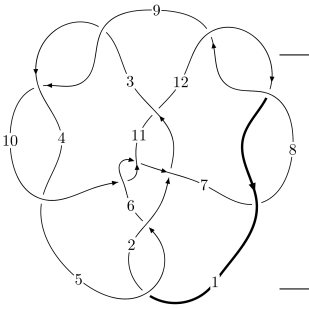
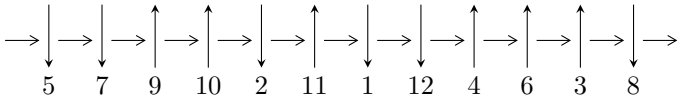
$12a_{1259}$ $(K12a_{1259})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 5.69308 \times 10^{303} u^{97} - 1.06736 \times 10^{304} u^{96} + \cdots + 4.39641 \times 10^{304} b + 1.65833 \times 10^{306},$$
$$- 1.21815 \times 10^{306} u^{97} - 1.21298 \times 10^{306} u^{96} + \cdots + 3.47317 \times 10^{306} a + 1.09802 \times 10^{308},$$
$$u^{98} + u^{97} + \cdots - 192u + 79 \rangle$$
$$I_2^u = \langle -1240865 u^{26} + 78914 u^{25} + \cdots + 933437 b + 295188,$$
$$- 8955091 u^{26} - 9064939 u^{25} + \cdots + 933437 a - 23614626,\ u^{27} - 9u^{25} + \cdots + 9u^2 - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 125 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. $\boldsymbol{I_1^u = \langle 5.69 \times 10^{303} u^{97} - 1.07 \times 10^{304} u^{96} + \cdots + 4.40 \times 10^{304} b + 1.66 \times 10^{306},\ -1.22 \times 10^{306} u^{97} - 1.21 \times 10^{306} u^{96} + \cdots + 3.47 \times 10^{306} a + 1.10 \times 10^{308},\ u^{98} + u^{97} + \cdots - 192u + 79 \rangle}$

(i) Arc colorings

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

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

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

$$a_2 = \begin{pmatrix} 0.350731u^{97} + 0.349244u^{96} + \cdots + 34.5787u - 31.6144 \\ -0.129494u^{97} + 0.242779u^{96} + \cdots + 63.5735u - 37.7201 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.635075u^{97} + 0.290148u^{96} + \cdots - 26.8955u - 14.5431 \\ -0.154509u^{97} + 0.303320u^{96} + \cdots + 90.5028u - 47.7805 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.279601u^{97} - 0.295570u^{96} + \cdots + 17.3434u + 33.7179 \\ -0.0375579u^{97} - 0.0703430u^{96} + \cdots - 8.10495u + 0.408463 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.223768u^{97} + 0.576551u^{96} + \cdots + 72.9539u - 63.0265 \\ 0.0190934u^{97} - 0.103748u^{96} + \cdots - 38.7659u + 19.0595 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0147025u^{97} - 0.0896428u^{96} + \cdots - 44.5524u + 43.9400 \\ 0.0261589u^{97} - 0.0145128u^{96} + \cdots - 28.2070u + 1.37104 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.204674u^{97} + 0.680299u^{96} + \cdots + 111.720u - 82.0860 \\ 0.0190934u^{97} - 0.103748u^{96} + \cdots - 38.7659u + 19.0595 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.289035u^{97} + 0.180873u^{96} + \cdots + 111.655u - 64.0028 \\ 0.140591u^{97} - 0.182545u^{96} + \cdots - 76.3010u + 39.1583 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.136447u^{97} + 0.413129u^{96} + \cdots + 145.083u - 58.1068 \\ 0.238402u^{97} + 0.490572u^{96} + \cdots + 48.6728u - 44.2169 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.47472u^{97} - 1.63887u^{96} + \cdots + 179.736u + 58.6258$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{98} - 24u^{96} + \cdots + 179u - 49$
