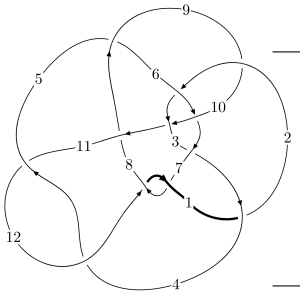
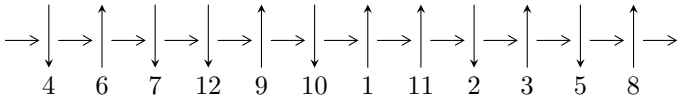
$12a_{0887}$ $(K12a_{0887})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -7.22780 \times 10^{1306} u^{189} + 2.45986 \times 10^{1306} u^{188} + \cdots + 1.66697 \times 10^{1306} b - 2.31380 \times 10^{1310},$$
$$6.30404 \times 10^{1315} u^{189} + 1.68808 \times 10^{1315} u^{188} + \cdots + 5.96446 \times 10^{1314} a - 5.48078 \times 10^{1319},$$
$$u^{190} + 67u^{188} + \cdots - 138006u - 17447 \rangle$$
$$I_2^u = \langle 9.76518 \times 10^{48} u^{45} + 1.28953 \times 10^{49} u^{44} + \cdots + 7.60878 \times 10^{48} b - 1.58720 \times 10^{49},$$
$$4.78561 \times 10^{49} u^{45} + 3.77004 \times 10^{49} u^{44} + \cdots + 1.52176 \times 10^{49} a - 4.81006 \times 10^{49},\ u^{46} + u^{45} + \cdots - 2u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 236 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. $\boldsymbol{I_1^u = \langle -7.23 \times 10^{1306} u^{189} + 2.46 \times 10^{1306} u^{188} + \cdots + 1.67 \times 10^{1306} b - 2.31 \times 10^{1310},\ 6.30 \times 10^{1315} u^{189} + 1.69 \times 10^{1315} u^{188} + \cdots + 5.96 \times 10^{1314} a - 5.48 \times 10^{1319},\ u^{190} + 67 u^{188} + \cdots - 138006 u - 17447 \rangle}$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -10.5693 u^{189} - 2.83023 u^{188} + \cdots + 945060. u + 91890.7 \\ 4.33589 u^{189} - 1.47565 u^{188} + \cdots + 15990.1 u + 13880.3 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -6.23344 u^{189} - 4.30588 u^{188} + \cdots + 961050. u + 105771. \\ 4.33589 u^{189} - 1.47565 u^{188} + \cdots + 15990.1 u + 13880.3 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 10.7355 u^{189} + 14.2863 u^{188} + \cdots - 2.78517 \times 10^6 u - 323181. \\ -4.61634 u^{189} - 0.542985 u^{188} + \cdots + 199375. u + 10795.3 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -8.78606 u^{189} - 1.37271 u^{188} + \cdots + 631875. u + 56427.2 \\ 5.22398 u^{189} - 1.52033 u^{188} + \cdots - 15094.2 u + 12049.1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -5.04397 u^{189} - 0.399550 u^{188} + \cdots + 172980. u + 5773.97 \\ 1.95804 u^{189} - 1.48337 u^{188} + \cdots + 114320. u + 22056.1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 23.6821 u^{189} - 2.17840 u^{188} + \cdots - 309586. u + 26789.7 \\ -2.09425 u^{189} + 0.305661 u^{188} + \cdots - 172398. u - 26443.0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 15.2253 u^{189} + 0.780421 u^{188} + \cdots - 624926. u - 33479.8 \\ -0.887353 u^{189} + 6.08852 u^{188} + \cdots - 1.08620 \times 10^6 u - 143525. \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -5.78169 u^{189} - 5.37501 u^{188} + \cdots + 1.18082 \times 10^6 u + 131470. \\ 4.03607 u^{189} - 1.68248 u^{188} + \cdots + 92118.3 u + 24863.1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4.73829 u^{189} - 0.820069 u^{188} + \cdots + 142554. u + 11834.1$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{190} + 5u^{189} + \cdots + 6665u + 199$
c_2	$u^{190} - 9u^{189} + \cdots - 4u + 1$
c_3	$u^{190} - 2u^{189} + \cdots + 670900166u - 53862673$
c_4, c_{11}	$u^{190} + 67u^{188} + \cdots + 138006u - 17447$
c_5	$u^{190} + 2u^{189} + \cdots - 670900166u - 53862673$
c_6	$u^{190} + 9u^{189} + \cdots + 4u + 1$
c_7, c_{12}	$u^{190} + 67u^{188} + \cdots - 138006u - 17447$
c_8	$u^{190} - 5u^{189} + \cdots - 6665u + 199$
c_9	$u^{190} - u^{189} + \cdots + 29u - 1$
c_{10}	$u^{190} + u^{189} + \cdots - 29u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{190} - 19y^{189} + \cdots + 1497025y + 39601$
c_2, c_6	$y^{190} - 23y^{189} + \cdots - 252y + 1$
c_3, c_5	$y^{190} - 88y^{189} + \cdots - 175498183281035406y + 2901187542704929$
c_4, c_7, c_{11} c_{12}	$y^{190} + 134y^{189} + \cdots + 46421594y + 304397809$
c_9, c_{10}	$y^{190} + 23y^{189} + \cdots - 149y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.864219+0.506539I$ $a=\ \ 0.21689+2.29034I$ $b=-0.186777-1.246840I$	$3.78459-4.20222I$	0
