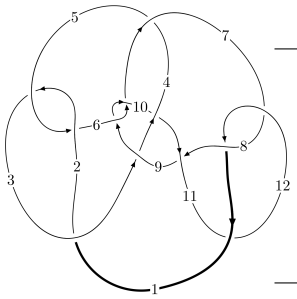
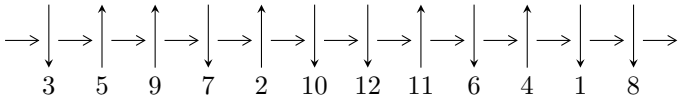
$12a_{0185}$ $(K12a_{0185})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle 4.98914 \times 10^{445} u^{128} - 1.30336 \times 10^{446} u^{127} + \cdots + 2.09279 \times 10^{445} b + 7.62318 \times 10^{445},$
$5.11649 \times 10^{446} u^{128} - 1.01386 \times 10^{447} u^{127} + \cdots + 1.04639 \times 10^{446} a + 3.19751 \times 10^{446},\ u^{129} - 3u^{128} + \cdots +$

$I_2^u = \langle 2u^2 a - au + 2u^2 + b + 2a - u + 2,\ 15u^2 a + 25a^2 - 5au + 13u^2 + 60a - 6u + 42,\ u^3 - u^2 + 2u - 1 \rangle$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 135 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. $\boldsymbol{I_1^u = \langle 4.99 \times 10^{445} u^{128} - 1.30 \times 10^{446} u^{127} + \cdots + 2.09 \times 10^{445} b + 7.62 \times 10^{445},\ 5.12 \times 10^{446} u^{128} - 1.01 \times 10^{447} u^{127} + \cdots + 1.05 \times 10^{446} a + 3.20 \times 10^{446},\ u^{129} - 3u^{128} + \cdots + 6u - 1 \rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -4.88965u^{128} + 9.68913u^{127} + \cdots + 21.8288u - 3.05575 \\ -2.38397u^{128} + 6.22785u^{127} + \cdots + 17.3934u - 3.64260 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -16.2649u^{128} + 36.0614u^{127} + \cdots + 94.5515u - 18.4908 \\ 4.05033u^{128} - 8.11181u^{127} + \cdots - 22.0327u + 3.82688 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -12.5725u^{128} + 28.3938u^{127} + \cdots + 72.9033u - 14.6140 \\ 3.00818u^{128} - 5.66495u^{127} + \cdots - 14.4581u + 2.25274 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 7.59367u^{128} - 17.3064u^{127} + \cdots - 46.4404u + 9.36540 \\ -0.489938u^{128} + 1.20604u^{127} + \cdots + 5.09923u - 1.11099 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2.55440u^{128} + 6.03912u^{127} + \cdots + 12.3850u - 1.93084 \\ 13.0262u^{128} - 28.0196u^{127} + \cdots - 74.9764u + 14.9359 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.11099u^{128} + 2.84302u^{127} + \cdots + 7.35949u - 1.56670 \\ 5.47464u^{128} - 12.7709u^{127} + \cdots - 36.1966u + 7.59367 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -2.33366u^{128} + 5.14492u^{127} + \cdots + 17.3240u - 3.56421 \\ 6.20152u^{128} - 15.0253u^{127} + \cdots - 43.6088u + 8.95686 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -3.44229u^{128} + 8.53517u^{127} + \cdots + 30.9440u - 5.97392 \\ 4.25086u^{128} - 8.79384u^{127} + \cdots - 19.2212u + 3.91476 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -35.3681u^{128} + 84.1056u^{127} + \cdots + 260.905u - 58.9553$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{129} + 58u^{128} + \cdots + 31691u - 625$
