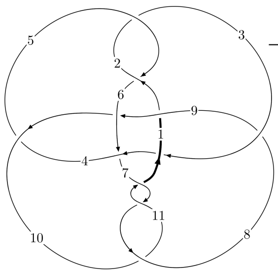
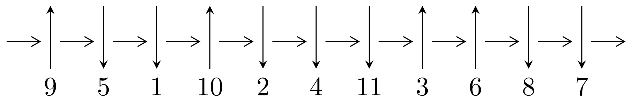
$11a_{278}$ ($K11a_{278}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle 1.19641\times 10^{18}u^{40} - 1.14397\times 10^{19}u^{39} + \cdots + 1.66044\times 10^{18}b + 1.81027\times 10^{19},\\
&\quad 4.68165\times 10^{19}u^{40} - 5.02396\times 10^{20}u^{39} + \cdots + 3.98505\times 10^{19}a - 1.19786\times 10^{21},\\
&\quad u^{41} - 11u^{40} + \cdots - 239u + 24\rangle\\
I_2^u &= \langle -u^{22}a - 6u^{21}a + \cdots - a - 1,\ -u^{21}a - 3u^{22} + \cdots + a^2 - 13u,\ u^{23} + 7u^{22} + \cdots + 4u + 1\rangle\\
I_3^u &= \langle 2u^{15} + 15u^{14} + \cdots + b + 8,\ -8u^{16} - 54u^{15} + \cdots + 5a + 43,\ u^{17} + 8u^{16} + \cdots + 29u + 5\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 104 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. $I^u_1 =$
$\langle 1.20\times10^{18}u^{40}-1.14\times10^{19}u^{39}+\cdots+1.66\times10^{18}b+1.81\times10^{19},\ 4.68\times10^{19}u^{40}-5.02\times10^{20}u^{39}+\cdots+3.99\times10^{19}a-1.20\times10^{21},\ u^{41}-11u^{40}+\cdots-239u+24\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

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

$$a_{10} = \begin{pmatrix} -1.17480u^{40}+12.6070u^{39}+\cdots-319.545u+30.0588 \\ -0.720540u^{40}+6.88956u^{39}+\cdots+67.6080u-10.9023 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.14574u^{40}-11.8183u^{39}+\cdots-20.0365u+6.80811 \\ 0.738778u^{40}-6.60293u^{39}+\cdots-93.3051u+9.76711 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.633150u^{40}-5.52375u^{39}+\cdots-208.982u+22.2813 \\ -0.938766u^{40}+10.6746u^{39}+\cdots-322.499u+32.6119 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.454264u^{40}+5.71745u^{39}+\cdots-387.153u+40.9611 \\ -0.720540u^{40}+6.88956u^{39}+\cdots+67.6080u-10.9023 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.28278u^{40}+13.4475u^{39}+\cdots-94.7279u+10.9155 \\ 0.663004u^{40}-8.31978u^{39}+\cdots+296.668u-30.7866 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.277139u^{40}-1.62154u^{39}+\cdots-383.007u+40.2112 \\ -0.534336u^{40}+6.09950u^{39}+\cdots-87.8238u+6.80221 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2.29615u^{40}+24.6191u^{39}+\cdots-309.565u+27.7328 \\ -0.339712u^{40}+2.80144u^{39}+\cdots+173.961u-19.8874 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2.29615u^{40}+24.6191u^{39}+\cdots-309.565u+27.7328 \\ -0.339712u^{40}+2.80144u^{39}+\cdots+173.961u-19.8874 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{1664141169681345798}{1660437713445795359}u^{40} - \frac{2001904579293712626}{1660437713445795359}u^{39} + \cdots + \frac{7345456442658202756}{1660437713445795359}u - \frac{5973792467490949769}{1660437713445795359}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_9	$u^{41} - 12u^{39} + \cdots - 2u + 1$
