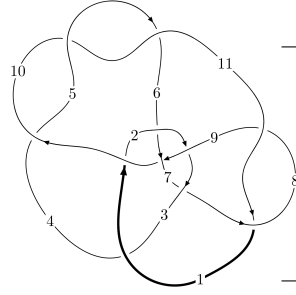
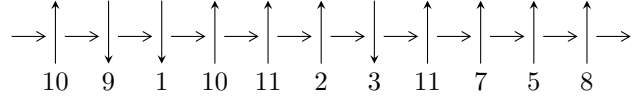


11n₁₅₉ (K11n₁₅₉)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 4.18672 \times 10^{96} u^{50} - 1.99216 \times 10^{96} u^{49} + \dots + 1.57066 \times 10^{97} b - 7.53117 \times 10^{96}, \\ 6.93809 \times 10^{95} u^{50} - 3.65626 \times 10^{96} u^{49} + \dots + 1.57066 \times 10^{97} a - 2.77787 \times 10^{98}, u^{51} + 19u^{49} + \dots + 13u + \\ I_2^u = \langle -u^{15} - u^{14} - 3u^{13} - u^{12} + u^{11} + 6u^{10} + 14u^9 + 16u^8 + 22u^7 + 15u^6 + 14u^5 + 6u^4 + 7u^3 + u^2 + b, \\ - 201u^{15} - 115u^{14} + \dots + 85a - 229, u^{16} + u^{15} + \dots - u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 67 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.

$$\text{I. } I_1^u = \langle 4.19 \times 10^{96} u^{50} - 1.99 \times 10^{96} u^{49} + \dots + 1.57 \times 10^{97} b - 7.53 \times 10^{96}, 6.94 \times 10^{95} u^{50} - 3.66 \times 10^{96} u^{49} + \dots + 1.57 \times 10^{97} a - 2.78 \times 10^{98}, u^{51} + 19u^{49} + \dots + 13u + 1 \rangle$$

(i) Arc colorings

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

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

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

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0441731u^{50} + 0.232785u^{49} + \dots + 101.687u + 17.6860 \\ -0.266558u^{50} + 0.126836u^{49} + \dots - 2.22590u + 0.479491 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.00694886u^{50} + 0.245771u^{49} + \dots + 100.087u + 17.5801 \\ -0.215436u^{50} + 0.139822u^{49} + \dots - 3.82562u + 0.373542 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.315201u^{50} + 0.322634u^{49} + \dots + 96.4791u + 17.9327 \\ -0.255159u^{50} + 0.144501u^{49} + \dots - 1.32888u + 0.569340 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.492967u^{50} - 0.795819u^{49} + \dots - 148.859u - 17.2613 \\ -0.135931u^{50} - 0.160168u^{49} + \dots - 20.5135u - 2.00969 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2.73260u^{50} + 0.0713461u^{49} + \dots - 195.275u - 13.1506 \\ -0.141930u^{50} + 0.0517872u^{49} + \dots - 5.44851u + 0.0702398 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2.17298u^{50} - 0.00432810u^{49} + \dots + 193.781u + 17.3396 \\ 0.0132709u^{50} + 0.0275351u^{49} + \dots + 3.99076u + 0.0293163 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 2.17298u^{50} - 0.00432810u^{49} + \dots + 193.781u + 17.3396 \\ -0.0193853u^{50} + 0.0282101u^{49} + \dots + 1.87404u + 0.0336444 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 2.17298u^{50} - 0.00432810u^{49} + \dots + 193.781u + 17.3396 \\ -0.0193853u^{50} + 0.0282101u^{49} + \dots + 1.87404u + 0.0336444 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-0.101424u^{50} + 0.0191393u^{49} + \dots - 6.99335u + 1.74681$

