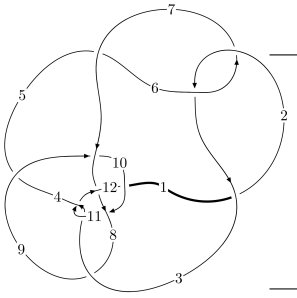
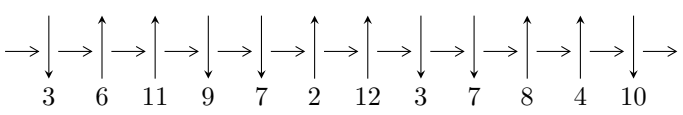
$12n_{0504}$ $(K12n_{0504})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.23441 \times 10^{152} u^{80} + 1.03277 \times 10^{152} u^{79} + \cdots + 7.12803 \times 10^{149} b + 1.45911 \times 10^{152}, \\ & - 1.08125 \times 10^{152} u^{80} - 9.29614 \times 10^{151} u^{79} + \cdots + 7.12803 \times 10^{149} a - 1.25045 \times 10^{152}, \\ & u^{81} - 25 u^{79} + \cdots - u - 1 \rangle \\ I_2^u = \langle & -u^{19} - u^{18} + \cdots + b - 1,\ -7529 u^{20} + 16576 u^{19} + \cdots + 4369 a + 66551,\ u^{21} + u^{20} + \cdots + u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 102 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. $\boldsymbol{I_1^u = \langle 1.23 \times 10^{152} u^{80} + 1.03 \times 10^{152} u^{79} + \cdots + 7.13 \times 10^{149} b + 1.46 \times 10^{152},\ -1.08 \times 10^{152} u^{80} - 9.30 \times 10^{151} u^{79} + \cdots + 7.13 \times 10^{149} a - 1.25 \times 10^{152},\ u^{81} - 25 u^{79} + \cdots - u - 1 \rangle}$

(i) Arc colorings

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

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

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

$$a_8 = \begin{pmatrix} 151.690u^{80} + 130.417u^{79} + \cdots + 384.512u + 175.426 \\ -173.177u^{80} - 144.889u^{79} + \cdots - 450.511u - 204.700 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 324.867u^{80} + 275.305u^{79} + \cdots + 835.023u + 380.126 \\ -173.177u^{80} - 144.889u^{79} + \cdots - 450.511u - 204.700 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -217.115u^{80} - 183.775u^{79} + \cdots - 589.240u - 262.760 \\ 83.8333u^{80} + 71.1008u^{79} + \cdots + 215.196u + 102.506 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 303.584u^{80} + 259.429u^{79} + \cdots + 777.896u + 355.169 \\ -130.110u^{80} - 108.535u^{79} + \cdots - 338.033u - 153.969 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -290.200u^{80} - 249.523u^{79} + \cdots - 729.435u - 337.494 \\ 85.7527u^{80} + 71.4068u^{79} + \cdots + 225.793u + 102.293 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -264.895u^{80} - 226.810u^{79} + \cdots - 666.097u - 306.595 \\ 95.4427u^{80} + 78.6904u^{79} + \cdots + 251.393u + 112.450 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 183.583u^{80} + 153.132u^{79} + \cdots + 480.308u + 219.882 \\ -72.9647u^{80} - 64.8472u^{79} + \cdots - 178.991u - 84.6969 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -169.452u^{80} - 148.120u^{79} + \cdots - 414.704u - 194.145 \\ 95.4427u^{80} + 78.6904u^{79} + \cdots + 251.393u + 112.450 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -134.434u^{80} - 107.850u^{79} + \cdots - 374.672u - 167.881$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{81} + 48u^{80} + \cdots - 46u - 1$
