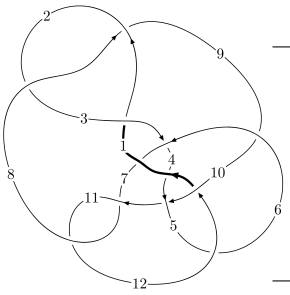
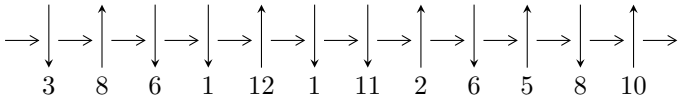
$12n_{0618}$ $(K12n_{0618})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 2.78413 \times 10^{157} u^{83} + 4.41545 \times 10^{158} u^{82} + \cdots + 6.49095 \times 10^{157} b + 2.25203 \times 10^{160}, \\ & 1.03935 \times 10^{160} u^{83} + 1.05276 \times 10^{160} u^{82} + \cdots + 3.18057 \times 10^{159} a + 1.00444 \times 10^{162}, \\ & u^{84} - u^{83} + \cdots - 111u + 49 \rangle \\ I_2^u = \langle & -5u^{30} - 2u^{29} + \cdots + b - 4,\ -3u^{30} + 2u^{29} + \cdots + a - 1,\ u^{31} + 8u^{29} + \cdots - 4u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 115 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. $\boldsymbol{I_1^u = \langle 2.78 \times 10^{157} u^{83} + 4.42 \times 10^{158} u^{82} + \cdots + 6.49 \times 10^{157} b + 2.25 \times 10^{160},\ 1.04 \times 10^{160} u^{83} + 1.05 \times 10^{160} u^{82} + \cdots + 3.18 \times 10^{159} a + 1.00 \times 10^{162},\ u^{84} - u^{83} + \cdots - 111u + 49 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -3.26781u^{83} - 3.30996u^{82} + \cdots + 487.028u - 315.806 \\ -0.428925u^{83} - 6.80246u^{82} + \cdots + 728.359u - 346.949 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.16716u^{83} - 1.19878u^{82} + \cdots + 112.821u - 87.6721 \\ 0.148106u^{83} - 0.591608u^{82} + \cdots + 30.7174u - 25.5279 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -2.43860u^{83} + 2.86253u^{82} + \cdots - 210.519u + 45.7678 \\ -0.688297u^{83} - 0.498914u^{82} + \cdots + 43.5911u - 43.6754 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2 + 1 \\ -u^4 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 5.77871u^{83} - 5.15966u^{82} + \cdots + 404.557u - 35.3569 \\ 4.36764u^{83} + 3.76892u^{82} + \cdots - 546.433u + 386.589 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.405428u^{83} - 1.49265u^{82} + \cdots + 134.373u - 79.1284 \\ 1.55554u^{83} - 2.95746u^{82} + \cdots + 251.078u - 103.417 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 5.77871u^{83} - 5.15966u^{82} + \cdots + 404.557u - 35.3569 \\ 9.19323u^{83} + 0.355636u^{82} + \cdots - 331.991u + 416.922 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -2.31774u^{83} - 3.78616u^{82} + \cdots + 504.281u - 305.207 \\ -0.356820u^{83} - 11.5652u^{82} + \cdots + 1284.14u - 608.102 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -5.61656u^{83} - 5.45770u^{82} + \cdots + 670.848u - 462.720$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{84} + 51u^{83} + \cdots + 45793u + 2401$
c_2, c_8	$u^{84} + u^{83} + \cdots + 111u + 49$