c_2	$u^{98} - u^{97} + \cdots - 175987u - 451$
c_3, c_4, c_9	$u^{98} - u^{97} + \cdots - 224u - 32$
c_6, c_{10}	$u^{98} + u^{97} + \cdots - 192u + 79$
c_7, c_8, c_{12}	$u^{98} + 2u^{97} + \cdots - 36u + 19$
c_{11}	$u^{98} - 5u^{97} + \cdots - 215663520u + 43957163$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{98} - 48y^{97} + \cdots - 56639y + 2401$
c_2	$y^{98} + 23y^{97} + \cdots - 31146246201y + 203401$
c_3, c_4, c_9	$y^{98} - 109y^{97} + \cdots - 160768y + 1024$
c_6, c_{10}	$y^{98} - 67y^{97} + \cdots - 74626y + 6241$
c_7, c_8, c_{12}	$y^{98} + 106y^{97} + \cdots + 12536y + 361$
c_{11}	$y^{98} - 57y^{97} + \cdots - 68808164574318740y + 1932232179008569$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.147644+0.991105I$ $a=\ \ 0.428223+0.979194I$ $b=-0.083114+1.402650I$	$-2.74725+3.13007I$	0
$u=-0.147644-0.991105I$ $a=\ \ 0.428223-0.979194I$ $b=-0.083114-1.402650I$	$-2.74725-3.13007I$	0
$u=-0.580157+0.788031I$ $a=\ \ 1.330990+0.437564I$ $b=\ \ 0.250861+0.849982I$	$8.50650+1.10397I$	0
$u=-0.580157-0.788031I$ $a=\ \ 1.330990-0.437564I$ $b=\ \ 0.250861-0.849982I$	$8.50650-1.10397I$	0
$u=\ \ 0.969739+0.067480I$ $a=\ \ 0.855963-0.493667I$ $b=-0.64297-1.34543I$	$1.110890+0.358653I$	0
$u=\ \ 0.969739-0.067480I$ $a=\ \ 0.855963+0.493667I$ $b=-0.64297+1.34543I$	$1.110890-0.358653I$	0
$u=-0.982662+0.303550I$ $a=-0.744825-0.890821I$ $b=\ \ 0.325588-1.109070I$	$-0.64154-2.71485I$	0
$u=-0.982662-0.303550I$ $a=-0.744825+0.890821I$ $b=\ \ 0.325588+1.109070I$	$-0.64154+2.71485I$	0
$u=\ \ 1.02854$ $a=-1.64694$ $b=\ \ 1.45660$	2.65903	0
$u=-1.031350+0.102678I$ $a=\ \ 1.39462+0.63971I$ $b=-1.40148+0.67569I$	$6.05602-4.27471I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.031350-0.102678I$ $a=\ \ 1.39462-0.63971I$ $b=-1.40148-0.67569I$	$6.05602+4.27471I$	0
$u=-1.017430+0.216044I$ $a=\ \ 1.07032+0.98555I$ $b=-1.17396+1.08732I$	$6.07548-4.43283I$	0
$u=-1.017430-0.216044I$ $a=\ \ 1.07032-0.98555I$ $b=-1.17396-1.08732I$	$6.07548+4.43283I$	0
$u=\ \ 0.951483+0.470279I$ $a=-0.460130+1.277270I$ $b=\ \ 0.81690+1.41346I$	$3.57337+5.44735I$	0
$u=\ \ 0.951483-0.470279I$ $a=-0.460130-1.277270I$ $b=\ \ 0.81690-1.41346I$	$3.57337-5.44735I$	0
$u=\ \ 1.059930+0.107788I$ $a=-0.638112-0.319931I$ $b=\ \ 0.186539-0.221069I$	$2.11130+0.19001I$	0
$u=\ \ 1.059930-0.107788I$ $a=-0.638112+0.319931I$ $b=\ \ 0.186539+0.221069I$	$2.11130-0.19001I$	0
$u=-1.066920+0.069450I$ $a=-0.649537+0.367157I$ $b=\ \ 0.70174+1.97988I$	$8.50659-0.46621I$	0
$u=-1.066920-0.069450I$ $a=-0.649537-0.367157I$ $b=\ \ 0.70174-1.97988I$	$8.50659+0.46621I$	0