c_2, c_5	$u^{41} - 11u^{40} + \cdots - 239u + 24$
c_3, c_6	$u^{41} - u^{40} + \cdots + 6u + 1$
c_4, c_8	$u^{41} - 3u^{39} + \cdots + 39u + 19$
c_7, c_{10}, c_{11}	$u^{41} - 8u^{40} + \cdots + 9u - 2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_9	$y^{41} - 24y^{40} + \cdots + 96y - 1$
c_2, c_5	$y^{41} + 23y^{40} + \cdots - 10223y - 576$
c_3, c_6	$y^{41} + 27y^{40} + \cdots - 82y - 1$
c_4, c_8	$y^{41} - 6y^{40} + \cdots + 4637y - 361$
c_7, c_{10}, c_{11}	$y^{41} + 40y^{40} + \cdots - 87y - 4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.029022 + 1.006330I$ $a = 1.62224 + 0.62151I$ $b = 1.118340 - 0.475258I$	$3.33397 + 0.06687I$	$6.02301 + 0.24252I$
$u = -0.029022 - 1.006330I$ $a = 1.62224 - 0.62151I$ $b = 1.118340 + 0.475258I$	$3.33397 - 0.06687I$	$6.02301 - 0.24252I$
$u = 0.212627 + 0.952062I$ $a = 1.81242 - 0.15435I$ $b = 0.78122 - 1.20521I$	$1.10287 - 3.44596I$	$-5.05254 - 2.71451I$
$u = 0.212627 - 0.952062I$ $a = 1.81242 + 0.15435I$ $b = 0.78122 + 1.20521I$	$1.10287 + 3.44596I$	$-5.05254 + 2.71451I$
$u = 1.052800 + 0.131390I$ $a = 0.017775 - 0.158160I$ $b = -0.971790 - 0.691117I$	$0.26528 + 7.29842I$	$-3.00000 - 7.62825I$
$u = 1.052800 - 0.131390I$ $a = 0.017775 + 0.158160I$ $b = -0.971790 + 0.691117I$	$0.26528 - 7.29842I$	$-3.00000 + 7.62825I$
$u = -0.125412 + 1.084050I$ $a = -1.83248 - 0.48717I$ $b = -1.204160 + 0.550939I$	$8.77240 + 0.69151I$	$5.83897 + 1.00152I$
$u = -0.125412 - 1.084050I$ $a = -1.83248 + 0.48717I$ $b = -1.204160 - 0.550939I$	$8.77240 - 0.69151I$	$5.83897 - 1.00152I$
$u = -1.12668$ $a = -0.245548$ $b = -0.130087$	-2.19078	-19.8800
$u = 0.821173 + 0.119690I$ $a = -0.297539 + 0.031863I$ $b = 0.933904 + 0.677894I$	$0.99974 + 2.62993I$	$-0.91222 - 3.18628I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.821173 - 0.119690I$ $a = -0.297539 - 0.031863I$ $b = 0.933904 - 0.677894I$	$0.99974 - 2.62993I$	$-0.91222 + 3.18628I$
$u = 1.182590 + 0.075770I$ $a = 0.116810 + 0.162777I$ $b = 0.978144 + 0.696826I$	$6.46948 + 11.04650I$	$0. - 7.47384I$
$u = 1.182590 - 0.075770I$ $a = 0.116810 - 0.162777I$ $b = 0.978144 - 0.696826I$	$6.46948 - 11.04650I$	$0. + 7.47384I$
$u = -0.388375 + 1.153130I$ $a = 0.886517 + 0.002500I$ $b = 0.509537 - 0.312406I$	$5.35338 + 3.81903I$	0
$u = -0.388375 - 1.153130I$ $a = 0.886517 - 0.002500I$ $b = 0.509537 + 0.312406I$	$5.35338 - 3.81903I$	0
$u = 0.717608 + 0.311811I$ $a = -0.110757 - 0.623250I$ $b = -1.032150 + 0.566413I$	$7.82283 - 0.16471I$	$3.38955 + 1.65431I$
$u = 0.717608 - 0.311811I$ $a = -0.110757 + 0.623250I$ $b = -1.032150 - 0.566413I$	$7.82283 + 0.16471I$	$3.38955 - 1.65431I$
