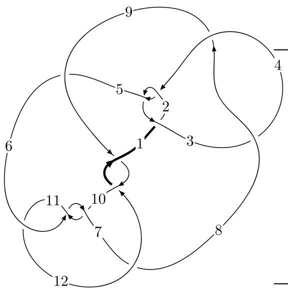
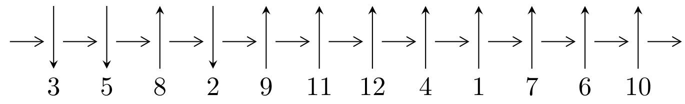
$12a_{0086}$ $(K12a_{0086})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -u^{90} + u^{89} + \cdots + 3u^2 + b,\ -u^{88} + u^{87} + \cdots + a - 3u,\ u^{92} - 2u^{91} + \cdots + 3u - 1\rangle$$
$$I_2^u = \langle -u^2 + b - 1,\ -u^2 + a - 2,\ u^3 + 2u - 1\rangle$$
$$I_3^u = \langle u^3 + u^2 + b + u + 1,\ u^3 + u^2 + a + 2u + 2,\ u^4 + u^3 + 2u^2 + 2u + 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 99 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.

$$\boldsymbol{I_1^u = \langle -u^{90}+u^{89}+\cdots+3u^2+b,\ -u^{88}+u^{87}+\cdots+a-3u,\ u^{92}-2u^{91}+\cdots+3u-1\rangle}$$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{88}-u^{87}+\cdots-6u^2+3u \\ u^{90}-u^{89}+\cdots+6u^3-3u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^3+2u \\ u^3+u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{10}+5u^8+8u^6+3u^4-u^2+1 \\ u^{12}+6u^{10}+12u^8+8u^6+u^4+2u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2u^{88}-u^{87}+\cdots+4u-1 \\ u^{89}+u^{88}+\cdots-2u^2-u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{21}-10u^{19}+\cdots+2u^3-u \\ -u^{23}-11u^{21}+\cdots-2u^3+u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{88}-u^{87}+\cdots-6u^2+3u \\ u^{88}-u^{87}+\cdots+5u^3-3u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^2+1 \\ u^4+2u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^6-3u^4-2u^2+1 \\ -u^8-4u^6-4u^4 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{91}-8u^{90}+\cdots-5u+15$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{92} + 44u^{91} + \cdots + 78u + 1$
c_2, c_4	$u^{92} - 8u^{91} + \cdots + 14u - 1$
c_3, c_8	$u^{92} + u^{91} + \cdots + 192u + 128$
c_5	$u^{92} - 2u^{91} + \cdots + 13397u - 11981$
c_6, c_{10}, c_{11}	$u^{92} - 2u^{91} + \cdots + 3u - 1$
c_7	$u^{92} + 2u^{91} + \cdots + 19896u - 4360$
c_9, c_{12}	$u^{92} + 14u^{91} + \cdots + 3115u + 131$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{92} + 16y^{91} + \cdots - 5674y + 1$
c_2, c_4	$y^{92} - 44y^{91} + \cdots - 78y + 1$
c_3, c_8	$y^{92} - 45y^{91} + \cdots - 438272y + 16384$
c_5	$y^{92} - 10y^{91} + \cdots + 378763105y + 143544361$
c_6, c_{10}, c_{11}	$y^{92} + 86y^{91} + \cdots + y + 1$
c_7	$y^{92} + 30y^{91} + \cdots + 525356144y + 19009600$
c_9, c_{12}	$y^{92} + 74y^{91} + \cdots + 260373y + 17161$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.153909 + 1.134970I$ $a = 0.417347 + 1.214000I$ $b = 1.49588 - 1.44581I$	$1.12873 + 4.25478I$	0
$u = -0.153909 - 1.134970I$ $a = 0.417347 - 1.214000I$ $b = 1.49588 + 1.44581I$	$1.12873 - 4.25478I$	0
$u = -0.178162 + 1.177710I$ $a = -0.495039 - 1.310920I$ $b = -1.68518 + 1.60196I$	$2.58467 - 1.25382I$	0
