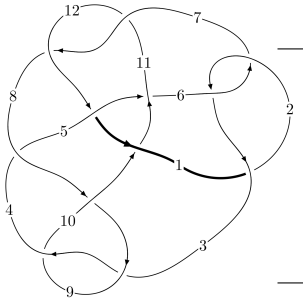
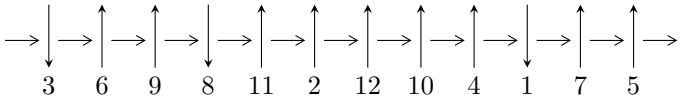
$12a_{0363}$ $(K12a_{0363})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 6.13651 \times 10^{190} u^{139} - 2.21719 \times 10^{190} u^{138} + \cdots + 1.74140 \times 10^{190} b + 8.78867 \times 10^{191},$$
$$- 2.57843 \times 10^{192} u^{139} + 1.13373 \times 10^{192} u^{138} + \cdots + 1.91554 \times 10^{191} a - 2.84745 \times 10^{193},$$
$$u^{140} - u^{139} + \cdots + 3u - 11 \rangle$$
$$I_2^u = \langle -5u^{25} + 33u^{23} + \cdots + b + 1,\ 10u^{25} + 8u^{24} + \cdots + a - 17,\ u^{26} - 7u^{24} + \cdots - 5u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 166 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. $\boldsymbol{I_1^u = \langle 6.14 \times 10^{190} u^{139} - 2.22 \times 10^{190} u^{138} + \cdots + 1.74 \times 10^{190} b + 8.79 \times 10^{191},\ -2.58 \times 10^{192} u^{139} + 1.13 \times 10^{192} u^{138} + \cdots + 1.92 \times 10^{191} a - 2.85 \times 10^{193},\ u^{140} - u^{139} + \cdots + 3u - 11 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 13.4606u^{139} - 5.91858u^{138} + \cdots + 177.633u + 148.650 \\ -3.52390u^{139} + 1.27322u^{138} + \cdots - 71.2813u - 50.4690 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2.65083u^{139} - 3.89431u^{138} + \cdots + 111.399u + 82.2790 \\ 3.04276u^{139} + 1.43378u^{138} + \cdots + 1.82150u + 47.9135 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 5.69359u^{139} - 2.46052u^{138} + \cdots + 113.221u + 130.193 \\ 3.04276u^{139} + 1.43378u^{138} + \cdots + 1.82150u + 47.9135 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 4.08136u^{139} - 4.79781u^{138} + \cdots + 109.917u + 54.4416 \\ -0.606961u^{139} + 0.806119u^{138} + \cdots - 37.3582u - 6.65478 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^6 - u^4 + 1 \\ -u^8 + 2u^6 - 2u^4 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 3.82378u^{139} - 2.26440u^{138} + \cdots + 91.3649u + 97.7676 \\ 3.89747u^{139} + 1.15101u^{138} + \cdots + 15.4401u + 61.6666 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 4.67478u^{139} - 4.01428u^{138} + \cdots + 108.440u + 70.0227 \\ 0.589215u^{139} - 0.565928u^{138} + \cdots + 33.8266u + 15.2231 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -8.36211u^{139} - 4.62818u^{138} + \cdots + 41.7553u - 36.0403$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{140} + 52u^{139} + \cdots + 337740u + 6241$
c_2, c_6	$u^{140} + 26u^{138} + \cdots - 482u + 79$
c_3, c_9	$u^{140} + u^{139} + \cdots - 3u - 11$
c_4	$u^{140} + 3u^{139} + \cdots - 25984085u - 6280527$
c_5	$u^{140} + u^{139} + \cdots + 404117u - 144771$
c_7, c_{11}	$u^{140} + u^{139} + \cdots + 45u - 1$
c_8	$u^{140} - 73u^{139} + \cdots - 1461u + 121$
c_{10}	$u^{140} - 23u^{139} + \cdots - 258635u + 11863$
c_{12}	$u^{140} - 3u^{139} + \cdots - 3347197u + 538957$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{140} + 84y^{139} + \cdots - 2917146088y + 38950081$
c_2, c_6	$y^{140} + 52y^{139} + \cdots + 337740y + 6241$
c_3, c_9	$y^{140} - 73y^{139} + \cdots - 1461y + 121$
c_4	$y^{140} + 91y^{139} + \cdots - 1096216389691129y + 39445019397729$
c_5	$y^{140} - 39y^{139} + \cdots - 438067087459y + 20958642441$
