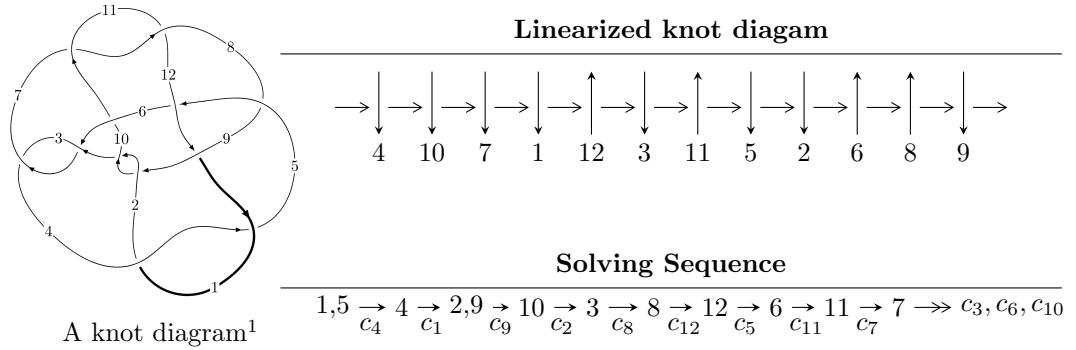


## $12a_{1175}$ ( $K12a_{1175}$ )



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

$$I_1^u = \langle 5.84939 \times 10^{910} u^{146} + 5.61647 \times 10^{911} u^{145} + \dots + 2.71478 \times 10^{912} b - 5.72333 \times 10^{914}, \\ 1.06195 \times 10^{914} u^{146} + 8.90133 \times 10^{914} u^{145} + \dots + 2.22883 \times 10^{915} a - 3.84240 \times 10^{917}, \\ u^{147} + 8u^{146} + \dots + 61480u - 5747 \rangle$$

$$I_2^u = \langle 5.49437 \times 10^{35} u^{35} + 2.03279 \times 10^{36} u^{34} + \dots + 3.20930 \times 10^{35} b + 9.34926 \times 10^{35}, \\ 1.11019 \times 10^{36} u^{35} + 3.24693 \times 10^{36} u^{34} + \dots + 3.20930 \times 10^{35} a + 4.28373 \times 10^{36}, u^{36} + 3u^{35} + \dots + 2u - 1 \rangle$$

\* 2 irreducible components of  $\dim_{\mathbb{C}} = 0$ , with total 183 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.

$$\text{I. } I_1^u = \langle 5.85 \times 10^{910} u^{146} + 5.62 \times 10^{911} u^{145} + \dots + 2.71 \times 10^{912} b - 5.72 \times 10^{914}, 1.06 \times 10^{914} u^{146} + 8.90 \times 10^{914} u^{145} + \dots + 2.23 \times 10^{915} a - 3.84 \times 10^{917}, u^{147} + 8u^{146} + \dots + 61480u - 5747 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_1 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_5 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_4 &= \begin{pmatrix} 1 \\ -u^2 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -u \\ u^3 + u \end{pmatrix} \\ a_9 &= \begin{pmatrix} -0.0476460u^{146} - 0.399372u^{145} + \dots - 1619.95u + 172.395 \\ -0.0215465u^{146} - 0.206885u^{145} + \dots - 2194.54u + 210.821 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -0.0733621u^{146} - 0.658696u^{145} + \dots - 4820.81u + 475.848 \\ -0.0448746u^{146} - 0.386975u^{145} + \dots - 2140.92u + 215.379 \end{pmatrix} \\ a_3 &= \begin{pmatrix} 0.00620052u^{146} + 0.0524415u^{145} + \dots + 77.9777u - 11.1646 \\ -0.00987834u^{146} - 0.0813767u^{145} + \dots - 269.340u + 32.3155 \end{pmatrix} \\ a_8 &= \begin{pmatrix} -0.0691925u^{146} - 0.606257u^{145} + \dots - 3814.50u + 383.217 \\ -0.0215465u^{146} - 0.206885u^{145} + \dots - 2194.54u + 210.821 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} 0.0112444u^{146} + 0.140122u^{145} + \dots + 3100.04u - 285.491 \\ 0.000974400u^{146} + 0.00416042u^{145} + \dots - 216.608u + 19.9840 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 0.0532520u^{146} + 0.349593u^{145} + \dots - 4377.81u + 370.101 \\ 0.0183596u^{146} + 0.120357u^{145} + \dots - 1397.64u + 119.695 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} 0.0144073u^{146} + 0.130613u^{145} + \dots + 1174.02u - 113.909 \\ -0.00642001u^{146} - 0.0543650u^{145} + \dots - 30.5381u + 3.26770 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 0.0598125u^{146} + 0.532811u^{145} + \dots + 3201.29u - 317.212 \\ 0.0375649u^{146} + 0.359767u^{145} + \dots + 3268.27u - 314.725 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes =  $-0.0203121u^{146} - 0.141621u^{145} + \dots + 1840.41u - 142.702$

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

Crossings	u-Polynomials at each crossing
$c_1, c_4$	$u^{147} - 8u^{146} + \cdots + 61480u + 5747$
$c_2, c_9$	$u^{147} - 2u^{146} + \cdots + 11046847u + 496609$
$c_3, c_6$	$u^{147} - 3u^{146} + \cdots + 108035u + 24613$
$c_5$	$u^{147} - 3u^{146} + \cdots - 73u - 61$
$c_7, c_{11}$	$u^{147} - 2u^{146} + \cdots - 51044u + 7693$
$c_8$	$u^{147} + 6u^{146} + \cdots - 435868u + 78457$
$c_{10}$	$u^{147} + u^{146} + \cdots + 4068286687u + 578211329$
$c_{12}$	$u^{147} + 7u^{146} + \cdots + 24u - 1$

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

Crossings	Riley Polynomials at each crossing
$c_1, c_4$	$y^{147} + 80y^{146} + \dots + 2204675628y - 33028009$
$c_2, c_9$	$y^{147} - 110y^{146} + \dots + 135599578671993y - 246620498881$
$c_3, c_6$	$y^{147} - 83y^{146} + \dots + 10185969771y - 605799769$
$c_5$	$y^{147} - 29y^{146} + \dots - 148879y - 3721$
$c_7, c_{11}$	$y^{147} - 104y^{146} + \dots + 12402263874y - 59182249$
$c_8$	$y^{147} + 54y^{146} + \dots - 169630825840y - 6155500849$
$c_{10}$	$y^{147} + 17y^{146} + \dots - 2.57 \times 10^{18}y - 3.34 \times 10^{17}$
$c_{12}$	$y^{147} + 7y^{146} + \dots + 230y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.876951 + 0.469338I$		
$a = -1.034530 - 0.425889I$	$0.25753 - 8.60731I$	0
$b = 0.851366 + 1.024550I$		
$u = 0.876951 - 0.469338I$		
$a = -1.034530 + 0.425889I$	$0.25753 + 8.60731I$	0
$b = 0.851366 - 1.024550I$		
$u = -0.169210 + 0.994862I$		
$a = -1.47924 + 0.45402I$	$-2.71907 + 3.26464I$	0
$b = 0.638776 + 0.628243I$		
$u = -0.169210 - 0.994862I$		
$a = -1.47924 - 0.45402I$	$-2.71907 - 3.26464I$	0
$b = 0.638776 - 0.628243I$		
$u = 0.242383 + 0.952148I$		
$a = -0.180100 + 0.272064I$	$0.73118 - 4.44431I$	0
$b = 1.51947 + 0.50864I$		
$u = 0.242383 - 0.952148I$		
$a = -0.180100 - 0.272064I$	$0.73118 + 4.44431I$	0
$b = 1.51947 - 0.50864I$		
$u = 0.896984 + 0.384069I$		
$a = 1.005690 - 0.454065I$	$-1.72980 + 0.90174I$	0
$b = -0.953019 - 0.568526I$		
$u = 0.896984 - 0.384069I$		
