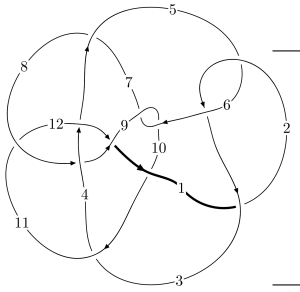
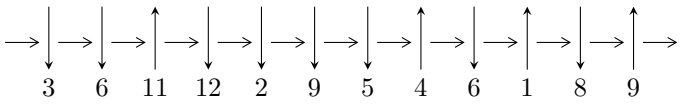
$12n_{0539}$ $(K12n_{0539})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.71224 \times 10^{120} u^{84} + 1.40203 \times 10^{120} u^{83} + \cdots + 3.73013 \times 10^{118} b - 2.07454 \times 10^{120}, \\ & 8.58971 \times 10^{120} u^{84} + 5.94299 \times 10^{120} u^{83} + \cdots + 4.10314 \times 10^{119} a - 4.74408 \times 10^{120}, \\ & u^{85} - 24u^{83} + \cdots + 10u + 1 \rangle \\ I_2^u = \langle & -10u^{21} + 53u^{19} + \cdots + b - 15,\ -10u^{21} + 54u^{19} + \cdots + a - 13,\ u^{22} + u^{21} + \cdots - 2u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 107 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. $\boldsymbol{I_1^u = \langle 1.71 \times 10^{120} u^{84} + 1.40 \times 10^{120} u^{83} + \cdots + 3.73 \times 10^{118} b - 2.07 \times 10^{120},\ 8.59 \times 10^{120} u^{84} + 5.94 \times 10^{120} u^{83} + \cdots + 4.10 \times 10^{119} a - 4.74 \times 10^{120},\ u^{85} - 24 u^{83} + \cdots + 10u + 1 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} -20.9345u^{84} - 14.4840u^{83} + \cdots + 267.776u + 11.5621 \\ -45.9029u^{84} - 37.5866u^{83} + \cdots + 629.922u + 55.6158 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 11.1468u^{84} + 8.19621u^{83} + \cdots - 72.3417u + 9.67525 \\ 18.6966u^{84} + 17.0401u^{83} + \cdots - 217.270u - 19.2457 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -20.9345u^{84} - 14.4840u^{83} + \cdots + 267.776u + 11.5621 \\ -57.1007u^{84} - 46.1321u^{83} + \cdots + 795.697u + 70.0998 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -30.8822u^{84} - 22.1361u^{83} + \cdots + 408.995u + 23.4304 \\ -46.8081u^{84} - 37.9200u^{83} + \cdots + 649.457u + 57.1070 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 3.64203u^{84} + 1.55727u^{83} + \cdots + 23.6473u + 18.5192 \\ 11.1918u^{84} + 10.4012u^{83} + \cdots - 121.281u - 10.4017 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -8.59326u^{84} - 8.98215u^{83} + \cdots + 100.400u + 15.7211 \\ -34.9414u^{84} - 30.6980u^{83} + \cdots + 434.117u + 39.2473 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 13.6180u^{84} + 13.8934u^{83} + \cdots - 145.844u - 18.0597 \\ 48.0968u^{84} + 41.5976u^{83} + \cdots - 603.928u - 54.4575 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 171.919u^{84} + 151.328u^{83} + \cdots - 2175.77u - 192.981$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{85} + 48u^{84} + \cdots + 76u + 1$
