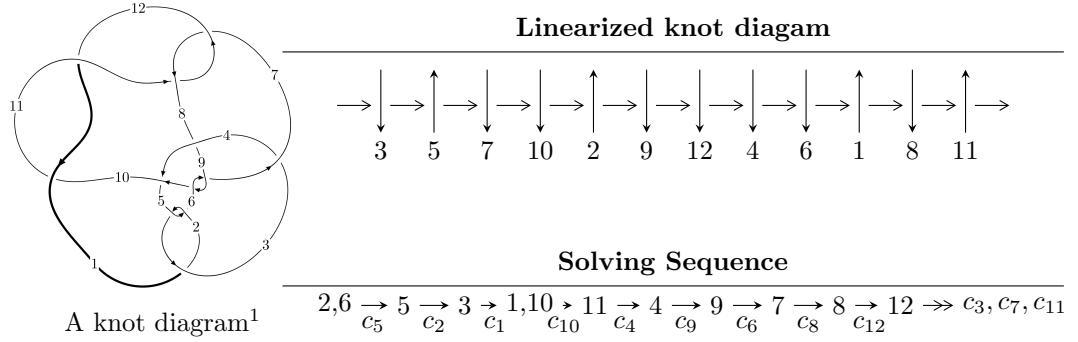


## $12a_{0073}$ ( $K12a_{0073}$ )



### Ideals for irreducible components<sup>2</sup> of $X_{\text{par}}$

$$I_1^u = \langle 7.66892 \times 10^{214} u^{104} - 5.54270 \times 10^{214} u^{103} + \dots + 8.78552 \times 10^{214} b - 2.62937 \times 10^{214}, \\ - 7.70789 \times 10^{214} u^{104} - 9.86900 \times 10^{214} u^{103} + \dots + 8.78552 \times 10^{214} a - 3.93480 \times 10^{215}, \\ u^{105} + u^{104} + \dots + 3u + 1 \rangle$$

\* 1 irreducible components of  $\dim_{\mathbb{C}} = 0$ , with total 105 representations.

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<sup>1</sup>The image of knot diagram is generated by the software “**Draw programme**” developed by Andrew Bartholomew(<http://www.layer8.co.uk/math/draw/index.htm#Running-draw>), where we modified some parts for our purpose(<https://github.com/CATsTAILs/LinksPainter>).

<sup>2</sup>All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\text{I. } I_1^u = \langle 7.67 \times 10^{214}u^{104} - 5.54 \times 10^{214}u^{103} + \dots + 8.79 \times 10^{214}b - 2.63 \times 10^{214}, -7.71 \times 10^{214}u^{104} - 9.87 \times 10^{214}u^{103} + \dots + 8.79 \times 10^{214}a - 3.93 \times 10^{215}, u^{105} + u^{104} + \dots + 3u + 1 \rangle$$

(i) **Arc colorings**

$$\begin{aligned} a_2 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_6 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_5 &= \begin{pmatrix} 1 \\ u^2 \end{pmatrix} \\ a_3 &= \begin{pmatrix} u \\ u^3 + u \end{pmatrix} \\ a_1 &= \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 0.877340u^{104} + 1.12333u^{103} + \dots - 4.89904u + 4.47874 \\ -0.872905u^{104} + 0.630891u^{103} + \dots - 2.07805u + 0.299284 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -0.214388u^{104} + 1.49205u^{103} + \dots - 4.86698u + 4.98395 \\ -0.608798u^{104} + 0.442648u^{103} + \dots - 2.47648u + 0.150688 \end{pmatrix} \\ a_4 &= \begin{pmatrix} -2.51175u^{104} - 2.39463u^{103} + \dots + 10.4331u + 4.89572 \\ -0.0579607u^{104} - 0.975123u^{103} + \dots - 3.10564u - 0.356969 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 0.00443566u^{104} + 1.75422u^{103} + \dots - 6.97708u + 4.77802 \\ -0.872905u^{104} + 0.630891u^{103} + \dots - 2.07805u + 0.299284 \end{pmatrix} \\ a_7 &= \begin{pmatrix} -2.21119u^{104} - 1.97819u^{103} + \dots - 8.95378u - 4.10035 \\ 0.647194u^{104} - 1.16684u^{103} + \dots - 0.177061u - 1.69006 \end{pmatrix} \\ a_8 &= \begin{pmatrix} 0.0758079u^{104} + 1.33160u^{103} + \dots - 5.78845u + 6.83418 \\ -1.04456u^{104} + 0.913641u^{103} + \dots - 3.12835u + 0.562654 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} -2.58052u^{104} - 1.81430u^{103} + \dots - 14.5209u - 2.88953 \\ 0.434434u^{104} - 0.542417u^{103} + \dots - 0.463397u - 1.49524 \end{pmatrix} \end{aligned}$$

