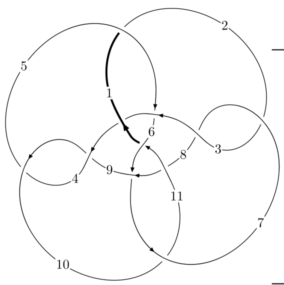
$11n_{184}$ ($K11n_{184}$)



A knot diagram[1]

Linearized knot diagam

$\rightarrow \downarrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \uparrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \uparrow \rightarrow \downarrow \rightarrow \uparrow \rightarrow$

5 7 1 10 3 9 3 11 4 7 6

Solving Sequence

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

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

$$I_1^u = \langle 9.79327 \times 10^{23} u^{27} - 1.97941 \times 10^{24} u^{26} + \cdots + 2.45772 \times 10^{24} b - 1.05681 \times 10^{25},$$
$$5.11012 \times 10^{24} u^{27} - 1.51176 \times 10^{25} u^{26} + \cdots + 2.45772 \times 10^{25} a - 1.24464 \times 10^{26},\ u^{28} - 3u^{27} + \cdots - 40u +$$
$$I_2^u = \langle 2554960u^{17}a - 4096933u^{17} + \cdots - 42906164a + 49128383,$$
$$- 103879132u^{17}a - 263156948u^{17} + \cdots + 1344416472a + 157961924,\ u^{18} - 8u^{16} + \cdots - 3u - 7\rangle$$
$$I_3^u = \langle -17u^{17} - 10u^{16} + \cdots + 4b - 38,\ u^{17} - 11u^{16} + \cdots + 4a - 58,$$
$$u^{18} - 6u^{16} + 19u^{14} - 40u^{12} + 66u^{10} - 82u^8 + 76u^6 - 46u^4 + 15u^2 - 2\rangle$$
$$I_4^u = \langle b + u + 1,\ 2a - u - 2,\ u^2 - 2\rangle$$