c_2, c_6	$u^{81} - 4u^{80} + \cdots - 10u + 1$
c_3, c_{11}	$u^{81} - 25u^{79} + \cdots - u - 1$
c_4	$u^{81} - 40u^{79} + \cdots - 67990u + 12769$
c_7	$u^{81} - 3u^{80} + \cdots + 24u + 1$
c_8	$u^{81} - u^{80} + \cdots - 3486u - 4531$
c_9	$u^{81} + 10u^{80} + \cdots + 31415u + 24751$
c_{10}	$u^{81} + 9u^{80} + \cdots + 26u + 1$
c_{12}	$u^{81} - 13u^{80} + \cdots + 136052u - 20201$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{81} - 24y^{80} + \cdots - 770y - 1$
c_2, c_6	$y^{81} + 48y^{80} + \cdots - 46y - 1$
c_3, c_{11}	$y^{81} - 50y^{80} + \cdots + 13y - 1$
c_4	$y^{81} - 80y^{80} + \cdots + 9648824956y - 163047361$
c_7	$y^{81} - y^{80} + \cdots + 68y - 1$
c_8	$y^{81} - 23y^{80} + \cdots + 1638264662y - 20529961$
c_9	$y^{81} - 78y^{80} + \cdots + 90529436459y - 612612001$
c_{10}	$y^{81} - 5y^{80} + \cdots + 92y - 1$
c_{12}	$y^{81} - 37y^{80} + \cdots - 298277160y - 408080401$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.902305+0.379132I$ $a=-0.541466+0.988112I$ $b=-1.32681-1.87079I$	$-6.54251+2.36585I$	0
$u=-0.902305-0.379132I$ $a=-0.541466-0.988112I$ $b=-1.32681+1.87079I$	$-6.54251-2.36585I$	0
$u=-0.960722+0.366305I$ $a=-0.43622-1.63083I$ $b=\ \ 0.460770+0.120247I$	$-2.14981-3.01376I$	0
$u=-0.960722-0.366305I$ $a=-0.43622+1.63083I$ $b=\ \ 0.460770-0.120247I$	$-2.14981+3.01376I$	0
$u=\ \ 1.011240+0.299411I$ $a=\ \ 0.436443+0.645111I$ $b=\ \ 1.21365-2.14492I$	$-1.46165+2.09415I$	0
$u=\ \ 1.011240-0.299411I$ $a=\ \ 0.436443-0.645111I$ $b=\ \ 1.21365+2.14492I$	$-1.46165-2.09415I$	0
$u=\ \ 1.009510+0.325728I$ $a=\ \ 0.54837-2.02019I$ $b=-0.737204+0.175634I$	$-5.81489+7.27123I$	0
$u=\ \ 1.009510-0.325728I$ $a=\ \ 0.54837+2.02019I$ $b=-0.737204-0.175634I$	$-5.81489-7.27123I$	0
$u=-0.964311+0.454853I$ $a=-0.210966+0.098303I$ $b=-1.009290+0.240162I$	$-1.62903-2.11796I$	0
$u=-0.964311-0.454853I$ $a=-0.210966-0.098303I$ $b=-1.009290-0.240162I$	$-1.62903+2.11796I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.648411 + 0.654308I$ $a = -0.695906 + 0.027482I$ $b = 0.355885 + 1.177700I$	$-1.75332 + 2.51421I$	0
$u = 0.648411 - 0.654308I$ $a = -0.695906 - 0.027482I$ $b = 0.355885 - 1.177700I$	$-1.75332 - 2.51421I$	0
$u = 1.09655$ $a = 0.468450$ $b = 0.654070$	1.81674	0
$u = 1.013360 + 0.419477I$ $a = 0.79390 - 1.50335I$ $b = -0.506195 - 0.174838I$	$-5.33253 - 1.57015I$	0
$u = 1.013360 - 0.419477I$ $a = 0.79390 + 1.50335I$ $b = -0.506195 + 0.174838I$	$-5.33253 + 1.57015I$	0
$u = -0.886429 + 0.150741I$ $a = 0.71362 - 1.59397I$ $b = 0.277004 + 0.899802I$	$0.26570 - 4.55441I$	0
$u = -0.886429 - 0.150741I$ $a = 0.71362 + 1.59397I$ $b = 0.277004 - 0.899802I$	$0.26570 + 4.55441I$	0
$u = 1.088310 + 0.200271I$ $a = -1.125980 - 0.191011I$ $b = -0.925517 - 0.209416I$	$2.44803 + 1.62087I$	0