(ii) **Obstruction class** = -1

(iii) **Cusp Shapes** =  $1.26566u^{104} - 6.31791u^{103} + \dots + 10.2404u - 6.23126$

**(iv) u-Polynomials at the component**

Crossings	u-Polynomials at each crossing
$c_1$	$u^{105} + 43u^{104} + \cdots - 7u - 1$
$c_2, c_5$	$u^{105} + u^{104} + \cdots + 3u + 1$
$c_3$	$u^{105} - 27u^{104} + \cdots - 9u + 1$
$c_4$	$u^{105} - 15u^{104} + \cdots + 15789u + 52699$
$c_6, c_9$	$u^{105} - 5u^{104} + \cdots - 3u + 1$
$c_7, c_{11}$	$u^{105} + 5u^{104} + \cdots - u + 1$
$c_8$	$u^{105} - u^{104} + \cdots - 11u + 1$
$c_{10}, c_{12}$	$u^{105} - 31u^{104} + \cdots + 5u + 1$

**(v) Riley Polynomials at the component**

Crossings	Riley Polynomials at each crossing
$c_1$	$y^{105} + 39y^{104} + \cdots - 579y - 1$
$c_2, c_5$	$y^{105} + 43y^{104} + \cdots - 7y - 1$
$c_3$	$y^{105} + 95y^{104} + \cdots - 295y - 1$
$c_4$	$y^{105} - 17y^{104} + \cdots + 26937541693y - 2777184601$
$c_6, c_9$	$y^{105} + 75y^{104} + \cdots + 5y - 1$
$c_7, c_{11}$	$y^{105} + 31y^{104} + \cdots + 5y - 1$
$c_8$	$y^{105} - 5y^{104} + \cdots + 33y - 1$
$c_{10}, c_{12}$	$y^{105} + 87y^{104} + \cdots - 251y - 1$

