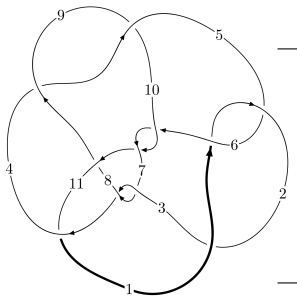
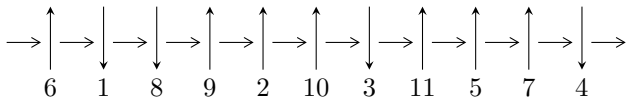
$11a_{131}$ ($K11a_{131}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle -2.39241 \times 10^{297} u^{76} + 2.07034 \times 10^{298} u^{75} + \cdots + 7.56609 \times 10^{293} b - 6.88514 \times 10^{297},$
$1.90621 \times 10^{298} u^{76} - 1.65962 \times 10^{299} u^{75} + \cdots + 7.56609 \times 10^{293} a + 6.40142 \times 10^{298},\ u^{77} - 9u^{76} + \cdots + 21u$

$I_2^u = \langle 265u^{11} + 395u^{10} + \cdots + b + 529,$
$62u^{11} + 109u^{10} + 31u^9 - 12u^8 + 252u^7 - 61u^6 - 934u^5 - 809u^4 + 808u^3 + 1745u^2 + a + 992u + 184,$
$u^{12} + 2u^{11} + u^{10} + 4u^8 - 15u^6 - 17u^5 + 9u^4 + 31u^3 + 24u^2 + 8u + 1\rangle$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 89 representations.

[1]The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2]All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $\boldsymbol{I_1^u = \langle -2.39 \times 10^{297} u^{76} + 2.07 \times 10^{298} u^{75} + \cdots + 7.57 \times 10^{293} b - 6.89 \times 10^{297},\ 1.91 \times 10^{298} u^{76} - 1.66 \times 10^{299} u^{75} + \cdots + 7.57 \times 10^{293} a + 6.40 \times 10^{298},\ u^{77} - 9u^{76} + \cdots + 21u - 1 \rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -25194.1u^{76} + 219350.u^{75} + \cdots + 1.49608 \times 10^6 u - 84606.7 \\ 3162.01u^{76} - 27363.4u^{75} + \cdots - 164906.u + 9100.00 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -24167.3u^{76} + 210600.u^{75} + \cdots + 1.46132 \times 10^6 u - 82903.8 \\ 2951.14u^{76} - 25550.4u^{75} + \cdots - 155615.u + 8608.65 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 36469.7u^{76} - 317311.u^{75} + \cdots - 2.14120 \times 10^6 u + 120882. \\ 2514.97u^{76} - 21887.7u^{75} + \cdots - 149547.u + 8482.64 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -22032.1u^{76} + 191986.u^{75} + \cdots + 1.33118 \times 10^6 u - 75506.7 \\ 3162.01u^{76} - 27363.4u^{75} + \cdots - 164906.u + 9100.00 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 3328.29u^{76} - 30427.5u^{75} + \cdots - 404077.u + 25152.7 \\ -7001.88u^{76} + 60698.7u^{75} + \cdots + 377943.u - 20947.6 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 6514.01u^{76} - 56697.7u^{75} + \cdots - 387663.u + 21971.8 \\ -1968.63u^{76} + 17131.1u^{75} + \cdots + 116642.u - 6616.81 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 19882.8u^{76} - 173045.u^{75} + \cdots - 1.17852 \times 10^6 u + 66715.8 \\ -1263.34u^{76} + 10993.8u^{75} + \cdots + 