(iv) u-Polynomials at the component

| Crossings | u-Polynomials at each crossing |
|--------------------|--|
| c_1 | $u^{51} + 4u^{50} + \dots + 10304u + 1139$ |
| c_2 | $u^{51} + u^{50} + \dots + 197u + 3$ |
| c_3 | $u^{51} + 4u^{50} + \dots - 668u + 28$ |
| c_4, c_5, c_{10} | $u^{51} + u^{50} + \dots - 15u - 1$ |
| c_6 | $u^{51} + 14u^{49} + \dots - 3611u + 487$ |
| c_7 | $u^{51} - u^{50} + \dots + 2734u - 367$ |
| c_8, c_{11} | $u^{51} + 19u^{49} + \dots + 13u + 1$ |
| c_9 | $u^{51} + 3u^{50} + \dots + 17u + 1$ |

(v) Riley Polynomials at the component

| Crossings | Riley Polynomials at each crossing |
|--------------------|---|
| c_1 | $y^{51} + 48y^{50} + \dots + 51493582y - 1297321$ |
| c_2 | $y^{51} - 11y^{50} + \dots + 48673y - 9$ |
| c_3 | $y^{51} - 54y^{50} + \dots + 361104y - 784$ |
| c_4, c_5, c_{10} | $y^{51} - 13y^{50} + \dots + 69y - 1$ |
| c_6 | $y^{51} + 28y^{50} + \dots - 14382675y - 237169$ |
| c_7 | $y^{51} - 13y^{50} + \dots + 4303142y - 134689$ |
| c_8, c_{11} | $y^{51} + 38y^{50} + \dots - 63y - 1$ |
| c_9 | $y^{51} + 3y^{50} + \dots + 231y - 1$ |

(vi) Complex Volumes and Cusp Shapes

| Solutions to I_1^u | $\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$ | Cusp shape |
|---|---------------------------------------|-----------------------|
| $u = -0.493427 + 0.809787I$ $a = -0.77037 + 1.28680I$ $b = -1.158320 - 0.268559I$ | $-3.18456 - 2.09749I$ | $1.52387 + 2.56668I$ |
| $u = -0.493427 - 0.809787I$ $a = -0.77037 - 1.28680I$ $b = -1.158320 + 0.268559I$ | $-3.18456 + 2.09749I$ | $1.52387 - 2.56668I$ |
| $u = 0.440430 + 1.030910I$ $a = 1.20909 + 0.73700I$ $b = 0.648815 + 0.030734I$ | $-1.47252 + 3.57882I$ | $5.00000 - 4.02671I$ |
| $u = 0.440430 - 1.030910I$ $a = 1.20909 - 0.73700I$ $b = 0.648815 - 0.030734I$ | $-1.47252 - 3.57882I$ | $5.00000 + 4.02671I$ |
| $u = -0.479467 + 1.026910I$ $a = -2.05858 + 0.43573I$ $b = -0.759278 - 0.845778I$ | $-1.69267 - 6.49416I$ | $2.47045 + 12.27311I$ |
| $u = -0.479467 - 1.026910I$ $a = -2.05858 - 0.43573I$ $b = -0.759278 + 0.845778I$ | $-1.69267 + 6.49416I$ | $2.47045 - 12.27311I$ |
| $u = 0.743842 + 0.386843I$ $a = 0.297848 + 0.032171I$ $b = 0.446197 + 0.593035I$ | $1.328990 + 0.424799I$ | $9.68382 - 3.33114I$ |
| $u = 0.743842 - 0.386843I$ $a = 0.297848 - 0.032171I$ $b = 0.446197 - 0.593035I$ | $1.328990 - 0.424799I$ | $9.68382 + 3.33114I$ |
| $u = 0.095349 + 1.173960I$ $a = -1.19574 - 0.93729I$ $b = -0.696664 - 0.158856I$ | $-0.53609 - 2.28831I$ | $3.93640 + 2.00082I$ |
| $u = 0.095349 - 1.173960I$ $a = -1.19574 + 0.93729I$ $b = -0.696664 + 0.158856I$ | $-0.53609 + 2.28831I$ | $3.93640 - 2.00082I$ |