**(vi) Complex Volumes and Cusp Shapes**

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.508255 + 0.862936I$		
$a = 7.42480 + 9.85920I$	$-1.35091 + 4.86008I$	0
$b = -0.027672 - 0.963307I$		
$u = 0.508255 - 0.862936I$		
$a = 7.42480 - 9.85920I$	$-1.35091 - 4.86008I$	0
$b = -0.027672 + 0.963307I$		
$u = -0.726437 + 0.681228I$		
$a = 0.302847 - 0.123414I$	$7.14004 - 0.17018I$	0
$b = 0.41559 - 1.45271I$		
$u = -0.726437 - 0.681228I$		
$a = 0.302847 + 0.123414I$	$7.14004 + 0.17018I$	0
$b = 0.41559 + 1.45271I$		
$u = 0.670011 + 0.735882I$		
$a = -0.398917 + 1.060470I$	$-1.53322 + 5.27277I$	0
$b = 0.218711 - 0.343183I$		
$u = 0.670011 - 0.735882I$		
$a = -0.398917 - 1.060470I$	$-1.53322 - 5.27277I$	0
$b = 0.218711 + 0.343183I$		
$u = 0.498514 + 0.873517I$		
$a = -13.15460 + 0.69616I$	$-1.39472 - 0.77663I$	0
$b = 0.039933 + 1.006260I$		
$u = 0.498514 - 0.873517I$		
$a = -13.15460 - 0.69616I$	$-1.39472 + 0.77663I$	0
$b = 0.039933 - 1.006260I$		
$u = 0.416633 + 0.881483I$		
$a = -0.697391 - 0.189517I$	$-0.33676 + 1.74914I$	0
$b = 0.218983 + 0.169046I$		
$u = 0.416633 - 0.881483I$		
$a = -0.697391 + 0.189517I$	$-0.33676 - 1.74914I$	0
$b = 0.218983 - 0.169046I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.421508 + 0.941394I$		
$a = 0.113393 - 1.188910I$	$-2.90888 - 0.14378I$	0
$b = -0.88553 + 1.17946I$		
$u = -0.421508 - 0.941394I$		
$a = 0.113393 + 1.188910I$	$-2.90888 + 0.14378I$	0
$b = -0.88553 - 1.17946I$		
$u = -0.000183 + 1.041080I$		
$a = 0.655071 - 1.227110I$	$-1.37985 + 2.60061I$	0
$b = -0.461490 + 0.982731I$		
$u = -0.000183 - 1.041080I$		
$a = 0.655071 + 1.227110I$	$-1.37985 - 2.60061I$	0
$b = -0.461490 - 0.982731I$		
$u = -0.462542 + 0.937742I$		
$a = 2.01181 - 0.08750I$	$-2.72043 - 5.15393I$	0
$b = -0.38997 - 1.69307I$		
$u = -0.462542 - 0.937742I$		
$a = 2.01181 + 0.08750I$	$-2.72043 + 5.15393I$	0
$b = -0.38997 + 1.69307I$		
$u = -0.944508 + 0.449202I$		
$a = 0.227674 + 0.414665I$	$0.58537 + 6.60149I$	0
$b = -0.43011 + 1.35679I$		
$u = -0.944508 - 0.449202I$		
$a = 0.227674 - 0.414665I$	$0.58537 - 6.60149I$	0
$b = -0.43011 - 1.35679I$		
$u = 0.673932 + 0.800679I$		
$a = 0.449328 - 0.906610I$	$-1.68329 - 0.14385I$	0
$b = -0.236551 + 0.292446I$		
$u = 0.673932 - 0.800679I$		
$a = 0.449328 + 0.906610I$	$-1.68329 + 0.14385I$	0
$b = -0.236551 - 0.292446I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.420652 + 0.958376I$		
$a = 1.60412 - 0.80365I$	$-2.94183 - 2.82687I$	0
$b = -1.169270 - 0.420460I$		
$u = -0.420652 - 0.958376I$		
$a = 1.60412 + 0.80365I$	$-2.94183 + 2.82687I$	0
$b = -1.169270 + 0.420460I$		
$u = -0.406993 + 0.861247I$		
$a = -1.79250 + 0.05635I$	$-2.32293 + 1.64088I$	0
$b = 0.11232 + 1.69617I$		
$u = -0.406993 - 0.861247I$		
$a = -1.79250 - 0.05635I$	$-2.32293 - 1.64088I$	0
$b = 0.11232 - 1.69617I$		
$u = -0.883123 + 0.572875I$		
$a = -0.048849 - 0.279960I$	$7.89421 + 6.86350I$	0
$b = 0.42862 - 1.38709I$		
$u = -0.883123 - 0.572875I$		
$a = -0.048849 + 0.279960I$	$7.89421 - 6.86350I$	0
$b = 0.42862 + 1.38709I$		
$u = 0.604807 + 0.709411I$		