$u=-0.864219-0.506539I$ $a=\ \ 0.21689-2.29034I$ $b=-0.186777+1.246840I$	$3.78459+4.20222I$	0
$u=-0.638373+0.767389I$ $a=\ \ 0.60552-2.35236I$ $b=\ \ 0.080709+1.272450I$	$5.21796-2.67365I$	0
$u=-0.638373-0.767389I$ $a=\ \ 0.60552+2.35236I$ $b=\ \ 0.080709-1.272450I$	$5.21796+2.67365I$	0
$u=\ \ 0.031691+0.990579I$ $a=-1.37887+0.60361I$ $b=-0.698418-1.148540I$	$-1.80089-1.83392I$	0
$u=\ \ 0.031691-0.990579I$ $a=-1.37887-0.60361I$ $b=-0.698418+1.148540I$	$-1.80089+1.83392I$	0
$u=-0.340233+0.924142I$ $a=-1.17546+1.01173I$ $b=-0.84402-1.34401I$	$2.65028-5.98733I$	0
$u=-0.340233-0.924142I$ $a=-1.17546-1.01173I$ $b=-0.84402+1.34401I$	$2.65028+5.98733I$	0
$u=-0.098449+0.972581I$ $a=-0.58409+1.58122I$ $b=-0.16055-1.59671I$	$2.01485-3.55741I$	0
$u=-0.098449-0.972581I$ $a=-0.58409-1.58122I$ $b=-0.16055+1.59671I$	$2.01485+3.55741I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.119296+0.965852I$		
$a=$	$0.017329-0.417748I$	$0.94548+7.07618I$	0
$b=$	$0.71740+2.20998I$		
$u=$	$0.119296-0.965852I$		
$a=$	$0.017329+0.417748I$	$0.94548-7.07618I$	0
$b=$	$0.71740-2.20998I$		
$u=$	$0.613232+0.823675I$		
$a=$	$0.599902+1.103490I$	$0.64534+2.48885I$	0
$b=$	$0.354486-1.137680I$		
$u=$	$0.613232-0.823675I$		
$a=$	$0.599902-1.103490I$	$0.64534-2.48885I$	0
$b=$	$0.354486+1.137680I$		
$u=$	$0.565862+0.787510I$		
$a=$	$0.838198+0.988520I$	$0.82965+2.65878I$	0
$b=$	$0.612638-1.195610I$		
$u=$	$0.565862-0.787510I$		
$a=$	$0.838198-0.988520I$	$0.82965-2.65878I$	0
$b=$	$0.612638+1.195610I$		
$u=$	$-0.102463+0.962021I$		
$a=$	$-1.50913-0.91650I$	$-3.02895-2.54150I$	0
$b=$	$-0.282652+0.856538I$		
$u=$	$-0.102463-0.962021I$		
$a=$	$-1.50913+0.91650I$	$-3.02895+2.54150I$	0
$b=$	$-0.282652-0.856538I$		
$u=$	$0.048183+1.034830I$		
$a=$	$0.128851+0.373299I$	$-1.68569+1.98753I$	0
$b=$	$0.826802-0.254280I$		
$u=$	$0.048183-1.034830I$		
$a=$	$0.128851-0.373299I$	$-1.68569-1.98753I$	0
$b=$	$0.826802+0.254280I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.143691+0.946403I$ $a=-0.858770+0.173939I$ $b=-0.96058-1.31302I$	$2.04273-1.92425I$	0
$u=-0.143691-0.946403I$ $a=-0.858770-0.173939I$ $b=-0.96058+1.31302I$	$2.04273+1.92425I$	0
$u=-0.552887+0.776994I$ $a=-1.21485+1.44966I$ $b=-0.552887-0.776994I$	$-5.13061I$	0
$u=-0.552887-0.776994I$ $a=-1.21485-1.44966I$ $b=-0.552887+0.776994I$	$5.13061I$	0
$u=0.671960+0.807813I$ $a=0.339432+0.012190I$ $b=-0.189179-0.240700I$	$0.60621+2.56467I$	0
$u=0.671960-0.807813I$ $a=0.339432-0.012190I$ $b=-0.189179+0.240700I$	$0.60621-2.56467I$	0
$u=-0.155008+1.051230I$ $a=0.50273-1.94901I$ $b=0.204387+1.100630I$	$-2.86286-4.82970I$	0
$u=-0.155008-1.051230I$ $a=0.50273+1.94901I$ $b=0.204387-1.100630I$	$-2.86286+4.82970I$	0
$u=0.906525+0.226741I$ $a=0.28195+1.46628I$ $b=-0.252765-1.375860I$	$7.99660+1.83983I$	0
$u=0.906525-0.226741I$ $a=0.28195-1.46628I$ $b=-0.252765+1.375860I$	$7.99660-1.83983I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.384605+1.005630I$		
$a=$	$0.530220+0.793332I$	$-0.91300+3.25049I$	0
$b=$	$0.838496-0.137029I$		
$u=$	$0.384605-1.005630I$		
$a=$	$0.530220-0.793332I$	$-0.91300-3.25049I$	0
$b=$	$0.838496+0.137029I$		
$u=$	$0.081765+1.085650I$		
$a=$	$2.30031+1.57765I$	$-1.03850+9.71041I$	0
$b=$	$0.358880-1.125930I$		
$u=$	$0.081765-1.085650I$		
$a=$	$2.30031-1.57765I$	$-1.03850-9.71041I$	0
$b=$	$0.358880+1.125930I$		
$u=$	$0.994147+0.447540I$		
$a=$	$-0.477464-1.163730I$	$6.58758-7.24408I$	0
$b=$	$0.390802+1.300370I$		
$u=$	$0.994147-0.447540I$		
$a=$	$-0.477464+1.163730I$	$6.58758+7.24408I$	0
$b=$	$0.390802-1.300370I$		
$u=$	$-0.282652+0.856538I$		
$a=$	$1.89217-0.34272I$	$3.02895+2.54150I$	0
$b=$	$-0.102463+0.962021I$		
$u=$	$-0.282652-0.856538I$		
$a=$	$1.89217+0.34272I$	$3.02895-2.54150I$	0
$b=$	$-0.102463-0.962021I$		
$u=$	$-0.013025+0.889984I$		
$a=$	$0.58377-2.54777I$	$4.14677-4.21274I$	0
$b=$	$0.165168+1.387130I$		
$u=$	$-0.013025-0.889984I$		
$a=$	$0.58377+2.54777I$	$4.14677+4.21274I$	0
