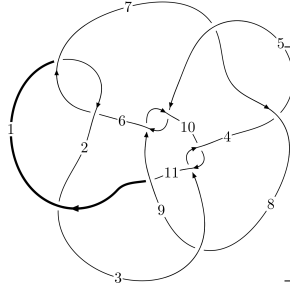
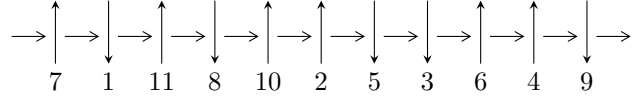


11a₂₀₉ (K11a₂₀₉)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -6.30788 \times 10^{126} u^{85} - 9.55625 \times 10^{125} u^{84} + \dots + 9.00015 \times 10^{126} b + 6.05580 \times 10^{127}, \\ -2.03979 \times 10^{128} u^{85} - 2.07030 \times 10^{128} u^{84} + \dots + 2.07003 \times 10^{128} a - 3.57647 \times 10^{129}, \\ u^{86} + u^{85} + \dots + 22u + 23 \rangle$$

$$I_2^u = \langle -2u^{14} - 7u^{12} + 2u^{11} - 16u^{10} + 9u^9 - 23u^8 + 15u^7 - 26u^6 + 17u^5 - 22u^4 + 10u^3 - 11u^2 + b + 3u - 2, \\ u^{14} + u^{13} + 4u^{12} + 2u^{11} + 8u^{10} + u^9 + 9u^8 - 2u^7 + 9u^6 - 2u^5 + 7u^4 + 4u^2 + a + u - 1, \\ u^{16} + 4u^{14} - u^{13} + 10u^{12} - 5u^{11} + 16u^{10} - 10u^9 + 20u^8 - 13u^7 + 19u^6 - 10u^5 + 13u^4 - 5u^3 + 5u^2 - u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 102 representations.

¹The 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>).

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

$$\text{I. } I_1^u = \langle -6.31 \times 10^{126} u^{85} - 9.56 \times 10^{125} u^{84} + \dots + 9.00 \times 10^{126} b + 6.06 \times 10^{127}, -2.04 \times 10^{128} u^{85} - 2.07 \times 10^{128} u^{84} + \dots + 2.07 \times 10^{128} a - 3.58 \times 10^{129}, u^{86} + u^{85} + \dots + 22u + 23 \rangle$$

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix} 0.985388u^{85} + 1.00013u^{84} + \dots + 21.7854u + 17.2774 \\ 0.700864u^{85} + 0.106179u^{84} + \dots + 14.6782u - 6.72856 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.68625u^{85} + 1.10631u^{84} + \dots + 36.4636u + 10.5488 \\ 0.700864u^{85} + 0.106179u^{84} + \dots + 14.6782u - 6.72856 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.179613u^{85} + 0.843358u^{84} + \dots - 1.56088u + 10.9518 \\ 0.440284u^{85} + 0.983845u^{84} + \dots + 15.9276u + 22.9163 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1.68776u^{85} + 1.23127u^{84} + \dots + 40.7914u + 14.3817 \\ 0.860452u^{85} + 0.154872u^{84} + \dots + 20.0925u - 6.09132 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.13364u^{85} + 1.30317u^{84} + \dots + 25.1297u + 21.3228 \\ 0.585302u^{85} + 0.634965u^{84} + \dots + 18.0615u + 12.8964 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.151976u^{85} - 0.909808u^{84} + \dots - 7.21246u - 14.7505 \\ 0.0869857u^{85} - 0.573926u^{84} + \dots - 0.0631483u - 8.62579 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.151976u^{85} - 0.909808u^{84} + \dots - 7.21246u - 14.7505 \\ 0.0869857u^{85} - 0.573926u^{84} + \dots - 0.0631483u - 8.62579 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-2.93906u^{85} - 1.80148u^{84} + \dots - 94.0864u - 29.1762$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{86} + u^{85} + \dots + 22u + 23$