$u = 1.088310 - 0.200271I$ $a = -1.125980 + 0.191011I$ $b = -0.925517 + 0.209416I$	$2.44803 - 1.62087I$	0
$u = -0.315200 + 0.827015I$ $a = 0.985815 + 0.065165I$ $b = 0.573644 + 0.998964I$	$-3.44192 - 2.58172I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.315200-0.827015I$ $a=\ \ 0.985815-0.065165I$ $b=\ \ 0.573644-0.998964I$	$-3.44192+2.58172I$	0
$u=-0.767732+0.423882I$ $a=-0.205242-0.622535I$ $b=-0.380848+0.219729I$	$-1.39485-1.84663I$	0
$u=-0.767732-0.423882I$ $a=-0.205242+0.622535I$ $b=-0.380848-0.219729I$	$-1.39485+1.84663I$	0
$u=-0.013086+1.134480I$ $a=\ \ 0.213787-0.203235I$ $b=\ \ 0.247143+0.087637I$	$0.64631+2.82490I$	0
$u=-0.013086-1.134480I$ $a=\ \ 0.213787+0.203235I$ $b=\ \ 0.247143-0.087637I$	$0.64631-2.82490I$	0
$u=-1.076550+0.360738I$ $a=-0.635040+0.553652I$ $b=-1.23910-2.13479I$	$-4.75622-7.90439I$	0
$u=-1.076550-0.360738I$ $a=-0.635040-0.553652I$ $b=-1.23910+2.13479I$	$-4.75622+7.90439I$	0
$u=\ \ 0.183779+1.122460I$ $a=-0.802444-0.673376I$ $b=-1.306840-0.417115I$	$-9.90972-0.66625I$	0
$u=\ \ 0.183779-1.122460I$ $a=-0.802444+0.673376I$ $b=-1.306840+0.417115I$	$-9.90972+0.66625I$	0
$u=-0.170398+1.126680I$ $a=\ \ 0.689681-0.781080I$ $b=\ \ 1.106720-0.668721I$	$-5.19483+5.53843I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.170398-1.126680I$ $a=\ \ 0.689681+0.781080I$ $b=\ \ 1.106720+0.668721I$	$-5.19483-5.53843I$	0
$u=\ \ 1.065720+0.407914I$ $a=-1.189530-0.619382I$ $b=-1.72330+0.89309I$	$0.68423+7.22736I$	0
$u=\ \ 1.065720-0.407914I$ $a=-1.189530+0.619382I$ $b=-1.72330-0.89309I$	$0.68423-7.22736I$	0
$u=\ \ 0.165603+1.132270I$ $a=-0.726014-0.887409I$ $b=-1.19140-0.88628I$	$-8.76483-11.09010I$	0
$u=\ \ 0.165603-1.132270I$ $a=-0.726014+0.887409I$ $b=-1.19140+0.88628I$	$-8.76483+11.09010I$	0
$u=\ \ 0.852441+0.001116I$ $a=-0.658643+1.180880I$ $b=-0.044733-1.206010I$	$1.046830-0.649414I$	$5.50516+0.I$
$u=\ \ 0.852441-0.001116I$ $a=-0.658643-1.180880I$ $b=-0.044733+1.206010I$	$1.046830+0.649414I$	$5.50516+0.I$
$u=-0.597478+0.470710I$ $a=-0.292709+0.767245I$ $b=-0.478827+0.650933I$	$-0.13061+2.12477I$	$1.60050-2.94701I$
$u=-0.597478-0.470710I$ $a=-0.292709-0.767245I$ $b=-0.478827-0.650933I$	$-0.13061-2.12477I$	$1.60050+2.94701I$
$u=-1.192220+0.350482I$ $a=\ \ 1.217880-0.419708I$ $b=\ \ 0.805797+0.821329I$	$3.57269-4.92095I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.192220-0.350482I$ $a=\ \ 1.217880+0.419708I$ $b=\ \ 0.805797-0.821329I$	$3.57269+4.92095I$	0
$u=-1.169650+0.444904I$ $a=\ \ 1.370680-0.316177I$ $b=\ \ 0.86662+1.45089I$	$3.36884-5.55592I$	0
$u=-1.169650-0.444904I$ $a=\ \ 1.370680+0.316177I$ $b=\ \ 0.86662-1.45089I$	$3.36884+5.55592I$	0
$u=-1.236580+0.299380I$ $a=\ \ 1.247280-0.439033I$ $b=\ \ 0.527525+0.682155I$	$3.49137-4.92888I$	0
$u=-1.236580-0.299380I$ $a=\ \ 1.247280+0.439033I$ $b=\ \ 0.527525-0.682155I$	$3.49137+4.92888I$	0
