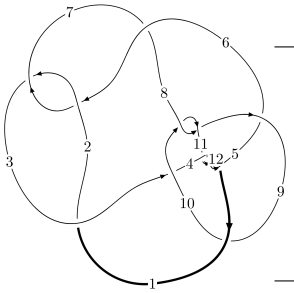
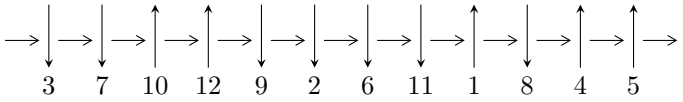
$12a_{0657}$ $(K12a_{0657})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle 2.50294 \times 10^{149} u^{95} + 9.60419 \times 10^{149} u^{94} + \cdots + 5.45085 \times 10^{150} b + 7.14187 \times 10^{150},$
$5.49450 \times 10^{151} u^{95} + 1.92581 \times 10^{152} u^{94} + \cdots + 1.25370 \times 10^{152} a - 2.01529 \times 10^{152},\ u^{96} + 2u^{95} + \cdots + 2u^2$
$I_2^u = \langle b + 1,\ 12u^5 + 2u^4 - 25u^3 + 14u^2 + 23a + 24u - 7,\ u^6 - u^5 - u^4 + 2u^3 - u + 1 \rangle$

* 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. $\boldsymbol{I_1^u = \langle 2.50 \times 10^{149} u^{95} + 9.60 \times 10^{149} u^{94} + \cdots + 5.45 \times 10^{150} b + 7.14 \times 10^{150},\ 5.49 \times 10^{151} u^{95} + 1.93 \times 10^{152} u^{94} + \cdots + 1.25 \times 10^{152} a - 2.02 \times 10^{152},\ u^{96} + 2u^{95} + \cdots + 2u^2 + 1 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.438264u^{95} - 1.53611u^{94} + \cdots - 15.8344u + 1.60748 \\ -0.0459183u^{95} - 0.176196u^{94} + \cdots - 1.02762u - 1.31023 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2.34511u^{95} + 4.53792u^{94} + \cdots - 4.30308u + 6.52258 \\ -0.404134u^{95} - 0.805885u^{94} + \cdots + 3.44265u + 0.468334 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -0.484182u^{95} - 1.71230u^{94} + \cdots - 16.8620u + 0.297252 \\ -0.0459183u^{95} - 0.176196u^{94} + \cdots - 1.02762u - 1.31023 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.948773u^{95} - 2.17227u^{94} + \cdots - 8.96234u - 2.40244 \\ 0.0561849u^{95} - 0.157085u^{94} + \cdots - 1.71285u - 1.05821 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.349694u^{95} - 1.34273u^{94} + \cdots - 15.8119u + 1.44566 \\ -0.0232900u^{95} - 0.115177u^{94} + \cdots - 0.862337u - 1.28587 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.33753u^{95} + 2.83107u^{94} + \cdots - 9.96316u + 6.91198 \\ -0.555614u^{95} - 0.988189u^{94} + \cdots + 2.17596u + 0.0933008 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0756936u^{95} - 0.257581u^{94} + \cdots - 8.23068u + 3.42725 \\ 0.0319373u^{95} + 0.0106439u^{94} + \cdots + 0.274085u - 0.354842 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 3.54301u^{95} + 5.85152u^{94} + \cdots - 26.2365u + 1.81413$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{96} + 30u^{95} + \cdots - 4u + 1$
c_2, c_6	$u^{96} - 2u^{95} + \cdots - 2u + 1$
c_3	$23(23u^{96} - 123u^{95} + \cdots - 9356946u + 601141)$
c_4, c_{11}, c_{12}	$u^{96} - 2u^{95} + \cdots + 2u^2 + 1$