$u = 0.495810 + 1.155840I$ $a = 0.816045 + 0.781921I$ $b = 1.125660 - 0.059155I$	$4.52174 - 1.46436I$	0
$u = 0.495810 - 1.155840I$ $a = 0.816045 - 0.781921I$ $b = 1.125660 + 0.059155I$	$4.52174 + 1.46436I$	0
$u = -1.215000 + 0.331445I$ $a = 0.383654 - 0.112321I$ $b = 0.206819 - 0.088073I$	$1.95983 + 1.37588I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.215000 - 0.331445I$ $a = 0.383654 + 0.112321I$ $b = 0.206819 + 0.088073I$	$1.95983 - 1.37588I$	0
$u = 0.038850 + 0.715738I$ $a = -1.55374 - 1.28578I$ $b = -1.154670 + 0.349145I$	$7.32305 + 0.14265I$	$5.03936 + 0.27284I$
$u = 0.038850 - 0.715738I$ $a = -1.55374 + 1.28578I$ $b = -1.154670 - 0.349145I$	$7.32305 - 0.14265I$	$5.03936 - 0.27284I$
$u = -0.185808 + 0.685986I$ $a = -1.118850 + 0.444113I$ $b = -0.249566 + 0.572464I$	$-0.087291 + 1.322900I$	$-3.26673 - 3.24423I$
$u = -0.185808 - 0.685986I$ $a = -1.118850 - 0.444113I$ $b = -0.249566 - 0.572464I$	$-0.087291 - 1.322900I$	$-3.26673 + 3.24423I$
$u = 0.347665 + 1.264830I$ $a = -1.77476 - 0.18019I$ $b = -1.31566 + 0.98619I$	$12.33800 - 3.83464I$	0
$u = 0.347665 - 1.264830I$ $a = -1.77476 + 0.18019I$ $b = -1.31566 - 0.98619I$	$12.33800 + 3.83464I$	0
$u = 0.490892 + 1.239610I$ $a = 1.70373 + 0.26449I$ $b = 1.40330 - 0.98654I$	$4.41136 - 7.49164I$	0
$u = 0.490892 - 1.239610I$ $a = 1.70373 - 0.26449I$ $b = 1.40330 + 0.98654I$	$4.41136 + 7.49164I$	0
$u = 0.684336 + 1.194050I$ $a = -0.636884 - 0.796428I$ $b = -1.128510 - 0.133079I$	$10.00540 - 5.34593I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.684336 - 1.194050I$ $a = -0.636884 + 0.796428I$ $b = -1.128510 + 0.133079I$	$10.00540 + 5.34593I$	0
$u = 0.325776 + 1.364770I$ $a = -0.829707 - 0.563437I$ $b = -0.920142 + 0.089185I$	$5.42164 + 2.35534I$	0
$u = 0.325776 - 1.364770I$ $a = -0.829707 + 0.563437I$ $b = -0.920142 - 0.089185I$	$5.42164 - 2.35534I$	0
$u = 0.558892 + 1.297930I$ $a = -1.62402 - 0.22838I$ $b = -1.40055 + 0.94692I$	$3.92238 - 13.02370I$	0
$u = 0.558892 - 1.297930I$ $a = -1.62402 + 0.22838I$ $b = -1.40055 - 0.94692I$	$3.92238 + 13.02370I$	0
$u = 0.58068 + 1.35810I$ $a = 1.60234 + 0.17682I$ $b = 1.38863 - 0.93704I$	$10.5240 - 17.2112I$	0
$u = 0.58068 - 1.35810I$ $a = 1.60234 - 0.17682I$ $b = 1.38863 + 0.93704I$	$10.5240 + 17.2112I$	0
$u = 0.113639 + 0.464794I$ $a = -1.43312 + 0.66702I$ $b = 0.144535 + 0.741778I$	$-0.006980 + 1.308310I$	$1.77615 - 2.91870I$
$u = 0.113639 - 0.464794I$ $a = -1.43312 - 0.66702I$ $b = 0.144535 - 0.741778I$	$-0.006980 - 1.308310I$	$1.77615 + 2.91870I$
$u = 0.38362 + 1.54611I$ $a = 0.727259 + 0.513748I$ $b = 0.852167 - 0.006427I$	$11.91810 + 4.98494I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.38362 - 1.54611I$		
$a =$	$0.727259 - 0.513748I$	$11.91810 - 4.98494I$	0
$b =$	$0.852167 + 0.006427I$		