$a = -0.06549 + 1.57847I$	$3.17185 + 1.49000I$	0
$b = -0.034649 + 1.142580I$		
$u = 0.604807 - 0.709411I$		
$a = -0.06549 - 1.57847I$	$3.17185 - 1.49000I$	0
$b = -0.034649 - 1.142580I$		
$u = -0.758524 + 0.535990I$		
$a = -0.154021 + 0.433594I$	$3.99639 + 3.72302I$	0
$b = -0.39001 + 1.39514I$		
$u = -0.758524 - 0.535990I$		
$a = -0.154021 - 0.433594I$	$3.99639 - 3.72302I$	0
$b = -0.39001 - 1.39514I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.524210 + 0.945636I$		
$a = 0.190673 + 0.999026I$	$-1.36172 - 6.40994I$	0
$b = 0.80345 - 1.44636I$		
$u = -0.524210 - 0.945636I$		
$a = 0.190673 - 0.999026I$	$-1.36172 + 6.40994I$	0
$b = 0.80345 + 1.44636I$		
$u = -0.978052 + 0.472820I$		
$a = -0.250397 - 0.357539I$	$1.51311 + 12.62850I$	0
$b = 0.43741 - 1.35953I$		
$u = -0.978052 - 0.472820I$		
$a = -0.250397 + 0.357539I$	$1.51311 - 12.62850I$	0
$b = 0.43741 + 1.35953I$		
$u = -0.786078 + 0.399159I$		
$a = -0.422992 + 0.480443I$	$-3.14157 + 7.73150I$	0
$b = 0.929515 - 0.138087I$		
$u = -0.786078 - 0.399159I$		
$a = -0.422992 - 0.480443I$	$-3.14157 - 7.73150I$	0
$b = 0.929515 + 0.138087I$		
$u = 0.101092 + 0.874217I$		
$a = -1.52874 - 0.02687I$	$-1.22927 + 1.94221I$	0
$b = 0.509118 + 0.386326I$		
$u = 0.101092 - 0.874217I$		
$a = -1.52874 + 0.02687I$	$-1.22927 - 1.94221I$	0
$b = 0.509118 - 0.386326I$		
$u = 0.572492 + 0.963051I$		
$a = 0.618677 - 0.447757I$	$1.38092 + 3.06411I$	0
$b = -0.289709 + 0.100685I$		
$u = 0.572492 - 0.963051I$		
$a = 0.618677 + 0.447757I$	$1.38092 - 3.06411I$	0
$b = -0.289709 - 0.100685I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.577256 + 0.970351I$		
$a = -1.24254 + 0.92560I$	$1.68086 - 6.53955I$	0
$b = 1.265650 + 0.082613I$		
$u = -0.577256 - 0.970351I$		
$a = -1.24254 - 0.92560I$	$1.68086 + 6.53955I$	0
$b = 1.265650 - 0.082613I$		
$u = 1.133270 + 0.094508I$		
$a = -0.0108772 - 0.1312870I$	$3.44061 - 2.55226I$	0
$b = 0.008558 - 1.226130I$		
$u = 1.133270 - 0.094508I$		
$a = -0.0108772 + 0.1312870I$	$3.44061 + 2.55226I$	0
$b = 0.008558 + 1.226130I$		
$u = -0.443283 + 0.714059I$		
$a = -2.00536 + 0.69393I$	$-0.58409 + 2.30355I$	0
$b = 0.845499 + 0.998451I$		
$u = -0.443283 - 0.714059I$		
$a = -2.00536 - 0.69393I$	$-0.58409 - 2.30355I$	0
$b = 0.845499 - 0.998451I$		
$u = 1.062760 + 0.471860I$		
$a = -0.118414 - 0.270868I$	$6.76585 + 1.83284I$	0
$b = 0.044239 - 1.215040I$		
$u = 1.062760 - 0.471860I$		
$a = -0.118414 + 0.270868I$	$6.76585 - 1.83284I$	0
$b = 0.044239 + 1.215040I$		
$u = -0.651366 + 0.971836I$		
$a = -1.92468 + 0.26060I$	$6.25598 - 5.09845I$	0
$b = 0.59797 + 1.44518I$		
$u = -0.651366 - 0.971836I$		
$a = -1.92468 - 0.26060I$	$6.25598 + 5.09845I$	0
$b = 0.59797 - 1.44518I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.557017 + 0.613871I$		
$a = -0.409467 + 0.939341I$	$2.71513 + 1.93385I$	0
$b = 0.987950 - 0.342672I$		
$u = -0.557017 - 0.613871I$		
$a = -0.409467 - 0.939341I$	$2.71513 - 1.93385I$	0
$b = 0.987950 + 0.342672I$		
$u = -0.747186 + 0.332399I$		
$a = 0.332745 - 0.437546I$	$-4.04595 + 1.81268I$	0
