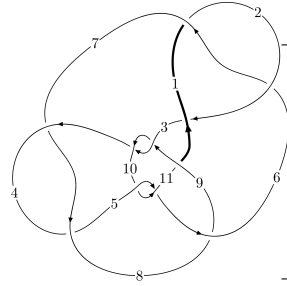
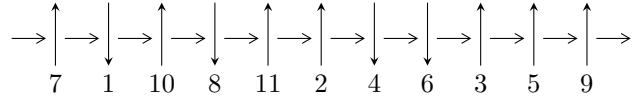


11a₂₁₇ (K11a₂₁₇)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 1.17366 \times 10^{130} u^{87} - 2.47035 \times 10^{130} u^{86} + \dots + 1.30550 \times 10^{131} b + 1.73562 \times 10^{131}, \\ - 1.20844 \times 10^{131} u^{87} - 1.95249 \times 10^{131} u^{86} + \dots + 3.91650 \times 10^{131} a + 2.77458 \times 10^{132}, \\ u^{88} + u^{87} + \dots - 15u - 9 \rangle$$

$$I_2^u = \langle -u^{18} + u^{17} + \dots + b - 1, 2u^{18} - 3u^{17} + \dots + a + 7, u^{19} + 6u^{17} + \dots + 2u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 107 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.

$$\mathbf{I. } I_1^u = \langle 1.17 \times 10^{130} u^{87} - 2.47 \times 10^{130} u^{86} + \dots + 1.31 \times 10^{131} b + 1.74 \times 10^{131}, -1.21 \times 10^{131} u^{87} - 1.95 \times 10^{131} u^{86} + \dots + 3.92 \times 10^{131} a + 2.77 \times 10^{132}, u^{88} + u^{87} + \dots - 15u - 9 \rangle$$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} 0.308550u^{87} + 0.498528u^{86} + \dots + 7.54550u - 7.08434 \\ -0.0899012u^{87} + 0.189226u^{86} + \dots - 2.55127u - 1.32947 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.386032u^{87} - 0.283155u^{86} + \dots + 12.0176u - 0.729770 \\ -0.256563u^{87} + 0.494342u^{86} + \dots - 0.570209u - 4.79156 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.317057u^{87} - 0.164745u^{86} + \dots - 15.3332u + 2.84818 \\ -0.127635u^{87} + 0.423062u^{86} + \dots + 4.82042u - 0.610035 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -0.244942u^{87} - 0.153358u^{86} + \dots + 12.6279u - 2.44254 \\ -0.265588u^{87} + 0.498825u^{86} + \dots - 1.17630u - 5.08573 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.728320u^{87} - 0.445892u^{86} + \dots + 23.4775u + 5.97101 \\ 0.299986u^{87} + 0.213630u^{86} + \dots - 6.17882u - 4.63479 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.566401u^{87} + 0.182126u^{86} + \dots + 13.2863u + 1.44734 \\ 0.921798u^{87} + 0.106995u^{86} + \dots - 9.79027u - 4.16570 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.566401u^{87} + 0.182126u^{86} + \dots + 13.2863u + 1.44734 \\ 0.921798u^{87} + 0.106995u^{86} + \dots - 9.79027u - 4.16570 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-1.34526u^{87} - 2.29597u^{86} + \dots + 57.3933u + 23.8601$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{88} + u^{87} + \dots - 15u - 9$
c_2	$u^{88} + 39u^{87} + \dots + 1917u + 81$
c_3, c_9	$u^{88} - 2u^{87} + \dots - 1806u - 5669$
c_4, c_7	$u^{88} + 2u^{87} + \dots - 4u - 1$
c_5, c_{10}	$u^{88} + u^{87} + \dots + 369u + 73$
c_8	$u^{88} - 2u^{87} + \dots + 116u - 29$
