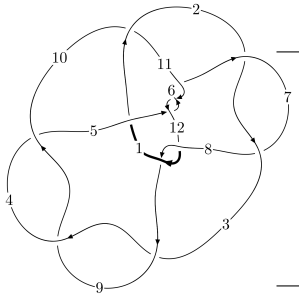
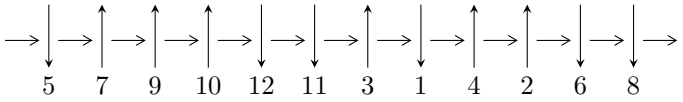
$12a_{1262}$ $(K12a_{1262})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.70194 \times 10^{188} u^{96} + 3.19613 \times 10^{188} u^{95} + \cdots + 2.54218 \times 10^{187} b + 3.85233 \times 10^{188},$$
$$2.54426 \times 10^{188} u^{96} - 1.10013 \times 10^{188} u^{95} + \cdots + 2.54218 \times 10^{187} a - 8.55554 \times 10^{188},\ u^{97} - 50u^{95} + \cdots - 4u$$
$$I_2^u = \langle -592u^{24} - 394u^{23} + \cdots + 559b - 776,\ -25u^{24} + 684u^{23} + \cdots + 559a + 564,$$
$$u^{25} - 14u^{23} + \cdots + 2u^2 - 1\rangle$$
$$I_3^u = \langle b,\ a - 1,\ u + 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 123 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. $\boldsymbol{I_1^u = \langle -2.70 \times 10^{188} u^{96} + 3.20 \times 10^{188} u^{95} + \cdots + 2.54 \times 10^{187} b + 3.85 \times 10^{188},\ 2.54 \times 10^{188} u^{96} - 1.10 \times 10^{188} u^{95} + \cdots + 2.54 \times 10^{187} a - 8.56 \times 10^{188},\ u^{97} - 50u^{95} + \cdots - 4u - 1 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_1 = \begin{pmatrix} -10.0082u^{96} + 4.32750u^{95} + \cdots + 48.6803u + 33.6544 \\ 10.6285u^{96} - 12.5724u^{95} + \cdots - 17.7846u - 15.1536 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 12.5922u^{96} - 1.77202u^{95} + \cdots + 14.2481u - 46.7205 \\ 4.63659u^{96} - 4.60135u^{95} + \cdots - 6.79228u - 8.49313 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 7.95562u^{96} + 2.82932u^{95} + \cdots + 21.0403u - 38.2274 \\ 4.63659u^{96} - 4.60135u^{95} + \cdots - 6.79228u - 8.49313 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -16.6625u^{96} + 13.0338u^{95} + \cdots + 57.8871u + 41.2971 \\ 9.78142u^{96} - 11.3527u^{95} + \cdots - 14.9995u - 14.6073 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 9.03230u^{96} - 6.50457u^{95} + \cdots + 2.34776u - 16.4773 \\ -1.79403u^{96} + 3.98873u^{95} + \cdots + 18.6428u - 5.18379 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1.45738u^{96} + 13.6162u^{95} + \cdots + 10.2044u - 23.8542 \\ 0.372455u^{96} - 4.69082u^{95} + \cdots + 3.81710u + 9.83895 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -3.88855u^{96} + 12.2474u^{95} + \cdots - 4.60422u - 15.8760 \\ 2.97130u^{96} - 1.96134u^{95} + \cdots + 0.369519u - 9.54574 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6.91455u^{96} - 6.40239u^{95} + \cdots - 108.420u + 0.833440$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{97}+8u^{96}+\cdots+12842088u-1859089$
c_2, c_7	$u^{97}+u^{96}+\cdots-10909u-1781$
c_3, c_4, c_9	$u^{97}-50u^{95}+\cdots-4u+1$
