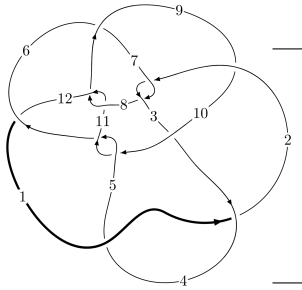
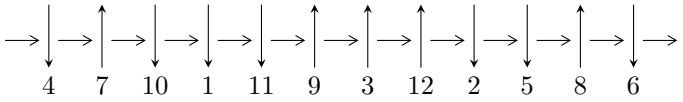
$12a_{1091}$ $(K12a_{1091})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.39310 \times 10^{837} u^{160} + 4.58819 \times 10^{837} u^{159} + \cdots + 1.25873 \times 10^{837} b + 1.99542 \times 10^{842}, \\ & 1.45185 \times 10^{842} u^{160} - 7.32509 \times 10^{841} u^{159} + \cdots + 2.86374 \times 10^{841} a - 5.38127 \times 10^{846}, \\ & u^{161} - 43 u^{159} + \cdots + 23192 u - 22751 \rangle \\ I_2^u = \langle & -1.30052 \times 10^{27} u^{42} + 5.58534 \times 10^{27} u^{41} + \cdots + 5.17611 \times 10^{24} b - 1.73362 \times 10^{27}, \\ & - 5.05339 \times 10^{27} u^{42} + 2.24625 \times 10^{28} u^{41} + \cdots + 5.17611 \times 10^{24} a - 8.77138 \times 10^{27}, \ u^{43} - 5 u^{42} + \cdots + 9 u - \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 204 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. $\boldsymbol{I_1^u = \langle -6.39 \times 10^{837} u^{160} + 4.59 \times 10^{837} u^{159} + \cdots + 1.26 \times 10^{837} b + 2.00 \times 10^{842},\ 1.45 \times 10^{842} u^{160} - 7.33 \times 10^{841} u^{159} + \cdots + 2.86 \times 10^{841} a - 5.38 \times 10^{846},\ u^{161} - 43 u^{159} + \cdots + 23192 u - 22751 \rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -5.06979 u^{160} + 2.55788 u^{159} + \cdots - 468625. u + 187911. \\ 5.07901 u^{160} - 3.64509 u^{159} + \cdots + 375636. u - 158527. \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 10.6826 u^{160} - 9.77082 u^{159} + \cdots + 576831. u - 269285. \\ -24.6702 u^{160} + 21.3731 u^{159} + \cdots - 1.39803 \times 10^6 u + 645587. \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.12700 u^{160} - 6.54266 u^{159} + \cdots - 510744. u + 142501. \\ 1.25989 u^{160} + 0.372663 u^{159} + \cdots + 244271. u - 82982.0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -80.0417 u^{160} + 75.0777 u^{159} + \cdots - 4.05107 \times 10^6 u + 1.94173 \times 10^6 \\ 28.1384 u^{160} - 23.4524 u^{159} + \cdots + 1.66699 \times 10^6 u - 759659. \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 26.3009 u^{160} - 22.6628 u^{159} + \cdots + 1.50521 \times 10^6 u - 692577. \\ -35.0998 u^{160} + 29.6020 u^{159} + \cdots - 2.05235 \times 10^6 u + 938893. \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 74.7417 u^{160} - 62.5278 u^{159} + \cdots + 4.47416 \times 10^6 u - 2.02663 \times 10^6 \\ -45.8026 u^{160} + 37.7780 u^{159} + \cdots - 2.80124 \times 10^6 u + 1.25943 \times 10^6 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 21.0485 u^{160} - 18.9227 u^{159} + \cdots + 1.14409 \times 10^6 u - 534703. \\ -29.8474 u^{160} + 25.8619 u^{159} + \cdots - 1.69123 \times 10^6 u + 781019. \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -23.3510 u^{160} + 15.7838 u^{159} + \cdots - 1.78107 \times 10^6 u + 747855. \\ -11.4670 u^{160} + 12.3883 u^{159} + \cdots - 382645. u + 221297. \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$= -357.352 u^{160} + 338.730 u^{159} + \cdots - 1.76787 \times 10^7 u + 8.55098 \times 10^6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{161} - 6u^{160} + \cdots - 60405u + 2525$
c_2, c_7	$u^{161} + u^{160} + \cdots + 62875u + 20690$
c_3	$u^{161} + u^{160} + \cdots + 6424407u - 1081037$
c_5, c_{10}	$u^{161} - 5u^{160} + \cdots - 34377u - 24287$
c_6	$u^{161} + 4u^{160} + \cdots + 209706558586u + 17633051719$
c_8, c_{11}	$u^{161} - 43u^{159} + \cdots + 23192u + 22751$
c_9	$u^{161} + 5u^{160} + \cdots + 5900566245u - 806431049$
c_{12}	$u^{161} + 2u^{160} + \cdots + 297854463u - 20528044$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{161} + 104y^{160} + \cdots - 44901925y - 6375625$
c_2, c_7	$y^{161} - 95y^{160} + \cdots + 56848574785y - 428076100$
c_3	$y^{161} + 13y^{160} + \cdots - 81817610068445y - 1168640995369$
c_5, c_{10}	$y^{161} - 71y^{160} + \cdots - 8324930855y - 589858369$
