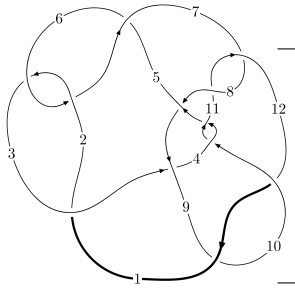
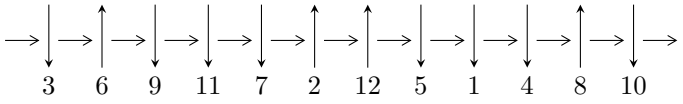
$12a_{0405}$ $(K12a_{0405})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 1.74918 \times 10^{481} u^{118} + 1.13087 \times 10^{480} u^{117} + \cdots + 3.76444 \times 10^{482} b - 5.51380 \times 10^{484},$$
$$- 1.88038 \times 10^{485} u^{118} - 5.43563 \times 10^{485} u^{117} + \cdots + 1.64393 \times 10^{486} a - 1.41886 \times 10^{489},$$
$$u^{119} + u^{118} + \cdots + 4696u - 4367 \rangle$$
$$I_2^u = \langle 134204u^{23} - 60433u^{22} + \cdots + 61210b + 20157,\ 66179u^{23} + 20157u^{22} + \cdots + 61210a + 542412,$$
$$u^{24} - 12u^{22} + \cdots + 4u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 143 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. $\boldsymbol{I_1^u = \langle 1.75 \times 10^{481} u^{118} + 1.13 \times 10^{480} u^{117} + \cdots + 3.76 \times 10^{482} b - 5.51 \times 10^{484},\ -1.88 \times 10^{485} u^{118} - 5.44 \times 10^{485} u^{117} + \cdots + 1.64 \times 10^{486} a - 1.42 \times 10^{489},\ u^{119} + u^{118} + \cdots + 4696u - 4367 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} 0.114383u^{118} + 0.330648u^{117} + \cdots - 479.984u + 863.088 \\ -0.0464657u^{118} - 0.00300409u^{117} + \cdots - 357.274u + 146.471 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.280271u^{118} + 0.0944427u^{117} + \cdots + 1600.16u - 614.771 \\ -0.263990u^{118} - 0.219179u^{117} + \cdots - 1351.59u + 269.403 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.0679176u^{118} + 0.327644u^{117} + \cdots - 837.258u + 1009.56 \\ -0.0464657u^{118} - 0.00300409u^{117} + \cdots - 357.274u + 146.471 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0912004u^{118} + 0.106850u^{117} + \cdots + 7.29293u + 233.640 \\ 0.0276670u^{118} + 0.278787u^{117} + \cdots - 959.393u + 957.198 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.337154u^{118} - 0.160946u^{117} + \cdots + 3118.25u - 1883.61 \\ -0.00674423u^{118} + 0.0484890u^{117} + \cdots - 547.872u + 378.354 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -0.0340855u^{118} - 0.210614u^{117} + \cdots + 513.977u - 581.351 \\ 0.0715432u^{118} + 0.326265u^{117} + \cdots - 808.053u + 981.448 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.463324u^{118} + 0.0153182u^{117} + \cdots - 1875.61u + 975.097 \\ 0.242350u^{118} + 0.159986u^{117} + \cdots + 913.110u - 158.555 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.30834u^{118} - 0.0714837u^{117} + \cdots + 11338.6u - 5626.43 \\ -0.0561421u^{118} - 0.0515743u^{117} + \cdots - 1003.85u + 404.609 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.522519u^{118} + 0.0348626u^{117} + \cdots - 3209.51u + 1608.47$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{119} + 35u^{118} + \cdots - 7880u - 289$
c_2, c_6	$u^{119} - 5u^{118} + \cdots + 46u + 17$
c_3	$u^{119} + u^{118} + \cdots - 1436808u + 659257$
c_4, c_{10}	$u^{119} - u^{118} + \cdots + 4696u + 4367$
c_7, c_{11}	$u^{119} - 3u^{118} + \cdots + 103202u + 32411$