$b = -0.896635 + 0.130466I$		
$u = -0.747186 - 0.332399I$		
$a = 0.332745 + 0.437546I$	$-4.04595 - 1.81268I$	0
$b = -0.896635 - 0.130466I$		
$u = 0.622436 + 1.009490I$		
$a = -1.69807 - 0.26278I$	$2.09705 + 3.42836I$	0
$b = 0.139745 - 1.105790I$		
$u = 0.622436 - 1.009490I$		
$a = -1.69807 + 0.26278I$	$2.09705 - 3.42836I$	0
$b = 0.139745 + 1.105790I$		
$u = -0.181525 + 1.172900I$		
$a = 1.42896 - 0.46621I$	$-8.82234 - 0.91544I$	0
$b = -0.829191 - 0.232875I$		
$u = -0.181525 - 1.172900I$		
$a = 1.42896 + 0.46621I$	$-8.82234 + 0.91544I$	0
$b = -0.829191 + 0.232875I$		
$u = 0.456154 + 0.664711I$		
$a = 0.61525 + 1.56775I$	$2.33820 + 1.37333I$	0
$b = -0.020906 - 0.518366I$		
$u = 0.456154 - 0.664711I$		
$a = 0.61525 - 1.56775I$	$2.33820 - 1.37333I$	0
$b = -0.020906 + 0.518366I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.133227 + 1.187360I$		
$a = -1.41101 + 0.43669I$	$-8.34685 + 5.22128I$	0
$b = 0.795493 + 0.218832I$		
$u = -0.133227 - 1.187360I$		
$a = -1.41101 - 0.43669I$	$-8.34685 - 5.22128I$	0
$b = 0.795493 - 0.218832I$		
$u = 0.477886 + 1.111110I$		
$a = -0.927862 + 0.357458I$	$-3.85790 + 1.05487I$	0
$b = 0.433014 - 0.015021I$		
$u = 0.477886 - 1.111110I$		
$a = -0.927862 - 0.357458I$	$-3.85790 - 1.05487I$	0
$b = 0.433014 + 0.015021I$		
$u = 0.522546 + 1.107910I$		
$a = 0.895110 - 0.406895I$	$-3.53406 + 6.74367I$	0
$b = -0.423129 + 0.048731I$		
$u = 0.522546 - 1.107910I$		
$a = 0.895110 + 0.406895I$	$-3.53406 - 6.74367I$	0
$b = -0.423129 - 0.048731I$		
$u = 0.195343 + 1.213140I$		
$a = -0.955707 + 0.975328I$	$0.76843 + 5.57184I$	0
$b = 0.347571 - 1.069600I$		
$u = 0.195343 - 1.213140I$		
$a = -0.955707 - 0.975328I$	$0.76843 - 5.57184I$	0
$b = 0.347571 + 1.069600I$		
$u = -0.635360 + 1.051860I$		
$a = 1.91539 - 0.19142I$	$2.46261 - 9.01692I$	0
$b = -0.53909 - 1.43926I$		
$u = -0.635360 - 1.051860I$		
$a = 1.91539 + 0.19142I$	$2.46261 + 9.01692I$	0
$b = -0.53909 + 1.43926I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.573696 + 1.101490I$		
$a = 1.27872 - 0.73078I$	$-6.25145 - 6.77312I$	0
$b = -1.113830 - 0.111897I$		
$u = -0.573696 - 1.101490I$		
$a = 1.27872 + 0.73078I$	$-6.25145 + 6.77312I$	0
$b = -1.113830 + 0.111897I$		
$u = -0.607709 + 1.103640I$		
$a = -1.24531 + 0.72570I$	$-5.20237 - 12.95960I$	0
$b = 1.113740 + 0.085690I$		
$u = -0.607709 - 1.103640I$		
$a = -1.24531 - 0.72570I$	$-5.20237 + 12.95960I$	0
$b = 1.113740 - 0.085690I$		
$u = -0.695529 + 1.076720I$		
$a = -1.86993 + 0.18482I$	$6.3495 - 12.6969I$	0
$b = 0.54253 + 1.40519I$		
$u = -0.695529 - 1.076720I$		
$a = -1.86993 - 0.18482I$	$6.3495 + 12.6969I$	0
$b = 0.54253 - 1.40519I$		
$u = 0.604480 + 0.379071I$		
$a = -0.551150 + 0.357450I$	$3.35286 + 1.30846I$	$-2.29563 - 4.32140I$
$b = -0.018965 + 1.181400I$		
$u = 0.604480 - 0.379071I$		
$a = -0.551150 - 0.357450I$	$3.35286 - 1.30846I$	$-2.29563 + 4.32140I$
$b = -0.018965 - 1.181400I$		
$u = 1.016120 + 0.853696I$		
$a = 0.519396 + 0.310803I$	$2.39877 + 1.01374I$	0
$b = -0.094416 + 1.202750I$		
$u = 1.016120 - 0.853696I$		