$u = -0.178162 - 1.177710I$ $a = -0.495039 + 1.310920I$ $b = -1.68518 - 1.60196I$	$2.58467 + 1.25382I$	0
$u = 0.692151 + 0.390660I$ $a = -2.83083 + 0.45729I$ $b = -2.42917 + 0.16265I$	$-1.15801 + 12.77270I$	$5.19545 - 9.98793I$
$u = 0.692151 - 0.390660I$ $a = -2.83083 - 0.45729I$ $b = -2.42917 - 0.16265I$	$-1.15801 - 12.77270I$	$5.19545 + 9.98793I$
$u = -0.655533 + 0.444833I$ $a = -0.568758 + 0.309874I$ $b = -0.165875 + 0.683566I$	$-4.78712 - 0.77055I$	$4.27518 - 2.02219I$
$u = -0.655533 - 0.444833I$ $a = -0.568758 - 0.309874I$ $b = -0.165875 - 0.683566I$	$-4.78712 + 0.77055I$	$4.27518 + 2.02219I$
$u = -0.622505 + 0.481239I$ $a = 0.245787 - 0.637722I$ $b = -0.380467 - 0.619541I$	$-4.93263 - 3.45869I$	$3.45815 + 8.17533I$
$u = -0.622505 - 0.481239I$ $a = 0.245787 + 0.637722I$ $b = -0.380467 + 0.619541I$	$-4.93263 + 3.45869I$	$3.45815 - 8.17533I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.681826 + 0.378269I$ $a = 2.73645 - 0.17651I$ $b = 2.29636 - 0.07821I$	$1.22083 + 7.21067I$	$8.33989 - 6.35791I$
$u = 0.681826 - 0.378269I$ $a = 2.73645 + 0.17651I$ $b = 2.29636 + 0.07821I$	$1.22083 - 7.21067I$	$8.33989 + 6.35791I$
$u = 0.555518 + 0.540981I$ $a = -1.11207 + 2.49940I$ $b = -0.953299 + 0.378073I$	$-1.75174 - 8.58830I$	$3.72994 + 4.13812I$
$u = 0.555518 - 0.540981I$ $a = -1.11207 - 2.49940I$ $b = -0.953299 - 0.378073I$	$-1.75174 + 8.58830I$	$3.72994 - 4.13812I$
$u = -0.666620 + 0.388015I$ $a = -0.958765 - 0.000505I$ $b = -0.754029 + 0.679010I$	$-3.47583 - 6.55474I$	$3.56008 + 7.35236I$
$u = -0.666620 - 0.388015I$ $a = -0.958765 + 0.000505I$ $b = -0.754029 - 0.679010I$	$-3.47583 + 6.55474I$	$3.56008 - 7.35236I$
$u = 0.145987 + 1.225320I$ $a = 0.007933 + 0.249436I$ $b = 0.748621 - 0.760668I$	$-2.36582 + 0.77393I$	0
$u = 0.145987 - 1.225320I$ $a = 0.007933 - 0.249436I$ $b = 0.748621 + 0.760668I$	$-2.36582 - 0.77393I$	0
$u = 0.651996 + 0.392636I$ $a = -3.32272 - 0.41767I$ $b = -2.40704 - 0.36202I$	$-4.32011 + 3.99543I$	$4.12422 - 6.59810I$
$u = 0.651996 - 0.392636I$ $a = -3.32272 + 0.41767I$ $b = -2.40704 + 0.36202I$	$-4.32011 - 3.99543I$	$4.12422 + 6.59810I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.529646 + 0.527281I$ $a = 0.83363 - 2.44550I$ $b = 0.670451 - 0.398275I$	$0.59744 - 3.14929I$	$6.80686 + 0.31636I$
$u = 0.529646 - 0.527281I$ $a = 0.83363 + 2.44550I$ $b = 0.670451 + 0.398275I$	$0.59744 + 3.14929I$	$6.80686 - 0.31636I$
$u = -0.545896 + 0.498041I$ $a = -0.053053 - 0.997688I$ $b = -0.841966 - 0.459143I$	$-3.96124 + 2.53513I$	$1.92062 - 0.95185I$
$u = -0.545896 - 0.498041I$ $a = -0.053053 + 0.997688I$ $b = -0.841966 + 0.459143I$	$-3.96124 - 2.53513I$	$1.92062 + 0.95185I$
$u = -0.625833 + 0.381321I$ $a = 0.834785 + 0.303156I$ $b = 0.802569 - 0.344086I$	$-1.98725 - 2.24402I$	$5.47486 + 2.60472I$