c_8	$u^{119} - 3u^{118} + \cdots + 64836u - 22801$
c_9, c_{12}	$u^{119} - 5u^{118} + \cdots + 3020u + 193$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{119} + 107y^{118} + \cdots + 4464332y - 83521$
c_2, c_6	$y^{119} + 35y^{118} + \cdots - 7880y - 289$
c_3	$y^{119} + 27y^{118} + \cdots - 1873336698762y - 434619792049$
c_4, c_{10}	$y^{119} - 89y^{118} + \cdots + 330458690y - 19070689$
c_7, c_{11}	$y^{119} + 77y^{118} + \cdots - 37961568944y - 1050472921$
c_8	$y^{119} - 23y^{118} + \cdots - 50998608552y - 519885601$
c_9, c_{12}	$y^{119} + 83y^{118} + \cdots - 617994y - 37249$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.993748 + 0.091821I$ $a = -1.70614 + 0.86778I$ $b = 1.132030 + 0.432994I$	$-0.94803 - 1.18403I$	0
$u = 0.993748 - 0.091821I$ $a = -1.70614 - 0.86778I$ $b = 1.132030 - 0.432994I$	$-0.94803 + 1.18403I$	0
$u = 0.829298 + 0.570846I$ $a = -0.264246 + 0.851694I$ $b = 0.723253 - 0.622706I$	$-0.56186 - 2.52796I$	0
$u = 0.829298 - 0.570846I$ $a = -0.264246 - 0.851694I$ $b = 0.723253 + 0.622706I$	$-0.56186 + 2.52796I$	0
$u = -0.757272 + 0.636922I$ $a = 0.96387 + 1.13176I$ $b = -1.38287 - 0.30849I$	$0.29794 + 2.49737I$	0
$u = -0.757272 - 0.636922I$ $a = 0.96387 - 1.13176I$ $b = -1.38287 + 0.30849I$	$0.29794 - 2.49737I$	0
$u = 1.013900 + 0.133581I$ $a = -1.03736 + 1.51221I$ $b = 0.99999 - 2.41027I$	$4.66092 - 1.24632I$	0
$u = 1.013900 - 0.133581I$ $a = -1.03736 - 1.51221I$ $b = 0.99999 + 2.41027I$	$4.66092 + 1.24632I$	0
$u = -1.018330 + 0.145909I$ $a = 0.75821 + 1.64128I$ $b = -0.75854 - 2.53994I$	$4.41042 + 7.48872I$	0
$u = -1.018330 - 0.145909I$ $a = 0.75821 - 1.64128I$ $b = -0.75854 + 2.53994I$	$4.41042 - 7.48872I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.033200+0.110074I$ $a=\ \ 1.68503+1.10806I$ $b=-1.039290+0.387279I$	$-2.09560+6.34471I$	0
$u=-1.033200-0.110074I$ $a=\ \ 1.68503-1.10806I$ $b=-1.039290-0.387279I$	$-2.09560-6.34471I$	0
$u=\ \ 1.052780+0.028627I$ $a=-1.073540-0.159204I$ $b=\ \ 0.907167-1.022340I$	$-1.70067-0.88334I$	0
$u=\ \ 1.052780-0.028627I$ $a=-1.073540+0.159204I$ $b=\ \ 0.907167+1.022340I$	$-1.70067+0.88334I$	0
$u=\ \ 1.06159$ $a=\ \ 1.29131$ $b=-0.647519$	-1.95196	0
$u=\ \ 0.894736+0.271341I$ $a=-1.66578+0.77927I$ $b=\ \ 1.060870+0.194528I$	$-0.509475-1.301390I$	0
$u=\ \ 0.894736-0.271341I$ $a=-1.66578-0.77927I$ $b=\ \ 1.060870-0.194528I$	$-0.509475+1.301390I$	0
$u=-1.071880+0.062292I$ $a=\ \ 1.12239+0.97864I$ $b=-0.863779+0.520675I$	$-6.24332+0.48076I$	0
$u=-1.071880-0.062292I$ $a=\ \ 1.12239-0.97864I$ $b=-0.863779-0.520675I$	$-6.24332-0.48076I$	0
$u=-0.850086+0.665157I$ $a=\ \ 0.66917+1.45879I$ $b=-1.34377-0.83569I$	$4.24668+0.15654I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.850086-0.665157I$ $a=\ \ 0.66917-1.45879I$ $b=-1.34377+0.83569I$	$4.24668-0.15654I$	0
$u=\ \ 0.867716+0.651414I$ $a=-0.53938+1.46706I$ $b=\ \ 1.23335-0.91377I$	$4.11810-5.86438I$	0
$u=\ \ 0.867716-0.651414I$ $a=-0.53938-1.46706I$ $b=\ \ 1.23335+0.91377I$	$4.11810+5.86438I$	0