$b=$	$0.165168-1.387130I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.028930+0.419517I$ $a=\ \ 0.71297-1.37414I$ $b=-0.178544+1.263810I$	$5.05665+1.27721I$	0
$u=-1.028930-0.419517I$ $a=\ \ 0.71297+1.37414I$ $b=-0.178544-1.263810I$	$5.05665-1.27721I$	0
$u=-0.835416+0.282230I$ $a=-0.09605-1.80726I$ $b=\ \ 0.342270+1.368570I$	$4.52184-6.28312I$	0
$u=-0.835416-0.282230I$ $a=-0.09605+1.80726I$ $b=\ \ 0.342270-1.368570I$	$4.52184+6.28312I$	0
$u=\ \ 0.204387+1.100630I$ $a=-0.895943+0.544333I$ $b=-0.155008+1.051230I$	$2.86286+4.82970I$	0
$u=\ \ 0.204387-1.100630I$ $a=-0.895943-0.544333I$ $b=-0.155008-1.051230I$	$2.86286-4.82970I$	0
$u=\ \ 0.724429+0.492186I$ $a=-0.221354-0.003732I$ $b=\ \ 0.218270-0.363227I$	$1.06409+2.53770I$	0
$u=\ \ 0.724429-0.492186I$ $a=-0.221354+0.003732I$ $b=\ \ 0.218270+0.363227I$	$1.06409-2.53770I$	0
$u=\ \ 0.098846+1.120500I$ $a=-1.32602-0.75884I$ $b=-0.547775+1.014710I$	$-4.40175+2.27220I$	0
$u=\ \ 0.098846-1.120500I$ $a=-1.32602+0.75884I$ $b=-0.547775-1.014710I$	$-4.40175-2.27220I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.038169+0.872769I$ $a=\ \ 3.19060+0.29768I$ $b=-0.038169-0.872769I$	$-9.40180I$	0
$u=-0.038169-0.872769I$ $a=\ \ 3.19060-0.29768I$ $b=-0.038169+0.872769I$	$9.40180I$	0
$u=\ \ 0.826802+0.254280I$ $a=\ \ 0.423229+1.072870I$ $b=\ \ 0.048183-1.034830I$	$1.68569+1.98753I$	0
$u=\ \ 0.826802-0.254280I$ $a=\ \ 0.423229-1.072870I$ $b=\ \ 0.048183+1.034830I$	$1.68569-1.98753I$	0
$u=-0.025027+1.137880I$ $a=-0.93249+1.12429I$ $b=-0.135474-0.844110I$	$-2.26284+2.38006I$	0
$u=-0.025027-1.137880I$ $a=-0.93249-1.12429I$ $b=-0.135474+0.844110I$	$-2.26284-2.38006I$	0
$u=-0.135474+0.844110I$ $a=-1.46572-0.11078I$ $b=-0.025027-1.137880I$	$2.26284+2.38006I$	0
$u=-0.135474-0.844110I$ $a=-1.46572+0.11078I$ $b=-0.025027+1.137880I$	$2.26284-2.38006I$	0
$u=-0.073562+0.849661I$ $a=-0.129598+0.600967I$ $b=\ \ 0.33723-1.80064I$	$2.52076+0.62563I$	0
$u=-0.073562-0.849661I$ $a=-0.129598-0.600967I$ $b=\ \ 0.33723+1.80064I$	$2.52076-0.62563I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.838496 + 0.137029I$ $a = 0.46437 + 1.86669I$ $b = 0.384605 - 1.005630I$	$0.91300 + 3.25049I$	0
$u = 0.838496 - 0.137029I$ $a = 0.46437 - 1.86669I$ $b = 0.384605 + 1.005630I$	$0.91300 - 3.25049I$	0
$u = 1.047380 + 0.476835I$ $a = 0.44512 + 1.34264I$ $b = -0.201455 - 0.670663I$	$-1.58375 + 3.04276I$	0
$u = 1.047380 - 0.476835I$ $a = 0.44512 - 1.34264I$ $b = -0.201455 + 0.670663I$	$-1.58375 - 3.04276I$	0
$u = -0.547775 + 1.014710I$ $a = 1.38852 - 1.21465I$ $b = 0.098846 + 1.120500I$	$4.40175 - 2.27220I$	0
$u = -0.547775 - 1.014710I$ $a = 1.38852 + 1.21465I$ $b = 0.098846 - 1.120500I$	$4.40175 + 2.27220I$	0
$u = -0.504260 + 1.039200I$ $a = 0.85543 - 1.43473I$ $b = 0.45680 + 1.37653I$	$3.25392 - 6.73569I$	0
$u = -0.504260 - 1.039200I$ $a = 0.85543 + 1.43473I$ $b = 0.45680 - 1.37653I$	$3.25392 + 6.73569I$	0
$u = -0.801920 + 0.225074I$ $a = 0.26580 - 1.92824I$ $b = -0.347240 + 1.306480I$	$6.09129 + 3.67687I$	0
$u = -0.801920 - 0.225074I$ $a = 0.26580 + 1.92824I$ $b = -0.347240 - 1.306480I$	$6.09129 - 3.67687I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.194135+1.159610I$ $a=\ 0.426812-0.802608I$ $b=\ 0.64980+1.77633I$	$-1.24450-6.61929I$	0
$u=-0.194135-1.159610I$ $a=\ 0.426812+0.802608I$ $b=\ 0.64980-1.77633I$	$-1.24450+6.61929I$	0
$u=-0.413869+0.712030I$ $a=-0.924236+0.596977I$ $b=\ 0.40116-1.43664I$	$3.26014+2.74200I$	0
$u=-0.413869-0.712030I$ $a=-0.924236-0.596977I$ $b=\ 0.40116+1.43664I$	$3.26014-2.74200I$	0
$u=\ 0.358880+1.125930I$ $a=\ 2.42751+0.53129I$ $b=\ 0.081765-1.085650I$	$1.03850+9.71041I$	0
$u=\ 0.358880-1.125930I$ $a=\ 2.42751-0.53129I$ $b=\ 0.081765+1.085650I$	$1.03850-9.71041I$	0
$u=\ 0.354486+1.137680I$ $a=\ 0.459887+0.682483I$ $b=\ 0.613232-0.823675I$	$-0.64534+2.48885I$	0
$u=\ 0.354486-1.137680I$ $a=\ 0.459887-0.682483I$ $b=\ 0.613232+0.823675I$	$-0.64534-2.48885I$	0
$u=\ 0.729973+0.296590I$ $a=\ 0.844925+0.526610I$ $b=-0.542269-0.003712I$	$1.50001+2.85730I$	0