$$I_1^v = \langle a,\ b - 1,\ v + 1\rangle$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 85 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. $I^u_1 =$
$\langle 9.79\times10^{23}u^{27}-1.98\times10^{24}u^{26}+\cdots+2.46\times10^{24}b-1.06\times10^{25},\ 5.11\times10^{24}u^{27}-1.51\times10^{25}u^{26}+\cdots+2.46\times10^{25}a-1.24\times10^{26},\ u^{28}-3u^{27}+\cdots-40u+10\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.207921u^{27}+0.615107u^{26}+\cdots-17.2289u+5.06419 \\ -0.398469u^{27}+0.805384u^{26}+\cdots-15.8021u+4.29997 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ -u^3+u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.598386u^{27}+1.36198u^{26}+\cdots-25.7006u+6.72775 \\ -0.0606363u^{27}+0.102546u^{26}+\cdots-2.30306u-0.524423 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.429997u^{27}-0.891523u^{26}+\cdots+10.5673u-1.39779 \\ -0.00865581u^{27}+0.0715894u^{26}+\cdots-3.25265u+2.07921 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.438653u^{27}-0.963112u^{26}+\cdots+13.8200u-3.47700 \\ -0.00865581u^{27}+0.0715894u^{26}+\cdots-3.25265u+2.07921 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.0771778u^{27}+0.0489359u^{26}+\cdots-7.53802u+2.27914 \\ -0.431569u^{27}+0.843759u^{26}+\cdots-14.8252u+4.40618 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.498943u^{27}-1.06015u^{26}+\cdots+13.2218u-3.30666 \\ -0.0479065u^{27}+0.0970119u^{26}+\cdots-3.79894u+1.67983 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.175255u^{27}+0.212502u^{26}+\cdots+2.68490u-0.0259453 \\ -0.0725597u^{27}+0.0693962u^{26}+\cdots+2.45288u-0.486297 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.175255u^{27}+0.212502u^{26}+\cdots+2.68490u-0.0259453 \\ -0.0725597u^{27}+0.0693962u^{26}+\cdots+2.45288u-0.486297 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{4877780988340105932664134}{245772358159356732899646l}u^{27}+\frac{9987788121812337009415536}{2457723581593567328996461}u^{26}+\cdots-\frac{189867457763355278132012850}{2457723581593567328996461}u+\frac{4300140119401244371455099 2}{2457723581593567328996461}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{28} + u^{27} + \cdots + 303u + 49$
c_2, c_7	$u^{28} + 3u^{27} + \cdots - 120u + 26$
c_3, c_6	$u^{28} - u^{27} + \cdots - u + 1$
c_4, c_9	$u^{28} + 3u^{27} + \cdots + 40u + 10$
c_5, c_8	$u^{28} - u^{27} + \cdots + 21u + 5$
c_{11}	$u^{28} + 3u^{27} + \cdots + 56u + 8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{28} + 29y^{27} + \cdots - 8019y + 2401$
c_2, c_7	$y^{28} + 23y^{27} + \cdots - 1816y + 676$
c_3, c_6	$y^{28} + y^{27} + \cdots + 17y + 1$
c_4, c_9	$y^{28} - 17y^{27} + \cdots + 560y + 100$
c_5, c_8	$y^{28} + 19y^{27} + \cdots + 379y + 25$
c_{11}	$y^{28} - y^{27} + \cdots + 640y + 64$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.892804 + 0.444060I$ $a = 0.309008 + 0.559978I$ $b = -0.873429 + 0.799710I$	$1.26054 - 1.72230I$	$-0.40850 + 1.70276I$
$u = -0.892804 - 0.444060I$ $a = 0.309008 - 0.559978I$ $b = -0.873429 - 0.799710I$	$1.26054 + 1.72230I$	$-0.40850 - 1.70276I$
$u = 0.218854 + 1.012420I$ $a = 0.590636 - 0.144749I$ $b = 0.764812 - 0.117020I$	$-1.38872 - 0.92374I$	$-4.94776 + 7.36786I$