$u=-0.603923+0.667428I$ $a=\ \ 1.16982+0.94614I$ $b=-1.56551+0.22793I$	$4.84094+4.92640I$	0
$u=-0.603923-0.667428I$ $a=\ \ 1.16982-0.94614I$ $b=-1.56551-0.22793I$	$4.84094-4.92640I$	0
$u=\ \ 1.102390+0.265589I$ $a=\ \ 1.32591+0.69545I$ $b=-0.543730-0.841832I$	$1.68958-0.30415I$	0
$u=\ \ 1.102390-0.265589I$ $a=\ \ 1.32591-0.69545I$ $b=-0.543730+0.841832I$	$1.68958+0.30415I$	0
$u=\ \ 0.562668+0.653052I$ $a=-1.12617+0.88513I$ $b=\ \ 1.48777+0.34560I$	$4.84884+0.87854I$	0
$u=\ \ 0.562668-0.653052I$ $a=-1.12617-0.88513I$ $b=\ \ 1.48777-0.34560I$	$4.84884-0.87854I$	0
$u=-0.590349+0.621663I$ $a=-0.385476+0.434902I$ $b=-0.757976+0.170834I$	$-1.16159-4.09220I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.590349-0.621663I$ $a=-0.385476-0.434902I$ $b=-0.757976-0.170834I$	$-1.16159+4.09220I$	0
$u=-0.194234+0.825308I$ $a=\ \ 0.630135+0.100889I$ $b=-0.333873-1.172770I$	$9.09041-0.81528I$	0
$u=-0.194234-0.825308I$ $a=\ \ 0.630135-0.100889I$ $b=-0.333873+1.172770I$	$9.09041+0.81528I$	0
$u=-1.144880+0.132846I$ $a=-0.207806+0.263867I$ $b=\ \ 0.095170-1.352860I$	$-2.98625+4.80376I$	0
$u=-1.144880-0.132846I$ $a=-0.207806-0.263867I$ $b=\ \ 0.095170+1.352860I$	$-2.98625-4.80376I$	0
$u=-1.052790+0.490303I$ $a=\ \ 1.343810+0.047339I$ $b=-0.709913+0.279804I$	$1.86311+3.69038I$	0
$u=-1.052790-0.490303I$ $a=\ \ 1.343810-0.047339I$ $b=-0.709913-0.279804I$	$1.86311-3.69038I$	0
$u=\ \ 1.113830+0.377543I$ $a=-1.83215+0.01505I$ $b=\ \ 0.884890+0.434873I$	$-1.09608-6.48055I$	0
$u=\ \ 1.113830-0.377543I$ $a=-1.83215-0.01505I$ $b=\ \ 0.884890-0.434873I$	$-1.09608+6.48055I$	0
$u=-1.150550+0.256610I$ $a=-1.47925+0.67611I$ $b=\ \ 0.702963-0.878523I$	$1.35669+6.10854I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.150550-0.256610I$ $a=-1.47925-0.67611I$ $b=\ \ 0.702963+0.878523I$	$1.35669-6.10854I$	0
$u=-1.180750+0.080032I$ $a=-1.57694+0.23719I$ $b=\ \ 1.032360-0.365089I$	$-4.44393+2.41075I$	0
$u=-1.180750-0.080032I$ $a=-1.57694-0.23719I$ $b=\ \ 1.032360+0.365089I$	$-4.44393-2.41075I$	0
$u=\ \ 0.440014+0.682070I$ $a=-0.274980-0.055179I$ $b=\ \ 0.460698-0.695385I$	$1.09804+2.43325I$	0
$u=\ \ 0.440014-0.682070I$ $a=-0.274980+0.055179I$ $b=\ \ 0.460698+0.695385I$	$1.09804-2.43325I$	0
$u=-1.188530+0.007153I$ $a=\ \ 0.076112-0.745600I$ $b=-0.222787-0.586962I$	$-2.95282+5.04020I$	0
$u=-1.188530-0.007153I$ $a=\ \ 0.076112+0.745600I$ $b=-0.222787+0.586962I$	$-2.95282-5.04020I$	0
$u=\ \ 0.175678+0.780627I$ $a=-0.697871+0.030103I$ $b=\ \ 0.446186-1.189510I$	$8.45212+7.03911I$	0
$u=\ \ 0.175678-0.780627I$ $a=-0.697871-0.030103I$ $b=\ \ 0.446186+1.189510I$	$8.45212-7.03911I$	0
$u=\ \ 0.077746+1.219410I$ $a=-0.018029+0.290638I$ $b=-0.883143-0.787783I$	$6.09753-12.17320I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.077746 - 1.219410I$ $a = -0.018029 - 0.290638I$ $b = -0.883143 + 0.787783I$	$6.09753 + 12.17320I$	0
$u = -0.105421 + 1.221150I$ $a = 0.067558 + 0.290538I$ $b = 0.769815 - 0.804760I$	$7.11301 + 5.86529I$	0