$u=-0.022975+0.918534I$ $a=-0.469657+1.282630I$ $b=-0.074903+1.400880I$	$3.25898-6.63136I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.022975-0.918534I$ $a=-0.469657-1.282630I$ $b=-0.074903-1.400880I$	$3.25898+6.63136I$	0
$u=-0.952127+0.513412I$ $a=\ \ 1.125300+0.318980I$ $b=\ \ 0.042890+0.753251I$	$6.32720+2.24621I$	0
$u=-0.952127-0.513412I$ $a=\ \ 1.125300-0.318980I$ $b=\ \ 0.042890-0.753251I$	$6.32720-2.24621I$	0
$u=\ \ 1.042950+0.359828I$ $a=\ \ 0.521935-1.141640I$ $b=-0.284407-0.974890I$	$3.77548+4.91175I$	0
$u=\ \ 1.042950-0.359828I$ $a=\ \ 0.521935+1.141640I$ $b=-0.284407+0.974890I$	$3.77548-4.91175I$	0
$u=-0.935588+0.596452I$ $a=\ \ 0.209599+1.336450I$ $b=-0.71696+1.50993I$	$9.56242-6.26495I$	0
$u=-0.935588-0.596452I$ $a=\ \ 0.209599-1.336450I$ $b=-0.71696-1.50993I$	$9.56242+6.26495I$	0
$u=\ \ 0.283477+0.837190I$ $a=\ \ 0.918914-0.242800I$ $b=\ \ 0.12959-1.63928I$	$12.78970+4.85078I$	0
$u=\ \ 0.283477-0.837190I$ $a=\ \ 0.918914+0.242800I$ $b=\ \ 0.12959+1.63928I$	$12.78970-4.85078I$	0
$u=-1.106800+0.279137I$ $a=\ \ 0.394983-0.594836I$ $b=-0.048083-0.550544I$	$3.25698-3.46925I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.106800-0.279137I$ $a=\ \ 0.394983+0.594836I$ $b=-0.048083+0.550544I$	$3.25698+3.46925I$	0
$u=-0.531479+0.670358I$ $a=-0.612662-1.101300I$ $b=\ \ 1.26914-0.84801I$	$0.93590-2.76801I$	0
$u=-0.531479-0.670358I$ $a=-0.612662+1.101300I$ $b=\ \ 1.26914+0.84801I$	$0.93590+2.76801I$	0
$u=\ \ 0.594310+0.611420I$ $a=-1.351400+0.376376I$ $b=-0.248207+0.834678I$	$2.54743-1.15983I$	0
$u=\ \ 0.594310-0.611420I$ $a=-1.351400-0.376376I$ $b=-0.248207-0.834678I$	$2.54743+1.15983I$	0
$u=-1.165460+0.037280I$ $a=\ \ 0.888037-0.660491I$ $b=-0.0059516-0.1246310I$	$6.62448+3.13290I$	0
$u=-1.165460-0.037280I$ $a=\ \ 0.888037+0.660491I$ $b=-0.0059516+0.1246310I$	$6.62448-3.13290I$	0
$u=\ \ 0.526974+1.056170I$ $a=-0.388917+0.606673I$ $b=\ \ 0.47973+1.42246I$	$-1.26184+1.79008I$	0
$u=\ \ 0.526974-1.056170I$ $a=-0.388917-0.606673I$ $b=\ \ 0.47973-1.42246I$	$-1.26184-1.79008I$	0
$u=\ \ 0.818395$ $a=-1.10006$ $b=-0.366395$	2.19538	3.99030

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.051200+0.546365I$ $a=\ \ 0.223779+0.601295I$ $b=-1.14635+1.52843I$	$8.74420-1.92599I$	0
$u=-1.051200-0.546365I$ $a=\ \ 0.223779-0.601295I$ $b=-1.14635-1.52843I$	$8.74420+1.92599I$	0
$u=\ \ 1.185350+0.125017I$ $a=-0.825354+0.499077I$ $b=\ \ 2.03379+1.47819I$	$14.9038+5.4131I$	0
$u=\ \ 1.185350-0.125017I$ $a=-0.825354-0.499077I$ $b=\ \ 2.03379-1.47819I$	$14.9038-5.4131I$	0
$u=\ \ 1.187550+0.338186I$ $a=-0.512045-0.742522I$ $b=-0.142592-0.557432I$	$10.06030+5.61206I$	0
$u=\ \ 1.187550-0.338186I$ $a=-0.512045+0.742522I$ $b=-0.142592+0.557432I$	$10.06030-5.61206I$	0