c_{11}	$u^{88} + 4u^{87} + \dots - 84596u - 23303$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{88} + 39y^{87} + \dots + 1917y + 81$
c_2	$y^{88} + 31y^{87} + \dots + 1377y + 6561$
c_3, c_9	$y^{88} - 68y^{87} + \dots - 295181122y + 32137561$
c_4, c_7	$y^{88} - 48y^{87} + \dots - 78y + 1$
c_5, c_{10}	$y^{88} - 57y^{87} + \dots - 140103y + 5329$
c_8	$y^{88} + 8y^{87} + \dots - 160080y + 841$
c_{11}	$y^{88} - 32y^{87} + \dots - 13342637414y + 543029809$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.672994 + 0.730216I$ $a = -1.10735 - 1.07414I$ $b = 0.991137 + 0.532051I$	$3.40131 + 0.63657I$	0
$u = -0.672994 - 0.730216I$ $a = -1.10735 + 1.07414I$ $b = 0.991137 - 0.532051I$	$3.40131 - 0.63657I$	0
$u = 0.549677 + 0.855702I$ $a = 1.280460 - 0.488061I$ $b = -0.644430 - 0.292848I$	$0.34598 + 2.20232I$	0
$u = 0.549677 - 0.855702I$ $a = 1.280460 + 0.488061I$ $b = -0.644430 + 0.292848I$	$0.34598 - 2.20232I$	0
$u = 0.828880 + 0.513872I$ $a = 1.43498 - 1.02467I$ $b = -1.62216 + 0.64715I$	$8.90367 - 4.46822I$	0
$u = 0.828880 - 0.513872I$ $a = 1.43498 + 1.02467I$ $b = -1.62216 - 0.64715I$	$8.90367 + 4.46822I$	0
$u = -0.288083 + 0.930672I$ $a = 2.01211 + 0.27156I$ $b = -0.75665 + 1.25554I$	$-0.95666 + 2.66976I$	0
$u = -0.288083 - 0.930672I$ $a = 2.01211 - 0.27156I$ $b = -0.75665 - 1.25554I$	$-0.95666 - 2.66976I$	0
$u = 0.525827 + 0.813502I$ $a = -1.17367 + 0.85281I$ $b = 0.498338 + 1.251820I$	$-0.090444 + 1.045920I$	0
$u = 0.525827 - 0.813502I$ $a = -1.17367 - 0.85281I$ $b = 0.498338 - 1.251820I$	$-0.090444 - 1.045920I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.532741 + 0.803423I$ $a = 1.41185 - 0.72781I$ $b = -0.993775 - 0.272407I$	$6.59048 - 1.60100I$	0
$u = -0.532741 - 0.803423I$ $a = 1.41185 + 0.72781I$ $b = -0.993775 + 0.272407I$	$6.59048 + 1.60100I$	0
$u = 0.539664 + 0.896196I$ $a = -0.042642 + 0.542138I$ $b = 1.06395 - 1.25945I$	$-0.37079 + 3.25945I$	0
$u = 0.539664 - 0.896196I$ $a = -0.042642 - 0.542138I$ $b = 1.06395 + 1.25945I$	$-0.37079 - 3.25945I$	0
$u = -0.743273 + 0.736993I$ $a = -0.943024 - 0.750996I$ $b = 1.073520 + 0.651963I$	$3.60538 + 0.57994I$	0
$u = -0.743273 - 0.736993I$ $a = -0.943024 + 0.750996I$ $b = 1.073520 - 0.651963I$	$3.60538 - 0.57994I$	0
$u = 0.418994 + 0.851230I$ $a = -1.92662 + 0.69990I$ $b = 1.49127 + 0.27379I$	$-1.16615 + 0.99172I$	0
$u = 0.418994 - 0.851230I$ $a = -1.92662 - 0.69990I$ $b = 1.49127 - 0.27379I$	$-1.16615 - 0.99172I$	0
$u = 0.157375 + 1.064390I$ $a = -0.001733 - 0.538652I$ $b = 0.730790 - 0.971384I$	$-3.08031 - 3.58796I$	0
$u = 0.157375 - 1.064390I$ $a = -0.001733 + 0.538652I$ $b = 0.730790 + 0.971384I$	$-3.08031 + 3.58796I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.424583 + 0.989136I$ $a = -0.85380 + 1.41030I$ $b = 1.229640 + 0.518489I$	$-1.60218 + 2.32473I$	0