$u=\ 0.729973-0.296590I$ $a=\ 0.844925-0.526610I$ $b=-0.542269+0.003712I$	$1.50001-2.85730I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.217430+0.146682I$ $a=\ \ 0.35174-1.59271I$ $b=-0.380162+1.230360I$	$5.13554+6.54586I$	0
$u=-1.217430-0.146682I$ $a=\ \ 0.35174+1.59271I$ $b=-0.380162-1.230360I$	$5.13554-6.54586I$	0
$u=\ \ 0.640629+0.432937I$ $a=\ \ 0.753849+0.653524I$ $b=-0.202385-1.215850I$	$1.70567+1.64873I$	0
$u=\ \ 0.640629-0.432937I$ $a=\ \ 0.753849-0.653524I$ $b=-0.202385+1.215850I$	$1.70567-1.64873I$	0
$u=-0.202385+1.215850I$ $a=-0.017736+0.493749I$ $b=\ \ 0.640629-0.432937I$	$-1.70567+1.64873I$	0
$u=-0.202385-1.215850I$ $a=-0.017736-0.493749I$ $b=\ \ 0.640629+0.432937I$	$-1.70567-1.64873I$	0
$u=\ \ 1.241660+0.000578I$ $a=-0.103343-1.406140I$ $b=\ \ 0.348304+1.259150I$	$2.99999-6.53096I$	0
$u=\ \ 1.241660-0.000578I$ $a=-0.103343+1.406140I$ $b=\ \ 0.348304-1.259150I$	$2.99999+6.53096I$	0
$u=-0.735451+0.177578I$ $a=\ \ 0.553053-0.678758I$ $b=-0.735451-0.177578I$	$-10.8593I$	0
$u=-0.735451-0.177578I$ $a=\ \ 0.553053+0.678758I$ $b=-0.735451+0.177578I$	$10.8593I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.592458 + 1.097850I$ $a = -0.89786 - 1.10652I$ $b = -0.69048 + 1.34634I$	$4.48445 + 12.89690I$	0
$u = 0.592458 - 1.097850I$ $a = -0.89786 + 1.10652I$ $b = -0.69048 - 1.34634I$	$4.48445 - 12.89690I$	0
$u = -1.008240 + 0.736346I$ $a = 0.125074 - 0.933280I$ $b = -0.141427 + 0.502698I$	$-1.61642 + 5.68271I$	0
$u = -1.008240 - 0.736346I$ $a = 0.125074 + 0.933280I$ $b = -0.141427 - 0.502698I$	$-1.61642 - 5.68271I$	0
$u = -0.186777 + 1.246840I$ $a = -0.760603 - 0.330859I$ $b = -0.864219 - 0.506539I$	$-3.78459 - 4.20222I$	0
$u = -0.186777 - 1.246840I$ $a = -0.760603 + 0.330859I$ $b = -0.864219 + 0.506539I$	$-3.78459 + 4.20222I$	0
$u = 1.274010 + 0.002155I$ $a = 0.17769 + 1.53470I$ $b = -0.392076 - 1.290980I$	$4.3631 - 14.9744I$	0
$u = 1.274010 - 0.002155I$ $a = 0.17769 - 1.53470I$ $b = -0.392076 + 1.290980I$	$4.3631 + 14.9744I$	0
$u = 0.080709 + 1.272450I$ $a = -0.971199 + 0.245399I$ $b = -0.638373 + 0.767389I$	$-5.21796 + 2.67365I$	0
$u = 0.080709 - 1.272450I$ $a = -0.971199 - 0.245399I$ $b = -0.638373 - 0.767389I$	$-5.21796 - 2.67365I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.178544+1.263810I$ $a=-0.317193-0.353665I$ $b=-1.028930+0.419517I$	$-5.05665-1.27721I$	0
$u=-0.178544-1.263810I$ $a=-0.317193+0.353665I$ $b=-1.028930-0.419517I$	$-5.05665+1.27721I$	0
$u=-0.435716+1.204860I$ $a=\ \ 1.34640-1.04943I$ $b=\ \ 0.510008+1.287380I$	$3.01615-8.22973I$	0
$u=-0.435716-1.204860I$ $a=\ \ 1.34640+1.04943I$ $b=\ \ 0.510008-1.287380I$	$3.01615+8.22973I$	0
$u=-0.380162+1.230360I$ $a=-0.304080+0.165278I$ $b=-1.217430+0.146682I$	$-5.13554-6.54586I$	0
$u=-0.380162-1.230360I$ $a=-0.304080-0.165278I$ $b=-1.217430-0.146682I$	$-5.13554+6.54586I$	0
$u=\ \ 0.209467+1.275540I$ $a=-0.310130-0.170895I$ $b=-1.365010+0.227003I$	$-5.80644+4.40592I$	0
$u=\ \ 0.209467-1.275540I$ $a=-0.310130+0.170895I$ $b=-1.365010-0.227003I$	$-5.80644-4.40592I$	0
$u=-0.008032+0.707209I$ $a=-0.744637+0.267026I$ $b=-1.21653+0.96709I$	$1.61685-5.65859I$	0
$u=-0.008032-0.707209I$ $a=-0.744637-0.267026I$ $b=-1.21653-0.96709I$	$1.61685+5.65859I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.521757+1.190380I$		
$a=$	$0.982881+0.877814I$	$5.01183+3.30390I$	0
$b=$	$0.57949-1.33670I$		
$u=$	$0.521757-1.190380I$		
$a=$	$0.982881-0.877814I$	$5.01183-3.30390I$	0
$b=$	$0.57949+1.33670I$		
$u=$	$-0.201455+0.670663I$		
$a=$	$1.094690-0.426052I$	$1.58375+3.04276I$	0
$b=$	$1.047380-0.476835I$		
$u=$	$-0.201455-0.670663I$		
$a=$	$1.094690+0.426052I$	$1.58375-3.04276I$	0
$b=$	$1.047380+0.476835I$		
$u=$	$0.348304+1.259150I$		
$a=$	$0.072451+0.261668I$	$-2.99999+6.53096I$	0
$b=$	$1.241660+0.000578I$		
$u=$	$0.348304-1.259150I$		
$a=$	$0.072451-0.261668I$	$-2.99999-6.53096I$	0
$b=$	$1.241660-0.000578I$		
$u=$	$-0.015741+1.325840I$		