c_2, c_5	$u^{129} + 4u^{128} + \cdots - 129u - 25$
c_3	$25(25u^{129} - 195u^{128} + \cdots + 2.03112 \times 10^7 u + 1405871)$
c_4	$25(25u^{129} - 30u^{128} + \cdots - 2354708u + 76193)$
c_6, c_9	$u^{129} + 3u^{128} + \cdots + 6u + 1$
c_7, c_{12}	$u^{129} + 3u^{128} + \cdots + 2u + 1$
c_8	$u^{129} + 9u^{128} + \cdots + 4123464u + 328729$
c_{10}	$u^{129} - 3u^{128} + \cdots + 26400u + 8000$
c_{11}	$u^{129} + 63u^{128} + \cdots + 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{129} + 30y^{128} + \cdots + 1330940731y - 390625$
c_2, c_5	$y^{129} + 58y^{128} + \cdots + 31691y - 625$
c_3	625 $\cdot (625y^{129} + 26325y^{128} + \cdots + 27395194733737y - 1976473268641)$
c_4	$625(625y^{129} - 14300y^{128} + \cdots + 3.74977 \times 10^{11}y - 5.80537 \times 10^{9})$
c_6, c_9	$y^{129} - 71y^{128} + \cdots + 6y - 1$
c_7, c_{12}	$y^{129} - 63y^{128} + \cdots + 6y - 1$
c_8	$y^{129} + 45y^{128} + \cdots + 5854253992682y - 108062755441$
c_{10}	$y^{129} + 35y^{128} + \cdots - 255360000y - 64000000$
c_{11}	$y^{129} + 9y^{128} + \cdots - 14y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.983463+0.268681I$ $a=-0.62036+1.96394I$ $b=\ \ 0.682768+1.129540I$	$-0.58814+4.93859I$	0
$u=-0.983463-0.268681I$ $a=-0.62036-1.96394I$ $b=\ \ 0.682768-1.129540I$	$-0.58814-4.93859I$	0
$u=-0.175616+0.948969I$ $a=\ \ 0.687811-0.298549I$ $b=-0.739891-0.477913I$	$2.15356-3.17502I$	0
$u=-0.175616-0.948969I$ $a=\ \ 0.687811+0.298549I$ $b=-0.739891+0.477913I$	$2.15356+3.17502I$	0
$u=\ \ 0.144632+0.952589I$ $a=\ \ 0.648121+0.279122I$ $b=-0.803079+0.453732I$	$-0.32991+8.26485I$	0
$u=\ \ 0.144632-0.952589I$ $a=\ \ 0.648121-0.279122I$ $b=-0.803079-0.453732I$	$-0.32991-8.26485I$	0
$u=\ \ 0.917821+0.279541I$ $a=-0.44055-1.58384I$ $b=\ \ 0.817754-1.027710I$	$-1.80994-1.27988I$	0
$u=\ \ 0.917821-0.279541I$ $a=-0.44055+1.58384I$ $b=\ \ 0.817754+1.027710I$	$-1.80994+1.27988I$	0
$u=-0.930509+0.131444I$ $a=\ \ 3.26267+1.98840I$ $b=\ \ 0.424467-0.884741I$	$-4.38795-5.53131I$	0
$u=-0.930509-0.131444I$ $a=\ \ 3.26267-1.98840I$ $b=\ \ 0.424467+0.884741I$	$-4.38795+5.53131I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.330032+0.878496I$ $a=\ \ 0.689662+0.447288I$ $b=-0.241147+1.061570I$	$-6.56737-2.23567I$	0
$u=-0.330032-0.878496I$ $a=\ \ 0.689662-0.447288I$ $b=-0.241147-1.061570I$	$-6.56737+2.23567I$	0
$u=\ \ 0.934471+0.079932I$ $a=-3.48829-0.00956I$ $b=\ \ 0.541935-0.865418I$	$-1.46694-2.16043I$	0
$u=\ \ 0.934471-0.079932I$ $a=-3.48829+0.00956I$ $b=\ \ 0.541935+0.865418I$	$-1.46694+2.16043I$	0
$u=\ \ 1.059820+0.087490I$ $a=-0.94711-4.84175I$ $b=\ \ 0.453431-0.900657I$	$-1.94855-2.12974I$	0
$u=\ \ 1.059820-0.087490I$ $a=-0.94711+4.84175I$ $b=\ \ 0.453431+0.900657I$	$-1.94855+2.12974I$	0