c_5, c_6, c_{11}	$u^{97}-u^{96}+\cdots+44u-1$
c_8, c_{12}	$u^{97}+u^{96}+\cdots+231u-43$
c_{10}	$u^{97}-6u^{96}+\cdots-51370688u+9617432$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{97} + 32y^{96} + \cdots - 39674367994840y - 3456211909921$
c_2, c_7	$y^{97} - 85y^{96} + \cdots + 551971y - 3171961$
c_3, c_4, c_9	$y^{97} - 100y^{96} + \cdots + 80y - 1$
c_5, c_6, c_{11}	$y^{97} + 103y^{96} + \cdots + 2246y - 1$
c_8, c_{12}	$y^{97} - 47y^{96} + \cdots + 27905y - 1849$
c_{10}	$y^{97} - 54y^{96} + \cdots + 2993028924913184y - 92494998274624$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.392511 + 0.929569I$ $a = -0.119570 - 1.045380I$ $b = -0.80861 - 1.61190I$	$1.66027 + 2.03268I$	0
$u = 0.392511 - 0.929569I$ $a = -0.119570 + 1.045380I$ $b = -0.80861 + 1.61190I$	$1.66027 - 2.03268I$	0
$u = 0.517075 + 0.869044I$ $a = -0.003713 - 1.342650I$ $b = -0.76665 - 1.62978I$	$8.2073 + 12.3283I$	0
$u = 0.517075 - 0.869044I$ $a = -0.003713 + 1.342650I$ $b = -0.76665 + 1.62978I$	$8.2073 - 12.3283I$	0
$u = -0.495647 + 0.905002I$ $a = 0.002226 + 1.194820I$ $b = -0.79748 + 1.60970I$	$1.27001 - 7.95601I$	0
$u = -0.495647 - 0.905002I$ $a = 0.002226 - 1.194820I$ $b = -0.79748 - 1.60970I$	$1.27001 + 7.95601I$	0
$u = -0.956296$ $a = 0.992260$ $b = 0.0790206$	1.64464	0
$u = 0.877270 + 0.316407I$ $a = 1.263720 + 0.169632I$ $b = 0.380432 - 0.262755I$	$6.91275 + 0.04134I$	0
$u = 0.877270 - 0.316407I$ $a = 1.263720 - 0.169632I$ $b = 0.380432 + 0.262755I$	$6.91275 - 0.04134I$	0
$u = 0.683668 + 0.839515I$ $a = -1.001000 + 0.353649I$ $b = -0.093482 + 1.226850I$	$8.65876 - 6.63877I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.683668 - 0.839515I$ $a = -1.001000 - 0.353649I$ $b = -0.093482 - 1.226850I$	$8.65876 + 6.63877I$	0
$u = -1.046750 + 0.387787I$ $a = \quad 0.830817 + 0.465873I$ $b = -1.275660 + 0.578401I$	$1.30768 - 4.06870I$	0
$u = -1.046750 - 0.387787I$ $a = \quad 0.830817 - 0.465873I$ $b = -1.275660 - 0.578401I$	$1.30768 + 4.06870I$	0
$u = -0.803486 + 0.809664I$ $a = -0.799371 - 0.188894I$ $b = \quad 0.102850 - 1.189290I$	$2.11438 + 2.11101I$	0
$u = -0.803486 - 0.809664I$ $a = -0.799371 + 0.188894I$ $b = \quad 0.102850 + 1.189290I$	$2.11438 - 2.11101I$	0
$u = \quad 0.716315 + 0.458579I$ $a = -0.678169 - 0.485281I$ $b = \quad 0.189753 + 0.681947I$	$3.34504 + 3.10873I$	0
$u = \quad 0.716315 - 0.458579I$ $a = -0.678169 + 0.485281I$ $b = \quad 0.189753 - 0.681947I$	$3.34504 - 3.10873I$	0
$u = -0.325366 + 0.768932I$ $a = -0.347414 + 1.034470I$ $b = -0.88331 + 1.57712I$	$9.59958 + 1.86764I$	0
$u = -0.325366 - 0.768932I$ $a = -0.347414 - 1.034470I$ $b = -0.88331 - 1.57712I$	$9.59958 - 1.86764I$	0