c_6	$y^{161} - 44y^{160} + \cdots + 4.98 \times 10^{21}y - 3.11 \times 10^{20}$
c_8, c_{11}	$y^{161} - 86y^{160} + \cdots + 30379536528y - 517608001$
c_9	$y^{161} + 29y^{160} + \cdots - 3.95 \times 10^{19}y - 6.50 \times 10^{17}$
c_{12}	$y^{161} + 36y^{160} + \cdots - 32685559262828287y - 421400590465936$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.950374+0.325702I$ $a=\ \ 0.393996-0.385326I$ $b=\ \ 0.169698+0.056372I$	$1.60788-1.20779I$	0
$u=-0.950374-0.325702I$ $a=\ \ 0.393996+0.385326I$ $b=\ \ 0.169698-0.056372I$	$1.60788+1.20779I$	0
$u=-0.072510+0.991759I$ $a=-0.559105-0.563435I$ $b=\ \ 1.205640-0.484119I$	$6.47296-7.82720I$	0
$u=-0.072510-0.991759I$ $a=-0.559105+0.563435I$ $b=\ \ 1.205640+0.484119I$	$6.47296+7.82720I$	0
$u=-0.993352+0.197972I$ $a=\ \ 2.56889+0.55840I$ $b=-1.30419+0.69007I$	$0.61248-4.81440I$	0
$u=-0.993352-0.197972I$ $a=\ \ 2.56889-0.55840I$ $b=-1.30419-0.69007I$	$0.61248+4.81440I$	0
$u=\ \ 0.902874+0.463441I$ $a=\ \ 1.336050-0.193210I$ $b=-0.871684-0.901749I$	$-0.08463+5.13600I$	0
$u=\ \ 0.902874-0.463441I$ $a=\ \ 1.336050+0.193210I$ $b=-0.871684+0.901749I$	$-0.08463-5.13600I$	0
$u=-0.955013+0.229039I$ $a=-2.93997-0.42458I$ $b=\ \ 1.50313-0.49893I$	$3.79930-8.84455I$	0
$u=-0.955013-0.229039I$ $a=-2.93997+0.42458I$ $b=\ \ 1.50313+0.49893I$	$3.79930+8.84455I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.173656+0.965528I$ $a=\ \ 0.467423+0.277205I$ $b=-1.156730+0.326183I$	$1.90577-4.13490I$	0
$u=-0.173656-0.965528I$ $a=\ \ 0.467423-0.277205I$ $b=-1.156730-0.326183I$	$1.90577+4.13490I$	0
$u=\ \ 0.363651+0.909552I$ $a=\ \ 0.282299-0.406949I$ $b=-0.623074-0.340925I$	$-1.77610-2.50851I$	0
$u=\ \ 0.363651-0.909552I$ $a=\ \ 0.282299+0.406949I$ $b=-0.623074+0.340925I$	$-1.77610+2.50851I$	0
$u=-0.133671+0.967135I$ $a=\ \ 0.363269+0.968622I$ $b=-0.060760+1.024230I$	$-0.48025+8.06330I$	0
$u=-0.133671-0.967135I$ $a=\ \ 0.363269-0.968622I$ $b=-0.060760-1.024230I$	$-0.48025-8.06330I$	0
$u=-0.923789+0.443969I$ $a=\ \ 0.26507+1.48143I$ $b=-0.951484-0.034762I$	$4.76381+0.13098I$	0
$u=-0.923789-0.443969I$ $a=\ \ 0.26507-1.48143I$ $b=-0.951484+0.034762I$	$4.76381-0.13098I$	0
$u=\ \ 0.794847+0.656611I$ $a=\ \ 0.210662+0.974229I$ $b=-0.875222+0.010488I$	$6.86027+2.36778I$	0
$u=\ \ 0.794847-0.656611I$ $a=\ \ 0.210662-0.974229I$ $b=-0.875222-0.010488I$	$6.86027-2.36778I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.990904 + 0.328079I$ $a = 0.276707 + 0.562545I$ $b = -0.696982 + 0.658755I$	$-2.70689 + 1.93033I$	0
$u = 0.990904 - 0.328079I$ $a = 0.276707 - 0.562545I$ $b = -0.696982 - 0.658755I$	$-2.70689 - 1.93033I$	0
$u = 0.955110 + 0.432923I$ $a = -0.730781 - 0.042302I$ $b = 0.519570 + 0.834793I$	$0.31187 + 3.75114I$	0
$u = 0.955110 - 0.432923I$ $a = -0.730781 + 0.042302I$ $b = 0.519570 - 0.834793I$	$0.31187 - 3.75114I$	0
$u = 1.023370 + 0.258291I$ $a = -0.437416 - 1.185920I$ $b = 0.685995 - 0.525139I$	$1.01774 + 6.80120I$	0
$u = 1.023370 - 0.258291I$ $a = -0.437416 + 1.185920I$ $b = 0.685995 + 0.525139I$	$1.01774 - 6.80120I$	0
$u = 0.836063 + 0.420493I$ $a = -1.70373 + 0.81945I$ $b = 0.969989 + 0.648626I$	$1.31743 + 5.01058I$	0
$u = 0.836063 - 0.420493I$ $a = -1.70373 - 0.81945I$ $b = 0.969989 - 0.648626I$	$1.31743 - 5.01058I$	0
$u = 0.633559 + 0.685378I$ $a = -0.527296 - 0.412378I$ $b = -0.933157 + 0.296491I$	$-3.10634 - 1.77812I$	0
$u = 0.633559 - 0.685378I$ $a = -0.527296 + 0.412378I$ $b = -0.933157 - 0.296491I$	$-3.10634 + 1.77812I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.048950+0.218293I$ $a=\ \ 1.050050+0.088161I$ $b=-0.710613+1.195320I$	$-1.32350-3.70585I$	0
$u=-1.048950-0.218293I$ $a=\ \ 1.050050-0.088161I$ $b=-0.710613-1.195320I$	$-1.32350+3.70585I$	0
$u=-0.926103+0.043767I$ $a=-2.15843+4.41436I$ $b=-0.854807+0.525279I$	$3.09316-2.11983I$	0
$u=-0.926103-0.043767I$ $a=-2.15843-4.41436I$ $b=-0.854807-0.525279I$	$3.09316+2.11983I$	0