$u=\ \ 1.169700+0.502563I$ $a=-1.159140+0.011019I$ $b=-0.388968+1.350540I$	$3.00360+2.72726I$	0
$u=\ \ 1.169700-0.502563I$ $a=-1.159140-0.011019I$ $b=-0.388968-1.350540I$	$3.00360-2.72726I$	0
$u=\ \ 0.724961$ $a=\ \ 0.141553$ $b=-3.03101$	-3.09176	-12.2130
$u=-0.666916+0.195048I$ $a=-0.156382-0.607093I$ $b=\ \ 2.72346-0.31841I$	$-7.46556-5.35134I$	$-7.82165+7.22544I$
$u=-0.666916-0.195048I$ $a=-0.156382+0.607093I$ $b=\ \ 2.72346+0.31841I$	$-7.46556+5.35134I$	$-7.82165-7.22544I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.978674 + 0.931902I$ $a = -0.280037 + 0.224847I$ $b = -0.074527 + 0.737144I$	$1.13541 + 2.26803I$	0
$u = 0.978674 - 0.931902I$ $a = -0.280037 - 0.224847I$ $b = -0.074527 - 0.737144I$	$1.13541 - 2.26803I$	0
$u = 1.301260 + 0.414651I$ $a = 0.580151 + 0.104656I$ $b = 0.952867 - 0.457869I$	$5.36895 + 2.14990I$	0
$u = 1.301260 - 0.414651I$ $a = 0.580151 - 0.104656I$ $b = 0.952867 + 0.457869I$	$5.36895 - 2.14990I$	0
$u = -1.305270 + 0.493311I$ $a = -0.662219 + 0.141141I$ $b = -1.024370 - 0.588649I$	$4.77612 - 8.26020I$	0
$u = -1.305270 - 0.493311I$ $a = -0.662219 - 0.141141I$ $b = -1.024370 + 0.588649I$	$4.77612 + 8.26020I$	0
$u = -0.032146 + 0.601351I$ $a = -0.704884 + 1.212550I$ $b = -0.396728 + 0.822881I$	$0.20204 + 1.49826I$	$1.38934 - 4.06041I$
$u = -0.032146 - 0.601351I$ $a = -0.704884 - 1.212550I$ $b = -0.396728 - 0.822881I$	$0.20204 - 1.49826I$	$1.38934 + 4.06041I$
$u = 0.589104 + 0.077999I$ $a = 3.02288 + 0.38505I$ $b = 1.43654 + 0.15109I$	$-7.40845 - 4.70430I$	$-8.71870 + 1.25287I$
$u = 0.589104 - 0.077999I$ $a = 3.02288 - 0.38505I$ $b = 1.43654 - 0.15109I$	$-7.40845 + 4.70430I$	$-8.71870 - 1.25287I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.28056 + 0.60613I$ $a = 0.936300 + 0.444957I$ $b = 1.49356 - 1.15454I$	$-6.48713 + 6.72299I$	0
$u = 1.28056 - 0.60613I$ $a = 0.936300 - 0.444957I$ $b = 1.49356 + 1.15454I$	$-6.48713 - 6.72299I$	0
$u = 1.35655 + 0.41748I$ $a = -1.011780 - 0.542288I$ $b = -0.462888 + 1.153850I$	$1.69314 + 7.01569I$	0
$u = 1.35655 - 0.41748I$ $a = -1.011780 + 0.542288I$ $b = -0.462888 - 1.153850I$	$1.69314 - 7.01569I$	0
$u = -1.29675 + 0.60148I$ $a = -1.036220 + 0.360848I$ $b = -1.29084 - 1.29622I$	$-1.66431 - 11.60560I$	0
$u = -1.29675 - 0.60148I$ $a = -1.036220 - 0.360848I$ $b = -1.29084 + 1.29622I$	$-1.66431 + 11.60560I$	0
$u = 1.30382 + 0.60686I$ $a = 1.123340 + 0.392064I$ $b = 1.29633 - 1.46900I$	$-5.2024 + 17.2034I$	0
$u = 1.30382 - 0.60686I$ $a = 1.123340 - 0.392064I$ $b = 1.29633 + 1.46900I$	$-5.2024 - 17.2034I$	0
$u = 0.368457 + 0.423875I$ $a = 0.70058 + 2.15721I$ $b = 1.144710 - 0.026537I$	$-1.34736 - 3.65138I$	$-6.40050 + 3.27750I$
