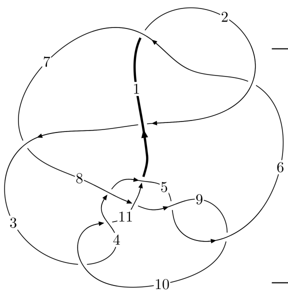
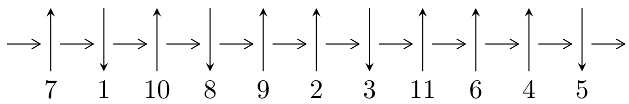
$11a_{196}$ ($K11a_{196}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.56366 \times 10^{21} u^{26} + 2.00582 \times 10^{21} u^{25} + \cdots + 7.42142 \times 10^{21} b - 9.93961 \times 10^{20},$$
$$- 1.23252 \times 10^{22} u^{26} + 1.13313 \times 10^{22} u^{25} + \cdots + 7.42142 \times 10^{21} a - 2.69156 \times 10^{22},\ u^{27} - u^{26} + \cdots + 2u -$$

$$I_2^u = \langle -466470675905338u^{23} - 397267180404293u^{22} + \cdots + 66308308865373766b - 264157828925488,$$
$$26944089879716u^{23} + 14049375398024u^{22} + \cdots + 121666621771328a - 16982188896888,$$
$$u^{24} + 3u^{22} + \cdots - 4u + 8\rangle$$

$$I_3^u = \langle u^{14} - 3u^{10} - u^9 - 2u^8 - u^7 + 3u^6 + 4u^5 + 4u^4 + u^3 - u^2 + 2b - 3,$$
$$- 2u^{14} - 3u^{13} - u^{12} - 5u^{11} + u^{10} + 6u^9 + u^8 + 13u^7 + 6u^6 - 7u^5 + u^4 - 7u^3 - 8u^2 + 2a + u - 1,$$
$$u^{15} + u^{13} + u^{12} - 2u^{11} - 2u^9 - 4u^8 + 2u^7 + u^5 + 4u^4 - 1\rangle$$

$$I_4^u = \langle 5.79410 \times 10^{18} u^{23} + 1.97168 \times 10^{19} u^{22} + \cdots + 1.42067 \times 10^{19} b - 3.77005 \times 10^{17},$$
$$19264503378333u^{23} + 64217498098488u^{22} + \cdots + 8090899806416a - 59730846409593,$$
$$u^{24} + 3u^{23} + \cdots - 6u + 1\rangle$$

$$I_5^u = \langle b - 1,\ 59u^5 + 76u^4 + 242u^3 + 190u^2 + 67a + 487u + 146,\ u^6 + u^5 + 4u^4 + 2u^3 + 8u^2 + 1\rangle$$

$$I_6^u = \langle -u^2 + b,\ -u^2 + a - 1,\ u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1\rangle$$

$$I_7^u = \langle b - 1,\ a - 2,\ u + 1\rangle$$

* 7 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 103 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

I.

$\boldsymbol{I_1^u = \langle -1.56\times10^{21}u^{26}+2.01\times10^{21}u^{25}+\cdots+7.42\times10^{21}b-9.94\times10^{20},\ -1.23\times10^{22}u^{26}+1.13\times10^{22}u^{25}+\cdots+7.42\times10^{21}a-2.69\times10^{22},\ u^{27}-u^{26}+\cdots+2u-1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}1.66077u^{26}-1.52684u^{25}+\cdots+1.11901u+3.62674\\0.210696u^{26}-0.270275u^{25}+\cdots+2.39290u+0.133931\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0.312172u^{26}+0.638396u^{25}+\cdots-1.77480u+3.01621\\0.581257u^{26}-0.629489u^{25}+\cdots+0.803940u+1.08450\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-1.18988u^{26}+1.11302u^{25}+\cdots-4.45598u+1.89491\\-0.241743u^{26}+0.0536668u^{25}+\cdots-0.670686u-0.868814\end{pmatrix}$$
$$a_1 = \begin{pmatrix}1.66077u^{26}-1.52684u^{25}+\cdots+0.119008u+3.62674\\0.210696u^{26}-0.270275u^{25}+\cdots+2.39290u+0.133931\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}1.45007u^{26}-1.25656u^{25}+\cdots-1.27390u+3.49281\\0.210696u^{26}-0.270275u^{25}+\cdots+2.39290u+0.133931\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1.19231u^{26}-0.633674u^{25}+\cdots+3.06255u+2.18099\\-0.107812u^{26}+0.130431u^{25}+\cdots-0.365474u+0.791952\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1.19260u^{26}-0.799146u^{25}+\cdots+2.64209u-0.651268\\-0.0394366u^{26}+0.164653u^{25}+\cdots+0.0481946u+0.646177\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-0.451600u^{26}+0.986823u^{25}+\cdots+5.66786u-0.00121263\\0.328533u^{26}-0.284050u^{25}+\cdots-0.908870u+0.936550\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-0.451600u^{26}+0.986823u^{25}+\cdots+5.66786u-0.00121263\\0.328533u^{26}-0.284050u^{25}+\cdots-0.908870u+0.936550\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{2436608986660065761015 3}{742141612990644365158 6}u^{26} - \frac{133440429614719744409 73}{371070806495322182579 3}u^{25}+\cdots+\frac{123365016888052989817509}{7421416129906443651586}u+\frac{577101315510207212008 5}{371070806495322182579 3}$

in decimal forms when there is not enough margin.