$u=-1.037490+0.293142I$ $a=-0.49223+2.19831I$ $b=\ \ 0.591524+1.258510I$	$-1.69705+5.73998I$	0
$u=-1.037490-0.293142I$ $a=-0.49223-2.19831I$ $b=\ \ 0.591524-1.258510I$	$-1.69705-5.73998I$	0
$u=\ \ 1.045160+0.313586I$ $a=-0.43290-2.21195I$ $b=\ \ 0.59443-1.32359I$	$-4.12236-10.24180I$	0
$u=\ \ 1.045160-0.313586I$ $a=-0.43290+2.21195I$ $b=\ \ 0.59443+1.32359I$	$-4.12236+10.24180I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.882793+0.210988I$ $a=\ 2.46528+0.82348I$ $b=\ 0.330870-0.872293I$	$-4.70234+2.17047I$	0
$u=-0.882793-0.210988I$ $a=\ 2.46528-0.82348I$ $b=\ 0.330870+0.872293I$	$-4.70234-2.17047I$	0
$u=\ 0.850268+0.301470I$ $a=-0.067006-1.297250I$ $b=\ 0.955342-0.885158I$	$-0.99778-7.95172I$	0
$u=\ 0.850268-0.301470I$ $a=-0.067006+1.297250I$ $b=\ 0.955342+0.885158I$	$-0.99778+7.95172I$	0
$u=-0.308540+1.057600I$ $a=\ 0.762706-0.454606I$ $b=-0.603539-0.665281I$	$4.10160-0.69007I$	0
$u=-0.308540-1.057600I$ $a=\ 0.762706+0.454606I$ $b=-0.603539+0.665281I$	$4.10160+0.69007I$	0
$u=-1.101470+0.044053I$ $a=\ 1.65006+4.84565I$ $b=\ 0.435278+0.828060I$	$-4.21569-1.91512I$	0
$u=-1.101470-0.044053I$ $a=\ 1.65006-4.84565I$ $b=\ 0.435278-0.828060I$	$-4.21569+1.91512I$	0
$u=\ 1.080440+0.289628I$ $a=-0.45069-2.29917I$ $b=\ 0.472374-1.287950I$	$-5.24083-2.81222I$	0
$u=\ 1.080440-0.289628I$ $a=-0.45069+2.29917I$ $b=\ 0.472374+1.287950I$	$-5.24083+2.81222I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.077505 + 1.116970I$ $a = 0.617919 - 0.590223I$ $b = -0.618915 - 1.098620I$	$-2.26166 + 13.60010I$	0
$u = 0.077505 - 1.116970I$ $a = 0.617919 + 0.590223I$ $b = -0.618915 + 1.098620I$	$-2.26166 - 13.60010I$	0
$u = 0.154618 + 0.866212I$ $a = 0.738529 + 0.202162I$ $b = -0.668670 + 0.330307I$	$-2.46704 + 0.18761I$	0
$u = 0.154618 - 0.866212I$ $a = 0.738529 - 0.202162I$ $b = -0.668670 - 0.330307I$	$-2.46704 - 0.18761I$	0
$u = -0.828793 + 0.275938I$ $a = -0.094524 + 1.077790I$ $b = 0.900322 + 0.807036I$	$1.08834 + 3.59177I$	0
$u = -0.828793 - 0.275938I$ $a = -0.094524 - 1.077790I$ $b = 0.900322 - 0.807036I$	$1.08834 - 3.59177I$	0
$u = 0.137134 + 1.120300I$ $a = 0.627586 - 0.578090I$ $b = -0.546670 - 1.089010I$	$-4.60897 + 4.87781I$	0
$u = 0.137134 - 1.120300I$ $a = 0.627586 + 0.578090I$ $b = -0.546670 + 1.089010I$	$-4.60897 - 4.87781I$	0
$u = -0.088221 + 1.139010I$ $a = 0.617847 + 0.584258I$ $b = -0.602534 + 1.071670I$	$0.39045 - 8.29549I$	0
$u = -0.088221 - 1.139010I$ $a = 0.617847 - 0.584258I$ $b = -0.602534 - 1.071670I$	$0.39045 + 8.29549I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.846643 + 0.121811I$ $a = 1.76479 - 1.66806I$ $b = 0.404616 + 0.814035I$	$-1.61493 + 1.51133I$	0
