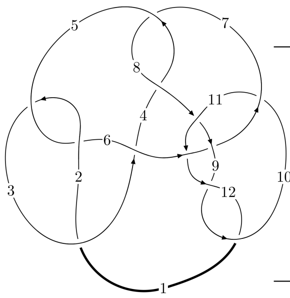
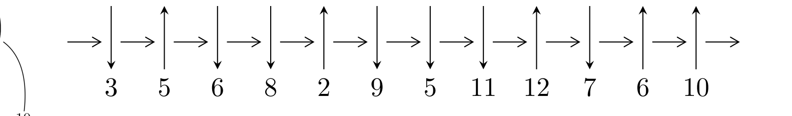
$12n_{0032}$ ($K12n_{0032}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle &-4.78378 \times 10^{254} u^{64} + 1.08998 \times 10^{255} u^{63} + \cdots + 3.15176 \times 10^{257} b - 2.19432 \times 10^{258}, \\ &3.69307 \times 10^{254} u^{64} + 2.76585 \times 10^{254} u^{63} + \cdots + 6.30351 \times 10^{257} a + 1.47988 \times 10^{259}, \\ &u^{65} - 2u^{64} + \cdots + 4096u + 4096 \rangle \\ I_2^u = \langle &-u^4 + 2u^3 + u^2 + b - 3u,\ 3u^4 - 3u^3 - 7u^2 + a + 5u + 4,\ u^5 - u^4 - 2u^3 + u^2 + u + 1 \rangle \end{aligned}$$

$$\begin{aligned} I_1^v = \langle &a,\ 164522v^{11} - 355934v^{10} + \cdots + 707733b + 176501, \\ &v^{12} - 3v^{11} + 3v^{10} - 18v^9 + 31v^8 + 29v^7 - 31v^6 + 9v^5 + 19v^4 - 5v^3 - 4v^2 - v + 1 \rangle \end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 82 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. $\boldsymbol{I_1^u = \langle -4.78 \times 10^{254} u^{64} + 1.09 \times 10^{255} u^{63} + \cdots + 3.15 \times 10^{257} b - 2.19 \times 10^{258},\ 3.69 \times 10^{254} u^{64} + 2.77 \times 10^{254} u^{63} + \cdots + 6.30 \times 10^{257} a + 1.48 \times 10^{259},\ u^{65} - 2u^{64} + \cdots + 4096u + 4096 \rangle}$

(i) Arc colorings

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

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.000585875u^{64} - 0.000438779u^{63} + \cdots + 20.3734u - 23.4770 \\ 0.00151782u^{64} - 0.00345832u^{63} + \cdots + 9.59064u + 6.96221 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0000458644u^{64} - 0.000173442u^{63} + \cdots + 1.67151u - 5.60504 \\ 0.0000363689u^{64} - 0.000165732u^{63} + \cdots + 2.08385u - 0.210615 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.000476569u^{64} - 0.000749697u^{63} + \cdots + 3.33404u + 5.48921 \\ -0.0000745146u^{64} + 0.000168353u^{63} + \cdots - 0.709852u - 0.337516 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.00116546u^{64} - 0.00414819u^{63} + \cdots + 31.2869u - 11.0123 \\ 0.00138687u^{64} - 0.00313302u^{63} + \cdots + 8.32770u + 7.09279 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.000390199u^{64} + 0.000564940u^{63} + \cdots - 0.279557u - 4.94851 \\ 0.000137437u^{64} - 0.000304135u^{63} + \cdots + 2.61125u + 0.546810 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.000390199u^{64} + 0.000564940u^{63} + \cdots - 0.279557u - 4.94851 \\ 0.000398870u^{64} - 0.000884646u^{63} + \cdots + 5.09202u + 1.42933 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.000327023u^{64} + 0.000433323u^{63} + \cdots - 1.25857u - 4.99343 \\ 0.000149546u^{64} - 0.000316374u^{63} + \cdots + 2.07547u + 0.495780 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.000931941u^{64} - 0.00389710u^{63} + \cdots + 29.9641u - 16.5148 \\ 0.00151782u^{64} - 0.00345832u^{63} + \cdots + 9.59064u + 6.96221 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0401453u^{64} - 0.0971031u^{63} + \cdots + 376.505u + 118.641$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{65} + 18u^{64} + \cdots - 47u - 1$