c_7, c_{11}	$y^{140} - 117y^{139} + \cdots + 107y + 1$
c_8	$y^{140} - 9y^{139} + \cdots - 804005y + 14641$
c_{10}	$y^{140} + 29y^{139} + \cdots - 922560827y + 140730769$
c_{12}	$y^{140} - 43y^{139} + \cdots - 16999596958743y + 290474647849$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.819465+0.601104I$ $a=-0.273785-0.601175I$ $b=-0.526903-0.936919I$	$-1.91446+1.71102I$	0
$u=-0.819465-0.601104I$ $a=-0.273785+0.601175I$ $b=-0.526903+0.936919I$	$-1.91446-1.71102I$	0
$u=\ \ 0.208895+0.998000I$ $a=\ \ 0.738442-0.049131I$ $b=-0.629531-0.861460I$	$3.98141+1.29056I$	0
$u=\ \ 0.208895-0.998000I$ $a=\ \ 0.738442+0.049131I$ $b=-0.629531+0.861460I$	$3.98141-1.29056I$	0
$u=\ \ 0.725777+0.641046I$ $a=\ \ 0.361709-0.866119I$ $b=\ \ 0.012192-1.196540I$	$-2.90283+4.25393I$	0
$u=\ \ 0.725777-0.641046I$ $a=\ \ 0.361709+0.866119I$ $b=\ \ 0.012192+1.196540I$	$-2.90283-4.25393I$	0
$u=-0.280451+0.996079I$ $a=\ \ 0.991224-0.455528I$ $b=-0.627884-0.845310I$	$4.03314+3.63347I$	0
$u=-0.280451-0.996079I$ $a=\ \ 0.991224+0.455528I$ $b=-0.627884+0.845310I$	$4.03314-3.63347I$	0
$u=\ \ 0.904664+0.324825I$ $a=\ \ 0.84139-1.90792I$ $b=-0.161953+0.649634I$	$-1.85564+1.33643I$	0
$u=\ \ 0.904664-0.324825I$ $a=\ \ 0.84139+1.90792I$ $b=-0.161953-0.649634I$	$-1.85564-1.33643I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.741408+0.605549I$ $a=-1.23895-1.65423I$ $b=\ \ 0.567177-0.983427I$	$-2.13460-6.43998I$	0
$u=-0.741408-0.605549I$ $a=-1.23895+1.65423I$ $b=\ \ 0.567177+0.983427I$	$-2.13460+6.43998I$	0
$u=-0.588581+0.752891I$ $a=\ \ 0.932767+0.669322I$ $b=-0.581080+0.505008I$	$2.01572+1.08008I$	0
$u=-0.588581-0.752891I$ $a=\ \ 0.932767-0.669322I$ $b=-0.581080-0.505008I$	$2.01572-1.08008I$	0
$u=\ \ 0.840582+0.637624I$ $a=\ \ 1.35916-0.66753I$ $b=-0.106758-1.116930I$	$-2.58040+0.68173I$	0
$u=\ \ 0.840582-0.637624I$ $a=\ \ 1.35916+0.66753I$ $b=-0.106758+1.116930I$	$-2.58040-0.68173I$	0
$u=\ \ 0.791527+0.515926I$ $a=\ \ 0.485552+0.133390I$ $b=\ \ 0.436044-0.572285I$	$-0.96654+2.06636I$	0
$u=\ \ 0.791527-0.515926I$ $a=\ \ 0.485552-0.133390I$ $b=\ \ 0.436044+0.572285I$	$-0.96654-2.06636I$	0
$u=-0.903401+0.251863I$ $a=\ \ 1.11305-1.68568I$ $b=\ \ 0.483060+1.013160I$	$3.28601+2.69223I$	0
$u=-0.903401-0.251863I$ $a=\ \ 1.11305+1.68568I$ $b=\ \ 0.483060-1.013160I$	$3.28601-2.69223I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.959593+0.510875I$ $a=\ \ 2.44943+0.92553I$ $b=-0.293618+0.965605I$	$-3.27126-3.56568I$	0
$u=-0.959593-0.510875I$ $a=\ \ 2.44943-0.92553I$ $b=-0.293618-0.965605I$	$-3.27126+3.56568I$	0
$u=\ \ 0.713368+0.820999I$ $a=\ \ 0.220508+0.255280I$ $b=-0.611825+1.026880I$	$0.58642-5.94419I$	0
$u=\ \ 0.713368-0.820999I$ $a=\ \ 0.220508-0.255280I$ $b=-0.611825-1.026880I$	$0.58642+5.94419I$	0
$u=\ \ 0.781067+0.463227I$ $a=\ \ 0.546918-0.488424I$ $b=-0.122889-0.449806I$	$-1.08917+1.93792I$	0
$u=\ \ 0.781067-0.463227I$ $a=\ \ 0.546918+0.488424I$ $b=-0.122889+0.449806I$	$-1.08917-1.93792I$	0
$u=\ \ 0.220674+0.880594I$ $a=-1.185880-0.572351I$ $b=\ \ 0.727382-1.104240I$	$5.2183-13.9708I$	0
$u=\ \ 0.220674-0.880594I$ $a=-1.185880+0.572351I$ $b=\ \ 0.727382+1.104240I$	$5.2183+13.9708I$	0
$u=-0.900493+0.639852I$ $a=-0.382863-0.499656I$ $b=\ \ 0.785510+0.473472I$	$2.88856-6.23663I$	0