II. $I_2^u = \langle -u^{22}a - 6u^{21}a + \cdots - a - 1,\ -u^{21}a - 3u^{22} + \cdots + a^2 - 13u,\ u^{23} + 7u^{22} + \cdots + 4u + 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} a \\ u^{22}a + 6u^{21}a + \cdots + a + 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{21} - 8u^{20} + \cdots - a - 3 \\ -u^{22}a - 6u^{21}a + \cdots - a - 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^{21} - 6u^{20} + \cdots - a + 3 \\ u^{22}a + 6u^{21}a + \cdots + a - 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{22}a - 6u^{21}a + \cdots - 4u - 1 \\ u^{22}a + 6u^{21}a + \cdots + a + 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^{21}a - u^{21} + \cdots + a + 4 \\ -1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{21} + 6u^{20} + \cdots + a - 1 \\ -u^{22}a - 6u^{21}a + \cdots - a + 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{21} - 6u^{20} + \cdots + a + 2 \\ u^{22}a + 6u^{21}a + \cdots + a - 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{21} - 6u^{20} + \cdots + a + 2 \\ u^{22}a + 6u^{21}a + \cdots + a - 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{22} - 20u^{21} - 72u^{20} - 172u^{19} - 320u^{18} - 444u^{17} - 436u^{16} - 196u^{15} + 308u^{14} + 932u^{13} + 1500u^{12} + 1784u^{11} + 1704u^{10} + 1348u^9 + 844u^8 + 436u^7 + 148u^6 + 16u^5 - 20u^4 - 28u^3 - 4u^2 - 8u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_9	$u^{46} - u^{45} + \cdots + 8u^2 + 1$
c_2, c_5	$(u^{23} + 7u^{22} + \cdots + 4u + 1)^2$
c_3, c_6	$u^{46} - 7u^{45} + \cdots - 188u + 37$
c_4, c_8	$u^{46} + u^{45} + \cdots + 36u + 11$
c_7, c_{10}, c_{11}	$(u^{23} + 5u^{22} + \cdots + 6u^2 - 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_9	$y^{46} + 7y^{45} + \cdots + 16y + 1$
c_2, c_5	$(y^{23} + 15y^{22} + \cdots - 12y - 1)^2$
c_3, c_6	$y^{46} - 5y^{45} + \cdots + 23412y + 1369$
c_4, c_8	$y^{46} - 13y^{45} + \cdots + 4820y + 121$
c_7, c_{10}, c_{11}	$(y^{23} + 23y^{22} + \cdots + 12y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.233567 + 1.031350I$ $a = 0.34801 + 1.50362I$ $b = 0.60058 + 2.13953I$	$7.62895 - 7.86344I$	$3.61806 + 10.44591I$
$u = 0.233567 + 1.031350I$ $a = -2.69560 + 0.51605I$ $b = -0.596857 + 0.409017I$	$7.62895 - 7.86344I$	$3.61806 + 10.44591I$
$u = 0.233567 - 1.031350I$ $a = 0.34801 - 1.50362I$ $b = 0.60058 - 2.13953I$	$7.62895 + 7.86344I$	$3.61806 - 10.44591I$
$u = 0.233567 - 1.031350I$ $a = -2.69560 - 0.51605I$ $b = -0.596857 - 0.409017I$	$7.62895 + 7.86344I$	$3.61806 - 10.44591I$
$u = 0.186753 + 0.913593I$ $a = 0.54495 - 1.43828I$ $b = 0.02137 - 2.03091I$	$0.48240 - 3.68961I$	$-4.31455 + 10.86650I$
$u = 0.186753 + 0.913593I$ $a = 2.57289 - 0.13037I$ $b = 0.443646 - 0.589013I$	$0.48240 - 3.68961I$	$-4.31455 + 10.86650I$