c_2, c_5	$u^{85} - 24u^{83} + \cdots + 10u - 1$
c_3	$u^{85} - 22u^{83} + \cdots - 68443u - 15487$
c_4	$u^{85} + 3u^{84} + \cdots - 115u + 29$
c_6, c_9	$u^{85} + 8u^{84} + \cdots + 33526u + 4031$
c_7	$u^{85} - 8u^{84} + \cdots - 747u - 17$
c_8	$u^{85} - 3u^{84} + \cdots - 24u + 11$
c_{10}	$u^{85} + u^{84} + \cdots - 653233343u - 56357257$
c_{11}	$u^{85} + 6u^{84} + \cdots - 17u + 1$
c_{12}	$u^{85} + u^{84} + \cdots - 7039u - 223$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{85} - 16y^{84} + \cdots + 5764y - 1$
c_2, c_5	$y^{85} - 48y^{84} + \cdots + 76y - 1$
c_3	$y^{85} - 44y^{84} + \cdots + 7600305635y - 239847169$
c_4	$y^{85} - 13y^{84} + \cdots + 50693y - 841$
c_6, c_9	$y^{85} - 84y^{84} + \cdots + 4537701460y - 16248961$
c_7	$y^{85} - 40y^{84} + \cdots + 290429y - 289$
c_8	$y^{85} - 13y^{84} + \cdots + 6208y - 121$
c_{10}	$y^{85} + 53y^{84} + \cdots + 39252202188225567 7y - 3176140416564049$
c_{11}	$y^{85} + 8y^{84} + \cdots + 23y - 1$
c_{12}	$y^{85} + 25y^{84} + \cdots + 6405495y - 49729$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.005353 + 1.000360I$ $a = 0.18285 - 1.48764I$ $b = 0.349188 - 0.373795I$	$-1.93409 + 0.60336I$	0
$u = 0.005353 - 1.000360I$ $a = 0.18285 + 1.48764I$ $b = 0.349188 + 0.373795I$	$-1.93409 - 0.60336I$	0
$u = 0.188620 + 0.969304I$ $a = 0.19737 + 1.77663I$ $b = -0.062291 + 0.128491I$	$-1.46515 + 11.85320I$	0
$u = 0.188620 - 0.969304I$ $a = 0.19737 - 1.77663I$ $b = -0.062291 - 0.128491I$	$-1.46515 - 11.85320I$	0
$u = -0.840878 + 0.483325I$ $a = 0.501916 - 1.283270I$ $b = 1.34341 - 1.06918I$	$3.51388 - 1.61241I$	0
$u = -0.840878 - 0.483325I$ $a = 0.501916 + 1.283270I$ $b = 1.34341 + 1.06918I$	$3.51388 + 1.61241I$	0
$u = 0.951828 + 0.159966I$ $a = 0.065586 - 0.374247I$ $b = 0.43709 + 2.16437I$	$-0.032156 - 0.597700I$	0
$u = 0.951828 - 0.159966I$ $a = 0.065586 + 0.374247I$ $b = 0.43709 - 2.16437I$	$-0.032156 + 0.597700I$	0
$u = 0.310483 + 0.990724I$ $a = 0.13435 - 1.57025I$ $b = -0.132367 - 0.293568I$	$-2.09244 + 2.43593I$	0
$u = 0.310483 - 0.990724I$ $a = 0.13435 + 1.57025I$ $b = -0.132367 + 0.293568I$	$-2.09244 - 2.43593I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.975011+0.393466I$ $a=\ 0.475549+0.820083I$ $b=\ 1.169380-0.022368I$	$1.41715+3.73569I$	0
$u=-0.975011-0.393466I$ $a=\ 0.475549-0.820083I$ $b=\ 1.169380+0.022368I$	$1.41715-3.73569I$	0