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{27} + 6u^{26} + \cdots - 40u - 8$
c_2	$u^{27} + 14u^{26} + \cdots + 32u - 64$
c_3, c_5, c_9 c_{10}	$u^{27} - 9u^{25} + \cdots - u - 1$
c_4, c_{11}	$u^{27} - u^{26} + \cdots + 2u - 1$
c_7	$u^{27} - 9u^{26} + \cdots + 2296u - 232$
c_8	$u^{27} + 22u^{26} + \cdots - 7680u - 512$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{27} + 14y^{26} + \cdots + 32y - 64$
c_2	$y^{27} + 2y^{26} + \cdots + 39424y - 4096$
c_3, c_5, c_9 c_{10}	$y^{27} - 18y^{26} + \cdots - 7y - 1$
c_4, c_{11}	$y^{27} - 5y^{26} + \cdots + 16y - 1$
c_7	$y^{27} - 7y^{26} + \cdots + 586144y - 53824$
c_8	$y^{27} - 4y^{26} + \cdots + 1966080y - 262144$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.898231 + 0.526385I$ $a = 0.209642 + 0.703154I$ $b = -0.122251 + 0.700628I$	$-1.84219 + 1.61763I$	$-0.34752 - 1.90846I$
$u = -0.898231 - 0.526385I$ $a = 0.209642 - 0.703154I$ $b = -0.122251 - 0.700628I$	$-1.84219 - 1.61763I$	$-0.34752 + 1.90846I$
$u = 1.012540 + 0.318884I$ $a = -0.308945 + 0.757476I$ $b = 0.238061 + 0.818947I$	$-5.36570 + 2.03204I$	$-4.32275 - 2.13513I$
$u = 1.012540 - 0.318884I$ $a = -0.308945 - 0.757476I$ $b = 0.238061 - 0.818947I$	$-5.36570 - 2.03204I$	$-4.32275 + 2.13513I$
$u = -0.276412 + 0.776716I$ $a = 0.023671 + 0.586360I$ $b = -0.037108 + 0.457608I$	$0.18488 + 1.81939I$	$2.29374 - 3.76762I$
$u = -0.276412 - 0.776716I$ $a = 0.023671 - 0.586360I$ $b = -0.037108 - 0.457608I$	$0.18488 - 1.81939I$	$2.29374 + 3.76762I$
$u = -0.795815 + 0.903407I$ $a = 0.26309 + 1.49507I$ $b = 1.305830 + 0.251781I$	$7.97470 + 2.85426I$	$8.94272 - 2.79876I$
$u = -0.795815 - 0.903407I$ $a = 0.26309 - 1.49507I$ $b = 1.305830 - 0.251781I$	$7.97470 - 2.85426I$	$8.94272 + 2.79876I$
$u = 1.074420 + 0.604846I$ $a = -0.257278 + 0.648739I$ $b = 0.028367 + 0.782017I$	$-4.76097 - 6.00409I$	$-3.69772 + 5.84582I$
$u = 1.074420 - 0.604846I$ $a = -0.257278 - 0.648739I$ $b = 0.028367 - 0.782017I$	$-4.76097 + 6.00409I$	$-3.69772 - 5.84582I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.208550 + 0.274221I$ $a = -1.302050 + 0.508274I$ $b = -0.932187 + 0.115358I$	$-2.56542 - 5.05729I$	$5.23613 + 5.90187I$
$u = 1.208550 - 0.274221I$ $a = -1.302050 - 0.508274I$ $b = -0.932187 - 0.115358I$	$-2.56542 + 5.05729I$	$5.23613 - 5.90187I$
$u = 0.878818 + 1.037850I$ $a = -0.167256 + 1.255180I$ $b = -1.359850 + 0.350164I$	$8.49644 - 8.55345I$	$9.20145 + 7.26296I$
$u = 0.878818 - 1.037850I$ $a = -0.167256 - 1.255180I$ $b = -1.359850 - 0.350164I$	$8.49644 + 8.55345I$	$9.20145 - 7.26296I$
$u = -0.421872 + 0.462971I$ $a = 2.45358 - 1.32260I$ $b = -1.027750 - 0.447368I$	$0.99303 + 9.06795I$	$3.46736 - 11.63407I$
$u = -0.421872 - 0.462971I$ $a = 2.45358 + 1.32260I$ $b = -1.027750 + 0.447368I$	$0.99303 - 9.06795I$	$3.46736 + 11.63407I$
$u = -0.591031 + 0.138214I$ $a = 0.54492 - 1.69705I$ $b = -0.688350 - 0.511205I$	$-2.72477 + 1.50676I$	$-3.17250 - 4.01509I$
$u = -0.591031 - 0.138214I$ $a = 0.54492 + 1.69705I$ $b = -0.688350 + 0.511205I$	$-2.72477 - 1.50676I$	$-3.17250 + 4.01509I$
$u = 0.338852 + 0.350615I$ $a = -3.02283 - 2.53673I$ $b = 0.966126 - 0.347074I$	$3.01066 - 3.39049I$	$3.02884 + 10.08685I$
$u = 0.338852 - 0.350615I$ $a = -3.02283 + 2.53673I$ $b = 0.966126 + 0.347074I$	$3.01066 + 3.39049I$	$3.02884 - 10.08685I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.13972+1.08957I$ $a=\ 0.255186+0.962671I$ $b=\ 1.279710+0.563405I$	$0.91508+8.68990I$	$2.54049-5.35859I$
$u=-1.13972-1.08957I$ $a=\ 0.255186-0.962671I$ $b=\ 1.279710-0.563405I$	$0.91508-8.68990I$	$2.54049+5.35859I$
$u=\ 1.07737+1.19752I$ $a=-0.142409+0.974746I$ $b=-1.39888+0.56362I$	$6.16613-11.88750I$	$7.81516+6.29925I$
$u=\ 1.07737-1.19752I$ $a=-0.142409-0.974746I$ $b=-1.39888-0.56362I$	$6.16613+11.88750I$	$7.81516-6.29925I$
$u=-1.12228+1.24272I$ $a=\ 0.128320+0.924082I$ $b=\ 1.41876+0.62158I$	$3.6775+17.2855I$	$4.85544-9.87335I$
$u=-1.12228-1.24272I$ $a=\ 0.128320-0.924082I$ $b=\ 1.41876-0.62158I$	$3.6775-17.2855I$	$4.85544+9.87335I$
$u=\ 0.309622$ $a=\ 3.64471$ $b=\ 0.659027$	1.29009	9.31830

