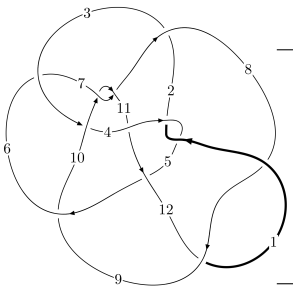
$12n_{0827}$ $(K12n_{0827})$



A knot diagram[1]

Linearized knot diagam

$$\rightarrow \underset{4}{\downarrow} \rightarrow \underset{8}{\downarrow} \rightarrow \underset{10}{\uparrow} \rightarrow \underset{1}{\downarrow} \rightarrow \underset{12}{\uparrow} \rightarrow \underset{3}{\downarrow} \rightarrow \underset{11}{\downarrow} \rightarrow \underset{1}{\downarrow} \rightarrow \underset{6}{\uparrow} \rightarrow \underset{7}{\downarrow} \rightarrow \underset{4}{\uparrow} \rightarrow \underset{9}{\downarrow} \rightarrow$$

Solving Sequence

$$9,12 \xrightarrow[c_{12}]{} 1,4 \xrightarrow[c_1]{} 2 \xrightarrow[c_4]{} 5 \xrightarrow[c_5]{} 6 \xrightarrow[c_9]{} 10 \xrightarrow[c_3]{} 3 \xrightarrow[c_8]{} 8 \xrightarrow[c_{11}]{} 11 \xrightarrow[c_7]{} 7 \twoheadrightarrow c_2, c_6, c_{10}$$

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

$$\begin{aligned}
I_1^u = \langle & -1.01535 \times 10^{193} u^{78} + 2.27202 \times 10^{193} u^{77} + \cdots + 1.23813 \times 10^{195} b + 3.31260 \times 10^{195}, \\
& 9.77104 \times 10^{193} u^{78} + 4.39315 \times 10^{194} u^{77} + \cdots + 1.23813 \times 10^{195} a - 3.09558 \times 10^{194}, \\
& u^{79} + 3u^{78} + \cdots + 200u + 29 \rangle \\
I_2^u = \langle & 7428u^{19} + 4394u^{18} + \cdots + 1981b + 11610,\ 11189u^{19} + 7253u^{18} + \cdots + 1981a + 3015, \\
& u^{20} + 6u^{18} + \cdots + 9u^2 + 1 \rangle
\end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 99 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. $\boldsymbol{I_1^u = \langle -1.02\times 10^{193}u^{78} + 2.27\times 10^{193}u^{77} + \cdots + 1.24\times 10^{195}b + 3.31\times 10^{195},\ 9.77\times 10^{193}u^{78} + 4.39\times 10^{194}u^{77} + \cdots + 1.24\times 10^{195}a - 3.10\times 10^{194},\ u^{79} + 3u^{78} + \cdots + 200u + 29\rangle}$

(i) Arc colorings

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.0789177u^{78} - 0.354821u^{77} + \cdots - 1.04936u + 0.250021 \\ 0.00820071u^{78} - 0.0183504u^{77} + \cdots - 10.6030u - 2.67549 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.316988u^{78} + 0.936300u^{77} + \cdots + 105.357u + 16.3934 \\ 0.238792u^{78} + 0.708289u^{77} + \cdots + 75.5899u + 10.7768 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.0251868u^{78} - 0.0941620u^{77} + \cdots + 35.4559u + 6.34948 \\ -0.0436195u^{78} - 0.194847u^{77} + \cdots - 32.0545u - 5.56001 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.0688064u^{78} - 0.289009u^{77} + \cdots + 3.40135u + 0.789464 \\ -0.0436195u^{78} - 0.194847u^{77} + \cdots - 32.0545u - 5.56001 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.0169539u^{78} - 