$u=-0.900493-0.639852I$ $a=-0.382863+0.499656I$ $b=\ \ 0.785510-0.473472I$	$2.88856+6.23663I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.197932+0.854508I$ $a=-0.578891+0.278552I$ $b=\ \ 0.945512-0.580759I$	$6.84078+7.84586I$	0
$u=-0.197932-0.854508I$ $a=-0.578891-0.278552I$ $b=\ \ 0.945512+0.580759I$	$6.84078-7.84586I$	0
$u=\ \ 1.065320+0.362248I$ $a=-1.23718+1.47542I$ $b=-0.239406+0.696587I$	$5.72554+1.31498I$	0
$u=\ \ 1.065320-0.362248I$ $a=-1.23718-1.47542I$ $b=-0.239406-0.696587I$	$5.72554-1.31498I$	0
$u=\ \ 1.058820+0.408764I$ $a=\ \ 0.447932-0.024635I$ $b=\ \ 0.089918-1.060490I$	$-0.35657+1.41502I$	0
$u=\ \ 1.058820-0.408764I$ $a=\ \ 0.447932+0.024635I$ $b=\ \ 0.089918+1.060490I$	$-0.35657-1.41502I$	0
$u=\ \ 0.894142+0.715299I$ $a=-1.55420+0.89153I$ $b=\ \ 0.643659+1.070540I$	$1.16619+11.59850I$	0
$u=\ \ 0.894142-0.715299I$ $a=-1.55420-0.89153I$ $b=\ \ 0.643659-1.070540I$	$1.16619-11.59850I$	0
$u=-1.112620+0.299776I$ $a=\ \ 0.445941-1.027240I$ $b=\ \ 0.308610+1.222730I$	$3.41072+2.93577I$	0
$u=-1.112620-0.299776I$ $a=\ \ 0.445941+1.027240I$ $b=\ \ 0.308610-1.222730I$	$3.41072-2.93577I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.805266 + 0.256270I$ $a = -3.13134 - 0.38971I$ $b = 0.696447 + 0.964734I$	$3.20266 + 5.85000I$	$10.8328 - 11.3116I$
$u = 0.805266 - 0.256270I$ $a = -3.13134 + 0.38971I$ $b = 0.696447 - 0.964734I$	$3.20266 - 5.85000I$	$10.8328 + 11.3116I$
$u = 0.645976 + 0.544508I$ $a = 0.749819 - 0.949600I$ $b = -0.386740 - 0.877417I$	$-1.34695 + 2.10493I$	$6.00000 + 0.I$
$u = 0.645976 - 0.544508I$ $a = 0.749819 + 0.949600I$ $b = -0.386740 + 0.877417I$	$-1.34695 - 2.10493I$	$6.00000 + 0.I$
$u = -0.766449 + 0.341769I$ $a = 1.204510 - 0.117120I$ $b = -0.897138 + 0.663381I$	$3.97663 - 2.55791I$	$11.57076 + 6.03390I$
$u = -0.766449 - 0.341769I$ $a = 1.204510 + 0.117120I$ $b = -0.897138 - 0.663381I$	$3.97663 + 2.55791I$	$11.57076 - 6.03390I$
$u = -0.428607 + 0.720357I$ $a = 1.18236 + 0.83855I$ $b = -0.240114 + 0.474540I$	$2.03051 + 0.98271I$	$6.00000 - 2.59458I$
$u = -0.428607 - 0.720357I$ $a = 1.18236 - 0.83855I$ $b = -0.240114 - 0.474540I$	$2.03051 - 0.98271I$	$6.00000 + 2.59458I$
$u = 0.836775$ $a = -0.207422$ $b = -0.879420$	5.63574	19.3000
$u = -1.123800 + 0.305845I$ $a = -1.09854 - 1.18868I$ $b = 0.716453 + 0.948727I$	$4.40051 + 0.60498I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.123800-0.305845I$ $a=-1.09854+1.18868I$ $b=\ \ 0.716453-0.948727I$	$4.40051-0.60498I$	0
$u=\ \ 1.149630+0.330362I$ $a=\ \ 1.60976-0.69797I$ $b=-0.673469+1.009790I$	$4.26218-4.49247I$	0
$u=\ \ 1.149630-0.330362I$ $a=\ \ 1.60976+0.69797I$ $b=-0.673469-1.009790I$	$4.26218+4.49247I$	0
$u=\ \ 0.112882+0.792728I$ $a=\ \ 0.557215+0.068936I$ $b=-0.067761+0.609858I$	$1.52861-1.68586I$	$4.68797+3.45114I$
$u=\ \ 0.112882-0.792728I$ $a=\ \ 0.557215-0.068936I$ $b=-0.067761-0.609858I$	$1.52861+1.68586I$	$4.68797-3.45114I$
$u=\ \ 0.263276+0.754577I$ $a=\ \ 0.176137+0.788252I$ $b=-0.167287+1.295340I$	$-0.76781-5.99748I$	$3.63087+7.05574I$
$u=\ \ 0.263276-0.754577I$ $a=\ \ 0.176137-0.788252I$ $b=-0.167287-1.295340I$	$-0.76781+5.99748I$	$3.63087-7.05574I$
$u=\ \ 0.280187+0.746806I$ $a=\ \ 0.788485+0.671446I$ $b=-0.594752+1.020860I$	$0.24157-3.64223I$	$4.72165+0.97424I$