c_5	$23(23u^{96} + 8u^{95} + \cdots - 2521819u + 368999)$
c_8, c_{10}	$u^{96} - 7u^{95} + \cdots - 4077u + 529$
c_9	$u^{96} - 7u^{95} + \cdots - 375360u + 33856$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{96} + 74y^{95} + \cdots + 192y + 1$
c_2, c_6	$y^{96} - 30y^{95} + \cdots + 4y + 1$
c_3	$529 \cdot (529y^{96} - 25893y^{95} + \cdots - 85531184791874y + 361370501881)$
c_4, c_{11}, c_{12}	$y^{96} - 90y^{95} + \cdots + 4y + 1$
c_5	$529 \cdot (529y^{96} + 8354y^{95} + \cdots + 6225987047943y + 136160262001)$
c_8, c_{10}	$y^{96} - 49y^{95} + \cdots - 6810037y + 279841$
c_9	$y^{96} - 39y^{95} + \cdots - 23851958272y + 1146228736$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.664093 + 0.724291I$ $a = -0.152601 + 0.267162I$ $b = 1.098560 + 0.527969I$	$2.46810 - 8.40093I$	0
$u = 0.664093 - 0.724291I$ $a = -0.152601 - 0.267162I$ $b = 1.098560 - 0.527969I$	$2.46810 + 8.40093I$	0
$u = 0.334101 + 0.923275I$ $a = 0.687547 + 0.470553I$ $b = 0.961263 - 0.266335I$	$-3.49169 - 0.00825I$	0
$u = 0.334101 - 0.923275I$ $a = 0.687547 - 0.470553I$ $b = 0.961263 + 0.266335I$	$-3.49169 + 0.00825I$	0
$u = -0.898631 + 0.504886I$ $a = 0.209912 - 0.192977I$ $b = 0.686280 - 0.190169I$	$1.053310 - 0.710227I$	0
$u = -0.898631 - 0.504886I$ $a = 0.209912 + 0.192977I$ $b = 0.686280 + 0.190169I$	$1.053310 + 0.710227I$	0
$u = -0.669520 + 0.697805I$ $a = -0.133986 - 0.212092I$ $b = 1.017990 - 0.549890I$	$3.55019 + 2.39774I$	0
$u = -0.669520 - 0.697805I$ $a = -0.133986 + 0.212092I$ $b = 1.017990 + 0.549890I$	$3.55019 - 2.39774I$	0
$u = 0.443174 + 0.848605I$ $a = 0.630015 + 0.813518I$ $b = 1.171900 - 0.445009I$	$-4.58322 + 7.44174I$	0
$u = 0.443174 - 0.848605I$ $a = 0.630015 - 0.813518I$ $b = 1.171900 + 0.445009I$	$-4.58322 - 7.44174I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.463645 + 0.806284I$ $a = 0.695610 + 1.020350I$ $b = 1.248500 - 0.622548I$	$1.86564 + 13.55260I$	0
$u = 0.463645 - 0.806284I$ $a = 0.695610 - 1.020350I$ $b = 1.248500 + 0.622548I$	$1.86564 - 13.55260I$	0
$u = -0.452945 + 0.802837I$ $a = 0.746322 - 0.987694I$ $b = 1.193980 + 0.629248I$	$2.88022 - 7.47631I$	0
$u = -0.452945 - 0.802837I$ $a = 0.746322 + 0.987694I$ $b = 1.193980 - 0.629248I$	$2.88022 + 7.47631I$	0
$u = -0.384282 + 0.833895I$ $a = 0.799115 - 0.692769I$ $b = 0.996785 + 0.458170I$	$-0.41962 - 4.20352I$	0
$u = -0.384282 - 0.833895I$ $a = 0.799115 + 0.692769I$ $b = 0.996785 - 0.458170I$	$-0.41962 + 4.20352I$	0
$u = 0.792963 + 0.739457I$ $a = 0.028708 + 0.283343I$ $b = 0.971436 + 0.287560I$	$-3.61912 - 2.02495I$	0