c_2	$u^{86} + 37u^{85} + \dots + 8624u + 529$
c_3, c_{10}	$u^{86} + 5u^{85} + \dots + 228u + 34$
c_4, c_7	$u^{86} - 3u^{85} + \dots - 3u + 1$
c_5, c_9	$u^{86} - u^{85} + \dots + 977u + 253$
c_8	$u^{86} + u^{85} + \dots - 5u + 1$
c_{11}	$u^{86} - 3u^{85} + \dots - 453u + 83$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{86} + 37y^{85} + \dots + 8624y + 529$
c_2	$y^{86} + 33y^{85} + \dots + 1800508y + 279841$
c_3, c_{10}	$y^{86} + 61y^{85} + \dots + 39068y + 1156$
c_4, c_7	$y^{86} + 51y^{85} + \dots + 79y + 1$
c_5, c_9	$y^{86} + 57y^{85} + \dots + 492125y + 64009$
c_8	$y^{86} + 7y^{85} + \dots + 89y + 1$
c_{11}	$y^{86} - 15y^{85} + \dots - 330041y + 6889$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.440608 + 0.882453I$ $a = -1.41549 + 0.11610I$ $b = -0.14456 - 2.08024I$	$-6.69565 - 1.80753I$	0
$u = -0.440608 - 0.882453I$ $a = -1.41549 - 0.11610I$ $b = -0.14456 + 2.08024I$	$-6.69565 + 1.80753I$	0
$u = 0.435411 + 0.874421I$ $a = 2.18520 - 0.30062I$ $b = -0.236877 - 0.859775I$	$-0.020421 + 1.232540I$	0
$u = 0.435411 - 0.874421I$ $a = 2.18520 + 0.30062I$ $b = -0.236877 + 0.859775I$	$-0.020421 - 1.232540I$	0
$u = -0.254148 + 0.997671I$ $a = -0.0121662 - 0.0653344I$ $b = 0.658248 + 0.624038I$	$-3.68445 - 0.23182I$	0
$u = -0.254148 - 0.997671I$ $a = -0.0121662 + 0.0653344I$ $b = 0.658248 - 0.624038I$	$-3.68445 + 0.23182I$	0
$u = 0.472137 + 0.915188I$ $a = -0.650907 + 0.686202I$ $b = 0.557676 - 0.372423I$	$-0.27091 + 2.38443I$	0
$u = 0.472137 - 0.915188I$ $a = -0.650907 - 0.686202I$ $b = 0.557676 + 0.372423I$	$-0.27091 - 2.38443I$	0
$u = 0.819335 + 0.516743I$ $a = 0.735754 - 1.133700I$ $b = -0.303943 + 1.157700I$	$-4.27251 - 4.47107I$	0
$u = 0.819335 - 0.516743I$ $a = 0.735754 + 1.133700I$ $b = -0.303943 - 1.157700I$	$-4.27251 + 4.47107I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.799498 + 0.671496I$ $a = -1.082950 - 0.476132I$ $b = 0.862405 - 0.332801I$	$6.03113 - 0.23797I$	0
$u = -0.799498 - 0.671496I$ $a = -1.082950 + 0.476132I$ $b = 0.862405 + 0.332801I$	$6.03113 + 0.23797I$	0
$u = 0.519186 + 0.913358I$ $a = -1.30951 + 1.25452I$ $b = 0.235203 + 1.254150I$	$0.55328 + 3.31179I$	0
$u = 0.519186 - 0.913358I$ $a = -1.30951 - 1.25452I$ $b = 0.235203 - 1.254150I$	$0.55328 - 3.31179I$	0
$u = 0.498753 + 0.796047I$ $a = 0.520912 + 0.215764I$ $b = -0.477711 + 1.141280I$	$0.958565 + 0.837035I$	0
$u = 0.498753 - 0.796047I$ $a = 0.520912 - 0.215764I$ $b = -0.477711 - 1.141280I$	$0.958565 - 0.837035I$	0