c_3	$u^{84} + 8u^{83} + \cdots - 11118u + 1361$
c_4	$u^{84} - 9u^{83} + \cdots - 217846165u + 89630771$
c_5	$u^{84} - 3u^{83} + \cdots - 1457u + 173$
c_6	$u^{84} - 41u^{82} + \cdots + 1075379u + 53761$
c_7, c_{11}	$u^{84} + u^{83} + \cdots + 14u + 1$
c_9	$u^{84} + 3u^{83} + \cdots + 5494435u + 643211$
c_{10}	$u^{84} + u^{83} + \cdots + 7748u + 16641$
c_{12}	$u^{84} + 4u^{83} + \cdots + 8u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{84} - 25y^{83} + \cdots + 451388937y + 5764801$
c_2, c_8	$y^{84} + 51y^{83} + \cdots + 45793y + 2401$
c_3	$y^{84} - 94y^{83} + \cdots + 3281550y + 1852321$
c_4	$y^{84} - 69y^{83} + \cdots - 93715556363356613y + 8033675110054441$
c_5	$y^{84} + 19y^{83} + \cdots - 9004789y + 29929$
c_6	$y^{84} - 82y^{83} + \cdots - 150205571231y + 2890245121$
c_7, c_{11}	$y^{84} - 63y^{83} + \cdots - 68y + 1$
c_9	$y^{84} - 47y^{83} + \cdots + 6919320761307y + 413720390521$
c_{10}	$y^{84} + 23y^{83} + \cdots + 12729508892y + 276922881$
c_{12}	$y^{84} + 6y^{83} + \cdots + 104y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.624339 + 0.776376I$ $a = -0.402447 + 0.827895I$ $b = 0.577955 + 0.944921I$	$2.98746 - 1.05041I$	0
$u = 0.624339 - 0.776376I$ $a = -0.402447 - 0.827895I$ $b = 0.577955 - 0.944921I$	$2.98746 + 1.05041I$	0
$u = -0.984757 + 0.028992I$ $a = -1.305870 - 0.531353I$ $b = -0.167274 + 0.135617I$	$-3.43240 - 4.70886I$	0
$u = -0.984757 - 0.028992I$ $a = -1.305870 + 0.531353I$ $b = -0.167274 - 0.135617I$	$-3.43240 + 4.70886I$	0
$u = 0.070205 + 0.974127I$ $a = 0.676828 - 0.681396I$ $b = -0.77441 - 1.73440I$	$-0.62510 + 3.04588I$	0
$u = 0.070205 - 0.974127I$ $a = 0.676828 + 0.681396I$ $b = -0.77441 + 1.73440I$	$-0.62510 - 3.04588I$	0
$u = 0.152041 + 1.034940I$ $a = -1.074540 - 0.801428I$ $b = 0.312399 - 0.793279I$	$-5.11490 + 2.83585I$	0
$u = 0.152041 - 1.034940I$ $a = -1.074540 + 0.801428I$ $b = 0.312399 + 0.793279I$	$-5.11490 - 2.83585I$	0
$u = 0.057583 + 0.947885I$ $a = -0.93954 + 2.00808I$ $b = -0.21235 + 2.27623I$	$1.035170 + 0.344979I$	0
$u = 0.057583 - 0.947885I$ $a = -0.93954 - 2.00808I$ $b = -0.21235 - 2.27623I$	$1.035170 - 0.344979I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.056600 + 0.170943I$ $a = -1.159070 + 0.193628I$ $b = -0.127728 + 0.182476I$	$-7.93661 - 2.97178I$	0
$u = 1.056600 - 0.170943I$ $a = -1.159070 - 0.193628I$ $b = -0.127728 - 0.182476I$	$-7.93661 + 2.97178I$	0
$u = 1.064760 + 0.140239I$ $a = -1.61256 - 0.31819I$ $b = -0.007697 + 0.448028I$	$-8.8561 - 11.2574I$	0
$u = 1.064760 - 0.140239I$ $a = -1.61256 + 0.31819I$ $b = -0.007697 - 0.448028I$	$-8.8561 + 11.2574I$	0