$u=\ 1.021460+0.278835I$ $a=\ 0.77446+2.18381I$ $b=\ 0.99233+2.23297I$	$1.68533-6.44110I$	0
$u=\ 1.021460-0.278835I$ $a=\ 0.77446-2.18381I$ $b=\ 0.99233-2.23297I$	$1.68533+6.44110I$	0
$u=-0.715395+0.783310I$ $a=\ 0.522346+0.160195I$ $b=\ 0.317448-0.195411I$	$3.70495+1.10586I$	0
$u=-0.715395-0.783310I$ $a=\ 0.522346-0.160195I$ $b=\ 0.317448+0.195411I$	$3.70495-1.10586I$	0
$u=-0.953739+0.471015I$ $a=-0.294966+1.084510I$ $b=\ 0.285466+0.666041I$	$1.52968+4.35650I$	0
$u=-0.953739-0.471015I$ $a=-0.294966-1.084510I$ $b=\ 0.285466-0.666041I$	$1.52968-4.35650I$	0
$u=-0.189972+0.915047I$ $a=\ 0.042038+1.307850I$ $b=\ 0.182832-0.146291I$	$0.27710-3.98155I$	0
$u=-0.189972-0.915047I$ $a=\ 0.042038-1.307850I$ $b=\ 0.182832+0.146291I$	$0.27710+3.98155I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.013401+0.933105I$ $a=-0.41356+1.56864I$ $b=-0.238256-0.042713I$	$-4.94846-4.99388I$	0
$u=-0.013401-0.933105I$ $a=-0.41356-1.56864I$ $b=-0.238256+0.042713I$	$-4.94846+4.99388I$	0
$u=\ \ 0.858709+0.306453I$ $a=\ \ 0.437696+0.079272I$ $b=-0.536251-0.628310I$	$-1.75635-1.24105I$	0
$u=\ \ 0.858709-0.306453I$ $a=\ \ 0.437696-0.079272I$ $b=-0.536251+0.628310I$	$-1.75635+1.24105I$	0
$u=\ \ 1.070350+0.241684I$ $a=-0.048326-0.800341I$ $b=-0.784925+0.086925I$	$-0.584139-1.214130I$	0
$u=\ \ 1.070350-0.241684I$ $a=-0.048326+0.800341I$ $b=-0.784925-0.086925I$	$-0.584139+1.214130I$	0
$u=\ \ 1.043000+0.381616I$ $a=-0.941223+0.060786I$ $b=-1.19962-1.11408I$	$0.85138+1.98117I$	0
$u=\ \ 1.043000-0.381616I$ $a=-0.941223-0.060786I$ $b=-1.19962+1.11408I$	$0.85138-1.98117I$	0
$u=-1.129960+0.104281I$ $a=-0.394497+0.932408I$ $b=-0.444109+0.587225I$	$-3.81181+3.18162I$	0
$u=-1.129960-0.104281I$ $a=-0.394497-0.932408I$ $b=-0.444109-0.587225I$	$-3.81181-3.18162I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.864367$ $a = \ 0.0715299$ $b = -0.541281$	-1.42725	-6.10760
$u = -1.080700 + 0.401420I$ $a = -0.165123 + 0.081421I$ $b = -0.78337 + 1.47583I$	$0.90179 + 8.56928I$	0
$u = -1.080700 - 0.401420I$ $a = -0.165123 - 0.081421I$ $b = -0.78337 - 1.47583I$	$0.90179 - 8.56928I$	0
$u = \ 0.832181$ $a = \ 0.926177$ $b = \ 2.91409$	0.997166	-18.4890
$u = -0.049225 + 0.830285I$ $a = \ 0.56528 - 1.89117I$ $b = -0.204200 - 0.163162I$	$-2.43502 - 3.30316I$	$-5.23294 + 7.40607I$
$u = -0.049225 - 0.830285I$ $a = \ 0.56528 + 1.89117I$ $b = -0.204200 + 0.163162I$	$-2.43502 + 3.30316I$	$-5.23294 - 7.40607I$