| Solutions to I_1^u | $\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$ | Cusp shape |
|-----------------------------|---------------------------------------|-----------------------|
| $u = 0.599757 + 1.068150I$ | | |
| $a = 1.59872 + 0.52153I$ | $-0.82395 + 4.71884I$ | $8.89552 - 4.87376I$ |
| $b = 1.166950 - 0.515248I$ | | |
| $u = 0.599757 - 1.068150I$ | | |
| $a = 1.59872 - 0.52153I$ | $-0.82395 - 4.71884I$ | $8.89552 + 4.87376I$ |
| $b = 1.166950 + 0.515248I$ | | |
| $u = -0.037987 + 0.741711I$ | | |
| $a = 0.487424 - 0.496015I$ | $0.97092 + 2.65596I$ | $-1.16196 - 5.22442I$ |
| $b = -0.263663 + 1.061380I$ | | |
| $u = -0.037987 - 0.741711I$ | | |
| $a = 0.487424 + 0.496015I$ | $0.97092 - 2.65596I$ | $-1.16196 + 5.22442I$ |
| $b = -0.263663 - 1.061380I$ | | |
| $u = -0.105363 + 1.293330I$ | | |
| $a = 0.842122 - 1.028860I$ | $-6.78593 - 5.05905I$ | $0. + 9.05421I$ |
| $b = 1.15000 - 2.18955I$ | | |
| $u = -0.105363 - 1.293330I$ | | |
| $a = 0.842122 + 1.028860I$ | $-6.78593 + 5.05905I$ | $0. - 9.05421I$ |
| $b = 1.15000 + 2.18955I$ | | |
| $u = -0.605350 + 0.328798I$ | | |
| $a = 0.030694 - 0.438381I$ | $0.18643 + 2.24007I$ | $4.31467 - 4.82703I$ |
| $b = -0.582666 + 0.913456I$ | | |
| $u = -0.605350 - 0.328798I$ | | |
| $a = 0.030694 + 0.438381I$ | $0.18643 - 2.24007I$ | $4.31467 + 4.82703I$ |
| $b = -0.582666 - 0.913456I$ | | |
| $u = -0.103993 + 1.307300I$ | | |
| $a = 1.289790 + 0.507751I$ | $0.75736 - 4.17149I$ | 0 |
| $b = 1.30493 + 0.86402I$ | | |
| $u = -0.103993 - 1.307300I$ | | |
| $a = 1.289790 - 0.507751I$ | $0.75736 + 4.17149I$ | 0 |
| $b = 1.30493 - 0.86402I$ | | |

| Solutions to I_1^u | $\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$ | Cusp shape |
|---|---------------------------------------|------------|
| $u = 0.066040 + 1.316750I$ $a = -1.134200 + 0.598306I$ $b = -0.869888 - 0.655773I$ | $-7.59339 + 1.64029I$ | 0 |
| $u = 0.066040 - 1.316750I$ $a = -1.134200 - 0.598306I$ $b = -0.869888 + 0.655773I$ | $-7.59339 - 1.64029I$ | 0 |
| $u = -0.316521 + 1.283090I$ $a = -0.973576 + 0.636597I$ $b = -1.275330 + 0.375261I$ | $-4.26515 - 0.63551I$ | 0 |
| $u = -0.316521 - 1.283090I$ $a = -0.973576 - 0.636597I$ $b = -1.275330 - 0.375261I$ | $-4.26515 + 0.63551I$ | 0 |
| $u = -0.169671 + 1.316380I$ $a = -1.56522 - 0.54880I$ $b = -1.61853 - 1.92364I$ | $-8.06935 - 3.19037I$ | 0 |
| $u = -0.169671 - 1.316380I$ $a = -1.56522 + 0.54880I$ $b = -1.61853 + 1.92364I$ | $-8.06935 + 3.19037I$ | 0 |
| $u = 1.32897$ $a = 0.301273$ $b = 0.554539$ | 2.55208 | -16.4860 |
| $u = -1.386170 + 0.040542I$ $a = 0.0061725 + 0.0594784I$ $b = 1.060320 + 0.487450I$ | $-4.33426 - 8.28696I$ | 0 |
| $u = -1.386170 - 0.040542I$ $a = 0.0061725 - 0.0594784I$ $b = 1.060320 - 0.487450I$ | $-4.33426 + 8.28696I$ | 0 |
| $u = 0.119578 + 1.392790I$ $a = 1.112220 + 0.798814I$ $b = 0.741572 - 0.551742I$ | $-8.21456 + 4.85073I$ | 0 |

