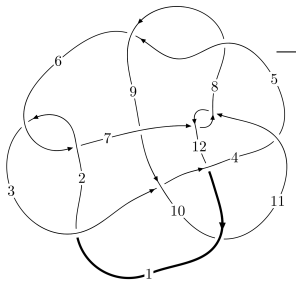
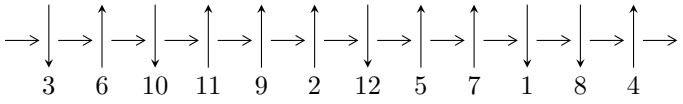
$12a_{0455}$ $(K12a_{0455})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.64159 \times 10^{351} u^{147} - 2.04306 \times 10^{352} u^{146} + \cdots + 3.22888 \times 10^{351} b - 6.10666 \times 10^{352}, \\ & - 5.24126 \times 10^{351} u^{147} - 1.21608 \times 10^{352} u^{146} + \cdots + 3.22888 \times 10^{351} a + 3.06698 \times 10^{353}, \\ & u^{148} + 2u^{147} + \cdots + 648u - 101 \rangle \\ I_2^u = \langle & -98006u^{28} - 171495u^{27} + \cdots + 58439b + 136719, \\ & - 178935u^{28} - 361858u^{27} + \cdots + 58439a + 408756,\ u^{29} + 3u^{28} + \cdots + 2u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 177 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. $\boldsymbol{I_1^u = \langle -6.64 \times 10^{351} u^{147} - 2.04 \times 10^{352} u^{146} + \cdots + 3.23 \times 10^{351} b - 6.11 \times 10^{352},\ -5.24 \times 10^{351} u^{147} - 1.22 \times 10^{352} u^{146} + \cdots + 3.23 \times 10^{351} a + 3.07 \times 10^{353},\ u^{148} + 2u^{147} + \cdots + 648u - 101 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.62324u^{147} + 3.76624u^{146} + \cdots + 215.821u - 94.9857 \\ 2.05693u^{147} + 6.32746u^{146} + \cdots - 394.089u + 18.9126 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -4.25834u^{147} - 13.7647u^{146} + \cdots + 536.061u - 8.91213 \\ -0.0989344u^{147} - 0.283071u^{146} + \cdots - 0.416518u + 1.70615 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.340291u^{147} - 1.41193u^{146} + \cdots + 1.36267u - 28.3977 \\ 0.935089u^{147} + 2.73408u^{146} + \cdots - 589.808u + 77.5672 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.433691u^{147} - 2.56122u^{146} + \cdots + 609.910u - 113.898 \\ 2.05693u^{147} + 6.32746u^{146} + \cdots - 394.089u + 18.9126 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -4.15824u^{147} - 15.5606u^{146} + \cdots - 951.355u + 226.736 \\ -1.08619u^{147} - 1.41697u^{146} + \cdots + 1067.53u - 176.821 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 14.5223u^{147} + 33.0084u^{146} + \cdots - 9219.44u + 1499.03 \\ -0.556047u^{147} - 2.33541u^{146} + \cdots + 46.6725u + 2.68327 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 9.20435u^{147} + 43.3960u^{146} + \cdots + 7499.92u - 1579.10 \\ -0.0490474u^{147} - 0.557633u^{146} + \cdots + 138.617u - 22.2642 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -23.7391u^{147} - 56.5982u^{146} + \cdots + 11427.9u - 1690.16$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{148} + 52u^{147} + \cdots + 225688u + 10201$
c_2, c_6	$u^{148} + 2u^{147} + \cdots + 648u - 101$
c_3	$u^{148} + 6u^{147} + \cdots - 28u + 1$
c_4	$u^{148} - u^{147} + \cdots + 58981664u - 6309529$
c_5, c_8	$u^{148} + 2u^{147} + \cdots + 569785u + 75377$
c_7, c_{11}	$u^{148} - u^{147} + \cdots + 20974u - 1021$
c_9	$u^{148} + 17u^{147} + \cdots + 20173695u + 2908799$
c_{10}	$u^{148} - 16u^{147} + \cdots - 121942u + 17011$
c_{12}	$u^{148} + 3u^{147} + \cdots - 45u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{148} + 64y^{147} + \cdots + 1862038336y + 104060401$
c_2, c_6	$y^{148} + 52y^{147} + \cdots + 225688y + 10201$
c_3	$y^{148} + 24y^{147} + \cdots - 116y + 1$
c_4	$y^{148} - 59y^{147} + \cdots - 6005658867352188y + 39810156201841$
c_5, c_8	$y^{148} - 110y^{147} + \cdots - 159118159739y + 5681692129$