$u=\ \ 0.280187-0.746806I$ $a=\ \ 0.788485-0.671446I$ $b=-0.594752-1.020860I$	$0.24157+3.64223I$	$4.72165-0.97424I$
$u=-0.750280+0.268239I$ $a=-1.14819-2.22811I$ $b=\ \ 0.746169+0.729878I$	$3.91151-0.35414I$	$10.25180+4.64821I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.750280-0.268239I$ $a=-1.14819+2.22811I$ $b=\ \ 0.746169-0.729878I$	$3.91151+0.35414I$	$10.25180-4.64821I$
$u=-0.229412+0.756603I$ $a=-1.35042+1.16217I$ $b=\ \ 0.637868+1.026790I$	$0.17383+7.83476I$	$5.17246-7.94900I$
$u=-0.229412-0.756603I$ $a=-1.35042-1.16217I$ $b=\ \ 0.637868-1.026790I$	$0.17383-7.83476I$	$5.17246+7.94900I$
$u=-1.160530+0.363731I$ $a=\ \ 1.53233-0.71195I$ $b=-0.739607+0.623924I$	$5.39201-0.90370I$	0
$u=-1.160530-0.363731I$ $a=\ \ 1.53233+0.71195I$ $b=-0.739607-0.623924I$	$5.39201+0.90370I$	0
$u=-1.111320+0.495860I$ $a=-1.258030-0.397388I$ $b=-0.031319-1.141470I$	$-1.06553-5.82110I$	0
$u=-1.111320-0.495860I$ $a=-1.258030+0.397388I$ $b=-0.031319+1.141470I$	$-1.06553+5.82110I$	0
$u=\ \ 1.164220+0.393081I$ $a=-1.81411-0.11891I$ $b=\ \ 0.768058+0.682952I$	$5.17383+5.00452I$	0
$u=\ \ 1.164220-0.393081I$ $a=-1.81411+0.11891I$ $b=\ \ 0.768058-0.682952I$	$5.17383-5.00452I$	0
$u=\ \ 0.748592+0.181734I$ $a=\ \ 0.878651-0.642024I$ $b=-0.779626+1.003540I$	$2.97274-3.60491I$	$10.36671+1.22859I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.748592 - 0.181734I$ $a = 0.878651 + 0.642024I$ $b = -0.779626 - 1.003540I$	$2.97274 + 3.60491I$	$10.36671 - 1.22859I$
$u = 1.157840 + 0.417927I$ $a = -1.32716 + 1.59285I$ $b = 1.185410 - 0.389801I$	$9.09011 + 1.84231I$	0
$u = 1.157840 - 0.417927I$ $a = -1.32716 - 1.59285I$ $b = 1.185410 + 0.389801I$	$9.09011 - 1.84231I$	0
$u = 1.150750 + 0.437661I$ $a = -0.85517 + 1.59029I$ $b = 0.86610 - 1.15636I$	$6.79845 - 0.84188I$	0
$u = 1.150750 - 0.437661I$ $a = -0.85517 - 1.59029I$ $b = 0.86610 + 1.15636I$	$6.79845 + 0.84188I$	0
$u = -0.572554 + 0.509279I$ $a = -0.61241 + 1.78069I$ $b = 0.190353 + 1.009410I$	$-4.40135 - 0.63333I$	$-1.24969 - 1.21453I$
$u = -0.572554 - 0.509279I$ $a = -0.61241 - 1.78069I$ $b = 0.190353 - 1.009410I$	$-4.40135 + 0.63333I$	$-1.24969 + 1.21453I$
$u = 1.149570 + 0.451749I$ $a = 3.62115 - 0.51783I$ $b = -0.636854 - 0.872531I$	$7.99476 + 4.59039I$	0
$u = 1.149570 - 0.451749I$ $a = 3.62115 + 0.51783I$ $b = -0.636854 + 0.872531I$	$7.99476 - 4.59039I$	0
$u = -1.151660 + 0.448221I$ $a = 2.03999 + 1.35586I$ $b = -0.697290 - 0.849589I$	$8.01842 - 3.49746I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.151660-0.448221I$ $a=\ \ 2.03999-1.35586I$ $b=-0.697290+0.849589I$	$8.01842+3.49746I$	0
$u=\ \ 0.177381+0.742334I$ $a=-0.071572-0.448830I$ $b=\ \ 0.690228+0.563342I$	$1.51325-2.67968I$	$7.37592+3.47726I$
$u=\ \ 0.177381-0.742334I$ $a=-0.071572+0.448830I$ $b=\ \ 0.690228-0.563342I$	$1.51325+2.67968I$	$7.37592-3.47726I$
$u=-1.151040+0.461160I$ $a=-2.84467-0.14834I$ $b=\ \ 0.82302-1.21891I$	$6.62997-8.93464I$	0
$u=-1.151040-0.461160I$ $a=-2.84467+0.14834I$ $b=\ \ 0.82302+1.21891I$	$6.62997+8.93464I$	0
$u=-1.121350+0.557992I$ $a=-0.201215+0.594207I$ $b=\ \ 0.111316+0.716162I$	$4.18372-5.94348I$	0
$u=-1.121350-0.557992I$ $a=-0.201215-0.594207I$ $b=\ \ 0.111316-0.716162I$	$4.18372+5.94348I$	0
