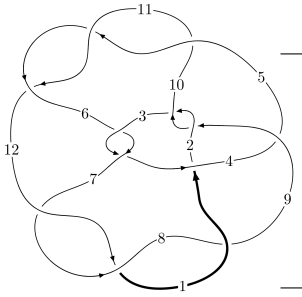
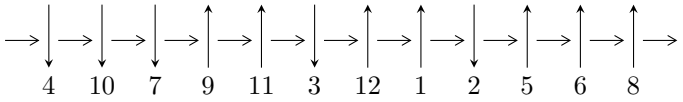
$12a_{1168}$ $(K12a_{1168})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.02112 \times 10^{219} u^{97} + 2.42861 \times 10^{219} u^{96} + \cdots + 1.88853 \times 10^{219} b + 4.15398 \times 10^{220},$$
$$7.40552 \times 10^{221} u^{97} - 1.66364 \times 10^{222} u^{96} + \cdots + 8.12069 \times 10^{220} a - 2.62723 \times 10^{223},$$
$$u^{98} - u^{97} + \cdots + 396u - 43 \rangle$$
$$I_2^u = \langle -18u^{20} + 35u^{19} + \cdots + 31b + 81,\ -29u^{20} + 3u^{19} + \cdots + 31a + 84,\ u^{21} - 12u^{19} + \cdots - u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 119 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. $\boldsymbol{I_1^u = \langle -1.02 \times 10^{219} u^{97} + 2.43 \times 10^{219} u^{96} + \cdots + 1.89 \times 10^{219} b + 4.15 \times 10^{220},\ 7.41 \times 10^{221} u^{97} - 1.66 \times 10^{222} u^{96} + \cdots + 8.12 \times 10^{220} a - 2.63 \times 10^{223},\ u^{98} - u^{97} + \cdots + 396u - 43 \rangle}$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -9.11932u^{97} + 20.4864u^{96} + \cdots - 3188.58u + 323.523 \\ 0.540697u^{97} - 1.28598u^{96} + \cdots + 214.779u - 21.9958 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -8.60049u^{97} + 19.0570u^{96} + \cdots - 2814.24u + 268.683 \\ -3.34750u^{97} + 7.42210u^{96} + \cdots - 1148.85u + 116.947 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -8.57862u^{97} + 19.2004u^{96} + \cdots - 2973.80u + 301.528 \\ 0.540697u^{97} - 1.28598u^{96} + \cdots + 214.779u - 21.9958 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -6.09442u^{97} + 13.8926u^{96} + \cdots - 2230.11u + 230.240 \\ 1.83837u^{97} - 4.17749u^{96} + \cdots + 651.713u - 66.9090 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2.31310u^{97} + 5.17198u^{96} + \cdots - 655.200u + 50.8427 \\ 5.33139u^{97} - 11.6945u^{96} + \cdots + 1763.76u - 172.869 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.29885u^{97} + 2.94361u^{96} + \cdots - 318.314u + 17.2269 \\ 1.39998u^{97} - 3.01976u^{96} + \cdots + 427.622u - 39.1893 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -6.34467u^{97} + 13.9931u^{96} + \cdots - 2044.24u + 193.324 \\ -0.534636u^{97} + 1.09416u^{96} + \cdots - 173.613u + 19.4352 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 19.4904u^{97} - 44.0633u^{96} + \cdots + 7002.50u - 705.505$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{98} - u^{97} + \cdots + 5u - 1$
c_2, c_9	$u^{98} - 33u^{96} + \cdots - 1246u - 76$
c_3, c_6	$u^{98} - 2u^{97} + \cdots - 6u + 1$
c_4	$u^{98} + 3u^{97} + \cdots - 1183u - 187$
c_5, c_{10}, c_{11}	$u^{98} - u^{97} + \cdots + 396u - 43$