c_7, c_{11}	$y^{148} + 91y^{147} + \cdots + 140301120y + 1042441$
c_9	$y^{148} - 57y^{147} + \cdots - 651689179521105y + 8461111622401$
c_{10}	$y^{148} + 26y^{147} + \cdots + 23472466328y + 289374121$
c_{12}	$y^{148} - 23y^{147} + \cdots + 47y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.769936+0.637167I$ $a=\ \ 1.51306+1.57880I$ $b=\ \ 1.95693+0.78697I$	$4.71739+4.12254I$	0
$u=-0.769936-0.637167I$ $a=\ \ 1.51306-1.57880I$ $b=\ \ 1.95693-0.78697I$	$4.71739-4.12254I$	0
$u=\ \ 0.839915+0.558536I$ $a=-0.793268-0.504148I$ $b=-0.455550-0.818813I$	$3.74720+4.69907I$	0
$u=\ \ 0.839915-0.558536I$ $a=-0.793268+0.504148I$ $b=-0.455550+0.818813I$	$3.74720-4.69907I$	0
$u=\ \ 0.680603+0.758056I$ $a=-1.15384+1.70671I$ $b=-1.029920+0.371559I$	$1.59469-1.18911I$	0
$u=\ \ 0.680603-0.758056I$ $a=-1.15384-1.70671I$ $b=-1.029920-0.371559I$	$1.59469+1.18911I$	0
$u=\ \ 0.082421+0.975904I$ $a=\ \ 0.404354+0.748854I$ $b=-0.053861-1.256040I$	$-2.80448+2.17992I$	0
$u=\ \ 0.082421-0.975904I$ $a=\ \ 0.404354-0.748854I$ $b=-0.053861+1.256040I$	$-2.80448-2.17992I$	0
$u=-0.800073+0.642825I$ $a=-1.04329-1.29748I$ $b=-1.37614-0.90742I$	$3.52532+2.68080I$	0
$u=-0.800073-0.642825I$ $a=-1.04329+1.29748I$ $b=-1.37614+0.90742I$	$3.52532-2.68080I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.533509 + 0.810153I$ $a = -3.11459 + 2.72354I$ $b = -0.239845 - 0.209041I$	$3.50091 + 1.82337I$	0
$u = 0.533509 - 0.810153I$ $a = -3.11459 - 2.72354I$ $b = -0.239845 + 0.209041I$	$3.50091 - 1.82337I$	0
$u = -0.692022 + 0.774667I$ $a = 1.47729 + 0.28878I$ $b = 1.40281 + 0.46749I$	$9.60483 + 5.04060I$	0
$u = -0.692022 - 0.774667I$ $a = 1.47729 - 0.28878I$ $b = 1.40281 - 0.46749I$	$9.60483 - 5.04060I$	0
$u = -0.800256 + 0.519923I$ $a = -1.12012 - 0.88361I$ $b = -0.686300 - 0.823247I$	$3.56002 + 8.07451I$	0
$u = -0.800256 - 0.519923I$ $a = -1.12012 + 0.88361I$ $b = -0.686300 + 0.823247I$	$3.56002 - 8.07451I$	0
$u = 0.614932 + 0.846163I$ $a = -1.54915 + 1.00418I$ $b = -0.74713 - 1.28581I$	$3.47362 + 0.56739I$	0
$u = 0.614932 - 0.846163I$ $a = -1.54915 - 1.00418I$ $b = -0.74713 + 1.28581I$	$3.47362 - 0.56739I$	0
$u = 0.637209 + 0.831340I$ $a = 0.84150 - 2.10274I$ $b = 2.48068 - 1.44697I$	$8.44146 + 7.98648I$	0
$u = 0.637209 - 0.831340I$ $a = 0.84150 + 2.10274I$ $b = 2.48068 + 1.44697I$	$8.44146 - 7.98648I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.706571+0.785069I$ $a=-0.918845-0.481131I$ $b=-1.237320-0.660865I$	$5.75577+0.28751I$	0
$u=-0.706571-0.785069I$ $a=-0.918845+0.481131I$ $b=-1.237320+0.660865I$	$5.75577-0.28751I$	0
$u=0.655402+0.678853I$ $a=0.960142-0.391166I$ $b=0.345528+0.044798I$	$1.36746+1.48211I$	0
$u=0.655402-0.678853I$ $a=0.960142+0.391166I$ $b=0.345528-0.044798I$	$1.36746-1.48211I$	0
$u=0.057886+1.055360I$ $a=-0.742576-0.161146I$ $b=0.864498+1.006030I$	$-1.09038+3.64274I$	0
$u=0.057886-1.055360I$ $a=-0.742576+0.161146I$ $b=0.864498-1.006030I$	$-1.09038-3.64274I$	0
$u=0.612091+0.863181I$ $a=-0.388473+0.671927I$ $b=-1.17312+1.22060I$	$3.42037+4.25835I$	0
$u=0.612091-0.863181I$ $a=-0.388473-0.671927I$ $b=-1.17312-1.22060I$	$3.42037-4.25835I$	0
$u=-0.452159+0.957349I$ $a=1.252100+0.655520I$ $b=0.916740-0.482441I$	$-2.95953-1.60773I$	0