$u=-1.159140+0.475194I$ $a=-2.12166-0.42257I$ $b=\ \ 1.181410-0.526785I$	$8.68313-6.36401I$	0
$u=-1.159140-0.475194I$ $a=-2.12166+0.42257I$ $b=\ \ 1.181410+0.526785I$	$8.68313+6.36401I$	0
$u=-0.689219+0.285983I$ $a=\ \ 0.82099+1.64476I$ $b=-0.646260+1.169410I$	$2.53323-5.41442I$	$5.96568+11.95972I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.689219-0.285983I$ $a=\ \ 0.82099-1.64476I$ $b=-0.646260-1.169410I$	$2.53323+5.41442I$	$5.96568-11.95972I$
$u=-1.175170+0.439114I$ $a=\ \ 0.66966+2.43954I$ $b=-0.642836-0.837836I$	$8.10380+0.40309I$	0
$u=-1.175170-0.439114I$ $a=\ \ 0.66966-2.43954I$ $b=-0.642836+0.837836I$	$8.10380-0.40309I$	0
$u=-1.158520+0.481809I$ $a=-0.768217-1.063910I$ $b=\ \ 0.744387+0.464103I$	$4.56933-3.26362I$	0
$u=-1.158520-0.481809I$ $a=-0.768217+1.063910I$ $b=\ \ 0.744387-0.464103I$	$4.56933+3.26362I$	0
$u=\ \ 1.172110+0.458685I$ $a=\ \ 2.49739+1.15826I$ $b=-0.688342-0.866363I$	$7.96453+8.82066I$	0
$u=\ \ 1.172110-0.458685I$ $a=\ \ 2.49739-1.15826I$ $b=-0.688342+0.866363I$	$7.96453-8.82066I$	0
$u=-1.206400+0.381025I$ $a=-0.055606-0.766674I$ $b=-0.044579+0.675540I$	$5.49976-2.33349I$	0
$u=-1.206400-0.381025I$ $a=-0.055606+0.766674I$ $b=-0.044579-0.675540I$	$5.49976+2.33349I$	0
$u=-0.087509+0.729576I$ $a=\ \ 0.481488+0.083455I$ $b=-0.609447+0.579754I$	$1.53007-1.15987I$	$7.43225+3.70763I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.087509-0.729576I$ $a=\ \ 0.481488-0.083455I$ $b=-0.609447-0.579754I$	$1.53007+1.15987I$	$7.43225-3.70763I$
$u=\ \ 1.146500+0.537372I$ $a=-1.61922-0.09495I$ $b=\ \ 0.194322+1.356190I$	$1.82460+10.85730I$	0
$u=\ \ 1.146500-0.537372I$ $a=-1.61922+0.09495I$ $b=\ \ 0.194322-1.356190I$	$1.82460-10.85730I$	0
$u=\ \ 1.143940+0.543522I$ $a=-2.29631+0.37953I$ $b=\ \ 0.634804+1.084940I$	$2.77562+8.52497I$	0
$u=\ \ 1.143940-0.543522I$ $a=-2.29631-0.37953I$ $b=\ \ 0.634804-1.084940I$	$2.77562-8.52497I$	0
$u=\ \ 1.163270+0.510441I$ $a=\ \ 0.29398-1.49105I$ $b=-0.734529+0.532186I$	$4.37382+7.36822I$	0
$u=\ \ 1.163270-0.510441I$ $a=\ \ 0.29398+1.49105I$ $b=-0.734529-0.532186I$	$4.37382-7.36822I$	0
$u=-1.156860+0.529818I$ $a=\ \ 2.77811+0.81836I$ $b=-0.647927+1.047350I$	$2.88783-12.66090I$	0
$u=-1.156860-0.529818I$ $a=\ \ 2.77811-0.81836I$ $b=-0.647927-1.047350I$	$2.88783+12.66090I$	0
$u=\ \ 1.244700+0.323559I$ $a=\ \ 2.00246+0.40466I$ $b=-0.927208-0.629923I$	$11.38690-3.94355I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.244700 - 0.323559I$ $a = 2.00246 - 0.40466I$ $b = -0.927208 + 0.629923I$	$11.38690 + 3.94355I$	0
$u = 0.023047 + 0.710804I$ $a = -1.05257 + 1.27195I$ $b = 0.654278 - 0.878099I$	$4.72416 - 4.54539I$	$11.00938 + 6.82756I$
$u = 0.023047 - 0.710804I$ $a = -1.05257 - 1.27195I$ $b = 0.654278 + 0.878099I$	$4.72416 + 4.54539I$	$11.00938 - 6.82756I$
$u = 1.188310 + 0.501202I$ $a = -0.936338 - 0.411125I$ $b = 0.010051 + 0.549485I$	$4.67098 + 6.41520I$	0
$u = 1.188310 - 0.501202I$ $a = -0.936338 + 0.411125I$ $b = 0.010051 - 0.549485I$	$4.67098 - 6.41520I$	0
$u = -1.263960 + 0.301245I$ $a = 1.44206 + 1.06783I$ $b = -0.739648 - 1.076720I$	$9.9965 + 10.0671I$	0
$u = -1.263960 - 0.301245I$ $a = 1.44206 - 1.06783I$ $b = -0.739648 + 1.076720I$	$9.9965 - 10.0671I$	0
$u = 0.658838 + 0.215652I$ $a = -2.41715 + 4.42010I$ $b = 0.499698 + 0.742419I$	$4.17541 + 1.35875I$	$8.54380 - 7.13093I$