$a = 1.005690 + 0.454065I$	$-1.72980 - 0.90174I$	0
$b = -0.953019 + 0.568526I$		
$u = 0.102939 + 1.029930I$		
$a = -1.64929 - 1.29682I$	$4.43319 - 2.71551I$	0
$b = 0.028382 - 0.859907I$		
$u = 0.102939 - 1.029930I$		
$a = -1.64929 + 1.29682I$	$4.43319 + 2.71551I$	0
$b = 0.028382 + 0.859907I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.202073 + 1.028700I$		
$a = 0.379102 + 0.405956I$	$-3.83897 - 2.56872I$	0
$b = -0.296180 - 1.006800I$		
$u = -0.202073 - 1.028700I$		
$a = 0.379102 - 0.405956I$	$-3.83897 + 2.56872I$	0
$b = -0.296180 + 1.006800I$		
$u = -0.058121 + 0.949008I$		
$a = -0.11046 + 1.78709I$	$-4.30862 + 3.41831I$	0
$b = 0.02723 + 1.57885I$		
$u = -0.058121 - 0.949008I$		
$a = -0.11046 - 1.78709I$	$-4.30862 - 3.41831I$	0
$b = 0.02723 - 1.57885I$		
$u = -0.400593 + 0.853754I$		
$a = -0.738910 - 0.221171I$	$-4.51006 + 0.97799I$	0
$b = 1.095550 + 0.692165I$		
$u = -0.400593 - 0.853754I$		
$a = -0.738910 + 0.221171I$	$-4.51006 - 0.97799I$	0
$b = 1.095550 - 0.692165I$		
$u = 0.061534 + 0.938135I$		
$a = 0.803720 - 0.763167I$	$2.53382 - 2.49123I$	0
$b = -0.87348 - 1.73870I$		
$u = 0.061534 - 0.938135I$		
$a = 0.803720 + 0.763167I$	$2.53382 + 2.49123I$	0
$b = -0.87348 + 1.73870I$		
$u = 0.600227 + 0.876715I$		
$a = 0.115520 - 0.577187I$	$-1.93708 - 1.02863I$	0
$b = -0.233182 + 0.146254I$		
$u = 0.600227 - 0.876715I$		
$a = 0.115520 + 0.577187I$	$-1.93708 + 1.02863I$	0
$b = -0.233182 - 0.146254I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.930561$		
$a = 0.758424$	-1.64571	0
$b = -0.477186$		
$u = 0.598023 + 0.898595I$		
$a = 1.164480 + 0.619413I$	$3.39807 - 2.72258I$	0
$b = -0.595055 - 0.818371I$		
$u = 0.598023 - 0.898595I$		
$a = 1.164480 - 0.619413I$	$3.39807 + 2.72258I$	0
$b = -0.595055 + 0.818371I$		
$u = -1.094130 + 0.021306I$		
$a = 0.948489 + 0.481917I$	-9.20594 - 7.28544I	0
$b = -0.808507 - 0.654879I$		
$u = -1.094130 - 0.021306I$		
$a = 0.948489 - 0.481917I$	-9.20594 + 7.28544I	0
$b = -0.808507 + 0.654879I$		
$u = 0.893073 + 0.115015I$		
$a = -1.217280 - 0.253669I$	-4.72484 - 2.71448I	0
$b = 0.719668 + 0.815559I$		
$u = 0.893073 - 0.115015I$		
$a = -1.217280 + 0.253669I$	-4.72484 + 2.71448I	0
$b = 0.719668 - 0.815559I$		
$u = -0.187421 + 1.097440I$		
$a = 1.30604 - 1.17317I$	$1.10897 + 10.17800I$	0
$b = 0.072765 - 0.828993I$		
$u = -0.187421 - 1.097440I$		
$a = 1.30604 + 1.17317I$	$1.10897 - 10.17800I$	0
$b = 0.072765 + 0.828993I$		
$u = -0.179249 + 1.101150I$		
$a = -0.591089 + 0.955092I$	$4.11202 + 2.41393I$	0
