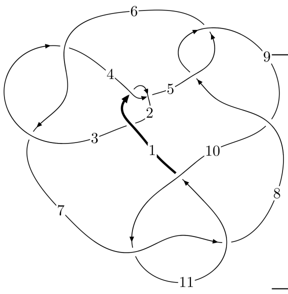
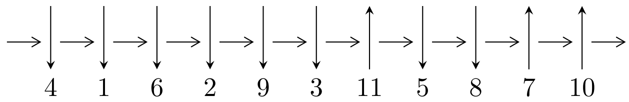
$11a_{18}$ ($K11a_{18}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.02368 \times 10^{22} u^{71} + 1.11016 \times 10^{23} u^{70} + \cdots + 1.88857 \times 10^{22} b - 6.09914 \times 10^{22},$$
$$4.07828 \times 10^{22} u^{71} - 1.25681 \times 10^{23} u^{70} + \cdots + 3.77714 \times 10^{22} a + 1.39984 \times 10^{23},\ u^{72} - 5u^{71} + \cdots + 12u -$$
$$I_2^u = \langle b,\ u^3 - u^2 + a + 1,\ u^6 - u^5 - u^4 + 2u^3 - u + 1 \rangle$$
$$I_3^u = \langle a^2 + 5b + 3a + 5,\ a^3 + a^2 + 4a + 5,\ u + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 81 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. $I_1^u = \langle -2.02 \times 10^{22}u^{71} + 1.11 \times 10^{23}u^{70} + \cdots + 1.89 \times 10^{22}b - 6.10 \times 10^{22},\ 4.08 \times 10^{22}u^{71} - 1.26 \times 10^{23}u^{70} + \cdots + 3.78 \times 10^{22}a + 1.40 \times 10^{23},\ u^{72} - 5u^{71} + \cdots + 12u - 1 \rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -1.07973u^{71} + 3.32742u^{70} + \cdots + 8.79814u - 3.70610 \\ 1.07154u^{71} - 5.87833u^{70} + \cdots - 27.8922u + 3.22950 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 7.15660u^{71} - 30.9077u^{70} + \cdots - 110.914u + 13.1587 \\ -3.05252u^{71} + 13.6578u^{70} + \cdots + 48.6687u - 4.93370 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -8.96090u^{71} + 37.1749u^{70} + \cdots + 124.175u - 16.1656 \\ 6.60610u^{71} - 29.5950u^{70} + \cdots - 105.720u + 10.6845 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1.44106u^{71} + 6.20595u^{70} + \cdots + 24.5011u - 5.21118 \\ -0.925198u^{71} + 1.52843u^{70} + \cdots - 9.87376u + 1.65560 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 6.74498u^{71} - 26.4676u^{70} + \cdots - 87.3523u + 10.9648 \\ -6.68660u^{71} + 26.6048u^{70} + \cdots + 77.8117u - 7.58573 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 6.74498u^{71} - 26.4676u^{70} + \cdots - 87.3523u + 10.9648 \\ -6.68660u^{71} + 26.6048u^{70} + \cdots + 77.8117u - 7.58573 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{7671075292773682365375 9}{944283776877038926258 1}u^{71} + \frac{5091778886695131087891 91}{1888567553754077852516 2}u^{70} + \cdots + \frac{3168049398967014461796 90}{944283776877038926258 1}u - \frac{2458529024894826124697 87}{1888567553754077852516 2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{72} - 8u^{71} + \cdots - 12u + 1$
c_2	$u^{72} + 32u^{71} + \cdots - 8u + 1$
c_3, c_6	$u^{72} - 2u^{71} + \cdots + 128u - 64$
c_5, c_8	$u^{72} + 2u^{71} + \cdots + 20u + 8$