0.0560201u^{77} + \cdots - 43.1019u - 7.03695 \\ -0.0200562u^{78} - 0.0892438u^{77} + \cdots - 24.7956u - 5.58376 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.270350u^{78} + 0.800990u^{77} + \cdots + 94.9364u + 14.7864 \\ 0.216092u^{78} + 0.639260u^{77} + \cdots + 65.6010u + 9.03626 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.104207u^{78} + 0.354515u^{77} + \cdots + 86.3463u + 15.4543 \\ 0.195689u^{78} + 0.613380u^{77} + \cdots + 64.1890u + 9.56182 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.0988891u^{78} - 0.365513u^{77} + \cdots - 95.0641u - 17.4083 \\ -0.199232u^{78} - 0.632045u^{77} + \cdots - 79.9865u - 13.1574 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.507381u^{78} - 1.83656u^{77} + \cdots - 237.468u - 36.5233$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{79} + 11u^{78} + \cdots + 5558u + 2479$
c_2	$u^{79} - u^{78} + \cdots - 102812253u + 13388083$
c_3	$u^{79} + 5u^{76} + \cdots + 20u + 1$
c_5	$u^{79} + 5u^{78} + \cdots + 13423495u + 1556833$
c_6	$u^{79} + 7u^{78} + \cdots + 68u - 7$
c_7, c_{10}	$u^{79} + u^{78} + \cdots + 77u + 19$
c_8, c_{12}	$u^{79} + 3u^{78} + \cdots + 200u + 29$
c_9	$u^{79} - u^{78} + \cdots - 8553u + 4021$
c_{11}	$u^{79} - 3u^{78} + \cdots + 7160839u + 2429981$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{79} - 77y^{78} + \cdots + 415458634y - 6145441$
c_2	$y^{79} - 57y^{78} + \cdots + 3295984311821017y - 179240766414889$
c_3	$y^{79} + 86y^{77} + \cdots - 12y - 1$
c_5	$y^{79} + 39y^{78} + \cdots - 73169724732107y - 2423728989889$
c_6	$y^{79} - y^{78} + \cdots + 1306y - 49$
c_7, c_{10}	$y^{79} - 61y^{78} + \cdots - 21393y - 361$
c_8, c_{12}	$y^{79} + 23y^{78} + \cdots - 15912y - 841$
c_9	$y^{79} - 45y^{78} + \cdots + 347635311y - 16168441$
c_{11}	$y^{79} + 43y^{78} + \cdots - 76836824810403y - 5904807660361$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.365028 + 0.921649I$ $a = 0.485538 - 0.442665I$ $b = -1.012030 - 0.390280I$	$0.81357 + 3.15646I$	0
$u = -0.365028 - 0.921649I$ $a = 0.485538 + 0.442665I$ $b = -1.012030 + 0.390280I$	$0.81357 - 3.15646I$	0
$u = -0.048716 + 0.988429I$ $a = 1.05917 + 2.15503I$ $b = -0.547677 - 0.774768I$	$2.98173 - 4.48398I$	0
$u = -0.048716 - 0.988429I$ $a = 1.05917 - 2.15503I$ $b = -0.547677 + 0.774768I$	$2.98173 + 4.48398I$	0
$u = -0.550088 + 0.820510I$ $a = -1.232910 + 0.211959I$ $b = 0.901767 + 0.418938I$	$0.35934 + 8.67454I$	0
$u = -0.550088 - 0.820510I$ $a = -1.232910 - 0.211959I$ $b = 0.901767 - 0.418938I$	$0.35934 - 8.67454I$	0
$u = 0.769309 + 0.614688I$ $a = 0.106252 + 1.084980I$ $b = 0.466533 + 0.733029I$	$-3.16503 - 1.16137I$	0