$u = -0.957226 + 0.470426I$ $a = -0.694272 - 0.926525I$ $b = 0.65505 + 1.27900I$	$-0.73034 + 11.32340I$	0
$u = -0.957226 - 0.470426I$ $a = -0.694272 + 0.926525I$ $b = 0.65505 - 1.27900I$	$-0.73034 - 11.32340I$	0
$u = 0.718222 + 0.590569I$ $a = -1.66020 + 0.78424I$ $b = 1.230230 + 0.333871I$	$2.36607 - 4.79257I$	0
$u = 0.718222 - 0.590569I$ $a = -1.66020 - 0.78424I$ $b = 1.230230 - 0.333871I$	$2.36607 + 4.79257I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.363945 + 0.853778I$ $a = 2.39581 + 1.39052I$ $b = 0.058045 + 0.753718I$	$-1.69428 + 3.12126I$	0
$u = -0.363945 - 0.853778I$ $a = 2.39581 - 1.39052I$ $b = 0.058045 - 0.753718I$	$-1.69428 - 3.12126I$	0
$u = 0.678602 + 0.851107I$ $a = 1.348950 + 0.317447I$ $b = -0.704996 - 0.539942I$	$1.82473 + 1.72939I$	0
$u = 0.678602 - 0.851107I$ $a = 1.348950 - 0.317447I$ $b = -0.704996 + 0.539942I$	$1.82473 - 1.72939I$	0
$u = 1.002180 + 0.442960I$ $a = -0.459083 + 0.579423I$ $b = 0.526479 - 1.140670I$	$3.53168 - 4.85270I$	0
$u = 1.002180 - 0.442960I$ $a = -0.459083 - 0.579423I$ $b = 0.526479 + 1.140670I$	$3.53168 + 4.85270I$	0
$u = -0.574135 + 0.697745I$ $a = 1.295480 + 0.432521I$ $b = -0.593842 - 0.982625I$	$0.55800 + 3.23439I$	0
$u = -0.574135 - 0.697745I$ $a = 1.295480 - 0.432521I$ $b = -0.593842 + 0.982625I$	$0.55800 - 3.23439I$	0
$u = -0.301901 + 1.060790I$ $a = 0.243556 + 0.478235I$ $b = 0.333285 + 0.966852I$	$-3.68916 - 0.50545I$	0
$u = -0.301901 - 1.060790I$ $a = 0.243556 - 0.478235I$ $b = 0.333285 - 0.966852I$	$-3.68916 + 0.50545I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.566298 + 0.952248I$ $a = -2.01719 - 1.25230I$ $b = 0.470639 - 1.102850I$	$-0.23044 - 7.80201I$	0
$u = -0.566298 - 0.952248I$ $a = -2.01719 + 1.25230I$ $b = 0.470639 + 1.102850I$	$-0.23044 + 7.80201I$	0
$u = -0.458991 + 1.014050I$ $a = -1.36992 - 0.61444I$ $b = 0.328045 + 0.090852I$	$-2.49113 - 6.25666I$	0
$u = -0.458991 - 1.014050I$ $a = -1.36992 + 0.61444I$ $b = 0.328045 - 0.090852I$	$-2.49113 + 6.25666I$	0
$u = -0.535541 + 0.976845I$ $a = 1.84339 - 0.12152I$ $b = -0.49099 + 1.53261I$	$-5.79066 - 2.94337I$	0
$u = -0.535541 - 0.976845I$ $a = 1.84339 + 0.12152I$ $b = -0.49099 - 1.53261I$	$-5.79066 + 2.94337I$	0
$u = 0.155910 + 0.854062I$ $a = 0.610198 - 1.248350I$ $b = -1.094600 + 0.553981I$	$-2.07684 - 4.50458I$	$-4.60378 + 5.16323I$
$u = 0.155910 - 0.854062I$ $a = 0.610198 + 1.248350I$ $b = -1.094600 - 0.553981I$	$-2.07684 + 4.50458I$	$-4.60378 - 5.16323I$
$u = 0.727983 + 0.866986I$ $a = -0.295618 + 1.161150I$ $b = 0.552356 - 0.433486I$	$1.80523 + 3.66895I$	0
$u = 0.727983 - 0.866986I$ $a = -0.295618 - 1.161150I$ $b = 0.552356 + 0.433486I$	$1.80523 - 3.66895I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.037161 + 1.155380I$ $a = -0.290467 - 0.823431I$ $b = 0.16766 - 1.42237I$	$-10.06360 - 2.70380I$	0