c_2, c_5	$u^{65} + 8u^{64} + \cdots + 5u + 1$
c_3	$u^{65} - 8u^{64} + \cdots + 103537045u + 13657673$
c_4, c_7	$u^{65} - 2u^{64} + \cdots + 4096u + 4096$
c_6	$u^{65} - 4u^{64} + \cdots - 3u + 1$
c_8	$u^{65} - 11u^{64} + \cdots - 192u + 32$
c_9, c_{12}	$u^{65} + 8u^{64} + \cdots + 3u + 1$
c_{10}	$u^{65} + 4u^{64} + \cdots - 606921u + 85049$
c_{11}	$u^{65} + 10u^{64} + \cdots + 497u + 101$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{65} + 66y^{64} + \cdots + 213y - 1$
c_2, c_5	$y^{65} + 18y^{64} + \cdots - 47y - 1$
c_3	$y^{65} + 114y^{64} + \cdots - 13102594991519615y - 186532031774929$
c_4, c_7	$y^{65} + 60y^{64} + \cdots - 134217728y - 16777216$
c_6	$y^{65} + 2y^{64} + \cdots - 19y - 1$
c_8	$y^{65} + 27y^{64} + \cdots - 52736y - 1024$
c_9, c_{12}	$y^{65} - 58y^{64} + \cdots - 4257y - 1$
c_{10}	$y^{65} + 4y^{64} + \cdots + 132226628699y - 7233332401$
c_{11}	$y^{65} - 72y^{64} + \cdots + 1225295y - 10201$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.130385 + 0.943634I$ $a = 0.76665 + 2.06572I$ $b = -0.514674 - 0.553942I$	$-0.74329 - 4.73729I$	$-2.00000 + 8.64739I$
$u = 0.130385 - 0.943634I$ $a = 0.76665 - 2.06572I$ $b = -0.514674 + 0.553942I$	$-0.74329 + 4.73729I$	$-2.00000 - 8.64739I$
$u = 0.887268 + 0.125733I$ $a = -0.179409 - 1.032200I$ $b = 0.318940 + 0.297442I$	$1.48232 - 4.00344I$	$-0.95634 + 8.48185I$
$u = 0.887268 - 0.125733I$ $a = -0.179409 + 1.032200I$ $b = 0.318940 - 0.297442I$	$1.48232 + 4.00344I$	$-0.95634 - 8.48185I$
$u = 0.668516 + 0.588632I$ $a = 1.56956 - 1.46497I$ $b = 0.016939 + 1.169930I$	$3.65615 - 1.42936I$	$6.46603 + 3.32743I$
$u = 0.668516 - 0.588632I$ $a = 1.56956 + 1.46497I$ $b = 0.016939 - 1.169930I$	$3.65615 + 1.42936I$	$6.46603 - 3.32743I$
$u = -0.802999$ $a = 0.258328$ $b = 0.781641$	-1.43422	-8.16770
$u = 0.243832 + 0.761247I$ $a = 1.34826 - 1.30971I$ $b = -0.250649 + 0.069598I$	$1.88543 + 1.32823I$	$3.63769 - 3.79947I$
$u = 0.243832 - 0.761247I$ $a = 1.34826 + 1.30971I$ $b = -0.250649 - 0.069598I$	$1.88543 - 1.32823I$	$3.63769 + 3.79947I$
$u = -0.607968 + 0.481302I$ $a = 0.149356 + 0.154741I$ $b = 1.044290 - 0.031607I$	$-1.68242 - 0.00290I$	$-4.75043 - 0.81603I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.607968 - 0.481302I$ $a = \quad 0.149356 - 0.154741I$ $b = \quad 1.044290 + 0.031607I$	$-1.68242 + 0.00290I$	$-4.75043 + 0.81603I$