$u = 0.186753 - 0.913593I$ $a = 0.54495 + 1.43828I$ $b = 0.02137 + 2.03091I$	$0.48240 + 3.68961I$	$-4.31455 - 10.86650I$
$u = 0.186753 - 0.913593I$ $a = 2.57289 + 0.13037I$ $b = 0.443646 + 0.589013I$	$0.48240 + 3.68961I$	$-4.31455 - 10.86650I$
$u = -1.07372$ $a = -0.257664 + 0.016236I$ $b = -0.133412 + 0.236476I$	-2.18491	-16.7310
$u = -1.07372$ $a = -0.257664 - 0.016236I$ $b = -0.133412 - 0.236476I$	-2.18491	-16.7310

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.126300 + 0.206470I$ $a = 0.499507 - 0.147399I$ $b = 0.427226 + 0.266230I$	$1.93766 + 1.32101I$	$-4.99704 - 4.34736I$
$u = -1.126300 + 0.206470I$ $a = 0.321072 - 0.184827I$ $b = -0.003992 - 0.480793I$	$1.93766 + 1.32101I$	$-4.99704 - 4.34736I$
$u = -1.126300 - 0.206470I$ $a = 0.499507 + 0.147399I$ $b = 0.427226 - 0.266230I$	$1.93766 - 1.32101I$	$-4.99704 + 4.34736I$
$u = -1.126300 - 0.206470I$ $a = 0.321072 + 0.184827I$ $b = -0.003992 + 0.480793I$	$1.93766 - 1.32101I$	$-4.99704 + 4.34736I$
$u = -0.616588 + 1.034050I$ $a = 1.49907 - 0.31690I$ $b = 1.218300 + 0.349141I$	$4.52825 + 4.72419I$	$-0.87243 - 5.66443I$
$u = -0.616588 + 1.034050I$ $a = -0.246425 + 0.316671I$ $b = -0.515604 - 0.701003I$	$4.52825 + 4.72419I$	$-0.87243 - 5.66443I$
$u = -0.616588 - 1.034050I$ $a = 1.49907 + 0.31690I$ $b = 1.218300 - 0.349141I$	$4.52825 - 4.72419I$	$-0.87243 + 5.66443I$
$u = -0.616588 - 1.034050I$ $a = -0.246425 - 0.316671I$ $b = -0.515604 + 0.701003I$	$4.52825 - 4.72419I$	$-0.87243 + 5.66443I$
$u = -0.356806 + 1.198900I$ $a = -0.908631 + 0.827801I$ $b = -0.674442 - 0.472287I$	$4.04810 + 4.55921I$	$5.41713 - 6.09867I$
$u = -0.356806 + 1.198900I$ $a = 1.68320 + 0.12017I$ $b = 1.47512 + 0.74465I$	$4.04810 + 4.55921I$	$5.41713 - 6.09867I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.356806-1.198900I$ $a=-0.908631-0.827801I$ $b=-0.674442+0.472287I$	$4.04810-4.55921I$	$5.41713+6.09867I$
$u=-0.356806-1.198900I$ $a=\ \ 1.68320-0.12017I$ $b=\ \ 1.47512-0.74465I$	$4.04810-4.55921I$	$5.41713+6.09867I$
$u=\ \ 0.089537+0.682903I$ $a=-1.058990-0.734558I$ $b=\ \ 0.199185+0.887413I$	$-0.19963+1.69919I$	$-7.29306-0.59779I$
$u=\ \ 0.089537+0.682903I$ $a=-2.31010+1.12368I$ $b=-0.994995+1.004440I$	$-0.19963+1.69919I$	$-7.29306-0.59779I$
$u=\ \ 0.089537-0.682903I$ $a=-1.058990+0.734558I$ $b=\ \ 0.199185-0.887413I$	$-0.19963-1.69919I$	$-7.29306+0.59779I$
$u=\ \ 0.089537-0.682903I$ $a=-2.31010-1.12368I$ $b=-0.994995-1.004440I$	$-0.19963-1.69919I$	$-7.29306+0.59779I$
$u=-0.184645+1.327800I$ $a=-1.58659-0.65447I$ $b=-1.47802-1.24587I$	$11.44280+6.01561I$	$9.34351-5.45649I$
$u=-0.184645+1.327800I$ $a=\ \ 1.53384-0.96668I$ $b=\ \ 0.765206+0.253347I$	$11.44280+6.01561I$	$9.34351-5.45649I$
$u=-0.184645-1.327800I$ $a=-1.58659+0.65447I$ $b=-1.47802+1.24587I$	$11.44280-6.01561I$	$9.34351+5.45649I$