$u = 0.037161 - 1.155380I$ $a = -0.290467 + 0.823431I$ $b = 0.16766 + 1.42237I$	$-10.06360 + 2.70380I$	0
$u = 0.356735 + 1.106460I$ $a = 0.771475 + 0.196566I$ $b = 0.51455 - 1.45263I$	$-4.90859 - 0.03496I$	0
$u = 0.356735 - 1.106460I$ $a = 0.771475 - 0.196566I$ $b = 0.51455 + 1.45263I$	$-4.90859 + 0.03496I$	0
$u = -0.784201 + 0.874304I$ $a = 0.646233 - 1.252980I$ $b = -0.075808 + 0.802027I$	$3.13190 - 2.94290I$	0
$u = -0.784201 - 0.874304I$ $a = 0.646233 + 1.252980I$ $b = -0.075808 - 0.802027I$	$3.13190 + 2.94290I$	0
$u = 0.471061 + 1.075990I$ $a = -1.75793 + 0.83086I$ $b = 0.99776 + 1.30307I$	$-4.20557 + 7.31255I$	0
$u = 0.471061 - 1.075990I$ $a = -1.75793 - 0.83086I$ $b = 0.99776 - 1.30307I$	$-4.20557 - 7.31255I$	0
$u = -0.651807 + 0.489532I$ $a = 0.39844 - 1.41823I$ $b = 0.197920 + 1.236210I$	$-4.44910 - 1.59822I$	$-3.44505 + 3.04430I$
$u = -0.651807 - 0.489532I$ $a = 0.39844 + 1.41823I$ $b = 0.197920 - 1.236210I$	$-4.44910 + 1.59822I$	$-3.44505 - 3.04430I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.624334 + 1.022790I$ $a = 0.969124 - 0.965579I$ $b = -1.47236 + 0.18895I$	$1.06511 + 9.94951I$	0
$u = 0.624334 - 1.022790I$ $a = 0.969124 + 0.965579I$ $b = -1.47236 - 0.18895I$	$1.06511 - 9.94951I$	0
$u = -0.788393 + 0.093088I$ $a = 0.175436 + 0.306457I$ $b = 0.330111 + 0.644700I$	$0.40272 - 2.72268I$	$2.86940 + 3.16788I$
$u = -0.788393 - 0.093088I$ $a = 0.175436 - 0.306457I$ $b = 0.330111 - 0.644700I$	$0.40272 + 2.72268I$	$2.86940 - 3.16788I$
$u = -0.683162 + 0.995349I$ $a = 0.756961 + 0.517256I$ $b = -0.997716 - 0.121911I$	$5.03331 - 5.32903I$	0
$u = -0.683162 - 0.995349I$ $a = 0.756961 - 0.517256I$ $b = -0.997716 + 0.121911I$	$5.03331 + 5.32903I$	0
$u = -0.536132 + 1.087660I$ $a = -1.55660 - 0.83006I$ $b = 0.756634 - 0.727652I$	$-2.10386 - 6.56947I$	0
$u = -0.536132 - 1.087660I$ $a = -1.55660 + 0.83006I$ $b = 0.756634 + 0.727652I$	$-2.10386 + 6.56947I$	0
$u = -0.573481 + 1.085080I$ $a = -1.67333 - 0.55597I$ $b = 0.531502 - 0.970130I$	$-1.93850 - 6.65557I$	0
$u = -0.573481 - 1.085080I$ $a = -1.67333 + 0.55597I$ $b = 0.531502 + 0.970130I$	$-1.93850 + 6.65557I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.131390 + 0.532631I$ $a = -0.273567 - 0.463197I$ $b = 0.248035 + 0.937067I$	$-0.23931 + 5.38129I$	0
$u = 1.131390 - 0.532631I$ $a = -0.273567 + 0.463197I$ $b = 0.248035 - 0.937067I$	$-0.23931 - 5.38129I$	0
$u = 0.657555 + 1.085690I$ $a = -1.92694 + 0.01672I$ $b = 0.437325 + 1.219940I$	$-5.97898 + 10.01160I$	0
$u = 0.657555 - 1.085690I$ $a = -1.92694 - 0.01672I$ $b = 0.437325 - 1.219940I$	$-5.97898 - 10.01160I$	0