II.
$\boldsymbol{I_2^u = \langle -4.66\times10^{14}u^{23} - 3.97\times10^{14}u^{22} + \cdots + 6.63\times10^{15}b - 2.64\times10^{14},\ 2.69\times10^{13}u^{23} + 1.40\times10^{13}u^{22} + \cdots + 1.22\times10^{14}a - 1.70\times10^{13},\ u^{24} + 3u^{22} + \cdots - 4u + 8\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.221458u^{23} - 0.115474u^{22} + \cdots - 5.16359u + 0.139580 \\ 0.0703488u^{23} + 0.0599121u^{22} + \cdots + 3.44503u + 0.0398378 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.131260u^{23} - 0.121483u^{22} + \cdots - 3.05755u + 2.19329 \\ -0.0922969u^{23} + 0.000104233u^{22} + \cdots - 1.11867u - 0.780159 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.108244u^{23} + 0.149259u^{22} + \cdots + 1.62669u + 5.33342 \\ 0.00600815u^{23} + 0.116833u^{22} + \cdots - 2.41450u - 0.278416 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.277967u^{23} - 0.143397u^{22} + \cdots - 7.29884u + 1.02354 \\ 0.0235493u^{23} + 0.106410u^{22} + \cdots + 3.78541u + 0.263215 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.291807u^{23} - 0.175386u^{22} + \cdots - 8.60861u + 0.0997419 \\ 0.0703488u^{23} + 0.0599121u^{22} + \cdots + 3.44503u + 0.0398378 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.187834u^{23} + 0.00949931u^{22} + \cdots + 7.51428u - 1.76112 \\ -0.0903139u^{23} - 0.101796u^{22} + \cdots + 0.0682743u + 0.252378 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.0733779u^{23} + 0.0153619u^{22} + \cdots + 9.34212u + 4.09583 \\ 0.123742u^{23} - 0.0875102u^{22} + \cdots - 0.0211572u - 1.70617 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.340801u^{23} - 0.152896u^{22} + \cdots - 7.31312u + 2.28466 \\ 0.170602u^{23} + 0.00657076u^{22} + \cdots + 1.79380u - 0.738436 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.340801u^{23} - 0.152896u^{22} + \cdots - 7.31312u + 2.28466 \\ 0.170602u^{23} + 0.00657076u^{22} + \cdots + 1.79380u - 0.738436 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= \frac{867553217111521}{1657707721634344}u^{23} + \frac{56390307623253}{3315415443268688}u^{22} + \cdots + \frac{3770100918086014}{207213465204293}u + \frac{1919092137145043}{207213465204293}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u^4 + u^2 + u + 1)^6$
c_2	$(u^4 + 2u^3 + 3u^2 + u + 1)^6$
c_3, c_5, c_9 c_{10}	$u^{24} - 9u^{22} + \cdots + 56u + 8$
c_4, c_{11}	$u^{24} + 3u^{22} + \cdots - 4u + 8$
c_7	$(u^4 + 3u^3 + 4u^2 + 3u + 2)^6$
c_8	$(u^3 - u^2 + 1)^8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y^4 + 2y^3 + 3y^2 + y + 1)^6$
c_2	$(y^4 + 2y^3 + 7y^2 + 5y + 1)^6$
c_3, c_5, c_9 c_{10}	$y^{24} - 18y^{23} + \cdots - 864y + 64$
c_4, c_{11}	$y^{24} + 6y^{23} + \cdots + 944y + 64$
c_7	$(y^4 - y^3 + 2y^2 + 7y + 4)^6$
c_8	$(y^3 - y^2 + 2y - 1)^8$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.077838 + 1.001210I$ $a = -0.058264 + 0.749436I$ $b = -1.40920 + 0.84871I$	$3.42323 - 7.64338I$	$9.24932 + 6.51087I$