| Solutions to I_1^u | $\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$ | Cusp shape |
|---|---------------------------------------|------------|
| $u = 0.119578 - 1.392790I$ $a = 1.112220 - 0.798814I$ $b = 0.741572 + 0.551742I$ | $-8.21456 - 4.85073I$ | 0 |
| $u = 1.40409 + 0.33821I$ $a = 0.0516236 - 0.0304155I$ $b = -0.946779 + 0.253375I$ | $-4.12435 + 1.05287I$ | 0 |
| $u = 1.40409 - 0.33821I$ $a = 0.0516236 + 0.0304155I$ $b = -0.946779 - 0.253375I$ | $-4.12435 - 1.05287I$ | 0 |
| $u = 0.531665$ $a = 0.598400$ $b = 0.509912$ | 1.10699 | 8.71620 |
| $u = 0.32774 + 1.48242I$ $a = 1.280410 - 0.075549I$ $b = 1.059310 - 0.382106I$ | $-3.16584 + 5.71287I$ | 0 |
| $u = 0.32774 - 1.48242I$ $a = 1.280410 + 0.075549I$ $b = 1.059310 + 0.382106I$ | $-3.16584 - 5.71287I$ | 0 |
| $u = -1.54491$ $a = -0.149552$ $b = 0.343321$ | 7.66230 | 0 |
| $u = -0.60455 + 1.48396I$ $a = 1.358730 - 0.175270I$ $b = 1.44476 + 0.99917I$ | $-9.1940 - 15.1810I$ | 0 |
| $u = -0.60455 - 1.48396I$ $a = 1.358730 + 0.175270I$ $b = 1.44476 - 0.99917I$ | $-9.1940 + 15.1810I$ | 0 |
| $u = 0.45015 + 1.55699I$ $a = -1.287260 - 0.004117I$ $b = -1.50034 + 0.96394I$ | $-10.36510 + 7.36778I$ | 0 |

| Solutions to I_1^u | $\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$ | Cusp shape |
|--|---------------------------------------|----------------------|
| $u = 0.45015 - 1.55699I$ $a = -1.287260 + 0.004117I$ $b = -1.50034 - 0.96394I$ | $-10.36510 - 7.36778I$ | 0 |
| $u = -0.013247 + 0.321612I$ $a = 1.17101 - 1.69632I$ $b = 0.490132 - 1.210900I$ | $4.50411 + 3.58227I$ | $16.0667 - 6.6127I$ |
| $u = -0.013247 - 0.321612I$ $a = 1.17101 + 1.69632I$ $b = 0.490132 + 1.210900I$ | $4.50411 - 3.58227I$ | $16.0667 + 6.6127I$ |
| $u = 0.70380 + 1.55046I$ $a = -0.751838 - 0.224127I$ $b = -1.028030 + 0.642864I$ | $-8.17422 + 6.90097I$ | 0 |
| $u = 0.70380 - 1.55046I$ $a = -0.751838 + 0.224127I$ $b = -1.028030 - 0.642864I$ | $-8.17422 - 6.90097I$ | 0 |
| $u = -0.56390 + 1.65705I$ $a = 0.727943 - 0.273768I$ $b = 1.075260 + 0.420157I$ | $-9.56909 + 0.79682I$ | 0 |
| $u = -0.56390 - 1.65705I$ $a = 0.727943 + 0.273768I$ $b = 1.075260 - 0.420157I$ | $-9.56909 - 0.79682I$ | 0 |
| $u = -0.169815 + 0.103297I$ $a = 5.86596 + 4.64169I$ $b = -0.852548 - 0.435407I$ | $-3.57803 - 1.46219I$ | $0.29485 + 4.98451I$ |
| $u = -0.169815 - 0.103297I$ $a = 5.86596 - 4.64169I$ $b = -0.852548 + 0.435407I$ | $-3.57803 + 1.46219I$ | $0.29485 - 4.98451I$ |
| $u = -0.059185 + 0.143199I$ $a = 9.53198 + 7.67652I$ $b = 0.759897 + 0.569891I$ | $-2.97946 + 4.11273I$ | $4.99561 + 1.01748I$ |