$u = -0.031117 + 0.710250I$ $a = \quad 1.88874 + 1.21810I$ $b = -0.608662 - 0.271807I$	$-0.54684 + 1.46329I$	$-1.59201 - 1.40388I$
$u = -0.031117 - 0.710250I$ $a = \quad 1.88874 - 1.21810I$ $b = -0.608662 + 0.271807I$	$-0.54684 - 1.46329I$	$-1.59201 + 1.40388I$
$u = -0.704902 + 0.035674I$ $a = \quad 1.00315 + 1.49097I$ $b = \quad 0.615020 - 0.093383I$	$1.30008 - 0.99581I$	$-3.39411 - 0.67872I$
$u = -0.704902 - 0.035674I$ $a = \quad 1.00315 - 1.49097I$ $b = \quad 0.615020 + 0.093383I$	$1.30008 + 0.99581I$	$-3.39411 + 0.67872I$
$u = \quad 0.536940 + 0.442415I$ $a = \quad 0.096152 + 0.318851I$ $b = \quad 0.948518 - 0.522416I$	$-2.50902 + 1.89252I$	$-7.42573 - 0.50006I$
$u = \quad 0.536940 - 0.442415I$ $a = \quad 0.096152 - 0.318851I$ $b = \quad 0.948518 + 0.522416I$	$-2.50902 - 1.89252I$	$-7.42573 + 0.50006I$
$u = -0.423794 + 0.531866I$ $a = \quad 1.09298 - 3.83683I$ $b = -1.83672 - 0.52554I$	$1.19925 + 1.20786I$	$13.02298 - 5.31257I$
$u = -0.423794 - 0.531866I$ $a = \quad 1.09298 + 3.83683I$ $b = -1.83672 + 0.52554I$	$1.19925 - 1.20786I$	$13.02298 + 5.31257I$
$u = -0.584385 + 0.334144I$ $a = \quad 0.118976 + 0.116953I$ $b = -0.863516 + 0.470481I$	$-0.48772 + 4.09297I$	$-7.37755 - 9.24327I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.584385 - 0.334144I$ $a = 0.118976 - 0.116953I$ $b = -0.863516 - 0.470481I$	$-0.48772 - 4.09297I$	$-7.37755 + 9.24327I$
$u = -0.340196 + 0.558280I$ $a = 0.987313 + 0.431504I$ $b = -0.136703 - 0.358878I$	$-0.33530 + 1.50733I$	$-2.98038 - 4.24113I$
$u = -0.340196 - 0.558280I$ $a = 0.987313 - 0.431504I$ $b = -0.136703 + 0.358878I$	$-0.33530 - 1.50733I$	$-2.98038 + 4.24113I$
$u = 0.462414 + 0.447292I$ $a = 0.117142 + 0.093138I$ $b = -1.175610 + 0.714758I$	$0.05754 + 7.13285I$	$-1.292669 + 0.043034I$
$u = 0.462414 - 0.447292I$ $a = 0.117142 - 0.093138I$ $b = -1.175610 - 0.714758I$	$0.05754 - 7.13285I$	$-1.292669 - 0.043034I$
$u = -0.237497 + 0.569452I$ $a = 0.98989 + 4.44821I$ $b = 0.067363 - 1.017050I$	$2.38609 - 2.85839I$	$7.30042 - 0.29630I$
$u = -0.237497 - 0.569452I$ $a = 0.98989 - 4.44821I$ $b = 0.067363 + 1.017050I$	$2.38609 + 2.85839I$	$7.30042 + 0.29630I$
$u = 1.356580 + 0.325626I$ $a = 0.0929425 - 0.0475878I$ $b = 0.601262 - 0.221151I$	$-4.31980 - 4.20818I$	0
$u = 1.356580 - 0.325626I$ $a = 0.0929425 + 0.0475878I$ $b = 0.601262 + 0.221151I$	$-4.31980 + 4.20818I$	0
$u = -0.324505 + 0.474102I$ $a = 2.11235 + 9.22641I$ $b = 2.59859 - 1.54012I$	$1.37708 + 1.55327I$	$81.0765 + 4.2253I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.324505-0.474102I$ $a=\ \ 2.11235-9.22641I$ $b=\ \ 2.59859+1.54012I$	$1.37708-1.55327I$	$81.0765-4.2253I$
$u=\ \ 0.361073+0.261174I$ $a=\ \ 2.01834-0.84744I$ $b=-0.211431-0.525368I$	$1.90413+1.10524I$	$1.74598-1.88050I$