$u = 0.077838 - 1.001210I$ $a = -0.058264 - 0.749436I$ $b = -1.40920 - 0.84871I$	$3.42323 + 7.64338I$	$9.24932 - 6.51087I$
$u = 0.554955 + 0.881319I$ $a = -0.156285 - 1.094010I$ $b = 0.443978 - 1.026930I$	$2.89077 - 4.22521I$	$8.26043 + 6.84681I$
$u = 0.554955 - 0.881319I$ $a = -0.156285 + 1.094010I$ $b = 0.443978 + 1.026930I$	$2.89077 + 4.22521I$	$8.26043 - 6.84681I$
$u = 0.214202 + 0.934183I$ $a = 0.962122 - 0.718649I$ $b = -0.207958 + 0.155122I$	$2.89077 + 1.43103I$	$8.26043 + 0.88791I$
$u = 0.214202 - 0.934183I$ $a = 0.962122 + 0.718649I$ $b = -0.207958 - 0.155122I$	$2.89077 - 1.43103I$	$8.26043 - 0.88791I$
$u = -0.810739 + 0.684928I$ $a = -0.178616 - 1.069640I$ $b = 0.034600 - 1.374090I$	$-0.71436 + 10.47150I$	$2.72006 - 9.49032I$
$u = -0.810739 - 0.684928I$ $a = -0.178616 + 1.069640I$ $b = 0.034600 + 1.374090I$	$-0.71436 - 10.47150I$	$2.72006 + 9.49032I$
$u = -1.023630 + 0.332750I$ $a = -0.989201 + 0.406110I$ $b = -0.441767 + 0.651030I$	$-0.71436 + 4.81525I$	$2.72006 - 3.53142I$
$u = -1.023630 - 0.332750I$ $a = -0.989201 - 0.406110I$ $b = -0.441767 - 0.651030I$	$-0.71436 - 4.81525I$	$2.72006 + 3.53142I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.299931 + 0.824118I$ $a = -0.455949 - 1.230640I$ $b = 1.091230 - 0.434477I$	$2.89077 - 1.43103I$	$8.26043 - 0.88791I$
$u = 0.299931 - 0.824118I$ $a = -0.455949 + 1.230640I$ $b = 1.091230 + 0.434477I$	$2.89077 + 1.43103I$	$8.26043 + 0.88791I$
$u = -0.233421 + 0.551322I$ $a = 0.491584 + 1.161090I$ $b = 1.68223 + 0.39397I$	$7.02835 + 1.39709I$	$14.7897 - 3.8674I$
$u = -0.233421 - 0.551322I$ $a = 0.491584 - 1.161090I$ $b = 1.68223 - 0.39397I$	$7.02835 - 1.39709I$	$14.7897 + 3.8674I$
$u = 0.208549 + 0.403398I$ $a = 2.34438 - 0.96312I$ $b = -1.141110 + 0.176547I$	$-0.71436 - 4.81525I$	$2.72006 + 3.53142I$
$u = 0.208549 - 0.403398I$ $a = 2.34438 + 0.96312I$ $b = -1.141110 - 0.176547I$	$-0.71436 + 4.81525I$	$2.72006 - 3.53142I$
$u = -0.69942 + 1.38686I$ $a = 0.173806 - 0.720332I$ $b = -1.091770 - 0.185403I$	$2.89077 + 4.22521I$	$8.26043 - 6.84681I$
$u = -0.69942 - 1.38686I$ $a = 0.173806 + 0.720332I$ $b = -1.091770 + 0.185403I$	$2.89077 - 4.22521I$	$8.26043 + 6.84681I$
$u = 1.50603 + 0.81015I$ $a = -0.388743 + 0.209121I$ $b = -1.370290 - 0.060244I$	$7.02835 + 1.39709I$	$14.7897 - 3.8674I$
$u = 1.50603 - 0.81015I$ $a = -0.388743 - 0.209121I$ $b = -1.370290 + 0.060244I$	$7.02835 - 1.39709I$	$14.7897 + 3.8674I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.25615 + 1.37119I$ $a = \ \ 0.023380 - 0.618493I$ $b = \ \ 1.312800 - 0.417455I$	$-0.71436 - 10.47150I$	$2.72006 + 9.49032I$
$u = \ \ 1.25615 - 1.37119I$ $a = \ \ 0.023380 + 0.618493I$ $b = \ \ 1.312800 + 0.417455I$	$-0.71436 + 10.47150I$	$2.72006 - 9.49032I$
$u = -1.35044 + 1.60451I$ $a = \ \ 0.231785 + 0.275391I$ $b = \ \ 1.097260 - 0.209996I$	$3.42323 - 7.64338I$	$9.24932 + 6.51087I$
$u = -1.35044 - 1.60451I$ $a = \ \ 0.231785 - 0.275391I$ $b = \ \ 1.097260 + 0.209996I$	$3.42323 + 7.64338I$	$9.24932 - 6.51087I$

