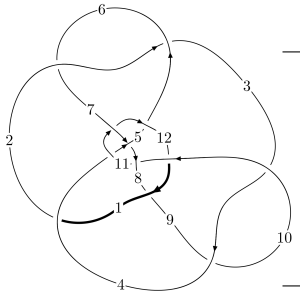
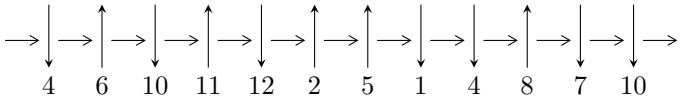
$12n_{0776}$ $(K12n_{0776})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 1.30447 \times 10^{408} u^{82} + 1.37413 \times 10^{409} u^{81} + \cdots + 8.60439 \times 10^{408} b - 2.49025 \times 10^{408},$$
$$- 1.05688 \times 10^{410} u^{82} - 1.12073 \times 10^{411} u^{81} + \cdots + 1.29066 \times 10^{410} a + 2.26537 \times 10^{410},$$
$$u^{83} + 11u^{82} + \cdots - 13u - 3 \rangle$$
$$I_2^u = \langle 1.25634 \times 10^{54} u^{29} + 1.27322 \times 10^{55} u^{28} + \cdots + 2.61825 \times 10^{54} b + 1.66292 \times 10^{54},$$
$$2.32992 \times 10^{54} u^{29} + 2.36472 \times 10^{55} u^{28} + \cdots + 3.00141 \times 10^{54} a + 8.04364 \times 10^{54},\ u^{30} + 10u^{29} + \cdots - 2u +$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 113 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. $\boldsymbol{I_1^u = \langle 1.30 \times 10^{408} u^{82} + 1.37 \times 10^{409} u^{81} + \cdots + 8.60 \times 10^{408} b - 2.49 \times 10^{408},\ -1.06 \times 10^{410} u^{82} - 1.12 \times 10^{411} u^{81} + \cdots + 1.29 \times 10^{410} a + 2.27 \times 10^{410},\ u^{83} + 11 u^{82} + \cdots - 13u - 3 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.818869u^{82} + 8.68343u^{81} + \cdots + 28.1044u - 1.75521 \\ -0.151605u^{82} - 1.59701u^{81} + \cdots + 2.31640u + 0.289416 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.970473u^{82} + 10.2804u^{81} + \cdots + 25.7880u - 2.04462 \\ -0.151605u^{82} - 1.59701u^{81} + \cdots + 2.31640u + 0.289416 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.751807u^{82} - 7.77308u^{81} + \cdots + 119.279u + 25.5349 \\ -0.0208145u^{82} - 0.206503u^{81} + \cdots - 1.29505u - 1.10729 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0172443u^{82} - 0.0375127u^{81} + \cdots - 126.673u - 18.4506 \\ -0.0490051u^{82} - 0.539643u^{81} + \cdots + 3.70028u + 1.39331 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.731904u^{82} - 7.54031u^{81} + \cdots + 113.239u + 23.1711 \\ 0.0407173u^{82} + 0.439275u^{81} + \cdots - 2.74464u - 1.25654 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.19729u^{82} - 12.6448u^{81} + \cdots + 1.47287u + 12.3678 \\ -0.0211191u^{82} - 0.198672u^{81} + \cdots + 2.33013u - 0.629956 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2.19019u^{82} - 23.7541u^{81} + \cdots + 139.252u + 18.1407 \\ 0.108002u^{82} + 1.16613u^{81} + \cdots - 5.31878u - 1.13687 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.26772u^{82} - 13.4375u^{81} + \cdots + 2.38069u + 14.5739 \\ -0.00603930u^{82} - 0.0390650u^{81} + \cdots + 1.88614u - 0.683654 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.532288u^{82} - 5.37650u^{81} + \cdots + 106.052u + 20.3826 \\ 0.0409161u^{82} + 0.446102u^{81} + \cdots - 2.56150u - 1.35247 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.65712u^{82} + 17.5491u^{81} + \cdots - 136.696u - 33.9475$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{83}+u^{82}+\cdots-53405u+3225$