$u=\ \ 0.361073-0.261174I$ $a=\ \ 2.01834+0.84744I$ $b=-0.211431+0.525368I$	$1.90413-1.10524I$	$1.74598+1.88050I$
$u=-0.33997+1.55682I$ $a=\ \ 0.396931+0.958804I$ $b=-0.35203-1.74037I$	$6.96782+4.95648I$	0
$u=-0.33997-1.55682I$ $a=\ \ 0.396931-0.958804I$ $b=-0.35203+1.74037I$	$6.96782-4.95648I$	0
$u=\ \ 0.12238+1.58993I$ $a=\ \ 0.326507-1.039120I$ $b=-0.71396+1.78796I$	$7.32759+1.41648I$	0
$u=\ \ 0.12238-1.58993I$ $a=\ \ 0.326507+1.039120I$ $b=-0.71396-1.78796I$	$7.32759-1.41648I$	0
$u=\ \ 0.19403+1.60184I$ $a=-0.231654-1.153400I$ $b=\ \ 0.57265+1.52102I$	$4.63170-9.18200I$	0
$u=\ \ 0.19403-1.60184I$ $a=-0.231654+1.153400I$ $b=\ \ 0.57265-1.52102I$	$4.63170+9.18200I$	0
$u=-0.11845+1.68248I$ $a=-1.083650+0.136637I$ $b=\ \ 3.97406+0.12574I$	$9.32058+3.26408I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.11845 - 1.68248I$ $a = -1.083650 - 0.136637I$ $b = 3.97406 - 0.12574I$	$9.32058 - 3.26408I$	0
$u = -0.38021 + 1.66959I$ $a = -0.339909 - 0.746548I$ $b = -0.176201 + 1.278650I$	$4.26944 + 0.46934I$	0
$u = -0.38021 - 1.66959I$ $a = -0.339909 + 0.746548I$ $b = -0.176201 - 1.278650I$	$4.26944 - 0.46934I$	0
$u = 0.46996 + 1.65519I$ $a = -0.068809 + 1.192120I$ $b = -0.386126 - 1.328800I$	$7.48257 - 9.61839I$	0
$u = 0.46996 - 1.65519I$ $a = -0.068809 - 1.192120I$ $b = -0.386126 + 1.328800I$	$7.48257 + 9.61839I$	0
$u = -0.25917 + 1.70792I$ $a = 0.092890 - 1.145830I$ $b = -0.179693 + 1.268370I$	$8.03127 + 3.06347I$	0
$u = -0.25917 - 1.70792I$ $a = 0.092890 + 1.145830I$ $b = -0.179693 - 1.268370I$	$8.03127 - 3.06347I$	0
$u = 1.79527 + 0.04387I$ $a = 0.0775738 + 0.0854124I$ $b = -0.31338 + 1.67113I$	$8.03839 + 7.65970I$	0
$u = 1.79527 - 0.04387I$ $a = 0.0775738 - 0.0854124I$ $b = -0.31338 - 1.67113I$	$8.03839 - 7.65970I$	0
$u = 0.24346 + 1.80056I$ $a = -0.445122 + 0.716665I$ $b = -0.989214 - 0.963624I$	$12.17050 - 5.84377I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.24346 - 1.80056I$ $a = -0.445122 - 0.716665I$ $b = -0.989214 + 0.963624I$	$12.17050 + 5.84377I$	0
$u = 0.00594 + 1.82235I$ $a = -0.314626 - 0.803941I$ $b = -0.90000 + 1.16024I$	$12.34330 - 0.87809I$	0
$u = 0.00594 - 1.82235I$ $a = -0.314626 + 0.803941I$ $b = -0.90000 - 1.16024I$	$12.34330 + 0.87809I$	0
$u = -1.81397 + 0.20782I$ $a = 0.0729012 + 0.0880981I$ $b = 0.01065 + 1.57570I$	$7.91932 + 0.95011I$	0
$u = -1.81397 - 0.20782I$ $a = 0.0729012 - 0.0880981I$ $b = 0.01065 - 1.57570I$	$7.91932 - 0.95011I$	0
$u = 0.07790 + 1.85868I$ $a = -0.234843 + 0.882842I$ $b = 0.13594 - 1.69367I$	$9.02288 + 4.28735I$	0
$u = 0.07790 - 1.85868I$ $a = -0.234843 - 0.882842I$ $b = 0.13594 + 1.69367I$	$9.02288 - 4.28735I$	0
$u = 0.83937 + 1.67276I$ $a = 0.323244 - 1.110800I$ $b = 1.22877 + 1.81894I$	$12.9811 - 16.7369I$	0