$u=-1.117930+0.589731I$ $a=-0.400399-0.298404I$ $b=-0.096130-1.338790I$	$2.91728-2.13489I$	0
$u=-1.117930-0.589731I$ $a=-0.400399+0.298404I$ $b=-0.096130+1.338790I$	$2.91728+2.13489I$	0
$u=-0.093270+1.268720I$ $a=-0.558781-0.803792I$ $b=-0.44261-1.65262I$	$11.0488+10.0618I$	0
$u=-0.093270-1.268720I$ $a=-0.558781+0.803792I$ $b=-0.44261+1.65262I$	$11.0488-10.0618I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.458681+1.206590I$ $a=-0.558461-0.407742I$ $b=-0.19589-1.78208I$	$4.57573-1.08706I$	0
$u=-0.458681-1.206590I$ $a=-0.558461+0.407742I$ $b=-0.19589+1.78208I$	$4.57573+1.08706I$	0
$u=1.255990+0.333837I$ $a=0.561102-0.495221I$ $b=0.009349-1.314490I$	$1.10032+3.23237I$	0
$u=1.255990-0.333837I$ $a=0.561102+0.495221I$ $b=0.009349+1.314490I$	$1.10032-3.23237I$	0
$u=0.512361+0.456053I$ $a=1.19642-1.55974I$ $b=-0.054081-0.905565I$	$2.00167+1.93138I$	$-0.28873-2.52521I$
$u=0.512361-0.456053I$ $a=1.19642+1.55974I$ $b=-0.054081+0.905565I$	$2.00167-1.93138I$	$-0.28873+2.52521I$
$u=1.206820+0.585243I$ $a=-0.479965+0.645941I$ $b=0.92675+1.47971I$	$1.21950+4.15829I$	0
$u=1.206820-0.585243I$ $a=-0.479965-0.645941I$ $b=0.92675-1.47971I$	$1.21950-4.15829I$	0
$u=0.196337+1.345660I$ $a=0.489493-0.633617I$ $b=0.39692-1.78268I$	$3.87743-5.28163I$	0
$u=0.196337-1.345660I$ $a=0.489493+0.633617I$ $b=0.39692+1.78268I$	$3.87743+5.28163I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.067106+0.624611I$ $a=\ \ 1.279550+0.038144I$ $b=\ \ 0.054288+0.503329I$	$6.41094-2.06804I$	$4.76498+2.79186I$
$u=-0.067106-0.624611I$ $a=\ \ 1.279550-0.038144I$ $b=\ \ 0.054288-0.503329I$	$6.41094+2.06804I$	$4.76498-2.79186I$
$u=-1.310460+0.407738I$ $a=-0.705152+0.792990I$ $b=\ \ 0.024819-0.214507I$	$17.4061-9.1635I$	0
$u=-1.310460-0.407738I$ $a=-0.705152-0.792990I$ $b=\ \ 0.024819+0.214507I$	$17.4061+9.1635I$	0
$u=-1.365970+0.255309I$ $a=-0.640875-0.497012I$ $b=-0.082924-1.398390I$	$7.34936-4.49309I$	0
$u=-1.365970-0.255309I$ $a=-0.640875+0.497012I$ $b=-0.082924+1.398390I$	$7.34936+4.49309I$	0
$u=-1.291660+0.514437I$ $a=\ \ 0.590267+0.688910I$ $b=-0.82988+1.57606I$	$0.90602-8.52331I$	0
$u=-1.291660-0.514437I$ $a=\ \ 0.590267-0.688910I$ $b=-0.82988-1.57606I$	$0.90602+8.52331I$	0
$u=\ \ 1.363110+0.329387I$ $a=\ \ 0.465083+0.771046I$ $b=-0.106287-0.193530I$	$10.62200+5.43560I$	0
$u=\ \ 1.363110-0.329387I$ $a=\ \ 0.465083-0.771046I$ $b=-0.106287+0.193530I$	$10.62200-5.43560I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.34484 + 0.46922I$ $a = -0.628411 + 0.716027I$ $b = 0.77780 + 1.69573I$	$7.53961 + 11.67750I$	0
$u = 1.34484 - 0.46922I$ $a = -0.628411 - 0.716027I$ $b = 0.77780 - 1.69573I$	$7.53961 - 11.67750I$	0
$u = 1.27782 + 0.68507I$ $a = 0.443314 - 0.675997I$ $b = -1.84712 - 1.63509I$	$15.4772 + 1.0599I$	0