74786.7u - 4242.80 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -37204.0u^{76} + 323703.u^{75} + \cdots + 2.18430 \times 10^6 u - 123307. \\ -2519.11u^{76} + 21922.8u^{75} + \cdots + 149639.u - 8486.27 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -37204.0u^{76} + 323703.u^{75} + \cdots + 2.18430 \times 10^6 u - 123307. \\ -2519.11u^{76} + 21922.8u^{75} + \cdots + 149639.u - 8486.27 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2184.18u^{76} - 18961.6u^{75} + \cdots - 120593.u + 6664.56$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{77} - u^{76} + \cdots + 15u - 1$
c_2	$u^{77} + 29u^{76} + \cdots - 41u - 1$
c_3, c_7	$u^{77} - u^{76} + \cdots - 165u - 29$
c_4, c_9	$u^{77} + u^{76} + \cdots - 1709u - 751$
c_6, c_{10}	$u^{77} - u^{76} + \cdots + 2607u - 121$
c_8	$u^{77} + 9u^{76} + \cdots + 21u + 1$
c_{11}	$u^{77} - 2u^{76} + \cdots - 11u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{77} + 29y^{76} + \cdots - 41y - 1$
c_2	$y^{77} + 45y^{76} + \cdots - 1989y - 1$
c_3, c_7	$y^{77} - 39y^{76} + \cdots + 32561y - 841$
c_4, c_9	$y^{77} - 57y^{76} + \cdots - 8745353y - 564001$
c_6, c_{10}	$y^{77} - 61y^{76} + \cdots + 895279y - 14641$
c_8	$y^{77} - 7y^{76} + \cdots + 53y - 1$
c_{11}	$y^{77} + 2y^{76} + \cdots - 43y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.772580 + 0.649599I$ $a = -0.427166 + 1.251420I$ $b = 1.273380 - 0.435053I$	$-4.61742 + 6.13658I$	0
$u = 0.772580 - 0.649599I$ $a = -0.427166 - 1.251420I$ $b = 1.273380 + 0.435053I$	$-4.61742 - 6.13658I$	0
$u = -0.831929 + 0.574661I$ $a = 0.241087 - 0.114363I$ $b = -1.265010 + 0.301142I$	$-0.23261 + 3.64167I$	0
$u = -0.831929 - 0.574661I$ $a = 0.241087 + 0.114363I$ $b = -1.265010 - 0.301142I$	$-0.23261 - 3.64167I$	0
$u = -0.458067 + 0.856288I$ $a = 1.293790 - 0.404733I$ $b = 0.896924 + 0.374361I$	$1.80693 - 4.42620I$	0
$u = -0.458067 - 0.856288I$ $a = 1.293790 + 0.404733I$ $b = 0.896924 - 0.374361I$	$1.80693 + 4.42620I$	0
$u = -0.758441 + 0.763394I$ $a = -0.535976 + 0.962822I$ $b = 0.110329 - 0.733577I$	$3.84970 - 0.08012I$	0
$u = -0.758441 - 0.763394I$ $a = -0.535976 - 0.962822I$ $b = 0.110329 + 0.733577I$	$3.84970 + 0.08012I$	0
$u = 1.094390 + 0.064995I$ $a = 1.58015 - 0.73304I$ $b = -0.775291 + 0.429157I$	$5.46593 - 3.52443I$	0
$u = 1.094390 - 0.064995I$ $a = 1.58015 + 0.73304I$ $b = -0.775291 - 0.429157I$	$5.46593 + 3.52443I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.584838 + 0.939434I$ $a = -0.146487 + 0.899216I$ $b = 1.211330 - 0.130649I$	$-5.89787 - 1.17472I$	0