$u = -0.625833 - 0.381321I$ $a = 0.834785 - 0.303156I$ $b = 0.802569 + 0.344086I$	$-1.98725 + 2.24402I$	$5.47486 - 2.60472I$
$u = 0.556284 + 0.474387I$ $a = -0.38833 + 3.14529I$ $b = -0.480167 + 1.085090I$	$-4.69977 - 0.02977I$	$2.52437 + 0.10755I$
$u = 0.556284 - 0.474387I$ $a = -0.38833 - 3.14529I$ $b = -0.480167 - 1.085090I$	$-4.69977 + 0.02977I$	$2.52437 - 0.10755I$
$u = -0.220636 + 1.250340I$ $a = -0.44070 - 1.47175I$ $b = -2.06377 + 1.59068I$	$1.98043 - 5.03762I$	0
$u = -0.220636 - 1.250340I$ $a = -0.44070 + 1.47175I$ $b = -2.06377 - 1.59068I$	$1.98043 + 5.03762I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.164083+1.261680I$ $a=\ 0.65175+1.65425I$ $b=\ 2.23983-2.06975I$	$-4.01978-2.64901I$	0
$u=-0.164083-1.261680I$ $a=\ 0.65175-1.65425I$ $b=\ 2.23983+2.06975I$	$-4.01978+2.64901I$	0
$u=\ 0.192419+1.262480I$ $a=\ 0.0551400-0.1149010I$ $b=-1.019200+0.512780I$	$-2.86556+4.87473I$	0
$u=\ 0.192419-1.262480I$ $a=\ 0.0551400+0.1149010I$ $b=-1.019200-0.512780I$	$-2.86556-4.87473I$	0
$u=\ 0.646126+0.313529I$ $a=\ 1.75378+0.37623I$ $b=\ 1.56532-0.11169I$	$3.18820+3.73788I$	$10.37835-6.18860I$
$u=\ 0.646126-0.313529I$ $a=\ 1.75378-0.37623I$ $b=\ 1.56532+0.11169I$	$3.18820-3.73788I$	$10.37835+6.18860I$
$u=-0.233887+1.270730I$ $a=\ 0.39170+1.45839I$ $b=\ 2.08527-1.50862I$	$0.05201-10.63290I$	0
$u=-0.233887-1.270730I$ $a=\ 0.39170-1.45839I$ $b=\ 2.08527+1.50862I$	$0.05201+10.63290I$	0
$u=-0.557320+0.428223I$ $a=\ 0.386482+0.794648I$ $b=\ 0.785288+0.179548I$	$-2.25038-1.52905I$	$4.54304+4.84070I$
$u=-0.557320-0.428223I$ $a=\ 0.386482-0.794648I$ $b=\ 0.785288-0.179548I$	$-2.25038+1.52905I$	$4.54304-4.84070I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.629600 + 0.259973I$ $a = -1.195540 - 0.301501I$ $b = -1.198360 + 0.315983I$	$2.36633 - 1.56857I$	$9.57501 - 0.35949I$
$u = 0.629600 - 0.259973I$ $a = -1.195540 + 0.301501I$ $b = -1.198360 - 0.315983I$	$2.36633 + 1.56857I$	$9.57501 + 0.35949I$
$u = 0.076396 + 1.320050I$ $a = 0.273441 - 0.089865I$ $b = -0.205489 - 0.776355I$	$-3.46868 + 1.61071I$	0
$u = 0.076396 - 1.320050I$ $a = 0.273441 + 0.089865I$ $b = -0.205489 + 0.776355I$	$-3.46868 - 1.61071I$	0
$u = -0.659928 + 0.077076I$ $a = 2.57388 + 0.32862I$ $b = 2.32497 - 0.07020I$	$4.21134 - 7.37974I$	$11.34871 + 6.94008I$
$u = -0.659928 - 0.077076I$ $a = 2.57388 - 0.32862I$ $b = 2.32497 + 0.07020I$	$4.21134 + 7.37974I$	$11.34871 - 6.94008I$
$u = -0.652326 + 0.044106I$ $a = -2.70896 - 0.22220I$ $b = -2.38718 + 0.02177I$	$5.94549 - 1.85105I$	$14.4520 + 1.6433I$
$u = -0.652326 - 0.044106I$ $a = -2.70896 + 0.22220I$ $b = -2.38718 - 0.02177I$	$5.94549 + 1.85105I$	$14.4520 - 1.6433I$
$u = -0.017316 + 1.356330I$ $a = -0.772933 + 0.352254I$ $b = 0.77425 + 1.27105I$	$-6.60923 - 1.10020I$	0
