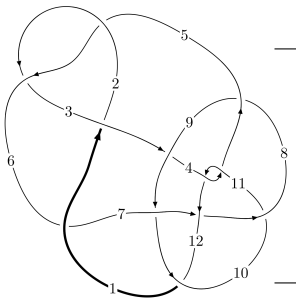
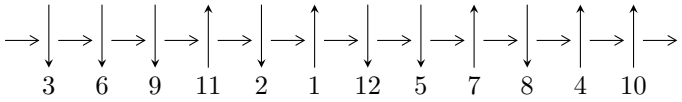
$12a_{0402}$ $(K12a_{0402})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 5.48450 \times 10^{766} u^{168} - 9.61153 \times 10^{766} u^{167} + \cdots + 2.29982 \times 10^{767} b - 7.81469 \times 10^{768}, \\ & - 8.67596 \times 10^{770} u^{168} + 1.10504 \times 10^{771} u^{167} + \cdots + 1.37506 \times 10^{771} a + 8.82996 \times 10^{773}, \\ & u^{169} - u^{168} + \cdots + 2025u - 1993 \rangle \\ I_2^u = \langle & u^{32} + 2u^{31} + \cdots + b + 1, \\ & 602206367062 u^{33} + 1149094827776 u^{32} + \cdots + 540898481 a - 160702223985, \\ & u^{34} + 2u^{33} + \cdots - u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 203 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. $\boldsymbol{I_1^u = \langle 5.48 \times 10^{766} u^{168} - 9.61 \times 10^{766} u^{167} + \cdots + 2.30 \times 10^{767} b - 7.81 \times 10^{768},\ -8.68 \times 10^{770} u^{168} + 1.11 \times 10^{771} u^{167} + \cdots + 1.38 \times 10^{771} a + 8.83 \times 10^{773},\ u^{169} - u^{168} + \cdots + 2025u - 1993 \rangle}$

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix} 0.630952u^{168} - 0.803634u^{167} + \cdots - 1654.92u - 642.151 \\ -0.238476u^{168} + 0.417926u^{167} + \cdots + 568.575u + 33.9796 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.110031u^{168} + 0.264849u^{167} + \cdots + 11.6708u - 225.567 \\ 0.342928u^{168} - 0.256644u^{167} + \cdots + 187.277u - 682.837 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.392476u^{168} - 0.385708u^{167} + \cdots - 1086.35u - 608.171 \\ -0.238476u^{168} + 0.417926u^{167} + \cdots + 568.575u + 33.9796 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.637299u^{168} - 0.871269u^{167} + \cdots - 2175.84u - 504.279 \\ -0.0306003u^{168} + 0.260739u^{167} + \cdots + 454.505u - 341.920 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.310904u^{168} + 0.507805u^{167} + \cdots + 2173.69u - 729.178 \\ 0.128441u^{168} - 0.169595u^{167} + \cdots + 24.3434u + 10.2808 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.232887u^{168} + 0.0525653u^{167} + \cdots + 1074.67u - 739.430 \\ 0.110673u^{168} + 0.0143566u^{167} + \cdots + 489.045u - 735.424 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.70887u^{168} - 1.86510u^{167} + \cdots - 3299.07u - 490.037 \\ -0.581369u^{168} + 0.588853u^{167} + \cdots - 99.9868u + 750.915 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.625299u^{168} + 0.588598u^{167} + \cdots + 1723.13u - 110.055 \\ -0.213795u^{168} + 0.698520u^{167} + \cdots + 2369.17u - 869.343 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.79580u^{168} + 4.21624u^{167} + \cdots + 11034.1u - 3131.15$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{169} + 88u^{168} + \cdots + 10u + 1$
c_2, c_5	$u^{169} + 4u^{168} + \cdots + 2u + 1$
c_3	$u^{169} - u^{168} + \cdots - 1643667u + 823471$
c_4, c_{11}	$u^{169} + u^{168} + \cdots + 2025u + 1993$
c_6	$u^{169} + 12u^{168} + \cdots + 763606u + 385669$
c_7	$u^{169} + 2u^{168} + \cdots - 64u + 1$
c_8	$u^{169} + u^{168} + \cdots - 423737259u + 188817887$
c_9	$u^{169} - 3u^{168} + \cdots + 8406u + 459$
c_{10}	$u^{169} + 17u^{168} + \cdots + 65005u + 5071$
c_{12}	$u^{169} + 17u^{168} + \cdots - 1043253u - 63901$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{169} - 4y^{168} + \cdots + 126y - 1$
c_2, c_5	$y^{169} - 88y^{168} + \cdots + 10y - 1$
c_3	$y^{169} - 31y^{168} + \cdots + 8943525035817y - 678104487841$
c_4, c_{11}	$y^{169} + 101y^{168} + \cdots - 158878943y - 3972049$
c_6	$y^{169} + 96y^{168} + \cdots + 1430818496714y - 148740577561$
c_7	$y^{169} + 14y^{168} + \cdots + 122y - 1$
c_8	$y^{169} - 53y^{168} + \cdots + 1817884010224232283y - 356521944511447 69$
c_9	$y^{169} + 17y^{168} + \cdots - 3881682y - 210681$