$u=-0.452159-0.957349I$ $a=1.252100-0.655520I$ $b=0.916740+0.482441I$	$-2.95953+1.60773I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.682346+0.645395I$ $a=-1.91385-0.70412I$ $b=-1.45467+0.53812I$	$5.48460+1.98053I$	0
$u=-0.682346-0.645395I$ $a=-1.91385+0.70412I$ $b=-1.45467-0.53812I$	$5.48460-1.98053I$	0
$u=0.089356+1.057760I$ $a=0.397022+0.533329I$ $b=-0.376259-1.046850I$	$-2.61567+2.29136I$	0
$u=0.089356-1.057760I$ $a=0.397022-0.533329I$ $b=-0.376259+1.046850I$	$-2.61567-2.29136I$	0
$u=0.621686+0.698295I$ $a=0.523634-1.135410I$ $b=0.182883-0.355598I$	$1.46921+1.77573I$	0
$u=0.621686-0.698295I$ $a=0.523634+1.135410I$ $b=0.182883+0.355598I$	$1.46921-1.77573I$	0
$u=-0.753687+0.758324I$ $a=0.478102-0.190940I$ $b=0.864382+0.396362I$	$9.07722-4.51869I$	0
$u=-0.753687-0.758324I$ $a=0.478102+0.190940I$ $b=0.864382-0.396362I$	$9.07722+4.51869I$	0
$u=-0.762931+0.524549I$ $a=1.171310+0.733873I$ $b=0.665422+0.379943I$	$0.60685+3.89379I$	0
$u=-0.762931-0.524549I$ $a=1.171310-0.733873I$ $b=0.665422-0.379943I$	$0.60685-3.89379I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.643856+0.877600I$		
$a=$	$2.49371-1.18966I$	$8.29501-2.98629I$	0
$b=$	$1.92963+1.77881I$		
$u=$	$0.643856-0.877600I$		
$a=$	$2.49371+1.18966I$	$8.29501+2.98629I$	0
$b=$	$1.92963-1.77881I$		
$u=$	$0.561460+0.933887I$		
$a=$	$-2.33444+0.83306I$	$3.04732+2.54731I$	0
$b=$	$-0.535764-0.033243I$		
$u=$	$0.561460-0.933887I$		
$a=$	$-2.33444-0.83306I$	$3.04732-2.54731I$	0
$b=$	$-0.535764+0.033243I$		
$u=$	$0.168089+1.076850I$		
$a=$	$-1.253420-0.599193I$	$2.69789-3.74630I$	0
$b=$	$0.758942-1.037640I$		
$u=$	$0.168089-1.076850I$		
$a=$	$-1.253420+0.599193I$	$2.69789+3.74630I$	0
$b=$	$0.758942+1.037640I$		
$u=$	$0.507455+0.983069I$		
$a=$	$0.225480-1.144630I$	$1.76820+2.11705I$	0
$b=$	$0.287681+0.146148I$		
$u=$	$0.507455-0.983069I$		
$a=$	$0.225480+1.144630I$	$1.76820-2.11705I$	0
$b=$	$0.287681-0.146148I$		
$u=$	$0.969721+0.534209I$		
$a=$	$0.999737-0.607200I$	$11.20750-1.13432I$	0
$b=$	$1.35067-0.42951I$		
$u=$	$0.969721-0.534209I$		
$a=$	$0.999737+0.607200I$	$11.20750+1.13432I$	0
$b=$	$1.35067+0.42951I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.560989+0.958698I$ $a=-1.88637-0.49337I$ $b=-1.05468+1.18469I$	$0.03616-6.60312I$	0
$u=-0.560989-0.958698I$ $a=-1.88637+0.49337I$ $b=-1.05468-1.18469I$	$0.03616+6.60312I$	0
$u=-0.407500+1.035220I$ $a=-0.295263+0.385450I$ $b=\ 0.462997+1.110580I$	$-3.28286-4.45845I$	0
$u=-0.407500-1.035220I$ $a=-0.295263-0.385450I$ $b=\ 0.462997-1.110580I$	$-3.28286+4.45845I$	0
$u=\ 0.403619+0.789925I$ $a=\ 2.62780+1.73916I$ $b=\ 0.393620-0.088664I$	$2.97332+1.73336I$	0
$u=\ 0.403619-0.789925I$ $a=\ 2.62780-1.73916I$ $b=\ 0.393620+0.088664I$	$2.97332-1.73336I$	0
$u=\ 0.945252+0.591891I$ $a=\ 0.97609-1.12813I$ $b=\ 1.42305-1.01224I$	$9.8462-13.8073I$	0
$u=\ 0.945252-0.591891I$ $a=\ 0.97609+1.12813I$ $b=\ 1.42305+1.01224I$	$9.8462+13.8073I$	0
$u=-0.720337+0.855632I$ $a=\ 1.49256-0.38863I$ $b=\ 0.31089-1.94869I$	$8.11074-2.09328I$	0
$u=-0.720337-0.855632I$ $a=\ 1.49256+0.38863I$ $b=\ 0.31089+1.94869I$	$8.11074+2.09328I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.970205+0.562492I$ $a=\ \ 0.792995+0.503182I$ $b=\ \ 1.143020+0.679410I$	$11.36020+4.55682I$	0
$u=-0.970205-0.562492I$ $a=\ \ 0.792995-0.503182I$ $b=\ \ 1.143020-0.679410I$	$11.36020-4.55682I$	0
$u=-0.264987+0.833730I$ $a=\ \ 1.295610+0.229529I$ $b=-0.22044-1.42663I$	$-1.99613+1.72020I$	0