c_2, c_6	$u^{83}+2u^{82}+\cdots+217u-67$
c_3, c_9	$u^{83}+10u^{82}+\cdots+34163451u-6221089$
c_4	$u^{83}+11u^{82}+\cdots-13u-3$
c_5	$u^{83}-15u^{81}+\cdots-486505u+43627$
c_7	$u^{83}+5u^{82}+\cdots-6u-1$
c_8	$u^{83}-51u^{81}+\cdots+17717265u-4973081$
c_{10}	$u^{83}+11u^{82}+\cdots+1754u+107$
c_{11}	$u^{83}+7u^{82}+\cdots-3609u+331$
c_{12}	$u^{83}-11u^{82}+\cdots+133746194u+15906677$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{83} - 131y^{82} + \cdots - 220531175y - 10400625$
c_2, c_6	$y^{83} + 60y^{82} + \cdots - 303187y - 4489$
c_3, c_9	$y^{83} - 126y^{82} + \cdots - 86541304996979y - 38701948345921$
c_4	$y^{83} - 15y^{82} + \cdots + 7y - 9$
c_5	$y^{83} - 30y^{82} + \cdots + 62663810995y - 1903315129$
c_7	$y^{83} + 13y^{82} + \cdots - 96y - 1$
c_8	$y^{83} - 102y^{82} + \cdots - 98203788924489y - 24731534632561$
c_{10}	$y^{83} + 17y^{82} + \cdots - 583740y - 11449$
c_{11}	$y^{83} + 5y^{82} + \cdots + 2855899y - 109561$
c_{12}	$y^{83} - 303y^{82} + \cdots - 13069623167467982y - 253022373182329$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.709906 + 0.690044I$ $a = -0.927762 + 0.065003I$ $b = -1.090150 + 0.433533I$	$-0.98312 + 1.83332I$	0
$u = 0.709906 - 0.690044I$ $a = -0.927762 - 0.065003I$ $b = -1.090150 - 0.433533I$	$-0.98312 - 1.83332I$	0
$u = 0.261828 + 0.930528I$ $a = -0.764997 + 0.206710I$ $b = -0.298237 + 0.061397I$	$-0.40627 + 1.72494I$	0
$u = 0.261828 - 0.930528I$ $a = -0.764997 - 0.206710I$ $b = -0.298237 - 0.061397I$	$-0.40627 - 1.72494I$	0
$u = -0.894847 + 0.518321I$ $a = 1.59094 - 0.23930I$ $b = 1.118840 - 0.816514I$	$3.48501 - 4.70122I$	0
$u = -0.894847 - 0.518321I$ $a = 1.59094 + 0.23930I$ $b = 1.118840 + 0.816514I$	$3.48501 + 4.70122I$	0
$u = -0.362153 + 0.892735I$ $a = 1.38780 + 0.53803I$ $b = -0.181923 - 0.485373I$	$-3.04231 + 1.75204I$	0
$u = -0.362153 - 0.892735I$ $a = 1.38780 - 0.53803I$ $b = -0.181923 + 0.485373I$	$-3.04231 - 1.75204I$	0
$u = -0.740237 + 0.744539I$ $a = -0.421844 + 0.182382I$ $b = -0.823000 + 0.195896I$	$-0.28428 + 2.31145I$	0
$u = -0.740237 - 0.744539I$ $a = -0.421844 - 0.182382I$ $b = -0.823000 - 0.195896I$	$-0.28428 - 2.31145I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.270866 + 1.053850I$ $a = 1.49395 - 0.74055I$ $b = 0.081067 + 0.787778I$	$-13.4588 + 7.1690I$	0