$u = 0.266496 + 0.883595I$ $a = -1.17684 - 2.39946I$ $b = -1.07953 - 2.21939I$	$-2.41310 + 6.12076I$	$0. - 7.70810I$
$u = 0.266496 - 0.883595I$ $a = -1.17684 + 2.39946I$ $b = -1.07953 + 2.21939I$	$-2.41310 - 6.12076I$	$0. + 7.70810I$
$u = -0.618147 + 0.892022I$ $a = 0.240538 - 0.019613I$ $b = -0.764502 - 0.092969I$	$-2.45152 + 0.05749I$	0
$u = -0.618147 - 0.892022I$ $a = 0.240538 + 0.019613I$ $b = -0.764502 + 0.092969I$	$-2.45152 - 0.05749I$	0
$u = 0.400936 + 1.008700I$ $a = 0.099014 - 1.279680I$ $b = -0.25180 - 2.23090I$	$-3.64938 + 5.14792I$	0
$u = 0.400936 - 1.008700I$ $a = 0.099014 + 1.279680I$ $b = -0.25180 + 2.23090I$	$-3.64938 - 5.14792I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.252494+0.875622I$ $a=\ 0.960910-0.430174I$ $b=\ 0.601016-0.096506I$	$-0.43979-1.58507I$	$0.+4.81532I$
$u=-0.252494-0.875622I$ $a=\ 0.960910+0.430174I$ $b=\ 0.601016+0.096506I$	$-0.43979+1.58507I$	$0.-4.81532I$
$u=-0.855464+0.674714I$ $a=\ 0.028517-0.741459I$ $b=\ 0.571683+0.220653I$	$-0.681532+0.899140I$	0
$u=-0.855464-0.674714I$ $a=\ 0.028517+0.741459I$ $b=\ 0.571683-0.220653I$	$-0.681532-0.899140I$	0
$u=-0.155261+1.079100I$ $a=-0.325368+0.475644I$ $b=-0.34063+1.77064I$	$-2.09724-2.85559I$	0
$u=-0.155261-1.079100I$ $a=-0.325368-0.475644I$ $b=-0.34063-1.77064I$	$-2.09724+2.85559I$	0
$u=\ 0.621232+0.914123I$ $a=-0.876179+0.130572I$ $b=-0.478088+0.940852I$	$2.55309+5.96851I$	0
$u=\ 0.621232-0.914123I$ $a=-0.876179-0.130572I$ $b=-0.478088-0.940852I$	$2.55309-5.96851I$	0
$u=-0.889487+0.087296I$ $a=\ 1.49853+0.36339I$ $b=\ 0.478615+0.423569I$	$-7.16342-1.69036I$	$-8.17295+4.28512I$
$u=-0.889487-0.087296I$ $a=\ 1.49853-0.36339I$ $b=\ 0.478615-0.423569I$	$-7.16342+1.69036I$	$-8.17295-4.28512I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.099728 + 0.867946I$ $a = 0.624002 - 0.596405I$ $b = -0.691779 - 0.310908I$	$-0.40378 - 2.13241I$	$-4.45473 + 4.83431I$
$u = 0.099728 - 0.867946I$ $a = 0.624002 + 0.596405I$ $b = -0.691779 + 0.310908I$	$-0.40378 + 2.13241I$	$-4.45473 - 4.83431I$
$u = -0.344209 + 0.802582I$ $a = 0.954239 + 0.172222I$ $b = 0.469133 + 0.722529I$	$-0.30736 - 1.52896I$	$-2.00000 + 5.06207I$
$u = -0.344209 - 0.802582I$ $a = 0.954239 - 0.172222I$ $b = 0.469133 - 0.722529I$	$-0.30736 + 1.52896I$	$-2.00000 - 5.06207I$
$u = 0.521057 + 0.696756I$ $a = 2.25645 + 0.55350I$ $b = 1.84405 - 0.56915I$	$-2.02874 - 2.80140I$	$-3.16614 + 3.38466I$
$u = 0.521057 - 0.696756I$ $a = 2.25645 - 0.55350I$ $b = 1.84405 + 0.56915I$	$-2.02874 + 2.80140I$	$-3.16614 - 3.38466I$
$u = -1.129490 + 0.150367I$ $a = 1.80812 - 0.45022I$ $b = -0.505344 + 0.948878I$	$-6.41608 + 0.87005I$	0