$u = 0.792963 - 0.739457I$ $a = 0.028708 - 0.283343I$ $b = 0.971436 - 0.287560I$	$-3.61912 + 2.02495I$	0
$u = -0.488518 + 0.562688I$ $a = -0.161461 + 0.365143I$ $b = 0.306469 - 1.012220I$	$5.59468 - 1.63818I$	$2.91885 + 2.68562I$
$u = -0.488518 - 0.562688I$ $a = -0.161461 - 0.365143I$ $b = 0.306469 + 1.012220I$	$5.59468 + 1.63818I$	$2.91885 - 2.68562I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.322988+0.658130I$ $a=\ 1.37204-0.52486I$ $b=\ 0.498271+0.624414I$	$5.05930-2.23755I$	$2.52582+5.05237I$
$u=-0.322988-0.658130I$ $a=\ 1.37204+0.52486I$ $b=\ 0.498271-0.624414I$	$5.05930+2.23755I$	$2.52582-5.05237I$
$u=-1.26745$ $a=\ 1.06705$ $b=-1.64301$	-1.61828	0
$u=\ 0.466641+0.564477I$ $a=-0.178245-0.425650I$ $b=\ 0.225474+1.073180I$	$5.01127+7.57568I$	$1.49767-8.14095I$
$u=\ 0.466641-0.564477I$ $a=-0.178245+0.425650I$ $b=\ 0.225474-1.073180I$	$5.01127-7.57568I$	$1.49767+8.14095I$
$u=-1.268200+0.059476I$ $a=\ 1.18929+0.81468I$ $b=-1.65731-0.33248I$	$2.12370-4.56403I$	0
$u=-1.268200-0.059476I$ $a=\ 1.18929-0.81468I$ $b=-1.65731+0.33248I$	$2.12370+4.56403I$	0
$u=\ 1.096330+0.643778I$ $a=\ 0.158040+0.346095I$ $b=\ 0.837642+0.052188I$	$-1.26594+5.58854I$	0
$u=\ 1.096330-0.643778I$ $a=\ 0.158040-0.346095I$ $b=\ 0.837642-0.052188I$	$-1.26594-5.58854I$	0
$u=\ 1.290000+0.078493I$ $a=\ 1.01584-1.13931I$ $b=-1.53554+0.46369I$	$2.40735-0.56323I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.290000 - 0.078493I$ $a = 1.01584 + 1.13931I$ $b = -1.53554 - 0.46369I$	$2.40735 + 0.56323I$	0
$u = -0.609114 + 0.334240I$ $a = 0.318331 + 0.157551I$ $b = 0.287889 - 0.332864I$	$1.146790 - 0.591982I$	$6.49485 + 1.54474I$
$u = -0.609114 - 0.334240I$ $a = 0.318331 - 0.157551I$ $b = 0.287889 + 0.332864I$	$1.146790 + 0.591982I$	$6.49485 - 1.54474I$
$u = 0.321236 + 0.613505I$ $a = 1.49841 + 0.44718I$ $b = 0.363298 - 0.635825I$	$4.61231 - 3.82498I$	$1.69669 + 0.30945I$
$u = 0.321236 - 0.613505I$ $a = 1.49841 - 0.44718I$ $b = 0.363298 + 0.635825I$	$4.61231 + 3.82498I$	$1.69669 - 0.30945I$
$u = 1.338900 + 0.124894I$ $a = 0.78918 - 1.77567I$ $b = -1.18956 + 0.83118I$	$-0.06296 + 3.70917I$	0
$u = 1.338900 - 0.124894I$ $a = 0.78918 + 1.77567I$ $b = -1.18956 - 0.83118I$	$-0.06296 - 3.70917I$	0
$u = 1.353990 + 0.016673I$ $a = -0.834167 - 0.766801I$ $b = -1.168080 + 0.080602I$	$1.89369 + 0.02531I$	0
$u = 1.353990 - 0.016673I$ $a = -0.834167 + 0.766801I$ $b = -1.168080 - 0.080602I$	$1.89369 - 0.02531I$	0