c_{10}	$y^{169} - 41y^{168} + \cdots - 5001642995y - 25715041$
c_{12}	$y^{169} + 33y^{168} + \cdots - 90651327247y - 4083337801$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.288257 + 0.954367I$ $a = -0.352091 + 1.180490I$ $b = -0.12401 - 1.96027I$	$-0.46332 + 6.07821I$	0
$u = 0.288257 - 0.954367I$ $a = -0.352091 - 1.180490I$ $b = -0.12401 + 1.96027I$	$-0.46332 - 6.07821I$	0
$u = -0.323766 + 0.942439I$ $a = 0.61498 + 1.31635I$ $b = -0.02847 - 2.10407I$	$-2.89006 - 10.88830I$	0
$u = -0.323766 - 0.942439I$ $a = 0.61498 - 1.31635I$ $b = -0.02847 + 2.10407I$	$-2.89006 + 10.88830I$	0
$u = -0.238077 + 0.975381I$ $a = 2.92191 + 0.45105I$ $b = -0.654577 - 0.683921I$	$-3.63976 - 10.39140I$	0
$u = -0.238077 - 0.975381I$ $a = 2.92191 - 0.45105I$ $b = -0.654577 + 0.683921I$	$-3.63976 + 10.39140I$	0
$u = 0.240802 + 0.957798I$ $a = -2.74770 + 0.34558I$ $b = 0.640654 - 0.597955I$	$-0.74218 + 5.70982I$	0
$u = 0.240802 - 0.957798I$ $a = -2.74770 - 0.34558I$ $b = 0.640654 + 0.597955I$	$-0.74218 - 5.70982I$	0
$u = -0.212908 + 0.956625I$ $a = 2.89414 + 0.08756I$ $b = -0.768487 - 0.579991I$	$-4.59817 - 2.04110I$	0
$u = -0.212908 - 0.956625I$ $a = 2.89414 - 0.08756I$ $b = -0.768487 + 0.579991I$	$-4.59817 + 2.04110I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.310270 + 0.926825I$ $a = -2.08934 + 0.50705I$ $b = 0.375083 - 0.425428I$	$1.63879 + 5.18646I$	0
$u = 0.310270 - 0.926825I$ $a = -2.08934 - 0.50705I$ $b = 0.375083 + 0.425428I$	$1.63879 - 5.18646I$	0
$u = 0.500551 + 0.898128I$ $a = -0.390318 - 0.899039I$ $b = 0.450899 + 0.950589I$	$-2.45808 + 5.69634I$	0
$u = 0.500551 - 0.898128I$ $a = -0.390318 + 0.899039I$ $b = 0.450899 - 0.950589I$	$-2.45808 - 5.69634I$	0
$u = -0.373115 + 0.897009I$ $a = 1.60172 + 0.47062I$ $b = -0.204842 - 0.240003I$	$1.58912 - 1.10486I$	0
$u = -0.373115 - 0.897009I$ $a = 1.60172 - 0.47062I$ $b = -0.204842 + 0.240003I$	$1.58912 + 1.10486I$	0
$u = -0.031392 + 1.030530I$ $a = -1.59884 - 0.85844I$ $b = 1.064940 - 0.402531I$	$-4.15385 + 0.01671I$	0
$u = -0.031392 - 1.030530I$ $a = -1.59884 + 0.85844I$ $b = 1.064940 + 0.402531I$	$-4.15385 - 0.01671I$	0
$u = -0.964297 + 0.059526I$ $a = 0.411222 - 0.034592I$ $b = -0.396885 - 0.522705I$	$2.40429 - 1.00428I$	0
$u = -0.964297 - 0.059526I$ $a = 0.411222 + 0.034592I$ $b = -0.396885 + 0.522705I$	$2.40429 + 1.00428I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.004298+1.035560I$ $a=\ \ 1.77339-1.11705I$ $b=-1.099500-0.305216I$	$-7.48849-4.46493I$	0
$u=-0.004298-1.035560I$ $a=\ \ 1.77339+1.11705I$ $b=-1.099500+0.305216I$	$-7.48849+4.46493I$	0
$u=\ \ 0.192685+0.943332I$ $a=\ \ 0.588790+1.224620I$ $b=-0.77647-1.86103I$	$1.05548+4.20578I$	0
$u=\ \ 0.192685-0.943332I$ $a=\ \ 0.588790-1.224620I$ $b=-0.77647+1.86103I$	$1.05548-4.20578I$	0
$u=-0.149336+0.949456I$ $a=-1.24062+1.10289I$ $b=\ \ 1.23681-1.69173I$	$0.207746+0.684749I$	0
$u=-0.149336-0.949456I$ $a=-1.24062-1.10289I$ $b=\ \ 1.23681+1.69173I$	$0.207746-0.684749I$	0
$u=\ \ 0.679865+0.678476I$ $a=-1.15989-1.11411I$ $b=\ \ 1.261950+0.450739I$	$-2.48283-1.17409I$	0
$u=\ \ 0.679865-0.678476I$ $a=-1.15989+1.11411I$ $b=\ \ 1.261950-0.450739I$	$-2.48283+1.17409I$	0
$u=\ \ 0.946075+0.150596I$ $a=-0.566398-0.039069I$ $b=\ \ 0.515662-0.700706I$	$0.27922+5.69278I$	0
$u=\ \ 0.946075-0.150596I$ $a=-0.566398+0.039069I$ $b=\ \ 0.515662+0.700706I$	$0.27922-5.69278I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.331982 + 1.003480I$ $a = -0.005970 - 0.505256I$ $b = 0.043370 + 0.870054I$	$-2.60777 - 1.34412I$	0
$u = 0.331982 - 1.003480I$ $a = -0.005970 + 0.505256I$ $b = 0.043370 - 0.870054I$	$-2.60777 + 1.34412I$	0
$u = 0.715139 + 0.605751I$ $a = -1.24905 - 1.00956I$ $b = 1.344770 + 0.195916I$	$-2.29663 + 6.37428I$	0
$u = 0.715139 - 0.605751I$ $a = -1.24905 + 1.00956I$ $b = 1.344770 - 0.195916I$	$-2.29663 - 6.37428I$	0