$u = -1.129490 - 0.150367I$ $a = 1.80812 + 0.45022I$ $b = -0.505344 - 0.948878I$	$-6.41608 - 0.87005I$	0
$u = 0.317066 + 1.096700I$ $a = -0.80464 - 1.22601I$ $b = -0.73642 - 2.85554I$	$-4.04887 + 7.70346I$	0
$u = 0.317066 - 1.096700I$ $a = -0.80464 + 1.22601I$ $b = -0.73642 + 2.85554I$	$-4.04887 - 7.70346I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.231757+1.181000I$ $a=-0.730973-1.200560I$ $b=\ 0.07606-1.88946I$	$-5.80217-6.52422I$	0
$u=-0.231757-1.181000I$ $a=-0.730973+1.200560I$ $b=\ 0.07606+1.88946I$	$-5.80217+6.52422I$	0
$u=\ 0.793678+0.911216I$ $a=-0.083385+0.248184I$ $b=-0.386082+0.069923I$	$5.63036+2.99540I$	0
$u=\ 0.793678-0.911216I$ $a=-0.083385-0.248184I$ $b=-0.386082-0.069923I$	$5.63036-2.99540I$	0
$u=\ 0.279077+0.740387I$ $a=\ 1.271060-0.044685I$ $b=\ 1.87377+0.06065I$	$-4.18434-0.93777I$	$-10.44340-1.29773I$
$u=\ 0.279077-0.740387I$ $a=\ 1.271060+0.044685I$ $b=\ 1.87377-0.06065I$	$-4.18434+0.93777I$	$-10.44340+1.29773I$
$u=\ 0.769600+0.104576I$ $a=\ 1.88696+0.52531I$ $b=\ 0.429347-0.248742I$	$-2.63396-1.15147I$	$-2.64253-2.45768I$
$u=\ 0.769600-0.104576I$ $a=\ 1.88696-0.52531I$ $b=\ 0.429347+0.248742I$	$-2.63396+1.15147I$	$-2.64253+2.45768I$
$u=\ 0.416078+1.182460I$ $a=\ 0.208724-1.368180I$ $b=\ 0.86755-2.06309I$	$-6.34523+2.87444I$	0
$u=\ 0.416078-1.182460I$ $a=\ 0.208724+1.368180I$ $b=\ 0.86755+2.06309I$	$-6.34523-2.87444I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.498312+0.543146I$ $a=\ \ 0.125771-0.693418I$ $b=-0.062607+1.020890I$	$-1.56776-4.58591I$	$-3.52776+6.17506I$
$u=-0.498312-0.543146I$ $a=\ \ 0.125771+0.693418I$ $b=-0.062607-1.020890I$	$-1.56776+4.58591I$	$-3.52776-6.17506I$
$u=-0.116360+1.267120I$ $a=\ \ 0.225728-0.913470I$ $b=\ \ 1.07436-2.04992I$	$-7.20975-0.95387I$	0
$u=-0.116360-1.267120I$ $a=\ \ 0.225728+0.913470I$ $b=\ \ 1.07436+2.04992I$	$-7.20975+0.95387I$	0
$u=-0.802349+1.014890I$ $a=-0.394246+0.208156I$ $b=-1.092340-0.494974I$	$-1.65167-7.02055I$	0
$u=-0.802349-1.014890I$ $a=-0.394246-0.208156I$ $b=-1.092340+0.494974I$	$-1.65167+7.02055I$	0
$u=\ \ 0.489018+1.198890I$ $a=-0.10819-1.72417I$ $b=-0.36299-2.86624I$	$-5.84133+5.81556I$	0
$u=\ \ 0.489018-1.198890I$ $a=-0.10819+1.72417I$ $b=-0.36299+2.86624I$	$-5.84133-5.81556I$	0
$u=-0.433364+1.274080I$ $a=-0.425292+1.337080I$ $b=-0.12528+2.11785I$	$-11.30970-6.31124I$	0
$u=-0.433364-1.274080I$ $a=-0.425292-1.337080I$ $b=-0.12528-2.11785I$	$-11.30970+6.31124I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.524149+1.250560I$ $a=\ 0.39005+1.42843I$ $b=\ 0.39342+2.16528I$	$-10.64430-3.42952I$	0
$u=-0.524149-1.250560I$ $a=\ 0.39005-1.42843I$ $b=\ 0.39342-2.16528I$	$-10.64430+3.42952I$	0