| Solutions to I_1^u | $\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$ | Cusp shape |
|-----------------------------|---------------------------------------|----------------------|
| $u = -0.059185 - 0.143199I$ | | |
| $a = 9.53198 - 7.67652I$ | $-2.97946 - 4.11273I$ | $4.99561 - 1.01748I$ |
| $b = 0.759897 - 0.569891I$ | | |

$$\text{II. } I_2^u = \langle -u^{15} - u^{14} + \dots + u^2 + b, -201u^{15} - 115u^{14} + \dots + 85a - 229, u^{16} + u^{15} + \dots - u - 1 \rangle$$

(i) Arc colorings

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

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

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

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.36471u^{15} + 1.35294u^{14} + \dots - 6.82353u + 2.69412 \\ u^{15} + u^{14} + \dots - 7u^3 - u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3.49412u^{15} + 3.05882u^{14} + \dots - 6.47059u + 1.68235 \\ 2.12941u^{15} + 2.70588u^{14} + \dots + 0.352941u - 1.01176 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 3.49412u^{15} + 3.05882u^{14} + \dots - 5.47059u + 1.68235 \\ 2.34118u^{15} + 2.58824u^{14} + \dots - 1.70588u - 0.576471 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 2.27059u^{15} + 2.29412u^{14} + \dots - 7.35294u - 1.38824 \\ 3u^{14} + 3u^{13} + \dots - 4u - 4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.95294u^{15} - 0.529412u^{14} + \dots + 7.23529u + 6.45882 \\ 3.96471u^{15} - 0.647059u^{14} + \dots + 3.17647u + 10.0941 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.48235u^{15} + 3.17647u^{14} + \dots - 8.41176u - 2.95294 \\ -\frac{16}{5}u^{15} + 3u^{14} + \dots - 5u - \frac{64}{5} \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.48235u^{15} + 3.17647u^{14} + \dots - 8.41176u - 2.95294 \\ -2.83529u^{15} + 2.35294u^{14} + \dots - 1.82353u - 11.1059 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.48235u^{15} + 3.17647u^{14} + \dots - 8.41176u - 2.95294 \\ -2.83529u^{15} + 2.35294u^{14} + \dots - 1.82353u - 11.1059 \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = -\frac{1404}{85}u^{15} - \frac{541}{17}u^{14} + \dots + \frac{1353}{17}u + \frac{3829}{85}$$

(iv) u-Polynomials at the component

| Crossings | u-Polynomials at each crossing |
|------------|--------------------------------------|
| c_1 | $u^{16} - u^{15} + \dots + 6u^2 - 1$ |
| c_2 | $u^{16} + u^{14} + \dots - 3u - 1$ |
| c_3 | $u^{16} + 9u^{15} + \dots + 48u + 4$ |
| c_4, c_5 | $u^{16} - 6u^{14} + \dots - u + 1$ |
| c_6 | $u^{16} - 3u^{15} + \dots - 3u - 1$ |
| c_7 | $u^{16} + 2u^{14} + \dots - 2u - 1$ |
| c_8 | $u^{16} + u^{15} + \dots - u - 1$ |
| c_9 | $u^{16} - 4u^{15} + \dots + 3u + 1$ |
| c_{10} | $u^{16} - 6u^{14} + \dots + u + 1$ |
| c_{11} | $u^{16} - u^{15} + \dots + u - 1$ |