$u = -0.613434 + 0.381423I$ $a = 1.142460 + 0.688198I$ $b = -0.522004 - 0.772282I$	$0.03093 + 1.91449I$	$1.42093 - 2.93716I$
$u = -0.613434 - 0.381423I$ $a = 1.142460 - 0.688198I$ $b = -0.522004 + 0.772282I$	$0.03093 - 1.91449I$	$1.42093 + 2.93716I$
$u = -0.624780 + 0.343324I$ $a = 1.41145 + 0.48892I$ $b = -0.637437 - 0.540547I$	$0.00762 + 1.99264I$	$2.82106 - 2.47705I$
$u = -0.624780 - 0.343324I$ $a = 1.41145 - 0.48892I$ $b = -0.637437 + 0.540547I$	$0.00762 - 1.99264I$	$2.82106 + 2.47705I$
$u = 0.006838 + 1.320150I$ $a = -0.042358 - 0.568413I$ $b = -0.369980 - 1.292530I$	$-7.52252 + 8.52696I$	0
$u = 0.006838 - 1.320150I$ $a = -0.042358 + 0.568413I$ $b = -0.369980 + 1.292530I$	$-7.52252 - 8.52696I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.682783 + 1.148320I$ $a = 1.73833 + 0.37633I$ $b = -0.70195 + 1.39798I$	$-2.8205 - 17.3023I$	0
$u = -0.682783 - 1.148320I$ $a = 1.73833 - 0.37633I$ $b = -0.70195 - 1.39798I$	$-2.8205 + 17.3023I$	0
$u = 0.385965 + 0.524461I$ $a = 1.33463 + 0.54748I$ $b = -0.346668 - 0.264256I$	$0.610346 + 1.128090I$	$4.76161 - 5.52253I$
$u = 0.385965 - 0.524461I$ $a = 1.33463 - 0.54748I$ $b = -0.346668 + 0.264256I$	$0.610346 - 1.128090I$	$4.76161 + 5.52253I$
$u = 0.689193 + 1.161250I$ $a = 1.45571 - 0.42058I$ $b = -0.55690 - 1.30946I$	$1.32319 + 10.94470I$	0
$u = 0.689193 - 1.161250I$ $a = 1.45571 + 0.42058I$ $b = -0.55690 + 1.30946I$	$1.32319 - 10.94470I$	0
$u = -0.178929 + 1.357480I$ $a = 0.024553 + 0.644724I$ $b = -0.122682 + 1.122470I$	$-4.10884 - 1.64866I$	0
$u = -0.178929 - 1.357480I$ $a = 0.024553 - 0.644724I$ $b = -0.122682 - 1.122470I$	$-4.10884 + 1.64866I$	0
$u = 0.591175 + 0.049975I$ $a = 1.31039 - 1.38090I$ $b = -0.687577 + 1.119080I$	$-1.62551 - 3.43865I$	$-0.96501 + 2.90877I$
$u = 0.591175 - 0.049975I$ $a = 1.31039 + 1.38090I$ $b = -0.687577 - 1.119080I$	$-1.62551 + 3.43865I$	$-0.96501 - 2.90877I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.145997 + 0.558877I$		
$a = 1.02027 + 1.15455I$	$0.40918 + 1.48015I$	$2.24000 - 5.97587I$
$b = -0.467675 - 0.564857I$		
$u = 0.145997 - 0.558877I$		
$a = 1.02027 - 1.15455I$	$0.40918 - 1.48015I$	$2.24000 + 5.97587I$
$b = -0.467675 + 0.564857I$		
$u = 0.62384 + 1.28071I$		
$a = -0.820261 + 0.152739I$	$-3.04048 + 1.33044I$	0
$b = -0.005790 + 0.909994I$		
$u = 0.62384 - 1.28071I$		
$a = -0.820261 - 0.152739I$	$-3.04048 - 1.33044I$	0
$b = -0.005790 - 0.909994I$		
$u = -0.87956 + 1.15875I$		
$a = 0.821875 - 0.111111I$	$-4.20851 - 3.78318I$	0
$b = -0.137121 + 1.346990I$		
$u = -0.87956 - 1.15875I$		
$a = 0.821875 + 0.111111I$	$-4.20851 + 3.78318I$	0
$b = -0.137121 - 1.346990I$		

II.