$b = -0.242870 + 0.945429I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.179249 - 1.101150I$		
$a = -0.591089 - 0.955092I$	$4.11202 - 2.41393I$	0
$b = -0.242870 - 0.945429I$		
$u = -0.156078 + 1.107690I$		
$a = 0.836814 + 0.411960I$	$3.28339 - 0.12770I$	0
$b = -0.530807 + 0.949615I$		
$u = -0.156078 - 1.107690I$		
$a = 0.836814 - 0.411960I$	$3.28339 + 0.12770I$	0
$b = -0.530807 - 0.949615I$		
$u = 0.042875 + 0.874045I$		
$a = 1.90713 + 0.24861I$	$3.76867 + 1.96043I$	0
$b = -0.588240 + 0.918261I$		
$u = 0.042875 - 0.874045I$		
$a = 1.90713 - 0.24861I$	$3.76867 - 1.96043I$	0
$b = -0.588240 - 0.918261I$		
$u = -0.417159 + 1.047950I$		
$a = 0.299074 + 0.140133I$	$-5.56249 + 5.90122I$	0
$b = -1.19668 - 0.87425I$		
$u = -0.417159 - 1.047950I$		
$a = 0.299074 - 0.140133I$	$-5.56249 - 5.90122I$	0
$b = -1.19668 + 0.87425I$		
$u = -0.185789 + 1.114000I$		
$a = -1.106120 - 0.671426I$	$2.38368 + 3.23403I$	0
$b = 0.731886 - 1.071050I$		
$u = -0.185789 - 1.114000I$		
$a = -1.106120 + 0.671426I$	$2.38368 - 3.23403I$	0
$b = 0.731886 + 1.071050I$		
$u = -0.072876 + 1.144390I$		
$a = -0.815391 - 0.632412I$	$2.77497 + 4.12483I$	0
$b = 1.02596 - 1.49700I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.072876 - 1.144390I$		
$a = -0.815391 + 0.632412I$	$2.77497 - 4.12483I$	0
$b = 1.02596 + 1.49700I$		
$u = -0.917208 + 0.691962I$		
$a = -0.660072 - 0.639637I$	$-4.34907 - 5.78532I$	0
$b = 1.05527 - 0.97105I$		
$u = -0.917208 - 0.691962I$		
$a = -0.660072 + 0.639637I$	$-4.34907 + 5.78532I$	0
$b = 1.05527 + 0.97105I$		
$u = -0.292839 + 0.778068I$		
$a = -0.31649 - 1.74613I$	$-4.93078 + 2.17996I$	0
$b = 0.241986 - 1.050730I$		
$u = -0.292839 - 0.778068I$		
$a = -0.31649 + 1.74613I$	$-4.93078 - 2.17996I$	0
$b = 0.241986 + 1.050730I$		
$u = 0.514617 + 1.052430I$		
$a = 0.571008 - 0.326610I$	$0.36156 - 5.92102I$	0
$b = -1.275220 + 0.149157I$		
$u = 0.514617 - 1.052430I$		
$a = 0.571008 + 0.326610I$	$0.36156 + 5.92102I$	0
$b = -1.275220 - 0.149157I$		
$u = -0.035844 + 0.826571I$		
$a = 1.89667 - 1.26211I$	$-3.58582 - 2.05989I$	0
$b = -0.347194 - 0.690544I$		
$u = -0.035844 - 0.826571I$		
$a = 1.89667 + 1.26211I$	$-3.58582 + 2.05989I$	0
$b = -0.347194 + 0.690544I$		
$u = 1.174280 + 0.031064I$		
$a = 0.731603 - 0.530394I$	$-0.42978 + 6.80664I$	0
$b = -0.708208 + 1.015300I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.174280 - 0.031064I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = 0.731603 + 0.530394I$	$-0.42978 - 6.80664I$	0
$b = -0.708208 - 1.015300I$		
$u = -0.628690 + 1.011720I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -0.515365 - 0.264585I$	$-3.22183 + 11.49500I$	0