$u = 0.218854 - 1.012420I$ $a = 0.590636 + 0.144749I$ $b = 0.764812 + 0.117020I$	$-1.38872 + 0.92374I$	$-4.94776 - 7.36786I$
$u = 0.802643 + 0.305370I$ $a = 0.75217 - 1.24109I$ $b = -1.08256 - 1.21911I$	$-1.15395 + 4.47162I$	$-7.14862 - 4.64379I$
$u = 0.802643 - 0.305370I$ $a = 0.75217 + 1.24109I$ $b = -1.08256 + 1.21911I$	$-1.15395 - 4.47162I$	$-7.14862 + 4.64379I$
$u = 0.584905 + 0.590380I$ $a = 0.965167 - 0.178536I$ $b = 0.259310 - 0.627636I$	$-1.36729 - 0.61050I$	$-5.48708 + 0.91172I$
$u = 0.584905 - 0.590380I$ $a = 0.965167 + 0.178536I$ $b = 0.259310 + 0.627636I$	$-1.36729 + 0.61050I$	$-5.48708 - 0.91172I$
$u = 1.216130 + 0.158248I$ $a = -0.911081 - 0.448221I$ $b = 0.709894 - 0.706039I$	$8.36654 + 1.60580I$	$-0.541797 - 0.240729I$
$u = 1.216130 - 0.158248I$ $a = -0.911081 + 0.448221I$ $b = 0.709894 + 0.706039I$	$8.36654 - 1.60580I$	$-0.541797 + 0.240729I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.099020 + 0.606761I$ $a = -0.148240 - 0.260078I$ $b = -0.80758 - 1.16185I$	$7.22801 + 2.43402I$	$1.57040 - 0.59342I$
$u = 1.099020 - 0.606761I$ $a = -0.148240 + 0.260078I$ $b = -0.80758 + 1.16185I$	$7.22801 - 2.43402I$	$1.57040 + 0.59342I$
$u = 1.243000 + 0.278668I$ $a = 0.112693 - 0.881381I$ $b = -0.184859 - 0.444395I$	$2.92454 + 5.00287I$	$-4.13660 - 6.40651I$
$u = 1.243000 - 0.278668I$ $a = 0.112693 + 0.881381I$ $b = -0.184859 + 0.444395I$	$2.92454 - 5.00287I$	$-4.13660 + 6.40651I$
$u = -1.193670 + 0.454674I$ $a = 0.069212 + 0.789810I$ $b = -0.54519 + 1.66827I$	$7.75458 - 5.65256I$	$3.62489 + 8.19789I$
$u = -1.193670 - 0.454674I$ $a = 0.069212 - 0.789810I$ $b = -0.54519 - 1.66827I$	$7.75458 + 5.65256I$	$3.62489 - 8.19789I$
$u = -0.097920 + 0.715313I$ $a = 1.130000 + 0.601158I$ $b = -0.248100 + 0.524577I$	$4.52132 + 1.28199I$	$-1.48628 - 3.62447I$
$u = -0.097920 - 0.715313I$ $a = 1.130000 - 0.601158I$ $b = -0.248100 - 0.524577I$	$4.52132 - 1.28199I$	$-1.48628 + 3.62447I$
$u = -1.299880 + 0.322120I$ $a = -0.777664 - 0.901721I$ $b = 1.34969 - 1.28546I$	$2.44490 - 7.44961I$	$-1.45384 + 5.70278I$
$u = -1.299880 - 0.322120I$ $a = -0.777664 + 0.901721I$ $b = 1.34969 + 1.28546I$	$2.44490 + 7.44961I$	$-1.45384 - 5.70278I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.062707 + 1.338020I$ $a = -0.743793 + 0.649763I$ $b = -0.98144 + 1.57064I$	$3.71060 - 9.58638I$	$-3.92148 + 6.82839I$
$u = 0.062707 - 1.338020I$ $a = -0.743793 - 0.649763I$ $b = -0.98144 - 1.57064I$	$3.71060 + 9.58638I$	$-3.92148 - 6.82839I$
$u = 0.014763 + 0.486702I$ $a = -1.33238 - 2.05009I$ $b = -0.722499 - 1.177000I$	$-1.69684 + 4.08256I$	$-6.58477 - 6.33725I$
$u = 0.014763 - 0.486702I$ $a = -1.33238 + 2.05009I$ $b = -0.722499 + 1.177000I$	$-1.69684 - 4.08256I$	$-6.58477 + 6.33725I$
$u = 1.42770 + 0.62293I$ $a = -0.427337 + 0.931681I$ $b = 1.73290 + 1.45902I$	$8.0703 + 16.3840I$	$-2.82061 - 8.06423I$
$u = 1.42770 - 0.62293I$ $a = -0.427337 - 0.931681I$ $b = 1.73290 - 1.45902I$	$8.0703 - 16.3840I$	$-2.82061 + 8.06423I$
$u = -1.68545 + 0.44537I$ $a = 0.411613 - 0.574335I$ $b = 0.129044 + 0.831625I$	$9.49594 + 2.56707I$	$1.74205 - 3.34695I$
$u = -1.68545 - 0.44537I$ $a = 0.411613 + 0.574335I$ $b = 0.129044 - 0.831625I$	$9.49594 - 2.56707I$	$1.74205 + 3.34695I$