$u = 1.27782 - 0.68507I$ $a = 0.443314 + 0.675997I$ $b = -1.84712 + 1.63509I$	$15.4772 - 1.0599I$	0
$u = 0.529291 + 0.136283I$ $a = -0.295583 + 0.644065I$ $b = -1.15988 - 2.02885I$	$12.31040 + 4.79248I$	$8.74810 + 2.34263I$
$u = 0.529291 - 0.136283I$ $a = -0.295583 - 0.644065I$ $b = -1.15988 + 2.02885I$	$12.31040 - 4.79248I$	$8.74810 - 2.34263I$
$u = -0.545204$ $a = -2.43757$ $b = 0.347274$	-2.34902	-12.2400
$u = 0.489696 + 0.124272I$ $a = 2.78679 + 0.32627I$ $b = -0.071431 + 0.192709I$	$1.86807 - 2.11041I$	$-3.76638 + 0.97321I$
$u = 0.489696 - 0.124272I$ $a = 2.78679 - 0.32627I$ $b = -0.071431 - 0.192709I$	$1.86807 + 2.11041I$	$-3.76638 - 0.97321I$
$u = -1.39422 + 0.62022I$ $a = -0.529737 - 0.826936I$ $b = 1.33860 - 1.64297I$	$15.1760 - 16.6548I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.39422-0.62022I$ $a=-0.529737+0.826936I$ $b=\ \ 1.33860+1.64297I$	$15.1760+16.6548I$	0
$u=-1.50683+0.25546I$ $a=-0.230888+0.496604I$ $b=\ \ 0.266403-0.198205I$	$10.49100-0.60626I$	0
$u=-1.50683-0.25546I$ $a=-0.230888-0.496604I$ $b=\ \ 0.266403+0.198205I$	$10.49100+0.60626I$	0
$u=-0.463145+0.067192I$ $a=\ \ 1.27291-0.62200I$ $b=\ \ 0.846169+1.046210I$	$4.47001+2.89360I$	$8.76845-3.27673I$
$u=-0.463145-0.067192I$ $a=\ \ 1.27291+0.62200I$ $b=\ \ 0.846169-1.046210I$	$4.47001-2.89360I$	$8.76845+3.27673I$
$u=\ \ 1.40230+0.63342I$ $a=\ \ 0.544741-0.763682I$ $b=-1.46695-1.55566I$	$7.8844+12.1680I$	0
$u=\ \ 1.40230-0.63342I$ $a=\ \ 0.544741+0.763682I$ $b=-1.46695+1.55566I$	$7.8844-12.1680I$	0
$u=-1.38830+0.68299I$ $a=-0.508588-0.694976I$ $b=\ \ 1.65569-1.54628I$	$7.79562-5.96678I$	0
$u=-1.38830-0.68299I$ $a=-0.508588+0.694976I$ $b=\ \ 1.65569+1.54628I$	$7.79562+5.96678I$	0
$u=\ \ 1.57236+0.03851I$ $a=-0.434018-0.269208I$ $b=-0.425318-0.062123I$	$16.1961+1.5198I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.57236 - 0.03851I$ $a = -0.434018 + 0.269208I$ $b = -0.425318 + 0.062123I$	$16.1961 - 1.5198I$	0
$u = -1.62467$ $a = 0.167450$ $b = 0.450009$	10.5686	0
$u = 0.075647 + 0.343854I$ $a = -0.831327 - 0.482254I$ $b = 0.074286 + 0.325055I$	$0.051677 + 0.871638I$	$1.30479 - 7.68178I$
$u = 0.075647 - 0.343854I$ $a = -0.831327 + 0.482254I$ $b = 0.074286 - 0.325055I$	$0.051677 - 0.871638I$	$1.30479 + 7.68178I$
$u = 0.040893 + 0.337505I$ $a = 0.46030 - 3.35033I$ $b = -0.477129 - 0.516478I$	$-2.51012 - 0.09044I$	$-5.54914 - 1.40997I$
$u = 0.040893 - 0.337505I$ $a = 0.46030 + 3.35033I$ $b = -0.477129 + 0.516478I$	$-2.51012 + 0.09044I$	$-5.54914 + 1.40997I$
$u = 1.64162 + 0.46046I$ $a = 0.460109 + 0.208462I$ $b = -0.326988 - 0.507396I$	$16.6920 - 3.4399I$	0
$u = 1.64162 - 0.46046I$ $a = 0.460109 - 0.208462I$ $b = -0.326988 + 0.507396I$	$16.6920 + 3.4399I$	0

II.