$u=\ 0.519821+0.374551I$ $a=\ 1.88837+0.04418I$ $b=\ 0.179300-0.260934I$	$-1.87796-1.43458I$	$-1.46731-0.52130I$
$u=\ 0.519821-0.374551I$ $a=\ 1.88837-0.04418I$ $b=\ 0.179300+0.260934I$	$-1.87796+1.43458I$	$-1.46731+0.52130I$
$u=-0.486780+1.316210I$ $a=\ 0.140717-1.395610I$ $b=\ 0.40034-2.51194I$	$-7.59451-9.91142I$	0
$u=-0.486780-1.316210I$ $a=\ 0.140717+1.395610I$ $b=\ 0.40034+2.51194I$	$-7.59451+9.91142I$	0
$u=-0.51542+1.32110I$ $a=-0.251208-0.923395I$ $b=-0.74651-1.69422I$	$-7.40945-0.67992I$	0
$u=-0.51542-1.32110I$ $a=-0.251208+0.923395I$ $b=-0.74651+1.69422I$	$-7.40945+0.67992I$	0
$u=\ 0.58449+1.30757I$ $a=-0.14518+1.53271I$ $b=\ 0.23231+2.91128I$	$-12.4841+17.1391I$	0
$u=\ 0.58449-1.30757I$ $a=-0.14518-1.53271I$ $b=\ 0.23231-2.91128I$	$-12.4841-17.1391I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.59528 + 1.30604I$ $a = -0.194602 + 1.083090I$ $b = -0.22396 + 1.95074I$	$-11.4630 + 8.9032I$	0
$u = 0.59528 - 1.30604I$ $a = -0.194602 - 1.083090I$ $b = -0.22396 - 1.95074I$	$-11.4630 - 8.9032I$	0
$u = 0.38684 + 1.38887I$ $a = 0.162602 + 1.055620I$ $b = -0.00363 + 2.00199I$	$-13.05160 + 2.06430I$	0
$u = 0.38684 - 1.38887I$ $a = 0.162602 - 1.055620I$ $b = -0.00363 - 2.00199I$	$-13.05160 - 2.06430I$	0
$u = 0.40196 + 1.41075I$ $a = -0.265295 + 0.937006I$ $b = -1.15968 + 2.03447I$	$-13.9236 - 6.0378I$	0
$u = 0.40196 - 1.41075I$ $a = -0.265295 - 0.937006I$ $b = -1.15968 - 2.03447I$	$-13.9236 + 6.0378I$	0
$u = -0.39976 + 1.41147I$ $a = 0.524178 + 0.697717I$ $b = 2.23400 + 1.98841I$	$-11.64390 - 4.47794I$	0
$u = -0.39976 - 1.41147I$ $a = 0.524178 - 0.697717I$ $b = 2.23400 - 1.98841I$	$-11.64390 + 4.47794I$	0
$u = -0.59023 + 1.35145I$ $a = 0.29506 + 1.50766I$ $b = -0.38369 + 3.36097I$	$-10.23170 - 7.02272I$	0
$u = -0.59023 - 1.35145I$ $a = 0.29506 - 1.50766I$ $b = -0.38369 - 3.36097I$	$-10.23170 + 7.02272I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.383340+0.185448I$ $a=\ \ 0.37154+1.61335I$ $b=-0.338406+0.477813I$	$1.21335-1.11387I$	$4.27095+2.48493I$
$u=-0.383340-0.185448I$ $a=\ \ 0.37154-1.61335I$ $b=-0.338406-0.477813I$	$1.21335+1.11387I$	$4.27095-2.48493I$
$u=\ \ 0.223249+0.317821I$ $a=\ \ 3.38242-0.25747I$ $b=\ \ 0.407420+0.951931I$	$-1.76322-4.93035I$	$-2.22330+7.33828I$
$u=\ \ 0.223249-0.317821I$ $a=\ \ 3.38242+0.25747I$ $b=\ \ 0.407420-0.951931I$	$-1.76322+4.93035I$	$-2.22330-7.33828I$

II. $I_2^u =$
$\langle -5u^{30}-2u^{29}+\cdots+b-4,\ -3u^{30}+2u^{29}+\cdots+a-1,\ u^{31}+8u^{29}+\cdots-4u+1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}3u^{30}-2u^{29}+\cdots+4u+1\\5u^{30}+2u^{29}+\cdots-10u+4\end{pmatrix}$$