$u=-1.066240+0.148110I$ $a=-3.43481-1.07592I$ $b=\ \ 1.010390-0.473750I$	$3.77843-2.44545I$	0
$u=-1.066240-0.148110I$ $a=-3.43481+1.07592I$ $b=\ \ 1.010390+0.473750I$	$3.77843+2.44545I$	0
$u=\ \ 0.944602+0.520467I$ $a=\ \ 0.167943+1.200010I$ $b=\ \ 0.965227+0.370418I$	$1.82846+10.45490I$	0
$u=\ \ 0.944602-0.520467I$ $a=\ \ 0.167943-1.200010I$ $b=\ \ 0.965227-0.370418I$	$1.82846-10.45490I$	0
$u=\ \ 0.946178+0.536677I$ $a=\ \ 0.370509-0.948938I$ $b=-0.880008-0.511022I$	$-2.15295+6.49551I$	0
$u=\ \ 0.946178-0.536677I$ $a=\ \ 0.370509+0.948938I$ $b=-0.880008+0.511022I$	$-2.15295-6.49551I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.662436 + 0.623903I$ $a = 1.028290 + 0.834059I$ $b = 1.059350 - 0.145601I$	$0.96205 - 5.94168I$	0
$u = 0.662436 - 0.623903I$ $a = 1.028290 - 0.834059I$ $b = 1.059350 + 0.145601I$	$0.96205 + 5.94168I$	0
$u = -1.087020 + 0.168140I$ $a = 0.436478 + 0.788002I$ $b = -0.183843 + 0.032853I$	$3.59860 + 0.07650I$	0
$u = -1.087020 - 0.168140I$ $a = 0.436478 - 0.788002I$ $b = -0.183843 - 0.032853I$	$3.59860 - 0.07650I$	0
$u = -1.049320 + 0.371160I$ $a = -0.222543 - 0.140301I$ $b = 0.202947 - 0.964642I$	$-0.000052 + 0.961895I$	0
$u = -1.049320 - 0.371160I$ $a = -0.222543 + 0.140301I$ $b = 0.202947 + 0.964642I$	$-0.000052 - 0.961895I$	0
$u = -0.875918 + 0.103730I$ $a = 2.03283 - 1.31093I$ $b = 0.799114 + 0.511328I$	$3.04543 + 1.62804I$	0
$u = -0.875918 - 0.103730I$ $a = 2.03283 + 1.31093I$ $b = 0.799114 - 0.511328I$	$3.04543 - 1.62804I$	0
$u = -0.841656 + 0.044934I$ $a = 0.16926 + 1.84266I$ $b = -0.38662 - 1.39931I$	$-2.50794 + 2.48803I$	0
$u = -0.841656 - 0.044934I$ $a = 0.16926 - 1.84266I$ $b = -0.38662 + 1.39931I$	$-2.50794 - 2.48803I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.796866+0.244137I$ $a=-1.061210+0.068995I$ $b=\ \ 1.257450+0.612779I$	$3.30258+6.67390I$	0
$u=-0.796866-0.244137I$ $a=-1.061210-0.068995I$ $b=\ \ 1.257450-0.612779I$	$3.30258-6.67390I$	0
$u=\ \ 0.814659+0.159634I$ $a=-0.871559+0.272351I$ $b=\ \ 0.807308-0.821539I$	$0.94128-1.98249I$	0
$u=\ \ 0.814659-0.159634I$ $a=-0.871559-0.272351I$ $b=\ \ 0.807308+0.821539I$	$0.94128+1.98249I$	0
$u=\ \ 0.252024+1.147930I$ $a=-0.038822-0.459122I$ $b=\ \ 1.39368-0.48426I$	$3.97747+2.64873I$	0
$u=\ \ 0.252024-1.147930I$ $a=-0.038822+0.459122I$ $b=\ \ 1.39368+0.48426I$	$3.97747-2.64873I$	0
$u=-1.114150+0.402874I$ $a=\ \ 2.58183+1.28478I$ $b=-1.226860+0.255437I$	$9.37549-4.01193I$	0
$u=-1.114150-0.402874I$ $a=\ \ 2.58183-1.28478I$ $b=-1.226860-0.255437I$	$9.37549+4.01193I$	0
$u=-0.791974+0.157432I$ $a=\ \ 0.265101+0.320836I$ $b=-1.030410-0.730490I$	$-0.11674+3.08623I$	0
$u=-0.791974-0.157432I$ $a=\ \ 0.265101-0.320836I$ $b=-1.030410+0.730490I$	$-0.11674-3.08623I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.014317 + 0.799111I$ $a = -0.676822 + 0.294373I$ $b = 1.241560 - 0.201321I$	$4.16113 - 3.92910I$	0
$u = 0.014317 - 0.799111I$ $a = -0.676822 - 0.294373I$ $b = 1.241560 + 0.201321I$	$4.16113 + 3.92910I$	0
$u = -1.097850 + 0.496437I$ $a = -0.808536 - 0.037056I$ $b = -0.169521 - 0.579602I$	$6.15852 - 1.21053I$	0
$u = -1.097850 - 0.496437I$ $a = -0.808536 + 0.037056I$ $b = -0.169521 + 0.579602I$	$6.15852 + 1.21053I$	0
$u = 0.033762 + 0.791489I$ $a = -0.79759 - 1.72609I$ $b = -0.117292 - 0.771044I$	$-5.45941 + 1.36823I$	0
$u = 0.033762 - 0.791489I$ $a = -0.79759 + 1.72609I$ $b = -0.117292 + 0.771044I$	$-5.45941 - 1.36823I$	0
$u = 0.785570 + 0.051564I$ $a = -4.81959 - 0.73771I$ $b = 0.828167 - 0.031471I$	$-0.30806 - 5.16477I$	0
$u = 0.785570 - 0.051564I$ $a = -4.81959 + 0.73771I$ $b = 0.828167 + 0.031471I$	$-0.30806 + 5.16477I$	0
$u = -1.184560 + 0.266383I$ $a = -2.57917 - 0.56752I$ $b = 1.106790 - 0.256566I$	$4.24337 - 3.13114I$	0