$u = -0.105421 - 1.221150I$ $a = 0.067558 - 0.290538I$ $b = 0.769815 + 0.804760I$	$7.11301 - 5.86529I$	0
$u = -0.592303 + 1.082860I$ $a = 0.294892 + 0.076098I$ $b = 0.003951 - 0.511174I$	$3.59851 + 1.54306I$	0
$u = -0.592303 - 1.082860I$ $a = 0.294892 - 0.076098I$ $b = 0.003951 + 0.511174I$	$3.59851 - 1.54306I$	0
$u = -0.140301 + 0.748675I$ $a = -0.586092 - 0.051997I$ $b = -0.860870 + 0.443851I$	$-4.26290 + 2.01587I$	$-10.93941 - 3.73280I$
$u = -0.140301 - 0.748675I$ $a = -0.586092 + 0.051997I$ $b = -0.860870 - 0.443851I$	$-4.26290 - 2.01587I$	$-10.93941 + 3.73280I$
$u = 1.269150 + 0.039754I$ $a = 0.514191 - 0.844116I$ $b = -0.205954 - 0.423162I$	$-2.84778 - 0.03444I$	0
$u = 1.269150 - 0.039754I$ $a = 0.514191 + 0.844116I$ $b = -0.205954 + 0.423162I$	$-2.84778 + 0.03444I$	0
$u = 0.703499 + 0.171720I$ $a = -2.55114 - 1.67369I$ $b = 1.47594 + 0.85405I$	$5.50016 - 0.24366I$	$0. + 1.50945I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.703499 - 0.171720I$ $a = -2.55114 + 1.67369I$ $b = 1.47594 - 0.85405I$	$5.50016 + 0.24366I$	$0. - 1.50945I$
$u = 1.212390 + 0.406742I$ $a = -1.89844 - 0.46020I$ $b = 0.823162 + 0.650134I$	$5.22065 - 11.39210I$	0
$u = 1.212390 - 0.406742I$ $a = -1.89844 + 0.46020I$ $b = 0.823162 - 0.650134I$	$5.22065 + 11.39210I$	0
$u = -1.207090 + 0.431148I$ $a = 1.77404 - 0.47413I$ $b = -0.759334 + 0.634410I$	$5.92831 + 5.38150I$	0
$u = -1.207090 - 0.431148I$ $a = 1.77404 + 0.47413I$ $b = -0.759334 - 0.634410I$	$5.92831 - 5.38150I$	0
$u = -1.222560 + 0.413704I$ $a = -1.74884 + 0.17727I$ $b = 1.68247 - 1.22932I$	$-1.93298 + 5.41868I$	0
$u = -1.222560 - 0.413704I$ $a = -1.74884 - 0.17727I$ $b = 1.68247 + 1.22932I$	$-1.93298 - 5.41868I$	0
$u = 0.099659 + 0.698115I$ $a = -0.964153 - 0.626279I$ $b = -0.826983 + 0.867480I$	$0.81558 + 7.01541I$	$-3.01914 - 6.58174I$
$u = 0.099659 - 0.698115I$ $a = -0.964153 + 0.626279I$ $b = -0.826983 - 0.867480I$	$0.81558 - 7.01541I$	$-3.01914 + 6.58174I$
$u = -0.669118 + 0.210478I$ $a = 2.51564 - 1.78531I$ $b = -1.30859 + 1.00851I$	$5.33147 - 5.82416I$	$-0.62651 + 3.42933I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.669118-0.210478I$ $a=\ \ 2.51564+1.78531I$ $b=-1.30859-1.00851I$	$5.33147+5.82416I$	$-0.62651-3.42933I$
$u=\ \ 1.231550+0.438160I$ $a=\ \ 1.82007+0.08404I$ $b=-1.77901-1.15060I$	$-2.60382-11.33900I$	0
$u=\ \ 1.231550-0.438160I$ $a=\ \ 1.82007-0.08404I$ $b=-1.77901+1.15060I$	$-2.60382+11.33900I$	0
$u=\ \ 1.345000+0.113830I$ $a=\ \ 1.27445-0.70699I$ $b=-0.799695-0.401265I$	$-6.06080-3.71647I$	0
$u=\ \ 1.345000-0.113830I$ $a=\ \ 1.27445+0.70699I$ $b=-0.799695+0.401265I$	$-6.06080+3.71647I$	0
$u=-1.342390+0.184944I$ $a=-1.42707-0.08861I$ $b=\ \ 1.037860-0.755404I$	$-4.95434+3.38613I$	0
$u=-1.342390-0.184944I$ $a=-1.42707+0.08861I$ $b=\ \ 1.037860+0.755404I$	$-4.95434-3.38613I$	0
$u=-0.119199+0.625277I$ $a=\ \ 1.246230-0.612151I$ $b=\ \ 0.660237+0.886920I$	$1.40916-1.37431I$	$-0.98344+1.45831I$