II.

$\boldsymbol{I_2^u = \langle 2.55\times10^6 a u^{17} - 4.10\times10^6 u^{17} + \cdots - 4.29\times10^7 a + 4.91\times10^7,\ -1.04\times10^8 a u^{17} - 2.63\times10^8 u^{17} + \cdots + 1.34\times10^9 a + 1.58\times10^8,\ u^{18} - 8u^{16} + \cdots - 3u - 7\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_1 = \begin{pmatrix} a \\ -1.25704au^{17} + 2.01569u^{17} + \cdots + 21.1098a - 24.1712 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -0.958254au^{17} + 0.294954u^{17} + \cdots + 7.30122a + 18.4962 \\ 0.820958au^{17} - 1.34758u^{17} + \cdots + 6.26047a - 0.681278 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 3.01569au^{17} - 1.25321u^{17} + \cdots - 24.1712a - 11.1950 \\ -0.958254u^{17} + 0.246005u^{16} + \cdots - 10.3700u + 7.30122 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 3.01569au^{17} - 0.294954u^{17} + \cdots - 24.1712a - 18.4962 \\ -0.958254u^{17} + 0.246005u^{16} + \cdots - 10.3700u + 7.30122 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.480313au^{17} - 0.514339u^{17} + \cdots - 9.60037a + 8.79929 \\ -1.07679au^{17} + 1.51484u^{17} + \cdots + 17.6039a - 18.7341 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -4.15349au^{17} - 2.19598u^{17} + \cdots + 53.3616a + 29.1783 \\ 0.235482au^{17} + 1.25704u^{17} + \cdots + 9.43306a - 20.1098 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -5.87811au^{17} - 0.514339u^{17} + \cdots + 42.2240a + 8.79929 \\ 0.776728au^{17} - 1.50135u^{17} + \cdots - 10.5095a + 15.3719 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -5.87811au^{17} - 0.514339u^{17} + \cdots + 42.2240a + 8.79929 \\ 0.776728au^{17} - 1.50135u^{17} + \cdots - 10.5095a + 15.3719 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{33551679}{2032519}u^{17} + \frac{7438389}{2032519}u^{16} + \cdots - \frac{495469247}{2032519}u + \frac{122235417}{2032519}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{36} - u^{35} + \cdots - 2025u + 675$
c_2, c_7	$(u^{18} + 8u^{16} + \cdots + 9u + 1)^2$
c_3, c_6	$u^{36} - 4u^{35} + \cdots - 8u + 1$
c_4, c_9	$(u^{18} - 8u^{16} + \cdots + 3u - 7)^2$
c_5, c_8	$u^{36} - 7u^{35} + \cdots + 512u + 139$
c_{11}	$(u^{18} - 3u^{16} + \cdots + 10u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{36} - 9y^{35} + \cdots - 2634525y + 455625$
c_2, c_7	$(y^{18} + 16y^{17} + \cdots + 23y + 1)^2$
c_3, c_6	$y^{36} - 16y^{35} + \cdots - 18y + 1$
c_4, c_9	$(y^{18} - 16y^{17} + \cdots - 569y + 49)^2$
c_5, c_8	$y^{36} - 3y^{35} + \cdots - 372232y + 19321$
c_{11}	$(y^{18} - 6y^{17} + \cdots - 36y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.517954 + 0.930078I$ $a = 0.921155 + 0.564888I$ $b = -0.41746 + 2.45748I$	$3.10062 - 3.22877I$	$-6.92519 + 4.57894I$
$u = -0.517954 + 0.930078I$ $a = 0.043469 + 0.902428I$ $b = -0.328101 + 0.755834I$	$3.10062 - 3.22877I$	$-6.92519 + 4.57894I$
$u = -0.517954 - 0.930078I$ $a = 0.921155 - 0.564888I$ $b = -0.41746 - 2.45748I$	$3.10062 + 3.22877I$	$-6.92519 - 4.57894I$
$u = -0.517954 - 0.930078I$ $a = 0.043469 - 0.902428I$ $b = -0.328101 - 0.755834I$	$3.10062 + 3.22877I$	$-6.92519 - 4.57894I$
$u = 0.695159 + 0.848524I$ $a = 1.232100 - 0.246670I$ $b = 0.286506 - 1.257930I$	$-2.09116 - 0.97054I$	$-2.23750 - 5.32372I$
$u = 0.695159 + 0.848524I$ $a = -0.206081 + 0.167522I$ $b = 0.137967 + 0.763918I$	$-2.09116 - 0.97054I$	$-2.23750 - 5.32372I$
$u = 0.695159 - 0.848524I$ $a = 1.232100 + 0.246670I$ $b = 0.286506 + 1.257930I$	$-2.09116 + 0.97054I$	$-2.23750 + 5.32372I$
$u = 0.695159 - 0.848524I$ $a = -0.206081 - 0.167522I$ $b = 0.137967 - 0.763918I$	$-2.09116 + 0.97054I$	$-2.23750 + 5.32372I$
$u = 0.853350$ $a = 0.662436$ $b = 0.522342$	-1.86607	-5.91390
$u = 0.853350$ $a = 1.47423$ $b = -1.01367$	-1.86607	-5.91390

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.153560 + 0.127277I$ $a = -0.756499 - 0.199759I$ $b = 2.70169 - 0.18542I$	$4.01524 - 4.53987I$	$-4.29652 + 4.59405I$
$u = -1.153560 + 0.127277I$ $a = 0.85825 + 1.17347I$ $b = -0.440550 + 0.874036I$	$4.01524 - 4.53987I$	$-4.29652 + 4.59405I$
$u = -1.153560 - 0.127277I$ $a = -0.756499 + 0.199759I$ $b = 2.70169 + 0.18542I$	$4.01524 + 4.53987I$	$-4.29652 - 4.59405I$
$u = -1.153560 - 0.127277I$ $a = 0.85825 - 1.17347I$ $b = -0.440550 - 0.874036I$	$4.01524 + 4.53987I$	$-4.29652 - 4.59405I$
$u = 0.992764 + 0.622226I$ $a = 0.155219 - 1.305160I$ $b = -0.94913 - 1.56570I$	$-0.99172 + 6.40330I$	$3.42158 - 6.30629I$
$u = 0.992764 + 0.622226I$ $a = -0.369663 + 0.558559I$ $b = 1.28369 + 1.07925I$	$-0.99172 + 6.40330I$	$3.42158 - 6.30629I$
$u = 0.992764 - 0.622226I$ $a = 0.155219 + 1.305160I$ $b = -0.94913 + 1.56570I$	$-0.99172 - 6.40330I$	$3.42158 + 6.30629I$
$u = 0.992764 - 0.622226I$ $a = -0.369663 - 0.558559I$ $b = 1.28369 - 1.07925I$	$-0.99172 - 6.40330I$	$3.42158 + 6.30629I$
$u = 0.714803$ $a = -1.30451$ $b = 2.14300$	-5.42967	-25.4730
$u = 0.714803$ $a = 2.89989$ $b = 0.656496$	-5.42967	-25.4730