(v) Riley Polynomials at the component

| Crossings | Riley Polynomials at each crossing |
|--------------------|--|
| c_1 | $y^{16} + y^{15} + \dots - 12y + 1$ |
| c_2 | $y^{16} + 2y^{15} + \dots - 15y + 1$ |
| c_3 | $y^{16} - 13y^{15} + \dots - 1600y + 16$ |
| c_4, c_5, c_{10} | $y^{16} - 12y^{15} + \dots - 19y + 1$ |
| c_6 | $y^{16} + 5y^{15} + \dots - 11y + 1$ |
| c_7 | $y^{16} + 4y^{15} + \dots - 12y + 1$ |
| c_8, c_{11} | $y^{16} + 7y^{15} + \dots + 13y + 1$ |
| c_9 | $y^{16} - 4y^{15} + \dots - 9y + 1$ |

(vi) Complex Volumes and Cusp Shapes

| Solutions to I_2^u | $\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$ | Cusp shape |
|-----------------------------|---------------------------------------|-----------------------|
| $u = -0.665069 + 0.678799I$ | | |
| $a = 0.420824 + 1.344970I$ | $-3.33249 + 0.34499I$ | $2.01757 + 0.37341I$ |
| $b = -0.711594 + 0.036986I$ | | |
| $u = -0.665069 - 0.678799I$ | | |
| $a = 0.420824 - 1.344970I$ | $-3.33249 - 0.34499I$ | $2.01757 - 0.37341I$ |
| $b = -0.711594 - 0.036986I$ | | |
| $u = 0.343696 + 1.208130I$ | | |
| $a = 1.53898 - 0.20131I$ | $1.66733 + 5.08939I$ | $7.99749 - 6.39804I$ |
| $b = 1.098860 - 0.865659I$ | | |
| $u = 0.343696 - 1.208130I$ | | |
| $a = 1.53898 + 0.20131I$ | $1.66733 - 5.08939I$ | $7.99749 + 6.39804I$ |
| $b = 1.098860 + 0.865659I$ | | |
| $u = 0.083391 + 0.730027I$ | | |
| $a = 0.297481 + 0.552196I$ | $3.97957 - 3.37369I$ | $2.06218 + 1.25376I$ |
| $b = 0.53614 + 1.40238I$ | | |
| $u = 0.083391 - 0.730027I$ | | |
| $a = 0.297481 - 0.552196I$ | $3.97957 + 3.37369I$ | $2.06218 - 1.25376I$ |
| $b = 0.53614 - 1.40238I$ | | |
| $u = 0.306045 + 0.663071I$ | | |
| $a = 1.27171 + 2.87741I$ | $-3.32910 + 4.68558I$ | $-1.72806 - 9.06253I$ |
| $b = 0.792095 + 0.522312I$ | | |
| $u = 0.306045 - 0.663071I$ | | |
| $a = 1.27171 - 2.87741I$ | $-3.32910 - 4.68558I$ | $-1.72806 + 9.06253I$ |
| $b = 0.792095 - 0.522312I$ | | |
| $u = -1.27402$ | | |
| $a = -0.404742$ | 2.72211 | 31.3500 |
| $b = -0.485688$ | | |
| $u = -0.501271 + 1.175050I$ | | |
| $a = -1.72984 + 0.28764I$ | $-1.52177 - 5.31010I$ | $3.27149 + 8.11960I$ |
| $b = -0.939350 - 0.528756I$ | | |