$\boldsymbol{I_2^u = \langle -1.24\times 10^6 u^{26} + 7.89\times 10^4 u^{25} + \cdots + 9.33\times 10^5 b + 2.95\times 10^5,\ -8.96\times 10^6 u^{26} - 9.06\times 10^6 u^{25} + \cdots + 9.33\times 10^5 a - 2.36\times 10^7,\ u^{27} - 9u^{25} + \cdots + 9u^2 - 1\rangle}$

(i) Arc colorings

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

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

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

$$a_2 = \begin{pmatrix} 9.59367u^{26} + 9.71136u^{25} + \cdots + 9.83209u + 25.2986 \\ 1.32935u^{26} - 0.0845413u^{25} + \cdots - 1.80120u - 0.316238 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 12.3529u^{26} + 13.2890u^{25} + \cdots + 13.2547u + 32.4687 \\ 2.37434u^{26} + 2.01097u^{25} + \cdots - 1.13786u + 3.27626 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 19.3072u^{26} + 1.06227u^{25} + \cdots + 43.6737u + 4.96453 \\ 4.42819u^{26} + 3.62731u^{25} + \cdots + 7.30655u + 0.673136 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -1.93034u^{26} - 6.11886u^{25} + \cdots + 5.78493u - 16.5652 \\ -5.13359u^{26} - 5.58858u^{25} + \cdots - 2.28473u - 10.4464 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -13.5724u^{26} - 3.44675u^{25} + \cdots - 30.7183u - 25.4385 \\ -2.80424u^{26} - 5.67312u^{25} + \cdots - 2.08593u - 10.7626 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3.20326u^{26} - 0.530277u^{25} + \cdots + 8.06966u - 6.11886 \\ -5.13359u^{26} - 5.58858u^{25} + \cdots - 2.28473u - 10.4464 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -18.3992u^{26} - 10.3562u^{25} + \cdots - 46.6222u - 16.4826 \\ -3.59250u^{26} - 1.04499u^{25} + \cdots - 8.73334u + 0.336661 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -29.7822u^{26} - 15.6228u^{25} + \cdots - 38.4206u - 13.2655 \\ -5.38513u^{26} - 6.09579u^{25} + \cdots + 7.57875u + 0.974312 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{33852149}{933437}u^{26} + \frac{15369740}{933437}u^{25} + \cdots + \frac{74879083}{933437}u + \frac{9932654}{933437}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{27}+5u^{26}+\cdots-5u-1$
c_2	$u^{27}-6u^{24}+\cdots+3u+1$
c_3, c_4	$u^{27}-16u^{25}+\cdots-4u^2-1$
c_5	$u^{27}-5u^{26}+\cdots-5u+1$
c_6	$u^{27}-9u^{25}+\cdots-9u^2+1$
c_7, c_8	$u^{27}+u^{26}+\cdots+4u^2+1$
c_9	$u^{27}-16u^{25}+\cdots+4u^2+1$
c_{10}	$u^{27}-9u^{25}+\cdots+9u^2-1$
c_{11}	$u^{27}-2u^{25}+\cdots+6u+1$