$u = 0.769309 - 0.614688I$ $a = 0.106252 - 1.084980I$ $b = 0.466533 - 0.733029I$	$-3.16503 + 1.16137I$	0
$u = -0.198767 + 0.920559I$ $a = 0.232424 - 0.455553I$ $b = -1.054030 - 0.576556I$	$0.56704 + 3.08659I$	0
$u = -0.198767 - 0.920559I$ $a = 0.232424 + 0.455553I$ $b = -1.054030 + 0.576556I$	$0.56704 - 3.08659I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.697347 + 0.814961I$ $a = \quad 0.27962 - 2.05303I$ $b = -0.633965 - 0.761739I$	$-6.29169 + 2.64828I$	0
$u = -0.697347 - 0.814961I$ $a = \quad 0.27962 + 2.05303I$ $b = -0.633965 + 0.761739I$	$-6.29169 - 2.64828I$	0
$u = -1.048100 + 0.403578I$ $a = \quad 0.808674 - 0.404445I$ $b = \quad 2.32569 - 1.11746I$	$-7.15287 + 0.34372I$	0
$u = -1.048100 - 0.403578I$ $a = \quad 0.808674 + 0.404445I$ $b = \quad 2.32569 + 1.11746I$	$-7.15287 - 0.34372I$	0
$u = \quad 0.383423 + 0.764569I$ $a = \quad 0.255771 + 0.433790I$ $b = -1.276420 - 0.222595I$	$4.18971 + 0.51454I$	$2.17923 + 0.I$
$u = \quad 0.383423 - 0.764569I$ $a = \quad 0.255771 - 0.433790I$ $b = -1.276420 + 0.222595I$	$4.18971 - 0.51454I$	$2.17923 + 0.I$
$u = -0.620381 + 0.965544I$ $a = \quad 1.12040 - 1.00106I$ $b = \quad 0.280816 - 0.558368I$	$-5.81347 + 2.47228I$	0
$u = -0.620381 - 0.965544I$ $a = \quad 1.12040 + 1.00106I$ $b = \quad 0.280816 + 0.558368I$	$-5.81347 - 2.47228I$	0
$u = -0.946796 + 0.663690I$ $a = \quad 0.148069 + 1.213100I$ $b = \quad 0.525674 + 0.797143I$	$-4.51817 + 2.00997I$	0
$u = -0.946796 - 0.663690I$ $a = \quad 0.148069 - 1.213100I$ $b = \quad 0.525674 - 0.797143I$	$-4.51817 - 2.00997I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.478436 + 0.694599I$ $a = 0.244214 - 0.318915I$ $b = -1.098680 + 0.795145I$	$0.01895 - 4.62268I$	$-4.00000 + 2.42967I$
$u = -0.478436 - 0.694599I$ $a = 0.244214 + 0.318915I$ $b = -1.098680 - 0.795145I$	$0.01895 + 4.62268I$	$-4.00000 - 2.42967I$
$u = 0.816484 + 0.827857I$ $a = 1.04084 + 1.10388I$ $b = 0.165023 + 1.149580I$	$-6.08738 + 0.90469I$	0
$u = 0.816484 - 0.827857I$ $a = 1.04084 - 1.10388I$ $b = 0.165023 - 1.149580I$	$-6.08738 - 0.90469I$	0
$u = 0.226560 + 0.796466I$ $a = 1.74735 - 0.47514I$ $b = -0.512841 + 0.571552I$	$-1.96522 + 0.47763I$	$-4.53788 + 0.92547I$
$u = 0.226560 - 0.796466I$ $a = 1.74735 + 0.47514I$ $b = -0.512841 - 0.571552I$	$-1.96522 - 0.47763I$	$-4.53788 - 0.92547I$
$u = 0.475780 + 0.661767I$ $a = -0.91811 - 1.22985I$ $b = 1.185730 - 0.177054I$	$3.73228 - 3.86132I$	$-1.05530 + 7.68432I$
$u = 0.475780 - 0.661767I$ $a = -0.91811 + 1.22985I$ $b = 1.185730 + 0.177054I$	$3.73228 + 3.86132I$	$-1.05530 - 7.68432I$
$u = 0.769284 + 0.247205I$ $a = 0.088417 + 0.987187I$ $b = 0.11862 + 1.57494I$	$-4.09349 - 3.57659I$	$-10.32261 + 5.90091I$