$u = 0.584838 - 0.939434I$ $a = -0.146487 - 0.899216I$ $b = 1.211330 + 0.130649I$	$-5.89787 + 1.17472I$	0
$u = -0.716415 + 0.853385I$ $a = 0.502942 - 1.047360I$ $b = 0.104207 + 0.712436I$	$3.61473 - 5.50095I$	0
$u = -0.716415 - 0.853385I$ $a = 0.502942 + 1.047360I$ $b = 0.104207 - 0.712436I$	$3.61473 + 5.50095I$	0
$u = 1.124370 + 0.023892I$ $a = -1.76474 + 0.35679I$ $b = 0.851750 - 0.208072I$	$6.39464 + 1.13968I$	0
$u = 1.124370 - 0.023892I$ $a = -1.76474 - 0.35679I$ $b = 0.851750 + 0.208072I$	$6.39464 - 1.13968I$	0
$u = 0.566723 + 0.642863I$ $a = 0.135597 - 1.323930I$ $b = -1.097940 + 0.358861I$	$-2.05915 + 1.76225I$	0
$u = 0.566723 - 0.642863I$ $a = 0.135597 + 1.323930I$ $b = -1.097940 - 0.358861I$	$-2.05915 - 1.76225I$	0
$u = 1.102000 + 0.373121I$ $a = 0.532793 - 0.960517I$ $b = -0.191518 + 0.862539I$	$2.70359 + 3.26674I$	0
$u = 1.102000 - 0.373121I$ $a = 0.532793 + 0.960517I$ $b = -0.191518 - 0.862539I$	$2.70359 - 3.26674I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.279776+0.784788I$ $a=-1.51840-0.35367I$ $b=-0.790743-0.263954I$	$1.46625+1.20974I$	0
$u=-0.279776-0.784788I$ $a=-1.51840+0.35367I$ $b=-0.790743+0.263954I$	$1.46625-1.20974I$	0
$u=1.022290+0.632834I$ $a=0.023347-1.053100I$ $b=0.177886+1.221810I$	$8.28927+10.45150I$	0
$u=1.022290-0.632834I$ $a=0.023347+1.053100I$ $b=0.177886-1.221810I$	$8.28927-10.45150I$	0
$u=-1.155300+0.454833I$ $a=-0.561575+0.200722I$ $b=0.667917-0.411478I$	$2.46824-1.00702I$	0
$u=-1.155300-0.454833I$ $a=-0.561575-0.200722I$ $b=0.667917+0.411478I$	$2.46824+1.00702I$	0
$u=-0.913499+0.854540I$ $a=0.09410-1.50305I$ $b=1.148930+0.468555I$	$0.86302-4.48046I$	0
$u=-0.913499-0.854540I$ $a=0.09410+1.50305I$ $b=1.148930-0.468555I$	$0.86302+4.48046I$	0
$u=-0.673445+0.327727I$ $a=-0.111958+0.526638I$ $b=0.491929-0.543095I$	$1.227580-0.394060I$	0
$u=-0.673445-0.327727I$ $a=-0.111958-0.526638I$ $b=0.491929+0.543095I$	$1.227580+0.394060I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.096450 + 0.632837I$ $a = -0.049964 + 0.927017I$ $b = -0.230006 - 1.090050I$	$9.74860 + 4.47979I$	0
$u = 1.096450 - 0.632837I$ $a = -0.049964 - 0.927017I$ $b = -0.230006 + 1.090050I$	$9.74860 - 4.47979I$	0
$u = -0.796961 + 0.996614I$ $a = 0.275085 - 1.055370I$ $b = 1.011980 + 0.499831I$	$-0.33626 - 4.72282I$	0
$u = -0.796961 - 0.996614I$ $a = 0.275085 + 1.055370I$ $b = 1.011980 - 0.499831I$	$-0.33626 + 4.72282I$	0
$u = -0.572914 + 0.422408I$ $a = -0.215285 + 0.421413I$ $b = 1.020670 - 0.758296I$	$1.164470 - 0.722959I$	0