c_{12}	$u^{27}-u^{26}+\cdots-4u^2-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{27} - 19y^{26} + \cdots + 27y - 1$
c_2	$y^{27} - 14y^{25} + \cdots + 13y - 1$
c_3, c_4, c_9	$y^{27} - 32y^{26} + \cdots - 8y - 1$
c_6, c_{10}	$y^{27} - 18y^{26} + \cdots + 18y - 1$
c_7, c_8, c_{12}	$y^{27} + 31y^{26} + \cdots - 8y - 1$
c_{11}	$y^{27} - 4y^{26} + \cdots - 36y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.485089 + 0.936854I$ $a = 0.397869 - 0.777369I$ $b = -0.51072 - 1.33669I$	$-1.47956 + 2.03481I$	$-5.77865 - 9.60998I$
$u = 0.485089 - 0.936854I$ $a = 0.397869 + 0.777369I$ $b = -0.51072 + 1.33669I$	$-1.47956 - 2.03481I$	$-5.77865 + 9.60998I$
$u = -0.949119 + 0.513442I$ $a = 0.456947 + 1.089520I$ $b = -1.01741 + 1.52896I$	$3.99828 - 4.96462I$	$7.26250 + 2.59999I$
$u = -0.949119 - 0.513442I$ $a = 0.456947 - 1.089520I$ $b = -1.01741 - 1.52896I$	$3.99828 + 4.96462I$	$7.26250 - 2.59999I$
$u = -1.027490 + 0.392055I$ $a = -0.447302 - 0.345733I$ $b = 0.57862 - 2.16315I$	$7.91750 - 1.58212I$	$1.68352 + 2.93249I$
$u = -1.027490 - 0.392055I$ $a = -0.447302 + 0.345733I$ $b = 0.57862 + 2.16315I$	$7.91750 + 1.58212I$	$1.68352 - 2.93249I$
$u = 1.062870 + 0.365733I$ $a = -0.68903 + 1.33354I$ $b = 0.753801 + 1.158750I$	$6.39604 + 5.84242I$	$6.69178 - 7.94773I$
$u = 1.062870 - 0.365733I$ $a = -0.68903 - 1.33354I$ $b = 0.753801 - 1.158750I$	$6.39604 - 5.84242I$	$6.69178 + 7.94773I$
$u = -0.147257 + 0.804940I$ $a = -0.215120 + 1.226910I$ $b = -1.09953 + 1.37711I$	$3.27196 - 3.54502I$	$2.57974 + 4.21881I$
$u = -0.147257 - 0.804940I$ $a = -0.215120 - 1.226910I$ $b = -1.09953 - 1.37711I$	$3.27196 + 3.54502I$	$2.57974 - 4.21881I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.180300+0.289874I$ $a=-0.539669-0.747909I$ $b=-0.080063-0.754670I$	$4.41578-3.76745I$	$5.99903+3.10920I$
$u=-1.180300-0.289874I$ $a=-0.539669+0.747909I$ $b=-0.080063+0.754670I$	$4.41578+3.76745I$	$5.99903-3.10920I$
$u=1.157870+0.391750I$ $a=0.487445-0.502194I$ $b=-0.191569-1.317550I$	$1.03253+2.42829I$	$1.41343-0.11118I$
$u=1.157870-0.391750I$ $a=0.487445+0.502194I$ $b=-0.191569+1.317550I$	$1.03253-2.42829I$	$1.41343+0.11118I$
$u=-0.826385+0.920635I$ $a=0.728727+0.282129I$ $b=0.016117+1.270820I$	$3.34708-0.27472I$	$3.57620-0.72730I$
$u=-0.826385-0.920635I$ $a=0.728727-0.282129I$ $b=0.016117-1.270820I$	$3.34708+0.27472I$	$3.57620+0.72730I$
$u=0.665400+0.363386I$ $a=-0.416547+0.968781I$ $b=1.57866+2.24267I$	$12.21670+5.39354I$	$6.49982-9.79940I$
$u=0.665400-0.363386I$ $a=-0.416547-0.968781I$ $b=1.57866-2.24267I$	$12.21670-5.39354I$	$6.49982+9.79940I$