c_7, c_{10}	$u^{72} + 5u^{71} + \cdots - 12u - 1$
c_9	$u^{72} + 24u^{71} + \cdots + 1872u + 64$
c_{11}	$u^{72} - 39u^{71} + \cdots - 52u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{72} - 32y^{71} + \cdots + 8y + 1$
c_2	$y^{72} + 24y^{71} + \cdots + 2568y + 1$
c_3, c_6	$y^{72} + 42y^{71} + \cdots + 73728y + 4096$
c_5, c_8	$y^{72} - 24y^{71} + \cdots - 1872y + 64$
c_7, c_{10}	$y^{72} - 39y^{71} + \cdots - 52y + 1$
c_9	$y^{72} + 44y^{71} + \cdots - 601344y + 4096$
c_{11}	$y^{72} - 7y^{71} + \cdots - 2176y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.876128 + 0.485866I$ $a = -1.020580 - 0.525723I$ $b = 0.151401 - 0.941501I$	$1.78878 + 0.06007I$	0
$u = -0.876128 - 0.485866I$ $a = -1.020580 + 0.525723I$ $b = 0.151401 + 0.941501I$	$1.78878 - 0.06007I$	0
$u = 0.642602 + 0.759427I$ $a = -0.004406 - 0.268942I$ $b = -0.468956 - 0.932444I$	$-3.84415 - 3.26268I$	0
$u = 0.642602 - 0.759427I$ $a = -0.004406 + 0.268942I$ $b = -0.468956 + 0.932444I$	$-3.84415 + 3.26268I$	0
$u = 0.809332 + 0.576281I$ $a = -0.308570 + 0.160474I$ $b = -0.794967 - 0.622629I$	$-4.30882 + 3.51764I$	0
$u = 0.809332 - 0.576281I$ $a = -0.308570 - 0.160474I$ $b = -0.794967 + 0.622629I$	$-4.30882 - 3.51764I$	0
$u = -0.951216 + 0.225981I$ $a = -0.764228 + 0.449018I$ $b = -0.173093 - 0.363920I$	$1.73034 - 0.74165I$	0
$u = -0.951216 - 0.225981I$ $a = -0.764228 - 0.449018I$ $b = -0.173093 + 0.363920I$	$1.73034 + 0.74165I$	0
$u = -1.05211$ $a = -2.54516$ $b = -0.432247$	0.330921	-46.0800
$u = 0.914907 + 0.540239I$ $a = 0.652730 + 1.039110I$ $b = 0.571615 - 0.771611I$	$-0.63477 + 4.40212I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.914907 - 0.540239I$ $a = 0.652730 - 1.039110I$ $b = 0.571615 + 0.771611I$	$-0.63477 - 4.40212I$	0
$u = 0.729237 + 0.575747I$ $a = -1.30537 - 1.48267I$ $b = -0.617113 + 0.726794I$	$-4.53906 + 1.05261I$	$-10.58932 - 3.82745I$
$u = 0.729237 - 0.575747I$ $a = -1.30537 + 1.48267I$ $b = -0.617113 - 0.726794I$	$-4.53906 - 1.05261I$	$-10.58932 + 3.82745I$
$u = 0.199115 + 0.897753I$ $a = -0.610450 + 0.607154I$ $b = -0.64956 - 1.25765I$	$1.48181 - 10.73100I$	$-6.00773 + 7.14911I$
$u = 0.199115 - 0.897753I$ $a = -0.610450 - 0.607154I$ $b = -0.64956 + 1.25765I$	$1.48181 + 10.73100I$	$-6.00773 - 7.14911I$
$u = 0.453294 + 0.792285I$ $a = -0.230638 + 0.142154I$ $b = -0.207389 + 0.782148I$	$-2.85223 + 0.05705I$	$-5.94816 - 3.77217I$
$u = 0.453294 - 0.792285I$ $a = -0.230638 - 0.142154I$ $b = -0.207389 - 0.782148I$	$-2.85223 - 0.05705I$	$-5.94816 + 3.77217I$