$u = 0.368457 - 0.423875I$ $a = 0.70058 - 2.15721I$ $b = 1.144710 + 0.026537I$	$-1.34736 + 3.65138I$	$-6.40050 - 3.27750I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.002369+0.507248I$ $a=-1.31039+1.21972I$ $b=-0.441129+0.625857I$	$0.12904+1.47742I$	$0.85859-4.88287I$
$u=-0.002369-0.507248I$ $a=-1.31039-1.21972I$ $b=-0.441129-0.625857I$	$0.12904-1.47742I$	$0.85859+4.88287I$
$u=\ 1.61293$ $a=\ 0.420426$ $b=-0.170339$	1.22427	0
$u=-0.378742+0.055619I$ $a=-3.23578-0.29152I$ $b=-1.335370-0.015602I$	$-3.66407+0.00055I$	$-3.29899+0.32726I$
$u=-0.378742-0.055619I$ $a=-3.23578+0.29152I$ $b=-1.335370+0.015602I$	$-3.66407-0.00055I$	$-3.29899-0.32726I$
$u=-1.67266+0.23707I$ $a=-0.403242-0.141145I$ $b=\ 0.422530-0.302754I$	$-2.75985+5.35327I$	0
$u=-1.67266-0.23707I$ $a=-0.403242+0.141145I$ $b=\ 0.422530+0.302754I$	$-2.75985-5.35327I$	0
$u=\ 0.067184+0.302298I$ $a=\ 1.13766-3.28658I$ $b=\ 1.54834-0.44871I$	$-7.40668+4.90606I$	$-5.02431-3.21161I$
$u=\ 0.067184-0.302298I$ $a=\ 1.13766+3.28658I$ $b=\ 1.54834+0.44871I$	$-7.40668-4.90606I$	$-5.02431+3.21161I$
$u=-1.56337+0.79423I$ $a=\ 0.246662-0.263030I$ $b=\ 0.605441+0.629873I$	$-4.14648-5.92038I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.56337-0.79423I$		
$a=\quad 0.246662+0.263030I$	$-4.14648+5.92038I$	0
$b=\quad 0.605441-0.629873I$		

II. $I_2^u = \langle -u^{19} - u^{18} + \cdots + b - 1,\ -7529u^{20} + 16576u^{19} + \cdots + 4369a + 66551,\ u^{21} + u^{20} + \cdots + u - 1 \rangle$

(i) Arc colorings

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

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

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

$$a_8 = \begin{pmatrix} 1.72328u^{20} - 3.79400u^{19} + \cdots + 7.36301u - 15.2325 \\ u^{19} + u^{18} + \cdots - 6u^2 + 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.72328u^{20} - 4.79400u^{19} + \cdots + 7.36301u - 16.2325 \\ u^{19} + u^{18} + \cdots - 6u^2 + 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -8.57542u^{20} - 1.45502u^{19} + \cdots - 26.2774u + 12.2559 \\ -4.44610u^{20} + 0.689403u^{19} + \cdots - 18.0385u + 8.07507 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 2.57679u^{20} - 5.24079u^{19} + \cdots + 10.3401u - 19.4260 \\ 0.0691234u^{20} + 0.310826u^{19} + \cdots - 0.176699u - 0.893111 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 6.02930u^{20} + 0.489357u^{19} + \cdots + 14.0046u - 12.9613 \\ 9.33257u^{20} + 1.16434u^{19} + \cdots + 26.5207u - 15.3500 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 8.32982u^{20} + 7.55596u^{19} + \cdots + 22.3953u + 4.99016 \\ 11.4024u^{20} + 5.12726u^{19} + \cdots + 30.3754u - 9.82811 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -17.6077u^{20} - 10.1035u^{19} + \cdots - 38.7512u + 9.75235 \\ -8.07507u^{20} - 2.62898u^{19} + \cdots - 19.7617u + 10.9634 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 19.7322u^{20} + 12.6832u^{19} + \cdots + 52.7707u - 4.83795 \\ 11.4024u^{20} + 5.12726u^{19} + \cdots + 30.3754u - 9.82811 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{142174}{4369}u^{20} - \frac{43479}{4369}u^{19} + \cdots - \frac{429897}{4369}u + \frac{119686}{4369}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{21} - 11u^{20} + \cdots - 4u + 1$