$$I_2^u = \langle -2u^{14} - 7u^{12} + \dots + b - 2, u^{14} + u^{13} + \dots + a - 1, u^{16} + 4u^{14} + \dots - u + 1 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_2 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_6 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 1 \\ -u^2 \end{pmatrix} \\ a_9 &= \begin{pmatrix} -u^{14} - u^{13} + \dots - u + 1 \\ 2u^{14} + 7u^{12} + \dots - 3u + 2 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} u^{14} - u^{13} + \dots - 4u + 3 \\ 2u^{14} + 7u^{12} + \dots - 3u + 2 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -u \\ u^3 + u \end{pmatrix} \\ a_3 &= \begin{pmatrix} -u^3 \\ u^5 + u^3 + u \end{pmatrix} \\ a_5 &= \begin{pmatrix} 2u^{14} - u^{13} + \dots - 5u + 4 \\ u^{15} - u^{14} + \dots + u - 1 \end{pmatrix} \\ a_8 &= \begin{pmatrix} -u^{13} - u^{12} + \dots - u + 1 \\ 2u^{14} + 7u^{12} + \dots - 3u + 2 \end{pmatrix} \\ a_4 &= \begin{pmatrix} u^{15} + u^{14} + \dots + 4u - 2 \\ u^{15} - u^{14} + \dots + 2u - 1 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} u^{15} + 4u^{13} + \dots + 3u + 3 \\ u^{15} + 4u^{13} + \dots - u^2 + u \end{pmatrix} \\ a_{11} &= \begin{pmatrix} u^{15} + 4u^{13} + \dots + 3u + 3 \\ u^{15} + 4u^{13} + \dots - u^2 + u \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes

$$= u^{15} - u^{14} + 4u^{13} + 2u^{12} + 12u^{11} + 7u^{10} + 16u^9 + 17u^8 + 5u^7 + 17u^6 - u^5 + 20u^4 - 6u^3 + 18u^2 + 5$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{16} + 4u^{14} + \dots + u + 1$
c_2	$u^{16} + 8u^{15} + \dots + 9u + 1$
c_3	$u^{16} + 8u^{14} + \dots + u + 2$
c_4	$u^{16} - 2u^{15} + \dots + 8u^2 + 1$
c_5	$u^{16} + 8u^{14} + \dots + 2u + 1$
c_6	$u^{16} + 4u^{14} + \dots - u + 1$
c_7	$u^{16} + 2u^{15} + \dots + 8u^2 + 1$
c_8	$u^{16} + 3u^{14} + \dots - 4u + 1$
c_9	$u^{16} + 8u^{14} + \dots - 2u + 1$
c_{10}	$u^{16} + 8u^{14} + \dots - u + 2$
c_{11}	$u^{16} + 6u^{15} + \dots + 5u^3 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{16} + 8y^{15} + \dots + 9y + 1$
c_2	$y^{16} + 8y^{15} + \dots + y + 1$
c_3, c_{10}	$y^{16} + 16y^{15} + \dots + 39y + 4$
c_4, c_7	$y^{16} + 14y^{15} + \dots + 16y + 1$
c_5, c_9	$y^{16} + 16y^{15} + \dots + 14y + 1$
c_8	$y^{16} + 6y^{15} + \dots - 2y + 1$
c_{11}	$y^{16} - 4y^{15} + \dots + 30y^2 + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.343340 + 0.903837I$ $a = 1.56676 - 0.12174I$ $b = 0.11176 + 1.95777I$	$-7.14694 - 1.43565I$	$-10.40664 - 2.32978I$
$u = -0.343340 - 0.903837I$ $a = 1.56676 + 0.12174I$ $b = 0.11176 - 1.95777I$	$-7.14694 + 1.43565I$	$-10.40664 + 2.32978I$
$u = 0.798443 + 0.511463I$ $a = -0.0414475 + 0.0829013I$ $b = -0.318907 - 0.710933I$	$0.31683 + 4.82313I$	$2.45674 - 4.45720I$
$u = 0.798443 - 0.511463I$ $a = -0.0414475 - 0.0829013I$ $b = -0.318907 + 0.710933I$	$0.31683 - 4.82313I$	$2.45674 + 4.45720I$
$u = -0.738361 + 0.873406I$ $a = 0.552854 - 1.253860I$ $b = -0.051627 + 0.529275I$	$3.66939 - 2.80776I$	$10.64447 + 1.16069I$