$u = 0.769284 - 0.247205I$ $a = 0.088417 - 0.987187I$ $b = 0.11862 - 1.57494I$	$-4.09349 + 3.57659I$	$-10.32261 - 5.90091I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.029470 + 0.653797I$ $a = -0.406332 - 0.758563I$ $b = -0.583979 - 1.033370I$	$-1.60411 + 4.69680I$	0
$u = 1.029470 - 0.653797I$ $a = -0.406332 + 0.758563I$ $b = -0.583979 + 1.033370I$	$-1.60411 - 4.69680I$	0
$u = 0.787331 + 0.948348I$ $a = 0.48663 + 1.51737I$ $b = -0.436525 + 1.341180I$	$-5.72001 - 6.91767I$	0
$u = 0.787331 - 0.948348I$ $a = 0.48663 - 1.51737I$ $b = -0.436525 - 1.341180I$	$-5.72001 + 6.91767I$	0
$u = 0.277595 + 0.709657I$ $a = -0.42118 + 1.83706I$ $b = -0.866044 + 0.759028I$	$4.81405 - 3.49144I$	$1.70169 + 10.64917I$
$u = 0.277595 - 0.709657I$ $a = -0.42118 - 1.83706I$ $b = -0.866044 - 0.759028I$	$4.81405 + 3.49144I$	$1.70169 - 10.64917I$
$u = -0.878531 + 0.877785I$ $a = 0.635036 - 1.147060I$ $b = -0.508946 - 1.300500I$	$-2.18564 + 1.23495I$	0
$u = -0.878531 - 0.877785I$ $a = 0.635036 + 1.147060I$ $b = -0.508946 + 1.300500I$	$-2.18564 - 1.23495I$	0
$u = 0.192145 + 0.711068I$ $a = 0.73682 - 2.59438I$ $b = 0.499627 + 0.054033I$	$4.89202 + 1.47198I$	$0.48436 + 2.56488I$
$u = 0.192145 - 0.711068I$ $a = 0.73682 + 2.59438I$ $b = 0.499627 - 0.054033I$	$4.89202 - 1.47198I$	$0.48436 - 2.56488I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.857032 + 0.937871I$ $a = 0.652099 - 0.879166I$ $b = 0.16783 - 1.46825I$	$-2.00049 + 5.18597I$	0
$u = -0.857032 - 0.937871I$ $a = 0.652099 + 0.879166I$ $b = 0.16783 + 1.46825I$	$-2.00049 - 5.18597I$	0
$u = -1.099410 + 0.697283I$ $a = -0.819118 + 0.794230I$ $b = -1.07548 + 1.77879I$	$-6.68531 - 9.94778I$	0
$u = -1.099410 - 0.697283I$ $a = -0.819118 - 0.794230I$ $b = -1.07548 - 1.77879I$	$-6.68531 + 9.94778I$	0
$u = 0.963490 + 0.926074I$ $a = -0.855656 - 0.607154I$ $b = -0.67372 - 1.46186I$	$-9.63489 + 3.13405I$	0
$u = 0.963490 - 0.926074I$ $a = -0.855656 + 0.607154I$ $b = -0.67372 + 1.46186I$	$-9.63489 - 3.13405I$	0
$u = 0.923648 + 0.974917I$ $a = -0.46630 - 1.42944I$ $b = 1.03334 - 1.39055I$	$-9.46238 - 10.03940I$	0
$u = 0.923648 - 0.974917I$ $a = -0.46630 + 1.42944I$ $b = 1.03334 + 1.39055I$	$-9.46238 + 10.03940I$	0
$u = -0.329773 + 1.305820I$ $a = -0.270422 - 0.326511I$ $b = -0.261756 + 0.423075I$	$1.86473 + 3.78804I$	0
$u = -0.329773 - 1.305820I$ $a = -0.270422 + 0.326511I$ $b = -0.261756 - 0.423075I$	$1.86473 - 3.78804I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.701774 + 1.150670I$ $a = 0.86461 + 1.13965I$ $b = -0.950853 + 0.756054I$	$-1.45140 - 4.50648I$	0