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.32619$ $a = -0.398205 + 0.835176I$ $b = 0.030287 + 0.283651I$	4.77670	-0.191180
$u = -1.32619$ $a = -0.398205 - 0.835176I$ $b = 0.030287 - 0.283651I$	4.77670	-0.191180
$u = 1.35768$ $a = 1.73775$ $b = -2.10984$	-3.16853	23.1980
$u = 1.35768$ $a = -0.254521$ $b = -0.614155$	-3.16853	23.1980
$u = -0.629486 + 0.021587I$ $a = -0.146702 + 0.386290I$ $b = -2.51181 - 1.51793I$	$2.02553 + 3.59036I$	$-0.89678 + 6.78897I$
$u = -0.629486 + 0.021587I$ $a = 1.89696 - 1.18998I$ $b = -0.340362 + 0.042357I$	$2.02553 + 3.59036I$	$-0.89678 + 6.78897I$
$u = -0.629486 - 0.021587I$ $a = -0.146702 - 0.386290I$ $b = -2.51181 + 1.51793I$	$2.02553 - 3.59036I$	$-0.89678 - 6.78897I$
$u = -0.629486 - 0.021587I$ $a = 1.89696 + 1.18998I$ $b = -0.340362 - 0.042357I$	$2.02553 - 3.59036I$	$-0.89678 - 6.78897I$
$u = 1.42125 + 0.38509I$ $a = -0.410607 + 0.740708I$ $b = 0.781068 + 1.120410I$	$8.94298 + 7.76278I$	$-0.81388 - 5.96589I$
$u = 1.42125 + 0.38509I$ $a = -0.900245 - 0.743462I$ $b = 0.280432 + 0.787705I$	$8.94298 + 7.76278I$	$-0.81388 - 5.96589I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 1.42125 - 0.38509I$ $a = -0.410607 - 0.740708I$ $b = \quad 0.781068 - 1.120410I$	$8.94298 - 7.76278I$	$-0.81388 + 5.96589I$
$u = \quad 1.42125 - 0.38509I$ $a = -0.900245 + 0.743462I$ $b = \quad 0.280432 - 0.787705I$	$8.94298 - 7.76278I$	$-0.81388 + 5.96589I$
$u = -1.60799 + 0.59422I$ $a = \quad 0.560748 + 0.927961I$ $b = -2.70137 + 0.93413I$	$5.93656 - 5.69637I$	$-3.56158 + 12.64720I$
$u = -1.60799 + 0.59422I$ $a = -0.158968 - 0.337648I$ $b = \quad 0.395079 - 0.493552I$	$5.93656 - 5.69637I$	$-3.56158 + 12.64720I$
$u = -1.60799 - 0.59422I$ $a = \quad 0.560748 - 0.927961I$ $b = -2.70137 - 0.93413I$	$5.93656 + 5.69637I$	$-3.56158 - 12.64720I$
$u = -1.60799 - 0.59422I$ $a = -0.158968 + 0.337648I$ $b = \quad 0.395079 + 0.493552I$	$5.93656 + 5.69637I$	$-3.56158 - 12.64720I$