$u = -0.738361 - 0.873406I$ $a = 0.552854 + 1.253860I$ $b = -0.051627 - 0.529275I$	$3.66939 + 2.80776I$	$10.64447 - 1.16069I$
$u = 0.487072 + 1.055760I$ $a = -1.83617 + 1.15350I$ $b = 0.700331 + 0.823488I$	$-2.30232 + 7.54648I$	$-2.14299 - 11.74045I$
$u = 0.487072 - 1.055760I$ $a = -1.83617 - 1.15350I$ $b = 0.700331 - 0.823488I$	$-2.30232 - 7.54648I$	$-2.14299 + 11.74045I$
$u = 0.327557 + 1.160530I$ $a = 0.563947 - 0.360432I$ $b = 0.311651 - 1.038780I$	$-2.86838 - 0.11828I$	$-0.88069 + 2.46501I$
$u = 0.327557 - 1.160530I$ $a = 0.563947 + 0.360432I$ $b = 0.311651 + 1.038780I$	$-2.86838 + 0.11828I$	$-0.88069 - 2.46501I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.394909 + 0.626627I$		
$a = 2.17510 - 1.35355I$	$-0.74107 - 3.74159I$	$1.01930 + 5.15973I$
$b = -0.606467 + 0.609910I$		
$u = 0.394909 - 0.626627I$		
$a = 2.17510 + 1.35355I$	$-0.74107 + 3.74159I$	$1.01930 - 5.15973I$
$b = -0.606467 - 0.609910I$		
$u = -0.158611 + 0.649341I$		
$a = 1.97289 - 0.31397I$	$0.080629 + 0.400598I$	$-1.246602 - 0.185548I$
$b = -0.371932 - 0.795508I$		
$u = -0.158611 - 0.649341I$		
$a = 1.97289 + 0.31397I$	$0.080629 - 0.400598I$	$-1.246602 + 0.185548I$
$b = -0.371932 + 0.795508I$		
$u = -0.767670 + 1.139480I$		
$a = -0.953934 + 0.004192I$	$-4.16761 - 3.51464I$	$-0.94360 - 6.61638I$
$b = 0.225194 - 1.371430I$		
$u = -0.767670 - 1.139480I$		
$a = -0.953934 - 0.004192I$	$-4.16761 + 3.51464I$	$-0.94360 + 6.61638I$
$b = 0.225194 + 1.371430I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{16} + 4u^{14} + \dots + u + 1)(u^{86} + u^{85} + \dots + 22u + 23)$
c_2	$(u^{16} + 8u^{15} + \dots + 9u + 1)(u^{86} + 37u^{85} + \dots + 8624u + 529)$
c_3	$(u^{16} + 8u^{14} + \dots + u + 2)(u^{86} + 5u^{85} + \dots + 228u + 34)$
c_4	$(u^{16} - 2u^{15} + \dots + 8u^2 + 1)(u^{86} - 3u^{85} + \dots - 3u + 1)$
c_5	$(u^{16} + 8u^{14} + \dots + 2u + 1)(u^{86} - u^{85} + \dots + 977u + 253)$
c_6	$(u^{16} + 4u^{14} + \dots - u + 1)(u^{86} + u^{85} + \dots + 22u + 23)$
c_7	$(u^{16} + 2u^{15} + \dots + 8u^2 + 1)(u^{86} - 3u^{85} + \dots - 3u + 1)$
c_8	$(u^{16} + 3u^{14} + \dots - 4u + 1)(u^{86} + u^{85} + \dots - 5u + 1)$
c_9	$(u^{16} + 8u^{14} + \dots - 2u + 1)(u^{86} - u^{85} + \dots + 977u + 253)$
c_{10}	$(u^{16} + 8u^{14} + \dots - u + 2)(u^{86} + 5u^{85} + \dots + 228u + 34)$
c_{11}	$(u^{16} + 6u^{15} + \dots + 5u^3 + 1)(u^{86} - 3u^{85} + \dots - 453u + 83)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y^{16} + 8y^{15} + \dots + 9y + 1)(y^{86} + 37y^{85} + \dots + 8624y + 529)$
c_2	$(y^{16} + 8y^{15} + \dots + y + 1)(y^{86} + 33y^{85} + \dots + 1800508y + 279841)$
c_3, c_{10}	$(y^{16} + 16y^{15} + \dots + 39y + 4)(y^{86} + 61y^{85} + \dots + 39068y + 1156)$
c_4, c_7	$(y^{16} + 14y^{15} + \dots + 16y + 1)(y^{86} + 51y^{85} + \dots + 79y + 1)$
c_5, c_9	$(y^{16} + 16y^{15} + \dots + 14y + 1)(y^{86} + 57y^{85} + \dots + 492125y + 64009)$
c_8	$(y^{16} + 6y^{15} + \dots - 2y + 1)(y^{86} + 7y^{85} + \dots + 89y + 1)$
c_{11}	$(y^{16} - 4y^{15} + \dots + 30y^2 + 1)(y^{86} - 15y^{85} + \dots - 330041y + 6889)$