$u = 0.270866 - 1.053850I$ $a = 1.49395 + 0.74055I$ $b = 0.081067 - 0.787778I$	$-13.4588 - 7.1690I$	0
$u = -0.758010 + 0.437224I$ $a = -1.44879 - 1.65189I$ $b = -0.791564 + 0.668716I$	$-9.72538 - 8.72357I$	0
$u = -0.758010 - 0.437224I$ $a = -1.44879 + 1.65189I$ $b = -0.791564 - 0.668716I$	$-9.72538 + 8.72357I$	0
$u = -0.516399 + 0.659806I$ $a = -0.798299 + 0.327613I$ $b = -0.75838 + 1.49622I$	$-5.06876 - 0.94779I$	0
$u = -0.516399 - 0.659806I$ $a = -0.798299 - 0.327613I$ $b = -0.75838 - 1.49622I$	$-5.06876 + 0.94779I$	0
$u = -0.602229 + 0.994072I$ $a = -1.45123 - 0.15027I$ $b = -0.92859 + 1.10832I$	$-14.0609 - 2.5251I$	0
$u = -0.602229 - 0.994072I$ $a = -1.45123 + 0.15027I$ $b = -0.92859 - 1.10832I$	$-14.0609 + 2.5251I$	0
$u = 0.803341 + 0.845356I$ $a = -0.913620 - 0.197343I$ $b = -0.280226 - 0.440104I$	$-0.29002 + 2.15185I$	0
$u = 0.803341 - 0.845356I$ $a = -0.913620 + 0.197343I$ $b = -0.280226 + 0.440104I$	$-0.29002 - 2.15185I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.680380 + 0.437401I$ $a = 0.501491 - 0.074945I$ $b = 0.824171 + 0.728489I$	$1.37263 + 1.70785I$	0
$u = 0.680380 - 0.437401I$ $a = 0.501491 + 0.074945I$ $b = 0.824171 - 0.728489I$	$1.37263 - 1.70785I$	0
$u = -0.233492 + 0.754653I$ $a = -1.000650 + 0.119961I$ $b = 0.060779 + 0.557525I$	$-1.09485 + 1.14990I$	0
$u = -0.233492 - 0.754653I$ $a = -1.000650 - 0.119961I$ $b = 0.060779 - 0.557525I$	$-1.09485 - 1.14990I$	0
$u = -0.577250 + 0.501896I$ $a = -1.42505 + 0.21771I$ $b = -1.60916 - 0.88816I$	$-10.73260 - 8.88187I$	$0. + 8.54488I$
$u = -0.577250 - 0.501896I$ $a = -1.42505 - 0.21771I$ $b = -1.60916 + 0.88816I$	$-10.73260 + 8.88187I$	$0. - 8.54488I$
$u = 0.777187 + 1.003380I$ $a = -1.057860 - 0.100809I$ $b = -1.08433 - 1.22178I$	$-4.76888 + 8.66641I$	0
$u = 0.777187 - 1.003380I$ $a = -1.057860 + 0.100809I$ $b = -1.08433 + 1.22178I$	$-4.76888 - 8.66641I$	0
$u = 0.064315 + 1.270220I$ $a = -0.687278 - 0.229993I$ $b = -1.19350 - 1.01922I$	$-13.2417 + 5.2799I$	0
$u = 0.064315 - 1.270220I$ $a = -0.687278 + 0.229993I$ $b = -1.19350 + 1.01922I$	$-13.2417 - 5.2799I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.680427+0.042583I$ $a=1.38569+0.95422I$ $b=1.098090-0.661662I$	$3.67022-0.24922I$	$11.72806-2.38470I$
$u=-0.680427-0.042583I$ $a=1.38569-0.95422I$ $b=1.098090+0.661662I$	$3.67022+0.24922I$	$11.72806+2.38470I$
$u=0.948869+0.927196I$ $a=0.689941+0.118533I$ $b=0.820966+1.116060I$	$0.03269+4.50461I$	0
$u=0.948869-0.927196I$ $a=0.689941-0.118533I$ $b=0.820966-1.116060I$	$0.03269-4.50461I$	0
$u=-0.574607+0.326079I$ $a=1.81871-0.33275I$ $b=1.25086-1.16436I$	$2.26604-3.57767I$	$-8.97068+8.43068I$
$u=-0.574607-0.326079I$ $a=1.81871+0.33275I$ $b=1.25086+1.16436I$	$2.26604+3.57767I$	$-8.97068-8.43068I$