$u = 0.151325 + 0.858429I$ $a = 0.338744 - 0.734808I$ $b = 0.435835 + 1.280920I$	$3.59461 - 4.95936I$	$-3.13446 + 3.17768I$
$u = 0.151325 - 0.858429I$ $a = 0.338744 + 0.734808I$ $b = 0.435835 - 1.280920I$	$3.59461 + 4.95936I$	$-3.13446 - 3.17768I$
$u = -0.686903 + 0.514666I$ $a = 1.257030 + 0.541255I$ $b = 0.337786 + 1.041550I$	$1.23521 - 4.19775I$	$-3.49766 + 6.68711I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.686903 - 0.514666I$ $a = 1.257030 - 0.541255I$ $b = 0.337786 - 1.041550I$	$1.23521 + 4.19775I$	$-3.49766 - 6.68711I$
$u = 0.921196 + 0.680248I$ $a = -1.079360 - 0.688931I$ $b = -0.563006 + 1.013540I$	$-3.02672 + 8.64627I$	0
$u = 0.921196 - 0.680248I$ $a = -1.079360 + 0.688931I$ $b = -0.563006 - 1.013540I$	$-3.02672 - 8.64627I$	0
$u = 0.190668 + 0.789710I$ $a = -0.539342 - 0.183142I$ $b = -1.048020 + 0.360828I$	$-1.37174 - 4.55999I$	$-7.56588 + 4.82929I$
$u = 0.190668 - 0.789710I$ $a = -0.539342 + 0.183142I$ $b = -1.048020 - 0.360828I$	$-1.37174 + 4.55999I$	$-7.56588 - 4.82929I$
$u = 0.803990 + 0.062025I$ $a = 0.01110 + 2.46502I$ $b = 0.188498 - 1.395620I$	$4.16423 + 3.00649I$	$-10.90678 - 5.59644I$
$u = 0.803990 - 0.062025I$ $a = 0.01110 - 2.46502I$ $b = 0.188498 + 1.395620I$	$4.16423 - 3.00649I$	$-10.90678 + 5.59644I$
$u = -1.135490 + 0.370936I$ $a = 1.07671 - 2.69128I$ $b = 0.062046 + 0.875399I$	$1.26979 - 1.25057I$	0
$u = -1.135490 - 0.370936I$ $a = 1.07671 + 2.69128I$ $b = 0.062046 - 0.875399I$	$1.26979 + 1.25057I$	0
$u = 1.148040 + 0.380216I$ $a = -0.70878 - 1.85544I$ $b = 0.49043 + 1.40149I$	$6.72982 - 1.38866I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.148040 - 0.380216I$ $a = -0.70878 + 1.85544I$ $b = 0.49043 - 1.40149I$	$6.72982 + 1.38866I$	0
$u = -1.142140 + 0.425738I$ $a = -0.562710 - 0.941454I$ $b = 1.037880 - 0.268094I$	$2.61393 - 3.52046I$	0
$u = -1.142140 - 0.425738I$ $a = -0.562710 + 0.941454I$ $b = 1.037880 + 0.268094I$	$2.61393 + 3.52046I$	0
$u = 0.588819 + 0.498548I$ $a = -0.1316140 + 0.0334840I$ $b = 0.661202 + 0.427658I$	$-1.57298 - 0.11426I$	$-7.05869 + 0.49031I$
$u = 0.588819 - 0.498548I$ $a = -0.1316140 - 0.0334840I$ $b = 0.661202 - 0.427658I$	$-1.57298 + 0.11426I$	$-7.05869 - 0.49031I$
$u = 1.074870 + 0.603822I$ $a = 0.597690 + 0.112026I$ $b = -0.123079 - 0.683210I$	$-1.00613 + 5.17017I$	0
$u = 1.074870 - 0.603822I$ $a = 0.597690 - 0.112026I$ $b = -0.123079 + 0.683210I$	$-1.00613 - 5.17017I$	0
$u = -1.191930 + 0.342239I$ $a = 0.358281 + 1.074510I$ $b = -1.013040 - 0.196707I$	$2.80142 + 0.88223I$	0
$u = -1.191930 - 0.342239I$ $a = 0.358281 - 1.074510I$ $b = -1.013040 + 0.196707I$	$2.80142 - 0.88223I$	0