$u = -0.550305 + 0.584327I$ $a = -1.308720 + 0.502260I$ $b = -0.111757 - 0.693519I$	$10.46470 - 6.14501I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.550305-0.584327I$ $a=-1.308720-0.502260I$ $b=-0.111757+0.693519I$	$10.46470+6.14501I$	0
$u=1.100200+0.482089I$ $a=-0.416480+0.017263I$ $b=0.574249+1.010610I$	$3.52627+3.19540I$	0
$u=1.100200-0.482089I$ $a=-0.416480-0.017263I$ $b=0.574249-1.010610I$	$3.52627-3.19540I$	0
$u=-0.243053+0.760250I$ $a=-0.243045-1.030570I$ $b=-0.251134-1.287460I$	$-1.015240-0.183094I$	0
$u=-0.243053-0.760250I$ $a=-0.243045+1.030570I$ $b=-0.251134+1.287460I$	$-1.015240+0.183094I$	0
$u=-0.791904$ $a=0.492993$ $b=0.408603$	1.76659	4.39970
$u=1.201880+0.204437I$ $a=1.081130-0.254004I$ $b=-0.088372-0.657946I$	$6.14799-0.06988I$	0
$u=1.201880-0.204437I$ $a=1.081130+0.254004I$ $b=-0.088372+0.657946I$	$6.14799+0.06988I$	0
$u=-0.513924+0.546832I$ $a=-0.66835-1.56434I$ $b=0.06080-1.53310I$	$2.59000-6.18410I$	$0.+7.72471I$
$u=-0.513924-0.546832I$ $a=-0.66835+1.56434I$ $b=0.06080+1.53310I$	$2.59000+6.18410I$	$0.-7.72471I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.401661 + 0.627624I$ $a = -0.44051 + 1.41922I$ $b = -0.005207 + 1.397150I$	$-2.91966 + 3.56075I$	$-4.59067 - 7.53774I$
$u = 0.401661 - 0.627624I$ $a = -0.44051 - 1.41922I$ $b = -0.005207 - 1.397150I$	$-2.91966 - 3.56075I$	$-4.59067 + 7.53774I$
$u = 0.150843 + 0.673891I$ $a = 0.93490 + 1.77588I$ $b = 0.404953 + 1.053890I$	$4.56787 + 3.56494I$	$2.44341 - 4.16831I$
$u = 0.150843 - 0.673891I$ $a = 0.93490 - 1.77588I$ $b = 0.404953 - 1.053890I$	$4.56787 - 3.56494I$	$2.44341 + 4.16831I$
$u = -1.338310 + 0.105917I$ $a = 0.169241 - 0.234126I$ $b = 0.68393 - 2.15273I$	$11.86780 - 4.11142I$	0
$u = -1.338310 - 0.105917I$ $a = 0.169241 + 0.234126I$ $b = 0.68393 + 2.15273I$	$11.86780 + 4.11142I$	0
$u = -1.332670 + 0.225256I$ $a = -0.515937 - 0.983329I$ $b = 0.72756 - 1.49575I$	$9.19442 - 6.78558I$	0
$u = -1.332670 - 0.225256I$ $a = -0.515937 + 0.983329I$ $b = 0.72756 + 1.49575I$	$9.19442 + 6.78558I$	0
$u = 0.610795 + 0.215697I$ $a = 1.62885 - 0.54028I$ $b = -0.476611 - 0.383178I$	$-2.13893 - 0.04002I$	$-4.97568 - 0.42696I$
$u = 0.610795 - 0.215697I$ $a = 1.62885 + 0.54028I$ $b = -0.476611 + 0.383178I$	$-2.13893 + 0.04002I$	$-4.97568 + 0.42696I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.388169 + 0.507048I$ $a = 1.068570 + 0.795802I$ $b = 0.349033 + 0.384938I$	$6.17606 + 1.67369I$	$5.38929 - 3.79656I$
$u = 0.388169 - 0.507048I$ $a = 1.068570 - 0.795802I$ $b = 0.349033 - 0.384938I$	$6.17606 - 1.67369I$	$5.38929 + 3.79656I$