$u=0.927408+0.976224I$ $a=-0.319524-0.705776I$ $b=0.160830-0.946290I$	$-8.05970-2.70904I$	0
$u=0.927408-0.976224I$ $a=-0.319524+0.705776I$ $b=0.160830+0.946290I$	$-8.05970+2.70904I$	0
$u=0.373196+0.449963I$ $a=1.72772+1.13860I$ $b=0.447128-1.280330I$	$-10.82210+1.04215I$	$-8.95659-0.64479I$
$u=0.373196-0.449963I$ $a=1.72772-1.13860I$ $b=0.447128+1.280330I$	$-10.82210-1.04215I$	$-8.95659+0.64479I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.02114 + 1.01195I$ $a = 1.165700 + 0.230472I$ $b = 0.99942 + 1.24394I$	$-7.91150 + 10.06580I$	0
$u = 1.02114 - 1.01195I$ $a = 1.165700 - 0.230472I$ $b = 0.99942 - 1.24394I$	$-7.91150 - 10.06580I$	0
$u = -0.165432 + 0.479272I$ $a = 1.74495 - 1.61770I$ $b = -0.331671 + 0.790672I$	$-2.95336 - 5.09545I$	$-6.33229 + 9.13394I$
$u = -0.165432 - 0.479272I$ $a = 1.74495 + 1.61770I$ $b = -0.331671 - 0.790672I$	$-2.95336 + 5.09545I$	$-6.33229 - 9.13394I$
$u = 0.504156$ $a = 5.40046$ $b = 0.696000$	-4.71616	10.6220
$u = 0.10860 + 1.51156I$ $a = 0.484440 + 0.127681I$ $b = 1.002370 + 0.085521I$	$0.309078 + 0.377421I$	0
$u = 0.10860 - 1.51156I$ $a = 0.484440 - 0.127681I$ $b = 1.002370 - 0.085521I$	$0.309078 - 0.377421I$	0
$u = -1.31990 + 0.75395I$ $a = 0.861735 - 0.367052I$ $b = 0.90290 - 1.18899I$	$2.06751 - 7.02731I$	0
$u = -1.31990 - 0.75395I$ $a = 0.861735 + 0.367052I$ $b = 0.90290 + 1.18899I$	$2.06751 + 7.02731I$	0
$u = -1.03049 + 1.12737I$ $a = -0.670023 + 0.083173I$ $b = -0.799015 + 1.128390I$	$-2.24741 - 9.70482I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.03049-1.12737I$ $a=-0.670023-0.083173I$ $b=-0.799015-1.128390I$	$-2.24741+9.70482I$	0
$u=-1.02629+1.15598I$ $a=-0.816028+0.211399I$ $b=-0.677550+0.597699I$	$-5.06471-5.76701I$	0
$u=-1.02629-1.15598I$ $a=-0.816028-0.211399I$ $b=-0.677550-0.597699I$	$-5.06471+5.76701I$	0
$u=1.36893+0.74159I$ $a=0.399726-0.420329I$ $b=0.578099+0.577904I$	$-5.53407+1.96330I$	0
$u=1.36893-0.74159I$ $a=0.399726+0.420329I$ $b=0.578099-0.577904I$	$-5.53407-1.96330I$	0
$u=0.043734+0.437894I$ $a=1.37494-0.86927I$ $b=1.80634-1.67583I$	$-6.61873+0.72943I$	$-27.0371-3.0253I$
$u=0.043734-0.437894I$ $a=1.37494+0.86927I$ $b=1.80634+1.67583I$	$-6.61873-0.72943I$	$-27.0371+3.0253I$
$u=-1.48630+0.49749I$ $a=-0.184899-0.725570I$ $b=-0.514333-1.079950I$	$-11.23120-3.55868I$	0
$u=-1.48630-0.49749I$ $a=-0.184899+0.725570I$ $b=-0.514333+1.079950I$	$-11.23120+3.55868I$	0
$u=1.17287+1.06491I$ $a=-0.948428-0.052602I$ $b=-0.770986-1.135900I$	$-2.90730+8.25650I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.17287 - 1.06491I$ $a = -0.948428 + 0.052602I$ $b = -0.770986 + 1.135900I$	$-2.90730 - 8.25650I$	0
$u = 1.60080 + 0.00259I$ $a = -0.308479 + 0.601802I$ $b = -0.512848 + 0.469068I$	$-2.12534 - 2.73496I$	0