$u = 1.144240 + 0.478405I$ $a = -0.536141 + 0.780473I$ $b = 1.126790 - 0.035537I$	$2.23267 + 4.45748I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.144240 - 0.478405I$ $a = -0.536141 - 0.780473I$ $b = 1.126790 + 0.035537I$	$2.23267 - 4.45748I$	0
$u = 1.176730 + 0.425158I$ $a = 0.78375 + 2.01694I$ $b = -0.21774 - 1.44325I$	$8.03882 + 4.81398I$	0
$u = 1.176730 - 0.425158I$ $a = 0.78375 - 2.01694I$ $b = -0.21774 + 1.44325I$	$8.03882 - 4.81398I$	0
$u = 0.209029 + 0.716378I$ $a = -0.26407 + 1.66791I$ $b = -0.225033 - 0.897395I$	$-2.48615 - 2.12650I$	$-6.43169 + 3.64338I$
$u = 0.209029 - 0.716378I$ $a = -0.26407 - 1.66791I$ $b = -0.225033 + 0.897395I$	$-2.48615 + 2.12650I$	$-6.43169 - 3.64338I$
$u = -1.153340 + 0.507415I$ $a = 1.60055 - 2.01202I$ $b = 0.60825 + 1.28103I$	$5.82177 - 9.49602I$	0
$u = -1.153340 - 0.507415I$ $a = 1.60055 + 2.01202I$ $b = 0.60825 - 1.28103I$	$5.82177 + 9.49602I$	0
$u = 1.152310 + 0.513166I$ $a = -0.96387 - 2.44235I$ $b = -0.189978 + 1.047730I$	$0.24731 + 6.78521I$	0
$u = 1.152310 - 0.513166I$ $a = -0.96387 + 2.44235I$ $b = -0.189978 - 1.047730I$	$0.24731 - 6.78521I$	0
$u = -1.261390 + 0.058100I$ $a = 0.01557 + 1.46315I$ $b = -0.223456 - 1.041190I$	$3.01523 - 2.24466I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.261390-0.058100I$ $a=\ \ 0.01557-1.46315I$ $b=-0.223456+1.041190I$	$3.01523+2.24466I$	0
$u=-0.064161+0.732453I$ $a=-0.767662-0.651334I$ $b=-0.235839+1.293170I$	$4.51528-0.75882I$	$-2.00847+2.21103I$
$u=-0.064161-0.732453I$ $a=-0.767662+0.651334I$ $b=-0.235839-1.293170I$	$4.51528+0.75882I$	$-2.00847-2.21103I$
$u=-1.179000+0.470286I$ $a=-1.43630+2.06463I$ $b=-0.372085-1.312220I$	$7.71847-3.66806I$	0
$u=-1.179000-0.470286I$ $a=-1.43630-2.06463I$ $b=-0.372085+1.312220I$	$7.71847+3.66806I$	0
$u=-0.184930+0.702974I$ $a=\ \ 1.142920+0.364325I$ $b=\ \ 0.511874-1.258740I$	$3.04313+4.90017I$	$-4.09415-2.80236I$
$u=-0.184930-0.702974I$ $a=\ \ 1.142920-0.364325I$ $b=\ \ 0.511874+1.258740I$	$3.04313-4.90017I$	$-4.09415+2.80236I$
$u=\ \ 1.175940+0.526545I$ $a=\ \ 0.711909-0.601787I$ $b=-1.150070-0.355611I$	$1.52562+9.43889I$	0
$u=\ \ 1.175940-0.526545I$ $a=\ \ 0.711909+0.601787I$ $b=-1.150070+0.355611I$	$1.52562-9.43889I$	0
$u=-0.696737+0.142085I$ $a=\ \ 2.57175+0.05432I$ $b=\ \ 0.517031-0.372132I$	$-0.802882-0.774259I$	$-7.90864-1.29464I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.696737 - 0.142085I$ $a = 2.57175 - 0.05432I$ $b = 0.517031 + 0.372132I$	$-0.802882 + 0.774259I$	$-7.90864 + 1.29464I$
$u = -1.255590 + 0.362909I$ $a = -0.86019 + 1.86322I$ $b = 0.319526 - 1.319120I$	$7.96250 + 0.80203I$	0