$a=$	$0.440036-0.885792I$	$-3.42745-6.17744I$	0
$b=$	$0.498678-0.330608I$		
$u=$	$-0.015741-1.325840I$		
$a=$	$0.440036+0.885792I$	$-3.42745+6.17744I$	0
$b=$	$0.498678+0.330608I$		
$u=$	$0.612638+1.195610I$		
$a=$	$0.345226+0.999956I$	$-0.82965+2.65878I$	0
$b=$	$0.565862-0.787510I$		
$u=$	$0.612638-1.195610I$		
$a=$	$0.345226-0.999956I$	$-0.82965-2.65878I$	0
$b=$	$0.565862+0.787510I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.698418+1.148540I$ $a=-1.13573+1.10329I$ $b=\ 0.031691-0.990579I$	$1.80089-1.83392I$	0
$u=-0.698418-1.148540I$ $a=-1.13573-1.10329I$ $b=\ 0.031691+0.990579I$	$1.80089+1.83392I$	0
$u=\ 0.651859$ $a=\ 1.30127$ $b=-0.121386$	1.03935	0
$u=-0.392076+1.290980I$ $a=\ 0.160934-0.260850I$ $b=\ 1.274010-0.002155I$	$-4.3631-14.9744I$	0
$u=-0.392076-1.290980I$ $a=\ 0.160934+0.260850I$ $b=\ 1.274010+0.002155I$	$-4.3631+14.9744I$	0
$u=-0.347240+1.306480I$ $a=-0.304351+0.237992I$ $b=-0.801920+0.225074I$	$-6.09129-3.67687I$	0
$u=-0.347240-1.306480I$ $a=-0.304351-0.237992I$ $b=-0.801920-0.225074I$	$-6.09129+3.67687I$	0
$u=\ 0.390802+1.300370I$ $a=-0.0372292-0.1244690I$ $b=\ 0.994147+0.447540I$	$-6.58758+7.24408I$	0
$u=\ 0.390802-1.300370I$ $a=-0.0372292+0.1244690I$ $b=\ 0.994147-0.447540I$	$-6.58758-7.24408I$	0
$u=-0.602683+0.154149I$ $a=\ 0.339281+0.335040I$ $b=\ 0.512946-0.069863I$	$-1.64259+0.07288I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.602683-0.154149I$ $a=\ \ 0.339281-0.335040I$ $b=\ \ 0.512946+0.069863I$	$-1.64259-0.07288I$	0
$u=-1.365010+0.227003I$ $a=-0.04924-1.56492I$ $b=\ \ 0.209467+1.275540I$	$5.80644-4.40592I$	0
$u=-1.365010-0.227003I$ $a=-0.04924+1.56492I$ $b=\ \ 0.209467-1.275540I$	$5.80644+4.40592I$	0
$u=\ \ 0.510008+1.287380I$ $a=-1.14072-1.30291I$ $b=-0.435716+1.204860I$	$-3.01615+8.22973I$	0
$u=\ \ 0.510008-1.287380I$ $a=-1.14072+1.30291I$ $b=-0.435716-1.204860I$	$-3.01615-8.22973I$	0
$u=\ \ 0.165168+1.387130I$ $a=-0.571152+0.669630I$ $b=-0.013025+0.889984I$	$-4.14677+4.21274I$	0
$u=\ \ 0.165168-1.387130I$ $a=-0.571152-0.669630I$ $b=-0.013025-0.889984I$	$-4.14677-4.21274I$	0
$u=-0.252765+1.375860I$ $a=\ \ 0.0630504-0.0072569I$ $b=\ \ 0.906525-0.226741I$	$-7.99660+1.83983I$	0
$u=-0.252765-1.375860I$ $a=\ \ 0.0630504+0.0072569I$ $b=\ \ 0.906525+0.226741I$	$-7.99660-1.83983I$	0
$u=\ \ 0.498678+0.330608I$ $a=-1.05892+3.23620I$ $b=-0.015741-1.325840I$	$3.42745-6.17744I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.498678 - 0.330608I$ $a = -1.05892 - 3.23620I$ $b = -0.015741 + 1.325840I$	$3.42745 + 6.17744I$	0
$u = 0.342270 + 1.368570I$ $a = -0.285730 - 0.131290I$ $b = -0.835416 + 0.282230I$	$-4.52184 + 6.28312I$	0
$u = 0.342270 - 1.368570I$ $a = -0.285730 + 0.131290I$ $b = -0.835416 - 0.282230I$	$-4.52184 - 6.28312I$	0
$u = 0.044599 + 0.559522I$ $a = 2.19902 + 1.72214I$ $b = 0.037178 + 0.336355I$	$-1.26339 + 3.53599I$	0
$u = 0.044599 - 0.559522I$ $a = 2.19902 - 1.72214I$ $b = 0.037178 - 0.336355I$	$-1.26339 - 3.53599I$	0
$u = 0.45680 + 1.37653I$ $a = -0.781031 - 0.695952I$ $b = -0.504260 + 1.039200I$	$-3.25392 + 6.73569I$	0
$u = 0.45680 - 1.37653I$ $a = -0.781031 + 0.695952I$ $b = -0.504260 - 1.039200I$	$-3.25392 - 6.73569I$	0
$u = 0.57949 + 1.33670I$ $a = 0.64875 + 1.29975I$ $b = 0.521757 - 1.190380I$	$-5.01183 + 3.30390I$	0
$u = 0.57949 - 1.33670I$ $a = 0.64875 - 1.29975I$ $b = 0.521757 + 1.190380I$	$-5.01183 - 3.30390I$	0
$u = -0.542269 + 0.003712I$ $a = 0.127368 - 0.868560I$ $b = 0.729973 - 0.296590I$	$-1.50001 + 2.85730I$	$-7.03168 - 9.29271I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.542269-0.003712I$ $a=\ \ 0.127368+0.868560I$ $b=\ \ 0.729973+0.296590I$	$-1.50001-2.85730I$	$-7.03168+9.29271I$
$u=-0.60249+1.33280I$ $a=\ \ 0.79980-1.29573I$ $b=\ \ 0.58228+1.38962I$	$1.35735-12.84530I$	0
$u=-0.60249-1.33280I$ $a=\ \ 0.79980+1.29573I$ $b=\ \ 0.58228-1.38962I$	$1.35735+12.84530I$	0
$u=-0.141427+0.502698I$ $a=-0.605084+0.833743I$ $b=-1.008240+0.736346I$	$1.61642-5.68271I$	$5.78893+6.51076I$