$u = 1.360990 + 0.155619I$ $a = 0.63332 - 2.01476I$ $b = -0.98925 + 1.12317I$	$4.77740 + 8.35511I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.360990 - 0.155619I$ $a = 0.63332 + 2.01476I$ $b = -0.98925 - 1.12317I$	$4.77740 - 8.35511I$	0
$u = 0.417961 + 0.467588I$ $a = 0.077572 - 0.589308I$ $b = -0.094014 + 0.749714I$	$-1.06119 + 3.30659I$	$-3.60035 - 9.06831I$
$u = 0.417961 - 0.467588I$ $a = 0.077572 + 0.589308I$ $b = -0.094014 - 0.749714I$	$-1.06119 - 3.30659I$	$-3.60035 + 9.06831I$
$u = -1.370750 + 0.094332I$ $a = 0.58842 + 1.75045I$ $b = -0.938648 - 0.549645I$	$3.04859 - 2.23764I$	0
$u = -1.370750 - 0.094332I$ $a = 0.58842 - 1.75045I$ $b = -0.938648 + 0.549645I$	$3.04859 + 2.23764I$	0
$u = -1.373450 + 0.150990I$ $a = 0.54418 + 1.95382I$ $b = -0.863399 - 1.075360I$	$5.36707 - 2.82780I$	0
$u = -1.373450 - 0.150990I$ $a = 0.54418 - 1.95382I$ $b = -0.863399 + 1.075360I$	$5.36707 + 2.82780I$	0
$u = 1.41758 + 0.04983I$ $a = 2.13899 - 2.92262I$ $b = -0.820464 + 0.008321I$	$6.72398 - 2.80070I$	0
$u = 1.41758 - 0.04983I$ $a = 2.13899 + 2.92262I$ $b = -0.820464 - 0.008321I$	$6.72398 + 2.80070I$	0
$u = -1.41743 + 0.05890I$ $a = 1.89221 + 2.25946I$ $b = -0.735464 - 0.033098I$	$6.92096 - 2.88647I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.41743-0.05890I$ $a=\ \ 1.89221-2.25946I$ $b=-0.735464+0.033098I$	$6.92096+2.88647I$	0
$u=-0.196684+0.513849I$ $a=-0.354453+0.932054I$ $b=-1.132040-0.750035I$	$-0.11950-5.94878I$	$-5.44478+9.17655I$
$u=-0.196684-0.513849I$ $a=-0.354453-0.932054I$ $b=-1.132040+0.750035I$	$-0.11950+5.94878I$	$-5.44478-9.17655I$
$u=\ \ 0.221448+0.498623I$ $a=-0.290394-0.994151I$ $b=-0.989290+0.743082I$	$0.333283+0.495333I$	$-3.97583-3.89260I$
$u=\ \ 0.221448-0.498623I$ $a=-0.290394+0.994151I$ $b=-0.989290-0.743082I$	$0.333283-0.495333I$	$-3.97583+3.89260I$
$u=-1.42650+0.28467I$ $a=\ \ 0.487682-1.290430I$ $b=\ \ 0.798971+0.614933I$	$10.09940+0.42622I$	0
$u=-1.42650-0.28467I$ $a=\ \ 0.487682+1.290430I$ $b=\ \ 0.798971-0.614933I$	$10.09940-0.42622I$	0
$u=\ \ 1.44291+0.28759I$ $a=\ \ 0.39822+1.39202I$ $b=\ \ 0.868280-0.653053I$	$10.67610+5.79876I$	0
$u=\ \ 1.44291-0.28759I$ $a=\ \ 0.39822-1.39202I$ $b=\ \ 0.868280+0.653053I$	$10.67610-5.79876I$	0
$u=-1.46807+0.17113I$ $a=-0.31675+1.45982I$ $b=\ \ 0.153260-1.105640I$	$5.08717-5.68044I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.46807-0.17113I$ $a=-0.31675-1.45982I$ $b=\ \ 0.153260+1.105640I$	$5.08717+5.68044I$	0
$u=-1.47757+0.19945I$ $a=-0.69290+1.56154I$ $b=\ \ 0.382716-1.339380I$	$11.3102-10.3824I$	0
$u=-1.47757-0.19945I$ $a=-0.69290-1.56154I$ $b=\ \ 0.382716+1.339380I$	$11.3102+10.3824I$	0