$u = 1.60080 - 0.00259I$ $a = -0.308479 - 0.601802I$ $b = -0.512848 - 0.469068I$	$-2.12534 + 2.73496I$	0
$u = -0.275291 + 0.221049I$ $a = -0.64665 + 1.27043I$ $b = -1.054180 - 0.813914I$	$-0.89305 - 2.92243I$	$-9.70267 + 2.02248I$
$u = -0.275291 - 0.221049I$ $a = -0.64665 - 1.27043I$ $b = -1.054180 + 0.813914I$	$-0.89305 + 2.92243I$	$-9.70267 - 2.02248I$
$u = -0.318817 + 0.131695I$ $a = -3.73118 - 2.56355I$ $b = 0.0551272 + 0.0990377I$	$-2.40668 - 0.00982I$	$-16.7035 - 7.8985I$
$u = -0.318817 - 0.131695I$ $a = -3.73118 + 2.56355I$ $b = 0.0551272 - 0.0990377I$	$-2.40668 + 0.00982I$	$-16.7035 + 7.8985I$
$u = 0.252941 + 0.222750I$ $a = -1.61194 - 2.97824I$ $b = -0.203176 - 1.245190I$	$-7.63133 - 1.98716I$	$-11.03642 + 4.01004I$
$u = 0.252941 - 0.222750I$ $a = -1.61194 + 2.97824I$ $b = -0.203176 + 1.245190I$	$-7.63133 + 1.98716I$	$-11.03642 - 4.01004I$
$u = -1.20089 + 1.18117I$ $a = -0.951427 + 0.190149I$ $b = -0.97977 + 1.25279I$	$-12.3596 - 17.5347I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.20089-1.18117I$ $a=-0.951427-0.190149I$ $b=-0.97977-1.25279I$	$-12.3596+17.5347I$	0
$u=0.40829+1.64602I$ $a=0.252064-0.072091I$ $b=-0.082371+0.853035I$	$-4.39323+0.59906I$	0
$u=0.40829-1.64602I$ $a=0.252064+0.072091I$ $b=-0.082371-0.853035I$	$-4.39323-0.59906I$	0
$u=0.133270+0.145455I$ $a=1.89268+13.71840I$ $b=-0.154111-0.408727I$	$-2.72551-0.66144I$	$-24.1115-31.0038I$
$u=0.133270-0.145455I$ $a=1.89268-13.71840I$ $b=-0.154111+0.408727I$	$-2.72551+0.66144I$	$-24.1115+31.0038I$
$u=-1.57118+0.94094I$ $a=0.451176-0.364575I$ $b=0.294701-0.688444I$	$-2.17859-4.62625I$	0
$u=-1.57118-0.94094I$ $a=0.451176+0.364575I$ $b=0.294701+0.688444I$	$-2.17859+4.62625I$	0
$u=1.16083+1.45232I$ $a=0.665646+0.142507I$ $b=1.033180+0.595503I$	$-8.06942+7.08098I$	0
$u=1.16083-1.45232I$ $a=0.665646-0.142507I$ $b=1.033180-0.595503I$	$-8.06942-7.08098I$	0
$u=-1.20226+1.73624I$ $a=0.213848-0.358282I$ $b=-0.247627-0.670148I$	$-12.8693+7.8727I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.20226-1.73624I$ $a=\quad 0.213848+0.358282I$ $b=-0.247627+0.670148I$	$-12.8693-7.8727I$	0
$u=-3.30429+0.71948I$ $a=-0.0507409+0.0686539I$ $b=-0.016178+1.084750I$	$-4.67503+0.08868I$	0
$u=-3.30429-0.71948I$ $a=-0.0507409-0.0686539I$ $b=-0.016178-1.084750I$	$-4.67503-0.08868I$	0

II. $I_2^u =$
$\langle \mathbf{1.26\times10^{54}u^{29}+1.27\times10^{55}u^{28}+\cdots+2.62\times10^{54}b+1.66\times10^{54},\ 2.33\times10^{54}u^{29}+}$