$u = \ 0.830826 + 0.826040I$ $a = -0.169302 + 0.010069I$ $b = -0.577550 + 0.509050I$	$3.76622 + 2.32030I$	0
$u = \ 0.830826 - 0.826040I$ $a = -0.169302 - 0.010069I$ $b = -0.577550 - 0.509050I$	$3.76622 - 2.32030I$	0
$u = \ 0.891925 + 0.810015I$ $a = -0.286571 + 0.262922I$ $b = \ 0.329641 - 0.110602I$	$3.57498 - 8.36975I$	0
$u = \ 0.891925 - 0.810015I$ $a = -0.286571 - 0.262922I$ $b = \ 0.329641 + 0.110602I$	$3.57498 + 8.36975I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.989802+0.710827I$ $a=\ \ 0.168409+0.465761I$ $b=\ \ 0.416900+0.454793I$	$2.86904+4.53419I$	0
$u=-0.989802-0.710827I$ $a=\ \ 0.168409-0.465761I$ $b=\ \ 0.416900-0.454793I$	$2.86904-4.53419I$	0
$u=-0.666265+0.344818I$ $a=-1.09970+1.54051I$ $b=-1.397150+0.053578I$	$4.07887+5.28332I$	$1.24117-5.02642I$
$u=-0.666265-0.344818I$ $a=-1.09970-1.54051I$ $b=-1.397150-0.053578I$	$4.07887-5.28332I$	$1.24117+5.02642I$
$u=\ \ 1.183110+0.402824I$ $a=\ \ 1.54579+0.12909I$ $b=\ \ 3.14640-0.15589I$	$-6.48173-3.55864I$	0
$u=\ \ 1.183110-0.402824I$ $a=\ \ 1.54579-0.12909I$ $b=\ \ 3.14640+0.15589I$	$-6.48173+3.55864I$	0
$u=-1.160000+0.524269I$ $a=-1.37812-0.72891I$ $b=-2.73159-1.13043I$	$-5.60017+4.82152I$	0
$u=-1.160000-0.524269I$ $a=-1.37812+0.72891I$ $b=-2.73159+1.13043I$	$-5.60017-4.82152I$	0
$u=\ \ 0.719223+0.060664I$ $a=-1.44270-2.37773I$ $b=-1.85713-1.14364I$	$3.11952+4.42569I$	$-0.76135-6.20286I$
$u=\ \ 0.719223-0.060664I$ $a=-1.44270+2.37773I$ $b=-1.85713+1.14364I$	$3.11952-4.42569I$	$-0.76135+6.20286I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.229530 + 0.438003I$ $a = 1.217770 - 0.384196I$ $b = 2.27464 - 1.11533I$	$-6.24720 - 1.14845I$	0
$u = 1.229530 - 0.438003I$ $a = 1.217770 + 0.384196I$ $b = 2.27464 + 1.11533I$	$-6.24720 + 1.14845I$	0
$u = -1.275120 + 0.282603I$ $a = -1.49840 - 0.21043I$ $b = -2.60608 - 0.26666I$	$-7.45533 + 1.39297I$	0
$u = -1.275120 - 0.282603I$ $a = -1.49840 + 0.21043I$ $b = -2.60608 + 0.26666I$	$-7.45533 - 1.39297I$	0
$u = -1.224310 + 0.482177I$ $a = -1.67152 + 0.03389I$ $b = -3.05540 + 0.28991I$	$-5.92815 + 8.04533I$	0
$u = -1.224310 - 0.482177I$ $a = -1.67152 - 0.03389I$ $b = -3.05540 - 0.28991I$	$-5.92815 - 8.04533I$	0
$u = 1.270180 + 0.354996I$ $a = -0.936675 + 0.026252I$ $b = -2.18853 + 0.30229I$	$-4.36713 - 0.22372I$	0
$u = 1.270180 - 0.354996I$ $a = -0.936675 - 0.026252I$ $b = -2.18853 - 0.30229I$	$-4.36713 + 0.22372I$	0