| Solutions to I_2^u | $\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$ | Cusp shape |
|---|---------------------------------------|----------------------|
| $u = -0.501271 - 1.175050I$ $a = -1.72984 - 0.28764I$ $b = -0.939350 + 0.528756I$ | $-1.52177 + 5.31010I$ | $3.27149 - 8.11960I$ |
| $u = -0.096302 + 0.611710I$ $a = 0.48873 - 1.35280I$ $b = -0.319333 + 0.903954I$ | $1.44991 + 2.46756I$ | $14.2433 - 0.1322I$ |
| $u = -0.096302 - 0.611710I$ $a = 0.48873 + 1.35280I$ $b = -0.319333 - 0.903954I$ | $1.44991 - 2.46756I$ | $14.2433 + 0.1322I$ |
| $u = -0.135082 + 1.374290I$ $a = -0.554322 - 0.164051I$ $b = -0.43850 - 1.39183I$ | $-7.35161 - 3.81019I$ | $1.49699 + 3.24326I$ |
| $u = -0.135082 - 1.374290I$ $a = -0.554322 + 0.164051I$ $b = -0.43850 + 1.39183I$ | $-7.35161 + 3.81019I$ | $1.49699 - 3.24326I$ |
| $u = 1.60320$ $a = -0.0623831$ $b = 0.449044$ | 7.57445 | -38.0720 |

III. u-Polynomials

| Crossings | u-Polynomials at each crossing |
|------------|--|
| c_1 | $(u^{16} - u^{15} + \dots + 6u^2 - 1)(u^{51} + 4u^{50} + \dots + 10304u + 1139)$ |
| c_2 | $(u^{16} + u^{14} + \dots - 3u - 1)(u^{51} + u^{50} + \dots + 197u + 3)$ |
| c_3 | $(u^{16} + 9u^{15} + \dots + 48u + 4)(u^{51} + 4u^{50} + \dots - 668u + 28)$ |
| c_4, c_5 | $(u^{16} - 6u^{14} + \dots - u + 1)(u^{51} + u^{50} + \dots - 15u - 1)$ |
| c_6 | $(u^{16} - 3u^{15} + \dots - 3u - 1)(u^{51} + 14u^{49} + \dots - 3611u + 487)$ |
| c_7 | $(u^{16} + 2u^{14} + \dots - 2u - 1)(u^{51} - u^{50} + \dots + 2734u - 367)$ |
| c_8 | $(u^{16} + u^{15} + \dots - u - 1)(u^{51} + 19u^{49} + \dots + 13u + 1)$ |
| c_9 | $(u^{16} - 4u^{15} + \dots + 3u + 1)(u^{51} + 3u^{50} + \dots + 17u + 1)$ |
| c_{10} | $(u^{16} - 6u^{14} + \dots + u + 1)(u^{51} + u^{50} + \dots - 15u - 1)$ |
| c_{11} | $(u^{16} - u^{15} + \dots + u - 1)(u^{51} + 19u^{49} + \dots + 13u + 1)$ |

IV. Riley Polynomials

| Crossings | Riley Polynomials at each crossing |
|--------------------|---|
| c_1 | $(y^{16} + y^{15} + \dots - 12y + 1)$ $\cdot (y^{51} + 48y^{50} + \dots + 51493582y - 1297321)$ |
| c_2 | $(y^{16} + 2y^{15} + \dots - 15y + 1)(y^{51} - 11y^{50} + \dots + 48673y - 9)$ |
| c_3 | $(y^{16} - 13y^{15} + \dots - 1600y + 16)(y^{51} - 54y^{50} + \dots + 361104y - 784)$ |
| c_4, c_5, c_{10} | $(y^{16} - 12y^{15} + \dots - 19y + 1)(y^{51} - 13y^{50} + \dots + 69y - 1)$ |
| c_6 | $(y^{16} + 5y^{15} + \dots - 11y + 1)$ $\cdot (y^{51} + 28y^{50} + \dots - 14382675y - 237169)$ |
| c_7 | $(y^{16} + 4y^{15} + \dots - 12y + 1)(y^{51} - 13y^{50} + \dots + 4303142y - 134689)$ |
| c_8, c_{11} | $(y^{16} + 7y^{15} + \dots + 13y + 1)(y^{51} + 38y^{50} + \dots - 63y - 1)$ |
| c_9 | $(y^{16} - 4y^{15} + \dots - 9y + 1)(y^{51} + 3y^{50} + \dots + 231y - 1)$ |