$u = 0.037080 + 1.071750I$ $a = 1.28445 - 1.06594I$ $b = -0.921191 - 0.339432I$	$-7.75531 + 4.15723I$	0
$u = 0.037080 - 1.071750I$ $a = 1.28445 + 1.06594I$ $b = -0.921191 + 0.339432I$	$-7.75531 - 4.15723I$	0
$u = -0.429232 + 0.804094I$ $a = 0.634934 - 0.509036I$ $b = -0.352722 + 0.610857I$	$0.06076 - 1.89508I$	0
$u = -0.429232 - 0.804094I$ $a = 0.634934 + 0.509036I$ $b = -0.352722 - 0.610857I$	$0.06076 + 1.89508I$	0
$u = -0.331459 + 1.040380I$ $a = 0.854440 + 0.574470I$ $b = -0.35379 - 1.61190I$	$-4.47717 - 3.37033I$	0
$u = -0.331459 - 1.040380I$ $a = 0.854440 - 0.574470I$ $b = -0.35379 + 1.61190I$	$-4.47717 + 3.37033I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000960 + 0.442294I$ $a = -0.234294 + 0.011879I$ $b = -0.740478 + 0.198583I$	$-5.04360 - 1.51530I$	0
$u = 1.000960 - 0.442294I$ $a = -0.234294 - 0.011879I$ $b = -0.740478 - 0.198583I$	$-5.04360 + 1.51530I$	0
$u = -0.532489 + 0.716149I$ $a = 0.997416 - 0.906772I$ $b = -0.801648 + 0.480258I$	$0.15517 - 2.14886I$	0
$u = -0.532489 - 0.716149I$ $a = 0.997416 + 0.906772I$ $b = -0.801648 - 0.480258I$	$0.15517 + 2.14886I$	0
$u = -1.100760 + 0.173641I$ $a = -0.068941 + 0.138372I$ $b = 1.095180 - 0.549054I$	$-5.34506 + 5.43270I$	0
$u = -1.100760 - 0.173641I$ $a = -0.068941 - 0.138372I$ $b = 1.095180 + 0.549054I$	$-5.34506 - 5.43270I$	0
$u = -1.109710 + 0.162141I$ $a = -0.101962 + 0.217304I$ $b = 1.125380 - 0.722848I$	$-3.4933 + 14.3748I$	0
$u = -1.109710 - 0.162141I$ $a = -0.101962 - 0.217304I$ $b = 1.125380 + 0.722848I$	$-3.4933 - 14.3748I$	0
$u = 1.110590 + 0.167761I$ $a = 0.065062 + 0.202902I$ $b = -1.056620 - 0.679733I$	$-0.63192 - 9.17536I$	0
$u = 1.110590 - 0.167761I$ $a = 0.065062 - 0.202902I$ $b = -1.056620 + 0.679733I$	$-0.63192 + 9.17536I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.478995+1.026800I$ $a=\ \ 0.665647-1.225280I$ $b=-1.372840+0.094386I$	$-7.65416+2.63004I$	0
$u=-0.478995-1.026800I$ $a=\ \ 0.665647+1.225280I$ $b=-1.372840-0.094386I$	$-7.65416-2.63004I$	0
$u=-0.717939+0.485296I$ $a=\ \ 0.507223+0.034780I$ $b=\ \ 0.590724+0.510279I$	$-0.51115-2.73758I$	0
$u=-0.717939-0.485296I$ $a=\ \ 0.507223-0.034780I$ $b=\ \ 0.590724-0.510279I$	$-0.51115+2.73758I$	0
$u=\ \ 0.102157+0.856948I$ $a=-2.40168-0.57194I$ $b=\ \ 0.980898-0.162317I$	$-2.06752+2.69493I$	0
$u=\ \ 0.102157-0.856948I$ $a=-2.40168+0.57194I$ $b=\ \ 0.980898+0.162317I$	$-2.06752-2.69493I$	0
$u=-0.632218+0.586771I$ $a=\ \ 1.15278-0.99037I$ $b=-1.102940+0.192770I$	$0.32133-2.40540I$	0
$u=-0.632218-0.586771I$ $a=\ \ 1.15278+0.99037I$ $b=-1.102940-0.192770I$	$0.32133+2.40540I$	0
$u=\ \ 1.131250+0.173663I$ $a=-0.093866+0.199702I$ $b=-0.694113-0.624713I$	$2.94636-7.01335I$	0
$u=\ \ 1.131250-0.173663I$ $a=-0.093866-0.199702I$ $b=-0.694113+0.624713I$	$2.94636+7.01335I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.158630+0.838466I$ $a=-2.65577-0.60529I$ $b=\ 1.60746+0.45128I$	$0.49745-2.26532I$	0
$u=-0.158630-0.838466I$ $a=-2.65577+0.60529I$ $b=\ 1.60746-0.45128I$	$0.49745+2.26532I$	0
$u=-0.253291+1.132730I$ $a=\ 0.533505-0.308927I$ $b=-0.205564-0.877474I$	$-4.29063-3.47084I$	0
$u=-0.253291-1.132730I$ $a=\ 0.533505+0.308927I$ $b=-0.205564+0.877474I$	$-4.29063+3.47084I$	0
$u=-1.152270+0.160549I$ $a=\ 0.165926+0.151616I$ $b=\ 0.491188-0.495379I$	$3.39244+1.68848I$	0
$u=-1.152270-0.160549I$ $a=\ 0.165926-0.151616I$ $b=\ 0.491188+0.495379I$	$3.39244-1.68848I$	0
$u=\ 0.511381+1.057080I$ $a=-0.818725-1.051980I$ $b=\ 1.330600-0.019173I$	$-4.46414+1.79514I$	0
$u=\ 0.511381-1.057080I$ $a=-0.818725+1.051980I$ $b=\ 1.330600+0.019173I$	$-4.46414-1.79514I$	0
$u=\ 0.779467+0.261333I$ $a=-0.755679-0.483346I$ $b=\ 0.873247-0.486132I$	$-0.816729-1.138170I$	0
$u=\ 0.779467-0.261333I$ $a=-0.755679+0.483346I$ $b=\ 0.873247+0.486132I$	$-0.816729+1.138170I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.622675 + 0.526067I$ $a = -0.067891 - 0.163291I$ $b = 0.621665 + 0.308570I$	$-1.75037 - 0.18181I$	0