$u = 0.846643 - 0.121811I$ $a = 1.76479 + 1.66806I$ $b = 0.404616 - 0.814035I$	$-1.61493 - 1.51133I$	0
$u = 0.388528 + 0.748464I$ $a = 0.705392 - 0.355453I$ $b = -0.124235 - 0.981885I$	$-2.61497 - 1.72957I$	0
$u = 0.388528 - 0.748464I$ $a = 0.705392 + 0.355453I$ $b = -0.124235 + 0.981885I$	$-2.61497 + 1.72957I$	0
$u = 1.120410 + 0.361375I$ $a = 0.391824 + 0.409775I$ $b = -0.424807 - 0.086576I$	$-2.42987 - 0.61021I$	0
$u = 1.120410 - 0.361375I$ $a = 0.391824 - 0.409775I$ $b = -0.424807 + 0.086576I$	$-2.42987 + 0.61021I$	0
$u = -0.761610 + 0.265352I$ $a = 0.194084 + 0.747520I$ $b = 0.878946 + 0.617003I$	$1.48127 + 2.53507I$	0
$u = -0.761610 - 0.265352I$ $a = 0.194084 - 0.747520I$ $b = 0.878946 - 0.617003I$	$1.48127 - 2.53507I$	0
$u = -0.283572 + 0.735406I$ $a = 0.775469 + 0.385271I$ $b = -0.076026 + 1.087540I$	$-5.67794 + 6.36186I$	0
$u = -0.283572 - 0.735406I$ $a = 0.775469 - 0.385271I$ $b = -0.076026 - 1.087540I$	$-5.67794 - 6.36186I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.214880+0.129383I$ $a=\ \ 0.46615+2.43126I$ $b=\ \ 0.158810+0.914329I$	$-4.67216+4.81332I$	0
$u=-1.214880-0.129383I$ $a=\ \ 0.46615-2.43126I$ $b=\ \ 0.158810-0.914329I$	$-4.67216-4.81332I$	0
$u=\ \ 0.715395+0.288428I$ $a=\ \ 0.481009-0.704654I$ $b=\ \ 0.930821-0.456529I$	$-0.15548+1.57650I$	0
$u=\ \ 0.715395-0.288428I$ $a=\ \ 0.481009+0.704654I$ $b=\ \ 0.930821+0.456529I$	$-0.15548-1.57650I$	0
$u=\ \ 0.763368$ $a=\ \ 0.816194$ $b=\ \ 0.131616$	-1.26499	0
$u=-1.227300+0.196563I$ $a=\ \ 0.09851+2.26617I$ $b=\ \ 0.110958+1.054910I$	$-4.65246+4.81342I$	0
$u=-1.227300-0.196563I$ $a=\ \ 0.09851-2.26617I$ $b=\ \ 0.110958-1.054910I$	$-4.65246-4.81342I$	0
$u=-1.210290+0.315524I$ $a=\ \ 0.409683-0.678849I$ $b=-0.472854-0.115902I$	$-5.02290-4.05629I$	0
$u=-1.210290-0.315524I$ $a=\ \ 0.409683+0.678849I$ $b=-0.472854+0.115902I$	$-5.02290+4.05629I$	0
$u=\ \ 0.449856+1.189000I$ $a=\ \ 0.798817+0.571328I$ $b=-0.528504+0.753911I$	$3.39101-4.69695I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.449856 - 1.189000I$ $a = 0.798817 - 0.571328I$ $b = -0.528504 - 0.753911I$	$3.39101 + 4.69695I$	0
$u = -1.198590 + 0.429633I$ $a = 0.105430 - 0.488278I$ $b = -0.659760 + 0.094863I$	$-6.47133 + 3.95304I$	0
$u = -1.198590 - 0.429633I$ $a = 0.105430 + 0.488278I$ $b = -0.659760 - 0.094863I$	$-6.47133 - 3.95304I$	0
$u = 0.587319 + 0.383139I$ $a = 1.291290 - 0.016709I$ $b = 0.083690 + 0.539120I$	$-1.52762 - 0.09529I$	0
$u = 0.587319 - 0.383139I$ $a = 1.291290 + 0.016709I$ $b = 0.083690 - 0.539120I$	$-1.52762 + 0.09529I$	0
$u = 0.626876 + 0.299965I$ $a = 0.838928 - 0.531539I$ $b = 0.905222 - 0.100755I$	$0.03259 - 4.68683I$	$0. + 7.22182I$