$u = -0.572914 - 0.422408I$ $a = -0.215285 - 0.421413I$ $b = 1.020670 + 0.758296I$	$1.164470 + 0.722959I$	0
$u = -0.978567 + 0.845945I$ $a = 0.14374 + 1.52350I$ $b = -1.221000 - 0.424375I$	$-0.15779 - 9.61338I$	0
$u = -0.978567 - 0.845945I$ $a = 0.14374 - 1.52350I$ $b = -1.221000 + 0.424375I$	$-0.15779 + 9.61338I$	0
$u = -0.772842 + 1.043420I$ $a = 0.079148 - 0.986729I$ $b = 1.179490 + 0.706716I$	$0.48900 - 5.35296I$	0
$u = -0.772842 - 1.043420I$ $a = 0.079148 + 0.986729I$ $b = 1.179490 - 0.706716I$	$0.48900 + 5.35296I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.774013+1.051790I$ $a=\ \ 0.041612+0.969778I$ $b=-1.31184-0.73020I$	$-0.77093-10.59390I$	0
$u=-0.774013-1.051790I$ $a=\ \ 0.041612-0.969778I$ $b=-1.31184+0.73020I$	$-0.77093+10.59390I$	0
$u=-0.769505+1.080340I$ $a=-0.036932+0.616536I$ $b=-1.300530-0.421555I$	$-4.57880-4.18550I$	0
$u=-0.769505-1.080340I$ $a=-0.036932-0.616536I$ $b=-1.300530+0.421555I$	$-4.57880+4.18550I$	0
$u=-0.324035+0.552616I$ $a=-0.07864-1.43992I$ $b=-0.279592+0.135545I$	$-1.33936-1.90829I$	$-3.28849+4.48822I$
$u=-0.324035-0.552616I$ $a=-0.07864+1.43992I$ $b=-0.279592-0.135545I$	$-1.33936+1.90829I$	$-3.28849-4.48822I$
$u=-1.06710+1.01825I$ $a=\ \ 0.195883+0.983581I$ $b=-1.087150-0.216785I$	$-3.63556-3.63723I$	0
$u=-1.06710-1.01825I$ $a=\ \ 0.195883-0.983581I$ $b=-1.087150+0.216785I$	$-3.63556+3.63723I$	0
$u=-1.37924+0.59849I$ $a=\ \ 0.610740+0.090379I$ $b=-0.896422+0.265763I$	$1.15451+3.72703I$	0
$u=-1.37924-0.59849I$ $a=\ \ 0.610740-0.090379I$ $b=-0.896422-0.265763I$	$1.15451-3.72703I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.113956+0.377311I$ $a=-0.081851+0.887678I$ $b=1.24468-1.64088I$	$2.31339+2.06400I$	$-22.0462+12.4650I$
$u=-0.113956-0.377311I$ $a=-0.081851-0.887678I$ $b=1.24468+1.64088I$	$2.31339-2.06400I$	$-22.0462-12.4650I$
$u=0.335262+0.119310I$ $a=-1.09156-2.32545I$ $b=-1.073860+0.675324I$	$0.02842+2.19997I$	$4.77678-3.74049I$
$u=0.335262-0.119310I$ $a=-1.09156+2.32545I$ $b=-1.073860-0.675324I$	$0.02842-2.19997I$	$4.77678+3.74049I$
$u=0.048363+0.351944I$ $a=-0.110601-1.089750I$ $b=-1.32320+1.63039I$	$2.00559-2.59230I$	$-21.8153-13.3624I$
$u=0.048363-0.351944I$ $a=-0.110601+1.089750I$ $b=-1.32320-1.63039I$	$2.00559+2.59230I$	$-21.8153+13.3624I$
$u=0.335209+0.036264I$ $a=-2.55630+6.06495I$ $b=-0.820378-0.379925I$	$5.36519-7.03538I$	$8.75195+9.18938I$
$u=0.335209-0.036264I$ $a=-2.55630-6.06495I$ $b=-0.820378+0.379925I$	$5.36519+7.03538I$	$8.75195-9.18938I$
$u=1.23280+1.12711I$ $a=-0.049627+1.009430I$ $b=1.32035-0.63988I$	$4.7027+16.9146I$	0