$u = -1.255590 - 0.362909I$ $a = -0.86019 - 1.86322I$ $b = 0.319526 + 1.319120I$	$7.96250 - 0.80203I$	0
$u = 1.209240 + 0.530646I$ $a = 1.09985 + 2.14991I$ $b = 0.48229 - 1.35413I$	$6.75363 + 10.01730I$	0
$u = 1.209240 - 0.530646I$ $a = 1.09985 - 2.14991I$ $b = 0.48229 + 1.35413I$	$6.75363 - 10.01730I$	0
$u = -1.284540 + 0.323794I$ $a = 0.70474 - 1.66611I$ $b = -0.570649 + 1.286370I$	$6.23840 + 6.61734I$	0
$u = -1.284540 - 0.323794I$ $a = 0.70474 + 1.66611I$ $b = -0.570649 - 1.286370I$	$6.23840 - 6.61734I$	0
$u = 1.213020 + 0.559420I$ $a = -1.18093 - 2.10008I$ $b = -0.68584 + 1.29855I$	$4.5389 + 16.0300I$	0
$u = 1.213020 - 0.559420I$ $a = -1.18093 + 2.10008I$ $b = -0.68584 - 1.29855I$	$4.5389 - 16.0300I$	0
$u = 0.108198 + 0.607054I$ $a = 0.456063 + 0.553200I$ $b = 0.933701 + 0.059450I$	$-0.602714 - 0.211764I$	$-6.49349 - 0.29601I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.108198 - 0.607054I$ $a = 0.456063 - 0.553200I$ $b = 0.933701 - 0.059450I$	$-0.602714 + 0.211764I$	$-6.49349 + 0.29601I$
$u = 0.146855$ $a = -2.66318$ $b = 0.617774$	-0.987420	-10.0940

II. $I_2^u = \langle b,\ u^3 - u^2 + a + 1,\ u^6 - u^5 - u^4 + 2u^3 - u + 1\rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^3 + u^2 - 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^3 + u^2 - 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^2 - 1 \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^3 \\ u^3 - u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^3 \\ u^3 - u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3u^4 - 2u^3 + 3u^2 - 2u - 11$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^6$
c_2, c_4	$(u+1)^6$
c_3, c_6	u^6
c_5, c_{10}	$u^6+u^5-u^4-2u^3+u+1$
c_7, c_8	$u^6-u^5-u^4+2u^3-u+1$
c_9	$u^6+3u^5+5u^4+4u^3+2u^2+u+1$
c_{11}	$u^6-3u^5+5u^4-4u^3+2u^2-u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^6$
c_3, c_6	y^6
c_5, c_7, c_8 c_{10}	$y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1$
c_9, c_{11}	$y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.002190 + 0.295542I$ $a = 0.66103 - 1.45708I$ $b = 0$	$0.245672 - 0.924305I$	$-6.22669 - 0.83820I$
$u = -1.002190 - 0.295542I$ $a = 0.66103 + 1.45708I$ $b = 0$	$0.245672 + 0.924305I$	$-6.22669 + 0.83820I$
$u = 0.428243 + 0.664531I$ $a = -0.769407 + 0.497010I$ $b = 0$	$-3.53554 - 0.92430I$	$-10.88169 + 1.11590I$
$u = 0.428243 - 0.664531I$ $a = -0.769407 - 0.497010I$ $b = 0$	$-3.53554 + 0.92430I$	$-10.88169 - 1.11590I$
$u = 1.073950 + 0.558752I$ $a = -0.391622 - 0.558752I$ $b = 0$	$-1.64493 + 5.69302I$	$-8.89162 - 7.09196I$