$\mathbf{2.36\times10^{55}u^{28}+\cdots+3.00\times10^{54}a+8.04\times10^{54},\ u^{30}+10u^{29}+\cdots-2u+1}\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.776274u^{29}-7.87870u^{28}+\cdots-14.4332u-2.67995\\-0.479840u^{29}-4.86287u^{28}+\cdots-10.1187u-0.635126\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-0.296434u^{29}-3.01583u^{28}+\cdots-4.31447u-2.04483\\-0.479840u^{29}-4.86287u^{28}+\cdots-10.1187u-0.635126\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-0.784936u^{29}-7.49694u^{28}+\cdots-11.5746u+2.88220\\0.0540488u^{29}+0.600763u^{28}+\cdots-0.892560u+0.854988\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-0.659512u^{29}-6.25109u^{28}+\cdots-11.4807u+3.31022\\-0.0591853u^{29}-0.587345u^{28}+\cdots-1.73211u+0.912115\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-0.630267u^{29}-5.81988u^{28}+\cdots-13.4474u+5.43172\\0.100621u^{29}+1.07630u^{28}+\cdots+1.01977u+1.69453\end{pmatrix}$$
$$a_1 = \begin{pmatrix}0.329607u^{29}+3.29915u^{28}+\cdots+9.75861u-4.93015\\-0.120600u^{29}-1.28428u^{28}+\cdots-1.86892u-2.01908\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-0.214937u^{29}-2.65604u^{28}+\cdots+11.2629u-6.81042\\-0.155969u^{29}-1.70352u^{28}+\cdots-2.05754u-3.24115\end{pmatrix}$$
$$a_2 = \begin{pmatrix}0.443524u^{29}+4.48675u^{28}+\cdots+11.3041u-2.91414\\-0.137180u^{29}-1.45673u^{28}+\cdots-1.88598u-2.06751\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-0.686563u^{29}-6.30933u^{28}+\cdots-14.0235u+7.60903\\0.0905133u^{29}+0.965512u^{28}+\cdots+1.22311u+1.62101\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 1.96657u^{29}+20.4621u^{28}+\cdots+47.8697u-2.01729$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{30} - 22u^{29} + \cdots - 3284u + 361$
c_2	$u^{30} + u^{29} + \cdots + 4u + 1$
c_3	$u^{30} + 9u^{29} + \cdots - 2u + 1$
c_4	$u^{30} + 10u^{29} + \cdots - 2u + 1$
c_5	$u^{30} + 3u^{29} + \cdots - 8u + 1$
c_6	$u^{30} - u^{29} + \cdots - 4u + 1$
c_7	$u^{30} - 6u^{29} + \cdots + u + 1$
c_8	$u^{30} + u^{29} + \cdots - 4u + 1$
c_9	$u^{30} - 9u^{29} + \cdots + 2u + 1$
c_{10}	$u^{30} - 10u^{29} + \cdots - 11u + 1$
c_{11}	$u^{30} - 6u^{29} + \cdots + 2u + 1$
c_{12}	$u^{30} - 10u^{29} + \cdots + 3u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{30} - 46y^{29} + \cdots - 1581322y + 130321$
c_2, c_6	$y^{30} + 13y^{29} + \cdots + 22y + 1$
c_3, c_9	$y^{30} - 25y^{29} + \cdots + 26y + 1$
c_4	$y^{30} - 18y^{29} + \cdots + 52y + 1$
c_5	$y^{30} + 7y^{29} + \cdots - 28y + 1$
c_7	$y^{30} + 2y^{29} + \cdots - y + 1$
c_8	$y^{30} - 13y^{29} + \cdots + 20y + 1$
c_{10}	$y^{30} - 2y^{29} + \cdots + 27y + 1$
c_{11}	$y^{30} + 14y^{29} + \cdots + 20y + 1$
c_{12}	$y^{30} + 366y^{29} + \cdots + 121y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.264851+0.986255I$ $a=\ \ 0.361756-0.958759I$ $b=\ \ 0.850957+0.097098I$	$-11.54740+7.22206I$	$-5.65155-4.25847I$