$u=-0.184645-1.327800I$ $a=\ \ 1.53384+0.96668I$ $b=\ \ 0.765206-0.253347I$	$11.44280-6.01561I$	$9.34351+5.45649I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.54822 + 1.33148I$ $a = 0.914945 - 0.015844I$ $b = 0.843719 + 0.814001I$	$1.92714 + 5.73570I$	$-6.54258 - 11.45569I$
$u = -0.54822 + 1.33148I$ $a = -1.365520 + 0.207271I$ $b = -1.065870 - 0.549777I$	$1.92714 + 5.73570I$	$-6.54258 - 11.45569I$
$u = -0.54822 - 1.33148I$ $a = 0.914945 + 0.015844I$ $b = 0.843719 - 0.814001I$	$1.92714 - 5.73570I$	$-6.54258 + 11.45569I$
$u = -0.54822 - 1.33148I$ $a = -1.365520 - 0.207271I$ $b = -1.065870 + 0.549777I$	$1.92714 - 5.73570I$	$-6.54258 + 11.45569I$
$u = -0.388479 + 0.400318I$ $a = -1.155830 - 0.149061I$ $b = 0.438402 + 0.600768I$	$-0.02603 + 1.77955I$	$-5.09313 - 4.79070I$
$u = -0.388479 + 0.400318I$ $a = -1.14506 + 1.66093I$ $b = -0.919497 + 0.346909I$	$-0.02603 + 1.77955I$	$-5.09313 - 4.79070I$
$u = -0.388479 - 0.400318I$ $a = -1.155830 + 0.149061I$ $b = 0.438402 - 0.600768I$	$-0.02603 - 1.77955I$	$-5.09313 + 4.79070I$
$u = -0.388479 - 0.400318I$ $a = -1.14506 - 1.66093I$ $b = -0.919497 - 0.346909I$	$-0.02603 - 1.77955I$	$-5.09313 + 4.79070I$
$u = 0.300297 + 0.396341I$ $a = -0.36424 + 1.38690I$ $b = -0.583913 - 0.986914I$	$5.91614 + 5.40360I$	$-0.73363 - 1.75125I$
$u = 0.300297 + 0.396341I$ $a = 3.16595 - 0.53729I$ $b = 0.874871 - 0.799916I$	$5.91614 + 5.40360I$	$-0.73363 - 1.75125I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.300297 - 0.396341I$ $a = -0.36424 - 1.38690I$ $b = -0.583913 + 0.986914I$	$5.91614 - 5.40360I$	$-0.73363 + 1.75125I$
$u = 0.300297 - 0.396341I$ $a = 3.16595 + 0.53729I$ $b = 0.874871 + 0.799916I$	$5.91614 - 5.40360I$	$-0.73363 + 1.75125I$
$u = -0.55226 + 1.43648I$ $a = -0.920559 - 0.249915I$ $b = -0.878187 - 0.988227I$	$6.99739 + 7.32012I$	$2.83321 - 9.36955I$
$u = -0.55226 + 1.43648I$ $a = 1.43177 - 0.29444I$ $b = 1.037170 + 0.468605I$	$6.99739 + 7.32012I$	$2.83321 - 9.36955I$
$u = -0.55226 - 1.43648I$ $a = -0.920559 + 0.249915I$ $b = -0.878187 + 0.988227I$	$6.99739 - 7.32012I$	$2.83321 + 9.36955I$
$u = -0.55226 - 1.43648I$ $a = 1.43177 + 0.29444I$ $b = 1.037170 - 0.468605I$	$6.99739 - 7.32012I$	$2.83321 + 9.36955I$

III. $\boldsymbol{I^u_3 =}$
$\boldsymbol{\langle 2u^{15}+15u^{14}+\cdots+b+8,\ -8u^{16}-54u^{15}+\cdots+5a+43,\ u^{17}+8u^{16}+\cdots+29u+5\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ u^3+u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{8}{5}u^{16} + \frac{54}{5}u^{15} + \cdots - 44u - \frac{43}{5} \\ -2u^{15} - 15u^{14} + \cdots - 47u - 8 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} \frac{1}{5}u^{16} + \frac{8}{5}u^{15} + \cdots + 19u + \frac{24}{5} \\ -u^2 - u - 