III.
$$\boldsymbol{I^u_3 = \langle u^{14}-3u^{10}+\cdots+2b-3,\ -2u^{14}-3u^{13}+\cdots+2a-1,\ u^{15}+u^{13}+\cdots+4u^4-1\rangle}$$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^{14}+\frac{3}{2}u^{13}+\cdots-\frac{1}{2}u+\frac{1}{2} \\ -\frac{1}{2}u^{14}+\frac{3}{2}u^{10}+\cdots+\frac{1}{2}u^2+\frac{3}{2} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{14}+\frac{3}{2}u^{13}+\cdots+\frac{7}{2}u+\frac{1}{2} \\ u^{14}+u^{12}+u^{11}-2u^{10}-2u^8-4u^7+2u^6+u^4+4u^3+u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{1}{2}u^{14}+u^{13}+\cdots+4u+\frac{1}{2} \\ \frac{3}{2}u^{14}+2u^{12}+\cdots+2u-\frac{1}{2} \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^{14}+\frac{3}{2}u^{13}+\cdots+\frac{1}{2}u+\frac{1}{2} \\ -\frac{1}{2}u^{14}+\frac{3}{2}u^{10}+\cdots+\frac{1}{2}u^2+\frac{3}{2} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{3}{2}u^{14}+\frac{3}{2}u^{13}+\cdots-\frac{1}{2}u-1 \\ -\frac{1}{2}u^{14}+\frac{3}{2}u^{10}+\cdots+\frac{1}{2}u^2+\frac{3}{2} \end{pmatrix}$$
$$a_3 = \begin{pmatrix} \frac{3}{2}u^{13}+\frac{1}{2}u^{12}+\cdots+\frac{3}{2}u-\frac{1}{2} \\ -\frac{1}{2}u^{13}-\frac{1}{2}u^{12}+\cdots-\frac{3}{2}u+\frac{3}{2} \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{14}+\frac{3}{2}u^{13}+\cdots+\frac{1}{2}u-\frac{3}{2} \\ -\frac{1}{2}u^{14}-u^{13}+\cdots-2u+\frac{3}{2} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{14}+\frac{1}{2}u^{13}+\cdots+\frac{7}{2}u+\frac{5}{2} \\ 2u^{14}+2u^{12}+\cdots+u-1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{14}+\frac{1}{2}u^{13}+\cdots+\frac{7}{2}u+\frac{5}{2} \\ 2u^{14}+2u^{12}+\cdots+u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$$= -\frac{11}{2}u^{14}-u^{13}-2u^{12}-8u^{11}+\frac{23}{2}u^{10}+\frac{7}{2}u^9+6u^8+\frac{47}{2}u^7-\frac{9}{2}u^6-10u^5+4u^4-\frac{33}{2}u^3-\frac{19}{2}u^2+\frac{5}{2}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{15}+4u^{13}+8u^{11}-u^{10}+8u^9-3u^8+4u^7-5u^6-5u^4-3u^2-1$
c_2	$u^{15}+8u^{14}+\cdots-6u-1$
c_3, c_9	$u^{15}+u^{14}+\cdots-u-1$
c_4, c_{11}	$u^{15}+u^{13}+u^{12}-2u^{11}-2u^9-4u^8+2u^7+u^5+4u^4-1$
c_5, c_{10}	$u^{15}-u^{14}+\cdots-u+1$
c_6	$u^{15}+4u^{13}+8u^{11}+u^{10}+8u^9+3u^8+4u^7+5u^6+5u^4+3u^2+1$
c_7	$u^{15}-4u^{13}+\cdots+2u+1$
c_8	$u^{15}+7u^{14}+\cdots-4u^2+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{15} + 8y^{14} + \cdots - 6y - 1$
c_2	$y^{15} + 16y^{13} + \cdots - 2y - 1$
c_3, c_5, c_9 c_{10}	$y^{15} - 15y^{14} + \cdots + 13y - 1$
c_4, c_{11}	$y^{15} + 2y^{14} + \cdots + 8y^2 - 1$
c_7	$y^{15} - 8y^{14} + \cdots - 10y - 1$
c_8	$y^{15} - 7y^{14} + \cdots + 8y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.185034 + 0.977053I$ $a = 0.901834 - 0.120626I$ $b = -0.971462 - 0.539948I$	$1.66412 + 7.79387I$	$4.71821 - 7.48440I$
$u = 0.185034 - 0.977053I$ $a = 0.901834 + 0.120626I$ $b = -0.971462 + 0.539948I$	$1.66412 - 7.79387I$	$4.71821 + 7.48440I$
$u = 1.059920 + 0.125997I$ $a = -0.505429 + 0.152100I$ $b = -1.66034 - 0.09253I$	$5.03009 - 3.03027I$	$-0.29865 + 6.15454I$
$u = 1.059920 - 0.125997I$ $a = -0.505429 - 0.152100I$ $b = -1.66034 + 0.09253I$	$5.03009 + 3.03027I$	$-0.29865 - 6.15454I$
$u = -1.017990 + 0.343618I$ $a = -1.24822 - 0.67823I$ $b = -0.602647 - 0.093142I$	$-3.33930 + 4.72492I$	$-3.76065 - 3.56168I$
$u = -1.017990 - 0.343618I$ $a = -1.24822 + 0.67823I$ $b = -0.602647 + 0.093142I$	$-3.33930 - 4.72492I$	$-3.76065 + 3.56168I$
$u = -0.877006 + 0.163803I$ $a = 0.740351 + 0.352474I$ $b = 1.52784 - 0.11487I$	$6.32524 - 0.81175I$	$6.18881 - 3.33873I$
$u = -0.877006 - 0.163803I$ $a = 0.740351 - 0.352474I$ $b = 1.52784 + 0.11487I$	$6.32524 + 0.81175I$	$6.18881 + 3.33873I$
$u = -0.034209 + 0.765835I$ $a = -1.59402 - 0.49939I$ $b = 0.941073 - 0.390006I$	$3.58065 - 2.83345I$	$10.68843 + 2.87579I$
$u = -0.034209 - 0.765835I$ $a = -1.59402 + 0.49939I$ $b = 0.941073 + 0.390006I$	$3.58065 + 2.83345I$	$10.68843 - 2.87579I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.162111+1.223850I$ $a=0.441400-0.577132I$ $b=-0.716431-0.549731I$	$-0.031900+0.989940I$	$0.43333-2.78857I$
$u=-0.162111-1.223850I$ $a=0.441400+0.577132I$ $b=-0.716431+0.549731I$	$-0.031900-0.989940I$	$0.43333+2.78857I$
$u=0.493147+1.132940I$ $a=-0.152438-0.861689I$ $b=0.628299-0.406815I$	$1.26100-3.34950I$	$3.87772+4.04913I$
$u=0.493147-1.132940I$ $a=-0.152438+0.861689I$ $b=0.628299+0.406815I$	$1.26100+3.34950I$	$3.87772-4.04913I$
$u=\ 0.706418$ $a=\ 2.83303$ $b=\ 0.707336$	0.629027	-6.69440