$u = 1.362710 + 0.041017I$ $a = 0.457730 + 0.323553I$ $b = -0.196610 + 1.390290I$	$4.56809 + 2.43963I$	0
$u = 1.362710 - 0.041017I$ $a = 0.457730 - 0.323553I$ $b = -0.196610 - 1.390290I$	$4.56809 - 2.43963I$	0
$u = 1.361750 + 0.174491I$ $a = -0.649756 + 0.791631I$ $b = 0.81332 + 1.43734I$	$3.74574 + 5.39311I$	0
$u = 1.361750 - 0.174491I$ $a = -0.649756 - 0.791631I$ $b = 0.81332 - 1.43734I$	$3.74574 - 5.39311I$	0
$u = -1.382410 + 0.042738I$ $a = -1.129430 - 0.437054I$ $b = 1.28519 - 0.75019I$	$5.93004 - 3.76358I$	0
$u = -1.382410 - 0.042738I$ $a = -1.129430 + 0.437054I$ $b = 1.28519 + 0.75019I$	$5.93004 + 3.76358I$	0
$u = -1.384110 + 0.043348I$ $a = 0.650415 + 0.487842I$ $b = -0.201190 + 0.900288I$	$3.14340 - 0.85093I$	0
$u = -1.384110 - 0.043348I$ $a = 0.650415 - 0.487842I$ $b = -0.201190 - 0.900288I$	$3.14340 + 0.85093I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.39037$ $a = -1.23778$ $b = 1.46125$	2.49868	0
$u = -1.391980 + 0.158735I$ $a = 0.100387 - 0.485388I$ $b = 0.72084 - 1.52107I$	$11.85160 - 4.06119I$	0
$u = -1.391980 - 0.158735I$ $a = 0.100387 + 0.485388I$ $b = 0.72084 + 1.52107I$	$11.85160 + 4.06119I$	0
$u = -1.404570 + 0.076611I$ $a = -0.898301 - 0.494541I$ $b = 1.35458 - 1.22527I$	$6.02793 - 3.69113I$	0
$u = -1.404570 - 0.076611I$ $a = -0.898301 + 0.494541I$ $b = 1.35458 + 1.22527I$	$6.02793 + 3.69113I$	0
$u = -0.132997 + 0.573960I$ $a = 0.65531 - 1.97402I$ $b = 0.321499 - 1.085960I$	$-0.97351 - 2.75732I$	$-4.82575 + 8.33321I$
$u = -0.132997 - 0.573960I$ $a = 0.65531 + 1.97402I$ $b = 0.321499 + 1.085960I$	$-0.97351 + 2.75732I$	$-4.82575 - 8.33321I$
$u = 1.40426 + 0.26771I$ $a = -0.410691 + 0.402399I$ $b = 0.70194 + 1.43695I$	$4.24241 + 3.85882I$	0
$u = 1.40426 - 0.26771I$ $a = -0.410691 - 0.402399I$ $b = 0.70194 - 1.43695I$	$4.24241 - 3.85882I$	0
$u = 1.44130 + 0.06652I$ $a = 0.627350 - 0.730719I$ $b = -0.114820 - 0.692209I$	$7.66651 + 4.00515I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.44130 - 0.06652I$ $a = 0.627350 + 0.730719I$ $b = -0.114820 + 0.692209I$	$7.66651 - 4.00515I$	0
$u = 1.46086 + 0.04805I$ $a = -0.706200 + 0.322554I$ $b = 2.23923 + 1.84773I$	$14.1239 + 4.2828I$	0
$u = 1.46086 - 0.04805I$ $a = -0.706200 - 0.322554I$ $b = 2.23923 - 1.84773I$	$14.1239 - 4.2828I$	0
$u = -0.180339 + 0.500258I$ $a = 1.40247 + 2.14088I$ $b = 0.128546 + 0.990895I$	$1.97762 + 2.85321I$	$-0.200970 - 0.751746I$
$u = -0.180339 - 0.500258I$ $a = 1.40247 - 2.14088I$ $b = 0.128546 - 0.990895I$	$1.97762 - 2.85321I$	$-0.200970 + 0.751746I$
$u = -1.48504 + 0.21762I$ $a = -0.618268 - 0.448163I$ $b = 0.60007 - 1.69299I$	$3.25478 - 6.63468I$	0