$u = 0.622675 - 0.526067I$ $a = -0.067891 + 0.163291I$ $b = 0.621665 - 0.308570I$	$-1.75037 + 0.18181I$	0
$u = -0.475278 + 1.086230I$ $a = 1.01986 - 1.22124I$ $b = -1.46735 - 0.06195I$	$-8.00056 - 5.81192I$	0
$u = -0.475278 - 1.086230I$ $a = 1.01986 + 1.22124I$ $b = -1.46735 + 0.06195I$	$-8.00056 + 5.81192I$	0
$u = 0.728904 + 0.357200I$ $a = -0.527428 - 0.134968I$ $b = -0.766158 + 0.615731I$	$-3.61671 + 7.78948I$	0
$u = 0.728904 - 0.357200I$ $a = -0.527428 + 0.134968I$ $b = -0.766158 - 0.615731I$	$-3.61671 - 7.78948I$	0
$u = 0.403738 + 1.129660I$ $a = -1.55406 - 0.01324I$ $b = 1.06744 - 1.25732I$	$-3.49676 + 6.15244I$	0
$u = 0.403738 - 1.129660I$ $a = -1.55406 + 0.01324I$ $b = 1.06744 + 1.25732I$	$-3.49676 - 6.15244I$	0
$u = -0.457279 + 1.146190I$ $a = 2.11332 - 0.25070I$ $b = -1.64579 - 1.22727I$	$-7.63723 - 10.05980I$	0
$u = -0.457279 - 1.146190I$ $a = 2.11332 + 0.25070I$ $b = -1.64579 + 1.22727I$	$-7.63723 + 10.05980I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.447131 + 1.152460I$ $a = -1.94375 - 0.32039I$ $b = 1.52654 - 1.10507I$	$-4.72287 + 5.80817I$	0
$u = 0.447131 - 1.152460I$ $a = -1.94375 + 0.32039I$ $b = 1.52654 + 1.10507I$	$-4.72287 - 5.80817I$	0
$u = 0.181570 + 0.735585I$ $a = 2.61316 - 0.74056I$ $b = -1.244700 + 0.652639I$	$1.63266 - 2.19221I$	0
$u = 0.181570 - 0.735585I$ $a = 2.61316 + 0.74056I$ $b = -1.244700 - 0.652639I$	$1.63266 + 2.19221I$	0
$u = -0.456265 + 1.159960I$ $a = 2.06233 - 0.50169I$ $b = -1.69787 - 0.99945I$	$-8.01784 - 2.03325I$	0
$u = -0.456265 - 1.159960I$ $a = 2.06233 + 0.50169I$ $b = -1.69787 + 0.99945I$	$-8.01784 + 2.03325I$	0
$u = -0.638064 + 0.394126I$ $a = 0.956703 - 0.899839I$ $b = -0.957507 - 0.169309I$	$0.79709 - 2.29243I$	0
$u = -0.638064 - 0.394126I$ $a = 0.956703 + 0.899839I$ $b = -0.957507 + 0.169309I$	$0.79709 + 2.29243I$	0
$u = -1.224110 + 0.338369I$ $a = 0.304657 - 0.030327I$ $b = -0.437065 + 0.087483I$	$2.70500 - 1.17588I$	0
$u = -1.224110 - 0.338369I$ $a = 0.304657 + 0.030327I$ $b = -0.437065 - 0.087483I$	$2.70500 + 1.17588I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.466385 + 1.185090I$ $a = -1.55495 - 0.67703I$ $b = 1.38808 - 0.58781I$	$-4.62264 + 4.26724I$	0
$u = 0.466385 - 1.185090I$ $a = -1.55495 + 0.67703I$ $b = 1.38808 + 0.58781I$	$-4.62264 - 4.26724I$	0
$u = -0.270687 + 0.651384I$ $a = -0.601813 + 0.315667I$ $b = -0.584161 + 0.985648I$	$-3.81337 - 0.28146I$	0
$u = -0.270687 - 0.651384I$ $a = -0.601813 - 0.315667I$ $b = -0.584161 - 0.985648I$	$-3.81337 + 0.28146I$	0
$u = 0.338584 + 1.260610I$ $a = 1.88786 - 0.15118I$ $b = -1.70307 + 0.83871I$	$-8.25357 + 11.31400I$	0
$u = 0.338584 - 1.260610I$ $a = 1.88786 + 0.15118I$ $b = -1.70307 - 0.83871I$	$-8.25357 - 11.31400I$	0
$u = -0.385491 + 0.575000I$ $a = -2.50837 - 0.84921I$ $b = 0.70561 + 1.30467I$	$-1.87220 + 7.72879I$	0
$u = -0.385491 - 0.575000I$ $a = -2.50837 + 0.84921I$ $b = 0.70561 - 1.30467I$	$-1.87220 - 7.72879I$	0
$u = -0.318846 + 1.272740I$ $a = -1.74136 - 0.20280I$ $b = 1.58002 + 0.85978I$	$-5.49827 - 6.03914I$	0
$u = -0.318846 - 1.272740I$ $a = -1.74136 + 0.20280I$ $b = 1.58002 - 0.85978I$	$-5.49827 + 6.03914I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.233812 + 1.293090I$ $a = -1.09874 - 1.22166I$ $b = 0.601758 - 0.137748I$	$-8.34614 + 1.14539I$	0
$u = 0.233812 - 1.293090I$ $a = -1.09874 + 1.22166I$ $b = 0.601758 + 0.137748I$	$-8.34614 - 1.14539I$	0
$u = -0.221205 + 0.648702I$ $a = -0.693482 + 0.667807I$ $b = -0.519212 + 1.158340I$	$-2.66133 + 8.07549I$	0
$u = -0.221205 - 0.648702I$ $a = -0.693482 - 0.667807I$ $b = -0.519212 - 1.158340I$	$-2.66133 - 8.07549I$	0
$u = -0.272055 + 1.289910I$ $a = 1.22590 - 1.02434I$ $b = -0.722480 - 0.268853I$	$-5.09266 - 5.08803I$	0