$u=-0.141427-0.502698I$ $a=-0.605084-0.833743I$ $b=-1.008240-0.736346I$	$1.61642+5.68271I$	$5.78893-6.51076I$
$u=\ \ 0.512946+0.069863I$ $a=\ \ 1.053910-0.199001I$ $b=-0.602683-0.154149I$	$1.64259+0.07288I$	$6.72266+0.I$
$u=\ \ 0.512946-0.069863I$ $a=\ \ 1.053910+0.199001I$ $b=-0.602683+0.154149I$	$1.64259-0.07288I$	$6.72266+0.I$
$u=-0.45647+1.41731I$ $a=-0.759777+0.979733I$ $b=-0.60812-1.45626I$	$-0.74114-11.16110I$	0
$u=-0.45647-1.41731I$ $a=-0.759777-0.979733I$ $b=-0.60812+1.45626I$	$-0.74114+11.16110I$	0
$u=\ \ 0.40116+1.43664I$ $a=-0.162936+0.521349I$ $b=-0.413869-0.712030I$	$-3.26014+2.74200I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.40116 - 1.43664I$ $a = -0.162936 - 0.521349I$ $b = -0.413869 + 0.712030I$	$-3.26014 - 2.74200I$	0
$u = 0.58228 + 1.38962I$ $a = -0.847279 - 1.044300I$ $b = -0.60249 + 1.33280I$	$-1.35735 + 12.84530I$	0
$u = 0.58228 - 1.38962I$ $a = -0.847279 + 1.044300I$ $b = -0.60249 - 1.33280I$	$-1.35735 - 12.84530I$	0
$u = -0.69048 + 1.34634I$ $a = 0.578684 - 1.191290I$ $b = 0.592458 + 1.097850I$	$-4.48445 - 12.89690I$	0
$u = -0.69048 - 1.34634I$ $a = 0.578684 + 1.191290I$ $b = 0.592458 - 1.097850I$	$-4.48445 + 12.89690I$	0
$u = 0.59787 + 1.39664I$ $a = 0.83451 + 1.18352I$ $b = 0.59787 - 1.39664I$	$21.4390I$	0
$u = 0.59787 - 1.39664I$ $a = 0.83451 - 1.18352I$ $b = 0.59787 + 1.39664I$	$-21.4390I$	0
$u = -1.21653 + 0.96709I$ $a = 0.127649 - 1.046760I$ $b = -0.008032 + 0.707209I$	$-1.61685 + 5.65859I$	0
$u = -1.21653 - 0.96709I$ $a = 0.127649 + 1.046760I$ $b = -0.008032 - 0.707209I$	$-1.61685 - 5.65859I$	0
$u = 0.218270 + 0.363227I$ $a = -0.757589 + 0.035843I$ $b = 0.724429 - 0.492186I$	$-1.06409 + 2.53770I$	$-9.83616 - 8.02353I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.218270 - 0.363227I$ $a = -0.757589 - 0.035843I$ $b = 0.724429 + 0.492186I$	$-1.06409 - 2.53770I$	$-9.83616 + 8.02353I$
$u = -0.60812 + 1.45626I$ $a = -0.689061 + 1.180300I$ $b = -0.45647 - 1.41731I$	$0.74114 - 11.16110I$	0
$u = -0.60812 - 1.45626I$ $a = -0.689061 - 1.180300I$ $b = -0.45647 + 1.41731I$	$0.74114 + 11.16110I$	0
$u = -0.84402 + 1.34401I$ $a = -0.602391 + 1.118000I$ $b = -0.340233 - 0.924142I$	$-2.65028 - 5.98733I$	0
$u = -0.84402 - 1.34401I$ $a = -0.602391 - 1.118000I$ $b = -0.340233 + 0.924142I$	$-2.65028 + 5.98733I$	0
$u = -0.16055 + 1.59671I$ $a = -0.442577 + 0.099851I$ $b = -0.098449 - 0.972581I$	$-2.01485 - 3.55741I$	0
$u = -0.16055 - 1.59671I$ $a = -0.442577 - 0.099851I$ $b = -0.098449 + 0.972581I$	$-2.01485 + 3.55741I$	0
$u = -0.96058 + 1.31302I$ $a = -0.286862 + 1.230000I$ $b = -0.143691 - 0.946403I$	$-2.04273 - 1.92425I$	0
$u = -0.96058 - 1.31302I$ $a = -0.286862 - 1.230000I$ $b = -0.143691 + 0.946403I$	$-2.04273 + 1.92425I$	0
$u = 0.037178 + 0.336355I$ $a = -3.60309 - 3.52603I$ $b = 0.044599 + 0.559522I$	$1.26339 - 3.53599I$	$8.48761 + 1.84732I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.037178 - 0.336355I$ $a = -3.60309 + 3.52603I$ $b = 0.044599 - 0.559522I$	$1.26339 + 3.53599I$	$8.48761 - 1.84732I$
$u = -0.189179 + 0.240700I$ $a = 0.493757 + 0.798291I$ $b = 0.671960 - 0.807813I$	$-0.60621 + 2.56467I$	$1.05348 + 9.91926I$
$u = -0.189179 - 0.240700I$ $a = 0.493757 - 0.798291I$ $b = 0.671960 + 0.807813I$	$-0.60621 - 2.56467I$	$1.05348 - 9.91926I$
$u = 0.33723 + 1.80064I$ $a = 0.041114 + 0.565302I$ $b = -0.073562 - 0.849661I$	$-2.52076 + 0.62563I$	0
$u = 0.33723 - 1.80064I$ $a = 0.041114 - 0.565302I$ $b = -0.073562 + 0.849661I$	$-2.52076 - 0.62563I$	0
$u = -0.121386$ $a = 6.33618$ $b = 0.651859$	-1.03935	-9.23360
$u = 0.64980 + 1.77633I$ $a = -0.282970 - 0.856836I$ $b = -0.194135 + 1.159610I$	$1.24450 + 6.61929I$	0
$u = 0.64980 - 1.77633I$ $a = -0.282970 + 0.856836I$ $b = -0.194135 - 1.159610I$	$1.24450 - 6.61929I$	0
$u = 0.71740 + 2.20998I$ $a = -0.159639 - 0.795440I$ $b = 0.119296 + 0.965852I$	$-0.94548 - 7.07618I$	0
$u = 0.71740 - 2.20998I$ $a = -0.159639 + 0.795440I$ $b = 0.119296 - 0.965852I$	$-0.94548 + 7.07618I$	0

II.