c_7, c_8, c_{12}	$u^{98} + 3u^{97} + \cdots + 32u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{98} - 3y^{97} + \cdots + 173y + 1$
c_2, c_9	$y^{98} - 66y^{97} + \cdots - 1035260y + 5776$
c_3, c_6	$y^{98} - 54y^{97} + \cdots + 132y + 1$
c_4	$y^{98} - 25y^{97} + \cdots - 1527771y + 34969$
c_5, c_{10}, c_{11}	$y^{98} - 97y^{97} + \cdots + 29288y + 1849$
c_7, c_8, c_{12}	$y^{98} - 105y^{97} + \cdots - 568y + 1$

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.438752+0.891193I$		
$a=$	$0.362502+0.686195I$	$-5.41570+8.09818I$	0
$b=$	$1.303190-0.450763I$		
$u=$	$0.438752-0.891193I$		
$a=$	$0.362502-0.686195I$	$-5.41570-8.09818I$	0
$b=$	$1.303190+0.450763I$		
$u=$	$0.391864+0.898326I$		
$a=$	$0.903543-0.068277I$	$4.41768-2.63930I$	0
$b=$	$0.528510-0.233621I$		
$u=$	$0.391864-0.898326I$		
$a=$	$0.903543+0.068277I$	$4.41768+2.63930I$	0
$b=$	$0.528510+0.233621I$		
$u=$	$0.391411+0.898450I$		
$a=$	$0.580518-0.049871I$	$2.92084-1.91064I$	0
$b=$	$0.939209+0.499556I$		
$u=$	$0.391411-0.898450I$		
$a=$	$0.580518+0.049871I$	$2.92084+1.91064I$	0
$b=$	$0.939209-0.499556I$		
$u=$	$0.938750+0.254685I$		
$a=$	$0.112409+0.225776I$	$1.79041-0.16871I$	0
$b=$	$1.381750-0.029759I$		
$u=$	$0.938750-0.254685I$		
$a=$	$0.112409-0.225776I$	$1.79041+0.16871I$	0
$b=$	$1.381750+0.029759I$		
$u=$	$-0.852144+0.390335I$		
$a=$	$0.578814-0.432802I$	$6.86100-2.05030I$	0
$b=$	$-0.246807+0.692959I$		
$u=$	$-0.852144-0.390335I$		
$a=$	$0.578814+0.432802I$	$6.86100+2.05030I$	0
$b=$	$-0.246807-0.692959I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.915479$ $a=-1.31935$ $b=\ \ 1.49906$	-5.21283	0
$u=-0.058479+0.894470I$ $a=\ \ 0.577736-0.337542I$ $b=\ \ 0.458079+0.502884I$	$4.16131-2.22766I$	0
$u=-0.058479-0.894470I$ $a=\ \ 0.577736+0.337542I$ $b=\ \ 0.458079-0.502884I$	$4.16131+2.22766I$	0
$u=-0.446241+1.029130I$ $a=-0.434185+0.599991I$ $b=-1.262990-0.482764I$	$1.37895-11.98030I$	0
$u=-0.446241-1.029130I$ $a=-0.434185-0.599991I$ $b=-1.262990+0.482764I$	$1.37895+11.98030I$	0
$u=\ \ 0.792923+0.793440I$ $a=\ \ 0.282718-0.510672I$ $b=-1.156990-0.219396I$	$-4.42238-2.43268I$	0
$u=\ \ 0.792923-0.793440I$ $a=\ \ 0.282718+0.510672I$ $b=-1.156990+0.219396I$	$-4.42238+2.43268I$	0
$u=\ \ 1.132050+0.247239I$ $a=-0.15095-2.01792I$ $b=-1.047450+0.584414I$	$4.99022+6.27593I$	0
$u=\ \ 1.132050-0.247239I$ $a=-0.15095+2.01792I$ $b=-1.047450-0.584414I$	$4.99022-6.27593I$	0
$u=-0.456258+0.670176I$ $a=-0.171983+0.785584I$ $b=-1.36966-0.40803I$	$-5.36300-2.92221I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.456258-0.670176I$ $a=-0.171983-0.785584I$ $b=-1.36966+0.40803I$	$-5.36300+2.92221I$	0
$u=-0.106869+0.787117I$ $a=-0.807532-0.213605I$ $b=-0.822220+0.300167I$	$-1.42261+1.54220I$	0