$u = 0.658838 - 0.215652I$ $a = -2.41715 - 4.42010I$ $b = 0.499698 - 0.742419I$	$4.17541 - 1.35875I$	$8.54380 + 7.13093I$
$u = -0.085778 + 0.683615I$ $a = 0.570129 + 0.264834I$ $b = -1.105130 - 0.475850I$	$5.66691 + 2.02008I$	$15.5707 - 2.4843I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.085778-0.683615I$ $a=\ \ 0.570129-0.264834I$ $b=-1.105130+0.475850I$	$5.66691-2.02008I$	$15.5707+2.4843I$
$u=-1.196310+0.545973I$ $a=\ \ 0.80595+1.53573I$ $b=-0.978656-0.585263I$	$9.8239-12.9726I$	0
$u=-1.196310-0.545973I$ $a=\ \ 0.80595-1.53573I$ $b=-0.978656+0.585263I$	$9.8239+12.9726I$	0
$u=\ \ 1.304550+0.214866I$ $a=-1.51929+0.62867I$ $b=\ \ 0.701903-0.787117I$	$9.65087+0.28641I$	0
$u=\ \ 1.304550-0.214866I$ $a=-1.51929-0.62867I$ $b=\ \ 0.701903+0.787117I$	$9.65087-0.28641I$	0
$u=\ \ 1.200350+0.561477I$ $a=\ \ 2.63905-0.38998I$ $b=-0.741029-1.116420I$	$8.1649+19.2372I$	0
$u=\ \ 1.200350-0.561477I$ $a=\ \ 2.63905+0.38998I$ $b=-0.741029+1.116420I$	$8.1649-19.2372I$	0
$u=-0.258586+0.598774I$ $a=\ \ 0.12063-1.72443I$ $b=\ \ 0.058980-1.075560I$	$-3.48227+1.48199I$	$-0.50148-1.95380I$
$u=-0.258586-0.598774I$ $a=\ \ 0.12063+1.72443I$ $b=\ \ 0.058980+1.075560I$	$-3.48227-1.48199I$	$-0.50148+1.95380I$
$u=-1.322690+0.273102I$ $a=-1.71019+0.64607I$ $b=\ \ 0.679577-0.912322I$	$9.26823-5.59425I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.322690-0.273102I$ $a=-1.71019-0.64607I$ $b=\ \ 0.679577+0.912322I$	$9.26823+5.59425I$	0
$u=-0.040169+0.639825I$ $a=\ \ 1.211900-0.489008I$ $b=-0.80372-1.16410I$	$3.59821+4.78398I$	$9.75116-7.27352I$
$u=-0.040169-0.639825I$ $a=\ \ 1.211900+0.489008I$ $b=-0.80372+1.16410I$	$3.59821-4.78398I$	$9.75116+7.27352I$
$u=-0.639327$ $a=\ \ 0.726186$ $b=-0.366444$	0.799879	13.3670
$u=-0.000275+0.633985I$ $a=-2.82175-0.28828I$ $b=\ \ 0.654959-0.820280I$	$4.90145-0.54303I$	$11.38278+0.21652I$
$u=-0.000275-0.633985I$ $a=-2.82175+0.28828I$ $b=\ \ 0.654959+0.820280I$	$4.90145+0.54303I$	$11.38278-0.21652I$
$u=-1.228690+0.597989I$ $a=-2.18358-0.41182I$ $b=\ \ 0.647702-0.888812I$	$7.00616-9.37399I$	0
$u=-1.228690-0.597989I$ $a=-2.18358+0.41182I$ $b=\ \ 0.647702+0.888812I$	$7.00616+9.37399I$	0
$u=\ \ 1.245460+0.567445I$ $a=-0.564762+1.129130I$ $b=\ \ 0.653490-0.817424I$	$7.22938+4.31143I$	0
$u=\ \ 1.245460-0.567445I$ $a=-0.564762-1.129130I$ $b=\ \ 0.653490+0.817424I$	$7.22938-4.31143I$	0

II. $I_2^u =$
$\langle -5u^{25}+33u^{23}+\cdots+b+1,\ 10u^{25}+8u^{24}+\cdots+a-17,\ u^{26}-7u^{24}+\cdots-5u^2+1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -10u^{25} - 8u^{24} + \cdots + 15u + 17 \\ 5u^{25} - 33u^{23} + \cdots - 9u - 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 8u^{25} - 50u^{23} + \cdots + 39u^3 - 8u \\ -6u^{25} + 39u^{23} + \cdots - 38u^3 + 12u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 2u^{25} - 11u^{23} + \cdots + u^3 + 4u \\ -6u^{25} + 39u^{23} + \cdots - 38u^3 + 12u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -12u^{25} - 5u^{24} + \cdots + 22u + 6 \\ 2u^{25} + 4u^{24} + \cdots - 7u - 5 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^6 - u^4 + 1 \\ -u^8 + 2u^6 - 2u^4 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 4u^{25} - 25u^{23} + \cdots + 19u^3 - 3u \\ -6u^{25} + 