$u = 0.424583 - 0.989136I$ $a = -0.85380 - 1.41030I$ $b = 1.229640 - 0.518489I$	$-1.60218 - 2.32473I$	0
$u = -0.954150 + 0.504375I$ $a = 1.27641 + 0.78432I$ $b = -1.41629 - 0.70913I$	$6.30173 + 11.20680I$	0
$u = -0.954150 - 0.504375I$ $a = 1.27641 - 0.78432I$ $b = -1.41629 + 0.70913I$	$6.30173 - 11.20680I$	0
$u = -0.570950 + 0.920505I$ $a = 0.35854 + 1.78146I$ $b = -0.648133 + 0.346156I$	$6.17225 - 2.81909I$	0
$u = -0.570950 - 0.920505I$ $a = 0.35854 - 1.78146I$ $b = -0.648133 - 0.346156I$	$6.17225 + 2.81909I$	0
$u = -0.825409 + 0.389965I$ $a = 0.744459 - 0.263975I$ $b = -1.099570 - 0.053538I$	$8.37441 - 1.00046I$	0
$u = -0.825409 - 0.389965I$ $a = 0.744459 + 0.263975I$ $b = -1.099570 + 0.053538I$	$8.37441 + 1.00046I$	0
$u = -0.864107 + 0.670402I$ $a = -0.795663 - 0.661817I$ $b = 1.117810 + 0.571773I$	$3.99640 + 0.52623I$	0
$u = -0.864107 - 0.670402I$ $a = -0.795663 + 0.661817I$ $b = 1.117810 - 0.571773I$	$3.99640 - 0.52623I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.987316 + 0.473726I$ $a = -0.821517 + 0.527676I$ $b = 1.091220 - 0.562324I$	$2.36912 - 4.77643I$	0
$u = 0.987316 - 0.473726I$ $a = -0.821517 - 0.527676I$ $b = 1.091220 + 0.562324I$	$2.36912 + 4.77643I$	0
$u = 0.748244 + 0.800032I$ $a = 1.42273 + 0.31582I$ $b = -0.926866 + 0.143704I$	$5.12945 - 1.10437I$	0
$u = 0.748244 - 0.800032I$ $a = 1.42273 - 0.31582I$ $b = -0.926866 - 0.143704I$	$5.12945 + 1.10437I$	0
$u = -0.521304 + 0.736352I$ $a = 1.41976 - 0.43169I$ $b = 0.29104 + 1.85754I$	$1.35988 + 3.41417I$	0
$u = -0.521304 - 0.736352I$ $a = 1.41976 + 0.43169I$ $b = 0.29104 - 1.85754I$	$1.35988 - 3.41417I$	0
$u = -0.558781 + 0.949859I$ $a = -1.159030 + 0.427247I$ $b = -0.19983 - 2.03307I$	$0.64622 - 7.81246I$	0
$u = -0.558781 - 0.949859I$ $a = -1.159030 - 0.427247I$ $b = -0.19983 + 2.03307I$	$0.64622 + 7.81246I$	0
$u = 0.020883 + 1.113770I$ $a = -0.786207 - 0.139160I$ $b = -0.892118 + 0.756600I$	$3.07957 - 2.82800I$	0
$u = 0.020883 - 1.113770I$ $a = -0.786207 + 0.139160I$ $b = -0.892118 - 0.756600I$	$3.07957 + 2.82800I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.068391 + 0.882123I$		
$a = 0.289943 + 0.967539I$	$-1.62956 + 1.49672I$	$-2.18266 - 4.73494I$
$b = 0.361809 + 0.714360I$		
$u = 0.068391 - 0.882123I$		
$a = 0.289943 - 0.967539I$	$-1.62956 - 1.49672I$	$-2.18266 + 4.73494I$
$b = 0.361809 - 0.714360I$		
$u = -0.652582 + 0.904482I$		
$a = -1.87179 - 0.49715I$	$2.89016 - 5.77549I$	0
$b = 1.140730 - 0.831300I$		
$u = -0.652582 - 0.904482I$		
$a = -1.87179 + 0.49715I$	$2.89016 + 5.77549I$	0
$b = 1.140730 + 0.831300I$		
$u = 0.999619 + 0.565212I$		
$a = 0.889970 + 0.066196I$	$6.55539 + 5.69360I$	0
$b = -1.045120 + 0.006616I$		
$u = 0.999619 - 0.565212I$		
$a = 0.889970 - 0.066196I$	$6.55539 - 5.69360I$	0
$b = -1.045120 - 0.006616I$		