$u=-0.743669+0.113537I$ $a=-1.86128+0.35715I$ $b=0.968209+0.116721I$	$2.48833+2.05269I$	$9.77151+0.18924I$
$u=-0.743669-0.113537I$ $a=-1.86128-0.35715I$ $b=0.968209-0.116721I$	$2.48833-2.05269I$	$9.77151-0.18924I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.699055 + 0.226988I$ $a = -2.32653 - 0.27444I$ $b = -0.206392 + 0.302743I$	$4.89157 - 3.13631I$	$1.34681 + 1.41207I$
$u = \quad 0.699055 - 0.226988I$ $a = -2.32653 + 0.27444I$ $b = -0.206392 - 0.302743I$	$4.89157 + 3.13631I$	$1.34681 - 1.41207I$
$u = \quad 0.652026$ $a = \quad 2.01778$ $b = -0.867893$	-1.99612	12.1580
$u = -0.468647$ $a = \quad 3.12140$ $b = \quad 0.566633$	1.09456	-4.47640
$u = \quad 1.55512 + 0.21865I$ $a = -0.287202 - 0.041726I$ $b = -0.213577 + 0.958778I$	$15.8581 - 2.5922I$	$5.18360 + 2.23250I$
$u = \quad 1.55512 - 0.21865I$ $a = -0.287202 + 0.041726I$ $b = -0.213577 - 0.958778I$	$15.8581 + 2.5922I$	$5.18360 - 2.23250I$
$u = -1.68573$ $a = \quad 0.284193$ $b = \quad 0.148948$	10.3675	-17.1410

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{27}+5u^{26}+\cdots-5u-1)(u^{98}-24u^{96}+\cdots+179u-49)$
c_2	$(u^{27}-6u^{24}+\cdots+3u+1)(u^{98}-u^{97}+\cdots-175987u-451)$
c_3, c_4	$(u^{27}-16u^{25}+\cdots-4u^2-1)(u^{98}-u^{97}+\cdots-224u-32)$
c_5	$(u^{27}-5u^{26}+\cdots-5u+1)(u^{98}-24u^{96}+\cdots+179u-49)$
c_6	$(u^{27}-9u^{25}+\cdots-9u^2+1)(u^{98}+u^{97}+\cdots-192u+79)$
c_7, c_8	$(u^{27}+u^{26}+\cdots+4u^2+1)(u^{98}+2u^{97}+\cdots-36u+19)$
c_9	$(u^{27}-16u^{25}+\cdots+4u^2+1)(u^{98}-u^{97}+\cdots-224u-32)$
c_{10}	$(u^{27}-9u^{25}+\cdots+9u^2-1)(u^{98}+u^{97}+\cdots-192u+79)$
c_{11}	$(u^{27}-2u^{25}+\cdots+6u+1)$ $\cdot(u^{98}-5u^{97}+\cdots-215663520u+43957163)$
c_{12}	$(u^{27}-u^{26}+\cdots-4u^2-1)(u^{98}+2u^{97}+\cdots-36u+19)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{27} - 19y^{26} + \cdots + 27y - 1)(y^{98} - 48y^{97} + \cdots - 56639y + 2401)$
c_2	$(y^{27} - 14y^{25} + \cdots + 13y - 1)$ $\cdot (y^{98} + 23y^{97} + \cdots - 31146246201y + 203401)$
c_3, c_4, c_9	$(y^{27} - 32y^{26} + \cdots - 8y - 1)(y^{98} - 109y^{97} + \cdots - 160768y + 1024)$
c_6, c_{10}	$(y^{27} - 18y^{26} + \cdots + 18y - 1)(y^{98} - 67y^{97} + \cdots - 74626y + 6241)$
c_7, c_8, c_{12}	$(y^{27} + 31y^{26} + \cdots - 8y - 1)(y^{98} + 106y^{97} + \cdots + 12536y + 361)$
c_{11}	$(y^{27} - 4y^{26} + \cdots - 36y - 1)$ $\cdot (y^{98} - 57y^{97} + \cdots - 68808164574318740y + 1932232179008569)$