$u = -0.272055 - 1.289910I$ $a = 1.22590 + 1.02434I$ $b = -0.722480 + 0.268853I$	$-5.09266 + 5.08803I$	0
$u = 0.235632 + 0.627996I$ $a = 0.515560 + 0.599666I$ $b = 0.462130 + 1.084470I$	$0.18334 - 3.29876I$	0
$u = 0.235632 - 0.627996I$ $a = 0.515560 - 0.599666I$ $b = 0.462130 - 1.084470I$	$0.18334 + 3.29876I$	0
$u = -0.655277 + 0.099893I$ $a = -0.543581 - 0.105698I$ $b = -1.173940 + 0.643421I$	$-4.99706 - 2.18355I$	$-7.80963 + 0.I$
$u = -0.655277 - 0.099893I$ $a = -0.543581 + 0.105698I$ $b = -1.173940 - 0.643421I$	$-4.99706 + 2.18355I$	$-7.80963 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.333611 + 1.307330I$ $a = 1.62390 + 0.03204I$ $b = -1.51702 + 0.65103I$	$-10.36450 + 2.47352I$	0
$u = 0.333611 - 1.307330I$ $a = 1.62390 - 0.03204I$ $b = -1.51702 - 0.65103I$	$-10.36450 - 2.47352I$	0
$u = -0.631999 + 0.151222I$ $a = -0.789636 - 0.192513I$ $b = -1.033530 + 0.885738I$	$-4.78809 + 5.86477I$	$-6.67906 - 6.89519I$
$u = -0.631999 - 0.151222I$ $a = -0.789636 + 0.192513I$ $b = -1.033530 - 0.885738I$	$-4.78809 - 5.86477I$	$-6.67906 + 6.89519I$
$u = 0.266831 + 1.323650I$ $a = -1.37293 - 1.15885I$ $b = 0.811310 - 0.147748I$	$-8.13484 + 9.26127I$	0
$u = 0.266831 - 1.323650I$ $a = -1.37293 + 1.15885I$ $b = 0.811310 + 0.147748I$	$-8.13484 - 9.26127I$	0
$u = -0.373832 + 1.298120I$ $a = 1.50367 - 0.66952I$ $b = -1.017910 - 0.471356I$	$-4.06075 - 5.89876I$	0
$u = -0.373832 - 1.298120I$ $a = 1.50367 + 0.66952I$ $b = -1.017910 + 0.471356I$	$-4.06075 + 5.89876I$	0
$u = 0.306546 + 0.562655I$ $a = 2.57417 - 0.78314I$ $b = -0.718550 + 1.044770I$	$0.61709 - 3.25560I$	0
$u = 0.306546 - 0.562655I$ $a = 2.57417 + 0.78314I$ $b = -0.718550 - 1.044770I$	$0.61709 + 3.25560I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.247491+1.345360I$ $a=-0.939706-0.345082I$ $b=\ \ 0.877413+0.902855I$	$-2.54656-3.24246I$	0
$u=-0.247491-1.345360I$ $a=-0.939706+0.345082I$ $b=\ \ 0.877413-0.902855I$	$-2.54656+3.24246I$	0
$u=\ \ 0.609620+0.110358I$ $a=\ \ 0.719060+0.025078I$ $b=\ \ 0.953345+0.692950I$	$-1.77265-1.71671I$	$-3.89346+3.39080I$
$u=\ \ 0.609620-0.110358I$ $a=\ \ 0.719060-0.025078I$ $b=\ \ 0.953345-0.692950I$	$-1.77265+1.71671I$	$-3.89346-3.39080I$
$u=\ \ 0.616207$ $a=\ \ 0.176667$ $b=\ \ 0.827938$	-1.45673	-7.05760
$u=\ \ 0.243333+1.373350I$ $a=\ \ 0.682132+0.065195I$ $b=-0.673518+0.489693I$	$-2.92781-2.05368I$	0
$u=\ \ 0.243333-1.373350I$ $a=\ \ 0.682132-0.065195I$ $b=-0.673518-0.489693I$	$-2.92781+2.05368I$	0
$u=-0.401014+0.446364I$ $a=-2.34670-0.64741I$ $b=\ \ 0.279871+1.210940I$	$-2.76145+0.15865I$	$-2.37833+2.56508I$
$u=-0.401014-0.446364I$ $a=-2.34670+0.64741I$ $b=\ \ 0.279871-1.210940I$	$-2.76145-0.15865I$	$-2.37833-2.56508I$
$u=\ \ 0.716446+1.214870I$ $a=-0.930380-0.279276I$ $b=\ \ 0.948262-0.308934I$	$-1.42931+1.08147I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.716446 - 1.214870I$ $a = -0.930380 + 0.279276I$ $b = 0.948262 + 0.308934I$	$-1.42931 - 1.08147I$	0
$u = 0.239627 + 0.534731I$ $a = -0.106157 + 0.763133I$ $b = 0.139934 + 1.052830I$	$2.67868 - 2.33676I$	$3.70936 + 1.81119I$
$u = 0.239627 - 0.534731I$ $a = -0.106157 - 0.763133I$ $b = 0.139934 - 1.052830I$	$2.67868 + 2.33676I$	$3.70936 - 1.81119I$
$u = 1.29704 + 0.57395I$ $a = -0.340640 - 0.044679I$ $b = 0.490694 + 0.021283I$	$0.95136 + 6.10179I$	0
$u = 1.29704 - 0.57395I$ $a = -0.340640 + 0.044679I$ $b = 0.490694 - 0.021283I$	$0.95136 - 6.10179I$	0
$u = -0.308768 + 0.485218I$ $a = 0.499503 + 0.593741I$ $b = 0.054592 + 0.972901I$	$2.61071 - 2.15044I$	$3.49429 + 5.07410I$
$u = -0.308768 - 0.485218I$ $a = 0.499503 - 0.593741I$ $b = 0.054592 - 0.972901I$	$2.61071 + 2.15044I$	$3.49429 - 5.07410I$
$u = 0.59220 + 1.30755I$ $a = 1.373610 + 0.081316I$ $b = -1.20788 + 0.96084I$	$-0.65240 + 13.07150I$	0
$u = 0.59220 - 1.30755I$ $a = 1.373610 - 0.081316I$ $b = -1.20788 - 0.96084I$	$-0.65240 - 13.07150I$	0