$\boldsymbol{I_2^u = \langle 9.77\times 10^{48}u^{45}+1.29\times 10^{49}u^{44}+\cdots+7.61\times 10^{48}b-1.59\times 10^{49},\ 4.79\times 10^{49}u^{45}+3.77\times 10^{49}u^{44}+\cdots+1.52\times 10^{49}a-4.81\times 10^{49},\ u^{46}+u^{45}+\cdots-2u+1\rangle}$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -3.14479u^{45} - 2.47743u^{44} + \cdots + 6.20769u + 3.16086 \\ -1.28341u^{45} - 1.69479u^{44} + \cdots + 6.32515u + 2.08601 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -4.42820u^{45} - 4.17222u^{44} + \cdots + 12.5328u + 5.24687 \\ -1.28341u^{45} - 1.69479u^{44} + \cdots + 6.32515u + 2.08601 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.845860u^{45} + 1.58667u^{44} + \cdots - 7.57292u + 13.1916 \\ -0.942781u^{45} - 1.28190u^{44} + \cdots + 16.0628u + 0.227574 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2.88832u^{45} - 2.72018u^{44} + \cdots + 16.4425u + 5.69110 \\ -1.88543u^{45} - 2.20767u^{44} + \cdots + 4.13104u + 1.55394 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.465016u^{45} - 0.995453u^{44} + \cdots + 20.3747u - 8.28756 \\ 1.98562u^{45} + 2.56756u^{44} + \cdots - 11.8551u - 1.10611 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 6.47064u^{45} + 3.64790u^{44} + \cdots + 12.8110u - 1.77496 \\ -2.64343u^{45} - 1.34550u^{44} + \cdots - 12.4888u - 1.73754 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 7.15260u^{45} + 5.81205u^{44} + \cdots - 5.90193u + 11.2994 \\ -2.38129u^{45} - 3.79813u^{44} + \cdots + 14.4459u - 3.26141 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.451925u^{45} - 1.49570u^{44} + \cdots + 16.7203u - 12.0040 \\ 0.327833u^{45} + 1.22926u^{44} + \cdots - 17.2272u + 1.86062 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -9.71406u^{45} - 14.4173u^{44} + \cdots + 113.376u + 42.9605$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{46} - 10u^{45} + \cdots - 43u + 7$
c_2	$u^{46} + 4u^{45} + \cdots - 16u^2 + 1$
c_3	$u^{46} + 3u^{45} + \cdots + 6u + 11$
c_4, c_7	$u^{46} - u^{45} + \cdots + 2u + 1$
c_5	$u^{46} - 3u^{45} + \cdots - 6u + 11$
c_6	$u^{46} - 4u^{45} + \cdots - 16u^2 + 1$
c_8	$u^{46} + 10u^{45} + \cdots + 43u + 7$
c_9	$u^{46} + 11u^{44} + \cdots - u + 1$
c_{10}	$u^{46} + 11u^{44} + \cdots + u + 1$
c_{11}, c_{12}	$u^{46} + u^{45} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{46} - 4y^{45} + \cdots - 939y + 49$
c_2, c_6	$y^{46} - 4y^{45} + \cdots - 32y + 1$
c_3, c_5	$y^{46} - 29y^{45} + \cdots - 2522y + 121$
c_4, c_7, c_{11} c_{12}	$y^{46} + 41y^{45} + \cdots - 30y + 1$
c_9, c_{10}	$y^{46} + 22y^{45} + \cdots + 27y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.727540 + 0.688729I$ $a = -0.427620 - 0.261294I$ $b = 0.200432 - 0.011361I$	$0.53949 + 2.86039I$	$0. - 15.4305I$
$u = 0.727540 - 0.688729I$ $a = -0.427620 + 0.261294I$ $b = 0.200432 + 0.011361I$	$0.53949 - 2.86039I$	$0. + 15.4305I$
$u = -0.329478 + 0.960965I$ $a = 1.16986 - 1.12279I$ $b = 0.68718 + 1.34568I$	$2.50780 - 5.65241I$	0
$u = -0.329478 - 0.960965I$ $a = 1.16986 + 1.12279I$ $b = 0.68718 - 1.34568I$	$2.50780 + 5.65241I$	0
$u = -0.778009 + 0.584867I$ $a = -0.20578 + 2.50673I$ $b = -0.105849 - 1.265510I$	$4.47763 - 3.29898I$	$5.18756 + 3.44828I$
$u = -0.778009 - 0.584867I$ $a = -0.20578 - 2.50673I$ $b = -0.105849 + 1.265510I$	$4.47763 + 3.29898I$	$5.18756 - 3.44828I$
$u = -1.025180 + 0.087295I$ $a = -0.26513 - 1.70468I$ $b = 0.327609 + 1.291840I$	$4.78004 - 5.53985I$	0
$u = -1.025180 - 0.087295I$ $a = -0.26513 + 1.70468I$ $b = 0.327609 - 1.291840I$	$4.78004 + 5.53985I$	0
$u = -0.065381 + 0.948354I$ $a = 0.660454 + 0.569804I$ $b = 0.64687 - 1.77525I$	$0.94522 - 6.65017I$	$1.38744 + 1.69747I$
$u = -0.065381 - 0.948354I$ $a = 0.660454 - 0.569804I$ $b = 0.64687 + 1.77525I$	$0.94522 + 6.65017I$	$1.38744 - 1.69747I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.313371 + 1.008590I$ $a = 2.79375 + 1.42100I$ $b = 0.313371 - 1.008590I$	$10.6567I$	0
$u = 0.313371 - 1.008590I$ $a = 2.79375 - 1.42100I$ $b = 0.313371 + 1.008590I$	$-10.6567I$	0
$u = -0.646822 + 0.591396I$ $a = 0.88503 - 1.19039I$ $b = 0.586185 + 1.102620I$	$0.54038 - 2.81203I$	$-12.74993 + 4.27436I$
$u = -0.646822 - 0.591396I$ $a = 0.88503 + 1.19039I$ $b = 0.586185 - 1.102620I$	$0.54038 + 2.81203I$	$-12.74993 - 4.27436I$
$u = -0.043894 + 0.833181I$ $a = 0.754718 - 0.573028I$ $b = 0.55008 + 1.61160I$	$2.62289 - 1.22032I$	$9.80701 + 4.35080I$
$u = -0.043894 - 0.833181I$ $a = 0.754718 + 0.573028I$ $b = 0.55008 - 1.61160I$	$2.62289 + 1.22032I$	$9.80701 - 4.35080I$
$u = 0.204267 + 0.736085I$ $a = -1.74200 + 0.37937I$ $b = -0.442043 + 0.302005I$	$0.80874 + 4.00875I$	$0.23241 - 9.18036I$
