2.3600+14.3318I$	0
$u=-1.34956+0.60118I$ $a=-1.57223+0.13448I$ $b=-0.77949+1.63095I$	$-0.0250-19.4151I$	0
$u=-1.34956-0.60118I$ $a=-1.57223-0.13448I$ $b=-0.77949-1.63095I$	$-0.0250+19.4151I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.32250 + 0.67438I$ $a = 0.805550 - 0.393794I$ $b = 0.860338 + 0.772288I$	$4.67423 + 3.97595I$	0
$u = 1.32250 - 0.67438I$ $a = 0.805550 + 0.393794I$ $b = 0.860338 - 0.772288I$	$4.67423 - 3.97595I$	0
$u = 1.35867 + 0.60985I$ $a = -0.756330 + 0.396468I$ $b = -0.950442 - 0.524798I$	$3.58638 - 0.58250I$	0
$u = 1.35867 - 0.60985I$ $a = -0.756330 - 0.396468I$ $b = -0.950442 + 0.524798I$	$3.58638 + 0.58250I$	0
$u = 1.29343 + 0.76579I$ $a = 0.859495 - 0.396090I$ $b = 0.758224 + 1.115340I$	$3.42677 + 5.85292I$	0
$u = 1.29343 - 0.76579I$ $a = 0.859495 + 0.396090I$ $b = 0.758224 - 1.115340I$	$3.42677 - 5.85292I$	0
$u = 1.29726 + 0.79632I$ $a = -0.874562 + 0.401465I$ $b = -0.76452 - 1.23664I$	$1.13327 + 10.78210I$	0
$u = 1.29726 - 0.79632I$ $a = -0.874562 - 0.401465I$ $b = -0.76452 + 1.23664I$	$1.13327 - 10.78210I$	0
$u = 1.49683 + 0.33974I$ $a = 0.465832 - 0.405345I$ $b = 0.910390 - 0.488554I$	$5.29933 - 0.31811I$	0
$u = 1.49683 - 0.33974I$ $a = 0.465832 + 0.405345I$ $b = 0.910390 + 0.488554I$	$5.29933 + 0.31811I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 1.47937 + 0.41071I$ $a = -0.547428 + 0.416119I$ $b = -1.029580 + 0.271272I$	$3.96857 + 4.25353I$	0
$u = \ 1.47937 - 0.41071I$ $a = -0.547428 - 0.416119I$ $b = -1.029580 - 0.271272I$	$3.96857 - 4.25353I$	0
$u = \ 1.53731 + 0.13941I$ $a = -0.200164 + 0.389009I$ $b = -0.426811 + 0.930576I$	$0.242224 + 0.401680I$	0
$u = \ 1.53731 - 0.13941I$ $a = -0.200164 - 0.389009I$ $b = -0.426811 - 0.930576I$	$0.242224 - 0.401680I$	0
$u = -0.316222 + 0.319706I$ $a = \ 1.012340 - 0.774832I$ $b = -0.303654 - 1.348990I$	$-5.31921 + 0.42903I$	$-7.55664 + 1.65296I$
$u = -0.316222 - 0.319706I$ $a = \ 1.012340 + 0.774832I$ $b = -0.303654 + 1.348990I$	$-5.31921 - 0.42903I$	$-7.55664 - 1.65296I$
$u = \ 0.430188 + 0.055652I$ $a = \ 2.34176 + 1.17375I$ $b = -0.791735 + 0.058136I$	$0.41480 + 3.36963I$	$1.73095 - 2.15555I$
$u = \ 0.430188 - 0.055652I$ $a = \ 2.34176 - 1.17375I$ $b = -0.791735 - 0.058136I$	$0.41480 - 3.36963I$	$1.73095 + 2.15555I$
$u = -0.216354 + 0.373867I$ $a = \ 1.43865 - 0.53124I$ $b = -0.49438 - 1.35783I$	$-3.42694 + 8.32113I$	$-4.26369 - 4.51840I$
$u = -0.216354 - 0.373867I$ $a = \ 1.43865 + 0.53124I$ $b = -0.49438 + 1.35783I$	$-3.42694 - 8.32113I$	$-4.26369 + 4.51840I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.56272 + 0.24204I$ $a = 0.327838 - 0.448911I$ $b = 0.774719 - 0.868021I$	$4.38648 - 2.09982I$	0
