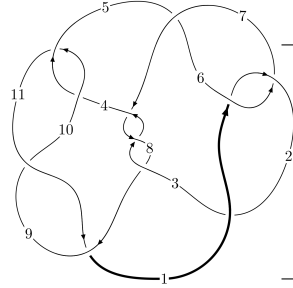
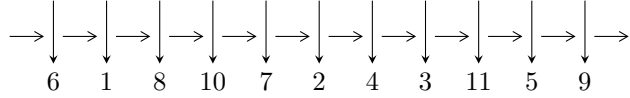


11a₂₀₀ (K11a₂₀₀)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle u^2 + b, -u^{13} + u^{11} + u^{10} - 4u^9 + 3u^7 + 4u^6 - 4u^5 - 2u^4 + 3u^3 + 3u^2 + 2a + u - 3, \\ u^{14} - 2u^{12} + 6u^{10} - u^9 - 8u^8 + u^7 + 10u^6 - 2u^5 - 9u^4 + u^3 + 4u^2 + u - 1 \rangle$$

$$I_2^u = \langle 11044796022984u^{35} + 15849610659410u^{34} + \dots + 5213417579383b - 19244867589607, \\ - 20597520331605u^{35} - 27230487651401u^{34} + \dots + 5213417579383a + 39323690068543, \\ u^{36} + u^{35} + \dots - 2u + 1 \rangle$$

$$I_3^u = \langle u^2 + b, -u^2 + a - u + 1, u^4 - u^2 + 1 \rangle$$

$$I_4^u = \langle -u^2 + b + 1, a - u - 1, u^4 - u^2 + 1 \rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 58 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.

$$\text{I. } I_1^u = \langle u^2 + b, -u^{13} + u^{11} + \dots + 2a - 3, u^{14} - 2u^{12} + \dots + u - 1 \rangle$$

(i) Arc colorings

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

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

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

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

$$a_7 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} \frac{1}{2}u^{13} - \frac{1}{2}u^{11} + \dots - \frac{1}{2}u + \frac{3}{2} \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^6 + u^4 - 2u^2 + 1 \\ \frac{1}{2}u^{12} + \frac{1}{2}u^{11} + \dots - u + \frac{1}{2} \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} \frac{1}{2}u^{13} - \frac{1}{2}u^{12} + \dots + \frac{1}{2}u + 1 \\ -u^4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} \frac{1}{2}u^{13} - \frac{1}{2}u^{12} + \dots + \frac{1}{2}u + 1 \\ -u^6 - u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -\frac{1}{2}u^{13} + \frac{1}{2}u^{11} + \dots + \frac{1}{2}u + \frac{1}{2} \\ -u^7 + u^5 - 2u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -\frac{1}{2}u^{13} + \frac{1}{2}u^{11} + \dots + \frac{1}{2}u + \frac{1}{2} \\ -u^7 + u^5 - 2u^3 + u \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes

$$= u^{13} + u^{11} + u^{10} + 2u^9 - 4u^8 + 7u^7 + 4u^6 - 4u^5 - 10u^4 + 11u^3 + 5u^2 - 9u - 13$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$u^{14} - 2u^{12} + 6u^{10} + u^9 - 8u^8 - u^7 + 10u^6 + 2u^5 - 9u^4 - u^3 + 4u^2 - u - 1$
c_2, c_5, c_9 c_{11}	$u^{14} + 4u^{13} + \dots + 9u + 1$
c_3, c_7, c_8	$u^{14} - 5u^{13} + \dots + 8u - 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$y^{14} - 4y^{13} + \dots - 9y + 1$
c_2, c_5, c_9 c_{11}	$y^{14} + 16y^{13} + \dots - 17y + 1$
c_3, c_7, c_8	$y^{14} + 13y^{13} + \dots - 136y + 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.950366$ $a = -0.787840$ $b = -0.903195$	-4.35310	-20.7960
$u = 0.934140 + 0.165940I$ $a = -0.833929 - 0.848131I$ $b = -0.845081 - 0.310022I$	$-0.76895 - 3.05854I$	$-15.2345 + 4.4220I$
$u = 0.934140 - 0.165940I$ $a = -0.833929 + 0.848131I$ $b = -0.845081 + 0.310022I$	$-0.76895 + 3.05854I$	$-15.2345 - 4.4220I$
$u = -0.861511 + 0.818074I$ $a = -0.43826 - 2.03212I$ $b = -0.072957 + 1.409560I$	$6.31411 + 3.07801I$	$-6.07433 - 2.66063I$
$u = -0.861511 - 0.818074I$ $a = -0.43826 + 2.03212I$ $b = -0.072957 - 1.409560I$	$6.31411 - 3.07801I$	$-6.07433 + 2.66063I$
$u = 0.771614 + 0.940827I$ $a = -0.178207 + 1.387930I$ $b = 0.28977 - 1.45191I$	$14.2923 + 0.8767I$	$-3.65848 + 1.44035I$
$u = 0.771614 - 0.940827I$ $a = -0.178207 - 1.387930I$ $b = 0.28977 + 1.45191I$	$14.2923 - 0.8767I$	$-3.65848 - 1.44035I$
$u = 0.965155 + 0.787055I$ $a = -1.13614 + 2.04636I$ $b = -0.31207 - 1.51926I$	$5.64578 - 9.04247I$	$-7.75570 + 7.54934I$
$u = 0.965155 - 0.787055I$ $a = -1.13614 - 2.04636I$ $b = -0.31207 + 1.51926I$	$5.64578 + 9.04247I$	$-7.75570 - 7.54934I$
$u = -0.499772 + 0.464713I$ $a = 1.46491 - 0.18431I$ $b = -0.033814 + 0.464501I$	$2.42034 + 2.01219I$	$-5.03531 - 3.18410I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.499772 - 0.464713I$ $a = 1.46491 + 0.18431I$ $b = -0.033814 - 0.464501I$	$2.42034 - 2.01219I$	$-5.03531 + 3.18410I$
$u = -1.055500 + 0.798468I$ $a = -1.43912 - 1.62917I$ $b = -0.47652 + 1.68556I$	$12.4304 + 13.7591I$	$-6.11753 - 7.81595I$
$u = -1.055500 - 0.798468I$ $a = -1.43912 + 1.62917I$ $b = -0.47652 - 1.68556I$	$12.4304 - 13.7591I$	$-6.11753 + 7.81595I$
$u = 0.442106$ $a = 0.909335$ $b = -0.195458$	-0.647887	-15.4520

II.

$$I_2^u = \langle 1.10 \times 10^{13} u^{35} + 1.58 \times 10^{13} u^{34} + \dots + 5.21 \times 10^{12} b - 1.92 \times 10^{13}, -2.06 \times 10^{13} u^{35} - 2.72 \times 10^{13} u^{34} + \dots + 5.21 \times 10^{12} a + 3.93 \times 10^{13}, u^{36} + u^{35} + \dots - 2u + 1 \rangle$$

(i) Arc colorings

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

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

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

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

$$a_7 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 3.95087u^{35} + 5.22315u^{34} + \dots + 0.910129u - 7.54279 \\ -2.11853u^{35} - 3.04016u^{34} + \dots - 2.06187u + 3.69141 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 2.27927u^{35} + 2.86643u^{34} + \dots - 0.0438616u - 4.50374 \\ -2.47612u^{35} - 3.71564u^{34} + \dots - 2.03874u + 4.69444 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2.30128u^{35} - 3.92404u^{34} + \dots + 1.16386u + 3.30524 \\ -2.34203u^{35} - 3.45720u^{34} + \dots - 1.18510u + 5.47128 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -1.79396u^{35} - 3.71712u^{34} + \dots + 0.968286u + 3.13328 \\ -1.97576u^{35} - 2.57126u^{34} + \dots - 0.845464u + 4.81490 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 4.69444u^{35} + 7.17055u^{34} + \dots - 0.960342u - 7.35013 \\ 0.587159u^{35} + 0.875255u^{34} + \dots + 0.0548089u - 2.27927 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 4.69444u^{35} + 7.17055u^{34} + \dots - 0.960342u - 7.35013 \\ 0.587159u^{35} + 0.875255u^{34} + \dots + 0.0548089u - 2.27927 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes

$$= \frac{23301194605224}{5213417579383} u^{35} + \frac{35979605140824}{5213417579383} u^{34} + \dots + \frac{21746030582642}{5213417579383} u - \frac{88939694002132}{5213417579383}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$u^{36} - u^{35} + \dots + 2u + 1$
c_2, c_5, c_9 c_{11}	$u^{36} + 11u^{35} + \dots + 2u + 1$
c_3, c_7, c_8	$(u^{18} + 2u^{17} + \dots + 4u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$y^{36} - 11y^{35} + \dots - 2y + 1$
c_2, c_5, c_9 c_{11}	$y^{36} + 29y^{35} + \dots - 86y + 1$
c_3, c_7, c_8	$(y^{18} + 20y^{17} + \dots - 6y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.812169 + 0.607179I$	$1.69238 + 2.34050I$	$-6.11304 - 4.51747I$
$a = 0.671292 + 0.171361I$		
$b = 0.144113 - 0.052398I$		
$u = -0.812169 - 0.607179I$	$1.69238 - 2.34050I$	$-6.11304 + 4.51747I$
$a = 0.671292 - 0.171361I$		
$b = 0.144113 + 0.052398I$		
$u = -0.946964 + 0.251366I$	$-0.82103 + 4.83091I$	$-14.6707 - 7.5484I$
$a = -1.156670 - 0.366820I$		
$b = -0.466192 + 1.168730I$		
$u = -0.946964 - 0.251366I$	$-0.82103 - 4.83091I$	$-14.6707 + 7.5484I$
$a = -1.156670 + 0.366820I$		
$b = -0.466192 - 1.168730I$		
$u = 0.730851 + 0.539733I$	$-0.218413 + 0.059150I$	$-13.30450 - 1.20964I$
$a = 0.924619 - 0.162335I$		
$b = -0.543811 + 0.535375I$		
$u = 0.730851 - 0.539733I$	$-0.218413 - 0.059150I$	$-13.30450 + 1.20964I$
$a = 0.924619 + 0.162335I$		
$b = -0.543811 - 0.535375I$		
$u = -0.942145 + 0.554752I$	$1.36390 + 2.08554I$	$-9.56168 - 2.20642I$
$a = 0.794075 - 0.773298I$		
$b = -0.251878 + 0.053017I$		
$u = -0.942145 - 0.554752I$	$1.36390 - 2.08554I$	$-9.56168 + 2.20642I$
$a = 0.794075 + 0.773298I$		
$b = -0.251878 - 0.053017I$		
$u = -0.040087 + 0.897653I$	$9.19677 + 3.10798I$	$-3.50971 - 2.64457I$
$a = 0.20998 - 1.45458I$		
$b = -0.11524 + 1.50569I$		
$u = -0.040087 - 0.897653I$	$9.19677 - 3.10798I$	$-3.50971 + 2.64457I$
$a = 0.20998 + 1.45458I$		
$b = -0.11524 - 1.50569I$		