$$a_4 = \begin{pmatrix}2u^{30}+3u^{29}+\cdots-10u+4\\6u^{30}-6u^{29}+\cdots+43u-7\end{pmatrix}$$
$$a_9 = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}4u^{30}+u^{29}+\cdots-8u+3\\-5u^{30}+3u^{29}+\cdots+7u-3\end{pmatrix}$$
$$a_1 = \begin{pmatrix}u^2+1\\-u^4\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}2u^{30}+6u^{29}+\cdots-20u+5\\-8u^{30}+u^{29}+\cdots+16u-6\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-u^{30}+u^{29}+\cdots+4u-1\\6u^{30}-9u^{29}+\cdots+55u-9\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}2u^{30}+6u^{29}+\cdots-20u+5\\-7u^{30}+3u^{29}+\cdots+27u^2-6u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}3u^{30}-2u^{29}+\cdots-27u^2+4u\\4u^{30}+2u^{29}+\cdots-11u+4\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= -3u^{29}-14u^{28}-28u^{27}-96u^{26}-127u^{25}-356u^{24}-374u^{23}-870u^{22}-790u^{21}-1557u^{20}-1273u^{19}-2066u^{18}-1619u^{17}-2021u^{16}-1648u^{15}-1324u^{14}-1375u^{13}-374u^{12}-963u^{11}+280u^{10}-574u^9+404u^8-295u^7+198u^6-109u^5+12u^4-2u^3-33u^2+19u-14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{31} - 16u^{30} + \cdots - 8u + 1$
c_2	$u^{31} + 8u^{29} + \cdots - 4u + 1$
c_3	$u^{31} - 17u^{30} + \cdots + 543u - 71$
c_4	$u^{31} + 4u^{30} + \cdots + 292u + 149$
c_5	$u^{31} - 2u^{29} + \cdots + 2u + 1$
c_6	$u^{31} - u^{30} + \cdots + 4u + 1$
c_7	$u^{31} - 7u^{29} + \cdots - u - 1$
c_8	$u^{31} + 8u^{29} + \cdots - 4u - 1$
c_9	$u^{31} - 3u^{29} + \cdots - 2u - 1$
c_{10}	$u^{31} - 2u^{29} + \cdots + u - 1$
c_{11}	$u^{31} - 7u^{29} + \cdots - u + 1$
c_{12}	$u^{31} - 7u^{30} + \cdots + 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{31} + 8y^{30} + \cdots - 20y - 1$
c_2, c_8	$y^{31} + 16y^{30} + \cdots - 8y - 1$
c_3	$y^{31} - 25y^{30} + \cdots - 46377y - 5041$
c_4	$y^{31} - 16y^{30} + \cdots - 83702y - 22201$
c_5	$y^{31} - 4y^{30} + \cdots - 30y - 1$
c_6	$y^{31} - y^{30} + \cdots - 20y - 1$
c_7, c_{11}	$y^{31} - 14y^{30} + \cdots + 25y - 1$
c_9	$y^{31} - 6y^{30} + \cdots - 18y - 1$
c_{10}	$y^{31} - 4y^{30} + \cdots - 23y - 1$
c_{12}	$y^{31} - 5y^{30} + \cdots + 13y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.265098 + 0.967882I$ $a = -0.28743 - 1.89453I$ $b = -0.49506 - 2.92170I$	$-3.29472 + 6.43312I$	$-7.05697 - 9.59211I$
$u = \quad 0.265098 - 0.967882I$ $a = -0.28743 + 1.89453I$ $b = -0.49506 + 2.92170I$	$-3.29472 - 6.43312I$	$-7.05697 + 9.59211I$
$u = -0.313962 + 0.920721I$ $a = \quad 0.511198 - 0.129308I$ $b = -0.893757 - 0.210031I$	$-0.217015 + 1.174960I$	$-1.83905 + 2.61792I$
$u = -0.313962 - 0.920721I$ $a = \quad 0.511198 + 0.129308I$ $b = -0.893757 + 0.210031I$	$-0.217015 - 1.174960I$	$-1.83905 - 2.61792I$