$u = -1.184560 - 0.266383I$ $a = -2.57917 + 0.56752I$ $b = 1.106790 + 0.256566I$	$4.24337 + 3.13114I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.275379+1.183100I$ $a=\ \ 0.367775-0.409936I$ $b=-1.31774-0.54177I$	$3.41290+13.66070I$	0
$u=-0.275379-1.183100I$ $a=\ \ 0.367775+0.409936I$ $b=-1.31774+0.54177I$	$3.41290-13.66070I$	0
$u=\ \ 0.784212$ $a=\ \ 4.93069$ $b=-0.828307$	-4.42162	0
$u=\ \ 1.194880+0.268287I$ $a=-0.356072-0.444064I$ $b=\ \ 0.014716+1.171310I$	$1.95698+3.36078I$	0
$u=\ \ 1.194880-0.268287I$ $a=-0.356072+0.444064I$ $b=\ \ 0.014716-1.171310I$	$1.95698-3.36078I$	0
$u=\ \ 0.750525+0.971488I$ $a=-0.423895+0.819516I$ $b=\ \ 0.889804+0.129233I$	$-1.87142+1.91362I$	0
$u=\ \ 0.750525-0.971488I$ $a=-0.423895-0.819516I$ $b=\ \ 0.889804-0.129233I$	$-1.87142-1.91362I$	0
$u=-0.249738+0.717625I$ $a=\ \ 1.70201+0.75465I$ $b=-0.143646+0.490394I$	$-2.54043-4.81653I$	0
$u=-0.249738-0.717625I$ $a=\ \ 1.70201-0.75465I$ $b=-0.143646-0.490394I$	$-2.54043+4.81653I$	0
$u=\ \ 1.057840+0.659438I$ $a=\ \ 1.49849-1.64923I$ $b=-1.069830-0.095667I$	$7.74010+2.88014I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.057840 - 0.659438I$ $a = 1.49849 + 1.64923I$ $b = -1.069830 + 0.095667I$	$7.74010 - 2.88014I$	0
$u = -0.691215 + 0.294815I$ $a = 0.289608 - 1.087610I$ $b = 0.819546 - 0.317304I$	$1.38946 - 1.66923I$	0
$u = -0.691215 - 0.294815I$ $a = 0.289608 + 1.087610I$ $b = 0.819546 + 0.317304I$	$1.38946 + 1.66923I$	0
$u = -0.086248 + 0.741503I$ $a = -0.246964 + 0.667509I$ $b = 0.141184 + 0.757421I$	$3.30597 - 3.17657I$	0
$u = -0.086248 - 0.741503I$ $a = -0.246964 - 0.667509I$ $b = 0.141184 - 0.757421I$	$3.30597 + 3.17657I$	0
$u = 1.051730 + 0.682378I$ $a = -0.200801 + 0.021955I$ $b = 0.629989 - 0.128704I$	$-0.72570 + 4.16457I$	0
$u = 1.051730 - 0.682378I$ $a = -0.200801 - 0.021955I$ $b = 0.629989 + 0.128704I$	$-0.72570 - 4.16457I$	0
$u = 0.542256 + 1.134990I$ $a = -0.888463 - 0.217508I$ $b = 0.928594 - 0.125798I$	$-1.79231 + 0.58528I$	0
$u = 0.542256 - 1.134990I$ $a = -0.888463 + 0.217508I$ $b = 0.928594 + 0.125798I$	$-1.79231 - 0.58528I$	0
$u = 0.538354 + 0.507318I$ $a = -0.187718 - 0.615248I$ $b = -0.505655 + 0.830666I$	$-1.07550 - 1.11618I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.538354 - 0.507318I$ $a = -0.187718 + 0.615248I$ $b = -0.505655 - 0.830666I$	$-1.07550 + 1.11618I$	0
$u = 0.141501 + 1.253470I$ $a = 0.924660 + 0.167727I$ $b = -0.925758 + 0.178230I$	$-1.23918 - 4.98850I$	0
$u = 0.141501 - 1.253470I$ $a = 0.924660 - 0.167727I$ $b = -0.925758 - 0.178230I$	$-1.23918 + 4.98850I$	0
$u = 1.227100 + 0.388147I$ $a = 0.386210 + 0.443945I$ $b = 0.142871 - 1.021830I$	$7.19910 + 7.20219I$	0
$u = 1.227100 - 0.388147I$ $a = 0.386210 - 0.443945I$ $b = 0.142871 + 1.021830I$	$7.19910 - 7.20219I$	0
$u = 1.283860 + 0.197190I$ $a = 1.85782 - 0.24238I$ $b = -1.39271 + 0.39227I$	$12.15770 + 2.16342I$	0
$u = 1.283860 - 0.197190I$ $a = 1.85782 + 0.24238I$ $b = -1.39271 - 0.39227I$	$12.15770 - 2.16342I$	0
$u = 1.163390 + 0.588438I$ $a = 0.094949 - 0.291251I$ $b = -0.427811 + 0.447608I$	$0.72346 + 7.97520I$	0
$u = 1.163390 - 0.588438I$ $a = 0.094949 + 0.291251I$ $b = -0.427811 - 0.447608I$	$0.72346 - 7.97520I$	0
$u = 1.218890 + 0.469664I$ $a = -2.09340 + 0.77780I$ $b = 1.45635 + 0.24580I$	$7.68884 + 8.51436I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.218890 - 0.469664I$ $a = -2.09340 - 0.77780I$ $b = 1.45635 - 0.24580I$	$7.68884 - 8.51436I$	0
$u = 0.488312 + 0.487819I$ $a = 0.549771 + 0.405455I$ $b = 0.070979 - 0.755869I$	$-0.976204 + 0.110519I$	0
$u = 0.488312 - 0.487819I$ $a = 0.549771 - 0.405455I$ $b = 0.070979 + 0.755869I$	$-0.976204 - 0.110519I$	0
$u = -1.225560 + 0.463896I$ $a = -1.67421 - 1.18222I$ $b = 1.246410 - 0.082879I$	$7.75605 - 0.60215I$	0
$u = -1.225560 - 0.463896I$ $a = -1.67421 + 1.18222I$ $b = 1.246410 + 0.082879I$	$7.75605 + 0.60215I$	0
$u = 1.237590 + 0.437420I$ $a = 2.01148 - 0.66167I$ $b = -1.46536 - 0.39893I$	$6.37169 + 8.20229I$	0