$u = -0.59383 + 1.30855I$ $a = -1.56460 + 0.39959I$ $b = 1.43884 + 0.80722I$	$-8.9223 - 11.4500I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.59383-1.30855I$ $a=-1.56460-0.39959I$ $b=\ \ 1.43884-0.80722I$	$-8.9223+11.4500I$	0
$u=-0.58738+1.31213I$ $a=-1.195620+0.036350I$ $b=\ \ 1.07099+0.92984I$	$-0.27570-7.75879I$	0
$u=-0.58738-1.31213I$ $a=-1.195620-0.036350I$ $b=\ \ 1.07099-0.92984I$	$-0.27570+7.75879I$	0
$u=\ \ 0.59514+1.30916I$ $a=\ \ 1.63281+0.28773I$ $b=-1.45065+0.90342I$	$-4.2262+15.2125I$	0
$u=\ \ 0.59514-1.30916I$ $a=\ \ 1.63281-0.28773I$ $b=-1.45065-0.90342I$	$-4.2262-15.2125I$	0
$u=-0.59533+1.31029I$ $a=-1.70899+0.30754I$ $b=\ \ 1.50851+0.91298I$	$-7.1013-20.4098I$	0
$u=-0.59533-1.31029I$ $a=-1.70899-0.30754I$ $b=\ \ 1.50851-0.91298I$	$-7.1013+20.4098I$	0
$u=\ \ 0.46943+1.36425I$ $a=-1.65406-0.37978I$ $b=\ \ 1.160210-0.523521I$	$-5.66062+3.51236I$	0
$u=\ \ 0.46943-1.36425I$ $a=-1.65406+0.37978I$ $b=\ \ 1.160210+0.523521I$	$-5.66062-3.51236I$	0
$u=-0.64174+1.30116I$ $a=\ \ 1.173070-0.218279I$ $b=-1.004490-0.446657I$	$-0.64799-5.40688I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.64174-1.30116I$ $a=\ \ 1.173070+0.218279I$ $b=-1.004490+0.446657I$	$-0.64799+5.40688I$	0
$u=\ \ 0.62470+1.31422I$ $a=\ \ 0.844977+0.435676I$ $b=-0.989877+0.544954I$	$-8.08219+7.88607I$	0
$u=\ \ 0.62470-1.31422I$ $a=\ \ 0.844977-0.435676I$ $b=-0.989877-0.544954I$	$-8.08219-7.88607I$	0
$u=-0.32831+1.41957I$ $a=-1.061590+0.567659I$ $b=\ \ 1.118710+0.080075I$	$-10.83290+0.32408I$	0
$u=-0.32831-1.41957I$ $a=-1.061590-0.567659I$ $b=\ \ 1.118710-0.080075I$	$-10.83290-0.32408I$	0
$u=-0.54203+1.36560I$ $a=\ \ 1.49770-0.21139I$ $b=-1.100510-0.553942I$	$-2.05045-6.55393I$	0
$u=-0.54203-1.36560I$ $a=\ \ 1.49770+0.21139I$ $b=-1.100510+0.553942I$	$-2.05045+6.55393I$	0
$u=\ \ 0.30875+1.44495I$ $a=\ \ 0.881145+0.601770I$ $b=-0.958452+0.010094I$	$-6.22903-3.96583I$	0
$u=\ \ 0.30875-1.44495I$ $a=\ \ 0.881145-0.601770I$ $b=-0.958452-0.010094I$	$-6.22903+3.96583I$	0
$u=-0.32321+1.45993I$ $a=-0.881245+0.712118I$ $b=\ \ 0.983383-0.093385I$	$-9.04715+9.08872I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.32321-1.45993I$ $a=-0.881245-0.712118I$ $b=\ \ 0.983383+0.093385I$	$-9.04715-9.08872I$	0
$u=\ \ 0.87773+1.21311I$ $a=\ \ 0.104597+0.395295I$ $b=-0.597844+0.258544I$	$-5.37577-2.05136I$	0
$u=\ \ 0.87773-1.21311I$ $a=\ \ 0.104597-0.395295I$ $b=-0.597844-0.258544I$	$-5.37577+2.05136I$	0
$u=\ \ 0.52868+1.40145I$ $a=-1.60596-0.14181I$ $b=\ \ 1.124490-0.596695I$	$-4.56961+11.14540I$	0
$u=\ \ 0.52868-1.40145I$ $a=-1.60596+0.14181I$ $b=\ \ 1.124490+0.596695I$	$-4.56961-11.14540I$	0
$u=\ \ 0.421936+0.188897I$ $a=\ \ 1.82266+0.38212I$ $b=\ \ 0.330215+0.769537I$	$-0.81987-2.60207I$	$1.50323+7.82448I$
$u=\ \ 0.421936-0.188897I$ $a=\ \ 1.82266-0.38212I$ $b=\ \ 0.330215-0.769537I$	$-0.81987+2.60207I$	$1.50323-7.82448I$
$u=-0.63298+1.42784I$ $a=-0.531480+0.097741I$ $b=\ \ 0.657893+0.622819I$	$-2.44231-4.22307I$	0
$u=-0.63298-1.42784I$ $a=-0.531480-0.097741I$ $b=\ \ 0.657893-0.622819I$	$-2.44231+4.22307I$	0

II. $I_2^u = \langle u^{32}+2u^{31}+\cdots+b+1,\ 6.02\times10^{11}u^{33}+1.15\times10^{12}u^{32}+\cdots+5.41\times10^{8}a-1.61\times10^{11},\ u^{34}+2u^{33}+\cdots-u+1\rangle$

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix}-1113.34u^{33}-2124.42u^{32}+\cdots-2851.74u+297.102\\-u^{32}-2u^{31}+\cdots+2u-1\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}u\\u^3+u\end{pmatrix}$$

$$a_3 = \begin{pmatrix}-41.6620u^{33}-449.921u^{32}+\cdots+693.957u-786.918\\-50.2994u^{33}-520.920u^{32}+\cdots+764.764u-916.334\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-1113.34u^{33}-2125.42u^{32}+\cdots-2849.74u+296.102\\-u^{32}-2u^{31}+\cdots+2u-1\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-1384.12u^{33}-2643.47u^{32}+\cdots-3536.51u+365.548\\-149.333u^{33}-283.984u^{32}+\cdots-390.485u+44.9332\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}590.908u^{33}+1191.12u^{32}+\cdots+1144.73u+50.5712\\916.334u^{33}+1781.37u^{32}+\cdots+2183.25u-152.570\end{pmatrix}$$