$u = 0.711121 + 0.909996I$		
$a = 1.12820 - 1.52674I$	$4.78905 + 6.64535I$	0
$b = -0.681383 - 0.228321I$		
$u = 0.711121 - 0.909996I$		
$a = 1.12820 + 1.52674I$	$4.78905 - 6.64535I$	0
$b = -0.681383 + 0.228321I$		
$u = 0.617819 + 0.541637I$		
$a = -1.94871 + 1.12700I$	$1.17276 - 5.12018I$	$5.98234 + 4.87453I$
$b = 0.745025 - 0.523421I$		
$u = 0.617819 - 0.541637I$		
$a = -1.94871 - 1.12700I$	$1.17276 + 5.12018I$	$5.98234 - 4.87453I$
$b = 0.745025 + 0.523421I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.699347 + 0.964380I$ $a = -1.65613 - 0.72307I$ $b = 1.011390 - 0.874674I$	$2.91455 - 6.08125I$	0
$u = -0.699347 - 0.964380I$ $a = -1.65613 + 0.72307I$ $b = 1.011390 + 0.874674I$	$2.91455 + 6.08125I$	0
$u = 0.603972 + 1.028600I$ $a = -2.00103 + 0.72468I$ $b = 1.041580 + 0.628310I$	$-0.23970 + 9.99743I$	0
$u = 0.603972 - 1.028600I$ $a = -2.00103 - 0.72468I$ $b = 1.041580 - 0.628310I$	$-0.23970 - 9.99743I$	0
$u = 0.452174 + 1.105960I$ $a = 0.538003 + 0.865414I$ $b = 0.776965 - 0.935888I$	$-1.27582 + 4.49844I$	0
$u = 0.452174 - 1.105960I$ $a = 0.538003 - 0.865414I$ $b = 0.776965 + 0.935888I$	$-1.27582 - 4.49844I$	0
$u = -0.550712 + 1.074730I$ $a = 1.29204 + 0.62612I$ $b = -0.877930 + 0.444608I$	$-4.17850 - 5.69977I$	0
$u = -0.550712 - 1.074730I$ $a = 1.29204 - 0.62612I$ $b = -0.877930 - 0.444608I$	$-4.17850 + 5.69977I$	0
$u = -0.418001 + 1.139750I$ $a = 0.30516 + 1.43036I$ $b = -1.74406 - 0.38088I$	$-2.54284 - 4.00372I$	0
$u = -0.418001 - 1.139750I$ $a = 0.30516 - 1.43036I$ $b = -1.74406 + 0.38088I$	$-2.54284 + 4.00372I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.235896 + 1.191590I$ $a = 0.047892 - 0.136256I$ $b = -0.292908 - 0.768153I$	$-6.26061 - 1.83587I$	0
$u = -0.235896 - 1.191590I$ $a = 0.047892 + 0.136256I$ $b = -0.292908 + 0.768153I$	$-6.26061 + 1.83587I$	0
$u = -0.697556 + 1.017660I$ $a = -1.40280 - 0.71129I$ $b = 1.08357 - 0.92479I$	$2.90972 - 6.30768I$	0
$u = -0.697556 - 1.017660I$ $a = -1.40280 + 0.71129I$ $b = 1.08357 + 0.92479I$	$2.90972 + 6.30768I$	0
$u = 0.008092 + 0.764905I$ $a = 1.14418 + 1.17371I$ $b = 0.210534 + 0.328300I$	$-1.42460 + 1.54545I$	$-1.14589 - 4.93438I$
$u = 0.008092 - 0.764905I$ $a = 1.14418 - 1.17371I$ $b = 0.210534 - 0.328300I$	$-1.42460 - 1.54545I$	$-1.14589 + 4.93438I$
$u = -0.737322$ $a = 2.19967$ $b = -1.48738$	0.805893	8.65370
$u = 0.655494 + 1.088190I$ $a = 1.60130 - 1.13359I$ $b = -1.73234 - 0.92925I$	$7.17217 + 10.01930I$	0
$u = 0.655494 - 1.088190I$ $a = 1.60130 + 1.13359I$ $b = -1.73234 + 0.92925I$	$7.17217 - 10.01930I$	0
$u = -0.628107 + 0.256489I$ $a = 1.34336 + 0.46833I$ $b = -0.423109 - 0.347668I$	$-2.03705 + 1.14331I$	$-0.66173 - 1.29864I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.628107 - 0.256489I$ $a = 1.34336 - 0.46833I$ $b = -0.423109 + 0.347668I$	$-2.03705 - 1.14331I$	$-0.66173 + 1.29864I$