$u = 0.83937 - 1.67276I$ $a = 0.323244 + 1.110800I$ $b = 1.22877 - 1.81894I$	$12.9811 + 16.7369I$	0
$u = -0.91937 + 1.70937I$ $a = -0.299797 - 0.734642I$ $b = -1.06334 + 1.23089I$	$12.4197 + 8.6105I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.91937-1.70937I$ $a=-0.299797+0.734642I$ $b=-1.06334-1.23089I$	$12.4197-8.6105I$	0
$u=-0.72464+1.81573I$ $a=\ \ 0.208060+1.047760I$ $b=\ \ 1.06731-1.94103I$	$14.1227+9.9944I$	0
$u=-0.72464-1.81573I$ $a=\ \ 0.208060-1.047760I$ $b=\ \ 1.06731+1.94103I$	$14.1227-9.9944I$	0
$u=\ \ 0.81635+1.85467I$ $a=-0.281254+0.712321I$ $b=-0.91922-1.44444I$	$13.66850-1.78524I$	0
$u=\ \ 0.81635-1.85467I$ $a=-0.281254-0.712321I$ $b=-0.91922+1.44444I$	$13.66850+1.78524I$	0

II. $I_2^u = \langle -u^4+2u^3+u^2+b-3u,\ 3u^4-3u^3-7u^2+a+5u+4,\ u^5-u^4-2u^3+u^2+u+1\rangle$

(i) Arc colorings

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

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -3u^4+3u^3+7u^2-5u-4 \\ u^4-2u^3-u^2+3u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^2+1 \\ -u^4 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -2u^4+u^3+6u^2-2u-5 \\ u^4-2u^3-2u^2+3u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3+2u \\ -u^4-u^3+u^2+2u+1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^3+2u \\ -2u^4-u^3+2u^2+3u+2 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -2u^4+u^3+6u^2-2u-4 \\ u^4-2u^3-u^2+3u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 24u^4-21u^3-27u^2+28u-11$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^5 - 3u^4 + 4u^3 - u^2 - u + 1$
c_2	$u^5 - u^4 + 2u^3 - u^2 + u - 1$
c_3, c_4	$u^5 + u^4 - 2u^3 - u^2 + u - 1$
c_5	$u^5 + u^4 + 2u^3 + u^2 + u + 1$
c_6	$u^5 - 5u^4 + 8u^3 - 3u^2 - u - 1$
c_7	$u^5 - u^4 - 2u^3 + u^2 + u + 1$
c_8	u^5
c_9	$(u+1)^5$
c_{10}, c_{11}	$u^5 - u^4 + 3u^3 + 8u^2 + 5u + 1$
c_{12}	$(u-1)^5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1$
c_2, c_5	$y^5 + 3y^4 + 4y^3 + y^2 - y - 1$
c_3, c_4, c_7	$y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1$
c_6	$y^5 - 9y^4 + 32y^3 - 35y^2 - 5y - 1$
c_8	y^5
c_9, c_{12}	$(y-1)^5$
c_{10}, c_{11}	$y^5 + 5y^4 + 35y^3 - 32y^2 + 9y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.21774$ $a = 0.454765$ $b = 0.674363$	-0.756147	5.56100
$u = -0.309916 + 0.549911I$ $a = -2.91994 - 5.58105I$ $b = -1.29977 + 2.14694I$	$1.31583 + 1.53058I$	$-21.1516 + 28.1413I$
$u = -0.309916 - 0.549911I$ $a = -2.91994 + 5.58105I$ $b = -1.29977 - 2.14694I$	$1.31583 - 1.53058I$	$-21.1516 - 28.1413I$
$u = 1.41878 + 0.21917I$ $a = 0.192553 - 0.135455I$ $b = 0.462589 - 0.146410I$	$-4.22763 - 4.40083I$	$3.3711 + 20.4276I$
$u = 1.41878 - 0.21917I$ $a = 0.192553 + 0.135455I$ $b = 0.462589 + 0.146410I$	$-4.22763 + 4.40083I$	$3.3711 - 20.4276I$