$u = -0.017316 - 1.356330I$ $a = -0.772933 - 0.352254I$ $b = 0.77425 - 1.27105I$	$-6.60923 + 1.10020I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.241955 + 0.580936I$ $a = -0.50859 + 1.49464I$ $b = 0.284696 - 0.316284I$	$0.97832 + 4.80181I$	$5.01410 - 5.93125I$
$u = 0.241955 - 0.580936I$ $a = -0.50859 - 1.49464I$ $b = 0.284696 + 0.316284I$	$0.97832 - 4.80181I$	$5.01410 + 5.93125I$
$u = 0.351832 + 0.510395I$ $a = 0.46830 - 1.66268I$ $b = -0.0939873 + 0.0881433I$	$2.22250 - 0.24767I$	$7.73913 - 0.56298I$
$u = 0.351832 - 0.510395I$ $a = 0.46830 + 1.66268I$ $b = -0.0939873 - 0.0881433I$	$2.22250 + 0.24767I$	$7.73913 + 0.56298I$
$u = 0.116845 + 1.384250I$ $a = 0.041303 - 0.388215I$ $b = -0.633374 - 0.727871I$	$-3.55337 + 1.37478I$	0
$u = 0.116845 - 1.384250I$ $a = 0.041303 + 0.388215I$ $b = -0.633374 + 0.727871I$	$-3.55337 - 1.37478I$	0
$u = 0.604374 + 0.041012I$ $a = -0.127766 + 0.081512I$ $b = -0.185218 + 0.709651I$	$1.12451 + 1.96589I$	$10.80196 - 4.05866I$
$u = 0.604374 - 0.041012I$ $a = -0.127766 - 0.081512I$ $b = -0.185218 - 0.709651I$	$1.12451 - 1.96589I$	$10.80196 + 4.05866I$
$u = 0.05273 + 1.41471I$ $a = -0.364160 + 0.574122I$ $b = 0.622545 + 0.777866I$	$-5.11969 + 5.69600I$	0
$u = 0.05273 - 1.41471I$ $a = -0.364160 - 0.574122I$ $b = 0.622545 - 0.777866I$	$-5.11969 - 5.69600I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.22845 + 1.40463I$ $a = -0.584878 + 0.164449I$ $b = -2.06966 - 0.85642I$	$-2.94894 + 1.53520I$	0
$u = 0.22845 - 1.40463I$ $a = -0.584878 - 0.164449I$ $b = -2.06966 + 0.85642I$	$-2.94894 - 1.53520I$	0
$u = -0.567594$ $a = 3.54330$ $b = 2.58102$	-0.173277	14.7950
$u = 0.24441 + 1.42516I$ $a = 0.811666 - 0.501528I$ $b = 2.72720 + 0.93818I$	$-2.38662 + 6.98651I$	0
$u = 0.24441 - 1.42516I$ $a = 0.811666 + 0.501528I$ $b = 2.72720 - 0.93818I$	$-2.38662 - 6.98651I$	0
$u = -0.23688 + 1.44898I$ $a = 0.157512 + 0.487133I$ $b = 0.614421 - 0.604235I$	$-7.87270 - 5.41534I$	0
$u = -0.23688 - 1.44898I$ $a = 0.157512 - 0.487133I$ $b = 0.614421 + 0.604235I$	$-7.87270 + 5.41534I$	0
$u = -0.20910 + 1.45390I$ $a = -0.200284 + 0.476133I$ $b = 0.839346 - 0.055335I$	$-8.29005 - 4.36445I$	0
$u = -0.20910 - 1.45390I$ $a = -0.200284 - 0.476133I$ $b = 0.839346 + 0.055335I$	$-8.29005 + 4.36445I$	0
$u = 0.24393 + 1.45525I$ $a = -1.39528 + 1.22066I$ $b = -4.12013 - 1.03876I$	$-10.26670 + 7.27552I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.24393 - 1.45525I$ $a = -1.39528 - 1.22066I$ $b = -4.12013 + 1.03876I$	$-10.26670 - 7.27552I$	0
$u = 0.25656 + 1.45349I$ $a = 0.92293 - 1.21619I$ $b = 3.66245 + 0.51819I$	$-4.67134 + 10.63770I$	0
$u = 0.25656 - 1.45349I$ $a = 0.92293 + 1.21619I$ $b = 3.66245 - 0.51819I$	$-4.67134 - 10.63770I$	0
$u = -0.24966 + 1.45541I$ $a = -0.324280 - 0.465634I$ $b = -0.455645 + 0.854292I$	$-9.40835 - 9.90508I$	0