$u=-0.106869-0.787117I$ $a=-0.807532+0.213605I$ $b=-0.822220-0.300167I$	$-1.42261-1.54220I$	0
$u=\ \ 0.513550+0.603793I$ $a=-0.410518+0.368788I$ $b=\ \ 0.041349-0.849349I$	$5.22586+7.17879I$	0
$u=\ \ 0.513550-0.603793I$ $a=-0.410518-0.368788I$ $b=\ \ 0.041349+0.849349I$	$5.22586-7.17879I$	0
$u=\ \ 1.210380+0.055278I$ $a=-0.64806-1.90999I$ $b=\ \ 0.729911+0.089716I$	$6.09977+5.59032I$	0
$u=\ \ 1.210380-0.055278I$ $a=-0.64806+1.90999I$ $b=\ \ 0.729911-0.089716I$	$6.09977-5.59032I$	0
$u=-1.22310$ $a=-0.188603$ $b=-1.50392$	-3.65106	0
$u=\ \ 0.774695$ $a=\ \ 0.494111$ $b=\ \ 0.985875$	2.30370	4.50380
$u=-1.245610+0.001635I$ $a=\ \ 0.11423+1.54880I$ $b=-0.806424-0.186193I$	$1.05719+2.40310I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.245610-0.001635I$ $a=\ \ 0.11423-1.54880I$ $b=-0.806424+0.186193I$	$1.05719-2.40310I$	0
$u=-0.397002+0.606555I$ $a=-0.06672-1.47204I$ $b=\ \ 1.206540-0.037207I$	$-5.34711-1.16504I$	$-5.89004+4.77110I$
$u=-0.397002-0.606555I$ $a=-0.06672+1.47204I$ $b=\ \ 1.206540+0.037207I$	$-5.34711+1.16504I$	$-5.89004-4.77110I$
$u=\ \ 0.197358+0.695563I$ $a=-1.05863-1.44758I$ $b=-1.209490+0.094174I$	$-0.50881+3.77042I$	$-1.22991-5.05475I$
$u=\ \ 0.197358-0.695563I$ $a=-1.05863+1.44758I$ $b=-1.209490-0.094174I$	$-0.50881-3.77042I$	$-1.22991+5.05475I$
$u=-1.289390+0.036606I$ $a=-0.57450-1.79709I$ $b=\ \ 1.16868+0.84371I$	$1.64723-2.83590I$	0
$u=-1.289390-0.036606I$ $a=-0.57450+1.79709I$ $b=\ \ 1.16868-0.84371I$	$1.64723+2.83590I$	0
$u=\ \ 1.322300+0.134120I$ $a=\ \ 0.037004+1.012680I$ $b=\ \ 0.967591-0.296262I$	$2.99763+1.06282I$	0
$u=\ \ 1.322300-0.134120I$ $a=\ \ 0.037004-1.012680I$ $b=\ \ 0.967591+0.296262I$	$2.99763-1.06282I$	0
$u=-1.329790+0.051565I$ $a=\ \ 0.714474-1.092350I$ $b=-0.429983+0.762264I$	$6.66431-1.15467I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.329790-0.051565I$ $a=\ \ 0.714474+1.092350I$ $b=-0.429983-0.762264I$	$6.66431+1.15467I$	0
$u=\ \ 0.474672+0.455473I$ $a=-1.79909-1.37357I$ $b=-1.117410+0.415698I$	$4.31172+6.23668I$	$4.72015-6.34301I$
$u=\ \ 0.474672-0.455473I$ $a=-1.79909+1.37357I$ $b=-1.117410-0.415698I$	$4.31172-6.23668I$	$4.72015+6.34301I$
$u=\ \ 1.34546$ $a=\ \ 0.218883$ $b=\ \ 1.55069$	1.09642	0
$u=\ \ 1.370950+0.051265I$ $a=\ \ 1.02671+1.27373I$ $b=-1.64996-0.89336I$	$6.60733+2.66078I$	0
$u=\ \ 1.370950-0.051265I$ $a=\ \ 1.02671-1.27373I$ $b=-1.64996+0.89336I$	$6.60733-2.66078I$	0
$u=\ \ 1.384850+0.203389I$ $a=\ \ 0.14247-1.56229I$ $b=-1.252250+0.535982I$	$3.79747+6.54307I$	0
$u=\ \ 1.384850-0.203389I$ $a=\ \ 0.14247+1.56229I$ $b=-1.252250-0.535982I$	$3.79747-6.54307I$	0
$u=-1.378540+0.268996I$ $a=-0.36382-1.84575I$ $b=\ \ 1.103300+0.247597I$	$4.49819-7.25601I$	0