$u=-0.264851-0.986255I$ $a=\ \ 0.361756+0.958759I$ $b=\ \ 0.850957-0.097098I$	$-11.54740-7.22206I$	$-5.65155+4.25847I$
$u=\ \ 0.895499+0.582838I$ $a=-1.56633-0.03026I$ $b=-1.10896-0.91654I$	$3.13872+5.11649I$	$-3.26050-11.10481I$
$u=\ \ 0.895499-0.582838I$ $a=-1.56633+0.03026I$ $b=-1.10896+0.91654I$	$3.13872-5.11649I$	$-3.26050+11.10481I$
$u=\ \ 0.758092+0.267664I$ $a=-1.34276-0.62428I$ $b=-1.22987-0.94219I$	$2.67470+3.26845I$	$3.47425+0.31137I$
$u=\ \ 0.758092-0.267664I$ $a=-1.34276+0.62428I$ $b=-1.22987+0.94219I$	$2.67470-3.26845I$	$3.47425-0.31137I$
$u=-0.808579+1.008580I$ $a=\ \ 0.625296-0.162400I$ $b=\ \ 0.973062-0.124636I$	$-0.52735+1.51415I$	$-4.01431+0.97590I$
$u=-0.808579-1.008580I$ $a=\ \ 0.625296+0.162400I$ $b=\ \ 0.973062+0.124636I$	$-0.52735-1.51415I$	$-4.01431-0.97590I$
$u=\ \ 0.705784+0.035899I$ $a=-1.21686+0.99456I$ $b=-1.078060-0.731623I$	$3.20399+0.36138I$	$-6.01046-1.13377I$
$u=\ \ 0.705784-0.035899I$ $a=-1.21686-0.99456I$ $b=-1.078060+0.731623I$	$3.20399-0.36138I$	$-6.01046+1.13377I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.513887+0.484747I$ $a=\ 0.612259+0.049795I$ $b=\ 0.700776+1.052900I$	$-0.42743-3.33155I$	$-0.36861+10.50639I$
$u=-0.513887-0.484747I$ $a=\ 0.612259-0.049795I$ $b=\ 0.700776-1.052900I$	$-0.42743+3.33155I$	$-0.36861-10.50639I$
$u=-1.293000+0.211113I$ $a=\ 0.340213-0.765814I$ $b=\ 0.365797-0.255677I$	$-1.29420-4.26619I$	$1.65207+7.58449I$
$u=-1.293000-0.211113I$ $a=\ 0.340213+0.765814I$ $b=\ 0.365797+0.255677I$	$-1.29420+4.26619I$	$1.65207-7.58449I$
$u=-0.201020+0.524745I$ $a=\ 1.17021-2.68289I$ $b=-0.213535+0.311118I$	$-2.36627-0.24882I$	$-12.5512+12.1355I$
$u=-0.201020-0.524745I$ $a=\ 1.17021+2.68289I$ $b=-0.213535-0.311118I$	$-2.36627+0.24882I$	$-12.5512-12.1355I$
$u=-1.10174+1.00955I$ $a=\ 0.825015-0.016778I$ $b=\ 0.822575-1.114390I$	$-1.14409-9.85717I$	$-0.89607+8.10159I$
$u=-1.10174-1.00955I$ $a=\ 0.825015+0.016778I$ $b=\ 0.822575+1.114390I$	$-1.14409+9.85717I$	$-0.89607-8.10159I$
$u=\ 0.119635+0.409700I$ $a=-2.66687+3.75712I$ $b=\ 0.302007-0.395775I$	$-2.76195+0.87026I$	$-16.3868-3.1307I$
$u=\ 0.119635-0.409700I$ $a=-2.66687-3.75712I$ $b=\ 0.302007+0.395775I$	$-2.76195-0.87026I$	$-16.3868+3.1307I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.12733 + 1.57632I$ $a = -0.435438 + 0.098878I$ $b = -0.895542 + 0.150896I$	$0.587144 + 1.284410I$	$3.15676 - 3.79447I$
$u = \quad 0.12733 - 1.57632I$ $a = -0.435438 - 0.098878I$ $b = -0.895542 - 0.150896I$	$0.587144 - 1.284410I$	$3.15676 + 3.79447I$
$u = \quad 1.36990 + 0.80876I$ $a = -0.798991 - 0.342128I$ $b = -0.88374 - 1.17376I$	$1.79152 + 6.79652I$	$-9.91993 + 0.I$