$u=-0.119199-0.625277I$ $a=\ \ 1.246230+0.612151I$ $b=\ \ 0.660237-0.886920I$	$1.40916+1.37431I$	$-0.98344-1.45831I$
$u=\ \ 0.435878+0.460918I$ $a=\ \ 0.501651+0.361928I$ $b=\ \ 0.632035+0.167119I$	$0.024768-0.911188I$	$-4.48800+5.25224I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.435878 - 0.460918I$ $a = 0.501651 - 0.361928I$ $b = 0.632035 - 0.167119I$	$0.024768 + 0.911188I$	$-4.48800 - 5.25224I$
$u = 0.023918 + 0.627129I$ $a = -0.044179 + 0.176631I$ $b = 0.077657 + 1.133210I$	$4.86132 - 2.92884I$	$2.22301 + 3.01565I$
$u = 0.023918 - 0.627129I$ $a = -0.044179 - 0.176631I$ $b = 0.077657 - 1.133210I$	$4.86132 + 2.92884I$	$2.22301 - 3.01565I$
$u = -1.343550 + 0.316285I$ $a = -1.304540 + 0.017905I$ $b = 1.21750 - 0.89657I$	$-5.24287 + 3.92460I$	0
$u = -1.343550 - 0.316285I$ $a = -1.304540 - 0.017905I$ $b = 1.21750 + 0.89657I$	$-5.24287 - 3.92460I$	0
$u = 1.318740 + 0.418103I$ $a = 1.52853 - 0.13017I$ $b = -1.54112 - 0.83878I$	$-8.65926 - 6.39132I$	0
$u = 1.318740 - 0.418103I$ $a = 1.52853 + 0.13017I$ $b = -1.54112 + 0.83878I$	$-8.65926 + 6.39132I$	0
$u = -1.385000 + 0.162575I$ $a = -1.81739 - 0.52629I$ $b = 1.182280 - 0.450826I$	$-1.20792 + 1.51689I$	0
$u = -1.385000 - 0.162575I$ $a = -1.81739 + 0.52629I$ $b = 1.182280 + 0.450826I$	$-1.20792 - 1.51689I$	0
$u = 1.389660 + 0.149711I$ $a = 1.78063 - 0.65478I$ $b = -1.148410 - 0.371743I$	$-1.41681 - 7.20219I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.389660 - 0.149711I$ $a = 1.78063 + 0.65478I$ $b = -1.148410 + 0.371743I$	$-1.41681 + 7.20219I$	0
$u = 0.02596 + 1.45717I$ $a = -0.070555 + 0.131602I$ $b = -0.654297 - 0.337584I$	$-1.34996 - 5.61432I$	0
$u = 0.02596 - 1.45717I$ $a = -0.070555 - 0.131602I$ $b = -0.654297 + 0.337584I$	$-1.34996 + 5.61432I$	0
$u = 1.45078 + 0.38602I$ $a = 1.135720 - 0.190318I$ $b = -1.193420 - 0.602686I$	$-7.60121 - 0.34338I$	0
$u = 1.45078 - 0.38602I$ $a = 1.135720 + 0.190318I$ $b = -1.193420 + 0.602686I$	$-7.60121 + 0.34338I$	0
$u = -1.41696 + 0.55937I$ $a = 1.58122 - 0.05743I$ $b = -1.50659 + 1.05565I$	$1.4247 + 18.3744I$	0
$u = -1.41696 - 0.55937I$ $a = 1.58122 + 0.05743I$ $b = -1.50659 - 1.05565I$	$1.4247 - 18.3744I$	0
$u = 1.42073 + 0.55878I$ $a = -1.51903 - 0.12570I$ $b = 1.44479 + 1.09425I$	$2.36806 - 12.06800I$	0
$u = 1.42073 - 0.55878I$ $a = -1.51903 + 0.12570I$ $b = 1.44479 - 1.09425I$	$2.36806 + 12.06800I$	0
$u = -1.41739 + 0.58127I$ $a = 1.251370 + 0.093313I$ $b = -1.29430 + 0.86963I$	$-5.94696 + 12.29460I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.41739-0.58127I$ $a=\ \ 1.251370-0.093313I$ $b=-1.29430-0.86963I$	$-5.94696-12.29460I$	0
$u=-1.11735+1.06629I$ $a=\ \ 0.308057-0.157627I$ $b=\ \ 0.0376253-0.1082990I$	$3.69610+1.62803I$	0
$u=-1.11735-1.06629I$ $a=\ \ 0.308057+0.157627I$ $b=\ \ 0.0376253+0.1082990I$	$3.69610-1.62803I$	0
$u=\ \ 0.216441+0.390799I$ $a=\ \ 0.229350+0.502257I$ $b=\ \ 0.417198+0.377111I$	$-0.174303-1.015090I$	$-3.07045+6.48441I$
$u=\ \ 0.216441-0.390799I$ $a=\ \ 0.229350-0.502257I$ $b=\ \ 0.417198-0.377111I$	$-0.174303+1.015090I$	$-3.07045-6.48441I$