$b = 1.62562 + 0.14551I$		
$u = -0.628690 - 1.011720I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -0.515365 + 0.264585I$	$-3.22183 - 11.49500I$	0
$b = 1.62562 - 0.14551I$		
$u = 0.454783 + 1.108180I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -0.264591 + 0.167726I$	$-1.71882 - 2.08226I$	0
$b = 0.827780 - 0.453215I$		
$u = 0.454783 - 1.108180I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -0.264591 - 0.167726I$	$-1.71882 + 2.08226I$	0
$b = 0.827780 + 0.453215I$		
$u = 0.770889$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -0.372602$	$-1.42928$	0
$b = 0.649394$		
$u = 0.078790 + 1.253800I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = 0.722169 + 0.771577I$	$4.52687 - 0.28955I$	0
$b = -0.067686 + 1.009750I$		
$u = 0.078790 - 1.253800I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = 0.722169 - 0.771577I$	$4.52687 + 0.28955I$	0
$b = -0.067686 - 1.009750I$		
$u = -1.154960 + 0.507268I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -0.312798 - 0.749951I$	$-5.59782 - 1.30358I$	0
$b = 0.508256 + 0.770405I$		
$u = -1.154960 - 0.507268I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -0.312798 + 0.749951I$	$-5.59782 + 1.30358I$	0
$b = 0.508256 - 0.770405I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.468048 + 1.185170I$		
$a = -0.645720 + 0.382909I$	$1.99518 - 4.41462I$	0
$b = 0.769112 + 1.137780I$		
$u = 0.468048 - 1.185170I$		
$a = -0.645720 - 0.382909I$	$1.99518 + 4.41462I$	0
$b = 0.769112 - 1.137780I$		
$u = -0.365267 + 1.225470I$		
$a = 1.070730 + 0.548707I$	$7.68881 + 8.11256I$	0
$b = -0.77496 + 1.41354I$		
$u = -0.365267 - 1.225470I$		
$a = 1.070730 - 0.548707I$	$7.68881 - 8.11256I$	0
$b = -0.77496 - 1.41354I$		
$u = -0.058843 + 0.710421I$		
$a = 0.110257 + 0.636300I$	$2.75824 + 0.94900I$	0
$b = -1.076690 + 0.456778I$		
$u = -0.058843 - 0.710421I$		
$a = 0.110257 - 0.636300I$	$2.75824 - 0.94900I$	0
$b = -1.076690 - 0.456778I$		
$u = 0.254160 + 1.262070I$		
$a = 1.038250 - 0.416531I$	$0.82952 - 5.79904I$	0
$b = -1.078240 - 0.810680I$		
$u = 0.254160 - 1.262070I$		
$a = 1.038250 + 0.416531I$	$0.82952 + 5.79904I$	0
$b = -1.078240 + 0.810680I$		
$u = 0.544422 + 0.455781I$		
$a = -0.616904 + 0.358057I$	$-0.607696 + 1.062650I$	0
$b = 1.65097 + 0.64066I$		
$u = 0.544422 - 0.455781I$		
$a = -0.616904 - 0.358057I$	$-0.607696 - 1.062650I$	0
$b = 1.65097 - 0.64066I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.392218 + 1.234100I$		
$a = 1.35293 + 0.81474I$	$-4.43472 + 1.08434I$	0
$b = -0.513121 + 0.786595I$		