$u = 0.626876 - 0.299965I$ $a = 0.838928 + 0.531539I$ $b = 0.905222 + 0.100755I$	$0.03259 + 4.68683I$	$0. - 7.22182I$
$u = 1.262250 + 0.346204I$ $a = -0.36254 - 1.95976I$ $b = -0.094857 - 1.381630I$	$-10.1858 - 10.0625I$	0
$u = 1.262250 - 0.346204I$ $a = -0.36254 + 1.95976I$ $b = -0.094857 + 1.381630I$	$-10.1858 + 10.0625I$	0
$u = -1.270920 + 0.330277I$ $a = -0.30308 + 1.94671I$ $b = -0.093320 + 1.328500I$	$-7.38638 + 5.28336I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.270920-0.330277I$ $a=-0.30308-1.94671I$ $b=-0.093320-1.328500I$	$-7.38638-5.28336I$	0
$u=\ \ 1.197390+0.585875I$ $a=-0.1126030-0.0193402I$ $b=-0.719779-0.507016I$	$0.74811-1.37500I$	0
$u=\ \ 1.197390-0.585875I$ $a=-0.1126030+0.0193402I$ $b=-0.719779+0.507016I$	$0.74811+1.37500I$	0
$u=\ \ 1.295150+0.344969I$ $a=-0.32515-1.85291I$ $b=-0.172149-1.325040I$	$-11.48090-1.73695I$	0
$u=\ \ 1.295150-0.344969I$ $a=-0.32515+1.85291I$ $b=-0.172149+1.325040I$	$-11.48090+1.73695I$	0
$u=-0.133712+1.336340I$ $a=\ \ 0.606044+0.587032I$ $b=-0.543559+0.949319I$	$3.26341-5.24947I$	0
$u=-0.133712-1.336340I$ $a=\ \ 0.606044-0.587032I$ $b=-0.543559-0.949319I$	$3.26341+5.24947I$	0
$u=-1.226480+0.561154I$ $a=-0.234021-0.060837I$ $b=-0.815819+0.474313I$	$1.11255+6.37416I$	0
$u=-1.226480-0.561154I$ $a=-0.234021+0.060837I$ $b=-0.815819-0.474313I$	$1.11255-6.37416I$	0
$u=\ \ 1.245200+0.518345I$ $a=-0.306778+0.295530I$ $b=-0.915908-0.328646I$	$-5.81317-5.29985I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.245200 - 0.518345I$ $a = -0.306778 - 0.295530I$ $b = -0.915908 + 0.328646I$	$-5.81317 + 5.29985I$	0
$u = -0.588449 + 0.278132I$ $a = 0.913984 + 0.407455I$ $b = 0.786059 - 0.046206I$	$1.83272 + 0.45496I$	$5.79856 - 1.66220I$
$u = -0.588449 - 0.278132I$ $a = 0.913984 - 0.407455I$ $b = 0.786059 + 0.046206I$	$1.83272 - 0.45496I$	$5.79856 + 1.66220I$
$u = -1.251440 + 0.533176I$ $a = -0.366058 - 0.214061I$ $b = -0.938070 + 0.398504I$	$-1.20273 + 8.51895I$	0
$u = -1.251440 - 0.533176I$ $a = -0.366058 + 0.214061I$ $b = -0.938070 - 0.398504I$	$-1.20273 - 8.51895I$	0
$u = 1.258880 + 0.530564I$ $a = -0.413635 + 0.239128I$ $b = -0.976388 - 0.392520I$	$-3.78442 - 13.60190I$	0
$u = 1.258880 - 0.530564I$ $a = -0.413635 - 0.239128I$ $b = -0.976388 + 0.392520I$	$-3.78442 + 13.60190I$	0
$u = -1.186270 + 0.689583I$ $a = 1.26776 - 1.27280I$ $b = -0.390070 - 1.061840I$	$-7.87584 - 0.93121I$	0
$u = -1.186270 - 0.689583I$ $a = 1.26776 + 1.27280I$ $b = -0.390070 + 1.061840I$	$-7.87584 + 0.93121I$	0
$u = -0.519093 + 0.278453I$ $a = 1.056830 + 0.334162I$ $b = 0.768552 - 0.334931I$	$1.75839 - 0.65436I$	$5.34982 - 0.15315I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.519093-0.278453I$ $a=\ 1.056830-0.334162I$ $b=\ 0.768552+0.334931I$	$1.75839+0.65436I$	$5.34982+0.15315I$