39u^{23} + \cdots - 39u^3 + 13u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -10u^{25} - u^{24} + \cdots + 12u + 1 \\ 8u^{25} + u^{24} + \cdots - 17u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 7u^{24}-2u^{23}-42u^{22}+14u^{21}+119u^{20}-45u^{19}-182u^{18}+75u^{17}+140u^{16}-50u^{15}-17u^{14}-38u^{13}-22u^{12}+91u^{11}-44u^{10}-42u^9+57u^8-17u^7+18u^6+3u^5-40u^4+22u^3+7u^2-8u+15$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26} - 11u^{25} + \cdots - 11u + 1$
c_2	$u^{26} - u^{25} + \cdots - u + 1$
c_3	$u^{26} - 7u^{24} + \cdots - 5u^2 + 1$
c_4	$u^{26} + 9u^{24} + \cdots - 11u^2 + 1$
c_5	$u^{26} - 2u^{24} + \cdots - 2u^2 + 1$
c_6	$u^{26} + u^{25} + \cdots + u + 1$
c_7	$u^{26} - 2u^{25} + \cdots + 14u + 1$
c_8	$u^{26} + 14u^{25} + \cdots + 10u + 1$
c_9	$u^{26} - 7u^{24} + \cdots - 5u^2 + 1$
c_{10}	$u^{26} + 4u^{25} + \cdots + 4u + 1$
c_{11}	$u^{26} + 2u^{25} + \cdots - 14u + 1$
c_{12}	$u^{26} - 2u^{24} + \cdots - 2u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{26} + 19y^{25} + \cdots + 15y + 1$
c_2, c_6	$y^{26} + 11y^{25} + \cdots + 11y + 1$
c_3, c_9	$y^{26} - 14y^{25} + \cdots - 10y + 1$
c_4	$y^{26} + 18y^{25} + \cdots - 22y + 1$
c_5	$y^{26} - 4y^{25} + \cdots - 4y + 1$
c_7, c_{11}	$y^{26} - 30y^{25} + \cdots - 102y + 1$
c_8	$y^{26} - 2y^{25} + \cdots - 14y + 1$
c_{10}	$y^{26} - 4y^{24} + \cdots + 4y + 1$
c_{12}	$y^{26} - 4y^{25} + \cdots - 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.825135 + 0.508225I$ $a = 1.36943 - 1.52226I$ $b = -0.066172 - 0.982940I$	$-3.35311 + 2.06301I$	$1.39065 - 3.71553I$
$u = 0.825135 - 0.508225I$ $a = 1.36943 + 1.52226I$ $b = -0.066172 + 0.982940I$	$-3.35311 - 2.06301I$	$1.39065 + 3.71553I$
$u = -0.855624 + 0.353050I$ $a = 0.238376 + 1.300270I$ $b = -0.054290 - 0.756100I$	$-2.36698 - 1.52858I$	$-2.86650 + 4.86955I$
$u = -0.855624 - 0.353050I$ $a = 0.238376 - 1.300270I$ $b = -0.054290 + 0.756100I$	$-2.36698 + 1.52858I$	$-2.86650 - 4.86955I$
$u = -0.315764 + 0.828222I$ $a = 0.352002 + 0.799429I$ $b = -0.462284 + 0.673643I$	$2.60995 + 0.45997I$	$11.74182 + 2.43605I$
$u = -0.315764 - 0.828222I$ $a = 0.352002 - 0.799429I$ $b = -0.462284 - 0.673643I$	$2.60995 - 0.45997I$	$11.74182 - 2.43605I$
$u = -1.076730 + 0.364608I$ $a = -0.359851 - 0.867622I$ $b = 0.680612 + 1.135030I$	$4.75806 + 2.35961I$	$13.53237 - 1.98828I$
$u = -1.076730 - 0.364608I$ $a = -0.359851 + 0.867622I$ $b = 0.680612 - 1.135030I$	$4.75806 - 2.35961I$	$13.53237 + 1.98828I$
$u = 0.428688 + 0.729292I$ $a = 0.225847 + 0.591542I$ $b = -0.570493 + 1.069890I$	$1.14653 - 4.70780I$	$8.27206 + 4.54145I$
$u = 0.428688 - 0.729292I$ $a = 0.225847 - 0.591542I$ $b = -0.570493 - 1.069890I$	$1.14653 + 4.70780I$	$8.27206 - 4.54145I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.084031+0.840686I$ $a=\ \ 1.134640-0.009916I$ $b=-0.680697-0.815439I$	$3.83702+2.66410I$	$9.60930-2.37084I$
$u=-0.084031-0.840686I$ $a=\ \ 1.134640+0.009916I$ $b=-0.680697+0.815439I$	$3.83702-2.66410I$	$9.60930+2.37084I$
$u=\ \ 1.133610+0.353115I$ $a=-0.431201+0.314762I$ $b=\ \ 0.516870+0.563465I$	$6.77557+2.59635I$	$15.0550-3.8504I$
$u=\ \ 1.133610-0.353115I$ $a=-0.431201-0.314762I$ $b=\ \ 0.516870-0.563465I$	$6.77557-2.59635I$	$15.0550+3.8504I$