$u=-0.264987-0.833730I$ $a=\ \ 1.295610-0.229529I$ $b=-0.22044+1.42663I$	$-1.99613-1.72020I$	0
$u=-0.723000+0.862554I$ $a=-0.683099+1.095530I$ $b=\ \ 0.80358+1.86055I$	$8.09150-3.40596I$	0
$u=-0.723000-0.862554I$ $a=-0.683099-1.095530I$ $b=\ \ 0.80358-1.86055I$	$8.09150+3.40596I$	0
$u=\ \ 0.974867+0.589626I$ $a=-0.843848+0.942740I$ $b=-1.25978+0.82521I$	$5.65662-7.35879I$	0
$u=\ \ 0.974867-0.589626I$ $a=-0.843848-0.942740I$ $b=-1.25978-0.82521I$	$5.65662+7.35879I$	0
$u=-0.684381+0.913268I$ $a=-1.37694-1.09207I$ $b=-0.944280+0.860168I$	$5.36543-5.62427I$	0
$u=-0.684381-0.913268I$ $a=-1.37694+1.09207I$ $b=-0.944280-0.860168I$	$5.36543+5.62427I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.673284+0.923035I$ $a=\ \ 1.39343+1.65016I$ $b=\ \ 1.121090-0.595959I$	$9.15061-10.30330I$	0
$u=-0.673284-0.923035I$ $a=\ \ 1.39343-1.65016I$ $b=\ \ 1.121090+0.595959I$	$9.15061+10.30330I$	0
$u=\ \ 0.662223+0.937029I$ $a=-2.03763+0.25010I$ $b=-1.29671-0.67584I$	$1.04599+6.38778I$	0
$u=\ \ 0.662223-0.937029I$ $a=-2.03763-0.25010I$ $b=-1.29671+0.67584I$	$1.04599-6.38778I$	0
$u=-0.012214+1.151280I$ $a=\ \ 0.218582-0.257400I$ $b=\ \ 0.254769+0.881110I$	$-5.03626+2.30131I$	0
$u=-0.012214-1.151280I$ $a=\ \ 0.218582+0.257400I$ $b=\ \ 0.254769-0.881110I$	$-5.03626-2.30131I$	0
$u=\ \ 0.104267+0.841355I$ $a=-0.140788-0.834366I$ $b=-0.66639+1.35029I$	$-2.32899-2.11126I$	0
$u=\ \ 0.104267-0.841355I$ $a=-0.140788+0.834366I$ $b=-0.66639-1.35029I$	$-2.32899+2.11126I$	0
$u=-1.110010+0.319340I$ $a=\ \ 0.332488-0.230503I$ $b=\ \ 0.763772-0.118071I$	$8.09797-8.18527I$	0
$u=-1.110010-0.319340I$ $a=\ \ 0.332488+0.230503I$ $b=\ \ 0.763772+0.118071I$	$8.09797+8.18527I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.624567 + 0.980093I$ $a = 1.216560 - 0.241582I$ $b = 0.589137 + 0.338322I$	$0.45205 + 3.50465I$	0
$u = 0.624567 - 0.980093I$ $a = 1.216560 + 0.241582I$ $b = 0.589137 - 0.338322I$	$0.45205 - 3.50465I$	0
$u = 0.641338 + 0.975824I$ $a = 1.53440 + 0.25176I$ $b = 0.533710 + 0.685958I$	$0.60913 + 3.24526I$	0
$u = 0.641338 - 0.975824I$ $a = 1.53440 - 0.25176I$ $b = 0.533710 - 0.685958I$	$0.60913 - 3.24526I$	0
$u = 0.004974 + 1.167720I$ $a = -0.080516 + 0.577376I$ $b = -0.466323 - 1.085310I$	$-2.35243 + 6.40725I$	0
$u = 0.004974 - 1.167720I$ $a = -0.080516 - 0.577376I$ $b = -0.466323 + 1.085310I$	$-2.35243 - 6.40725I$	0
$u = -0.636773 + 0.997265I$ $a = -1.00898 - 1.26124I$ $b = -1.70064 - 0.15421I$	$4.42882 - 7.10812I$	0
$u = -0.636773 - 0.997265I$ $a = -1.00898 + 1.26124I$ $b = -1.70064 + 0.15421I$	$4.42882 + 7.10812I$	0
$u = 0.593681 + 1.023540I$ $a = 1.91308 - 1.26775I$ $b = 2.02863 + 1.49595I$	$5.35359 + 10.26120I$	0
$u = 0.593681 - 1.023540I$ $a = 1.91308 + 1.26775I$ $b = 2.02863 - 1.49595I$	$5.35359 - 10.26120I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.726251+0.939284I$ $a=\ \ 0.470063+0.833587I$ $b=\ \ 0.401942-0.566172I$	$8.54049-1.08703I$	0
$u=-0.726251-0.939284I$ $a=\ \ 0.470063-0.833587I$ $b=\ \ 0.401942+0.566172I$	$8.54049+1.08703I$	0
$u=\ \ 0.784216+0.208011I$ $a=-0.436489-0.104406I$ $b=-0.675779-0.006893I$	$1.49213+0.09418I$	0
$u=\ \ 0.784216-0.208011I$ $a=-0.436489+0.104406I$ $b=-0.675779+0.006893I$	$1.49213-0.09418I$	0
$u=\ \ 0.040675+0.789751I$ $a=-2.37348-0.75443I$ $b=\ \ 0.843461-0.529432I$	$5.30954+6.50829I$	0