IV.

$\boldsymbol{I_4^u = \langle 5.79\times 10^{18}u^{23} + 1.97\times 10^{19}u^{22} + \cdots + 1.42\times 10^{19}b - 3.77\times 10^{17},\ 1.93\times 10^{13}u^{23} + 6.42\times 10^{13}u^{22} + \cdots + 8.09\times 10^{12}a - 5.97\times 10^{13},\ u^{24} + 3u^{23} + \cdots - 6u + 1\rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2.38101u^{23} - 7.93700u^{22} + \cdots - 16.0638u + 7.38247 \\ -0.407843u^{23} - 1.38785u^{22} + \cdots - 3.78446u + 0.0265372 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -3.15250u^{23} - 10.3010u^{22} + \cdots - 32.7601u + 11.4367 \\ 0.503685u^{23} + 1.63902u^{22} + \cdots + 4.73930u - 0.983119 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1.98429u^{23} - 6.73679u^{22} + \cdots - 12.6550u + 5.30508 \\ 0.0494630u^{23} + 0.168935u^{22} + \cdots + 0.574708u - 1.77150 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -2.20112u^{23} - 7.24702u^{22} + \cdots - 14.6622u + 8.14991 \\ -0.371131u^{23} - 1.31484u^{22} + \cdots - 3.06241u - 0.123786 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -1.97317u^{23} - 6.54915u^{22} + \cdots - 12.2793u + 7.35594 \\ -0.407843u^{23} - 1.38785u^{22} + \cdots - 3.78446u + 0.0265372 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.146254u^{23} + 0.641487u^{22} + \cdots - 7.52556u - 0.845528 \\ 0.836864u^{23} + 2.81155u^{22} + \cdots + 6.03475u - 0.313883 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{23} - 3u^{22} + \cdots - 15u + 6 \\ 0.375295u^{23} + 1.14401u^{22} + \cdots + 6.69523u - 0.288437 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.35971u^{23} - 4.26371u^{22} + \cdots - 17.1675u + 3.44827 \\ -0.195361u^{23} - 0.483364u^{22} + \cdots - 8.48872u + 3.10314 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.35971u^{23} - 4.26371u^{22} + \cdots - 17.1675u + 3.44827 \\ -0.195361u^{23} - 0.483364u^{22} + \cdots - 8.48872u + 3.10314 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{7079914424451449855}{1775837212186070572}u^{23} + \frac{23544509299143752001}{1775837212186070572}u^{22} + \cdots + \frac{49265834911585654277}{1775837212186070572}u - \frac{18242523258821611130}{443959303046517643}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1)^4$
c_2	$(u^6 + 3u^5 + 4u^4 + 2u^3 + 1)^4$
c_3, c_5, c_9 c_{10}	$u^{24} + 4u^{23} + \cdots + 106u + 59$
c_4, c_{11}	$u^{24} + 3u^{23} + \cdots - 6u + 1$
c_7, c_8	$(u^3 - u^2 + 1)^8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y^6 + 3y^5 + 4y^4 + 2y^3 + 1)^4$
c_2	$(y^6 - y^5 + 4y^4 - 2y^3 + 8y^2 + 1)^4$
c_3, c_5, c_9 c_{10}	$y^{24} - 20y^{23} + \cdots - 32240y + 3481$
c_4, c_{11}	$y^{24} - y^{23} + \cdots - 6y + 1$
c_7, c_8	$(y^3 - y^2 + 2y - 1)^8$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.723079 + 0.704365I$ $a = 0.107758 - 1.135100I$ $b = 0.041447 - 1.243490I$	$1.64493 - 5.65624I$	$6.00000 + 5.95889I$
$u = 0.723079 - 0.704365I$ $a = 0.107758 + 1.135100I$ $b = 0.041447 + 1.243490I$	$1.64493 + 5.65624I$	$6.00000 - 5.95889I$
$u = -0.315281 + 0.984494I$ $a = 0.427343 - 1.028110I$ $b = -1.107680 - 0.653656I$	$1.64493 + 5.65624I$	$6.00000 - 5.95889I$
$u = -0.315281 - 0.984494I$ $a = 0.427343 + 1.028110I$ $b = -1.107680 + 0.653656I$	$1.64493 - 5.65624I$	$6.00000 + 5.95889I$
$u = -1.013310 + 0.252112I$ $a = -0.643211 - 0.895112I$ $b = -0.786818 - 0.569360I$	$-2.49265 + 2.82812I$	$-0.52927 - 2.97945I$
$u = -1.013310 - 0.252112I$ $a = -0.643211 + 0.895112I$ $b = -0.786818 + 0.569360I$	$-2.49265 - 2.82812I$	$-0.52927 + 2.97945I$
$u = -0.159442 + 0.926668I$ $a = 0.136132 + 0.791192I$ $b = 1.43944 + 0.70156I$	$5.78252 + 2.82812I$	$12.52927 - 2.97945I$
$u = -0.159442 - 0.926668I$ $a = 0.136132 - 0.791192I$ $b = 1.43944 - 0.70156I$	$5.78252 - 2.82812I$	$12.52927 + 2.97945I$
$u = -0.691733 + 0.527113I$ $a = -0.283373 - 1.292740I$ $b = 0.222973 - 1.116570I$	$-2.49265 + 2.82812I$	$-0.52927 - 2.97945I$
$u = -0.691733 - 0.527113I$ $a = -0.283373 + 1.292740I$ $b = 0.222973 + 1.116570I$	$-2.49265 - 2.82812I$	$-0.52927 + 2.97945I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.097732+1.282650I$ $a=-0.629193-0.636142I$ $b=\ \ 0.554361+0.213748I$	$1.64493-5.65624I$	$6.00000+5.95889I$
$u=-0.097732-1.282650I$ $a=-0.629193+0.636142I$ $b=\ \ 0.554361-0.213748I$	$1.64493+5.65624I$	$6.00000-5.95889I$
$u=\ \ 1.22255+1.06383I$ $a=\ \ 0.106727-0.702138I$ $b=\ \ 1.173390-0.504296I$	$-2.49265-2.82812I$	$-0.52927+2.97945I$
$u=\ \ 1.22255-1.06383I$ $a=\ \ 0.106727+0.702138I$ $b=\ \ 1.173390+0.504296I$	$-2.49265+2.82812I$	$-0.52927-2.97945I$
$u=\ \ 0.122779+0.275025I$ $a=-1.02171+2.28864I$ $b=-1.87511+0.22835I$	$5.78252+2.82812I$	$12.52927-2.97945I$
$u=\ \ 0.122779-0.275025I$ $a=-1.02171-2.28864I$ $b=-1.87511-0.22835I$	$5.78252-2.82812I$	$12.52927+2.97945I$
$u=\ \ 0.290085+0.035799I$ $a=\ \ 2.66725-2.89690I$ $b=-0.732109-0.436774I$	$-2.49265-2.82812I$	$-0.52927+2.97945I$
$u=\ \ 0.290085-0.035799I$ $a=\ \ 2.66725+2.89690I$ $b=-0.732109+0.436774I$	$-2.49265+2.82812I$	$-0.52927-2.97945I$
$u=-1.11766+1.32293I$ $a=\ \ 0.001573-0.664583I$ $b=-1.243000-0.376081I$	$1.64493+5.65624I$	$6.00000-5.95889I$
$u=-1.11766-1.32293I$ $a=\ \ 0.001573+0.664583I$ $b=-1.243000+0.376081I$	$1.64493-5.65624I$	$6.00000+5.95889I$