$u=\ \ 1.175950+0.404171I$ $a=-1.35687+1.72419I$ $b=\ \ 0.750394-0.713643I$	$7.67013+1.36274I$	$13.27996-0.65875I$
$u=\ \ 1.175950-0.404171I$ $a=-1.35687-1.72419I$ $b=\ \ 0.750394+0.713643I$	$7.67013-1.36274I$	$13.27996+0.65875I$
$u=\ \ 1.119170+0.556109I$ $a=-1.97264+0.46255I$ $b=\ \ 0.561985+1.146370I$	$3.28974+9.64848I$	$11.0008-9.5958I$
$u=\ \ 1.119170-0.556109I$ $a=-1.97264-0.46255I$ $b=\ \ 0.561985-1.146370I$	$3.28974-9.64848I$	$11.0008+9.5958I$
$u=-1.188490+0.462679I$ $a=-2.46262+0.22759I$ $b=\ \ 0.777932-0.858774I$	$7.23113-7.24661I$	$12.56748+6.12049I$
$u=-1.188490-0.462679I$ $a=-2.46262-0.22759I$ $b=\ \ 0.777932+0.858774I$	$7.23113+7.24661I$	$12.56748-6.12049I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.711494 + 0.046646I$ $a = -1.06824 - 2.79983I$ $b = -0.632044 + 0.590527I$	$4.50647 - 0.59346I$	$13.48668 + 0.11205I$
$u = 0.711494 - 0.046646I$ $a = -1.06824 + 2.79983I$ $b = -0.632044 - 0.590527I$	$4.50647 + 0.59346I$	$13.48668 - 0.11205I$
$u = -0.695999 + 0.145042I$ $a = 2.23149 + 0.76210I$ $b = -0.726435 + 1.055240I$	$3.00744 - 4.83361I$	$11.88974 + 3.52567I$
$u = -0.695999 - 0.145042I$ $a = 2.23149 - 0.76210I$ $b = -0.726435 - 1.055240I$	$3.00744 + 4.83361I$	$11.88974 - 3.52567I$
$u = -1.177410 + 0.545635I$ $a = 0.099635 - 0.360617I$ $b = 0.404622 + 0.620501I$	$5.30128 - 5.58909I$	$13.04059 + 2.30306I$
$u = -1.177410 - 0.545635I$ $a = 0.099635 + 0.360617I$ $b = 0.404622 - 0.620501I$	$5.30128 + 5.58909I$	$13.04059 - 2.30306I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{26}-11u^{25}+\cdots-11u+1)(u^{140}+52u^{139}+\cdots+337740u+6241)$
c_2	$(u^{26}-u^{25}+\cdots-u+1)(u^{140}+26u^{138}+\cdots-482u+79)$
c_3	$(u^{26}-7u^{24}+\cdots-5u^2+1)(u^{140}+u^{139}+\cdots-3u-11)$
c_4	$(u^{26}+9u^{24}+\cdots-11u^2+1)$ $\cdot(u^{140}+3u^{139}+\cdots-25984085u-6280527)$
c_5	$(u^{26}-2u^{24}+\cdots-2u^2+1)(u^{140}+u^{139}+\cdots+404117u-144771)$
c_6	$(u^{26}+u^{25}+\cdots+u+1)(u^{140}+26u^{138}+\cdots-482u+79)$
c_7	$(u^{26}-2u^{25}+\cdots+14u+1)(u^{140}+u^{139}+\cdots+45u-1)$
c_8	$(u^{26}+14u^{25}+\cdots+10u+1)(u^{140}-73u^{139}+\cdots-1461u+121)$
c_9	$(u^{26}-7u^{24}+\cdots-5u^2+1)(u^{140}+u^{139}+\cdots-3u-11)$
c_{10}	$(u^{26}+4u^{25}+\cdots+4u+1)(u^{140}-23u^{139}+\cdots-258635u+11863)$
c_{11}	$(u^{26}+2u^{25}+\cdots-14u+1)(u^{140}+u^{139}+\cdots+45u-1)$
c_{12}	$(u^{26}-2u^{24}+\cdots-2u^2+1)(u^{140}-3u^{139}+\cdots-3347197u+538957)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{26}+19y^{25}+\cdots+15y+1)$ $\cdot(y^{140}+84y^{139}+\cdots-2917146088y+38950081)$
c_2, c_6	$(y^{26}+11y^{25}+\cdots+11y+1)(y^{140}+52y^{139}+\cdots+337740y+6241)$
c_3, c_9	$(y^{26}-14y^{25}+\cdots-10y+1)(y^{140}-73y^{139}+\cdots-1461y+121)$
c_4	$(y^{26}+18y^{25}+\cdots-22y+1)$ $\cdot(y^{140}+91y^{139}+\cdots-1096216389691129y+39445019397729)$
c_5	$(y^{26}-4y^{25}+\cdots-4y+1)$ $\cdot(y^{140}-39y^{139}+\cdots-438067087459y+20958642441)$
c_7, c_{11}	$(y^{26}-30y^{25}+\cdots-102y+1)(y^{140}-117y^{139}+\cdots+107y+1)$
c_8	$(y^{26}-2y^{25}+\cdots-14y+1)(y^{140}-9y^{139}+\cdots-804005y+14641)$
c_{10}	$(y^{26}-4y^{24}+\cdots+4y+1)$ $\cdot(y^{140}+29y^{139}+\cdots-922560827y+140730769)$
c_{12}	$(y^{26}-4y^{25}+\cdots-4y+1)$ $\cdot(y^{140}-43y^{139}+\cdots-16999596958743y+290474647849)$