c_2	$u^{21} - u^{20} + \cdots - 2u - 1$
c_3	$u^{21} + u^{20} + \cdots + u - 1$
c_4	$u^{21} + u^{20} + \cdots + 6u - 1$
c_6	$u^{21} + u^{20} + \cdots - 2u + 1$
c_7	$u^{21} - 2u^{20} + \cdots - 2u + 1$
c_8	$u^{21} - 4u^{19} + \cdots + 2u + 1$
c_9	$u^{21} + 11u^{20} + \cdots + 7u + 1$
c_{10}	$u^{21} - 10u^{20} + \cdots - 8u + 1$
c_{11}	$u^{21} - u^{20} + \cdots + u + 1$
c_{12}	$u^{21} - 2u^{20} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{21} + 3y^{20} + \cdots - 4y - 1$
c_2, c_6	$y^{21} + 11y^{20} + \cdots - 4y - 1$
c_3, c_{11}	$y^{21} - 15y^{20} + \cdots + 15y - 1$
c_4	$y^{21} - 5y^{20} + \cdots - 14y - 1$
c_7	$y^{21} - 6y^{20} + \cdots + 6y - 1$
c_8	$y^{21} - 8y^{20} + \cdots - 12y - 1$
c_9	$y^{21} - 7y^{20} + \cdots - 11y - 1$
c_{10}	$y^{21} - 6y^{20} + \cdots - 2y - 1$
c_{12}	$y^{21} - 6y^{20} + \cdots + 6y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.888681 + 0.424494I$ $a = -0.320823 - 0.407542I$ $b = 0.037005 + 1.158720I$	$0.01292 + 1.95369I$	$2.10409 - 3.40241I$
$u = 0.888681 - 0.424494I$ $a = -0.320823 + 0.407542I$ $b = 0.037005 - 1.158720I$	$0.01292 - 1.95369I$	$2.10409 + 3.40241I$
$u = 0.807708$ $a = 0.989331$ $b = 2.32361$	-2.65595	8.30830
$u = -0.780642 + 0.008696I$ $a = -1.47938 - 0.67723I$ $b = -1.99501 + 0.09159I$	$-6.71198 - 4.94074I$	$3.19350 + 3.55851I$
$u = -0.780642 - 0.008696I$ $a = -1.47938 + 0.67723I$ $b = -1.99501 - 0.09159I$	$-6.71198 + 4.94074I$	$3.19350 - 3.55851I$
$u = -1.171510 + 0.413563I$ $a = 1.41786 - 0.22856I$ $b = 0.650009 + 1.073900I$	$2.50065 - 3.95422I$	$0.25209 + 3.41763I$
$u = -1.171510 - 0.413563I$ $a = 1.41786 + 0.22856I$ $b = 0.650009 - 1.073900I$	$2.50065 + 3.95422I$	$0.25209 - 3.41763I$
$u = 1.199990 + 0.355792I$ $a = -1.27775 - 0.66921I$ $b = -0.821752 + 1.103720I$	$2.38428 + 5.99565I$	$1.10633 - 7.42127I$
$u = 1.199990 - 0.355792I$ $a = -1.27775 + 0.66921I$ $b = -0.821752 - 1.103720I$	$2.38428 - 5.99565I$	$1.10633 + 7.42127I$
$u = 0.193620 + 1.274390I$ $a = -0.178684 + 0.310534I$ $b = -0.018473 + 0.489168I$	$0.97197 + 2.90581I$	$14.3385 - 11.9690I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.193620 - 1.274390I$ $a = -0.178684 - 0.310534I$ $b = -0.018473 - 0.489168I$	$0.97197 - 2.90581I$	$14.3385 + 11.9690I$
$u = 1.321630 + 0.400034I$ $a = -0.771560 - 0.180940I$ $b = -0.819522 + 0.795198I$	$5.96726 + 2.57833I$	$8.01202 - 3.81094I$
$u = 1.321630 - 0.400034I$ $a = -0.771560 + 0.180940I$ $b = -0.819522 - 0.795198I$	$5.96726 - 2.57833I$	$8.01202 + 3.81094I$