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.78242 + 0.43596I$ $a = 0.399606 + 0.097740I$ $b = 1.46829 - 0.05407I$	$5.78252 + 2.82812I$	$12.52927 - 2.97945I$
$u = -1.78242 - 0.43596I$ $a = 0.399606 - 0.097740I$ $b = 1.46829 + 0.05407I$	$5.78252 - 2.82812I$	$12.52927 + 2.97945I$
$u = 1.31909 + 1.40108I$ $a = -0.268903 + 0.285617I$ $b = -1.155190 - 0.130975I$	$5.78252 + 2.82812I$	$12.52927 - 2.97945I$
$u = 1.31909 - 1.40108I$ $a = -0.268903 - 0.285617I$ $b = -1.155190 + 0.130975I$	$5.78252 - 2.82812I$	$12.52927 + 2.97945I$

V. $\boldsymbol{I_5^u = \langle b-1,\ 59u^5+76u^4+\cdots+67a+146,\ u^6+u^5+4u^4+2u^3+8u^2+1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.880597u^5 - 1.13433u^4 + \cdots - 7.26866u - 2.17910 \\ 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.149254u^5 - 0.582090u^4 + \cdots - 2.16418u - 3.77612 \\ -0.253731u^5 - 0.0895522u^4 + \cdots - 1.17910u + 0.880597 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.597015u^5 - 0.328358u^4 + \cdots - 3.65672u + 2.89552 \\ 0.179104u^5 + 0.298507u^4 + \cdots + 1.59701u - 0.268657 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.716418u^5 - 1.19403u^4 + \cdots - 6.38806u - 2.92537 \\ -0.149254u^5 + 0.417910u^4 + \cdots - 0.164179u + 1.22388 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.880597u^5 - 1.13433u^4 + \cdots - 7.26866u - 3.17910 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.880597u^5 - 1.13433u^4 + \cdots - 7.26866u - 2.17910 \\ 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^5 - u^4 - 4u^3 - 2u^2 - 8u \\ -0.0746269u^5 + 0.208955u^4 + \cdots + 1.41791u + 0.611940 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.149254u^5 - 0.582090u^4 + \cdots - 2.16418u - 3.77612 \\ -0.253731u^5 - 0.0895522u^4 + \cdots - 1.17910u + 0.880597 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.149254u^5 - 0.582090u^4 + \cdots - 2.16418u - 3.77612 \\ -0.253731u^5 - 0.0895522u^4 + \cdots - 1.17910u + 0.880597 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6, c_{11}	$u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1$
c_2, c_5, c_9	$u^6 + 3u^5 + 4u^4 + 2u^3 + 1$
c_3, c_{10}	$(u-1)^6$
c_4	$u^6 + u^5 + 4u^4 + 2u^3 + 8u^2 + 1$
c_7, c_8	$(u^3 - u^2 + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_{11}	$y^6 + 3y^5 + 4y^4 + 2y^3 + 1$
c_2, c_5, c_9	$y^6 - y^5 + 4y^4 - 2y^3 + 8y^2 + 1$
c_3, c_{10}	$(y - 1)^6$
c_4	$y^6 + 7y^5 + 28y^4 + 62y^3 + 72y^2 + 16y + 1$
c_7, c_8	$(y^3 - y^2 + 2y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.42975 + 1.50598I$ $a = -0.303615 - 0.669275I$ $b = 1.00000$	1.64493	6.00000
$u = 0.42975 - 1.50598I$ $a = -0.303615 + 0.669275I$ $b = 1.00000$	1.64493	6.00000
$u = 0.017526 + 0.363437I$ $a = -1.92858 - 2.50729I$ $b = 1.00000$	1.64493	6.00000
$u = 0.017526 - 0.363437I$ $a = -1.92858 + 2.50729I$ $b = 1.00000$	1.64493	6.00000
$u = -0.94728 + 1.47725I$ $a = 0.232199 + 0.362106I$ $b = 1.00000$	1.64493	6.00000
$u = -0.94728 - 1.47725I$ $a = 0.232199 - 0.362106I$ $b = 1.00000$	1.64493	6.00000

VI. $\boldsymbol{I_6^u = \langle -u^2 + b,\ -u^2 + a - 1,\ u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1 \rangle}$

(i) Arc colorings

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

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} u^5 + 2u^3 + u \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^5 - 2u^3 - u + 1 \\ -u^5 - u^3 + u^2 - u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^5 - 2u^4 + 2u^3 - u^2 + 2u - 1 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} u^2 + 1 \\ u^4 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^5 + u^4 - 2u^3 + 2u^2 - 2u + 2 \\ u^5 - 2u^4 + 2u^3 - 3u^2 + 3u - 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^5 + 2u^3 + u \\ 2u - 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^5 + 2u^3 + u \\ 2u - 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6	$u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1$
c_2, c_3, c_{10}	$u^6 + 3u^5 + 4u^4 + 2u^3 + 1$
c_5, c_9	$(u-1)^6$
c_7, c_8	$(u^3 - u^2 + 1)^2$
c_{11}	$u^6 + u^5 + 4u^4 + 2u^3 + 8u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6	$y^6 + 3y^5 + 4y^4 + 2y^3 + 1$
c_2, c_3, c_{10}	$y^6 - y^5 + 4y^4 - 2y^3 + 8y^2 + 1$
c_5, c_9	$(y-1)^6$
c_7, c_8	$(y^3 - y^2 + 2y - 1)^2$
c_{11}	$y^6 + 7y^5 + 28y^4 + 62y^3 + 72y^2 + 16y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_6^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.498832 + 1.001300I$ $a = 0.246226 - 0.998963I$ $b = -0.753774 - 0.998963I$	1.64493	6.00000
$u = -0.498832 - 1.001300I$ $a = 0.246226 + 0.998963I$ $b = -0.753774 + 0.998963I$	1.64493	6.00000
$u = 0.284920 + 1.115140I$ $a = -0.162359 + 0.635452I$ $b = -1.162360 + 0.635452I$	1.64493	6.00000
$u = 0.284920 - 1.115140I$ $a = -0.162359 - 0.635452I$ $b = -1.162360 - 0.635452I$	1.64493	6.00000
$u = 0.713912 + 0.305839I$ $a = 1.41613 + 0.43668I$ $b = 0.416133 + 0.436684I$	1.64493	6.00000
$u = 0.713912 - 0.305839I$ $a = 1.41613 - 0.43668I$ $b = 0.416133 - 0.436684I$	1.64493	6.00000