$u=\ \ 0.040675-0.789751I$ $a=-2.37348+0.75443I$ $b=\ \ 0.843461+0.529432I$	$5.30954-6.50829I$	0
$u=\ \ 0.305796+0.708854I$ $a=-1.71675+0.18701I$ $b=-1.324070-0.241356I$	$1.62553-0.93392I$	0
$u=\ \ 0.305796-0.708854I$ $a=-1.71675-0.18701I$ $b=-1.324070+0.241356I$	$1.62553+0.93392I$	0
$u=-0.685085+1.020030I$ $a=\ \ 2.13374+1.10489I$ $b=\ \ 2.01427-1.25903I$	$3.57308-9.64410I$	0
$u=-0.685085-1.020030I$ $a=\ \ 2.13374-1.10489I$ $b=\ \ 2.01427+1.25903I$	$3.57308+9.64410I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.442510 + 1.149600I$ $a = -0.026493 + 1.316140I$ $b = -1.42405 + 0.27976I$	$-0.93725 + 4.03007I$	0
$u = 0.442510 - 1.149600I$ $a = -0.026493 - 1.316140I$ $b = -1.42405 - 0.27976I$	$-0.93725 - 4.03007I$	0
$u = -0.651514 + 1.055880I$ $a = 1.45529 + 0.49378I$ $b = 0.942923 - 0.567650I$	$-0.93890 - 9.25981I$	0
$u = -0.651514 - 1.055880I$ $a = 1.45529 - 0.49378I$ $b = 0.942923 + 0.567650I$	$-0.93890 + 9.25981I$	0
$u = -0.697643 + 1.026390I$ $a = -1.95036 - 0.65491I$ $b = -1.43148 + 1.28621I$	$2.36887 - 8.32288I$	0
$u = -0.697643 - 1.026390I$ $a = -1.95036 + 0.65491I$ $b = -1.43148 - 1.28621I$	$2.36887 + 8.32288I$	0
$u = 0.494245 + 0.566912I$ $a = 1.46375 - 1.82890I$ $b = 2.19364 - 0.56420I$	$6.73797 - 5.59726I$	0
$u = 0.494245 - 0.566912I$ $a = 1.46375 + 1.82890I$ $b = 2.19364 + 0.56420I$	$6.73797 + 5.59726I$	0
$u = 0.618970 + 1.090940I$ $a = -0.898525 + 0.614785I$ $b = -0.872745 - 0.708459I$	$-0.82047 + 5.13370I$	0
$u = 0.618970 - 1.090940I$ $a = -0.898525 - 0.614785I$ $b = -0.872745 + 0.708459I$	$-0.82047 - 5.13370I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.658937+1.067600I$ $a=-1.77396-0.49014I$ $b=-0.876392+0.917845I$	$1.94680-13.55350I$	0
$u=-0.658937-1.067600I$ $a=-1.77396+0.49014I$ $b=-0.876392-0.917845I$	$1.94680+13.55350I$	0
$u=-0.446704+0.586220I$ $a=-0.48099-1.47582I$ $b=-0.802919-0.715224I$	$1.04584+2.26494I$	0
$u=-0.446704-0.586220I$ $a=-0.48099+1.47582I$ $b=-0.802919+0.715224I$	$1.04584-2.26494I$	0
$u=-0.161935+1.269120I$ $a=-0.325955+0.253893I$ $b=0.692576-0.850020I$	$2.24682-12.10360I$	0
$u=-0.161935-1.269120I$ $a=-0.325955-0.253893I$ $b=0.692576+0.850020I$	$2.24682+12.10360I$	0
$u=0.002432+0.719130I$ $a=0.054436-1.142880I$ $b=-0.659458-0.250629I$	$1.09994+2.09658I$	0
$u=0.002432-0.719130I$ $a=0.054436+1.142880I$ $b=-0.659458+0.250629I$	$1.09994-2.09658I$	0
$u=0.116144+0.674757I$ $a=2.25606+0.81942I$ $b=-0.303519+0.183390I$	$1.32804+2.45147I$	0
$u=0.116144-0.674757I$ $a=2.25606-0.81942I$ $b=-0.303519-0.183390I$	$1.32804-2.45147I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.731434 + 1.102020I$ $a = 1.72781 - 0.69373I$ $b = 1.45412 + 1.29347I$	$8.2610 + 19.9510I$	0
$u = 0.731434 - 1.102020I$ $a = 1.72781 + 0.69373I$ $b = 1.45412 - 1.29347I$	$8.2610 - 19.9510I$	0
$u = -0.732177 + 1.115030I$ $a = 1.23441 + 0.75038I$ $b = 1.07674 - 0.97037I$	$9.6528 - 10.7542I$	0
$u = -0.732177 - 1.115030I$ $a = 1.23441 - 0.75038I$ $b = 1.07674 + 0.97037I$	$9.6528 + 10.7542I$	0
$u = -0.814338 + 1.056680I$ $a = -1.195400 - 0.029383I$ $b = -0.678119 + 1.217090I$	$3.47314 - 6.90476I$	0
$u = -0.814338 - 1.056680I$ $a = -1.195400 + 0.029383I$ $b = -0.678119 - 1.217090I$	$3.47314 + 6.90476I$	0
$u = 0.664233$ $a = -1.43464$ $b = -1.30578$	2.21894	0
$u = 0.740118 + 1.112690I$ $a = -1.48718 + 0.59400I$ $b = -1.31169 - 1.11971I$	$4.0208 + 13.6093I$	0