$u = 1.073950 - 0.558752I$ $a = -0.391622 + 0.558752I$ $b = 0$	$-1.64493 - 5.69302I$	$-8.89162 + 7.09196I$

III. $\boldsymbol{I_3^u = \langle a^2+5b+3a+5,\ a^3+a^2+4a+5,\ u+1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} a \\ -\frac{1}{5}a^2 - \frac{3}{5}a - 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{2}{5}a^2 + \frac{1}{5}a \\ -\frac{2}{5}a^2 - \frac{1}{5}a \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -1 \\ -\frac{1}{5}a^2 + \frac{2}{5}a \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -\frac{1}{5}a^2 + \frac{2}{5}a - 1 \\ -\frac{1}{5}a^2 - \frac{3}{5}a - 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{2}{5}a^2 + \frac{1}{5}a \\ -\frac{2}{5}a^2 - \frac{1}{5}a \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{2}{5}a^2 + \frac{1}{5}a \\ -\frac{2}{5}a^2 - \frac{1}{5}a \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{1}{5}a^2 + \frac{3}{5}a + 5$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.00000$ $a=-1.18504$ $b=-0.569840$	0.531480	4.56980
$u=-1.00000$ $a=\quad 0.09252+2.05200I$ $b=-0.215080-1.307140I$	$4.66906-2.82812I$	$4.21508+1.30714I$
$u=-1.00000$ $a=\quad 0.09252-2.05200I$ $b=-0.215080+1.307140I$	$4.66906+2.82812I$	$4.21508-1.30714I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^6)(u^3+u^2-1)(u^{72}-8u^{71}+\cdots-12u+1)$
c_2	$((u+1)^6)(u^3+u^2+2u+1)(u^{72}+32u^{71}+\cdots-8u+1)$
c_3	$u^6(u^3-u^2+2u-1)(u^{72}-2u^{71}+\cdots+128u-64)$
c_4	$((u+1)^6)(u^3-u^2+1)(u^{72}-8u^{71}+\cdots-12u+1)$
c_5	$u^3(u^6+u^5+\cdots+u+1)(u^{72}+2u^{71}+\cdots+20u+8)$
c_6	$u^6(u^3+u^2+2u+1)(u^{72}-2u^{71}+\cdots+128u-64)$
c_7	$((u+1)^3)(u^6-u^5+\cdots-u+1)(u^{72}+5u^{71}+\cdots-12u-1)$
c_8	$u^3(u^6-u^5+\cdots-u+1)(u^{72}+2u^{71}+\cdots+20u+8)$
c_9	$u^3(u^6+3u^5+\cdots+u+1)(u^{72}+24u^{71}+\cdots+1872u+64)$
c_{10}	$((u-1)^3)(u^6+u^5+\cdots+u+1)(u^{72}+5u^{71}+\cdots-12u-1)$
c_{11}	$(u-1)^3(u^6-3u^5+5u^4-4u^3+2u^2-u+1)$ $\cdot(u^{72}-39u^{71}+\cdots-52u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y-1)^6)(y^3 - y^2 + 2y - 1)(y^{72} - 32y^{71} + \cdots + 8y + 1)$
c_2	$((y-1)^6)(y^3 + 3y^2 + 2y - 1)(y^{72} + 24y^{71} + \cdots + 2568y + 1)$
c_3, c_6	$y^6(y^3 + 3y^2 + 2y - 1)(y^{72} + 42y^{71} + \cdots + 73728y + 4096)$
c_5, c_8	$y^3(y^6 - 3y^5 + \cdots - y + 1)(y^{72} - 24y^{71} + \cdots - 1872y + 64)$
c_7, c_{10}	$(y-1)^3(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)$ $\cdot (y^{72} - 39y^{71} + \cdots - 52y + 1)$
c_9	$y^3(y^6 + y^5 + \cdots + 3y + 1)(y^{72} + 44y^{71} + \cdots - 601344y + 4096)$
c_{11}	$((y-1)^3)(y^6 + y^5 + \cdots + 3y + 1)(y^{72} - 7y^{71} + \cdots - 2176y + 1)$