$u=-1.26057+0.64615I$ $a=\ 1.17659-1.47167I$ $b=-0.470241-1.114900I$	$-9.27307+8.12090I$	0
$u=-1.26057-0.64615I$ $a=\ 1.17659+1.47167I$ $b=-0.470241+1.114900I$	$-9.27307-8.12090I$	0
$u=\ 1.41428+0.17099I$ $a=\ 0.23804-1.62846I$ $b=-0.206084-0.938637I$	$-3.58418-0.24091I$	0
$u=\ 1.41428-0.17099I$ $a=\ 0.23804+1.62846I$ $b=-0.206084+0.938637I$	$-3.58418+0.24091I$	0
$u=\ 1.24503+0.70593I$ $a=\ 1.14437+1.32385I$ $b=-0.446392+1.052500I$	$-4.75671-4.16732I$	0
$u=\ 1.24503-0.70593I$ $a=\ 1.14437-1.32385I$ $b=-0.446392-1.052500I$	$-4.75671+4.16732I$	0
$u=\ 0.478659+0.305566I$ $a=\ 1.132950-0.320045I$ $b=\ 0.859647+0.471653I$	$-0.14799+4.91053I$	$0.79655-4.80579I$
$u=\ 0.478659-0.305566I$ $a=\ 1.132950+0.320045I$ $b=\ 0.859647-0.471653I$	$-0.14799-4.91053I$	$0.79655+4.80579I$
$u=\ 1.32444+0.58045I$ $a=\ 0.99325+1.74069I$ $b=-0.616651+1.174130I$	$-8.36816-10.88600I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.32444 - 0.58045I$ $a = 0.99325 - 1.74069I$ $b = -0.616651 - 1.174130I$	$-8.36816 + 10.88600I$	0
$u = 1.33532 + 0.56738I$ $a = 0.93205 + 1.79575I$ $b = -0.659633 + 1.180350I$	$-6.2042 - 19.5319I$	0
$u = 1.33532 - 0.56738I$ $a = 0.93205 - 1.79575I$ $b = -0.659633 - 1.180350I$	$-6.2042 + 19.5319I$	0
$u = -1.33721 + 0.57445I$ $a = 0.93028 - 1.75949I$ $b = -0.649568 - 1.163770I$	$-3.5377 + 14.3096I$	0
$u = -1.33721 - 0.57445I$ $a = 0.93028 + 1.75949I$ $b = -0.649568 + 1.163770I$	$-3.5377 - 14.3096I$	0
$u = -1.41941 + 0.35338I$ $a = -0.17051 + 1.49437I$ $b = -0.359827 + 1.133960I$	$-9.98903 + 0.41325I$	0
$u = -1.41941 - 0.35338I$ $a = -0.17051 - 1.49437I$ $b = -0.359827 - 1.133960I$	$-9.98903 - 0.41325I$	0
$u = 0.33718 + 1.43221I$ $a = 0.566529 - 0.589590I$ $b = -0.491172 - 0.922652I$	$2.88569 - 0.57683I$	0
$u = 0.33718 - 1.43221I$ $a = 0.566529 + 0.589590I$ $b = -0.491172 + 0.922652I$	$2.88569 + 0.57683I$	0
$u = -1.35795 + 0.60330I$ $a = 0.88211 - 1.62403I$ $b = -0.627909 - 1.091380I$	$-0.74343 + 11.77170I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.35795-0.60330I$ $a=\ \ 0.88211+1.62403I$ $b=-0.627909+1.091380I$	$-0.74343-11.77170I$	0
$u=\ \ 1.36563+0.63159I$ $a=\ \ 0.88688+1.53528I$ $b=-0.597528+1.058030I$	$-0.89915-6.42948I$	0
$u=\ \ 1.36563-0.63159I$ $a=\ \ 0.88688-1.53528I$ $b=-0.597528-1.058030I$	$-0.89915+6.42948I$	0
$u=\ \ 0.363717+0.292600I$ $a=\ \ 1.163910-0.174820I$ $b=\ \ 0.786445+0.731780I$	$-0.52121-1.56530I$	$-0.86638+2.57200I$
$u=\ \ 0.363717-0.292600I$ $a=\ \ 1.163910+0.174820I$ $b=\ \ 0.786445-0.731780I$	$-0.52121+1.56530I$	$-0.86638-2.57200I$
$u=-1.48950+0.41586I$ $a=-0.153476+1.272430I$ $b=-0.465312+1.067160I$	$-7.37499-7.84861I$	0