III. $\boldsymbol{I_3^u = \langle -17u^{17} - 10u^{16} + \cdots + 4b - 38,\ u^{17} - 11u^{16} + \cdots + 4a - 58,\ u^{18} - 6u^{16} + \cdots + 15u^2 - 2\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{1}{4}u^{17} + \frac{11}{4}u^{16} + \cdots - 6u + \frac{29}{2} \\ \frac{17}{4}u^{17} + \frac{5}{2}u^{16} + \cdots + \frac{23}{2}u + \frac{19}{2} \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} \frac{37}{4}u^{17} - \frac{1}{2}u^{16} + \cdots + \frac{81}{2}u - \frac{17}{2} \\ \frac{1}{4}u^{17} + \frac{3}{2}u^{16} + \cdots - 3u + \frac{5}{2} \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -\frac{19}{4}u^{17} + \frac{17}{4}u^{16} + \cdots - 12u + \frac{23}{2} \\ \frac{11}{4}u^{17} - \frac{1}{2}u^{16} + \cdots + \frac{29}{2}u + \frac{1}{2} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -\frac{15}{2}u^{17} + \frac{19}{4}u^{16} + \cdots - \frac{53}{2}u + 11 \\ \frac{11}{4}u^{17} - \frac{1}{2}u^{16} + \cdots + \frac{29}{2}u + \frac{1}{2} \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -3u^{17} + \frac{9}{4}u^{16} + \cdots - 16u + \frac{25}{2} \\ 3u^{17} + 2u^{16} + \cdots + 7u + \frac{17}{2} \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 15u^{17} - \frac{39}{4}u^{16} + \cdots + 53u - 43 \\ \frac{11}{4}u^{17} + \frac{3}{2}u^{16} + \cdots + 10u + 9 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{55}{4}u^{17} + \frac{7}{2}u^{16} + \cdots - \frac{83}{2}u + \frac{15}{2} \\ -2u^{17} - \frac{11}{4}u^{16} + \cdots - \frac{5}{2}u - 10 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{55}{4}u^{17} + \frac{7}{2}u^{16} + \cdots - \frac{83}{2}u + \frac{15}{2} \\ -2u^{17} - \frac{11}{4}u^{16} + \cdots - \frac{5}{2}u - 10 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= \frac{73}{2}u^{16} - 202u^{14} + \frac{1201}{2}u^{12} - \frac{2375}{2}u^{10} + 1878u^8 - \frac{4323}{2}u^6 + 1829u^4 - \frac{1781}{2}u^2 + 163$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} - 6u^{16} + \cdots + 13u - 1$
c_2, c_7	$u^{18} + 4u^{16} - 2u^{14} - 22u^{12} - 13u^{10} + 16u^8 - 3u^6 - 11u^4 + 9u^2 - 2$
c_3	$u^{18} + 5u^{17} + \cdots - 8u - 1$
c_4, c_9	$u^{18} - 6u^{16} + 19u^{14} - 40u^{12} + 66u^{10} - 82u^8 + 76u^6 - 46u^4 + 15u^2 - 2$
c_5	$u^{18} - u^{15} + \cdots + 2u^2 - 1$
c_6	$u^{18} - 5u^{17} + \cdots + 8u - 1$
c_8	$u^{18} + u^{15} + \cdots + 2u^2 - 1$
c_{10}	$u^{18} - 6u^{16} + \cdots - 13u - 1$
c_{11}	$u^{18} - 2u^{16} + 21u^{14} + 27u^{10} - 174u^8 + 205u^6 + 30u^4 - 53u^2 - 32$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{18} - 12y^{17} + \cdots - 71y + 1$
c_2, c_7	$(y^9 + 4y^8 - 2y^7 - 22y^6 - 13y^5 + 16y^4 - 3y^3 - 11y^2 + 9y - 2)^2$
c_3, c_6	$y^{18} - 7y^{17} + \cdots - 8y^2 + 1$
c_4, c_9	$(y^9 - 6y^8 + 19y^7 - 40y^6 + 66y^5 - 82y^4 + 76y^3 - 46y^2 + 15y - 2)^2$
c_5, c_8	$y^{18} - 8y^{16} + \cdots - 4y + 1$
c_{11}	$(y^9 - 2y^8 + 21y^7 + 27y^5 - 174y^4 + 205y^3 + 30y^2 - 53y - 32)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.996123 + 0.550603I$ $a = -0.558599 - 0.636333I$ $b = 1.31998 - 1.20112I$	$-1.46928 - 6.40624I$	$-13.4313 + 7.0584I$
$u = -0.996123 - 0.550603I$ $a = -0.558599 + 0.636333I$ $b = 1.31998 + 1.20112I$	$-1.46928 + 6.40624I$	$-13.4313 - 7.0584I$
$u = 0.996123 + 0.550603I$ $a = 0.272835 - 1.383160I$ $b = -0.93113 - 1.54199I$	$-1.46928 + 6.40624I$	$-13.4313 - 7.0584I$
$u = 0.996123 - 0.550603I$ $a = 0.272835 + 1.383160I$ $b = -0.93113 + 1.54199I$	$-1.46928 - 6.40624I$	$-13.4313 + 7.0584I$
$u = -0.845186$ $a = 1.11324$ $b = -2.33451$	-5.14686	3.50430
$u = 0.845186$ $a = 2.51611$ $b = 0.520639$	-5.14686	3.50430
$u = 0.822250 + 0.912603I$ $a = 1.281290 - 0.101081I$ $b = 0.49501 - 1.66189I$	$-2.29959 - 1.27814I$	$-15.7772 + 13.4535I$
$u = 0.822250 - 0.912603I$ $a = 1.281290 + 0.101081I$ $b = 0.49501 + 1.66189I$	$-2.29959 + 1.27814I$	$-15.7772 - 13.4535I$
$u = -0.822250 + 0.912603I$ $a = -0.387008 - 0.146816I$ $b = -0.072626 - 0.629482I$	$-2.29959 + 1.27814I$	$-15.7772 - 13.4535I$
$u = -0.822250 - 0.912603I$ $a = -0.387008 + 0.146816I$ $b = -0.072626 + 0.629482I$	$-2.29959 - 1.27814I$	$-15.7772 + 13.4535I$