$u = -1.48504 - 0.21762I$ $a = -0.618268 + 0.448163I$ $b = 0.60007 + 1.69299I$	$3.25478 + 6.63468I$	0
$u = 1.48101 + 0.32726I$ $a = 0.578234 - 0.537626I$ $b = -1.90280 - 1.38057I$	$15.4077 + 2.2364I$	0
$u = 1.48101 - 0.32726I$ $a = 0.578234 + 0.537626I$ $b = -1.90280 + 1.38057I$	$15.4077 - 2.2364I$	0
$u = 1.51386 + 0.20415I$ $a = -0.503237 - 0.825710I$ $b = -0.142036 - 0.118423I$	$17.1935 + 9.0667I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.51386 - 0.20415I$ $a = -0.503237 + 0.825710I$ $b = -0.142036 + 0.118423I$	$17.1935 - 9.0667I$	0
$u = \quad 1.52605 + 0.18848I$ $a = -0.681431 + 0.462774I$ $b = \quad 0.50855 + 1.92800I$	$9.33767 + 8.91307I$	0
$u = \quad 1.52605 - 0.18848I$ $a = -0.681431 - 0.462774I$ $b = \quad 0.50855 - 1.92800I$	$9.33767 - 8.91307I$	0
$u = -1.53416 + 0.17186I$ $a = -0.341778 + 0.756979I$ $b = -0.0213288 + 0.1309320I$	$10.57890 - 5.57061I$	0
$u = -1.53416 - 0.17186I$ $a = -0.341778 - 0.756979I$ $b = -0.0213288 - 0.1309320I$	$10.57890 + 5.57061I$	0
$u = -1.52575 + 0.33643I$ $a = \quad 0.649297 + 0.568102I$ $b = -1.62171 + 1.39665I$	$7.92678 - 6.63363I$	0
$u = -1.52575 - 0.33643I$ $a = \quad 0.649297 - 0.568102I$ $b = -1.62171 - 1.39665I$	$7.92678 + 6.63363I$	0
$u = -0.182198 + 0.392200I$ $a = \quad 0.710195 - 0.432768I$ $b = -0.059492 - 0.273027I$	$0.012814 - 0.936442I$	$0.29566 + 7.06424I$
$u = -0.182198 - 0.392200I$ $a = \quad 0.710195 + 0.432768I$ $b = -0.059492 + 0.273027I$	$0.012814 + 0.936442I$	$0.29566 - 7.06424I$
$u = \quad 1.53921 + 0.32022I$ $a = \quad 0.682901 - 0.623110I$ $b = -1.45925 - 1.51069I$	$7.8766 + 12.4041I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.53921 - 0.32022I$ $a = 0.682901 + 0.623110I$ $b = -1.45925 + 1.51069I$	$7.8766 - 12.4041I$	0
$u = -1.54203 + 0.31217I$ $a = 0.684051 + 0.676400I$ $b = -1.38375 + 1.64674I$	$14.8900 - 16.6481I$	0
$u = -1.54203 - 0.31217I$ $a = 0.684051 - 0.676400I$ $b = -1.38375 - 1.64674I$	$14.8900 + 16.6481I$	0
$u = 1.59203 + 0.14409I$ $a = -0.230570 - 0.515521I$ $b = 0.174407 - 0.058244I$	$10.48800 + 1.02584I$	0
$u = 1.59203 - 0.14409I$ $a = -0.230570 + 0.515521I$ $b = 0.174407 + 0.058244I$	$10.48800 - 1.02584I$	0
$u = -1.62581 + 0.01418I$ $a = 0.419330 - 0.220629I$ $b = 0.843645 - 0.252449I$	$15.4814 - 0.8320I$	0
$u = -1.62581 - 0.01418I$ $a = 0.419330 + 0.220629I$ $b = 0.843645 + 0.252449I$	$15.4814 + 0.8320I$	0
$u = 1.63737$ $a = 0.260472$ $b = 0.713002$	10.1799	0
$u = -1.64970 + 0.21614I$ $a = -0.442188 + 0.321128I$ $b = 0.180845 - 0.244529I$	$16.5948 + 2.6341I$	0
$u = -1.64970 - 0.21614I$ $a = -0.442188 - 0.321128I$ $b = 0.180845 + 0.244529I$	$16.5948 - 2.6341I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.287266+0.021195I$ $a=\ \ 4.04710+2.33903I$ $b=\ \ 0.098265-0.156070I$	$1.85478-3.25063I$	$5.35640-3.85765I$