$u = 0.740118 - 1.112690I$ $a = -1.48718 - 0.59400I$ $b = -1.31169 + 1.11971I$	$4.0208 - 13.6093I$	0
$u = 0.558940 + 0.357046I$ $a = 0.679118 + 1.146890I$ $b = 0.881939 + 0.002976I$	$3.29262 + 2.11226I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.558940-0.357046I$		
$a=$	$0.679118-1.146890I$	$3.29262-2.11226I$	0
$b=$	$0.881939-0.002976I$		
$u=$	$0.718741+1.129580I$		
$a=$	$1.15158-0.82914I$	$9.36834+7.28517I$	0
$b=$	$1.40120+0.75630I$		
$u=$	$0.718741-1.129580I$		
$a=$	$1.15158+0.82914I$	$9.36834-7.28517I$	0
$b=$	$1.40120-0.75630I$		
$u=$	$0.770563+1.099490I$		
$a=$	$0.154330+0.226927I$	$2.21026+1.19199I$	0
$b=$	$-0.288914+0.455273I$		
$u=$	$0.770563-1.099490I$		
$a=$	$0.154330-0.226927I$	$2.21026-1.19199I$	0
$b=$	$-0.288914-0.455273I$		
$u=$	$-0.212852+1.326520I$		
$a=$	$0.256717-0.093685I$	$-2.37008-5.40558I$	0
$b=$	$-0.438676+0.606345I$		
$u=$	$-0.212852-1.326520I$		
$a=$	$0.256717+0.093685I$	$-2.37008+5.40558I$	0
$b=$	$-0.438676-0.606345I$		
$u=$	$-1.10012+0.89232I$		
$a=$	$0.130966-0.447808I$	$4.37587+0.05789I$	0
$b=$	$-0.310512-0.812334I$		
$u=$	$-1.10012-0.89232I$		
$a=$	$0.130966+0.447808I$	$4.37587-0.05789I$	0
$b=$	$-0.310512+0.812334I$		
$u=$	$-0.14302+1.45762I$		
$a=$	$-0.291389-0.025003I$	$3.62994+1.54287I$	0
$b=$	$0.484017-0.114924I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.14302-1.45762I$ $a=-0.291389+0.025003I$ $b=\ \ 0.484017+0.114924I$	$3.62994-1.54287I$	0
$u=\ \ 0.353163+0.317005I$ $a=\ \ 1.76206-1.80707I$ $b=\ \ 1.77187-0.30182I$	$6.70775-5.64468I$	$2.91883+3.12758I$
$u=\ \ 0.353163-0.317005I$ $a=\ \ 1.76206+1.80707I$ $b=\ \ 1.77187+0.30182I$	$6.70775+5.64468I$	$2.91883-3.12758I$
$u=\ \ 0.400843+0.239268I$ $a=-1.18485-1.81069I$ $b=-0.467740+0.579961I$	$4.06649+1.04747I$	$8.01975+0.93073I$
$u=\ \ 0.400843-0.239268I$ $a=-1.18485+1.81069I$ $b=-0.467740-0.579961I$	$4.06649-1.04747I$	$8.01975-0.93073I$
$u=-0.410832+0.000981I$ $a=\ \ 1.21699-1.41861I$ $b=\ \ 0.131418-0.538352I$	$-0.92136+1.37626I$	$-1.95062-4.54782I$
$u=-0.410832-0.000981I$ $a=\ \ 1.21699+1.41861I$ $b=\ \ 0.131418+0.538352I$	$-0.92136-1.37626I$	$-1.95062+4.54782I$
$u=-2.03244$ $a=-0.0421868$ $b=-0.262158$	3.89519	0

II.

$\boldsymbol{I_2^u = \langle -9.80\times 10^4 u^{28} - 1.71\times 10^5 u^{27} + \cdots + 5.84\times 10^4 b + 1.37\times 10^5,\ -1.79\times 10^5 u^{28} - 3.62\times 10^5 u^{27} + \cdots + 5.84\times 10^4 a + 4.09\times 10^5,\ u^{29} + 3u^{28} + \cdots + 2u + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 3.06191u^{28} + 6.19206u^{27} + \cdots - 4.75773u - 6.99458 \\ 1.67706u^{28} + 2.93460u^{27} + \cdots - 0.561115u - 2.33952 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.800082u^{28} - 2.87123u^{27} + \cdots - 10.8385u + 3.00729 \\ 1.68978u^{28} + 6.71091u^{27} + \cdots + 4.10113u + 3.28211 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 2.59649u^{28} + 5.80181u^{27} + \cdots - 4.75427u - 7.43806 \\ 0.526908u^{28} - 0.0386899u^{27} + \cdots - 1.25319u - 1.76312 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.38485u^{28} + 3.25747u^{27} + \cdots - 4.19662u - 4.65506 \\ 1.67706u^{28} + 2.93460u^{27} + \cdots - 0.561115u - 2.33952 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.466897u^{28} - 1.16652u^{27} + \cdots + 5.23098u + 6.18712 \\ -u^{27} - 2u^{26} + \cdots - 9u^2 - 2u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -5.26058u^{28} - 