$u = -0.24966 - 1.45541I$ $a = -0.324280 + 0.465634I$ $b = -0.455645 - 0.854292I$	$-9.40835 + 9.90508I$	0
$u = 0.20029 + 1.46346I$ $a = 1.06981 + 1.23843I$ $b = 0.30114 + 2.78559I$	$-10.91640 + 2.73847I$	0
$u = 0.20029 - 1.46346I$ $a = 1.06981 - 1.23843I$ $b = 0.30114 - 2.78559I$	$-10.91640 - 2.73847I$	0
$u = 0.18047 + 1.46741I$ $a = -0.570968 - 1.146810I$ $b = -0.07249 - 1.84130I$	$-5.78797 - 0.59952I$	0
$u = 0.18047 - 1.46741I$ $a = -0.570968 + 1.146810I$ $b = -0.07249 + 1.84130I$	$-5.78797 + 0.59952I$	0
$u = -0.19235 + 1.46609I$ $a = 0.407594 - 0.477800I$ $b = -0.969850 - 0.229697I$	$-10.25700 - 0.14816I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.19235-1.46609I$ $a=\ \ 0.407594+0.477800I$ $b=-0.969850+0.229697I$	$-10.25700+0.14816I$	0
$u=\ \ 0.25926+1.45968I$ $a=-0.83788+1.37375I$ $b=-3.73811-0.29307I$	$-7.1149+16.2459I$	0
$u=\ \ 0.25926-1.45968I$ $a=-0.83788-1.37375I$ $b=-3.73811+0.29307I$	$-7.1149-16.2459I$	0
$u=\ \ 0.18213+1.47921I$ $a=\ \ 0.48220+1.33181I$ $b=-0.32791+1.78574I$	$-8.26083-5.95025I$	0
$u=\ \ 0.18213-1.47921I$ $a=\ \ 0.48220-1.33181I$ $b=-0.32791-1.78574I$	$-8.26083+5.95025I$	0
$u=-0.23642+1.47425I$ $a=-0.345417-0.152000I$ $b=\ \ 0.050317+0.631314I$	$-10.98450-4.02659I$	0
$u=-0.23642-1.47425I$ $a=-0.345417+0.152000I$ $b=\ \ 0.050317-0.631314I$	$-10.98450+4.02659I$	0
$u=-0.21737+1.47965I$ $a=\ \ 0.389128-0.167581I$ $b=-0.545415-0.427739I$	$-11.27020-6.51429I$	0
$u=-0.21737-1.47965I$ $a=\ \ 0.389128+0.167581I$ $b=-0.545415+0.427739I$	$-11.27020+6.51429I$	0
$u=\ \ 0.396015$ $a=\ \ 0.287101$ $b=-0.240748$	0.637008	15.7460

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.139636 + 0.286971I$ $a = -0.22054 + 2.15421I$ $b = \quad 0.621920 + 0.269076I$	$-1.64649 - 0.67439I$	$-2.11777 + 2.06502I$
$u = -0.139636 - 0.286971I$ $a = -0.22054 - 2.15421I$ $b = \quad 0.621920 - 0.269076I$	$-1.64649 + 0.67439I$	$-2.11777 - 2.06502I$

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

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ -u+1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^2+2 \\ u^2+1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u+1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u+1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^2+2 \\ u^2+1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u \\ u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^2+u+2 \\ 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^2+1 \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^2 + 3u + 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^3$
c_3, c_8	y^3
c_5, c_6, c_9 c_{10}, c_{11}, c_{12}	$y^3 + 4y^2 + 4y - 1$