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.928565 + 0.629318I$ $a = -0.112955 + 1.243650I$ $b = -0.833557 - 0.476070I$	$-0.82103 - 4.83091I$	$-14.6707 + 7.5484I$
$u = 0.928565 - 0.629318I$ $a = -0.112955 - 1.243650I$ $b = -0.833557 + 0.476070I$	$-0.82103 + 4.83091I$	$-14.6707 - 7.5484I$
$u = 0.808373 + 0.331144I$ $a = 1.193410 - 0.008565I$ $b = -0.242832 + 0.788929I$	$-0.218413 - 0.059150I$	$-13.30450 + 1.20964I$
$u = 0.808373 - 0.331144I$ $a = 1.193410 + 0.008565I$ $b = -0.242832 - 0.788929I$	$-0.218413 + 0.059150I$	$-13.30450 - 1.20964I$
$u = -0.823976 + 0.805806I$ $a = 0.742818 - 0.074215I$ $b = -1.25591 - 0.81116I$	$5.35610 - 1.19422I$	$-7.28872 + 0.77166I$
$u = -0.823976 - 0.805806I$ $a = 0.742818 + 0.074215I$ $b = -1.25591 + 0.81116I$	$5.35610 + 1.19422I$	$-7.28872 - 0.77166I$
$u = 0.812050 + 0.836206I$ $a = 0.83079 - 1.99521I$ $b = -0.21419 + 1.47787I$	$6.12069 + 2.97589I$	$-6.53141 - 2.59059I$
$u = 0.812050 - 0.836206I$ $a = 0.83079 + 1.99521I$ $b = -0.21419 - 1.47787I$	$6.12069 - 2.97589I$	$-6.53141 + 2.59059I$
$u = -0.729822 + 0.942917I$ $a = 0.48397 + 1.64428I$ $b = -0.39833 - 1.70046I$	$13.4573 - 7.3548I$	$-4.66879 + 3.22304I$
$u = -0.729822 - 0.942917I$ $a = 0.48397 - 1.64428I$ $b = -0.39833 + 1.70046I$	$13.4573 + 7.3548I$	$-4.66879 - 3.22304I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.185250 + 0.286307I$ $a = -0.870802 - 0.153065I$ $b = -0.29933 - 1.46346I$	$4.97567 - 7.12729I$	$-8.35142 + 6.02297I$
$u = 1.185250 - 0.286307I$ $a = -0.870802 + 0.153065I$ $b = -0.29933 + 1.46346I$	$4.97567 + 7.12729I$	$-8.35142 - 6.02297I$
$u = -0.923985 + 0.799724I$ $a = 1.36056 + 1.78580I$ $b = 0.039816 - 1.358080I$	$6.12069 + 2.97589I$	$-6.53141 - 2.59059I$
$u = -0.923985 - 0.799724I$ $a = 1.36056 - 1.78580I$ $b = 0.039816 + 1.358080I$	$6.12069 - 2.97589I$	$-6.53141 + 2.59059I$
$u = -0.946857 + 0.772796I$ $a = -0.283619 - 1.357530I$ $b = -1.32284 + 0.67869I$	$4.97567 + 7.12729I$	$-8.35142 - 6.02297I$
$u = -0.946857 - 0.772796I$ $a = -0.283619 + 1.357530I$ $b = -1.32284 - 0.67869I$	$4.97567 - 7.12729I$	$-8.35142 + 6.02297I$
$u = -1.172820 + 0.345817I$ $a = 1.063490 - 0.229177I$ $b = -0.029612 - 1.327930I$	$5.35610 + 1.19422I$	$-7.28872 - 0.77166I$
$u = -1.172820 - 0.345817I$ $a = 1.063490 + 0.229177I$ $b = -0.029612 + 1.327930I$	$5.35610 - 1.19422I$	$-7.28872 + 0.77166I$
$u = 0.901479 + 0.835123I$ $a = 0.216921 - 0.412346I$ $b = 0.804174 - 0.071969I$	$9.19677 - 3.10798I$	$-3.50971 + 2.64457I$
$u = 0.901479 - 0.835123I$ $a = 0.216921 + 0.412346I$ $b = 0.804174 + 0.071969I$	$9.19677 + 3.10798I$	$-3.50971 - 2.64457I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.035570 + 0.821025I$		
$a = 1.38875 - 1.34795I$	$13.4573 - 7.3548I$	$-4.66879 + 3.22304I$
$b = 0.35645 + 1.37632I$		
$u = 1.035570 - 0.821025I$		
$a = 1.38875 + 1.34795I$	$13.4573 + 7.3548I$	$-4.66879 - 3.22304I$
$b = 0.35645 - 1.37632I$		
$u = 0.504616 + 0.052532I$		
$a = -2.34048 + 1.62886I$	$1.36390 - 2.08554I$	$-9.56168 + 2.20642I$
$b = -0.579887 - 1.045310I$		
$u = 0.504616 - 0.052532I$		
$a = -2.34048 - 1.62886I$	$1.36390 + 2.08554I$	$-9.56168 - 2.20642I$
$b = -0.579887 + 1.045310I$		
$u = -0.067934 + 0.385652I$		
$a = 1.38386 + 2.45598I$	$1.69238 - 2.34050I$	$-6.11304 + 4.51747I$
$b = -0.290953 - 0.986264I$		
$u = -0.067934 - 0.385652I$		
$a = 1.38386 - 2.45598I$	$1.69238 + 2.34050I$	$-6.11304 - 4.51747I$
$b = -0.290953 + 0.986264I$		

$$\text{III. } I_3^u = \langle u^2 + b, -u^2 + a - u + 1, u^4 - u^2 + 1 \rangle$$