$u = -0.171412 + 0.657764I$ $a = -0.95991 - 2.23193I$ $b = -0.295373 + 0.036008I$	$-2.85946 - 0.19476I$	$-5.29145 - 0.97537I$
$u = -0.171412 - 0.657764I$ $a = -0.95991 + 2.23193I$ $b = -0.295373 - 0.036008I$	$-2.85946 + 0.19476I$	$-5.29145 + 0.97537I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.456041+0.464462I$ $a=\ 1.193950-0.065927I$ $b=\ 1.034860-0.579589I$	$2.88974-0.39617I$	$2.71681+0.34590I$
$u=-0.456041-0.464462I$ $a=\ 1.193950+0.065927I$ $b=\ 1.034860+0.579589I$	$2.88974+0.39617I$	$2.71681-0.34590I$
$u=-1.235500+0.557498I$ $a=\ 1.126590+0.216852I$ $b=\ 2.36000+0.16189I$	$-2.90587+9.34845I$	0
$u=-1.235500-0.557498I$ $a=\ 1.126590-0.216852I$ $b=\ 2.36000-0.16189I$	$-2.90587-9.34845I$	0
$u=-1.276860+0.483646I$ $a=\ 1.272450-0.106001I$ $b=\ 2.66529+0.09834I$	$-8.82888+10.02930I$	0
$u=-1.276860-0.483646I$ $a=\ 1.272450+0.106001I$ $b=\ 2.66529-0.09834I$	$-8.82888-10.02930I$	0
$u=\ 1.288810+0.464947I$ $a=-1.144530+0.491479I$ $b=-2.26959+0.66922I$	$-8.97476+0.02482I$	0
$u=\ 1.288810-0.464947I$ $a=-1.144530-0.491479I$ $b=-2.26959-0.66922I$	$-8.97476-0.02482I$	0
$u=-1.330440+0.337617I$ $a=\ 1.283760+0.299388I$ $b=\ 2.40343+0.74368I$	$-6.44061-7.37054I$	0
$u=-1.330440-0.337617I$ $a=\ 1.283760-0.299388I$ $b=\ 2.40343-0.74368I$	$-6.44061+7.37054I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.250740 + 0.573265I$ $a = -1.53166 + 0.06635I$ $b = -2.88843 + 0.09759I$	$-4.7225 - 17.4174I$	0
$u = 1.250740 - 0.573265I$ $a = -1.53166 - 0.06635I$ $b = -2.88843 - 0.09759I$	$-4.7225 + 17.4174I$	0
$u = -1.302360 + 0.463258I$ $a = -1.243900 + 0.247243I$ $b = -2.16132 - 0.06403I$	$-6.10453 + 4.53838I$	0
$u = -1.302360 - 0.463258I$ $a = -1.243900 - 0.247243I$ $b = -2.16132 + 0.06403I$	$-6.10453 - 4.53838I$	0
$u = 1.241210 + 0.613061I$ $a = 1.362000 - 0.100699I$ $b = 2.43612 - 0.38495I$	$-5.01768 - 8.27806I$	0
$u = 1.241210 - 0.613061I$ $a = 1.362000 + 0.100699I$ $b = 2.43612 + 0.38495I$	$-5.01768 + 8.27806I$	0
$u = 1.307630 + 0.466435I$ $a = 1.46921 - 0.37040I$ $b = 2.33556 - 0.34225I$	$-6.08890 - 5.78678I$	0
$u = 1.307630 - 0.466435I$ $a = 1.46921 + 0.37040I$ $b = 2.33556 + 0.34225I$	$-6.08890 + 5.78678I$	0
$u = -0.440911 + 0.405001I$ $a = 0.792263 + 0.730144I$ $b = 1.142640 - 0.386053I$	$2.88774 - 0.20923I$	$1.242555 + 0.378473I$
$u = -0.440911 - 0.405001I$ $a = 0.792263 - 0.730144I$ $b = 1.142640 + 0.386053I$	$2.88774 + 0.20923I$	$1.242555 - 0.378473I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.099952+0.429731I$ $a=\ \ 2.03358+0.01611I$ $b=-0.841544+0.483607I$	$3.44287-5.06710I$	$0.91675+5.72229I$