16.9875u^{27} + \cdots + 4.47283u + 8.12642 \\ 0.327418u^{28} + 1.45355u^{27} + \cdots - 4.92272u + 0.441623 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -8.10911u^{28} - 23.6215u^{27} + \cdots + 1.24027u - 0.316912 \\ 0.628912u^{28} + 0.674105u^{27} + \cdots - 1.86066u - 3.56596 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{715492}{58439}u^{28} + \frac{2342695}{58439}u^{27} + \cdots + \frac{213211}{58439}u + \frac{373912}{58439}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{29} - 9u^{28} + \cdots - 20u + 1$
c_2	$u^{29} - 3u^{28} + \cdots + 2u - 1$
c_3	$u^{29} + 3u^{28} + \cdots + 22u + 1$
c_4	$u^{29} + 2u^{28} + \cdots + 2u - 1$
c_5	$u^{29} + u^{28} + \cdots + u + 1$
c_6	$u^{29} + 3u^{28} + \cdots + 2u + 1$
c_7	$u^{29} + 2u^{28} + \cdots - 2u + 1$
c_8	$u^{29} - u^{28} + \cdots + u - 1$
c_9	$u^{29} - 4u^{28} + \cdots - u - 1$
c_{10}	$u^{29} - 3u^{28} + \cdots + 2u - 1$
c_{11}	$u^{29} - 2u^{28} + \cdots - 2u - 1$
c_{12}	$u^{29} + 8u^{28} + \cdots - 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{29} - 3y^{28} + \cdots + 44y - 1$
c_2, c_6	$y^{29} + 9y^{28} + \cdots - 20y - 1$
c_3	$y^{29} + 21y^{28} + \cdots + 440y - 1$
c_4	$y^{29} + 2y^{28} + \cdots + 16y - 1$
c_5, c_8	$y^{29} - 9y^{28} + \cdots + 11y - 1$
c_7, c_{11}	$y^{29} + 8y^{28} + \cdots - 20y - 1$
c_9	$y^{29} - 24y^{28} + \cdots + 21y - 1$
c_{10}	$y^{29} - 5y^{28} + \cdots + 4y - 1$
c_{12}	$y^{29} - 22y^{28} + \cdots - 11y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.073440 + 0.996386I$ $a = 0.333996 + 0.477240I$ $b = -0.570540 - 1.205160I$	$-2.82618 + 3.38088I$	$-3.54767 - 8.07825I$
$u = 0.073440 - 0.996386I$ $a = 0.333996 - 0.477240I$ $b = -0.570540 + 1.205160I$	$-2.82618 - 3.38088I$	$-3.54767 + 8.07825I$
$u = -0.781069 + 0.658115I$ $a = -1.30751 - 1.47409I$ $b = -1.63514 - 0.77249I$	$3.09501 + 3.48140I$	$3.23233 - 4.90037I$
$u = -0.781069 - 0.658115I$ $a = -1.30751 + 1.47409I$ $b = -1.63514 + 0.77249I$	$3.09501 - 3.48140I$	$3.23233 + 4.90037I$
$u = 0.323788 + 1.012610I$ $a = -0.63544 - 1.40479I$ $b = 0.063848 + 0.302755I$	$2.72862 + 1.99174I$	$9.68045 - 6.03244I$
$u = 0.323788 - 1.012610I$ $a = -0.63544 + 1.40479I$ $b = 0.063848 - 0.302755I$	$2.72862 - 1.99174I$	$9.68045 + 6.03244I$
$u = 0.507828 + 0.780521I$ $a = 3.42126 - 1.37680I$ $b = 0.140448 + 0.094444I$	$3.44852 + 1.74475I$	$-22.0194 + 4.1907I$
$u = 0.507828 - 0.780521I$ $a = 3.42126 + 1.37680I$ $b = 0.140448 - 0.094444I$	$3.44852 - 1.74475I$	$-22.0194 - 4.1907I$
$u = 0.884939 + 0.673073I$ $a = -0.469133 + 0.333359I$ $b = -0.568454 + 0.273810I$	$1.82641 + 0.71163I$	$12.11861 + 4.48155I$
$u = 0.884939 - 0.673073I$ $a = -0.469133 - 0.333359I$ $b = -0.568454 - 0.273810I$	$1.82641 - 0.71163I$	$12.11861 - 4.48155I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.563978+0.665426I$ $a=2.36719+1.21255I$ $b=2.20558+0.06566I$	$7.44962+5.20822I$	$10.52025-2.48221I$
$u=-0.563978-0.665426I$ $a=2.36719-1.21255I$ $b=2.20558-0.06566I$	$7.44962-5.20822I$	$10.52025+2.48221I$
$u=0.694744+0.932886I$ $a=-1.46707+0.12465I$ $b=-0.887314-0.781339I$	$1.18686+4.99401I$	$4.04180-5.87689I$
$u=0.694744-0.932886I$ $a=-1.46707-0.12465I$ $b=-0.887314+0.781339I$	$1.18686-4.99401I$	$4.04180+5.87689I$
$u=-0.616311+0.562932I$ $a=0.076720+0.889123I$ $b=1.40311+0.69448I$	$7.43307-6.74628I$	$6.79317+6.38006I$