$u=1.23280-1.12711I$ $a=-0.049627-1.009430I$ $b=1.32035+0.63988I$	$4.7027-16.9146I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.285935 + 0.153568I$ $a = -0.31692 - 2.19667I$ $b = -0.366677 + 0.724507I$	$-0.05781 + 1.76242I$	$0.07414 - 5.41523I$
$u = 0.285935 - 0.153568I$ $a = -0.31692 + 2.19667I$ $b = -0.366677 - 0.724507I$	$-0.05781 - 1.76242I$	$0.07414 + 5.41523I$
$u = 0.312107 + 0.020941I$ $a = 4.10024 - 5.28583I$ $b = 0.865786 + 0.306816I$	$6.12753 - 1.30742I$	$8.16681 + 3.90506I$
$u = 0.312107 - 0.020941I$ $a = 4.10024 + 5.28583I$ $b = 0.865786 - 0.306816I$	$6.12753 + 1.30742I$	$8.16681 - 3.90506I$
$u = 1.25412 + 1.18786I$ $a = -0.018665 - 0.921057I$ $b = -1.262300 + 0.607915I$	$6.51212 + 10.46960I$	0
$u = 1.25412 - 1.18786I$ $a = -0.018665 + 0.921057I$ $b = -1.262300 - 0.607915I$	$6.51212 - 10.46960I$	0
$u = 0.255137$ $a = 3.04447$ $b = 1.33814$	2.92476	1.67450
$u = 1.90461 + 0.33298I$ $a = -0.204161 + 0.131039I$ $b = -0.442330 - 0.184001I$	$7.54983 + 0.02659I$	0
$u = 1.90461 - 0.33298I$ $a = -0.204161 - 0.131039I$ $b = -0.442330 + 0.184001I$	$7.54983 - 0.02659I$	0
$u = 0.14509 + 1.98112I$ $a = 0.515709 - 0.055700I$ $b = 0.763715 - 0.227475I$	$4.77190 - 4.51965I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.14509 - 1.98112I$ $a = 0.515709 + 0.055700I$ $b = 0.763715 + 0.227475I$	$4.77190 + 4.51965I$	0
$u = 1.59985 + 1.21883I$ $a = -0.126330 + 0.598225I$ $b = 1.272530 - 0.403885I$	$-1.70122 + 7.58589I$	0
$u = 1.59985 - 1.21883I$ $a = -0.126330 - 0.598225I$ $b = 1.272530 + 0.403885I$	$-1.70122 - 7.58589I$	0
$u = 1.09059 + 2.01824I$ $a = -0.300796 - 0.315309I$ $b = -0.970357 + 0.344452I$	$6.12754 + 2.96766I$	0
$u = 1.09059 - 2.01824I$ $a = -0.300796 + 0.315309I$ $b = -0.970357 - 0.344452I$	$6.12754 - 2.96766I$	0
$u = 1.80088 + 1.78506I$ $a = -0.0842697 - 0.0436608I$ $b = 0.923298 + 0.276341I$	$4.20118 - 6.97147I$	0
$u = 1.80088 - 1.78506I$ $a = -0.0842697 + 0.0436608I$ $b = 0.923298 - 0.276341I$	$4.20118 + 6.97147I$	0

II. $I_2^u = \langle 265u^{11} + 395u^{10} + \cdots + b + 529,\ 62u^{11} + 109u^{10} + \cdots + a + 184,\ u^{12} + 2u^{11} + \cdots + 8u + 1\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -62u^{11} - 109u^{10} + \cdots - 992u - 184 \\ -265u^{11} - 395u^{10} + \cdots - 3159u - 529 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -326u^{11} - 507u^{10} + \cdots - 4209u - 728 \\ -200u^{11} - 298u^{10} + \cdots - 2383u - 399 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -47u^{11} - 78u^{10} + \cdots - 679u - 122 \\ -2u^{11} - 3u^{10} + \cdots - 31u - 8 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -327u^{11} - 504u^{10} + \cdots - 4151u - 713 \\ -265u^{11} - 395u^{10} + \cdots - 3159u - 529 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -327u^{11} - 504u^{10} + \cdots - 4150u - 713 \\ -89u^{11} - 123u^{10} + \cdots - 919u - 145 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 7u^{11} + 13u^{10} + \cdots + 137u + 32 \\ -u^{11} - u^{10} - 4u^7 + 4u^6 + 11u^5 + 6u^4 - 15u^3 - 16u^2 - 8u - 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 25u^{11} + 44u^{10} + \cdots + 423u + 87 \\ u + 1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -55u^{11} - 92u^{10} + \cdots - 824u - 154 \\ -2u^{11} - 3u^{10} + \cdots - 31u - 7 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -55u^{11} - 92u^{10} + \cdots - 824u - 154 \\ -2u^{11} - 3u^{10} + \cdots - 31u - 7 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 343u^{11} + 435u^{10} + 7u^9 - 22u^8 + 1393u^7 - 1020u^6 - 4470u^5 - 2485u^4 + 5112u^3 + 6955u^2 + 2864u + 383$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{12} - 2u^{11} + \cdots - 2u + 1$
c_2	$u^{12} + 6u^{11} + \cdots + 6u + 1$
c_3	$u^{12} - u^{10} + u^9 - u^8 - u^7 + 4u^6 - u^5 - u^4 + u^3 - 2u^2 + 1$
c_4	$u^{12} - 2u^{10} - u^9 - u^8 + u^7 + 4u^6 + u^5 - u^4 - u^3 - u^2 + 1$
c_5	$u^{12} + 2u^{11} + \cdots + 2u + 1$
c_6	$u^{12} - 4u^{11} + \cdots - 2u + 1$
c_7	$u^{12} - u^{10} - u^9 - u^8 + u^7 + 4u^6 + u^5 - u^4 - u^3 - 2u^2 + 1$
c_8	$u^{12} + 2u^{11} + u^{10} + 4u^8 - 15u^6 - 17u^5 + 9u^4 + 31u^3 + 24u^2 + 8u + 1$
c_9	$u^{12} - 2u^{10} + u^9 - u^8 - u^7 + 4u^6 - u^5 - u^4 + u^3 - u^2 + 1$
c_{10}	$u^{12} + 4u^{11} + \cdots + 2u + 1$
c_{11}	$u^{12} - 3u^{11} + \cdots - 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{12} + 6y^{11} + \cdots + 6y + 1$
c_2	$y^{12} + 6y^{11} + \cdots - 2y + 1$
c_3, c_7	$y^{12} - 2y^{11} + \cdots - 4y + 1$
c_4, c_9	$y^{12} - 4y^{11} + \cdots - 2y + 1$
c_6, c_{10}	$y^{12} - 12y^{11} + \cdots - 6y + 1$
c_8	$y^{12} - 2y^{11} + \cdots - 16y + 1$
c_{11}	$y^{12} - y^{11} + \cdots + 8y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.741008+0.843928I$ $a=-0.272841+1.370800I$ $b=-0.984853-0.549799I$	$-0.94624-4.30351I$	$-2.15264+4.03867I$
$u=-0.741008-0.843928I$ $a=-0.272841-1.370800I$ $b=-0.984853+0.549799I$	$-0.94624+4.30351I$	$-2.15264-4.03867I$
$u=1.262580+0.345242I$ $a=-1.032950+0.632710I$ $b=0.754976+0.043647I$	$6.38132+0.21376I$	$6.25984+0.75137I$