$u = 1.237590 - 0.437420I$ $a = 2.01148 + 0.66167I$ $b = -1.46536 + 0.39893I$	$6.37169 - 8.20229I$	0
$u = -0.067862 + 0.681199I$ $a = 0.176085 - 0.260940I$ $b = -1.176730 + 0.387839I$	$2.58142 - 4.00230I$	0
$u = -0.067862 - 0.681199I$ $a = 0.176085 + 0.260940I$ $b = -1.176730 - 0.387839I$	$2.58142 + 4.00230I$	0
$u = -0.940533 + 0.941896I$ $a = -0.277371 - 0.435324I$ $b = -0.988739 - 0.802148I$	$6.24717 - 0.29908I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.940533-0.941896I$ $a=-0.277371+0.435324I$ $b=-0.988739+0.802148I$	$6.24717+0.29908I$	0
$u=-0.283208+1.306100I$ $a=\ \ 0.390236+0.305867I$ $b=-1.294480+0.218177I$	$1.63786-4.30834I$	0
$u=-0.283208-1.306100I$ $a=\ \ 0.390236-0.305867I$ $b=-1.294480-0.218177I$	$1.63786+4.30834I$	0
$u=-0.392797+1.286680I$ $a=-0.267809+0.366326I$ $b=\ \ 1.34240+0.55580I$	$-0.76603+6.89558I$	0
$u=-0.392797-1.286680I$ $a=-0.267809-0.366326I$ $b=\ \ 1.34240-0.55580I$	$-0.76603-6.89558I$	0
$u=-0.327204+0.555531I$ $a=\ \ 0.636996-1.229940I$ $b=-1.111360-0.326258I$	$7.00072+0.30811I$	0
$u=-0.327204-0.555531I$ $a=\ \ 0.636996+1.229940I$ $b=-1.111360+0.326258I$	$7.00072-0.30811I$	0
$u=\ \ 1.376410+0.069310I$ $a=-1.71327+0.08014I$ $b=\ \ 1.43509-0.41398I$	$6.96615-2.50132I$	0
$u=\ \ 1.376410-0.069310I$ $a=-1.71327-0.08014I$ $b=\ \ 1.43509+0.41398I$	$6.96615+2.50132I$	0
$u=-1.269100+0.552397I$ $a=-0.523171+0.253472I$ $b=-0.194441-1.243000I$	$3.00122-13.54100I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.269100-0.552397I$ $a=-0.523171-0.253472I$ $b=-0.194441+1.243000I$	$3.00122+13.54100I$	0
$u=1.308780+0.465341I$ $a=1.83742-0.78805I$ $b=-1.34417-0.51184I$	$6.33671+9.08273I$	0
$u=1.308780-0.465341I$ $a=1.83742+0.78805I$ $b=-1.34417+0.51184I$	$6.33671-9.08273I$	0
$u=1.306810+0.475630I$ $a=-1.89328+0.92128I$ $b=1.286200+0.577959I$	$10.7154+12.9263I$	0
$u=1.306810-0.475630I$ $a=-1.89328-0.92128I$ $b=1.286200-0.577959I$	$10.7154-12.9263I$	0
$u=-1.352590+0.377037I$ $a=-1.48051-0.51240I$ $b=1.59871+0.29351I$	$9.28418-7.57796I$	0
$u=-1.352590-0.377037I$ $a=-1.48051+0.51240I$ $b=1.59871-0.29351I$	$9.28418+7.57796I$	0
$u=1.36189+0.38376I$ $a=0.327869+0.177645I$ $b=0.309449-1.229080I$	$4.22039-3.23688I$	0
$u=1.36189-0.38376I$ $a=0.327869-0.177645I$ $b=0.309449+1.229080I$	$4.22039+3.23688I$	0
$u=-1.40996+0.21702I$ $a=1.87955+0.05582I$ $b=-1.003870+0.065130I$	$5.05593-0.34565I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.40996-0.21702I$ $a=\ \ 1.87955-0.05582I$ $b=-1.003870-0.065130I$	$5.05593+0.34565I$	0
$u=-1.32026+0.58348I$ $a=\ \ 0.429953-0.159621I$ $b=\ \ 0.314367+1.291950I$	$-1.06924-7.01836I$	0
$u=-1.32026-0.58348I$ $a=\ \ 0.429953+0.159621I$ $b=\ \ 0.314367-1.291950I$	$-1.06924+7.01836I$	0
$u=\ \ 1.27599+0.67937I$ $a=-1.58847+0.91676I$ $b=\ \ 1.059540+0.231478I$	$0.81247+6.07654I$	0
$u=\ \ 1.27599-0.67937I$ $a=-1.58847-0.91676I$ $b=\ \ 1.059540-0.231478I$	$0.81247-6.07654I$	0
$u=\ \ 1.33885+0.58073I$ $a=\ \ 1.76165-0.76077I$ $b=-1.076530-0.340845I$	$2.70539+11.25400I$	0
$u=\ \ 1.33885-0.58073I$ $a=\ \ 1.76165+0.76077I$ $b=-1.076530+0.340845I$	$2.70539-11.25400I$	0
$u=-1.30757+0.65669I$ $a=\ \ 1.58455+1.05180I$ $b=-1.35553+0.64430I$	$6.7085-20.1549I$	0
$u=-1.30757-0.65669I$ $a=\ \ 1.58455-1.05180I$ $b=-1.35553-0.64430I$	$6.7085+20.1549I$	0
$u=-1.37349+0.51903I$ $a=-1.311600-0.480971I$ $b=\ \ 1.259940+0.325657I$	$10.47850+2.18356I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.37349-0.51903I$ $a=-1.311600+0.480971I$ $b=\ \ 1.259940-0.325657I$	$10.47850-2.18356I$	0
$u=-1.37819+0.50716I$ $a=\ \ 1.44237+0.63470I$ $b=-1.221120+0.079457I$	$5.55494-1.82210I$	0
$u=-1.37819-0.50716I$ $a=\ \ 1.44237-0.63470I$ $b=-1.221120-0.079457I$	$5.55494+1.82210I$	0
$u=-0.22057+1.45474I$ $a=-0.127654-1.048490I$ $b=\ \ 0.15390-1.45082I$	$-5.07831+0.54261I$	0
$u=-0.22057-1.45474I$ $a=-0.127654+1.048490I$ $b=\ \ 0.15390+1.45082I$	$-5.07831-0.54261I$	0