$u = 0.204267 - 0.736085I$ $a = -1.74200 - 0.37937I$ $b = -0.442043 - 0.302005I$	$0.80874 - 4.00875I$	$0.23241 + 9.18036I$
$u = 0.586185 + 1.102620I$ $a = -0.317153 - 0.984578I$ $b = -0.646822 + 0.591396I$	$-0.54038 + 2.81203I$	0
$u = 0.586185 - 1.102620I$ $a = -0.317153 + 0.984578I$ $b = -0.646822 - 0.591396I$	$-0.54038 - 2.81203I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.105849+1.265510I$ $a=-0.932535-0.304062I$ $b=-0.778009-0.584867I$	$-4.47763-3.29898I$	0
$u=-0.105849-1.265510I$ $a=-0.932535+0.304062I$ $b=-0.778009+0.584867I$	$-4.47763+3.29898I$	0
$u=-0.320917+0.633639I$ $a=1.086150-0.393176I$ $b=-0.25002+1.52526I$	$3.48588+2.45562I$	$13.9636+3.1362I$
$u=-0.320917-0.633639I$ $a=1.086150+0.393176I$ $b=-0.25002-1.52526I$	$3.48588-2.45562I$	$13.9636-3.1362I$
$u=0.136120+1.304210I$ $a=-0.465825+0.953517I$ $b=-0.280410+0.467502I$	$-5.16145+4.49240I$	0
$u=0.136120-1.304210I$ $a=-0.465825-0.953517I$ $b=-0.280410-0.467502I$	$-5.16145-4.49240I$	0
$u=-0.046914+1.325630I$ $a=0.188006+0.656992I$ $b=-0.046914-1.325630I$	$5.87289I$	0
$u=-0.046914-1.325630I$ $a=0.188006-0.656992I$ $b=-0.046914+1.325630I$	$-5.87289I$	0
$u=0.327609+1.291840I$ $a=-0.306628-0.099445I$ $b=-1.025180+0.087295I$	$-4.78004+5.53985I$	0
$u=0.327609-1.291840I$ $a=-0.306628+0.099445I$ $b=-1.025180-0.087295I$	$-4.78004-5.53985I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.280410+0.467502I$ $a=-0.61780-3.81100I$ $b=\ \ 0.136120+1.304210I$	$5.16145-4.49240I$	$10.46065+5.83591I$
$u=-0.280410-0.467502I$ $a=-0.61780+3.81100I$ $b=\ \ 0.136120-1.304210I$	$5.16145+4.49240I$	$10.46065-5.83591I$
$u=-0.442043+0.302005I$ $a=\ \ 0.08572-3.26342I$ $b=\ \ 0.204267+0.736085I$	$-0.80874-4.00875I$	$-0.23241+9.18036I$
$u=-0.442043-0.302005I$ $a=\ \ 0.08572+3.26342I$ $b=\ \ 0.204267-0.736085I$	$-0.80874+4.00875I$	$-0.23241-9.18036I$
$u=\ \ 0.68718+1.34568I$ $a=-0.759936-1.001910I$ $b=-0.329478+0.960965I$	$-2.50780+5.65241I$	0
$u=\ \ 0.68718-1.34568I$ $a=-0.759936+1.001910I$ $b=-0.329478-0.960965I$	$-2.50780-5.65241I$	0
$u=-0.54474+1.42111I$ $a=-0.722129+1.091760I$ $b=-0.54474-1.42111I$	$-11.2700I$	0
$u=-0.54474-1.42111I$ $a=-0.722129-1.091760I$ $b=-0.54474+1.42111I$	$11.2700I$	0
$u=-0.25002+1.52526I$ $a=-0.209460-0.611891I$ $b=-0.320917+0.633639I$	$-3.48588-2.45562I$	0
$u=-0.25002-1.52526I$ $a=-0.209460+0.611891I$ $b=-0.320917-0.633639I$	$-3.48588+2.45562I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.55008 + 1.61160I$ $a = -0.403835 - 0.710308I$ $b = -0.043894 + 0.833181I$	$-2.62289 + 1.22032I$	0
$u = 0.55008 - 1.61160I$ $a = -0.403835 + 0.710308I$ $b = -0.043894 - 0.833181I$	$-2.62289 - 1.22032I$	0
$u = 0.200432 + 0.011361I$ $a = -0.21191 - 1.75836I$ $b = 0.727540 - 0.688729I$	$-0.53949 + 2.86039I$	$6.2042 - 15.4305I$
$u = 0.200432 - 0.011361I$ $a = -0.21191 + 1.75836I$ $b = 0.727540 + 0.688729I$	$-0.53949 - 2.86039I$	$6.2042 + 15.4305I$
$u = 0.64687 + 1.77525I$ $a = 0.464060 + 0.764909I$ $b = -0.065381 - 0.948354I$	$-0.94522 - 6.65017I$	0
$u = 0.64687 - 1.77525I$ $a = 0.464060 - 0.764909I$ $b = -0.065381 + 0.948354I$	$-0.94522 + 6.65017I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{46}-10u^{45}+\cdots-43u+7)(u^{190}+5u^{189}+\cdots+6665u+199)$
c_2	$(u^{46}+4u^{45}+\cdots-16u^2+1)(u^{190}-9u^{189}+\cdots-4u+1)$
c_3	$(u^{46}+3u^{45}+\cdots+6u+11)$ $\cdot(u^{190}-2u^{189}+\cdots+670900166u-53862673)$
c_4	$(u^{46}-u^{45}+\cdots+2u+1)(u^{190}+67u^{188}+\cdots+138006u-17447)$
c_5	$(u^{46}-3u^{45}+\cdots-6u+11)$ $\cdot(u^{190}+2u^{189}+\cdots-670900166u-53862673)$
c_6	$(u^{46}-4u^{45}+\cdots-16u^2+1)(u^{190}+9u^{189}+\cdots+4u+1)$
c_7	$(u^{46}-u^{45}+\cdots+2u+1)(u^{190}+67u^{188}+\cdots-138006u-17447)$
c_8	$(u^{46}+10u^{45}+\cdots+43u+7)(u^{190}-5u^{189}+\cdots-6665u+199)$
c_9	$(u^{46}+11u^{44}+\cdots-u+1)(u^{190}-u^{189}+\cdots+29u-1)$
c_{10}	$(u^{46}+11u^{44}+\cdots+u+1)(u^{190}+u^{189}+\cdots-29u-1)$
c_{11}	$(u^{46}+u^{45}+\cdots-2u+1)(u^{190}+67u^{188}+\cdots+138006u-17447)$
c_{12}	$(u^{46}+u^{45}+\cdots-2u+1)(u^{190}+67u^{188}+\cdots-138006u-17447)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_8	$(y^{46} - 4y^{45} + \cdots - 939y + 49)$ $\cdot (y^{190} - 19y^{189} + \cdots + 1497025y + 39601)$
c_2, c_6	$(y^{46} - 4y^{45} + \cdots - 32y + 1)(y^{190} - 23y^{189} + \cdots - 252y + 1)$
c_3, c_5	$(y^{46} - 29y^{45} + \cdots - 2522y + 121)$ $\cdot (y^{190} - 88y^{189} + \cdots - 175498183281035406y + 2901187542704929)$
c_4, c_7, c_{11} c_{12}	$(y^{46} + 41y^{45} + \cdots - 30y + 1)$ $\cdot (y^{190} + 134y^{189} + \cdots + 46421594y + 304397809)$
c_9, c_{10}	$(y^{46} + 22y^{45} + \cdots + 27y + 1)(y^{190} + 23y^{189} + \cdots - 149y + 1)$