$u=\ \ 0.272528+0.342861I$ $a=\ \ 0.03378+1.58979I$ $b=\ \ 0.622769+0.294577I$	$-0.089774-1.203560I$	$-5.63891+4.72311I$
$u=\ \ 0.272528-0.342861I$ $a=\ \ 0.03378-1.58979I$ $b=\ \ 0.622769-0.294577I$	$-0.089774+1.203560I$	$-5.63891-4.72311I$
$u=\ \ 1.45149+0.59240I$ $a=-1.035130-0.102421I$ $b=\ \ 1.08289+0.95893I$	$-2.11151-8.25906I$	0
$u=\ \ 1.45149-0.59240I$ $a=-1.035130+0.102421I$ $b=\ \ 1.08289-0.95893I$	$-2.11151+8.25906I$	0
$u=-1.43547+0.67940I$ $a=\ \ 0.728367+0.116580I$ $b=-0.928092+0.700047I$	$-6.36420+4.28367I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.43547-0.67940I$ $a=\ \ 0.728367-0.116580I$ $b=-0.928092-0.700047I$	$-6.36420-4.28367I$	0
$u=-0.341916+0.204116I$ $a=\ \ 2.76733-1.85047I$ $b=-0.376461+0.667947I$	$-0.61691-3.18336I$	$-4.96615-1.85608I$
$u=-0.341916-0.204116I$ $a=\ \ 2.76733+1.85047I$ $b=-0.376461-0.667947I$	$-0.61691+3.18336I$	$-4.96615+1.85608I$
$u=-1.76703+0.13983I$ $a=-0.238752-0.553173I$ $b=\ \ 0.255687+1.051850I$	$2.25382-3.52138I$	0
$u=-1.76703-0.13983I$ $a=-0.238752+0.553173I$ $b=\ \ 0.255687-1.051850I$	$2.25382+3.52138I$	0
$u=\ \ 1.78247+0.42258I$ $a=-0.157575-0.477561I$ $b=\ \ 0.177339+1.014850I$	$2.81635-3.45183I$	0
$u=\ \ 1.78247-0.42258I$ $a=-0.157575+0.477561I$ $b=\ \ 0.177339-1.014850I$	$2.81635+3.45183I$	0
$u=\ \ 1.65467+0.92828I$ $a=\ \ 0.042499-0.327648I$ $b=-0.355810-0.071639I$	$1.89327+4.81903I$	0
$u=\ \ 1.65467-0.92828I$ $a=\ \ 0.042499+0.327648I$ $b=-0.355810+0.071639I$	$1.89327-4.81903I$	0

II. $I_2^u = \langle 134204u^{23} - 60433u^{22} + \cdots + 61210b + 20157,\ 66179u^{23} + 20157u^{22} + \cdots + 61210a + 542412,\ u^{24} - 12u^{22} + \cdots + 4u + 1\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} -1.08118u^{23} - 0.329309u^{22} + \cdots - 20.2122u - 8.86149 \\ -2.19252u^{23} + 0.987306u^{22} + \cdots - 2.39842u - 0.329309 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2.21240u^{23} + 2.45837u^{22} + \cdots - 12.1579u - 0.377193 \\ 1.88309u^{23} - 1.26586u^{22} + \cdots + 11.6211u + 3.45837 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -3.27370u^{23} + 0.657997u^{22} + \cdots - 22.6106u - 9.19080 \\ -2.19252u^{23} + 0.987306u^{22} + \cdots - 2.39842u - 0.329309 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 3.08118u^{23} + 0.329309u^{22} + \cdots + 18.2122u + 12.8615 \\ u^{23} - 11u^{21} + \cdots - 4u^2 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.62281u^{23} - 0.212400u^{22} + \cdots - 15.7398u - 12.6491 \\ -0.826777u^{23} - 0.360905u^{22} + \cdots + 1.64171u - 0.657997 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} 1.90796u^{23} + 0.690214u^{22} + \cdots + 17.5705u + 13.5195 \\ 0.563290u^{23} + 0.271230u^{22} + \cdots + 0.628688u + 1.01890 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.315896u^{23} + 4.01278u^{22} + \cdots - 9.80752u + 5.46270 \\ 0.883091u^{23} - 1.26586u^{22} + \cdots + 13.6211u + 5.45837 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 5.24310u^{23} - 3.62857u^{22} + \cdots + 26.6345u + 5.53905 \\ -0.246512u^{23} + 0.448995u^{22} + \cdots - 1.31706u - 0.890737 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{63410}{6121}u^{23} + \frac{58260}{6121}u^{22} + \cdots - \frac{336720}{6121}u - \frac{122543}{6121}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{24} - 8u^{23} + \cdots - 16u + 1$