$u=1.262580-0.345242I$ $a=-1.032950-0.632710I$ $b=0.754976-0.043647I$	$6.38132-0.21376I$	$6.25984-0.75137I$
$u=-0.578234+0.042931I$ $a=0.384529+0.999319I$ $b=-0.102518-1.164980I$	$0.61422-1.43941I$	$10.88514+4.78461I$
$u=-0.578234-0.042931I$ $a=0.384529-0.999319I$ $b=-0.102518+1.164980I$	$0.61422+1.43941I$	$10.88514-4.78461I$
$u=-1.24859+0.90135I$ $a=-0.191342-0.800979I$ $b=1.210650+0.425814I$	$-2.97178-6.11551I$	$1.52678+5.55521I$
$u=-1.24859-0.90135I$ $a=-0.191342+0.800979I$ $b=1.210650-0.425814I$	$-2.97178+6.11551I$	$1.52678-5.55521I$
$u=-0.457639+0.024191I$ $a=0.547649-0.753294I$ $b=-0.044719-0.917677I$	$2.40807+2.46975I$	$4.62403-2.63831I$
$u=-0.457639-0.024191I$ $a=0.547649+0.753294I$ $b=-0.044719+0.917677I$	$2.40807-2.46975I$	$4.62403+2.63831I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.76289 + 1.47705I$		
$a = -0.435041 - 0.572739I$	$4.38401 - 5.97653I$	$5.35684 + 3.69125I$
$b = -0.833532 - 0.167507I$		
$u = \quad 0.76289 - 1.47705I$		
$a = -0.435041 + 0.572739I$	$4.38401 + 5.97653I$	$5.35684 - 3.69125I$
$b = -0.833532 + 0.167507I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{12}-2u^{11}+\cdots-2u+1)(u^{77}-u^{76}+\cdots+15u-1)$
c_2	$(u^{12}+6u^{11}+\cdots+6u+1)(u^{77}+29u^{76}+\cdots-41u-1)$
c_3	$(u^{12}-u^{10}+u^9-u^8-u^7+4u^6-u^5-u^4+u^3-2u^2+1)$ $\cdot(u^{77}-u^{76}+\cdots-165u-29)$
c_4	$(u^{12}-2u^{10}-u^9-u^8+u^7+4u^6+u^5-u^4-u^3-u^2+1)$ $\cdot(u^{77}+u^{76}+\cdots-1709u-751)$
c_5	$(u^{12}+2u^{11}+\cdots+2u+1)(u^{77}-u^{76}+\cdots+15u-1)$
c_6	$(u^{12}-4u^{11}+\cdots-2u+1)(u^{77}-u^{76}+\cdots+2607u-121)$
c_7	$(u^{12}-u^{10}-u^9-u^8+u^7+4u^6+u^5-u^4-u^3-2u^2+1)$ $\cdot(u^{77}-u^{76}+\cdots-165u-29)$
c_8	$(u^{12}+2u^{11}+u^{10}+4u^8-15u^6-17u^5+9u^4+31u^3+24u^2+8u+1)$ $\cdot(u^{77}+9u^{76}+\cdots+21u+1)$
c_9	$(u^{12}-2u^{10}+u^9-u^8-u^7+4u^6-u^5-u^4+u^3-u^2+1)$ $\cdot(u^{77}+u^{76}+\cdots-1709u-751)$
c_{10}	$(u^{12}+4u^{11}+\cdots+2u+1)(u^{77}-u^{76}+\cdots+2607u-121)$
c_{11}	$(u^{12}-3u^{11}+\cdots-4u+1)(u^{77}-2u^{76}+\cdots-11u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{12}+6y^{11}+\cdots+6y+1)(y^{77}+29y^{76}+\cdots-41y-1)$
c_2	$(y^{12}+6y^{11}+\cdots-2y+1)(y^{77}+45y^{76}+\cdots-1989y-1)$
c_3, c_7	$(y^{12}-2y^{11}+\cdots-4y+1)(y^{77}-39y^{76}+\cdots+32561y-841)$
c_4, c_9	$(y^{12}-4y^{11}+\cdots-2y+1)(y^{77}-57y^{76}+\cdots-8745353y-564001)$
c_6, c_{10}	$(y^{12}-12y^{11}+\cdots-6y+1)(y^{77}-61y^{76}+\cdots+895279y-14641)$
c_8	$(y^{12}-2y^{11}+\cdots-16y+1)(y^{77}-7y^{76}+\cdots+53y-1)$
c_{11}	$(y^{12}-y^{11}+\cdots+8y+1)(y^{77}+2y^{76}+\cdots-43y-1)$