$u=-0.287266-0.021195I$ $a=\ \ 4.04710-2.33903I$ $b=\ \ 0.098265+0.156070I$	$1.85478+3.25063I$	$5.35640+3.85765I$
$u=\ \ 0.146471+0.216290I$ $a=-0.91999+3.68729I$ $b=\ \ 0.82152+1.15624I$	$0.89546+2.62228I$	$5.20511-7.14714I$
$u=\ \ 0.146471-0.216290I$ $a=-0.91999-3.68729I$ $b=\ \ 0.82152-1.15624I$	$0.89546-2.62228I$	$5.20511+7.14714I$
$u=-0.231454+0.076327I$ $a=-2.30597-2.27009I$ $b=\ \ 1.36845-1.85097I$	$8.34373-3.70807I$	$7.4954+13.2498I$
$u=-0.231454-0.076327I$ $a=-2.30597+2.27009I$ $b=\ \ 1.36845+1.85097I$	$8.34373+3.70807I$	$7.4954-13.2498I$
$u=\ \ 0.159338$ $a=\ \ 7.96376$ $b=\ \ 0.391736$	-1.99953	-7.84940

II. $I_2^u = \langle -592u^{24} - 394u^{23} + \cdots + 559b - 776,\ -25u^{24} + 684u^{23} + \cdots + 559a + 564,\ u^{25} - 14u^{23} + \cdots + 2u^2 - 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_1 = \begin{pmatrix} 0.0447227u^{24} - 1.22361u^{23} + \cdots - 0.998211u - 1.00894 \\ 1.05903u^{24} + 0.704830u^{23} + \cdots + 0.522361u + 1.38819 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.164580u^{24} - 0.177102u^{23} + \cdots - 3.48658u + 0.432916 \\ -0.223614u^{24} - 0.881932u^{23} + \cdots - 0.00894454u + 0.0447227 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.0590340u^{24} + 0.704830u^{23} + \cdots - 3.47764u + 0.388193 \\ -0.223614u^{24} - 0.881932u^{23} + \cdots - 0.00894454u + 0.0447227 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.132379u^{24} - 1.33810u^{23} + \cdots - 1.56530u - 1.17352 \\ 0.177102u^{24} + 0.114490u^{23} + \cdots + 0.567084u + 1.16458 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 2.16637u^{24} - 0.831843u^{23} + \cdots - 3.07335u + 0.366726 \\ 0.00715564u^{24} + 0.964222u^{23} + \cdots + 0.760286u + 0.198569 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2.25760u^{24} - 2.28801u^{23} + \cdots - 2.62970u - 2.85152 \\ 2.01789u^{24} - 0.0894454u^{23} + \cdots - 2.59928u - 1.00358 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.765653u^{24} + 2.82826u^{23} + \cdots + 6.64937u - 0.246869 \\ 1.05903u^{24} + 0.704830u^{23} + \cdots + 0.522361u + 0.388193 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{2287}{559}u^{24} + \frac{3658}{559}u^{23} + \cdots + \frac{6956}{559}u + \frac{4350}{559}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{25} - u^{22} + \cdots - 6u^2 + 1$
c_2	$u^{25} + u^{24} + \cdots + u + 1$
c_3, c_4	$u^{25} - 14u^{23} + \cdots + 2u^2 - 1$
c_5, c_6	$u^{25} + 14u^{23} + \cdots + 3u^2 + 1$
c_7	$u^{25} - u^{24} + \cdots + u - 1$