$u = 0.701774 - 1.150670I$ $a = 0.86461 - 1.13965I$ $b = -0.950853 - 0.756054I$	$-1.45140 + 4.50648I$	0
$u = -0.972873 + 0.937650I$ $a = -0.295198 + 0.885473I$ $b = 0.260392 + 0.884421I$	$-4.28133 + 3.53574I$	0
$u = -0.972873 - 0.937650I$ $a = -0.295198 - 0.885473I$ $b = 0.260392 - 0.884421I$	$-4.28133 - 3.53574I$	0
$u = -0.821478 + 1.130920I$ $a = -0.548820 + 0.572288I$ $b = -0.037613 + 0.738202I$	$-3.08625 + 4.54824I$	0
$u = -0.821478 - 1.130920I$ $a = -0.548820 - 0.572288I$ $b = -0.037613 - 0.738202I$	$-3.08625 - 4.54824I$	0
$u = -0.599388$ $a = 1.13836$ $b = 0.628716$	-1.88001	-6.12910
$u = 0.821578 + 1.137080I$ $a = -0.605483 - 1.147130I$ $b = 0.885700 - 0.997087I$	$-0.11191 - 11.43530I$	0
$u = 0.821578 - 1.137080I$ $a = -0.605483 + 1.147130I$ $b = 0.885700 + 0.997087I$	$-0.11191 + 11.43530I$	0
$u = 1.080490 + 0.909752I$ $a = 0.69148 + 1.34893I$ $b = -1.01470 + 2.67163I$	$-5.52397 - 3.79706I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.080490 - 0.909752I$ $a = 0.69148 - 1.34893I$ $b = -1.01470 - 2.67163I$	$-5.52397 + 3.79706I$	0
$u = 0.054786 + 1.411470I$ $a = -0.326149 - 0.219838I$ $b = 0.324393 + 0.617013I$	$6.16628 + 1.89006I$	0
$u = 0.054786 - 1.411470I$ $a = -0.326149 + 0.219838I$ $b = 0.324393 - 0.617013I$	$6.16628 - 1.89006I$	0
$u = -0.312943 + 0.477853I$ $a = -1.14468 - 2.44162I$ $b = -0.63512 - 1.78649I$	$0.79605 + 6.21294I$	$-6.33131 - 10.12425I$
$u = -0.312943 - 0.477853I$ $a = -1.14468 + 2.44162I$ $b = -0.63512 + 1.78649I$	$0.79605 - 6.21294I$	$-6.33131 + 10.12425I$
$u = -0.85067 + 1.14814I$ $a = -0.83436 + 1.42013I$ $b = 1.35640 + 1.56095I$	$-5.2404 + 16.9790I$	0
$u = -0.85067 - 1.14814I$ $a = -0.83436 - 1.42013I$ $b = 1.35640 - 1.56095I$	$-5.2404 - 16.9790I$	0
$u = 1.09269 + 0.93791I$ $a = 1.307310 + 0.521345I$ $b = 1.29376 + 3.00284I$	$-5.47068 - 3.91698I$	0
$u = 1.09269 - 0.93791I$ $a = 1.307310 - 0.521345I$ $b = 1.29376 - 3.00284I$	$-5.47068 + 3.91698I$	0
$u = -0.487872 + 0.175765I$ $a = 1.76241 + 1.10617I$ $b = 1.137630 + 0.211015I$	$-1.82613 + 0.02881I$	$-6.76412 + 0.34713I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.487872 - 0.175765I$ $a = 1.76241 - 1.10617I$ $b = 1.137630 - 0.211015I$	$-1.82613 - 0.02881I$	$-6.76412 - 0.34713I$
$u = -0.370186 + 0.350900I$ $a = 0.573493 - 0.938784I$ $b = -0.096093 - 0.493512I$	$-0.270088 + 1.031330I$	$-4.41640 - 6.52686I$
$u = -0.370186 - 0.350900I$ $a = 0.573493 + 0.938784I$ $b = -0.096093 + 0.493512I$	$-0.270088 - 1.031330I$	$-4.41640 + 6.52686I$
$u = 0.13902 + 1.49464I$ $a = -0.298338 + 0.663603I$ $b = 0.24627 - 1.50057I$	$2.55162 - 7.07486I$	0
$u = 0.13902 - 1.49464I$ $a = -0.298338 - 0.663603I$ $b = 0.24627 + 1.50057I$	$2.55162 + 7.07486I$	0