$u=-1.378540-0.268996I$ $a=-0.36382+1.84575I$ $b=\ \ 1.103300-0.247597I$	$4.49819+7.25601I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.996538+0.995942I$ $a=-0.147207-0.267647I$ $b=\ \ 1.054030-0.308627I$	$2.76808+5.25836I$	0
$u=-0.996538-0.995942I$ $a=-0.147207+0.267647I$ $b=\ \ 1.054030+0.308627I$	$2.76808-5.25836I$	0
$u=-1.412160+0.029118I$ $a=\ \ 0.57366+1.41669I$ $b=-0.398717-1.040950I$	$6.77476+1.07902I$	0
$u=-1.412160-0.029118I$ $a=\ \ 0.57366-1.41669I$ $b=-0.398717+1.040950I$	$6.77476-1.07902I$	0
$u=\ \ 1.40716+0.19956I$ $a=-0.442205-0.849721I$ $b=\ \ 0.591377+0.673716I$	$3.94160+1.46877I$	0
$u=\ \ 1.40716-0.19956I$ $a=-0.442205+0.849721I$ $b=\ \ 0.591377-0.673716I$	$3.94160-1.46877I$	0
$u=-0.251196+0.515381I$ $a=\ \ 1.77432-0.77605I$ $b=\ \ 1.081420+0.350458I$	$-1.42079-3.86409I$	$0.73110+8.65417I$
$u=-0.251196-0.515381I$ $a=\ \ 1.77432+0.77605I$ $b=\ \ 1.081420-0.350458I$	$-1.42079+3.86409I$	$0.73110-8.65417I$
$u=-1.37807+0.38773I$ $a=\ \ 0.048832-1.378100I$ $b=\ \ 0.969732+0.514999I$	$2.80879-6.07718I$	0
$u=-1.37807-0.38773I$ $a=\ \ 0.048832+1.378100I$ $b=\ \ 0.969732-0.514999I$	$2.80879+6.07718I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.192714+0.527897I$ $a=-0.968831+0.219684I$ $b=-0.933289+0.345314I$	$-1.44128+1.38418I$	$1.09886+2.24692I$
$u=-0.192714-0.527897I$ $a=-0.968831-0.219684I$ $b=-0.933289-0.345314I$	$-1.44128-1.38418I$	$1.09886-2.24692I$
$u=1.43811+0.15125I$ $a=0.11771+1.79107I$ $b=-0.04379-1.48336I$	$4.84521+5.36107I$	0
$u=1.43811-0.15125I$ $a=0.11771-1.79107I$ $b=-0.04379+1.48336I$	$4.84521-5.36107I$	0
$u=1.43863+0.23949I$ $a=0.69528-1.36386I$ $b=-0.966754+0.214159I$	$0.49710+4.31155I$	0
$u=1.43863-0.23949I$ $a=0.69528+1.36386I$ $b=-0.966754-0.214159I$	$0.49710-4.31155I$	0
$u=0.537595$ $a=3.07677$ $b=-0.133007$	1.02611	14.3890
$u=-0.212695+0.474080I$ $a=-1.25749-0.94890I$ $b=-0.144110-0.004155I$	$-1.49762+0.96898I$	$-3.07162+1.33299I$
$u=-0.212695-0.474080I$ $a=-1.25749+0.94890I$ $b=-0.144110+0.004155I$	$-1.49762-0.96898I$	$-3.07162-1.33299I$
$u=-1.47303+0.19946I$ $a=-0.086307-1.387760I$ $b=1.37450+0.50369I$	$10.59140-8.83976I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.47303-0.19946I$ $a=-0.086307+1.387760I$ $b=\ \ 1.37450-0.50369I$	$10.59140+8.83976I$	0
$u=-0.328199+0.393122I$ $a=\ \ 0.615651+0.634354I$ $b=-0.242216-0.946347I$	$-0.88687-3.29713I$	$2.45536+10.56224I$
$u=-0.328199-0.393122I$ $a=\ \ 0.615651-0.634354I$ $b=-0.242216+0.946347I$	$-0.88687+3.29713I$	$2.45536-10.56224I$
$u=\ \ 0.455525+0.197947I$ $a=-0.521523-0.188750I$ $b=\ \ 0.262790+0.470646I$	$0.912741+0.481311I$	$9.01303-2.84195I$
$u=\ \ 0.455525-0.197947I$ $a=-0.521523+0.188750I$ $b=\ \ 0.262790-0.470646I$	$0.912741-0.481311I$	$9.01303+2.84195I$