$u = 0.024501 + 1.333540I$ $a = -0.231763 - 0.033800I$ $b = -0.900322 - 0.607173I$	$-0.68113 + 8.56435I$	0
$u = 0.024501 - 1.333540I$ $a = -0.231763 + 0.033800I$ $b = -0.900322 + 0.607173I$	$-0.68113 - 8.56435I$	0
$u = -0.699704 + 1.136130I$ $a = 1.52044 + 0.94432I$ $b = -1.47465 + 0.92567I$	$4.3565 - 17.2462I$	0
$u = -0.699704 - 1.136130I$ $a = 1.52044 - 0.94432I$ $b = -1.47465 - 0.92567I$	$4.3565 + 17.2462I$	0
$u = -0.619798 + 1.190130I$ $a = 0.321227 + 0.830580I$ $b = -0.831881 + 0.388008I$	$5.93694 - 4.42882I$	0
$u = -0.619798 - 1.190130I$ $a = 0.321227 - 0.830580I$ $b = -0.831881 - 0.388008I$	$5.93694 + 4.42882I$	0
$u = 0.702911 + 1.150830I$ $a = -1.147340 + 0.666605I$ $b = 1.10356 + 0.88760I$	$0.29144 + 10.89830I$	0
$u = 0.702911 - 1.150830I$ $a = -1.147340 - 0.666605I$ $b = 1.10356 - 0.88760I$	$0.29144 - 10.89830I$	0
$u = 0.603081 + 0.191254I$ $a = -1.061460 - 0.858322I$ $b = 0.699506 + 0.668876I$	$1.312400 - 0.427135I$	$7.68860 + 0.03322I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.603081 - 0.191254I$ $a = -1.061460 + 0.858322I$ $b = 0.699506 - 0.668876I$	$1.312400 + 0.427135I$	$7.68860 - 0.03322I$
$u = 0.782309 + 1.124420I$ $a = 0.659480 - 0.750725I$ $b = -0.859534 - 0.291051I$	$4.85892 + 0.75021I$	0
$u = 0.782309 - 1.124420I$ $a = 0.659480 + 0.750725I$ $b = -0.859534 + 0.291051I$	$4.85892 - 0.75021I$	0
$u = 0.09795 + 1.48857I$ $a = 0.198655 + 0.067322I$ $b = 0.552268 - 0.131033I$	$-4.69267 - 1.22369I$	0
$u = 0.09795 - 1.48857I$ $a = 0.198655 - 0.067322I$ $b = 0.552268 + 0.131033I$	$-4.69267 + 1.22369I$	0
$u = 0.396189$ $a = -0.357439$ $b = 0.603577$	0.888455	11.7580
$u = -0.124814 + 0.274497I$ $a = -3.46331 + 3.55911I$ $b = 0.199334 - 0.805485I$	$0.79049 - 4.65679I$	$5.10183 + 7.14957I$
$u = -0.124814 - 0.274497I$ $a = -3.46331 - 3.55911I$ $b = 0.199334 + 0.805485I$	$0.79049 + 4.65679I$	$5.10183 - 7.14957I$

II.

$$I_2^u = \langle -u^{18} + u^{17} + \dots + b - 1, 2u^{18} - 3u^{17} + \dots + a + 7, u^{19} + 6u^{17} + \dots + 2u - 1 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_1 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_2 &= \begin{pmatrix} 1 \\ -u^2 \end{pmatrix} \\ a_3 &= \begin{pmatrix} u^2 + 1 \\ -u^2 \end{pmatrix} \\ a_9 &= \begin{pmatrix} -2u^{18} + 3u^{17} + \dots + 16u - 7 \\ u^{18} - u^{17} + \dots + 4u^2 + 1 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -2u^{18} + 2u^{17} + \dots + 13u - 5 \\ u^{18} - u^{17} + \dots - 2u + 2 \end{pmatrix} \\ a_4 &= \begin{pmatrix} 3u^{18} + 16u^{16} + \dots - 5u + 2 \\ u^{18} + u^{17} + \dots - u^2 - 1 \end{pmatrix} \\ a_6 &= \begin{pmatrix} -u \\ u^3 + u \end{pmatrix} \\ a_8 &= \begin{pmatrix} -2u^{18} + 