$u = 0.124655 + 0.464854I$ $a = -3.09093 + 1.14602I$ $b = 0.823635 - 0.304659I$	$-1.18700 - 2.75544I$	$-3.0625 + 14.8135I$
$u = 0.124655 - 0.464854I$ $a = -3.09093 - 1.14602I$ $b = 0.823635 + 0.304659I$	$-1.18700 + 2.75544I$	$-3.0625 - 14.8135I$
$u = -0.89541 + 1.30049I$ $a = 1.05199 - 1.41768I$ $b = -2.53671 - 1.97919I$	$-4.46745 + 6.91864I$	0
$u = -0.89541 - 1.30049I$ $a = 1.05199 + 1.41768I$ $b = -2.53671 + 1.97919I$	$-4.46745 - 6.91864I$	0

II. $\boldsymbol{I_2^u = \langle 7428u^{19} + 4394u^{18} + \cdots + 1981b + 11610,\ 11189u^{19} + 7253u^{18} + \cdots + 1981a + 3015,\ u^{20} + 6u^{18} + \cdots + 9u^2 + 1\rangle}$

(i) Arc colorings

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -5.64816u^{19} - 3.66128u^{18} + \cdots - 15.9192u - 1.52196 \\ -3.74962u^{19} - 2.21807u^{18} + \cdots - 8.27108u - 5.86068 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 4.50278u^{19} - 5.59919u^{18} + \cdots + 17.0121u - 13.9783 \\ 11.9086u^{19} + 1.62797u^{18} + \cdots + 28.4195u + 1.37658 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{18} + 6u^{16} + \cdots - 2u + 8 \\ -5.64816u^{19} - 4.66128u^{18} + \cdots - 13.9192u - 10.5220 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -5.64816u^{19} - 3.66128u^{18} + \cdots - 15.9192u - 2.52196 \\ -5.64816u^{19} - 4.66128u^{18} + \cdots - 13.9192u - 10.5220 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -1.02373u^{19} - 0.334175u^{18} + \cdots + 0.987380u - 1.73094 \\ -2.16305u^{19} - 4.08380u^{18} + \cdots - 10.2569u - 12.0020 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 8.25240u^{19} - 3.38112u^{18} + \cdots + 25.2832u - 9.11762 \\ 14.0490u^{19} + 2.79606u^{18} + \cdots + 32.9409u + 4.01918 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 7.38718u^{19} - 2.01464u^{18} + \cdots + 22.7804u - 10.5184 \\ 9.34074u^{19} + 1.73549u^{18} + \cdots + 21.0323u + 3.39122 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 9.38213u^{19} - 0.107017u^{18} + \cdots + 21.3948u + 2.62393 \\ 7.13074u^{19} + 3.69258u^{18} + \cdots + 19.3887u + 6.11307 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{28246}{1981}u^{19} - \frac{10162}{1981}u^{18} + \cdots - \frac{120734}{1981}u - \frac{22012}{1981}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} - 12u^{19} + \cdots - 74u + 11$
c_2	$u^{20} - 8u^{18} + \cdots + 117u + 59$
c_3	$u^{20} + u^{19} + \cdots - 2u + 1$
c_4	$u^{20} + 12u^{19} + \cdots + 74u + 11$
c_5	$u^{20} + 4u^{19} + \cdots + 293u + 101$
c_6	$u^{20} + 2u^{18} + \cdots + 4u + 1$
c_7	$u^{20} - 8u^{18} + \cdots + 5u + 7$
c_8	$u^{20} + 6u^{18} + \cdots + 9u^2 + 1$
c_9	$u^{20} - 8u^{18} + \cdots - 11u + 7$