c_7	$y^3 + y^2 + 13y - 4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.22670+1.46771I$ $a=-0.102785-0.665457I$ $b=-1.102790-0.665457I$	$-11.08570-5.13794I$	$-0.78288+3.73768I$
$u=-0.22670-1.46771I$ $a=-0.102785+0.665457I$ $b=-1.102790+0.665457I$	$-11.08570+5.13794I$	$-0.78288-3.73768I$
$u=\ \ 0.453398$ $a=\ \ 2.20557$ $b=\ \ 1.20557$	-0.857735	3.56580

III. $\boldsymbol{I_3^u = \langle u^3+u^2+b+u+1,\ u^3+u^2+a+2u+2,\ u^4+u^3+2u^2+2u+1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^3-u^2-2u-2 \\ -u^3-u^2-u-1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^3+2u \\ u^3+u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3+2u \\ u^3+u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^3-u^2-2u-2 \\ -u^3-u^2-u-1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -2u^3-u^2-3u-3 \\ -u^3-u^2-u-2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^3+u+1 \\ 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^2+1 \\ -u^3-2u-1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 2u^3+u^2+3u+3 \\ u^3+u^2+u+2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 5u^3+2u^2+6u+5$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.621744+0.440597I$ $a=-1.070700-0.758745I$ $b=-0.692440-0.318148I$	$-4.93480-2.02988I$	$2.26314+3.67497I$
$u=-0.621744-0.440597I$ $a=-1.070700+0.758745I$ $b=-0.692440+0.318148I$	$-4.93480+2.02988I$	$2.26314-3.67497I$
$u=\ \ 0.121744+1.306620I$ $a=\ \ 0.070696-0.758745I$ $b=\ \ 1.192440+0.547877I$	$-4.93480+2.02988I$	$-0.76314-2.38721I$
$u=\ \ 0.121744-1.306620I$ $a=\ \ 0.070696+0.758745I$ $b=\ \ 1.192440-0.547877I$	$-4.93480-2.02988I$	$-0.76314+2.38721I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^7)(u^{92}+44u^{91}+\cdots+78u+1)$
c_2	$((u-1)^7)(u^{92}-8u^{91}+\cdots+14u-1)$
c_3, c_8	$u^7(u^{92}+u^{91}+\cdots+192u+128)$
c_4	$((u+1)^7)(u^{92}-8u^{91}+\cdots+14u-1)$
c_5	$(u^3+2u+1)(u^4-u^3+2u^2-2u+1)$ $\cdot\,(u^{92}-2u^{91}+\cdots+13397u-11981)$
c_6	$(u^3+2u+1)(u^4-u^3+2u^2-2u+1)(u^{92}-2u^{91}+\cdots+3u-1)$
c_7	$((u^2-u+1)^2)(u^3+3u^2+5u+2)(u^{92}+2u^{91}+\cdots+19896u-4360)$
c_9	$(u^3+2u+1)(u^4-u^3+2u^2-2u+1)(u^{92}+14u^{91}+\cdots+3115u+131)$
c_{10}, c_{11}	$(u^3+2u-1)(u^4+u^3+2u^2+2u+1)(u^{92}-2u^{91}+\cdots+3u-1)$
c_{12}	$(u^3+2u-1)(u^4+u^3+2u^2+2u+1)(u^{92}+14u^{91}+\cdots+3115u+131)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^7)(y^{92}+16y^{91}+\cdots-5674y+1)$
c_2, c_4	$((y-1)^7)(y^{92}-44y^{91}+\cdots-78y+1)$
c_3, c_8	$y^7(y^{92}-45y^{91}+\cdots-438272y+16384)$
c_5	$(y^3+4y^2+4y-1)(y^4+3y^3+2y^2+1)$ $\cdot(y^{92}-10y^{91}+\cdots+378763105y+143544361)$
c_6, c_{10}, c_{11}	$(y^3+4y^2+4y-1)(y^4+3y^3+2y^2+1)(y^{92}+86y^{91}+\cdots+y+1)$
c_7	$(y^2+y+1)^2(y^3+y^2+13y-4)$ $\cdot(y^{92}+30y^{91}+\cdots+525356144y+19009600)$
c_9, c_{12}	$(y^3+4y^2+4y-1)(y^4+3y^3+2y^2+1)$ $\cdot(y^{92}+74y^{91}+\cdots+260373y+17161)$