3u^{17} + \dots + 13u - 6 \\ u^{18} + 5u^{16} + \dots - 2u^2 + 3u \end{pmatrix} \\ a_{11} &= \begin{pmatrix} 2u^{18} + u^{17} + \dots + 5u - 5 \\ -u^{18} - u^{17} + \dots + 5u^2 + 1 \end{pmatrix} \\ a_5 &= \begin{pmatrix} 4u^{18} + u^{17} + \dots - 4u^2 - 4 \\ -u^{18} - 2u^{17} + \dots - 2u + 2 \end{pmatrix} \\ a_5 &= \begin{pmatrix} 4u^{18} + u^{17} + \dots - 4u^2 - 4 \\ -u^{18} - 2u^{17} + \dots - 2u + 2 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes $= -6u^{18} + 2u^{17} - 30u^{16} + 8u^{15} - 72u^{14} + 23u^{13} - 117u^{12} + 56u^{11} - 133u^{10} + 81u^9 - 113u^8 + 80u^7 - 76u^6 + 46u^5 - 37u^4 + 16u^3 - 4u^2 + 3$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{19} + 6u^{17} + \dots + 2u - 1$
c_2	$u^{19} + 12u^{18} + \dots - 8u - 1$
c_3	$u^{19} + u^{18} + \dots - u - 1$
c_4	$u^{19} + u^{18} + \dots - u - 1$
c_5	$u^{19} - 6u^{17} + \dots + 2u - 1$
c_6	$u^{19} + 6u^{17} + \dots + 2u + 1$
c_7	$u^{19} - u^{18} + \dots - u + 1$
c_8	$u^{19} + 3u^{18} + \dots - 5u + 1$
c_9	$u^{19} - u^{18} + \dots - u + 1$
c_{10}	$u^{19} - 6u^{17} + \dots + 2u + 1$
c_{11}	$u^{19} - 7u^{18} + \dots + 7u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{19} + 12y^{18} + \dots - 8y - 1$
c_2	$y^{19} - 12y^{17} + \dots + 12y - 1$
c_3, c_9	$y^{19} - 19y^{18} + \dots + 15y - 1$
c_4, c_7	$y^{19} - 15y^{18} + \dots + 19y - 1$
c_5, c_{10}	$y^{19} - 12y^{18} + \dots + 20y - 1$
c_8	$y^{19} - 3y^{18} + \dots + 21y - 1$
c_{11}	$y^{19} - 3y^{18} + \dots + 19y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.300339 + 1.028100I$ $a = -0.710824 + 0.912612I$ $b = -0.164956 - 1.062830I$	$-0.80374 - 5.96566I$	$2.56814 + 7.23829I$
$u = -0.300339 - 1.028100I$ $a = -0.710824 - 0.912612I$ $b = -0.164956 + 1.062830I$	$-0.80374 + 5.96566I$	$2.56814 - 7.23829I$
$u = -0.769769 + 0.810412I$ $a = -0.639951 - 0.518424I$ $b = 0.811253 + 0.714824I$	$3.17953 + 1.36019I$	$3.92371 - 4.81231I$
$u = -0.769769 - 0.810412I$ $a = -0.639951 + 0.518424I$ $b = 0.811253 - 0.714824I$	$3.17953 - 1.36019I$	$3.92371 + 4.81231I$
$u = 0.562434 + 0.668186I$ $a = 1.08875 + 1.00323I$ $b = -0.926740 + 0.221997I$	$6.76547 + 0.96312I$	$8.25509 + 3.80362I$
$u = 0.562434 - 0.668186I$ $a = 1.08875 - 1.00323I$ $b = -0.926740 - 0.221997I$	$6.76547 - 0.96312I$	$8.25509 - 3.80362I$
$u = -0.706602 + 0.910457I$ $a = -1.67700 - 0.51030I$ $b = 0.753084 - 1.044950I$	$2.86959 - 6.94689I$	$4.90485 + 11.31459I$
$u = -0.706602 - 0.910457I$ $a = -1.67700 + 0.51030I$ $b = 0.753084 + 1.044950I$	$2.86959 + 6.94689I$	$4.90485 - 11.31459I$
$u = -0.273008 + 0.799953I$ $a = 2.28416 + 0.16634I$ $b = 0.142356 + 1.370340I$	$0.06532 + 3.52454I$	$1.23723 - 4.17495I$