$u=\ \ 1.48389+0.19736I$ $a=-0.71198-1.46988I$ $b=\ \ 0.433648+1.280640I$	$11.98830+4.43121I$	0
$u=\ \ 1.48389-0.19736I$ $a=-0.71198+1.46988I$ $b=\ \ 0.433648-1.280640I$	$11.98830-4.43121I$	0
$u=-0.019785+0.498386I$ $a=-0.867519+0.145622I$ $b=-1.51285-0.08023I$	$-1.45387+2.58739I$	$-7.88342-2.89181I$
$u=-0.019785-0.498386I$ $a=-0.867519-0.145622I$ $b=-1.51285+0.08023I$	$-1.45387-2.58739I$	$-7.88342+2.89181I$
$u=-0.122494+0.481151I$ $a=-0.714382+0.841174I$ $b=-1.290580-0.423315I$	$-4.60245-1.56147I$	$-13.5432+4.6448I$
$u=-0.122494-0.481151I$ $a=-0.714382-0.841174I$ $b=-1.290580+0.423315I$	$-4.60245+1.56147I$	$-13.5432-4.6448I$
$u=\ \ 1.49943+0.16275I$ $a=-0.427368-1.103110I$ $b=\ \ 0.385106+0.904863I$	$7.94574+2.75539I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.49943 - 0.16275I$ $a = -0.427368 + 1.103110I$ $b = 0.385106 - 0.904863I$	$7.94574 - 2.75539I$	0
$u = -1.48030 + 0.33222I$ $a = -0.065804 - 1.268560I$ $b = 1.099420 + 0.493860I$	$2.38632 - 4.46773I$	0
$u = -1.48030 - 0.33222I$ $a = -0.065804 + 1.268560I$ $b = 1.099420 - 0.493860I$	$2.38632 + 4.46773I$	0
$u = 1.48751 + 0.30794I$ $a = -0.06205 + 1.50463I$ $b = 1.144410 - 0.624455I$	$5.64050 + 8.33802I$	0
$u = 1.48751 - 0.30794I$ $a = -0.06205 - 1.50463I$ $b = 1.144410 + 0.624455I$	$5.64050 - 8.33802I$	0
$u = -1.51878 + 0.10601I$ $a = -0.095323 + 0.663397I$ $b = 0.339093 - 0.482819I$	$4.59539 - 0.33868I$	0
$u = -1.51878 - 0.10601I$ $a = -0.095323 - 0.663397I$ $b = 0.339093 + 0.482819I$	$4.59539 + 0.33868I$	0
$u = 1.50456 + 0.29310I$ $a = -0.20692 + 1.76757I$ $b = 1.27782 - 0.74165I$	$9.2181 + 11.4691I$	0
$u = 1.50456 - 0.29310I$ $a = -0.20692 - 1.76757I$ $b = 1.27782 + 0.74165I$	$9.2181 - 11.4691I$	0
$u = -1.50426 + 0.30859I$ $a = -0.25757 - 1.54880I$ $b = 1.261580 + 0.609340I$	$1.71020 - 11.63330I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.50426-0.30859I$ $a=-0.25757+1.54880I$ $b=\ 1.261580-0.609340I$	$1.71020+11.63330I$	0
$u=-1.50851+0.29342I$ $a=-0.27033-1.78274I$ $b=\ 1.31646+0.73734I$	$8.2521-17.5605I$	0
$u=-1.50851-0.29342I$ $a=-0.27033+1.78274I$ $b=\ 1.31646-0.73734I$	$8.2521+17.5605I$	0
$u=\ 0.388560+0.226499I$ $a=\ 3.47210-1.47453I$ $b=-0.939752-0.290967I$	$1.28524+1.87668I$	$1.39389-10.00654I$
$u=\ 0.388560-0.226499I$ $a=\ 3.47210+1.47453I$ $b=-0.939752+0.290967I$	$1.28524-1.87668I$	$1.39389+10.00654I$
$u=-0.405275+0.182370I$ $a=\ 4.00898+1.36668I$ $b=-1.040670+0.259813I$	$1.05835+3.63480I$	$3.32848+4.63258I$
$u=-0.405275-0.182370I$ $a=\ 4.00898-1.36668I$ $b=-1.040670-0.259813I$	$1.05835-3.63480I$	$3.32848-4.63258I$