$u=-1.42771+0.44318I$ $a=\ \ 1.40615+0.46494I$ $b=-1.42123-0.11571I$	$6.18667-2.09350I$	0
$u=-1.42771-0.44318I$ $a=\ \ 1.40615-0.46494I$ $b=-1.42123+0.11571I$	$6.18667+2.09350I$	0
$u=-1.32376+0.69830I$ $a=-1.44255-1.02867I$ $b=\ \ 1.34377-0.66711I$	$2.36737-13.86820I$	0
$u=-1.32376-0.69830I$ $a=-1.44255+1.02867I$ $b=\ \ 1.34377+0.66711I$	$2.36737+13.86820I$	0
$u=-1.24712+0.84386I$ $a=\ \ 1.08987+1.19487I$ $b=-1.24793+0.76502I$	$7.40283-6.91839I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.24712-0.84386I$ $a=1.08987-1.19487I$ $b=-1.24793-0.76502I$	$7.40283+6.91839I$	0
$u=1.41867+0.51798I$ $a=-1.46126+0.74622I$ $b=1.45701+0.63495I$	$8.02706+3.82363I$	0
$u=1.41867-0.51798I$ $a=-1.46126-0.74622I$ $b=1.45701-0.63495I$	$8.02706-3.82363I$	0
$u=1.51830+0.17387I$ $a=1.51539-0.19146I$ $b=-1.42599+0.37167I$	$10.05230-8.50067I$	0
$u=1.51830-0.17387I$ $a=1.51539+0.19146I$ $b=-1.42599-0.37167I$	$10.05230+8.50067I$	0
$u=0.168197+0.431680I$ $a=0.875183-0.334368I$ $b=-0.201001-0.533588I$	$-0.915726-0.687361I$	0
$u=0.168197-0.431680I$ $a=0.875183+0.334368I$ $b=-0.201001+0.533588I$	$-0.915726+0.687361I$	0
$u=-0.343804+0.090921I$ $a=0.94819-1.32544I$ $b=0.941762-0.385718I$	$1.45487-1.58972I$	$-2.00000-2.74536I$
$u=-0.343804-0.090921I$ $a=0.94819+1.32544I$ $b=0.941762+0.385718I$	$1.45487+1.58972I$	$-2.00000+2.74536I$
$u=0.280701+0.097255I$ $a=-0.97322+1.50126I$ $b=0.690430-0.592461I$	$0.71411-2.06955I$	$-3.17684+3.40929I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.280701-0.097255I$		
$a=$	$-0.97322-1.50126I$	$0.71411+2.06955I$	$-3.17684-3.40929I$
$b=$	$0.690430+0.592461I$		

II.

$\boldsymbol{I_2^u = \langle -1.30\times10^{27}u^{42}+5.59\times10^{27}u^{41}+\cdots+5.18\times10^{24}b-1.73\times10^{27},\ -5.05\times10^{27}u^{42}+2.25\times10^{28}u^{41}+\cdots+5.18\times10^{24}a-8.77\times10^{27},\ u^{43}-5u^{42}+\cdots+9u-1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix}1\\0\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}0\\u\end{pmatrix}$$

$$a_3 = \begin{pmatrix}976.290u^{42} - 4339.64u^{41} + \cdots - 12563.5u + 1694.59\\251.254u^{42} - 1079.06u^{41} + \cdots - 2631.38u + 334.926\end{pmatrix}$$

$$a_9 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

$$a_7 = \begin{pmatrix}690.201u^{42} - 3223.52u^{41} + \cdots - 11234.8u + 1666.48\\1063.08u^{42} - 4649.80u^{41} + \cdots - 12523.5u + 1690.74\end{pmatrix}$$

$$a_2 = \begin{pmatrix}1946.84u^{42} - 8537.33u^{41} + \cdots - 22943.6u + 3065.48\\-1757.20u^{42} + 7761.50u^{41} + \cdots + 21933.8u - 3006.41\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-381.102u^{42} + 1690.92u^{41} + \cdots + 4259.64u - 572.007\\-571.317u^{42} + 2488.17u^{41} + \cdots + 6264.83u - 823.904\end{pmatrix}$$

$$a_6 = \begin{pmatrix}-417.569u^{42} + 1685.77u^{41} + \cdots + 2645.87u - 251.748\\1435.87u^{42} - 6302.74u^{41} + \cdots - 17081.9u + 2320.31\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-3563.78u^{42} + 15715.5u^{41} + \cdots + 43934.5u - 5998.17\\3561.78u^{42} - 15706.5u^{41} + \cdots - 43899.5u + 5987.17\end{pmatrix}$$

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

$$a_5 = \begin{pmatrix}-196.119u^{42} + 664.940u^{41} + \cdots - 606.796u + 222.805\\1214.42u^{42} - 5281.91u^{41} + \cdots - 13829.2u + 1845.76\end{pmatrix}$$

$$a_4 = \begin{pmatrix}-5669.06u^{42} + 25125.2u^{41} + \cdots + 72661.1u - 10052.1\\2770.71u^{42} - 12334.0u^{41} + \cdots - 36228.9u + 5041.16\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= -\frac{39731743503703556572717582173}{5176114318849511714698289}u^{42} + \frac{176212969798214825520092916434}{5176114318849511714698289}u^{41} + \cdots + \frac{52885069985881857521298573187 0}{5176114318849511714698289}u - \frac{7335632411336893149057594 6909}{5176114318849511714698289}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{43} - 7u^{42} + \cdots + 10u - 1$