$u = -0.669519 + 0.789204I$ $a = -0.518703 - 1.126310I$ $b = \quad 0.563405 - 1.097350I$	$2.42460 + 0.73064I$	$-4.84089 + 2.23011I$
$u = -0.669519 - 0.789204I$ $a = -0.518703 + 1.126310I$ $b = \quad 0.563405 + 1.097350I$	$2.42460 - 0.73064I$	$-4.84089 - 2.23011I$
$u = -0.189679 + 0.927863I$ $a = \quad 1.04809 + 1.87907I$ $b = \quad 0.30657 + 2.16466I$	$1.18607 - 0.83629I$	$1.46354 + 9.46145I$
$u = -0.189679 - 0.927863I$ $a = \quad 1.04809 - 1.87907I$ $b = \quad 0.30657 - 2.16466I$	$1.18607 + 0.83629I$	$1.46354 - 9.46145I$
$u = -1.05657$ $a = \quad 1.66463$ $b = -0.229458$	-6.35797	-6.30910
$u = \quad 0.718686 + 0.844084I$ $a = \quad 0.780944 + 0.285872I$ $b = \quad 1.257230 - 0.128860I$	$-0.09569 - 2.34713I$	$-1.50519 + 3.38527I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.718686 - 0.844084I$ $a = 0.780944 - 0.285872I$ $b = 1.257230 + 0.128860I$	$-0.09569 + 2.34713I$	$-1.50519 - 3.38527I$
$u = -0.267932 + 0.847092I$ $a = 0.370904 - 0.228935I$ $b = -0.797009 + 1.085070I$	$0.10252 - 3.72692I$	$1.27618 + 7.56947I$
$u = -0.267932 - 0.847092I$ $a = 0.370904 + 0.228935I$ $b = -0.797009 - 1.085070I$	$0.10252 + 3.72692I$	$1.27618 - 7.56947I$
$u = 0.681648 + 0.893777I$ $a = -0.607976 - 0.954870I$ $b = -0.786717 - 0.392164I$	$-0.25933 + 7.71253I$	$-0.77608 - 8.53261I$
$u = 0.681648 - 0.893777I$ $a = -0.607976 + 0.954870I$ $b = -0.786717 + 0.392164I$	$-0.25933 - 7.71253I$	$-0.77608 + 8.53261I$
$u = 0.275652 + 0.825616I$ $a = 2.09397 - 0.85986I$ $b = 1.293070 - 0.245003I$	$-2.78013 - 4.08092I$	$-7.65589 + 4.54600I$
$u = 0.275652 - 0.825616I$ $a = 2.09397 + 0.85986I$ $b = 1.293070 + 0.245003I$	$-2.78013 + 4.08092I$	$-7.65589 - 4.54600I$
$u = -0.641006 + 0.933992I$ $a = -1.046320 - 0.393466I$ $b = -0.70177 - 1.23874I$	$1.96290 - 5.81995I$	$-7.31112 + 5.01137I$
$u = -0.641006 - 0.933992I$ $a = -1.046320 + 0.393466I$ $b = -0.70177 + 1.23874I$	$1.96290 + 5.81995I$	$-7.31112 - 5.01137I$
$u = -0.811801 + 0.910841I$ $a = 0.143518 + 0.320639I$ $b = 0.347483 + 0.203658I$	$5.52560 - 3.04659I$	$-31.3952 + 17.9372I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.811801-0.910841I$ $a=\ 0.143518-0.320639I$ $b=\ 0.347483-0.203658I$	$5.52560+3.04659I$	$-31.3952-17.9372I$
$u=\ 0.481778+1.173210I$ $a=\ 0.408417-1.203180I$ $b=\ 0.97414-1.75605I$	$-6.07463+2.05407I$	$-6.49054+0.97231I$
$u=\ 0.481778-1.173210I$ $a=\ 0.408417+1.203180I$ $b=\ 0.97414+1.75605I$	$-6.07463-2.05407I$	$-6.49054-0.97231I$
$u=\ 0.470271+1.181590I$ $a=-0.24613-1.80567I$ $b=-0.60419-2.99873I$	$-6.11418+6.34194I$	$-11.1554-10.3331I$