$u=\ 0.259608+0.355711I$ $a=\ 1.36832-0.40634I$ $b=-0.162394-0.150466I$	$-1.35358-0.59802I$	$-5.31839-0.10830I$
$u=\ 0.259608-0.355711I$ $a=\ 1.36832+0.40634I$ $b=-0.162394+0.150466I$	$-1.35358+0.59802I$	$-5.31839+0.10830I$
$u=\ 1.55443+0.17460I$ $a=-0.699112-0.633690I$ $b=\ 0.760656+0.693747I$	$11.00460+0.65235I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.55443 - 0.17460I$ $a = -0.699112 + 0.633690I$ $b = \quad 0.760656 - 0.693747I$	$11.00460 - 0.65235I$	0
$u = -1.57253 + 0.17459I$ $a = -0.702518 + 0.492334I$ $b = \quad 0.820732 - 0.598566I$	$10.03080 + 5.18475I$	0
$u = -1.57253 - 0.17459I$ $a = -0.702518 - 0.492334I$ $b = \quad 0.820732 + 0.598566I$	$10.03080 - 5.18475I$	0
$u = \quad 0.149227 + 0.346264I$ $a = -1.08762 - 2.24547I$ $b = -0.988148 + 0.176860I$	$-1.76677 + 0.65508I$	$-4.67837 + 0.58281I$
$u = \quad 0.149227 - 0.346264I$ $a = -1.08762 + 2.24547I$ $b = -0.988148 - 0.176860I$	$-1.76677 - 0.65508I$	$-4.67837 - 0.58281I$
$u = -0.325727$ $a = \quad 6.87271$ $b = -1.07784$	-3.07701	21.8700

II.

$\boldsymbol{I_2^u = \langle b+1,\ 12u^5+2u^4-25u^3+14u^2+23a+24u-7,\ u^6-u^5-u^4+2u^3-u+1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ -u^3+u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.521739u^5 - 0.0869565u^4 + \cdots - 1.04348u + 0.304348 \\ -1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.330813u^5 - 0.0680529u^4 + \cdots + 1.27032u + 0.238185 \\ -0.391304u^5 + 0.434783u^4 + \cdots + 1.21739u + 0.478261 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -0.521739u^5 - 0.0869565u^4 + \cdots - 1.04348u - 0.695652 \\ -1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.262760u^5 - 1.09452u^4 + \cdots - 0.568998u - 0.669187 \\ 0.956522u^5 - 1.17391u^4 + \cdots + 0.913043u - 1.39130 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.521739u^5 - 0.0869565u^4 + \cdots - 1.04348u + 0.304348 \\ -1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0264650u^5 + 0.285444u^4 + \cdots + 0.338374u + 0.500945 \\ -0.608696u^5 + 0.565217u^4 + \cdots + 0.782609u + 0.521739 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.219282u^5 - 0.0793951u^4 + \cdots + 0.482042u + 1.27788 \\ 0.0434783u^5 + 0.173913u^4 + \cdots + 0.0869565u + 0.391304 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{1575}{529}u^5 - \frac{1911}{529}u^4 - \frac{2712}{529}u^3 + \frac{1803}{529}u^2 - \frac{300}{529}u - \frac{4156}{529}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1$
c_2, c_4	$u^6 + u^5 - u^4 - 2u^3 + u + 1$
c_3	$23(23u^6 + 18u^5 + 25u^4 + 8u^3 + 7u^2 + u + 1)$