$u = 1.56272 - 0.24204I$ $a = 0.327838 + 0.448911I$ $b = 0.774719 + 0.868021I$	$4.38648 + 2.09982I$	0
$u = -0.211422 + 0.322262I$ $a = -1.49471 + 0.77211I$ $b = 0.453218 + 1.268460I$	$-0.98554 + 3.40975I$	$-1.15050 - 1.11653I$
$u = -0.211422 - 0.322262I$ $a = -1.49471 - 0.77211I$ $b = 0.453218 - 1.268460I$	$-0.98554 - 3.40975I$	$-1.15050 + 1.11653I$
$u = 1.60158 + 0.22519I$ $a = -0.297088 + 0.492533I$ $b = -0.787102 + 1.022290I$	$2.17268 - 6.94534I$	0
$u = 1.60158 - 0.22519I$ $a = -0.297088 - 0.492533I$ $b = -0.787102 - 1.022290I$	$2.17268 + 6.94534I$	0
$u = -0.074715 + 0.177976I$ $a = -2.85635 + 1.66941I$ $b = 0.442193 + 0.865512I$	$0.66682 + 1.85845I$	$0.98885 - 2.90243I$
$u = -0.074715 - 0.177976I$ $a = -2.85635 - 1.66941I$ $b = 0.442193 - 0.865512I$	$0.66682 - 1.85845I$	$0.98885 + 2.90243I$
$u = 0.086759 + 0.132561I$ $a = 4.38365 + 0.49941I$ $b = -0.624653 - 0.496832I$	$-0.24223 - 2.30428I$	$-0.10219 + 3.82754I$
$u = 0.086759 - 0.132561I$ $a = 4.38365 - 0.49941I$ $b = -0.624653 + 0.496832I$	$-0.24223 + 2.30428I$	$-0.10219 - 3.82754I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4b + 1$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	1.00000		
$a=$	1.00000	$1.64493-2.02988I$	$3.00000+3.46410I$
$b=$	$0.500000+0.866025I$		
$u=$	1.00000		
$a=$	1.00000	$1.64493+2.02988I$	$3.00000-3.46410I$
$b=$	$0.500000-0.866025I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^2-u+1)(u^{130}+62u^{129}+\cdots+5u+1)$
c_2	$(u^2+u+1)(u^{130}-2u^{129}+\cdots-5u+1)$
c_3	$(u^2-u+1)(u^{130}+2u^{129}+\cdots+41643u+4113)$
c_4	$(u^2-u+1)(u^{130}+4u^{129}+\cdots+u+1)$
c_5	$(u^2-u+1)(u^{130}+14u^{129}+\cdots-2746727u+111833)$
c_6	$(u^2-u+1)(u^{130}-2u^{129}+\cdots-5u+1)$
c_7	$u^2(u^{130}-5u^{129}+\cdots-58912u+6976)$
c_8	$u^2(u^{130}-21u^{129}+\cdots-12u+4)$
c_9	$((u+1)^2)(u^{130}+3u^{129}+\cdots+6u+1)$
c_{10}	$(u^2+u+1)(u^{130}-2u^{129}+\cdots-19u+1)$
c_{11}	$(u^2+u+1)(u^{130}-4u^{129}+\cdots-1271u+131)$
c_{12}	$((u-1)^2)(u^{130}+3u^{129}+\cdots+6u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^2+y+1)(y^{130}+14y^{129}+\cdots+97y+1)$
c_2, c_6	$(y^2+y+1)(y^{130}+62y^{129}+\cdots+5y+1)$
c_3	$(y^2+y+1)(y^{130}-34y^{129}+\cdots-4.60845\times10^8y+1.69168\times10^7)$
c_4	$(y^2+y+1)(y^{130}+22y^{129}+\cdots+5y+1)$
c_5	$(y^2+y+1)(y^{130}+50y^{129}+\cdots-7.59589\times10^{12}y+1.25066\times10^{10})$
c_7	$y^2(y^{130}+17y^{129}+\cdots+4.19085\times10^9y+4.86646\times10^7)$
c_8	$y^2(y^{130}-15y^{129}+\cdots-360y+16)$
c_9, c_{12}	$((y-1)^2)(y^{130}-81y^{129}+\cdots+30y+1)$
c_{10}	$(y^2+y+1)(y^{130}-118y^{129}+\cdots+121y+1)$
c_{11}	$(y^2+y+1)(y^{130}-130y^{129}+\cdots-1175543y+17161)$