$a = 0.519396 - 0.310803I$	$2.39877 - 1.01374I$	0
$b = -0.094416 - 1.202750I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.672944 + 1.147260I$	$-1.55003 - 12.50060I$	0
$a = 1.87685 - 0.13801I$		
$b = -0.51403 - 1.39635I$		
$u = -0.672944 - 1.147260I$	$-1.55003 + 12.50060I$	0
$a = 1.87685 + 0.13801I$		
$b = -0.51403 + 1.39635I$		
$u = 1.094560 + 0.763773I$	$2.71739 + 6.28347I$	0
$a = -0.387061 - 0.268070I$		
$b = 0.080994 - 1.214740I$		
$u = 1.094560 - 0.763773I$	$2.71739 - 6.28347I$	0
$a = -0.387061 + 0.268070I$		
$b = 0.080994 + 1.214740I$		
$u = -0.016022 + 1.345400I$	$-6.05046 + 3.63906I$	0
$a = 0.689201 - 0.878906I$		
$b = -0.426397 + 1.135310I$		
$u = -0.016022 - 1.345400I$	$-6.05046 - 3.63906I$	0
$a = 0.689201 + 0.878906I$		
$b = -0.426397 - 1.135310I$		
$u = -0.692371 + 1.153980I$	$-0.5913 - 18.6960I$	0
$a = -1.86487 + 0.13570I$		
$b = 0.51713 + 1.38967I$		
$u = -0.692371 - 1.153980I$	$-0.5913 + 18.6960I$	0
$a = -1.86487 - 0.13570I$		
$b = 0.51713 - 1.38967I$		
$u = 0.023126 + 1.377250I$	$-5.52098 + 9.62166I$	0
$a = -0.719581 + 0.849284I$		
$b = 0.409086 - 1.141730I$		
$u = 0.023126 - 1.377250I$	$-5.52098 - 9.62166I$	0
$a = -0.719581 - 0.849284I$		
$b = 0.409086 + 1.141730I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.805185 + 1.119210I$		
$a = 1.009610 + 0.085722I$	$4.84892 + 4.84004I$	0
$b = -0.154249 + 1.170110I$		
$u = 0.805185 - 1.119210I$		
$a = 1.009610 - 0.085722I$	$4.84892 - 4.84004I$	0
$b = -0.154249 - 1.170110I$		
$u = 0.272901 + 0.554183I$		
$a = -0.19275 + 2.00690I$	$2.30617 + 1.35689I$	$0.69154 - 4.56259I$
$b = 0.257419 - 0.608789I$		
$u = 0.272901 - 0.554183I$		
$a = -0.19275 - 2.00690I$	$2.30617 - 1.35689I$	$0.69154 + 4.56259I$
$b = 0.257419 + 0.608789I$		
$u = 0.65848 + 1.29036I$		
$a = -1.068220 + 0.283751I$	$-0.52858 + 3.53870I$	0
$b = 0.211206 - 1.163030I$		
$u = 0.65848 - 1.29036I$		
$a = -1.068220 - 0.283751I$	$-0.52858 - 3.53870I$	0
$b = 0.211206 + 1.163030I$		
$u = 0.72220 + 1.29833I$		
$a = 1.003820 - 0.223822I$	$-0.06083 + 9.13213I$	0
$b = -0.201729 + 1.176080I$		
$u = 0.72220 - 1.29833I$		
$a = 1.003820 + 0.223822I$	$-0.06083 - 9.13213I$	0
$b = -0.201729 - 1.176080I$		
$u = 0.270706 + 0.375679I$		
$a = 2.42139 + 1.77339I$	$-1.27823 - 2.63513I$	$-5.66825 + 3.44323I$
$b = -0.236524 - 0.659638I$		
$u = 0.270706 - 0.375679I$		
$a = 2.42139 - 1.77339I$	$-1.27823 + 2.63513I$	$-5.66825 - 3.44323I$
$b = -0.236524 + 0.659638I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.336905$		
$a = -0.721891$	-0.940602	-10.3260
$b = -0.588949$		
$u = 0.322904 + 0.028835I$		
$a = -1.17535 - 3.20754I$	$-1.22625 + 2.67668I$	$-4.97081 - 2.18693I$
$b = 0.143408 + 0.600910I$		
$u = 0.322904 - 0.028835I$		
$a = -1.17535 + 3.20754I$	$-1.22625 - 2.67668I$	$-4.97081 + 2.18693I$
$b = 0.143408 - 0.600910I$		
$u = -0.141033 + 0.171770I$		
$a = 4.56827 - 2.64364I$	$-1.35507 - 2.65461I$	$-5.59031 + 3.22885I$
$b = -0.276321 - 0.948170I$		
$u = -0.141033 - 0.171770I$		
$a = 4.56827 + 2.64364I$	$-1.35507 + 2.65461I$	$-5.59031 - 3.22885I$
$b = -0.276321 + 0.948170I$		