c_{10}	$u^{20} - 8u^{18} + \cdots - 5u + 7$
c_{11}	$u^{20} + 4u^{19} + \cdots - 11u + 7$
c_{12}	$u^{20} + 6u^{18} + \cdots + 9u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{20} - 4y^{19} + \cdots + 112y + 121$
c_2	$y^{20} - 16y^{19} + \cdots - 20887y + 3481$
c_3	$y^{20} - 3y^{19} + \cdots - 6y + 1$
c_5	$y^{20} + 12y^{19} + \cdots + 51713y + 10201$
c_6	$y^{20} + 4y^{19} + \cdots + 8y + 1$
c_7, c_{10}	$y^{20} - 16y^{19} + \cdots - 53y + 49$
c_8, c_{12}	$y^{20} + 12y^{19} + \cdots + 18y + 1$
c_9	$y^{20} - 16y^{19} + \cdots - 513y + 49$
c_{11}	$y^{20} + 12y^{19} + \cdots - 51y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.768071 + 0.596737I$ $a = 0.604655 + 1.101940I$ $b = 0.997208 + 0.889634I$	$-6.10903 - 0.54639I$	$-6.35226 + 0.28610I$
$u = 0.768071 - 0.596737I$ $a = 0.604655 - 1.101940I$ $b = 0.997208 - 0.889634I$	$-6.10903 + 0.54639I$	$-6.35226 - 0.28610I$
$u = -0.885049 + 0.742425I$ $a = 0.124687 - 1.307740I$ $b = -0.434624 - 1.037230I$	$-4.05162 + 2.43950I$	$-5.67949 - 4.08416I$
$u = -0.885049 - 0.742425I$ $a = 0.124687 + 1.307740I$ $b = -0.434624 + 1.037230I$	$-4.05162 - 2.43950I$	$-5.67949 + 4.08416I$
$u = 0.072410 + 1.235430I$ $a = -0.220059 - 0.785394I$ $b = 0.606714 + 0.293584I$	$7.10242 + 1.76975I$	$6.45710 - 1.57216I$
$u = 0.072410 - 1.235430I$ $a = -0.220059 + 0.785394I$ $b = 0.606714 - 0.293584I$	$7.10242 - 1.76975I$	$6.45710 + 1.57216I$
$u = 0.162743 + 1.261110I$ $a = -0.55490 + 1.36186I$ $b = 0.155700 - 1.152760I$	$3.96946 - 6.49112I$	$1.17515 + 5.52697I$
$u = 0.162743 - 1.261110I$ $a = -0.55490 - 1.36186I$ $b = 0.155700 + 1.152760I$	$3.96946 + 6.49112I$	$1.17515 - 5.52697I$
$u = 0.172256 + 0.678892I$ $a = 0.47239 + 2.22250I$ $b = -1.043000 + 0.402722I$	$4.85827 - 2.76424I$	$3.64862 + 0.62836I$
$u = 0.172256 - 0.678892I$ $a = 0.47239 - 2.22250I$ $b = -1.043000 - 0.402722I$	$4.85827 + 2.76424I$	$3.64862 - 0.62836I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.245877 + 1.283290I$ $a = -0.063534 - 0.179217I$ $b = 0.379916 + 0.361683I$	$1.99058 + 4.23949I$	$1.50893 - 12.25527I$
$u = -0.245877 - 1.283290I$ $a = -0.063534 + 0.179217I$ $b = 0.379916 - 0.361683I$	$1.99058 - 4.23949I$	$1.50893 + 12.25527I$
$u = -0.829529 + 1.035920I$ $a = 0.704288 - 0.719663I$ $b = 0.072155 - 1.098960I$	$-3.17862 + 3.91789I$	$-5.79194 - 1.68615I$
$u = -0.829529 - 1.035920I$ $a = 0.704288 + 0.719663I$ $b = 0.072155 + 1.098960I$	$-3.17862 - 3.91789I$	$-5.79194 + 1.68615I$
$u = 0.023548 + 0.636979I$ $a = 1.02126 - 1.93638I$ $b = -0.78900 - 1.30287I$	$1.30259 + 5.63518I$	$0.79418 - 3.67140I$
$u = 0.023548 - 0.636979I$ $a = 1.02126 + 1.93638I$ $b = -0.78900 + 1.30287I$	$1.30259 - 5.63518I$	$0.79418 + 3.67140I$