$u=-1.48950-0.41586I$ $a=-0.153476-1.272430I$ $b=-0.465312-1.067160I$	$-7.37499+7.84861I$	0
$u=\ \ 1.50504+0.36378I$ $a=-0.064729-1.333380I$ $b=-0.415637-1.041460I$	$-4.97818+2.52108I$	0
$u=\ \ 1.50504-0.36378I$ $a=-0.064729+1.333380I$ $b=-0.415637+1.041460I$	$-4.97818-2.52108I$	0
$u=\ \ 0.143271+0.386362I$ $a=\ \ 1.169800+0.073681I$ $b=\ \ 0.645129+1.054690I$	$-1.79385+7.26996I$	$-2.23125-5.78172I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.143271-0.386362I$		
$a=$	$1.169800-0.073681I$	$-1.79385-7.26996I$	$-2.23125+5.78172I$
$b=$	$0.645129-1.054690I$		
$u=$	$0.044126+0.388938I$		
$a=$	$1.095960+0.125750I$	$-2.53204+0.02473I$	$-2.93276+1.49413I$
$b=$	$0.522478+1.065910I$		
$u=$	$0.044126-0.388938I$		
$a=$	$1.095960-0.125750I$	$-2.53204-0.02473I$	$-2.93276-1.49413I$
$b=$	$0.522478-1.065910I$		
$u=$	$-0.266922+0.261058I$		
$a=$	$1.126660+0.080683I$	$1.11585-2.30829I$	$1.69883+2.89752I$
$b=$	$0.685137-0.840591I$		
$u=$	$-0.266922-0.261058I$		
$a=$	$1.126660-0.080683I$	$1.11585+2.30829I$	$1.69883-2.89752I$
$b=$	$0.685137+0.840591I$		
$u=$	$0.183193+0.325091I$		
$a=$	$0.933199-0.109578I$	$-0.83327-2.69684I$	$-0.17117+8.22409I$
$b=$	$0.357860-0.927565I$		
$u=$	$0.183193-0.325091I$		
$a=$	$0.933199+0.109578I$	$-0.83327+2.69684I$	$-0.17117-8.22409I$
$b=$	$0.357860+0.927565I$		
$u=$	$-0.146229+0.324302I$		
$a=$	$1.131360-0.032547I$	$0.54489-2.98296I$	$1.35807+1.48155I$
$b=$	$0.625831-0.980707I$		
$u=$	$-0.146229-0.324302I$		
$a=$	$1.131360+0.032547I$	$0.54489+2.98296I$	$1.35807-1.48155I$
$b=$	$0.625831+0.980707I$		

II. $I_2^u = \langle 2u^2a - au + 2u^2 + b + 2a - u + 2,\ 15u^2a + 25a^2 - 5au + 13u^2 + 60a - 6u + 42,\ u^3 - u^2 + 2u - 1\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} a \\ -2u^2a + au - 2u^2 - 2a + u - 2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 2u^2a - au + \frac{13}{5}u^2 + 3a - \frac{6}{5}u + \frac{22}{5} \\ -2u^2a + au - 2u^2 - 2a + u - 3 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} \frac{3}{5}u^2 + a - \frac{1}{5}u + \frac{7}{5} \\ -2u^2a + au - 2u^2 - 2a + u - 3 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0 \\ -2u^2a + au - \frac{13}{5}u^2 - 3a + \frac{6}{5}u - \frac{22}{5} \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} u \\ u \end{pmatrix}$$

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{33}{5}u^2a - \frac{34}{5}au - \frac{33}{5}u^2 + \frac{3}{5}a + \frac{11}{5}u - \frac{47}{5}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^2-u+1)^3$
c_2	$(u^2+u+1)^3$
c_3	$25(25u^6-20u^5+11u^4+6u^3-3u^2-u+1)$
c_4	$25(25u^6-55u^5+91u^4-56u^3+25u^2-6u+1)$
c_6, c_{11}	$(u^3-u^2+2u-1)^2$
c_7	$(u^3+u^2-1)^2$
c_8	$(u^3+3u^2+2u-1)^2$