$u=-1.49369+0.22603I$ $a=-0.24576+1.48020I$ $b=\ \ 0.086302-1.305070I$	$11.7083-10.2755I$	0
$u=-1.49369-0.22603I$ $a=-0.24576-1.48020I$ $b=\ \ 0.086302+1.305070I$	$11.7083+10.2755I$	0
$u=\ \ 1.50061+0.25185I$ $a=-0.75687+1.44958I$ $b=\ \ 1.42098-0.76085I$	$1.01132+6.33366I$	0
$u=\ \ 1.50061-0.25185I$ $a=-0.75687-1.44958I$ $b=\ \ 1.42098+0.76085I$	$1.01132-6.33366I$	0
$u=\ \ 1.45419+0.47323I$ $a=-0.169611-1.187990I$ $b=-0.880839+0.622003I$	$8.89047+7.50896I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.45419 - 0.47323I$ $a = -0.169611 + 1.187990I$ $b = -0.880839 - 0.622003I$	$8.89047 - 7.50896I$	0
$u = -1.50465 + 0.33444I$ $a = 0.46537 + 1.50163I$ $b = -1.37280 - 0.67976I$	$0.83454 - 12.54040I$	0
$u = -1.50465 - 0.33444I$ $a = 0.46537 - 1.50163I$ $b = -1.37280 + 0.67976I$	$0.83454 + 12.54040I$	0
$u = -1.52625 + 0.25451I$ $a = 0.348897 - 0.782798I$ $b = -0.685228 + 0.790126I$	$9.49483 - 2.22841I$	0
$u = -1.52625 - 0.25451I$ $a = 0.348897 + 0.782798I$ $b = -0.685228 - 0.790126I$	$9.49483 + 2.22841I$	0
$u = -1.54653 + 0.16048I$ $a = -0.906041 - 0.650789I$ $b = 0.876050 + 0.099100I$	$3.84707 - 0.63312I$	0
$u = -1.54653 - 0.16048I$ $a = -0.906041 + 0.650789I$ $b = 0.876050 - 0.099100I$	$3.84707 + 0.63312I$	0
$u = 1.57420 + 0.05203I$ $a = -0.234381 - 1.161370I$ $b = -0.034751 + 0.993551I$	$14.9919 + 3.4450I$	0
$u = 1.57420 - 0.05203I$ $a = -0.234381 + 1.161370I$ $b = -0.034751 - 0.993551I$	$14.9919 - 3.4450I$	0
$u = 1.52801 + 0.38258I$ $a = -0.30158 + 1.46885I$ $b = 1.37760 - 0.65580I$	$7.6986 + 17.0468I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.52801 - 0.38258I$ $a = -0.30158 - 1.46885I$ $b = \ \ 1.37760 + 0.65580I$	$7.6986 - 17.0468I$	0
$u = -1.56430 + 0.22600I$ $a = \ \ 0.190500 + 0.832144I$ $b = -1.157610 - 0.482699I$	$11.37440 - 1.57267I$	0
$u = -1.56430 - 0.22600I$ $a = \ \ 0.190500 - 0.832144I$ $b = -1.157610 + 0.482699I$	$11.37440 + 1.57267I$	0
$u = -1.62892$ $a = \ \ 1.44958$ $b = -2.05605$	10.4262	0
$u = \ \ 0.205747$ $a = \ \ 8.19845$ $b = -1.30217$	-2.91352	-6.84150
$u = \ \ 0.038209 + 0.193422I$ $a = -1.13932 + 3.29511I$ $b = \ \ 1.181660 - 0.747103I$	$2.10943 - 1.86396I$	$6.2079 + 13.3345I$
$u = \ \ 0.038209 - 0.193422I$ $a = -1.13932 - 3.29511I$ $b = \ \ 1.181660 + 0.747103I$	$2.10943 + 1.86396I$	$6.2079 - 13.3345I$
$u = \ \ 1.99579$ $a = \ \ 0.358034$ $b = -0.786064$	14.2146	0