III. $I_1^v = \langle a,\ 1.65\times10^5 v^{11} - 3.56\times10^5 v^{10} + \cdots + 7.08\times10^5 b + 1.77\times 10^5,\ v^{12} - 3v^{11} + \cdots - v + 1\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -0.232463v^{11} + 0.502921v^{10} + \cdots + 0.152902v - 0.249389 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 1.04198v^{11} - 2.90360v^{10} + \cdots - 1.23849v - 0.574544 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -1.04198v^{11} + 2.90360v^{10} + \cdots + 1.23849v + 1.57454 \\ -1.86146v^{11} + 5.23525v^{10} + \cdots + 2.25349v + 3.04348 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.802746v^{11} - 2.07621v^{10} + \cdots - 0.817216v - 0.266076 \\ 1.62222v^{11} - 4.40786v^{10} + \cdots - 1.83221v - 1.73501 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.332033v^{11} - 0.854010v^{10} + \cdots + 2.53667v - 0.802746 \\ 0.861460v^{11} - 2.23525v^{10} + \cdots + 1.74651v - 2.04348 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.0594066v^{11} + 0.292037v^{10} + \cdots + 3.04900v - 0.453619 \\ 0.861460v^{11} - 2.23525v^{10} + \cdots + 1.74651v - 2.04348 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1.04198v^{11} - 2.90360v^{10} + \cdots - 1.23849v - 1.57454 \\ 1.86146v^{11} - 5.23525v^{10} + \cdots - 2.25349v - 3.04348 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.232463v^{11} + 0.502921v^{10} + \cdots + 0.152902v - 0.249389 \\ -0.232463v^{11} + 0.502921v^{10} + \cdots + 0.152902v - 0.249389 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{142431}{78637}v^{11} - \frac{528010}{78637}v^{10} + \cdots + \frac{712177}{78637}v + \frac{123275}{78637}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_5	$(u^2 - u + 1)^6$
c_2	$(u^2 + u + 1)^6$
c_4, c_7	u^{12}
c_6, c_{11}	$(u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1)^2$
c_8, c_{12}	$(u^6 + u^5 - u^4 - 2u^3 + u + 1)^2$
c_9, c_{10}	$(u^6 - u^5 - u^4 + 2u^3 - u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_5	$(y^2 + y + 1)^6$
c_4, c_7	y^{12}
c_6, c_{11}	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)^2$
c_8, c_9, c_{10} c_{12}	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = -0.834826 + 0.083652I$ $a = 0$ $b = 1.002190 + 0.295542I$	$-1.89061 - 2.95419I$	$-3.63443 + 4.40052I$
$v = -0.834826 - 0.083652I$ $a = 0$ $b = 1.002190 - 0.295542I$	$-1.89061 + 2.95419I$	$-3.63443 - 4.40052I$
$v = 0.489858 + 0.681154I$ $a = 0$ $b = 1.002190 + 0.295542I$	$-1.89061 + 1.10558I$	$-6.39280 - 3.34928I$
$v = 0.489858 - 0.681154I$ $a = 0$ $b = 1.002190 - 0.295542I$	$-1.89061 - 1.10558I$	$-6.39280 + 3.34928I$
$v = 0.458424 + 0.081263I$ $a = 0$ $b = -1.073950 - 0.558752I$	$- 3.66314I$	$2.53591 + 0.53518I$