$u=-0.616311-0.562932I$ $a=0.076720-0.889123I$ $b=1.40311-0.69448I$	$7.43307+6.74628I$	$6.79317-6.38006I$
$u=0.383873+1.104840I$ $a=0.124012-0.088594I$ $b=0.144232-0.737220I$	$-2.93395+4.04810I$	$0.049872-1.034196I$
$u=0.383873-1.104840I$ $a=0.124012+0.088594I$ $b=0.144232+0.737220I$	$-2.93395-4.04810I$	$0.049872+1.034196I$
$u=0.278936+0.778244I$ $a=0.924819-0.491194I$ $b=-0.326819+1.367840I$	$-1.58412-1.49983I$	$8.07338-3.89010I$
$u=0.278936-0.778244I$ $a=0.924819+0.491194I$ $b=-0.326819-1.367840I$	$-1.58412+1.49983I$	$8.07338+3.89010I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.598901+1.022510I$ $a=\ \ 1.48302+1.69399I$ $b=\ \ 1.95713-0.71800I$	$6.26940-9.90910I$	$8.20203+8.64522I$
$u=-0.598901-1.022510I$ $a=\ \ 1.48302-1.69399I$ $b=\ \ 1.95713+0.71800I$	$6.26940+9.90910I$	$8.20203-8.64522I$
$u=-0.403994+1.154660I$ $a=\ \ 0.241508-1.275890I$ $b=-1.241890-0.506647I$	$-0.85574-4.26209I$	$5.5320+19.2758I$
$u=-0.403994-1.154660I$ $a=\ \ 0.241508+1.275890I$ $b=-1.241890+0.506647I$	$-0.85574+4.26209I$	$5.5320-19.2758I$
$u=-0.695167+1.014200I$ $a=-2.07424-0.81549I$ $b=-1.70886+1.20876I$	$2.02392-9.06805I$	$1.00434+10.48909I$
$u=-0.695167-1.014200I$ $a=-2.07424+0.81549I$ $b=-1.70886-1.20876I$	$2.02392+9.06805I$	$1.00434-10.48909I$
$u=-0.014566+0.436910I$ $a=-2.98540-1.09024I$ $b=-0.825872+0.379932I$	$2.04059+1.72205I$	$3.71368-3.13007I$
$u=-0.014566-0.436910I$ $a=-2.98540+1.09024I$ $b=-0.825872-0.379932I$	$2.04059-1.72205I$	$3.71368+3.13007I$
$u=-1.94713$ $a=-0.0674758$ $b=-0.298900$	3.90343	409.210

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{29}-9u^{28}+\cdots-20u+1)(u^{148}+52u^{147}+\cdots+225688u+10201)$
c_2	$(u^{29}-3u^{28}+\cdots+2u-1)(u^{148}+2u^{147}+\cdots+648u-101)$
c_3	$(u^{29}+3u^{28}+\cdots+22u+1)(u^{148}+6u^{147}+\cdots-28u+1)$
c_4	$(u^{29}+2u^{28}+\cdots+2u-1)(u^{148}-u^{147}+\cdots+5.89817\times10^{7}u-6309529)$
c_5	$(u^{29}+u^{28}+\cdots+u+1)(u^{148}+2u^{147}+\cdots+569785u+75377)$
c_6	$(u^{29}+3u^{28}+\cdots+2u+1)(u^{148}+2u^{147}+\cdots+648u-101)$
c_7	$(u^{29}+2u^{28}+\cdots-2u+1)(u^{148}-u^{147}+\cdots+20974u-1021)$
c_8	$(u^{29}-u^{28}+\cdots+u-1)(u^{148}+2u^{147}+\cdots+569785u+75377)$
c_9	$(u^{29}-4u^{28}+\cdots-u-1)$ $\cdot(u^{148}+17u^{147}+\cdots+20173695u+2908799)$
c_{10}	$(u^{29}-3u^{28}+\cdots+2u-1)(u^{148}-16u^{147}+\cdots-121942u+17011)$
c_{11}	$(u^{29}-2u^{28}+\cdots-2u-1)(u^{148}-u^{147}+\cdots+20974u-1021)$
c_{12}	$(u^{29}+8u^{28}+\cdots-5u+1)(u^{148}+3u^{147}+\cdots-45u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{29}-3y^{28}+\cdots+44y-1)$ $\cdot(y^{148}+64y^{147}+\cdots+1862038336y+104060401)$
c_2, c_6	$(y^{29}+9y^{28}+\cdots-20y-1)(y^{148}+52y^{147}+\cdots+225688y+10201)$
c_3	$(y^{29}+21y^{28}+\cdots+440y-1)(y^{148}+24y^{147}+\cdots-116y+1)$
c_4	$(y^{29}+2y^{28}+\cdots+16y-1)$ $\cdot(y^{148}-59y^{147}+\cdots-6005658867352188y+39810156201841)$
c_5, c_8	$(y^{29}-9y^{28}+\cdots+11y-1)$ $\cdot(y^{148}-110y^{147}+\cdots-159118159739y+5681692129)$
c_7, c_{11}	$(y^{29}+8y^{28}+\cdots-20y-1)$ $\cdot(y^{148}+91y^{147}+\cdots+140301120y+1042441)$
c_9	$(y^{29}-24y^{28}+\cdots+21y-1)$ $\cdot(y^{148}-57y^{147}+\cdots-651689179521105y+8461111622401)$
c_{10}	$(y^{29}-5y^{28}+\cdots+4y-1)$ $\cdot(y^{148}+26y^{147}+\cdots+23472466328y+289374121)$
c_{12}	$(y^{29}-22y^{28}+\cdots-11y-1)(y^{148}-23y^{147}+\cdots+47y+1)$