II. $I_2^u = \langle -18u^{20} + 35u^{19} + \cdots + 31b + 81,\ -29u^{20} + 3u^{19} + \cdots + 31a + 84,\ u^{21} - 12u^{19} + \cdots - u - 1 \rangle$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 0.935484u^{20} - 0.0967742u^{19} + \cdots + 9.48387u - 2.70968 \\ 0.580645u^{20} - 1.12903u^{19} + \cdots - 1.35484u - 2.61290 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -2.45161u^{20} - 1.67742u^{19} + \cdots - 12.6129u + 1.03226 \\ 0.0645161u^{20} - 0.903226u^{19} + \cdots + 1.51613u + 1.70968 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.51613u^{20} - 1.22581u^{19} + \cdots + 8.12903u - 5.32258 \\ 0.580645u^{20} - 1.12903u^{19} + \cdots - 1.35484u - 2.61290 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 2.41935u^{20} + 0.129032u^{19} + \cdots + 6.35484u - 1.38710 \\ -0.0645161u^{20} - 0.0967742u^{19} + \cdots - 2.51613u - 0.709677 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0967742u^{20} + 1.64516u^{19} + \cdots - 2.22581u + 0.0645161 \\ 0.129032u^{20} + 3.19355u^{19} + \cdots + 4.03226u + 3.41935 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1.58065u^{20} - 0.129032u^{19} + \cdots + 7.64516u - 7.61290 \\ 1.41935u^{20} + 2.12903u^{19} + \cdots + 2.35484u + 1.61290 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -2.38710u^{20} - 1.58065u^{19} + \cdots - 13.0968u + 2.74194 \\ 0.935484u^{20} - 0.0967742u^{19} + \cdots + 3.48387u + 2.29032 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{20}{31}u^{20} + \frac{216}{31}u^{19} + \cdots + \frac{780}{31}u + \frac{220}{31}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{21} - 6u^{20} + \cdots - 2u^2 + 1$
c_2	$u^{21} + u^{20} + \cdots + 3u - 1$
c_3	$u^{21} + 3u^{20} + \cdots - 3u - 1$
c_4	$u^{21} - 6u^{19} + \cdots + 2u + 1$
c_5	$u^{21} - 12u^{19} + \cdots - u + 1$
c_6	$u^{21} - 3u^{20} + \cdots - 3u + 1$
c_7, c_8	$u^{21} - 14u^{19} + \cdots - u - 1$
c_9	$u^{21} - u^{20} + \cdots + 3u + 1$
c_{10}, c_{11}	$u^{21} - 12u^{19} + \cdots - u - 1$
c_{12}	$u^{21} - 14u^{19} + \cdots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{21} - 6y^{20} + \cdots + 4y - 1$
c_2, c_9	$y^{21} - 21y^{20} + \cdots + 11y - 1$
c_3, c_6	$y^{21} - 21y^{20} + \cdots + 21y - 1$
c_4	$y^{21} - 12y^{20} + \cdots + 16y - 1$
c_5, c_{10}, c_{11}	$y^{21} - 24y^{20} + \cdots + 17y - 1$
c_7, c_8, c_{12}	$y^{21} - 28y^{20} + \cdots + 13y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.674615+0.691211I$ $a=-0.741284+0.872608I$ $b=-0.825088+0.244562I$	$3.65927+4.03818I$	$3.47178-3.14396I$
$u=-0.674615-0.691211I$ $a=-0.741284-0.872608I$ $b=-0.825088-0.244562I$	$3.65927-4.03818I$	$3.47178+3.14396I$
$u=\ 1.20770$ $a=\ 0.862653$ $b=\ 1.41027$	-0.227032	-1.33690
$u=-1.23747$ $a=\ 0.0698864$ $b=-1.55801$	-3.36420	15.3300
$u=-1.255340+0.270736I$ $a=\ 0.24302-2.14553I$ $b=\ 0.957058+0.403999I$	$5.95829-7.42742I$	$8.04674+8.80531I$
$u=-1.255340-0.270736I$ $a=\ 0.24302+2.14553I$ $b=\ 0.957058-0.403999I$	$5.95829+7.42742I$	$8.04674-8.80531I$
$u=\ 0.300005+0.615985I$ $a=\ 1.184700-0.024718I$ $b=\ 0.790924+0.339359I$	$-1.87137-1.86348I$	$-6.45473+8.21734I$