$u=-0.099952-0.429731I$ $a=\ \ 2.03358-0.01611I$ $b=-0.841544-0.483607I$	$3.44287+5.06710I$	$0.91675-5.72229I$
$u=\ \ 0.123525+0.400738I$ $a=\ \ 1.178250-0.064085I$ $b=\ \ 0.171595-0.506385I$	$-0.185084-1.355340I$	$-1.97953+4.83531I$
$u=\ \ 0.123525-0.400738I$ $a=\ \ 1.178250+0.064085I$ $b=\ \ 0.171595+0.506385I$	$-0.185084+1.355340I$	$-1.97953-4.83531I$
$u=-0.115053$ $a=-11.8433$ $b=-0.451096$	-2.58472	2.24510

II. $I_2^u = \langle -10u^{21} + 53u^{19} + \cdots + b - 15,\ -10u^{21} + 54u^{19} + \cdots + a - 13,\ u^{22} + u^{21} + \cdots - 2u + 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} 10u^{21} - 54u^{19} + \cdots - 37u + 13 \\ 10u^{21} - 53u^{19} + \cdots - 32u + 15 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -15u^{21} - 5u^{20} + \cdots + 37u - 10 \\ -12u^{21} - 5u^{20} + \cdots + 50u - 14 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 10u^{21} - 54u^{19} + \cdots - 37u + 13 \\ 16u^{21} + 2u^{20} + \cdots - 62u + 25 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 13u^{21} - 3u^{20} + \cdots - 40u + 18 \\ 16u^{21} - 84u^{19} + \cdots - 48u + 21 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -22u^{21} - 5u^{20} + \cdots + 46u - 13 \\ -19u^{21} - 5u^{20} + \cdots + 59u - 17 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -13u^{21} + 69u^{19} + \cdots + 44u - 18 \\ -15u^{21} - 6u^{20} + \cdots + 50u - 11 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 2u^{19} - 9u^{17} + \cdots + 11u - 3 \\ 6u^{21} + 2u^{20} + \cdots - u^2 - 13u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= 20u^{21} - u^{20} - 104u^{19} + 2u^{18} + 303u^{17} + 3u^{16} - 565u^{15} - 59u^{14} + 755u^{13} + 203u^{12} - 679u^{11} - 410u^{10} + 362u^9 + 572u^8 + 11u^7 - 551u^6 - 238u^5 + 388u^4 + 209u^3 - 192u^2 - 89u + 43$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{22} - 11u^{21} + \cdots - 16u + 1$
c_2	$u^{22} + u^{21} + \cdots - 2u + 1$
c_3	$u^{22} + u^{21} + \cdots - 15u + 5$
c_4	$u^{22} - 5u^{19} + \cdots + u - 1$
c_5	$u^{22} - u^{21} + \cdots + 2u + 1$
c_6	$u^{22} - 11u^{21} + \cdots - 10u + 1$
c_7	$u^{22} + 3u^{21} + \cdots + 189u + 23$
c_8	$u^{22} - 4u^{20} + \cdots + 8u^2 - 1$
c_9	$u^{22} + 11u^{21} + \cdots + 10u + 1$
c_{10}	$u^{22} + 2u^{21} + \cdots - 489u - 179$
c_{11}	$u^{22} - u^{21} + \cdots - 7u - 1$