$u = -0.392218 - 1.234100I$		
$a = 1.35293 - 0.81474I$	$-4.43472 - 1.08434I$	0
$b = -0.513121 - 0.786595I$		
$u = 0.134815 + 1.288280I$		
$a = -1.063060 + 0.845144I$	$7.48550 - 0.30234I$	0
$b = 0.023499 + 0.757121I$		
$u = 0.134815 - 1.288280I$		
$a = -1.063060 - 0.845144I$	$7.48550 + 0.30234I$	0
$b = 0.023499 - 0.757121I$		
$u = 0.129168 + 1.293520I$		
$a = -0.0344937 + 0.1283280I$	$3.59604 + 1.41572I$	0
$b = -0.443884 + 1.279780I$		
$u = 0.129168 - 1.293520I$		
$a = -0.0344937 - 0.1283280I$	$3.59604 - 1.41572I$	0
$b = -0.443884 - 1.279780I$		
$u = -0.224277 + 1.282390I$		
$a = -1.42949 - 0.90486I$	$-2.10216 + 4.13299I$	0
$b = 0.515504 - 0.396117I$		
$u = -0.224277 - 1.282390I$		
$a = -1.42949 + 0.90486I$	$-2.10216 - 4.13299I$	0
$b = 0.515504 + 0.396117I$		
$u = 0.466994 + 1.222470I$		
$a = 0.752734 - 0.579516I$	$5.39069 - 5.56331I$	0
$b = -0.74668 - 1.67540I$		
$u = 0.466994 - 1.222470I$		
$a = 0.752734 + 0.579516I$	$5.39069 + 5.56331I$	0
$b = -0.74668 + 1.67540I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.689909 + 0.018633I$		
$a = 0.627722 + 1.195240I$	$4.08112 - 4.28867I$	0
$b = -0.640424 - 0.974324I$		
$u = -0.689909 - 0.018633I$		
$a = 0.627722 - 1.195240I$	$4.08112 + 4.28867I$	0
$b = -0.640424 + 0.974324I$		
$u = -1.112310 + 0.693160I$		
$a = -0.490535 + 0.349355I$	$-1.58290 - 2.49840I$	0
$b = 0.895156 - 0.775499I$		
$u = -1.112310 - 0.693160I$		
$a = -0.490535 - 0.349355I$	$-1.58290 + 2.49840I$	0
$b = 0.895156 + 0.775499I$		
$u = 0.685620 + 1.137660I$		
$a = -0.922510 - 0.559626I$	$4.23284 - 2.62278I$	0
$b = -0.047576 + 0.816722I$		
$u = 0.685620 - 1.137660I$		
$a = -0.922510 + 0.559626I$	$4.23284 + 2.62278I$	0
$b = -0.047576 - 0.816722I$		
$u = -0.337289 + 1.285940I$		
$a = -0.830160 - 0.004283I$	$8.02539 - 0.41935I$	0
$b = -0.047814 - 0.870643I$		
$u = -0.337289 - 1.285940I$		
$a = -0.830160 + 0.004283I$	$8.02539 + 0.41935I$	0
$b = -0.047814 + 0.870643I$		
$u = 1.320310 + 0.240780I$		
$a = -0.208873 + 0.441659I$	$0.180238 + 0.465413I$	0
$b = 0.611708 - 0.680658I$		
$u = 1.320310 - 0.240780I$		
$a = -0.208873 - 0.441659I$	$0.180238 - 0.465413I$	0
$b = 0.611708 + 0.680658I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.267828 + 1.316030I$		
$a = -0.719672 - 0.684494I$	$4.77198 + 0.83961I$	0
$b = 0.64805 - 1.65046I$		
$u = -0.267828 - 1.316030I$		
$a = -0.719672 + 0.684494I$	$4.77198 - 0.83961I$	0
$b = 0.64805 + 1.65046I$		
$u = -0.424786 + 0.496437I$		
$a = 1.16223 + 1.35492I$	$-7.40262 - 2.17728I$	0
$b = -0.399878 + 1.352760I$		
$u = -0.424786 - 0.496437I$		