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -\frac{1}{5}u^{16} - \frac{8}{5}u^{15} + \cdots - 17u - \frac{14}{5} \\ u^4 + 2u^3 + 3u^2 + 2u + 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{8}{5}u^{16} + \frac{64}{5}u^{15} + \cdots + 3u - \frac{3}{5} \\ -2u^{15} - 15u^{14} + \cdots - 47u - 8 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} \frac{4}{5}u^{16} + \frac{32}{5}u^{15} + \cdots + 8u - \frac{4}{5} \\ -u^{15} - 7u^{14} + \cdots - 23u - 4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} \frac{8}{5}u^{16} + \frac{59}{5}u^{15} + \cdots - 28u - \frac{28}{5} \\ -2u^{15} - 15u^{14} + \cdots - 45u - 8 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} \frac{2}{5}u^{16} + \frac{11}{5}u^{15} + \cdots - 39u - \frac{42}{5} \\ -u^{15} - 7u^{14} + \cdots - 16u - 2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} \frac{2}{5}u^{16} + \frac{11}{5}u^{15} + \cdots - 39u - \frac{42}{5} \\ -u^{15} - 7u^{14} + \cdots - 16u - 2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= -8u^{16} - 73u^{15} - 345u^{14} - 1129u^{13} - 2811u^{12} - 5603u^{11} - 9220u^{10} - 12735u^9 - 14949u^8 - 15016u^7 - 12923u^6 - 9534u^5 - 5946u^4 - 3070u^3 - 1267u^2 - 373u - 64$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_9	$u^{17} + 3u^{15} + \cdots - u - 1$
c_2	$u^{17} - 8u^{16} + \cdots + 29u - 5$
c_3, c_6	$u^{17} + u^{16} + \cdots + u + 1$
c_4, c_8	$u^{17} - 4u^{15} + \cdots - 2u^2 + 1$
c_5	$u^{17} + 8u^{16} + \cdots + 29u + 5$
c_7	$u^{17} - 5u^{16} + \cdots + 6u - 1$
c_{10}, c_{11}	$u^{17} + 5u^{16} + \cdots + 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_9	$y^{17} + 6y^{16} + \cdots + 7y - 1$
c_2, c_5	$y^{17} + 8y^{16} + \cdots - 159y - 25$
c_3, c_6	$y^{17} - 7y^{16} + \cdots + y - 1$
c_4, c_8	$y^{17} - 8y^{16} + \cdots + 4y - 1$
c_7, c_{10}, c_{11}	$y^{17} + 17y^{16} + \cdots - 8y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.212883 + 0.989804I$ $a = -1.78717 - 0.40799I$ $b = -0.65506 - 1.31329I$	$1.43397 + 3.72395I$	$9.02521 - 8.71756I$
$u = -0.212883 - 0.989804I$ $a = -1.78717 + 0.40799I$ $b = -0.65506 + 1.31329I$	$1.43397 - 3.72395I$	$9.02521 + 8.71756I$
$u = 0.187789 + 0.804462I$ $a = -1.56094 - 1.01561I$ $b = -0.263040 - 1.039610I$	$7.01302 - 6.58132I$	$2.73271 + 4.66890I$
$u = 0.187789 - 0.804462I$ $a = -1.56094 + 1.01561I$ $b = -0.263040 + 1.039610I$	$7.01302 + 6.58132I$	$2.73271 - 4.66890I$
$u = -0.049862 + 0.811132I$ $a = 1.77966 + 0.76282I$ $b = 0.299763 + 1.223360I$	$0.38103 - 2.23066I$	$3.27072 + 6.66488I$
$u = -0.049862 - 0.811132I$ $a = 1.77966 - 0.76282I$ $b = 0.299763 - 1.223360I$	$0.38103 + 2.23066I$	$3.27072 - 6.66488I$
$u = -1.26194$ $a = -0.0920978$ $b = -0.443696$	-1.98855	20.3120
$u = -0.623402 + 0.351291I$ $a = 0.635918 + 0.086672I$ $b = -0.381807 + 0.805862I$	$-0.81423 - 1.18978I$	$-7.16259 + 1.41463I$