$$a_1 = \begin{pmatrix}554.774u^{33}+1056.88u^{32}+\cdots+1661.96u-256.804\\-516.139u^{33}-1014.13u^{32}+\cdots-1110.44u+23.5159\end{pmatrix}$$

$$a_2 = \begin{pmatrix}883.783u^{33}+1264.11u^{32}+\cdots+3226.37u-1023.23\\312.911u^{33}+778.291u^{32}+\cdots+192.133u+395.932\end{pmatrix}$$

$$a_6 = \begin{pmatrix}150.030u^{33}+648.213u^{32}+\cdots-770.626u+790.491\\134.517u^{33}+442.863u^{32}+\cdots-28.6665u+286.129\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= -\frac{681255538290}{540898481}u^{33}+\frac{449330303021}{540898481}u^{32}+\cdots-\frac{5577298219768}{540898481}u+\frac{4001351864909}{540898481}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{34} - 19u^{33} + \cdots - 10u + 1$
c_2	$u^{34} + u^{33} + \cdots + 2u + 1$
c_3	$u^{34} - 7u^{32} + \cdots - 3u + 1$
c_4	$u^{34} + 2u^{33} + \cdots - u + 1$
c_5	$u^{34} - u^{33} + \cdots - 2u + 1$
c_6	$u^{34} - 3u^{33} + \cdots + 2u + 1$
c_7	$u^{34} + u^{33} + \cdots - 2u + 1$
c_8	$u^{34} + u^{31} + \cdots - u + 1$
c_9	$u^{34} - 16u^{33} + \cdots - 4u + 1$
c_{10}	$u^{34} + 18u^{33} + \cdots + 17u + 1$
c_{11}	$u^{34} - 2u^{33} + \cdots + u + 1$
c_{12}	$u^{34} - 2u^{33} + \cdots + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{34} + y^{33} + \cdots - 10y + 1$
c_2, c_5	$y^{34} - 19y^{33} + \cdots - 10y + 1$
c_3	$y^{34} - 14y^{33} + \cdots - 5y + 1$
c_4, c_{11}	$y^{34} + 18y^{33} + \cdots + 31y + 1$
c_6	$y^{34} + 17y^{33} + \cdots - 42y + 1$
c_7	$y^{34} + 11y^{33} + \cdots + 2y + 1$
c_8	$y^{34} + 18y^{32} + \cdots - 19y + 1$
c_9	$y^{34} + 10y^{33} + \cdots - 14y + 1$
c_{10}	$y^{34} + 8y^{33} + \cdots + 15y + 1$
c_{12}	$y^{34} + 2y^{33} + \cdots + 11y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.435147 + 0.917496I$ $a = -1.55311 - 0.27289I$ $b = 1.165440 - 0.037689I$	$-0.36155 + 3.60801I$	$-2.66183 - 7.35374I$
$u = 0.435147 - 0.917496I$ $a = -1.55311 + 0.27289I$ $b = 1.165440 + 0.037689I$	$-0.36155 - 3.60801I$	$-2.66183 + 7.35374I$
$u = -0.758939 + 0.873640I$ $a = 0.923638 - 0.232048I$ $b = -0.733903 - 0.122515I$	$-0.683463 - 0.488389I$	0
$u = -0.758939 - 0.873640I$ $a = 0.923638 + 0.232048I$ $b = -0.733903 + 0.122515I$	$-0.683463 + 0.488389I$	0
$u = 0.164838 + 0.804978I$ $a = -1.96034 - 1.17708I$ $b = 1.28908 + 1.22073I$	$0.770359 - 0.947839I$	$2.96970 + 1.15611I$
$u = 0.164838 - 0.804978I$ $a = -1.96034 + 1.17708I$ $b = 1.28908 - 1.22073I$	$0.770359 + 0.947839I$	$2.96970 - 1.15611I$
$u = -0.473156 + 1.148290I$ $a = 0.912788 - 0.850913I$ $b = -1.011110 - 0.523545I$	$-6.84318 - 7.09948I$	0
$u = -0.473156 - 1.148290I$ $a = 0.912788 + 0.850913I$ $b = -1.011110 + 0.523545I$	$-6.84318 + 7.09948I$	0
$u = 0.383917 + 1.188110I$ $a = -1.53287 - 0.62239I$ $b = 1.089140 - 0.736264I$	$-4.10643 + 5.00632I$	0
$u = 0.383917 - 1.188110I$ $a = -1.53287 + 0.62239I$ $b = 1.089140 + 0.736264I$	$-4.10643 - 5.00632I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.339673+1.212470I$ $a=\ \ 1.89695-0.27063I$ $b=-1.091920-0.882603I$	$-6.61988-2.59813I$	0
$u=-0.339673-1.212470I$ $a=\ \ 1.89695+0.27063I$ $b=-1.091920+0.882603I$	$-6.61988+2.59813I$	0
$u=-0.121402+0.722072I$ $a=\ \ 1.74926-1.11307I$ $b=-0.680289+1.221860I$	$1.61406-3.40916I$	$1.37182+5.71080I$
$u=-0.121402-0.722072I$ $a=\ \ 1.74926+1.11307I$ $b=-0.680289-1.221860I$	$1.61406+3.40916I$	$1.37182-5.71080I$
$u=\ \ 1.252420+0.266938I$ $a=-0.222023-0.194384I$ $b=\ \ 0.494668-0.025553I$	$2.56577+1.39254I$	0
$u=\ \ 1.252420-0.266938I$ $a=-0.222023+0.194384I$ $b=\ \ 0.494668+0.025553I$	$2.56577-1.39254I$	0