$u = 0.907379 + 1.082400I$ $a = 0.91540 + 1.32912I$ $b = -1.10167 + 2.17079I$	$-4.61763 - 5.90824I$	$-5.47491 + 3.39735I$
$u = 0.907379 - 1.082400I$ $a = 0.91540 - 1.32912I$ $b = -1.10167 - 2.17079I$	$-4.61763 + 5.90824I$	$-5.47491 - 3.39735I$
$u = -0.145951 + 0.496213I$ $a = 1.99582 - 1.70977I$ $b = -0.843408 + 0.409500I$	$-1.26643 - 2.32795I$	$-6.78538 - 3.11988I$
$u = -0.145951 - 0.496213I$ $a = 1.99582 + 1.70977I$ $b = -0.843408 - 0.409500I$	$-1.26643 + 2.32795I$	$-6.78538 + 3.11988I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{20} - 12u^{19} + \cdots - 74u + 11)(u^{79} + 11u^{78} + \cdots + 5558u + 2479)$
c_2	$(u^{20} - 8u^{18} + \cdots + 117u + 59)$ $\cdot (u^{79} - u^{78} + \cdots - 102812253u + 13388083)$
c_3	$(u^{20} + u^{19} + \cdots - 2u + 1)(u^{79} + 5u^{76} + \cdots + 20u + 1)$
c_4	$(u^{20} + 12u^{19} + \cdots + 74u + 11)(u^{79} + 11u^{78} + \cdots + 5558u + 2479)$
c_5	$(u^{20} + 4u^{19} + \cdots + 293u + 101)$ $\cdot (u^{79} + 5u^{78} + \cdots + 13423495u + 1556833)$
c_6	$(u^{20} + 2u^{18} + \cdots + 4u + 1)(u^{79} + 7u^{78} + \cdots + 68u - 7)$
c_7	$(u^{20} - 8u^{18} + \cdots + 5u + 7)(u^{79} + u^{78} + \cdots + 77u + 19)$
c_8	$(u^{20} + 6u^{18} + \cdots + 9u^2 + 1)(u^{79} + 3u^{78} + \cdots + 200u + 29)$
c_9	$(u^{20} - 8u^{18} + \cdots - 11u + 7)(u^{79} - u^{78} + \cdots - 8553u + 4021)$
c_{10}	$(u^{20} - 8u^{18} + \cdots - 5u + 7)(u^{79} + u^{78} + \cdots + 77u + 19)$
c_{11}	$(u^{20} + 4u^{19} + \cdots - 11u + 7)(u^{79} - 3u^{78} + \cdots + 7160839u + 2429981)$
c_{12}	$(u^{20} + 6u^{18} + \cdots + 9u^2 + 1)(u^{79} + 3u^{78} + \cdots + 200u + 29)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{20} - 4y^{19} + \cdots + 112y + 121)$ $\cdot (y^{79} - 77y^{78} + \cdots + 415458634y - 6145441)$
c_2	$(y^{20} - 16y^{19} + \cdots - 20887y + 3481)$ $\cdot (y^{79} - 57y^{78} + \cdots + 3295984311821017y - 179240766414889)$
c_3	$(y^{20} - 3y^{19} + \cdots - 6y + 1)(y^{79} + 86y^{77} + \cdots - 12y - 1)$
c_5	$(y^{20} + 12y^{19} + \cdots + 51713y + 10201)$ $\cdot (y^{79} + 39y^{78} + \cdots - 73169724732107y - 2423728989889)$
c_6	$(y^{20} + 4y^{19} + \cdots + 8y + 1)(y^{79} - y^{78} + \cdots + 1306y - 49)$
c_7, c_{10}	$(y^{20} - 16y^{19} + \cdots - 53y + 49)(y^{79} - 61y^{78} + \cdots - 21393y - 361)$
c_8, c_{12}	$(y^{20} + 12y^{19} + \cdots + 18y + 1)(y^{79} + 23y^{78} + \cdots - 15912y - 841)$
c_9	$(y^{20} - 16y^{19} + \cdots - 513y + 49)$ $\cdot (y^{79} - 45y^{78} + \cdots + 347635311y - 16168441)$
c_{11}	$(y^{20} + 12y^{19} + \cdots - 51y + 49)$ $\cdot (y^{79} + 43y^{78} + \cdots - 76836824810403y - 5904807660361)$