## II. u-Polynomials

Crossings	u-Polynomials at each crossing
$c_1$	$u^{105} + 43u^{104} + \cdots - 7u - 1$
$c_2, c_5$	$u^{105} + u^{104} + \cdots + 3u + 1$
$c_3$	$u^{105} - 27u^{104} + \cdots - 9u + 1$
$c_4$	$u^{105} - 15u^{104} + \cdots + 15789u + 52699$
$c_6, c_9$	$u^{105} - 5u^{104} + \cdots - 3u + 1$
$c_7, c_{11}$	$u^{105} + 5u^{104} + \cdots - u + 1$
$c_8$	$u^{105} - u^{104} + \cdots - 11u + 1$
$c_{10}, c_{12}$	$u^{105} - 31u^{104} + \cdots + 5u + 1$

### III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
$c_1$	$y^{105} + 39y^{104} + \cdots - 579y - 1$
$c_2, c_5$	$y^{105} + 43y^{104} + \cdots - 7y - 1$
$c_3$	$y^{105} + 95y^{104} + \cdots - 295y - 1$
$c_4$	$y^{105} - 17y^{104} + \cdots + 26937541693y - 2777184601$
$c_6, c_9$	$y^{105} + 75y^{104} + \cdots + 5y - 1$
$c_7, c_{11}$	$y^{105} + 31y^{104} + \cdots + 5y - 1$
$c_8$	$y^{105} - 5y^{104} + \cdots + 33y - 1$
$c_{10}, c_{12}$	$y^{105} + 87y^{104} + \cdots - 251y - 1$