$u=\ 0.470271-1.181590I$ $a=-0.24613+1.80567I$ $b=-0.60419+2.99873I$	$-6.11418-6.34194I$	$-11.1554+10.3331I$
$u=\ 0.589602+0.209264I$ $a=\ 2.48299+1.02644I$ $b=\ 0.787669-0.377602I$	$-3.13512-1.99092I$	$-7.94938+3.76098I$
$u=\ 0.589602-0.209264I$ $a=\ 2.48299-1.02644I$ $b=\ 0.787669+0.377602I$	$-3.13512+1.99092I$	$-7.94938-3.76098I$
$u=-0.466463+1.331720I$ $a=\ 0.099439+1.155400I$ $b=\ 0.56374+2.28352I$	$-10.68690-5.35793I$	$-7.27535+3.05329I$
$u=-0.466463-1.331720I$ $a=\ 0.099439-1.155400I$ $b=\ 0.56374-2.28352I$	$-10.68690+5.35793I$	$-7.27535-3.05329I$
$u=\ 0.405909+0.350244I$ $a=\ 0.43477-1.80577I$ $b=\ 0.799929-0.326264I$	$-3.32889+2.11246I$	$-5.83416-3.67200I$

	Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.405909-0.350244I$		
$a=$	$0.43477+1.80577I$	$-3.32889-2.11246I$	$-5.83416+3.67200I$
$b=$	$0.799929+0.326264I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{31}-16u^{30}+\cdots-8u+1)(u^{84}+51u^{83}+\cdots+45793u+2401)$
c_2	$(u^{31}+8u^{29}+\cdots-4u+1)(u^{84}+u^{83}+\cdots+111u+49)$
c_3	$(u^{31}-17u^{30}+\cdots+543u-71)(u^{84}+8u^{83}+\cdots-11118u+1361)$
c_4	$(u^{31}+4u^{30}+\cdots+292u+149)$ $\cdot(u^{84}-9u^{83}+\cdots-217846165u+89630771)$
c_5	$(u^{31}-2u^{29}+\cdots+2u+1)(u^{84}-3u^{83}+\cdots-1457u+173)$
c_6	$(u^{31}-u^{30}+\cdots+4u+1)(u^{84}-41u^{82}+\cdots+1075379u+53761)$
c_7	$(u^{31}-7u^{29}+\cdots-u-1)(u^{84}+u^{83}+\cdots+14u+1)$
c_8	$(u^{31}+8u^{29}+\cdots-4u-1)(u^{84}+u^{83}+\cdots+111u+49)$
c_9	$(u^{31}-3u^{29}+\cdots-2u-1)(u^{84}+3u^{83}+\cdots+5494435u+643211)$
c_{10}	$(u^{31}-2u^{29}+\cdots+u-1)(u^{84}+u^{83}+\cdots+7748u+16641)$
c_{11}	$(u^{31}-7u^{29}+\cdots-u+1)(u^{84}+u^{83}+\cdots+14u+1)$
c_{12}	$(u^{31}-7u^{30}+\cdots+5u+1)(u^{84}+4u^{83}+\cdots+8u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{31}+8y^{30}+\cdots-20y-1)$ $\cdot(y^{84}-25y^{83}+\cdots+451388937y+5764801)$
c_2, c_8	$(y^{31}+16y^{30}+\cdots-8y-1)(y^{84}+51y^{83}+\cdots+45793y+2401)$
c_3	$(y^{31}-25y^{30}+\cdots-46377y-5041)$ $\cdot(y^{84}-94y^{83}+\cdots+3281550y+1852321)$
c_4	$(y^{31}-16y^{30}+\cdots-83702y-22201)$ $\cdot(y^{84}-69y^{83}+\cdots-93715556363356613y+8033675110054441)$
c_5	$(y^{31}-4y^{30}+\cdots-30y-1)(y^{84}+19y^{83}+\cdots-9004789y+29929)$
c_6	$(y^{31}-y^{30}+\cdots-20y-1)$ $\cdot(y^{84}-82y^{83}+\cdots-150205571231y+2890245121)$
c_7, c_{11}	$(y^{31}-14y^{30}+\cdots+25y-1)(y^{84}-63y^{83}+\cdots-68y+1)$
c_9	$(y^{31}-6y^{30}+\cdots-18y-1)$ $\cdot(y^{84}-47y^{83}+\cdots+6919320761307y+413720390521)$
c_{10}	$(y^{31}-4y^{30}+\cdots-23y-1)$ $\cdot(y^{84}+23y^{83}+\cdots+12729508892y+276922881)$
c_{12}	$(y^{31}-5y^{30}+\cdots+13y-1)(y^{84}+6y^{83}+\cdots+104y+1)$