$u = -1.305240 + 0.463057I$ $a = 0.877968 - 0.064829I$ $b = 0.704657 + 0.794595I$	$5.59416 - 8.12880I$	$7.29693 + 6.03982I$
$u = -1.305240 - 0.463057I$ $a = 0.877968 + 0.064829I$ $b = 0.704657 - 0.794595I$	$5.59416 + 8.12880I$	$7.29693 - 6.03982I$
$u = -0.312750 + 0.395125I$ $a = -0.41319 + 2.25464I$ $b = -0.197554 + 0.419489I$	$-0.253263 + 0.438961I$	$-2.82903 + 1.96774I$
$u = -0.312750 - 0.395125I$ $a = -0.41319 - 2.25464I$ $b = -0.197554 - 0.419489I$	$-0.253263 - 0.438961I$	$-2.82903 - 1.96774I$
$u = 0.486254 + 0.103220I$ $a = -0.39298 + 2.58099I$ $b = 0.600680 + 0.211205I$	$-0.41271 - 3.61050I$	$1.11773 + 4.65529I$
$u = 0.486254 - 0.103220I$ $a = -0.39298 - 2.58099I$ $b = 0.600680 - 0.211205I$	$-0.41271 + 3.61050I$	$1.11773 - 4.65529I$
$u = -1.42389 + 0.49409I$ $a = 0.043877 - 0.381971I$ $b = 0.698149 + 0.623289I$	$-3.79051 - 5.69804I$	$2.75371 + 3.99925I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.42389-0.49409I$		
$a=\quad 0.043877+0.381971I$	$-3.79051+5.69804I$	$2.75371-3.99925I$
$b=\quad 0.698149-0.623289I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^{21} - 11u^{20} + \cdots - 4u + 1)(u^{81} + 48u^{80} + \cdots - 46u - 1)$
c_2	$(u^{21} - u^{20} + \cdots - 2u - 1)(u^{81} - 4u^{80} + \cdots - 10u + 1)$
c_3	$(u^{21} + u^{20} + \cdots + u - 1)(u^{81} - 25u^{79} + \cdots - u - 1)$
c_4	$(u^{21} + u^{20} + \cdots + 6u - 1)(u^{81} - 40u^{79} + \cdots - 67990u + 12769)$
c_6	$(u^{21} + u^{20} + \cdots - 2u + 1)(u^{81} - 4u^{80} + \cdots - 10u + 1)$
c_7	$(u^{21} - 2u^{20} + \cdots - 2u + 1)(u^{81} - 3u^{80} + \cdots + 24u + 1)$
c_8	$(u^{21} - 4u^{19} + \cdots + 2u + 1)(u^{81} - u^{80} + \cdots - 3486u - 4531)$
c_9	$(u^{21} + 11u^{20} + \cdots + 7u + 1)(u^{81} + 10u^{80} + \cdots + 31415u + 24751)$
c_{10}	$(u^{21} - 10u^{20} + \cdots - 8u + 1)(u^{81} + 9u^{80} + \cdots + 26u + 1)$
c_{11}	$(u^{21} - u^{20} + \cdots + u + 1)(u^{81} - 25u^{79} + \cdots - u - 1)$
c_{12}	$(u^{21} - 2u^{20} + \cdots - 2u + 1)(u^{81} - 13u^{80} + \cdots + 136052u - 20201)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{21}+3y^{20}+\cdots-4y-1)(y^{81}-24y^{80}+\cdots-770y-1)$
c_2, c_6	$(y^{21}+11y^{20}+\cdots-4y-1)(y^{81}+48y^{80}+\cdots-46y-1)$
c_3, c_{11}	$(y^{21}-15y^{20}+\cdots+15y-1)(y^{81}-50y^{80}+\cdots+13y-1)$
c_4	$(y^{21}-5y^{20}+\cdots-14y-1)$ $\cdot(y^{81}-80y^{80}+\cdots+9648824956y-163047361)$
c_7	$(y^{21}-6y^{20}+\cdots+6y-1)(y^{81}-y^{80}+\cdots+68y-1)$
c_8	$(y^{21}-8y^{20}+\cdots-12y-1)$ $\cdot(y^{81}-23y^{80}+\cdots+1638264662y-20529961)$
c_9	$(y^{21}-7y^{20}+\cdots-11y-1)$ $\cdot(y^{81}-78y^{80}+\cdots+90529436459y-612612001)$
c_{10}	$(y^{21}-6y^{20}+\cdots-2y-1)(y^{81}-5y^{80}+\cdots+92y-1)$
c_{12}	$(y^{21}-6y^{20}+\cdots+6y-1)$ $\cdot(y^{81}-37y^{80}+\cdots-298277160y-408080401)$