$u = \quad 1.36990 - 0.80876I$ $a = -0.798991 + 0.342128I$ $b = -0.88374 + 1.17376I$	$1.79152 - 6.79652I$	$-9.91993 + 0.I$
$u = -1.13078 + 1.22918I$ $a = -0.737364 + 0.226659I$ $b = -0.737518 + 0.702723I$	$-4.93858 - 6.22716I$	$0. + 12.49688I$
$u = -1.13078 - 1.22918I$ $a = -0.737364 - 0.226659I$ $b = -0.737518 - 0.702723I$	$-4.93858 + 6.22716I$	$0. - 12.49688I$
$u = \quad 0.027817 + 0.207011I$ $a = -3.21790 - 2.28750I$ $b = -0.90341 - 1.73353I$	$-6.32991 - 0.83665I$	$-2.04581 + 8.27979I$
$u = \quad 0.027817 - 0.207011I$ $a = -3.21790 + 2.28750I$ $b = -0.90341 + 1.73353I$	$-6.32991 + 0.83665I$	$-2.04581 - 8.27979I$
$u = -3.69021 + 2.18082I$ $a = \quad 0.0477690 - 0.0382406I$ $b = \quad 0.035454 - 1.049530I$	$-4.73294 + 0.11525I$	0
$u = -3.69021 - 2.18082I$ $a = \quad 0.0477690 + 0.0382406I$ $b = \quad 0.035454 + 1.049530I$	$-4.73294 - 0.11525I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{30}-22u^{29}+\cdots-3284u+361)(u^{83}+u^{82}+\cdots-53405u+3225)$
c_2	$(u^{30}+u^{29}+\cdots+4u+1)(u^{83}+2u^{82}+\cdots+217u-67)$
c_3	$(u^{30}+9u^{29}+\cdots-2u+1)$ $\cdot(u^{83}+10u^{82}+\cdots+34163451u-6221089)$
c_4	$(u^{30}+10u^{29}+\cdots-2u+1)(u^{83}+11u^{82}+\cdots-13u-3)$
c_5	$(u^{30}+3u^{29}+\cdots-8u+1)(u^{83}-15u^{81}+\cdots-486505u+43627)$
c_6	$(u^{30}-u^{29}+\cdots-4u+1)(u^{83}+2u^{82}+\cdots+217u-67)$
c_7	$(u^{30}-6u^{29}+\cdots+u+1)(u^{83}+5u^{82}+\cdots-6u-1)$
c_8	$(u^{30}+u^{29}+\cdots-4u+1)(u^{83}-51u^{81}+\cdots+1.77173\times10^{7}u-4973081)$
c_9	$(u^{30}-9u^{29}+\cdots+2u+1)$ $\cdot(u^{83}+10u^{82}+\cdots+34163451u-6221089)$
c_{10}	$(u^{30}-10u^{29}+\cdots-11u+1)(u^{83}+11u^{82}+\cdots+1754u+107)$
c_{11}	$(u^{30}-6u^{29}+\cdots+2u+1)(u^{83}+7u^{82}+\cdots-3609u+331)$
c_{12}	$(u^{30}-10u^{29}+\cdots+3u+1)$ $\cdot(u^{83}-11u^{82}+\cdots+133746194u+15906677)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{30}-46y^{29}+\cdots-1581322y+130321)$ $\cdot(y^{83}-131y^{82}+\cdots-220531175y-10400625)$
c_2, c_6	$(y^{30}+13y^{29}+\cdots+22y+1)(y^{83}+60y^{82}+\cdots-303187y-4489)$
c_3, c_9	$(y^{30}-25y^{29}+\cdots+26y+1)$ $\cdot(y^{83}-126y^{82}+\cdots-86541304996979y-38701948345921)$
c_4	$(y^{30}-18y^{29}+\cdots+52y+1)(y^{83}-15y^{82}+\cdots+7y-9)$
c_5	$(y^{30}+7y^{29}+\cdots-28y+1)$ $\cdot(y^{83}-30y^{82}+\cdots+62663810995y-1903315129)$
c_7	$(y^{30}+2y^{29}+\cdots-y+1)(y^{83}+13y^{82}+\cdots-96y-1)$
c_8	$(y^{30}-13y^{29}+\cdots+20y+1)$ $\cdot(y^{83}-102y^{82}+\cdots-98203788924489y-24731534632561)$
c_{10}	$(y^{30}-2y^{29}+\cdots+27y+1)(y^{83}+17y^{82}+\cdots-583740y-11449)$
c_{11}	$(y^{30}+14y^{29}+\cdots+20y+1)(y^{83}+5y^{82}+\cdots+2855899y-109561)$
c_{12}	$(y^{30}+366y^{29}+\cdots+121y+1)$ $\cdot(y^{83}-303y^{82}+\cdots-13069623167467982y-253022373182329)$