c_{12}	$u^{22} + 4u^{21} + \cdots - 5u - 5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{22}+5y^{21}+\cdots-52y+1$
c_2, c_5	$y^{22}-11y^{21}+\cdots-16y+1$
c_3	$y^{22}-15y^{21}+\cdots-755y+25$
c_4	$y^{22}+24y^{20}+\cdots-9y+1$
c_6, c_9	$y^{22}-3y^{21}+\cdots+12y+1$
c_7	$y^{22}-15y^{21}+\cdots-11893y+529$
c_8	$y^{22}-8y^{21}+\cdots-16y+1$
c_{10}	$y^{22}+6y^{21}+\cdots+57303y+32041$
c_{11}	$y^{22}+5y^{21}+\cdots-3y+1$
c_{12}	$y^{22}+6y^{21}+\cdots-455y+25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.979550 + 0.192965I$ $a = 0.049739 - 0.317281I$ $b = 0.07427 + 1.88292I$	$-0.110842 - 0.638882I$	$-39.2337 - 0.4195I$
$u = 0.979550 - 0.192965I$ $a = 0.049739 + 0.317281I$ $b = 0.07427 - 1.88292I$	$-0.110842 + 0.638882I$	$-39.2337 + 0.4195I$
$u = -0.723270 + 0.716834I$ $a = 0.397388 - 0.005884I$ $b = 0.436175 - 0.704061I$	$4.11163 + 0.63723I$	$6.54002 + 1.19849I$
$u = -0.723270 - 0.716834I$ $a = 0.397388 + 0.005884I$ $b = 0.436175 + 0.704061I$	$4.11163 - 0.63723I$	$6.54002 - 1.19849I$
$u = -0.908952 + 0.290032I$ $a = 0.38486 - 2.07167I$ $b = 0.058682 - 1.072120I$	$2.62294 + 5.98882I$	$-0.92980 - 8.33780I$
$u = -0.908952 - 0.290032I$ $a = 0.38486 + 2.07167I$ $b = 0.058682 + 1.072120I$	$2.62294 - 5.98882I$	$-0.92980 + 8.33780I$
$u = -0.193236 + 0.923126I$ $a = 0.06481 + 1.71985I$ $b = 0.034564 + 0.268808I$	$-2.05997 - 1.85851I$	$-3.94257 - 0.91516I$
$u = -0.193236 - 0.923126I$ $a = 0.06481 - 1.71985I$ $b = 0.034564 - 0.268808I$	$-2.05997 + 1.85851I$	$-3.94257 + 0.91516I$
$u = 0.827042 + 0.682329I$ $a = 0.652080 + 0.805407I$ $b = 0.478838 + 0.307764I$	$5.15735 + 2.30312I$	$3.06418 - 2.18439I$
$u = 0.827042 - 0.682329I$ $a = 0.652080 - 0.805407I$ $b = 0.478838 - 0.307764I$	$5.15735 - 2.30312I$	$3.06418 + 2.18439I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.867318+0.312804I$ $a=-1.25055+1.37179I$ $b=-1.71767+2.08935I$	$2.75033-3.38289I$	$-3.52028+1.29488I$
$u=-0.867318-0.312804I$ $a=-1.25055-1.37179I$ $b=-1.71767-2.08935I$	$2.75033+3.38289I$	$-3.52028-1.29488I$
$u=0.905224+0.651152I$ $a=-0.388636-0.909012I$ $b=-0.69139-1.25158I$	$4.90447-7.46002I$	$1.09193+6.89812I$
$u=0.905224-0.651152I$ $a=-0.388636+0.909012I$ $b=-0.69139+1.25158I$	$4.90447+7.46002I$	$1.09193-6.89812I$
$u=-0.979142+0.678373I$ $a=0.039106+0.356080I$ $b=0.531614+0.013462I$	$3.32463+4.72683I$	$7.75293-7.21359I$
$u=-0.979142-0.678373I$ $a=0.039106-0.356080I$ $b=0.531614-0.013462I$	$3.32463-4.72683I$	$7.75293+7.21359I$