c_2	$u^{24} + 4u^{22} + \cdots + 8u^2 + 1$
c_3	$u^{24} - 4u^{22} + \cdots - 4u + 1$
c_4	$u^{24} - 12u^{22} + \cdots + 4u + 1$
c_6	$u^{24} + 4u^{22} + \cdots + 8u^2 + 1$
c_7	$u^{24} - 2u^{23} + \cdots + 4u + 1$
c_8	$u^{24} + 4u^{23} + \cdots + 2u + 1$
c_9	$u^{24} - 4u^{23} + \cdots + 2u + 1$
c_{10}	$u^{24} - 12u^{22} + \cdots - 4u + 1$
c_{11}	$u^{24} + 2u^{23} + \cdots - 4u + 1$
c_{12}	$u^{24} + 4u^{23} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{24} + 24y^{23} + \cdots - 12y + 1$
c_2, c_6	$y^{24} + 8y^{23} + \cdots + 16y + 1$
c_3	$y^{24} - 8y^{23} + \cdots + 6y + 1$
c_4, c_{10}	$y^{24} - 24y^{23} + \cdots - 18y + 1$
c_7, c_{11}	$y^{24} + 18y^{23} + \cdots + 20y + 1$
c_8	$y^{24} + 2y^{23} + \cdots - 16y + 1$
c_9, c_{12}	$y^{24} + 20y^{23} + \cdots + 18y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.823818 + 0.509047I$ $a = -1.15705 + 1.09651I$ $b = 1.35585 - 0.43774I$	$0.80666 - 2.12791I$	$2.15801 - 0.79148I$
$u = 0.823818 - 0.509047I$ $a = -1.15705 - 1.09651I$ $b = 1.35585 + 0.43774I$	$0.80666 + 2.12791I$	$2.15801 + 0.79148I$
$u = 0.473473 + 0.685310I$ $a = -0.877298 - 0.310074I$ $b = -0.490075 - 0.095328I$	$-0.54830 + 4.66085I$	$-1.08361 - 5.65635I$
$u = 0.473473 - 0.685310I$ $a = -0.877298 + 0.310074I$ $b = -0.490075 + 0.095328I$	$-0.54830 - 4.66085I$	$-1.08361 + 5.65635I$
$u = 0.758095 + 0.295027I$ $a = -1.21367 + 2.41142I$ $b = 1.11619 - 1.69292I$	$5.77004 - 1.21860I$	$2.61859 + 2.76979I$
$u = 0.758095 - 0.295027I$ $a = -1.21367 - 2.41142I$ $b = 1.11619 + 1.69292I$	$5.77004 + 1.21860I$	$2.61859 - 2.76979I$
$u = -0.737422 + 0.270431I$ $a = 0.99601 + 2.53886I$ $b = -0.83832 - 1.79310I$	$5.49811 + 7.28891I$	$1.57018 - 7.60427I$
$u = -0.737422 - 0.270431I$ $a = 0.99601 - 2.53886I$ $b = -0.83832 + 1.79310I$	$5.49811 - 7.28891I$	$1.57018 + 7.60427I$
$u = 1.230220 + 0.165715I$ $a = 1.56523 - 0.80023I$ $b = -0.998645 - 0.495374I$	$-3.13217 - 7.04885I$	$-10.08631 + 8.53609I$
$u = 1.230220 - 0.165715I$ $a = 1.56523 + 0.80023I$ $b = -0.998645 + 0.495374I$	$-3.13217 + 7.04885I$	$-10.08631 - 8.53609I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.248890+0.140758I$ $a=-1.67717-0.58824I$ $b=\ \ 1.045980-0.558472I$	$-2.65725+1.83677I$	$-9.00337-2.42633I$
$u=-1.248890-0.140758I$ $a=-1.67717+0.58824I$ $b=\ \ 1.045980+0.558472I$	$-2.65725-1.83677I$	$-9.00337+2.42633I$
$u=\ \ 1.306530+0.276619I$ $a=\ \ 0.892790-0.585095I$ $b=-0.765890-0.528255I$	$-6.28435-2.31851I$	$-10.73720+0.38540I$
$u=\ \ 1.306530-0.276619I$ $a=\ \ 0.892790+0.585095I$ $b=-0.765890+0.528255I$	$-6.28435+2.31851I$	$-10.73720-0.38540I$
$u=-1.349590+0.122631I$ $a=-1.312060-0.046641I$ $b=\ \ 0.899698-0.807863I$	$-4.88019+3.93694I$	$-6.25559-11.08565I$