$u = -0.273008 - 0.799953I$ $a = 2.28416 - 0.16634I$ $b = 0.142356 - 1.370340I$	$0.06532 - 3.52454I$	$1.23723 + 4.17495I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.448828 + 1.089750I$ $a = -0.38006 + 1.45167I$ $b = 1.72088 - 0.46919I$	$-3.15207 + 3.62872I$	$-4.99993 - 0.96458I$
$u = 0.448828 - 1.089750I$ $a = -0.38006 - 1.45167I$ $b = 1.72088 + 0.46919I$	$-3.15207 - 3.62872I$	$-4.99993 + 0.96458I$
$u = 0.612086 + 1.067960I$ $a = 0.254962 - 1.118410I$ $b = -0.614195 - 0.372988I$	$5.42685 + 3.75788I$	$2.42054 - 2.81140I$
$u = 0.612086 - 1.067960I$ $a = 0.254962 + 1.118410I$ $b = -0.614195 + 0.372988I$	$5.42685 - 3.75788I$	$2.42054 + 2.81140I$
$u = 0.181011 + 0.621059I$ $a = -1.96932 + 1.56059I$ $b = 0.890170 + 0.697260I$	$-0.988482 - 0.416067I$	$1.322447 + 0.053453I$
$u = 0.181011 - 0.621059I$ $a = -1.96932 - 1.56059I$ $b = 0.890170 - 0.697260I$	$-0.988482 + 0.416067I$	$1.322447 - 0.053453I$
$u = -0.029408 + 1.410930I$ $a = 0.338962 + 0.132093I$ $b = 0.319721 - 0.077815I$	$-4.90569 + 0.94743I$	$-3.91857 + 6.41242I$
$u = -0.029408 - 1.410930I$ $a = 0.338962 - 0.132093I$ $b = 0.319721 + 0.077815I$	$-4.90569 - 0.94743I$	$-3.91857 - 6.41242I$
$u = 0.549531$ $a = -2.17935$ $b = 1.13686$	-0.464251	1.57300

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{19} + 6u^{17} + \dots + 2u - 1)(u^{88} + u^{87} + \dots - 15u - 9)$
c_2	$(u^{19} + 12u^{18} + \dots - 8u - 1)(u^{88} + 39u^{87} + \dots + 1917u + 81)$
c_3	$(u^{19} + u^{18} + \dots - u - 1)(u^{88} - 2u^{87} + \dots - 1806u - 5669)$
c_4	$(u^{19} + u^{18} + \dots - u - 1)(u^{88} + 2u^{87} + \dots - 4u - 1)$
c_5	$(u^{19} - 6u^{17} + \dots + 2u - 1)(u^{88} + u^{87} + \dots + 369u + 73)$
c_6	$(u^{19} + 6u^{17} + \dots + 2u + 1)(u^{88} + u^{87} + \dots - 15u - 9)$
c_7	$(u^{19} - u^{18} + \dots - u + 1)(u^{88} + 2u^{87} + \dots - 4u - 1)$
c_8	$(u^{19} + 3u^{18} + \dots - 5u + 1)(u^{88} - 2u^{87} + \dots + 116u - 29)$
c_9	$(u^{19} - u^{18} + \dots - u + 1)(u^{88} - 2u^{87} + \dots - 1806u - 5669)$
c_{10}	$(u^{19} - 6u^{17} + \dots + 2u + 1)(u^{88} + u^{87} + \dots + 369u + 73)$
c_{11}	$(u^{19} - 7u^{18} + \dots + 7u - 1)(u^{88} + 4u^{87} + \dots - 84596u - 23303)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y^{19} + 12y^{18} + \dots - 8y - 1)(y^{88} + 39y^{87} + \dots + 1917y + 81)$
c_2	$(y^{19} - 12y^{17} + \dots + 12y - 1)(y^{88} + 31y^{87} + \dots + 1377y + 6561)$
c_3, c_9	$(y^{19} - 19y^{18} + \dots + 15y - 1)$ $\cdot (y^{88} - 68y^{87} + \dots - 295181122y + 32137561)$
c_4, c_7	$(y^{19} - 15y^{18} + \dots + 19y - 1)(y^{88} - 48y^{87} + \dots - 78y + 1)$
c_5, c_{10}	$(y^{19} - 12y^{18} + \dots + 20y - 1)(y^{88} - 57y^{87} + \dots - 140103y + 5329)$
c_8	$(y^{19} - 3y^{18} + \dots + 21y - 1)(y^{88} + 8y^{87} + \dots - 160080y + 841)$
c_{11}	$(y^{19} - 3y^{18} + \dots + 19y - 1)$ $\cdot (y^{88} - 32y^{87} + \dots - 13342637414y + 543029809)$