c_2	$u^{43} - 10u^{41} + \cdots - 4u - 1$
c_3	$u^{43} - 2u^{41} + \cdots + 4u - 1$
c_4	$u^{43} + 7u^{42} + \cdots + 10u + 1$
c_5	$u^{43} + 4u^{42} + \cdots - 2u - 1$
c_6	$u^{43} + 13u^{42} + \cdots - 7u + 1$
c_7	$u^{43} - 10u^{41} + \cdots - 4u + 1$
c_8	$u^{43} - 5u^{42} + \cdots + 9u - 1$
c_9	$u^{43} + 8u^{42} + \cdots - 6u + 1$
c_{10}	$u^{43} - 4u^{42} + \cdots - 2u + 1$
c_{11}	$u^{43} + 5u^{42} + \cdots + 9u + 1$
c_{12}	$u^{43} + u^{42} + \cdots - 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{43} + 27y^{42} + \cdots - 18y - 1$
c_2, c_7	$y^{43} - 20y^{42} + \cdots + 32y - 1$
c_3	$y^{43} - 4y^{42} + \cdots - 30y - 1$
c_5, c_{10}	$y^{43} - 4y^{42} + \cdots - 16y - 1$
c_6	$y^{43} + 15y^{42} + \cdots + 43y - 1$
c_8, c_{11}	$y^{43} - 15y^{42} + \cdots + 27y - 1$
c_9	$y^{43} - 24y^{42} + \cdots - 10y - 1$
c_{12}	$y^{43} + 3y^{42} + \cdots - 112y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.018036 + 1.005850I$ $a = -0.865587 - 0.572541I$ $b = 0.703586 - 0.069280I$	$-1.55180 - 4.33690I$	0
$u = 0.018036 - 1.005850I$ $a = -0.865587 + 0.572541I$ $b = 0.703586 + 0.069280I$	$-1.55180 + 4.33690I$	0
$u = -0.967617 + 0.119302I$ $a = -0.548131 + 0.149417I$ $b = 0.514103 - 0.815458I$	$1.61658 - 2.29495I$	$4.61864 + 2.93274I$
$u = -0.967617 - 0.119302I$ $a = -0.548131 - 0.149417I$ $b = 0.514103 + 0.815458I$	$1.61658 + 2.29495I$	$4.61864 - 2.93274I$
$u = -1.020430 + 0.293177I$ $a = 0.354342 - 0.854539I$ $b = 0.693053 + 0.548437I$	$3.33625 + 1.27021I$	0
$u = -1.020430 - 0.293177I$ $a = 0.354342 + 0.854539I$ $b = 0.693053 - 0.548437I$	$3.33625 - 1.27021I$	0
$u = 0.967778 + 0.438117I$ $a = 1.164550 - 0.206473I$ $b = -0.756698 - 0.918811I$	$-1.36209 + 4.95710I$	0
$u = 0.967778 - 0.438117I$ $a = 1.164550 + 0.206473I$ $b = -0.756698 + 0.918811I$	$-1.36209 - 4.95710I$	0
$u = -0.783383 + 0.470302I$ $a = -0.204859 - 1.011670I$ $b = -0.858982 + 0.087111I$	$7.75302 - 2.17548I$	$9.56983 + 2.53983I$
$u = -0.783383 - 0.470302I$ $a = -0.204859 + 1.011670I$ $b = -0.858982 - 0.087111I$	$7.75302 + 2.17548I$	$9.56983 - 2.53983I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.898121+0.033912I$ $a=-2.34558+3.49066I$ $b=-0.856628+0.518902I$	$3.05821-2.10222I$	$-47.3234-50.9827I$
$u=-0.898121-0.033912I$ $a=-2.34558-3.49066I$ $b=-0.856628-0.518902I$	$3.05821+2.10222I$	$-47.3234+50.9827I$
$u=0.675502+0.929007I$ $a=0.479383-0.025545I$ $b=-0.762703+0.350472I$	$-2.75030+0.36331I$	0
$u=0.675502-0.929007I$ $a=0.479383+0.025545I$ $b=-0.762703-0.350472I$	$-2.75030-0.36331I$	0
$u=-0.770362+0.201775I$ $a=0.277954-0.244414I$ $b=0.767500-0.404339I$	$1.87369-2.08777I$	$5.28642+7.07196I$
$u=-0.770362-0.201775I$ $a=0.277954+0.244414I$ $b=0.767500+0.404339I$	$1.87369+2.08777I$	$5.28642-7.07196I$
$u=1.070160+0.552468I$ $a=0.738078-0.337807I$ $b=-0.415913-0.621412I$	$-1.36368+5.06561I$	0
$u=1.070160-0.552468I$ $a=0.738078+0.337807I$ $b=-0.415913+0.621412I$	$-1.36368-5.06561I$	0
$u=-1.112120+0.484369I$ $a=1.95574+1.34639I$ $b=-1.139400+0.010371I$	$8.99490-1.86585I$	0
$u=-1.112120-0.484369I$ $a=1.95574-1.34639I$ $b=-1.139400-0.010371I$	$8.99490+1.86585I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.115720 + 0.510206I$ $a = -0.258006 + 1.066870I$ $b = 0.490522 + 0.130491I$	$1.55198 + 8.82913I$	0
$u = 1.115720 - 0.510206I$ $a = -0.258006 - 1.066870I$ $b = 0.490522 - 0.130491I$	$1.55198 - 8.82913I$	0
$u = 0.739430 + 0.158190I$ $a = 0.16306 - 1.69152I$ $b = -0.457958 + 1.315660I$	$-2.87881 - 2.25807I$	$-11.65616 - 2.03401I$
$u = 0.739430 - 0.158190I$ $a = 0.16306 + 1.69152I$ $b = -0.457958 - 1.315660I$	$-2.87881 + 2.25807I$	$-11.65616 + 2.03401I$
$u = 0.858125 + 0.903741I$ $a = -0.167400 + 0.587060I$ $b = -1.001110 + 0.631626I$	$5.77802 + 0.61199I$	0
$u = 0.858125 - 0.903741I$ $a = -0.167400 - 0.587060I$ $b = -1.001110 - 0.631626I$	$5.77802 - 0.61199I$	0
$u = -0.179188 + 1.256430I$ $a = -0.373285 - 0.110297I$ $b = 1.260690 - 0.185553I$	$1.14741 - 4.73512I$	0