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.631814 + 0.103081I$ $a = 0.630751 - 0.645179I$ $b = -2.91697 - 1.31128I$	$1.92430 + 3.93083I$	$-7.6382 - 13.9939I$
$u = 0.631814 - 0.103081I$ $a = 0.630751 + 0.645179I$ $b = -2.91697 + 1.31128I$	$1.92430 - 3.93083I$	$-7.6382 + 13.9939I$
$u = -0.631814 + 0.103081I$ $a = 1.55956 + 1.65719I$ $b = -0.435165 + 0.428160I$	$1.92430 - 3.93083I$	$-7.6382 + 13.9939I$
$u = -0.631814 - 0.103081I$ $a = 1.55956 - 1.65719I$ $b = -0.435165 - 0.428160I$	$1.92430 + 3.93083I$	$-7.6382 - 13.9939I$
$u = 1.38034 + 0.42829I$ $a = -0.049850 - 0.309510I$ $b = 0.420847 - 0.609955I$	$6.06294 + 4.89735I$	$-1.40550 - 2.57464I$
$u = 1.38034 - 0.42829I$ $a = -0.049850 + 0.309510I$ $b = 0.420847 + 0.609955I$	$6.06294 - 4.89735I$	$-1.40550 + 2.57464I$
$u = -1.38034 + 0.42829I$ $a = 0.436348 + 0.936920I$ $b = -1.47300 + 1.00585I$	$6.06294 - 4.89735I$	$-1.40550 + 2.57464I$
$u = -1.38034 - 0.42829I$ $a = 0.436348 - 0.936920I$ $b = -1.47300 - 1.00585I$	$6.06294 + 4.89735I$	$-1.40550 - 2.57464I$

IV. $\boldsymbol{I_4^u = \langle b+u+1,\ 2a-u-2,\ u^2-2\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 1 \\ -2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} \frac{1}{2}u+1 \\ -u-1 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} \frac{3}{2}u+2 \\ -u-3 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -\frac{1}{2}u \\ u-1 \end{pmatrix}$$

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

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

$$a_8 = \begin{pmatrix} \frac{3}{2}u+3 \\ -2u-3 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{3}{2}u+3 \\ -2u-3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -44$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.41421$ $a = 1.70711$ $b = -2.41421$	-3.28987	-44.0000
$u = -1.41421$ $a = 0.292893$ $b = 0.414214$	-3.28987	-44.0000

V. $I_1^v = \langle a,\ b-1,\ v+1 \rangle$

(i) Arc colorings

$a_4 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$

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

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

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

$a_5 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$

$a_3 = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$

$a_6 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

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

$a_2 = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$

$a_{11} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = -1.00000$ $a = \quad 0$ $b = \quad 1.00000$	-3.28987	-12.0000