c_8	$u^{25} - u^{24} + \cdots + u - 1$
c_9	$u^{25} - 14u^{23} + \cdots - 2u^2 + 1$
c_{10}	$u^{25} - 3u^{23} + \cdots - 4u^2 + 1$
c_{11}	$u^{25} + 14u^{23} + \cdots - 3u^2 - 1$
c_{12}	$u^{25} + u^{24} + \cdots + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{25} + 13y^{22} + \cdots + 12y - 1$
c_2, c_7	$y^{25} - 25y^{24} + \cdots + 19y - 1$
c_3, c_4, c_9	$y^{25} - 28y^{24} + \cdots + 4y - 1$
c_5, c_6, c_{11}	$y^{25} + 28y^{24} + \cdots - 6y - 1$
c_8, c_{12}	$y^{25} - 19y^{24} + \cdots + 25y - 1$
c_{10}	$y^{25} - 6y^{24} + \cdots + 8y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.983356+0.376182I$ $a=-0.874238-0.601576I$ $b=\ \ 1.48876-0.90028I$	$2.02550-4.69221I$	$5.96816+7.37435I$
$u=-0.983356-0.376182I$ $a=-0.874238+0.601576I$ $b=\ \ 1.48876+0.90028I$	$2.02550+4.69221I$	$5.96816-7.37435I$
$u=-0.690235+0.480451I$ $a=\ \ 0.928475+0.336120I$ $b=\ \ 0.305109+1.067130I$	$1.04640+1.18576I$	$1.13719-1.92017I$
$u=-0.690235-0.480451I$ $a=\ \ 0.928475-0.336120I$ $b=\ \ 0.305109-1.067130I$	$1.04640-1.18576I$	$1.13719+1.92017I$
$u=\ \ 1.23301$ $a=\ \ 1.24274$ $b=-0.378773$	0.824916	-5.75820
$u=\ \ 0.726869$ $a=-1.71211$ $b=\ \ 1.22977$	-1.27651	5.36070
$u=-1.283310+0.064854I$ $a=\ \ 1.269030-0.389074I$ $b=-0.456475-0.000433I$	$5.08431+2.48498I$	$3.15917-1.16792I$
$u=-1.283310-0.064854I$ $a=\ \ 1.269030+0.389074I$ $b=-0.456475+0.000433I$	$5.08431-2.48498I$	$3.15917+1.16792I$
$u=\ \ 0.103314+0.697814I$ $a=\ \ 0.42255+1.42950I$ $b=\ \ 0.393845+1.333890I$	$-0.35859+1.95000I$	$0.23183-2.36196I$
$u=\ \ 0.103314-0.697814I$ $a=\ \ 0.42255-1.42950I$ $b=\ \ 0.393845-1.333890I$	$-0.35859-1.95000I$	$0.23183+2.36196I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.307930 + 0.151342I$ $a = -0.474523 + 0.415243I$ $b = 1.70923 + 2.40040I$	$11.69700 + 4.97752I$	$6.33584 - 8.05036I$
$u = 1.307930 - 0.151342I$ $a = -0.474523 - 0.415243I$ $b = 1.70923 - 2.40040I$	$11.69700 - 4.97752I$	$6.33584 + 8.05036I$
$u = 1.226230 + 0.509672I$ $a = 0.647907 - 0.062189I$ $b = -0.421900 - 0.898680I$	$2.97522 + 2.51196I$	$2.82840 + 1.42374I$
$u = 1.226230 - 0.509672I$ $a = 0.647907 + 0.062189I$ $b = -0.421900 + 0.898680I$	$2.97522 - 2.51196I$	$2.82840 - 1.42374I$
$u = -1.378630 + 0.202454I$ $a = -0.570231 - 0.606582I$ $b = 0.99203 - 1.59871I$	$4.37328 - 4.94547I$	$7.69025 + 5.29639I$
$u = -1.378630 - 0.202454I$ $a = -0.570231 + 0.606582I$ $b = 0.99203 + 1.59871I$	$4.37328 + 4.94547I$	$7.69025 - 5.29639I$
$u = 1.43134 + 0.16649I$ $a = -0.644133 + 0.814272I$ $b = 0.597255 + 1.202160I$	$7.26434 + 5.69807I$	$5.91435 - 5.91144I$
$u = 1.43134 - 0.16649I$ $a = -0.644133 - 0.814272I$ $b = 0.597255 - 1.202160I$	$7.26434 - 5.69807I$	$5.91435 + 5.91144I$