c_9	$(u^3+u^2+2u+1)^2$
c_{10}	u^6
c_{12}	$(u^3-u^2+1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y^2+y+1)^3$
c_3	$625(625y^6+150y^5+211y^4-92y^3+43y^2-7y+1)$
c_4	$625(625y^6+1525y^5+3371y^4+804y^3+135y^2+14y+1)$
c_6, c_9, c_{11}	$(y^3+3y^2+2y-1)^2$
c_7, c_{12}	$(y^3-y^2+2y-1)^2$
c_8	$(y^3-5y^2+10y-1)^2$
c_{10}	y^6

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.215080 + 1.307140I$ $a = -0.745550 - 0.592600I$ $b = 0.500000 - 0.866025I$	$3.02413 - 4.85801I$	$-12.95856 + 2.56770I$
$u = 0.215080 + 1.307140I$ $a = -0.614019 + 0.516660I$ $b = 0.500000 + 0.866025I$	$3.02413 - 0.79824I$	$2.34733 + 12.12399I$
$u = 0.215080 - 1.307140I$ $a = -0.745550 + 0.592600I$ $b = 0.500000 + 0.866025I$	$3.02413 + 4.85801I$	$-12.95856 - 2.56770I$
$u = 0.215080 - 1.307140I$ $a = -0.614019 - 0.516660I$ $b = 0.500000 - 0.866025I$	$3.02413 + 0.79824I$	$2.34733 - 12.12399I$
$u = 0.569840$ $a = -1.240430 + 0.416439I$ $b = 0.500000 - 0.866025I$	$-1.11345 - 2.02988I$	$-3.56877 - 2.25629I$
$u = 0.569840$ $a = -1.240430 - 0.416439I$ $b = 0.500000 + 0.866025I$	$-1.11345 + 2.02988I$	$-3.56877 + 2.25629I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^3)(u^{129}+58u^{128}+\cdots+31691u-625)$
c_2	$((u^2+u+1)^3)(u^{129}+4u^{128}+\cdots-129u-25)$
c_3	$625(25u^6-20u^5+11u^4+6u^3-3u^2-u+1)$ $\cdot(25u^{129}-195u^{128}+\cdots+20311179u+1405871)$
c_4	$625(25u^6-55u^5+91u^4-56u^3+25u^2-6u+1)$ $\cdot(25u^{129}-30u^{128}+\cdots-2354708u+76193)$
c_5	$((u^2-u+1)^3)(u^{129}+4u^{128}+\cdots-129u-25)$
c_6	$((u^3-u^2+2u-1)^2)(u^{129}+3u^{128}+\cdots+6u+1)$
c_7	$((u^3+u^2-1)^2)(u^{129}+3u^{128}+\cdots+2u+1)$
c_8	$((u^3+3u^2+2u-1)^2)(u^{129}+9u^{128}+\cdots+4123464u+328729)$
c_9	$((u^3+u^2+2u+1)^2)(u^{129}+3u^{128}+\cdots+6u+1)$
c_{10}	$u^6(u^{129}-3u^{128}+\cdots+26400u+8000)$
c_{11}	$((u^3-u^2+2u-1)^2)(u^{129}+63u^{128}+\cdots+6u+1)$
c_{12}	$((u^3-u^2+1)^2)(u^{129}+3u^{128}+\cdots+2u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^3)(y^{129}+30y^{128}+\cdots+1.33094\times10^9y-390625)$
c_2, c_5	$((y^2+y+1)^3)(y^{129}+58y^{128}+\cdots+31691y-625)$
c_3	$390625(625y^6+150y^5+211y^4-92y^3+43y^2-7y+1)$ $\cdot(625y^{129}+26325y^{128}+\cdots+27395194733737y-1976473268641)$
c_4	$390625(625y^6+1525y^5+3371y^4+804y^3+135y^2+14y+1)$ $\cdot(625y^{129}-14300y^{128}+\cdots+374976658848y-5805373249)$
c_6, c_9	$((y^3+3y^2+2y-1)^2)(y^{129}-71y^{128}+\cdots+6y-1)$
c_7, c_{12}	$((y^3-y^2+2y-1)^2)(y^{129}-63y^{128}+\cdots+6y-1)$
c_8	$(y^3-5y^2+10y-1)^2$ $\cdot(y^{129}+45y^{128}+\cdots+5854253992682y-108062755441)$
c_{10}	$y^6(y^{129}+35y^{128}+\cdots-2.55360\times10^8y-6.40000\times10^7)$
c_{11}	$((y^3+3y^2+2y-1)^2)(y^{129}+9y^{128}+\cdots-14y-1)$