VII. $\boldsymbol{I^u_7 = \langle b - 1,\ a - 2,\ u + 1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -4 \\ -3 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 5 \\ 4 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -4 \\ -3 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -4 \\ -3 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6$

(iv) u-Polynomials at the component

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

(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_9, c_{10}, c_{11}	$y - 1$
c_7, c_8	$y - 4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_7^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = \quad 2.00000$ $b = \quad 1.00000$	1.64493	6.00000

VIII. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u+1)(u^4+u^2+u+1)^6(u^6-u^5+2u^4-2u^3+2u^2-2u+1)^6$ $\cdot(u^{15}+4u^{13}+8u^{11}-u^{10}+8u^9-3u^8+4u^7-5u^6-5u^4-3u^2-1)$ $\cdot(u^{27}+6u^{26}+\cdots-40u-8)$
c_2	$(u-1)(u^4+2u^3+3u^2+u+1)^6(u^6+3u^5+4u^4+2u^3+1)^6$ $\cdot(u^{15}+8u^{14}+\cdots-6u-1)(u^{27}+14u^{26}+\cdots+32u-64)$
c_3, c_9	$((u-1)^7)(u^6+3u^5+\cdots+2u^3+1)(u^{15}+u^{14}+\cdots-u-1)$ $\cdot(u^{24}-9u^{22}+\cdots+56u+8)(u^{24}+4u^{23}+\cdots+106u+59)$ $\cdot(u^{27}-9u^{25}+\cdots-u-1)$
c_4, c_{11}	$(u+1)(u^6-u^5+\cdots-2u+1)(u^6+u^5+\cdots+8u^2+1)$ $\cdot(u^{15}+u^{13}+u^{12}-2u^{11}-2u^9-4u^8+2u^7+u^5+4u^4-1)$ $\cdot(u^{24}+3u^{22}+\cdots-4u+8)(u^{24}+3u^{23}+\cdots-6u+1)$ $\cdot(u^{27}-u^{26}+\cdots+2u-1)$
c_5, c_{10}	$((u-1)^7)(u^6+3u^5+\cdots+2u^3+1)(u^{15}-u^{14}+\cdots-u+1)$ $\cdot(u^{24}-9u^{22}+\cdots+56u+8)(u^{24}+4u^{23}+\cdots+106u+59)$ $\cdot(u^{27}-9u^{25}+\cdots-u-1)$
c_6	$(u+1)(u^4+u^2+u+1)^6(u^6-u^5+2u^4-2u^3+2u^2-2u+1)^6$ $\cdot(u^{15}+4u^{13}+8u^{11}+u^{10}+8u^9+3u^8+4u^7+5u^6+5u^4+3u^2+1)$ $\cdot(u^{27}+6u^{26}+\cdots-40u-8)$
c_7	$(u+2)(u^3-u^2+1)^{12}(u^4+3u^3+4u^2+3u+2)^6$ $\cdot(u^{15}-4u^{13}+\cdots+2u+1)(u^{27}-9u^{26}+\cdots+2296u-232)$
c_8	$(u+2)(u^3-u^2+1)^{20}(u^{15}+7u^{14}+\cdots-4u^2+1)$ $\cdot(u^{27}+22u^{26}+\cdots-7680u-512)$

IX. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y-1)(y^4+2y^3+3y^2+y+1)^6(y^6+3y^5+4y^4+2y^3+1)^6$ $\cdot\,(y^{15}+8y^{14}+\cdots-6y-1)(y^{27}+14y^{26}+\cdots+32y-64)$
c_2	$(y-1)(y^4+2y^3+7y^2+5y+1)^6(y^6-y^5+4y^4-2y^3+8y^2+1)^6$ $\cdot\,(y^{15}+16y^{13}+\cdots-2y-1)(y^{27}+2y^{26}+\cdots+39424y-4096)$
c_3, c_5, c_9 c_{10}	$((y-1)^7)(y^6-y^5+\cdots+8y^2+1)(y^{15}-15y^{14}+\cdots+13y-1)$ $\cdot\,(y^{24}-20y^{23}+\cdots-32240y+3481)(y^{24}-18y^{23}+\cdots-864y+64)$ $\cdot\,(y^{27}-18y^{26}+\cdots-7y-1)$
c_4, c_{11}	$(y-1)(y^6+3y^5+4y^4+2y^3+1)$ $\cdot\,(y^6+7y^5+\cdots+16y+1)(y^{15}+2y^{14}+\cdots+8y^2-1)$ $\cdot\,(y^{24}-y^{23}+\cdots-6y+1)(y^{24}+6y^{23}+\cdots+944y+64)$ $\cdot\,(y^{27}-5y^{26}+\cdots+16y-1)$
c_7	$(y-4)(y^3-y^2+2y-1)^{12}(y^4-y^3+2y^2+7y+4)^6$ $\cdot\,(y^{15}-8y^{14}+\cdots-10y-1)(y^{27}-7y^{26}+\cdots+586144y-53824)$
c_8	$(y-4)(y^3-y^2+2y-1)^{20}(y^{15}-7y^{14}+\cdots+8y-1)$ $\cdot\,(y^{27}-4y^{26}+\cdots+1966080y-262144)$