$u = -0.623402 - 0.351291I$ $a = 0.635918 - 0.086672I$ $b = -0.381807 - 0.805862I$	$-0.81423 + 1.18978I$	$-7.16259 - 1.41463I$
$u = -0.159792 + 1.337940I$ $a = 1.264290 + 0.275164I$ $b = 0.691210 + 0.860233I$	$9.78949 + 6.03317I$	$3.31072 - 5.48564I$

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.159792 - 1.337940I$ $a = 1.264290 - 0.275164I$ $b = 0.691210 - 0.860233I$	$9.78949 - 6.03317I$	$3.31072 + 5.48564I$
$u = -0.459989 + 1.288470I$ $a = -1.256360 + 0.121374I$ $b = -0.988881 - 0.741602I$	$2.67441 + 5.22342I$	$1.79503 - 5.33597I$
$u = -0.459989 - 1.288470I$ $a = -1.256360 - 0.121374I$ $b = -0.988881 + 0.741602I$	$2.67441 - 5.22342I$	$1.79503 + 5.33597I$
$u = -1.41090 + 0.33080I$ $a = 0.174049 - 0.117023I$ $b = 0.570172 - 0.082917I$	$2.33565 + 1.27004I$	$12.05941 + 2.53511I$
$u = -1.41090 - 0.33080I$ $a = 0.174049 + 0.117023I$ $b = 0.570172 + 0.082917I$	$2.33565 - 1.27004I$	$12.05941 - 2.53511I$
$u = -0.63999 + 1.39192I$ $a = 0.996603 - 0.187799I$ $b = 0.949489 + 0.516009I$	$6.14483 + 5.85758I$	$2.31283 - 5.33514I$
$u = -0.63999 - 1.39192I$ $a = 0.996603 + 0.187799I$ $b = 0.949489 - 0.516009I$	$6.14483 - 5.85758I$	$2.31283 + 5.33514I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_9	$(u^{17}+3u^{15}+\cdots-u-1)(u^{41}-12u^{39}+\cdots-2u+1)$ $\cdot(u^{46}-u^{45}+\cdots+8u^2+1)$
c_2	$(u^{17}-8u^{16}+\cdots+29u-5)(u^{23}+7u^{22}+\cdots+4u+1)^2$ $\cdot(u^{41}-11u^{40}+\cdots-239u+24)$
c_3, c_6	$(u^{17}+u^{16}+\cdots+u+1)(u^{41}-u^{40}+\cdots+6u+1)$ $\cdot(u^{46}-7u^{45}+\cdots-188u+37)$
c_4, c_8	$(u^{17}-4u^{15}+\cdots-2u^2+1)(u^{41}-3u^{39}+\cdots+39u+19)$ $\cdot(u^{46}+u^{45}+\cdots+36u+11)$
c_5	$(u^{17}+8u^{16}+\cdots+29u+5)(u^{23}+7u^{22}+\cdots+4u+1)^2$ $\cdot(u^{41}-11u^{40}+\cdots-239u+24)$
c_7	$(u^{17}-5u^{16}+\cdots+6u-1)(u^{23}+5u^{22}+\cdots+6u^2-1)^2$ $\cdot(u^{41}-8u^{40}+\cdots+9u-2)$
c_{10}, c_{11}	$(u^{17}+5u^{16}+\cdots+6u+1)(u^{23}+5u^{22}+\cdots+6u^2-1)^2$ $\cdot(u^{41}-8u^{40}+\cdots+9u-2)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_9	$(y^{17} + 6y^{16} + \cdots + 7y - 1)(y^{41} - 24y^{40} + \cdots + 96y - 1)$ $\cdot (y^{46} + 7y^{45} + \cdots + 16y + 1)$
c_2, c_5	$(y^{17} + 8y^{16} + \cdots - 159y - 25)(y^{23} + 15y^{22} + \cdots - 12y - 1)^2$ $\cdot (y^{41} + 23y^{40} + \cdots - 10223y - 576)$
c_3, c_6	$(y^{17} - 7y^{16} + \cdots + y - 1)(y^{41} + 27y^{40} + \cdots - 82y - 1)$ $\cdot (y^{46} - 5y^{45} + \cdots + 23412y + 1369)$
c_4, c_8	$(y^{17} - 8y^{16} + \cdots + 4y - 1)(y^{41} - 6y^{40} + \cdots + 4637y - 361)$ $\cdot (y^{46} - 13y^{45} + \cdots + 4820y + 121)$
c_7, c_{10}, c_{11}	$(y^{17} + 17y^{16} + \cdots - 8y - 1)(y^{23} + 23y^{22} + \cdots + 12y - 1)^2$ $\cdot (y^{41} + 40y^{40} + \cdots - 87y - 4)$