c_5	$23(23u^6 + 5u^5 - 17u^4 - 10u^3 + 3u^2 + 4u + 1)$
c_6, c_{11}, c_{12}	$u^6 - u^5 - u^4 + 2u^3 - u + 1$
c_7	$u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1$
c_8	$(u-1)^6$
c_9	u^6
c_{10}	$(u+1)^6$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1$
c_2, c_4, c_6 c_{11}, c_{12}	$y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1$
c_3	$529(529y^6 + 826y^5 + 659y^4 + 296y^3 + 83y^2 + 13y + 1)$
c_5	$529(529y^6 - 807y^5 + 527y^4 - 196y^3 + 55y^2 - 10y + 1)$
c_8, c_{10}	$(y - 1)^6$
c_9	y^6

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.002190+0.295542I$ $a=\ \ 0.029335+0.442893I$ $b=-1.00000$	$0.245672-0.924305I$	$-2.62482+0.97831I$
$u=-1.002190-0.295542I$ $a=\ \ 0.029335-0.442893I$ $b=-1.00000$	$0.245672+0.924305I$	$-2.62482-0.97831I$
$u=\ \ 0.428243+0.664531I$ $a=-0.538704-0.781014I$ $b=-1.00000$	$-3.53554-0.92430I$	$-5.29043+1.37115I$
$u=\ \ 0.428243-0.664531I$ $a=-0.538704+0.781014I$ $b=-1.00000$	$-3.53554+0.92430I$	$-5.29043-1.37115I$
$u=\ \ 1.073950+0.558752I$ $a=-0.012370-0.494977I$ $b=-1.00000$	$-1.64493+5.69302I$	$-9.84656-7.30057I$
$u=\ \ 1.073950-0.558752I$ $a=-0.012370+0.494977I$ $b=-1.00000$	$-1.64493-5.69302I$	$-9.84656+7.30057I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)(u^{96}+30u^{95}+\cdots-4u+1)$
c_2	$(u^6+u^5-u^4-2u^3+u+1)(u^{96}-2u^{95}+\cdots-2u+1)$
c_3	$529(23u^6+18u^5+25u^4+8u^3+7u^2+u+1)$ $\cdot(23u^{96}-123u^{95}+\cdots-9356946u+601141)$
c_4	$(u^6+u^5-u^4-2u^3+u+1)(u^{96}-2u^{95}+\cdots+2u^2+1)$
c_5	$529(23u^6+5u^5-17u^4-10u^3+3u^2+4u+1)$ $\cdot(23u^{96}+8u^{95}+\cdots-2521819u+368999)$
c_6	$(u^6-u^5-u^4+2u^3-u+1)(u^{96}-2u^{95}+\cdots-2u+1)$
c_7	$(u^6+3u^5+5u^4+4u^3+2u^2+u+1)(u^{96}+30u^{95}+\cdots-4u+1)$
c_8	$((u-1)^6)(u^{96}-7u^{95}+\cdots-4077u+529)$
c_9	$u^6(u^{96}-7u^{95}+\cdots-375360u+33856)$
c_{10}	$((u+1)^6)(u^{96}-7u^{95}+\cdots-4077u+529)$
c_{11}, c_{12}	$(u^6-u^5-u^4+2u^3-u+1)(u^{96}-2u^{95}+\cdots+2u^2+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y^6+y^5+5y^4+6y^2+3y+1)(y^{96}+74y^{95}+\cdots+192y+1)$
c_2, c_6	$(y^6-3y^5+5y^4-4y^3+2y^2-y+1)(y^{96}-30y^{95}+\cdots+4y+1)$
c_3	$279841(529y^6+826y^5+659y^4+296y^3+83y^2+13y+1)$ $\cdot(529y^{96}-25893y^{95}+\cdots-85531184791874y+361370501881)$
c_4, c_{11}, c_{12}	$(y^6-3y^5+5y^4-4y^3+2y^2-y+1)(y^{96}-90y^{95}+\cdots+4y+1)$
c_5	$279841(529y^6-807y^5+527y^4-196y^3+55y^2-10y+1)$ $\cdot(529y^{96}+8354y^{95}+\cdots+6225987047943y+136160262001)$
c_8, c_{10}	$((y-1)^6)(y^{96}-49y^{95}+\cdots-6810037y+279841)$
c_9	$y^6(y^{96}-39y^{95}+\cdots-2.38520\times10^{10}y+1.14623\times10^9)$