$u=-1.349590-0.122631I$ $a=-1.312060+0.046641I$ $b=\ \ 0.899698+0.807863I$	$-4.88019-3.93694I$	$-6.25559+11.08565I$
$u=-0.483335+0.284939I$ $a=\ \ 0.25078+2.19288I$ $b=-0.225267-0.736854I$	$-0.76787+3.87710I$	$-7.41482-9.46815I$
$u=-0.483335-0.284939I$ $a=\ \ 0.25078-2.19288I$ $b=-0.225267+0.736854I$	$-0.76787-3.87710I$	$-7.41482+9.46815I$
$u=-0.359627+0.226494I$ $a=\ \ 1.96137-1.27534I$ $b=\ \ 0.390874+0.113977I$	$0.332844-0.265238I$	$-2.87378-2.01816I$
$u=-0.359627-0.226494I$ $a=\ \ 1.96137+1.27534I$ $b=\ \ 0.390874-0.113977I$	$0.332844+0.265238I$	$-2.87378+2.01816I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.36061 + 0.80604I$ $a = -0.450682 - 0.111904I$ $b = 0.716997 + 0.541360I$	$3.41356 - 2.24735I$	$-0.68594 + 5.13502I$
$u = 1.36061 - 0.80604I$ $a = -0.450682 + 0.111904I$ $b = 0.716997 - 0.541360I$	$3.41356 + 2.24735I$	$-0.68594 - 5.13502I$
$u = -1.77389 + 0.41695I$ $a = 0.021740 - 0.361154I$ $b = -0.207399 + 0.809528I$	$2.44892 - 4.49806I$	$0. + 7.60537I$
$u = -1.77389 - 0.41695I$ $a = 0.021740 + 0.361154I$ $b = -0.207399 - 0.809528I$	$2.44892 + 4.49806I$	$0. - 7.60537I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^{24} - 8u^{23} + \cdots - 16u + 1)(u^{119} + 35u^{118} + \cdots - 7880u - 289)$
c_2	$(u^{24} + 4u^{22} + \cdots + 8u^2 + 1)(u^{119} - 5u^{118} + \cdots + 46u + 17)$
c_3	$(u^{24} - 4u^{22} + \cdots - 4u + 1)(u^{119} + u^{118} + \cdots - 1436808u + 659257)$
c_4	$(u^{24} - 12u^{22} + \cdots + 4u + 1)(u^{119} - u^{118} + \cdots + 4696u + 4367)$
c_6	$(u^{24} + 4u^{22} + \cdots + 8u^2 + 1)(u^{119} - 5u^{118} + \cdots + 46u + 17)$
c_7	$(u^{24} - 2u^{23} + \cdots + 4u + 1)(u^{119} - 3u^{118} + \cdots + 103202u + 32411)$
c_8	$(u^{24} + 4u^{23} + \cdots + 2u + 1)(u^{119} - 3u^{118} + \cdots + 64836u - 22801)$
c_9	$(u^{24} - 4u^{23} + \cdots + 2u + 1)(u^{119} - 5u^{118} + \cdots + 3020u + 193)$
c_{10}	$(u^{24} - 12u^{22} + \cdots - 4u + 1)(u^{119} - u^{118} + \cdots + 4696u + 4367)$
c_{11}	$(u^{24} + 2u^{23} + \cdots - 4u + 1)(u^{119} - 3u^{118} + \cdots + 103202u + 32411)$
c_{12}	$(u^{24} + 4u^{23} + \cdots - 2u + 1)(u^{119} - 5u^{118} + \cdots + 3020u + 193)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{24} + 24y^{23} + \cdots - 12y + 1)$ $\cdot (y^{119} + 107y^{118} + \cdots + 4464332y - 83521)$
c_2, c_6	$(y^{24} + 8y^{23} + \cdots + 16y + 1)(y^{119} + 35y^{118} + \cdots - 7880y - 289)$
c_3	$(y^{24} - 8y^{23} + \cdots + 6y + 1)$ $\cdot (y^{119} + 27y^{118} + \cdots - 1873336698762y - 434619792049)$
c_4, c_{10}	$(y^{24} - 24y^{23} + \cdots - 18y + 1)$ $\cdot (y^{119} - 89y^{118} + \cdots + 330458690y - 19070689)$
c_7, c_{11}	$(y^{24} + 18y^{23} + \cdots + 20y + 1)$ $\cdot (y^{119} + 77y^{118} + \cdots - 37961568944y - 1050472921)$
c_8	$(y^{24} + 2y^{23} + \cdots - 16y + 1)$ $\cdot (y^{119} - 23y^{118} + \cdots - 50998608552y - 519885601)$
c_9, c_{12}	$(y^{24} + 20y^{23} + \cdots + 18y + 1)(y^{119} + 83y^{118} + \cdots - 617994y - 37249)$