(i) Arc colorings

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

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

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

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

$$a_7 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^3 \\ 0 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} u^2 - 1 \\ -u^3 - u^2 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^3 \\ -u^2 + 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^3 + u^2 - 1 \\ -u^2 + 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^2 + u + 1 \\ u^3 - u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^2 + u + 1 \\ u^3 - u \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = $8u^2 - 12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$u^4 - u^2 + 1$
c_2, c_{11}	$(u^2 + u + 1)^2$
c_3, c_7, c_8	$(u^2 + 1)^2$
c_5, c_9	$(u^2 - u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$(y^2 - y + 1)^2$
c_2, c_5, c_9 c_{11}	$(y^2 + y + 1)^2$
c_3, c_7, c_8	$(y + 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.866025 + 0.500000I$		
$a = 0.36603 + 1.36603I$	$1.64493 - 4.05977I$	$-8.00000 + 6.92820I$
$b = -0.500000 - 0.866025I$		
$u = 0.866025 - 0.500000I$		
$a = 0.36603 - 1.36603I$	$1.64493 + 4.05977I$	$-8.00000 - 6.92820I$
$b = -0.500000 + 0.866025I$		
$u = -0.866025 + 0.500000I$		
$a = -1.36603 - 0.36603I$	$1.64493 + 4.05977I$	$-8.00000 - 6.92820I$
$b = -0.500000 + 0.866025I$		
$u = -0.866025 - 0.500000I$		
$a = -1.36603 + 0.36603I$	$1.64493 - 4.05977I$	$-8.00000 + 6.92820I$
$b = -0.500000 - 0.866025I$		

$$\text{IV. } I_4^u = \langle -u^2 + b + 1, a - u - 1, u^4 - u^2 + 1 \rangle$$

(i) Arc colorings

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

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

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

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

$$a_7 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^3 \\ 0 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} 1 \\ -u^3 + u^2 + u - 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^3 - u^2 + u + 2 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^3 - 2u^2 + u + 2 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^3 - u^2 + 1 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^3 - u^2 + 1 \\ u \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = -8

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$u^4 - u^2 + 1$
c_2, c_{11}	$(u^2 + u + 1)^2$
c_3, c_7, c_8	$(u^2 + 1)^2$
c_5, c_9	$(u^2 - u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$(y^2 - y + 1)^2$
c_2, c_5, c_9 c_{11}	$(y^2 + y + 1)^2$
c_3, c_7, c_8	$(y + 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.866025 + 0.500000I$ $a = 1.86603 + 0.50000I$ $b = -0.500000 + 0.866025I$	1.64493	-8.00000
$u = 0.866025 - 0.500000I$ $a = 1.86603 - 0.50000I$ $b = -0.500000 - 0.866025I$	1.64493	-8.00000
$u = -0.866025 + 0.500000I$ $a = 0.133975 + 0.500000I$ $b = -0.500000 - 0.866025I$	1.64493	-8.00000
$u = -0.866025 - 0.500000I$ $a = 0.133975 - 0.500000I$ $b = -0.500000 + 0.866025I$	1.64493	-8.00000

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$(u^4 - u^2 + 1)^2$ $\cdot (u^{14} - 2u^{12} + 6u^{10} + u^9 - 8u^8 - u^7 + 10u^6 + 2u^5 - 9u^4 - u^3 + 4u^2 - u - 1)$ $\cdot (u^{36} - u^{35} + \dots + 2u + 1)$
c_2, c_{11}	$((u^2 + u + 1)^4)(u^{14} + 4u^{13} + \dots + 9u + 1)(u^{36} + 11u^{35} + \dots + 2u + 1)$
c_3, c_7, c_8	$((u^2 + 1)^4)(u^{14} - 5u^{13} + \dots + 8u - 4)(u^{18} + 2u^{17} + \dots + 4u + 1)^2$
c_5, c_9	$((u^2 - u + 1)^4)(u^{14} + 4u^{13} + \dots + 9u + 1)(u^{36} + 11u^{35} + \dots + 2u + 1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6 c_{10}	$((y^2 - y + 1)^4)(y^{14} - 4y^{13} + \dots - 9y + 1)(y^{36} - 11y^{35} + \dots - 2y + 1)$
c_2, c_5, c_9 c_{11}	$((y^2 + y + 1)^4)(y^{14} + 16y^{13} + \dots - 17y + 1)$ $\cdot (y^{36} + 29y^{35} + \dots - 86y + 1)$
c_3, c_7, c_8	$((y + 1)^8)(y^{14} + 13y^{13} + \dots - 136y + 16)$ $\cdot (y^{18} + 20y^{17} + \dots - 6y + 1)^2$