$u = -0.179188 - 1.256430I$ $a = -0.373285 + 0.110297I$ $b = 1.260690 + 0.185553I$	$1.14741 + 4.73512I$	0
$u = 1.266850 + 0.376482I$ $a = -2.00362 + 0.42464I$ $b = 1.48678 + 0.29090I$	$6.43713 + 9.46442I$	0
$u = 1.266850 - 0.376482I$ $a = -2.00362 - 0.42464I$ $b = 1.48678 - 0.29090I$	$6.43713 - 9.46442I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.256468 + 0.623041I$ $a = 0.63391 - 1.37530I$ $b = -1.103980 - 0.529718I$	$-1.27564 + 4.14509I$	$-4.10122 - 5.10933I$
$u = 0.256468 - 0.623041I$ $a = 0.63391 + 1.37530I$ $b = -1.103980 + 0.529718I$	$-1.27564 - 4.14509I$	$-4.10122 + 5.10933I$
$u = 0.122323 + 1.392290I$ $a = -0.100494 + 1.092750I$ $b = 0.004112 + 1.384690I$	$-5.15083 - 0.32395I$	0
$u = 0.122323 - 1.392290I$ $a = -0.100494 - 1.092750I$ $b = 0.004112 - 1.384690I$	$-5.15083 + 0.32395I$	0
$u = 1.247040 + 0.664885I$ $a = 1.49607 - 1.14603I$ $b = -1.34820 - 0.52760I$	$7.37503 + 5.86162I$	0
$u = 1.247040 - 0.664885I$ $a = 1.49607 + 1.14603I$ $b = -1.34820 + 0.52760I$	$7.37503 - 5.86162I$	0
$u = 0.581841 + 0.029202I$ $a = -2.60703 + 1.14090I$ $b = 1.301390 + 0.502509I$	$2.92133 + 7.68807I$	$0.83209 - 7.89037I$
$u = 0.581841 - 0.029202I$ $a = -2.60703 - 1.14090I$ $b = 1.301390 - 0.502509I$	$2.92133 - 7.68807I$	$0.83209 + 7.89037I$
$u = 0.522271 + 0.225026I$ $a = 4.03290 - 0.02892I$ $b = 0.537672 + 0.044936I$	$-0.91454 - 5.09998I$	$-7.09887 + 2.47578I$
$u = 0.522271 - 0.225026I$ $a = 4.03290 + 0.02892I$ $b = 0.537672 - 0.044936I$	$-0.91454 + 5.09998I$	$-7.09887 - 2.47578I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.42156+0.41997I$ $a=-1.56789-0.55679I$ $b=\ \ 1.201850-0.125310I$	$5.72726-1.48386I$	0
$u=-1.42156-0.41997I$ $a=-1.56789+0.55679I$ $b=\ \ 1.201850+0.125310I$	$5.72726+1.48386I$	0
$u=\ \ 0.422479$ $a=-5.50822$ $b=-0.519385$	-4.97926	-11.8730

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{43}-7u^{42}+\cdots+10u-1)(u^{161}-6u^{160}+\cdots-60405u+2525)$
c_2	$(u^{43}-10u^{41}+\cdots-4u-1)(u^{161}+u^{160}+\cdots+62875u+20690)$
c_3	$(u^{43}-2u^{41}+\cdots+4u-1)(u^{161}+u^{160}+\cdots+6424407u-1081037)$
c_4	$(u^{43}+7u^{42}+\cdots+10u+1)(u^{161}-6u^{160}+\cdots-60405u+2525)$
c_5	$(u^{43}+4u^{42}+\cdots-2u-1)(u^{161}-5u^{160}+\cdots-34377u-24287)$
c_6	$(u^{43}+13u^{42}+\cdots-7u+1)$ $\cdot(u^{161}+4u^{160}+\cdots+209706558586u+17633051719)$
c_7	$(u^{43}-10u^{41}+\cdots-4u+1)(u^{161}+u^{160}+\cdots+62875u+20690)$
c_8	$(u^{43}-5u^{42}+\cdots+9u-1)(u^{161}-43u^{159}+\cdots+23192u+22751)$
c_9	$(u^{43}+8u^{42}+\cdots-6u+1)$ $\cdot(u^{161}+5u^{160}+\cdots+5900566245u-806431049)$
c_{10}	$(u^{43}-4u^{42}+\cdots-2u+1)(u^{161}-5u^{160}+\cdots-34377u-24287)$
c_{11}	$(u^{43}+5u^{42}+\cdots+9u+1)(u^{161}-43u^{159}+\cdots+23192u+22751)$
c_{12}	$(u^{43}+u^{42}+\cdots-4u+1)$ $\cdot(u^{161}+2u^{160}+\cdots+297854463u-20528044)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{43} + 27y^{42} + \cdots - 18y - 1)$ $\cdot (y^{161} + 104y^{160} + \cdots - 44901925y - 6375625)$
c_2, c_7	$(y^{43} - 20y^{42} + \cdots + 32y - 1)$ $\cdot (y^{161} - 95y^{160} + \cdots + 56848574785y - 428076100)$
c_3	$(y^{43} - 4y^{42} + \cdots - 30y - 1)$ $\cdot (y^{161} + 13y^{160} + \cdots - 81817610068445y - 1168640995369)$
c_5, c_{10}	$(y^{43} - 4y^{42} + \cdots - 16y - 1)$ $\cdot (y^{161} - 71y^{160} + \cdots - 8324930855y - 589858369)$
c_6	$(y^{43} + 15y^{42} + \cdots + 43y - 1)$ $\cdot (y^{161} - 44y^{160} + \cdots + 4.98 \times 10^{21}y - 3.11 \times 10^{20})$
c_8, c_{11}	$(y^{43} - 15y^{42} + \cdots + 27y - 1)$ $\cdot (y^{161} - 86y^{160} + \cdots + 30379536528y - 517608001)$
c_9	$(y^{43} - 24y^{42} + \cdots - 10y - 1)$ $\cdot (y^{161} + 29y^{160} + \cdots - 3.95 \times 10^{19}y - 6.50 \times 10^{17})$
c_{12}	$(y^{43} + 3y^{42} + \cdots - 112y - 1)$ $\cdot (y^{161} + 36y^{160} + \cdots - 32685559262828287y - 421400590465936)$