$u=1.218980+0.391873I$ $a=-1.42856+0.23693I$ $b=-2.66587+0.61693I$	$-6.40706-2.19213I$	$-7.62094+1.94263I$
$u=1.218980-0.391873I$ $a=-1.42856-0.23693I$ $b=-2.66587-0.61693I$	$-6.40706+2.19213I$	$-7.62094-1.94263I$
$u=-1.249940+0.521685I$ $a=1.51302+0.09874I$ $b=2.66597+0.12109I$	$-5.41252+7.14535I$	$-5.55491-4.26248I$
$u=-1.249940-0.521685I$ $a=1.51302-0.09874I$ $b=2.66597-0.12109I$	$-5.41252-7.14535I$	$-5.55491+4.26248I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.594637$ $a = -2.04766$ $b = -0.0406902$	-2.98320	-18.2720
$u = \quad 0.387486$ $a = -1.01885$ $b = \quad 1.63034$	1.67065	-3.02160

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{22}-11u^{21}+\cdots-16u+1)(u^{85}+48u^{84}+\cdots+76u+1)$
c_2	$(u^{22}+u^{21}+\cdots-2u+1)(u^{85}-24u^{83}+\cdots+10u-1)$
c_3	$(u^{22}+u^{21}+\cdots-15u+5)(u^{85}-22u^{83}+\cdots-68443u-15487)$
c_4	$(u^{22}-5u^{19}+\cdots+u-1)(u^{85}+3u^{84}+\cdots-115u+29)$
c_5	$(u^{22}-u^{21}+\cdots+2u+1)(u^{85}-24u^{83}+\cdots+10u-1)$
c_6	$(u^{22}-11u^{21}+\cdots-10u+1)(u^{85}+8u^{84}+\cdots+33526u+4031)$
c_7	$(u^{22}+3u^{21}+\cdots+189u+23)(u^{85}-8u^{84}+\cdots-747u-17)$
c_8	$(u^{22}-4u^{20}+\cdots+8u^2-1)(u^{85}-3u^{84}+\cdots-24u+11)$
c_9	$(u^{22}+11u^{21}+\cdots+10u+1)(u^{85}+8u^{84}+\cdots+33526u+4031)$
c_{10}	$(u^{22}+2u^{21}+\cdots-489u-179)$ $\cdot(u^{85}+u^{84}+\cdots-653233343u-56357257)$
c_{11}	$(u^{22}-u^{21}+\cdots-7u-1)(u^{85}+6u^{84}+\cdots-17u+1)$
c_{12}	$(u^{22}+4u^{21}+\cdots-5u-5)(u^{85}+u^{84}+\cdots-7039u-223)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{22}+5y^{21}+\cdots-52y+1)(y^{85}-16y^{84}+\cdots+5764y-1)$
c_2, c_5	$(y^{22}-11y^{21}+\cdots-16y+1)(y^{85}-48y^{84}+\cdots+76y-1)$
c_3	$(y^{22}-15y^{21}+\cdots-755y+25)$ $\cdot(y^{85}-44y^{84}+\cdots+7600305635y-239847169)$
c_4	$(y^{22}+24y^{20}+\cdots-9y+1)(y^{85}-13y^{84}+\cdots+50693y-841)$
c_6, c_9	$(y^{22}-3y^{21}+\cdots+12y+1)$ $\cdot(y^{85}-84y^{84}+\cdots+4537701460y-16248961)$
c_7	$(y^{22}-15y^{21}+\cdots-11893y+529)$ $\cdot(y^{85}-40y^{84}+\cdots+290429y-289)$
c_8	$(y^{22}-8y^{21}+\cdots-16y+1)(y^{85}-13y^{84}+\cdots+6208y-121)$
c_{10}	$(y^{22}+6y^{21}+\cdots+57303y+32041)$ $\cdot(y^{85}+53y^{84}+\cdots+392522021882255677y-3176140416564049)$
c_{11}	$(y^{22}+5y^{21}+\cdots-3y+1)(y^{85}+8y^{84}+\cdots+23y-1)$
c_{12}	$(y^{22}+6y^{21}+\cdots-455y+25)$ $\cdot(y^{85}+25y^{84}+\cdots+6405495y-49729)$