$u = 0.315501 + 0.302617I$ $a = 1.43918 - 0.52275I$ $b = 0.88853 - 1.87331I$	$8.23308 - 3.29324I$	$2.38034 - 4.15634I$
$u = 0.315501 - 0.302617I$ $a = 1.43918 + 0.52275I$ $b = 0.88853 + 1.87331I$	$8.23308 + 3.29324I$	$2.38034 + 4.15634I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.242224+0.333690I$ $a=-0.37250-3.49848I$ $b=\ \ 0.269136-0.693288I$	$1.69740-3.66908I$	$-1.30719+12.43028I$
$u=-0.242224-0.333690I$ $a=-0.37250+3.49848I$ $b=\ \ 0.269136+0.693288I$	$1.69740+3.66908I$	$-1.30719-12.43028I$
$u=-1.61436+0.07869I$ $a=\ \ 0.307133-0.039961I$ $b=\ \ 0.538324+0.974866I$	$15.3193+1.7924I$	$6.39691-3.76121I$
$u=-1.61436-0.07869I$ $a=\ \ 0.307133+0.039961I$ $b=\ \ 0.538324-0.974866I$	$15.3193-1.7924I$	$6.39691+3.76121I$
$u=\ \ 1.65570$ $a=\ \ 0.312069$ $b=\ \ 0.541317$	10.0420	-25.0730

III. $I_3^u = \langle b,\ a-1,\ u+1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_3 c_4, c_7, c_8 c_9, c_{12}	$u-1$
c_5, c_6, c_{11}	u
c_{10}	$u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_7, c_8 c_9, c_{10}, c_{12}	$y-1$
c_5, c_6, c_{11}	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.00000$		
$a = 1.00000$	1.64493	6.00000
$b = 0$		

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u^{25}-u^{22}+\cdots-6u^2+1)$ $\cdot(u^{97}+8u^{96}+\cdots+12842088u-1859089)$
c_2	$(u-1)(u^{25}+u^{24}+\cdots+u+1)(u^{97}+u^{96}+\cdots-10909u-1781)$
c_3, c_4	$(u-1)(u^{25}-14u^{23}+\cdots+2u^2-1)(u^{97}-50u^{95}+\cdots-4u+1)$
c_5, c_6	$u(u^{25}+14u^{23}+\cdots+3u^2+1)(u^{97}-u^{96}+\cdots+44u-1)$
c_7	$(u-1)(u^{25}-u^{24}+\cdots+u-1)(u^{97}+u^{96}+\cdots-10909u-1781)$
c_8	$(u-1)(u^{25}-u^{24}+\cdots+u-1)(u^{97}+u^{96}+\cdots+231u-43)$
c_9	$(u-1)(u^{25}-14u^{23}+\cdots-2u^2+1)(u^{97}-50u^{95}+\cdots-4u+1)$
c_{10}	$(u+1)(u^{25}-3u^{23}+\cdots-4u^2+1)$ $\cdot(u^{97}-6u^{96}+\cdots-51370688u+9617432)$
c_{11}	$u(u^{25}+14u^{23}+\cdots-3u^2-1)(u^{97}-u^{96}+\cdots+44u-1)$
c_{12}	$(u-1)(u^{25}+u^{24}+\cdots+u+1)(u^{97}+u^{96}+\cdots+231u-43)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)(y^{25}+13y^{22}+\cdots+12y-1)$ $\cdot(y^{97}+32y^{96}+\cdots-39674367994840y-3456211909921)$
c_2, c_7	$(y-1)(y^{25}-25y^{24}+\cdots+19y-1)$ $\cdot(y^{97}-85y^{96}+\cdots+551971y-3171961)$
c_3, c_4, c_9	$(y-1)(y^{25}-28y^{24}+\cdots+4y-1)(y^{97}-100y^{96}+\cdots+80y-1)$
c_5, c_6, c_{11}	$y(y^{25}+28y^{24}+\cdots-6y-1)(y^{97}+103y^{96}+\cdots+2246y-1)$
c_8, c_{12}	$(y-1)(y^{25}-19y^{24}+\cdots+25y-1)$ $\cdot(y^{97}-47y^{96}+\cdots+27905y-1849)$
c_{10}	$(y-1)(y^{25}-6y^{24}+\cdots+8y-1)$ $\cdot(y^{97}-54y^{96}+\cdots+2993028924913184y-92494998274624)$