$v = 0.458424 - 0.081263I$ $a = 0$ $b = -1.073950 + 0.558752I$	$3.66314I$	$2.53591 - 0.53518I$
$v = -0.299588 + 0.356375I$ $a = 0$ $b = -1.073950 - 0.558752I$	$- 7.72290I$	$-2.83009 + 13.30597I$
$v = -0.299588 - 0.356375I$ $a = 0$ $b = -1.073950 + 0.558752I$	$7.72290I$	$-2.83009 - 13.30597I$
$v = -0.82520 + 2.42341I$ $a = 0$ $b = -0.428243 + 0.664531I$	$1.89061 - 2.95419I$	$-3.59610 + 0.35185I$
$v = -0.82520 - 2.42341I$ $a = 0$ $b = -0.428243 - 0.664531I$	$1.89061 + 2.95419I$	$-3.59610 - 0.35185I$

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 2.51133 + 0.49706I$ $a = 0$ $b = -0.428243 - 0.664531I$	$1.89061 - 1.10558I$	$7.91752 + 5.10831I$
$v = 2.51133 - 0.49706I$ $a = 0$ $b = -0.428243 + 0.664531I$	$1.89061 + 1.10558I$	$7.91752 - 5.10831I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^6)(u^5-3u^4+\cdots-u+1)(u^{65}+18u^{64}+\cdots-47u-1)$
c_2	$((u^2+u+1)^6)(u^5-u^4+\cdots+u-1)(u^{65}+8u^{64}+\cdots+5u+1)$
c_3	$(u^2-u+1)^6(u^5+u^4-2u^3-u^2+u-1)$ $\cdot(u^{65}-8u^{64}+\cdots+103537045u+13657673)$
c_4	$u^{12}(u^5+u^4+\cdots+u-1)(u^{65}-2u^{64}+\cdots+4096u+4096)$
c_5	$((u^2-u+1)^6)(u^5+u^4+\cdots+u+1)(u^{65}+8u^{64}+\cdots+5u+1)$
c_6	$(u^5-5u^4+8u^3-3u^2-u-1)(u^6-3u^5+5u^4-4u^3+2u^2-u+1)^2$ $\cdot(u^{65}-4u^{64}+\cdots-3u+1)$
c_7	$u^{12}(u^5-u^4+\cdots+u+1)(u^{65}-2u^{64}+\cdots+4096u+4096)$
c_8	$u^5(u^6+u^5+\cdots+u+1)^2(u^{65}-11u^{64}+\cdots-192u+32)$
c_9	$((u+1)^5)(u^6-u^5+\cdots-u+1)^2(u^{65}+8u^{64}+\cdots+3u+1)$
c_{10}	$(u^5-u^4+3u^3+8u^2+5u+1)(u^6-u^5-u^4+2u^3-u+1)^2$ $\cdot(u^{65}+4u^{64}+\cdots-606921u+85049)$
c_{11}	$(u^5-u^4+3u^3+8u^2+5u+1)(u^6-3u^5+5u^4-4u^3+2u^2-u+1)^2$ $\cdot(u^{65}+10u^{64}+\cdots+497u+101)$
c_{12}	$((u-1)^5)(u^6+u^5+\cdots+u+1)^2(u^{65}+8u^{64}+\cdots+3u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^2+y+1)^6(y^5-y^4+8y^3-3y^2+3y-1)$ $\cdot(y^{65}+66y^{64}+\cdots+213y-1)$
c_2, c_5	$((y^2+y+1)^6)(y^5+3y^4+\cdots-y-1)(y^{65}+18y^{64}+\cdots-47y-1)$
c_3	$(y^2+y+1)^6(y^5-5y^4+8y^3-3y^2-y-1)$ $\cdot(y^{65}+114y^{64}+\cdots-13102594991519615y-186532031774929)$
c_4, c_7	$y^{12}(y^5-5y^4+8y^3-3y^2-y-1)$ $\cdot(y^{65}+60y^{64}+\cdots-134217728y-16777216)$
c_6	$(y^5-9y^4+32y^3-35y^2-5y-1)(y^6+y^5+5y^4+6y^2+3y+1)^2$ $\cdot(y^{65}+2y^{64}+\cdots-19y-1)$
c_8	$y^5(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2$ $\cdot(y^{65}+27y^{64}+\cdots-52736y-1024)$
c_9, c_{12}	$(y-1)^5(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2$ $\cdot(y^{65}-58y^{64}+\cdots-4257y-1)$
c_{10}	$(y^5+5y^4+35y^3-32y^2+9y-1)$ $\cdot(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2$ $\cdot(y^{65}+4y^{64}+\cdots+132226628699y-7233332401)$
c_{11}	$(y^5+5y^4+35y^3-32y^2+9y-1)(y^6+y^5+5y^4+6y^2+3y+1)^2$ $\cdot(y^{65}-72y^{64}+\cdots+1225295y-10201)$