$u=\ 0.300005-0.615985I$ $a=\ 1.184700+0.024718I$ $b=\ 0.790924-0.339359I$	$-1.87137+1.86348I$	$-6.45473-8.21734I$
$u=\ 1.320720+0.131954I$ $a=-0.95135-1.34628I$ $b=\ 1.020660+0.824318I$	$5.69652+3.26176I$	$5.56127-4.00526I$
$u=\ 1.320720-0.131954I$ $a=-0.95135+1.34628I$ $b=\ 1.020660-0.824318I$	$5.69652-3.26176I$	$5.56127+4.00526I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.671580$ $a = 2.57615$ $b = -1.29809$	-2.29162	7.08010
$u = 1.374880 + 0.258894I$ $a = 0.33045 - 1.63311I$ $b = -1.025960 + 0.595179I$	$2.06818 + 5.09061I$	$2.23390 - 4.25924I$
$u = 1.374880 - 0.258894I$ $a = 0.33045 + 1.63311I$ $b = -1.025960 - 0.595179I$	$2.06818 - 5.09061I$	$2.23390 + 4.25924I$
$u = -0.591959$ $a = -1.86907$ $b = 1.38648$	-5.81449	-9.97790
$u = 0.371508 + 0.405795I$ $a = 0.296302 - 0.282231I$ $b = -1.234530 + 0.499833I$	$2.16927 - 1.42059I$	$6.69492 - 3.05445I$
$u = 0.371508 - 0.405795I$ $a = 0.296302 + 0.282231I$ $b = -1.234530 - 0.499833I$	$2.16927 + 1.42059I$	$6.69492 + 3.05445I$
$u = -1.44756 + 0.09102I$ $a = -0.215464 - 0.503314I$ $b = -0.221826 + 0.307903I$	$5.06058 - 0.15354I$	$7.92430 - 1.48170I$
$u = -1.44756 - 0.09102I$ $a = -0.215464 + 0.503314I$ $b = -0.221826 - 0.307903I$	$5.06058 + 0.15354I$	$7.92430 + 1.48170I$
$u = -1.64477$ $a = -1.36791$ $b = 1.97611$	10.3482	-42.6970
$u = -0.331409$ $a = -4.38784$ $b = -0.516198$	0.635448	-6.89680

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.94714$		
$a = -0.176603$	14.4498	23.5420
$b = \quad 0.676947$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{21}-6u^{20}+\cdots-2u^2+1)(u^{98}-u^{97}+\cdots+5u-1)$
c_2	$(u^{21}+u^{20}+\cdots+3u-1)(u^{98}-33u^{96}+\cdots-1246u-76)$
c_3	$(u^{21}+3u^{20}+\cdots-3u-1)(u^{98}-2u^{97}+\cdots-6u+1)$
c_4	$(u^{21}-6u^{19}+\cdots+2u+1)(u^{98}+3u^{97}+\cdots-1183u-187)$
c_5	$(u^{21}-12u^{19}+\cdots-u+1)(u^{98}-u^{97}+\cdots+396u-43)$
c_6	$(u^{21}-3u^{20}+\cdots-3u+1)(u^{98}-2u^{97}+\cdots-6u+1)$
c_7, c_8	$(u^{21}-14u^{19}+\cdots-u-1)(u^{98}+3u^{97}+\cdots+32u+1)$
c_9	$(u^{21}-u^{20}+\cdots+3u+1)(u^{98}-33u^{96}+\cdots-1246u-76)$
c_{10}, c_{11}	$(u^{21}-12u^{19}+\cdots-u-1)(u^{98}-u^{97}+\cdots+396u-43)$
c_{12}	$(u^{21}-14u^{19}+\cdots-u+1)(u^{98}+3u^{97}+\cdots+32u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{21}-6y^{20}+\cdots+4y-1)(y^{98}-3y^{97}+\cdots+173y+1)$
c_2, c_9	$(y^{21}-21y^{20}+\cdots+11y-1)(y^{98}-66y^{97}+\cdots-1035260y+5776)$
c_3, c_6	$(y^{21}-21y^{20}+\cdots+21y-1)(y^{98}-54y^{97}+\cdots+132y+1)$
c_4	$(y^{21}-12y^{20}+\cdots+16y-1)(y^{98}-25y^{97}+\cdots-1527771y+34969)$
c_5, c_{10}, c_{11}	$(y^{21}-24y^{20}+\cdots+17y-1)(y^{98}-97y^{97}+\cdots+29288y+1849)$
c_7, c_8, c_{12}	$(y^{21}-28y^{20}+\cdots+13y-1)(y^{98}-105y^{97}+\cdots-568y+1)$