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^3)(u^{18}-6u^{16}+\cdots+13u-1)(u^{28}+u^{27}+\cdots+303u+49)$ $\cdot\,(u^{36}-u^{35}+\cdots-2025u+675)$
c_2, c_7	$u(u^2-2)(u^{18}+4u^{16}+\cdots+9u^2-2)$ $\cdot\,((u^{18}+8u^{16}+\cdots+9u+1)^2)(u^{28}+3u^{27}+\cdots-120u+26)$
c_3	$(u+1)(u^2+2u-1)(u^{18}+5u^{17}+\cdots-8u-1)(u^{28}-u^{27}+\cdots-u+1)$ $\cdot\,(u^{36}-4u^{35}+\cdots-8u+1)$
c_4, c_9	$u(u^2-2)(u^{18}-8u^{16}+\cdots+3u-7)^2$ $\cdot\,(u^{18}-6u^{16}+19u^{14}-40u^{12}+66u^{10}-82u^8+76u^6-46u^4+15u^2-2)$ $\cdot\,(u^{28}+3u^{27}+\cdots+40u+10)$
c_5	$(u+1)(u^2-2u-1)(u^{18}-u^{15}+\cdots+2u^2-1)(u^{28}-u^{27}+\cdots+21u+5)$ $\cdot\,(u^{36}-7u^{35}+\cdots+512u+139)$
c_6	$(u-1)(u^2-2u-1)(u^{18}-5u^{17}+\cdots+8u-1)(u^{28}-u^{27}+\cdots-u+1)$ $\cdot\,(u^{36}-4u^{35}+\cdots-8u+1)$
c_8	$(u-1)(u^2+2u-1)(u^{18}+u^{15}+\cdots+2u^2-1)(u^{28}-u^{27}+\cdots+21u+5)$ $\cdot\,(u^{36}-7u^{35}+\cdots+512u+139)$
c_{10}	$((u+1)^3)(u^{18}-6u^{16}+\cdots-13u-1)(u^{28}+u^{27}+\cdots+303u+49)$ $\cdot\,(u^{36}-u^{35}+\cdots-2025u+675)$
c_{11}	$u^3(u^{18}-3u^{16}+\cdots+10u+1)^2$ $\cdot\,(u^{18}-2u^{16}+21u^{14}+27u^{10}-174u^8+205u^6+30u^4-53u^2-32)$ $\cdot\,(u^{28}+3u^{27}+\cdots+56u+8)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$((y-1)^3)(y^{18} - 12y^{17} + \cdots - 71y + 1)$ $\cdot (y^{28} + 29y^{27} + \cdots - 8019y + 2401)$ $\cdot (y^{36} - 9y^{35} + \cdots - 2634525y + 455625)$
c_2, c_7	$y(y-2)^2$ $\cdot (y^9 + 4y^8 - 2y^7 - 22y^6 - 13y^5 + 16y^4 - 3y^3 - 11y^2 + 9y - 2)^2$ $\cdot ((y^{18} + 16y^{17} + \cdots + 23y + 1)^2)(y^{28} + 23y^{27} + \cdots - 1816y + 676)$
c_3, c_6	$(y-1)(y^2 - 6y + 1)(y^{18} - 7y^{17} + \cdots - 8y^2 + 1)(y^{28} + y^{27} + \cdots + 17y + 1)$ $\cdot (y^{36} - 16y^{35} + \cdots - 18y + 1)$
c_4, c_9	$y(y-2)^2$ $\cdot (y^9 - 6y^8 + 19y^7 - 40y^6 + 66y^5 - 82y^4 + 76y^3 - 46y^2 + 15y - 2)^2$ $\cdot ((y^{18} - 16y^{17} + \cdots - 569y + 49)^2)(y^{28} - 17y^{27} + \cdots + 560y + 100)$
c_5, c_8	$(y-1)(y^2 - 6y + 1)(y^{18} - 8y^{16} + \cdots - 4y + 1)$ $\cdot (y^{28} + 19y^{27} + \cdots + 379y + 25)(y^{36} - 3y^{35} + \cdots - 372232y + 19321)$
c_{11}	$y^3(y^9 - 2y^8 + 21y^7 + 27y^5 - 174y^4 + 205y^3 + 30y^2 - 53y - 32)^2$ $\cdot ((y^{18} - 6y^{17} + \cdots - 36y + 1)^2)(y^{28} - y^{27} + \cdots + 640y + 64)$