$u=-0.330918+1.244120I$ $a=\ \ 1.82411+0.10620I$ $b=-1.010610-0.939880I$	$-5.71451-10.35650I$	0
$u=-0.330918-1.244120I$ $a=\ \ 1.82411-0.10620I$ $b=-1.010610+0.939880I$	$-5.71451+10.35650I$	0
$u=\ \ 0.351862+1.245040I$ $a=-1.61405-0.01453I$ $b=\ \ 0.991001-0.883778I$	$-3.17427+5.80657I$	0
$u=\ \ 0.351862-1.245040I$ $a=-1.61405+0.01453I$ $b=\ \ 0.991001+0.883778I$	$-3.17427-5.80657I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.022014+0.684432I$ $a=-2.04104-0.76196I$ $b=-0.113872+1.279990I$	$-2.97861+8.86716I$	$-6.59878-9.58148I$
$u=-0.022014-0.684432I$ $a=-2.04104+0.76196I$ $b=-0.113872-1.279990I$	$-2.97861-8.86716I$	$-6.59878+9.58148I$
$u=-0.000494+0.658351I$ $a=1.99888-0.89686I$ $b=-0.002205+1.161980I$	$-0.18895-4.22549I$	$-3.08347+6.05843I$
$u=-0.000494-0.658351I$ $a=1.99888+0.89686I$ $b=-0.002205-1.161980I$	$-0.18895+4.22549I$	$-3.08347-6.05843I$
$u=-0.056563+0.632693I$ $a=-2.17898-0.92610I$ $b=-0.215366+1.023850I$	$-3.94330+0.69175I$	$-7.74314-2.45282I$
$u=-0.056563-0.632693I$ $a=-2.17898+0.92610I$ $b=-0.215366-1.023850I$	$-3.94330-0.69175I$	$-7.74314+2.45282I$
$u=-0.890990+1.046280I$ $a=0.015621-0.420391I$ $b=-0.649100-0.234475I$	$-5.39501+1.92326I$	0
$u=-0.890990-1.046280I$ $a=0.015621+0.420391I$ $b=-0.649100+0.234475I$	$-5.39501-1.92326I$	0
$u=-1.296000+0.545456I$ $a=0.385960-0.163853I$ $b=-0.502834-0.069460I$	$0.98080-6.28329I$	0
$u=-1.296000-0.545456I$ $a=0.385960+0.163853I$ $b=-0.502834+0.069460I$	$0.98080+6.28329I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.48668 + 1.37361I$ $a = -0.680861 - 0.069385I$ $b = 0.687870 - 0.698394I$	$-2.53302 + 4.00004I$	0
$u = 0.48668 - 1.37361I$ $a = -0.680861 + 0.069385I$ $b = 0.687870 + 0.698394I$	$-2.53302 - 4.00004I$	0
$u = 0.215289 + 0.361964I$ $a = 2.57608 - 0.38967I$ $b = 0.294011 + 0.345385I$	$-1.22230 - 2.06774I$	$-5.00899 - 0.88679I$
$u = 0.215289 - 0.361964I$ $a = 2.57608 + 0.38967I$ $b = 0.294011 - 0.345385I$	$-1.22230 + 2.06774I$	$-5.00899 + 0.88679I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{34}-19u^{33}+\cdots-10u+1)(u^{169}+88u^{168}+\cdots+10u+1)$
c_2	$(u^{34}+u^{33}+\cdots+2u+1)(u^{169}+4u^{168}+\cdots+2u+1)$
c_3	$(u^{34}-7u^{32}+\cdots-3u+1)(u^{169}-u^{168}+\cdots-1643667u+823471)$
c_4	$(u^{34}+2u^{33}+\cdots-u+1)(u^{169}+u^{168}+\cdots+2025u+1993)$
c_5	$(u^{34}-u^{33}+\cdots-2u+1)(u^{169}+4u^{168}+\cdots+2u+1)$
c_6	$(u^{34}-3u^{33}+\cdots+2u+1)(u^{169}+12u^{168}+\cdots+763606u+385669)$
c_7	$(u^{34}+u^{33}+\cdots-2u+1)(u^{169}+2u^{168}+\cdots-64u+1)$
c_8	$(u^{34}+u^{31}+\cdots-u+1)$ $\cdot(u^{169}+u^{168}+\cdots-423737259u+188817887)$
c_9	$(u^{34}-16u^{33}+\cdots-4u+1)(u^{169}-3u^{168}+\cdots+8406u+459)$
c_{10}	$(u^{34}+18u^{33}+\cdots+17u+1)(u^{169}+17u^{168}+\cdots+65005u+5071)$
c_{11}	$(u^{34}-2u^{33}+\cdots+u+1)(u^{169}+u^{168}+\cdots+2025u+1993)$
c_{12}	$(u^{34}-2u^{33}+\cdots+u+1)(u^{169}+17u^{168}+\cdots-1043253u-63901)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{34}+y^{33}+\cdots-10y+1)(y^{169}-4y^{168}+\cdots+126y-1)$
c_2, c_5	$(y^{34}-19y^{33}+\cdots-10y+1)(y^{169}-88y^{168}+\cdots+10y-1)$
c_3	$(y^{34}-14y^{33}+\cdots-5y+1)$ $\cdot(y^{169}-31y^{168}+\cdots+8943525035817y-678104487841)$
c_4, c_{11}	$(y^{34}+18y^{33}+\cdots+31y+1)$ $\cdot(y^{169}+101y^{168}+\cdots-158878943y-3972049)$
c_6	$(y^{34}+17y^{33}+\cdots-42y+1)$ $\cdot(y^{169}+96y^{168}+\cdots+1430818496714y-148740577561)$
c_7	$(y^{34}+11y^{33}+\cdots+2y+1)(y^{169}+14y^{168}+\cdots+122y-1)$
c_8	$(y^{34}+18y^{32}+\cdots-19y+1)$ $\cdot(y^{169}-53y^{168}+\cdots+1817884010224232283y-356521944511447 69)$
c_9	$(y^{34}+10y^{33}+\cdots-14y+1)$ $\cdot(y^{169}+17y^{168}+\cdots-3881682y-210681)$
c_{10}	$(y^{34}+8y^{33}+\cdots+15y+1)$ $\cdot(y^{169}-41y^{168}+\cdots-5001642995y-25715041)$
c_{12}	$(y^{34}+2y^{33}+\cdots+11y+1)$ $\cdot(y^{169}+33y^{168}+\cdots-90651327247y-4083337801)$