$a = 1.16223 - 1.35492I$	$-7.40262 + 2.17728I$	0
$b = -0.399878 - 1.352760I$		
$u = -0.038537 + 0.645768I$		
$a = -2.04459 + 0.59487I$	$-0.60483 - 8.80157I$	$0. + 5.91511I$
$b = 0.758645 + 1.052500I$		
$u = -0.038537 - 0.645768I$		
$a = -2.04459 - 0.59487I$	$-0.60483 + 8.80157I$	$0. - 5.91511I$
$b = 0.758645 - 1.052500I$		
$u = -0.646035 + 1.196380I$		
$a = -1.199700 - 0.219788I$	$-3.18263 + 7.65952I$	0
$b = 0.791908 - 1.085050I$		
$u = -0.646035 - 1.196380I$		
$a = -1.199700 + 0.219788I$	$-3.18263 - 7.65952I$	0
$b = 0.791908 + 1.085050I$		
$u = 0.432649 + 1.294050I$		
$a = 0.974867 - 0.393157I$	$2.41235 - 4.82981I$	0
$b = -0.644214 - 0.814276I$		
$u = 0.432649 - 1.294050I$		
$a = 0.974867 + 0.393157I$	$2.41235 + 4.82981I$	0
$b = -0.644214 + 0.814276I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.010834 + 1.372280I$		
$a = 0.844158 + 0.823308I$	$5.75531 - 4.81060I$	0
$b = 0.019363 + 0.733749I$		
$u = 0.010834 - 1.372280I$		
$a = 0.844158 - 0.823308I$	$5.75531 + 4.81060I$	0
$b = 0.019363 - 0.733749I$		
$u = -0.521815 + 0.272355I$		
$a = 1.74165 + 1.72169I$	$-7.59186 + 2.72138I$	$-12.80013 - 2.70423I$
$b = -0.299454 - 0.648905I$		
$u = -0.521815 - 0.272355I$		
$a = 1.74165 - 1.72169I$	$-7.59186 - 2.72138I$	$-12.80013 + 2.70423I$
$b = -0.299454 + 0.648905I$		
$u = 0.38337 + 1.36632I$		
$a = -0.927977 + 0.531607I$	$5.65267 - 12.88380I$	0
$b = 0.86865 + 1.45809I$		
$u = 0.38337 - 1.36632I$		
$a = -0.927977 - 0.531607I$	$5.65267 + 12.88380I$	0
$b = 0.86865 - 1.45809I$		
$u = 0.334531 + 0.468970I$		
$a = -0.675876 - 0.038492I$	$2.85205 + 0.91488I$	$-0.94274 + 1.15824I$
$b = -0.800093 + 0.731056I$		
$u = 0.334531 - 0.468970I$		
$a = -0.675876 + 0.038492I$	$2.85205 - 0.91488I$	$-0.94274 - 1.15824I$
$b = -0.800093 - 0.731056I$		
$u = 0.45026 + 1.35340I$		
$a = -1.060430 + 0.679635I$	$-0.19042 - 7.55699I$	0
$b = 0.669703 + 1.023420I$		
$u = 0.45026 - 1.35340I$		
$a = -1.060430 - 0.679635I$	$-0.19042 + 7.55699I$	0
$b = 0.669703 - 1.023420I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.528484 + 0.213035I$		
$a = 1.75800 + 0.90834I$	$-3.45760 - 2.92189I$	$-11.27209 + 7.45409I$
$b = -0.683018 - 0.472616I$		
$u = 0.528484 - 0.213035I$		
$a = 1.75800 - 0.90834I$	$-3.45760 + 2.92189I$	$-11.27209 - 7.45409I$
$b = -0.683018 + 0.472616I$		
$u = -0.561562$		
$a = 0.787362$	0.814544	-30.4670
$b = -2.09875$		
$u = -1.44077 + 0.01593I$		
$a = -0.587519 + 0.383106I$	$-4.23476 + 12.61430I$	0
$b = 0.858394 - 0.944654I$		
$u = -1.44077 - 0.01593I$		
$a = -0.587519 - 0.383106I$	$-4.23476 - 12.61430I$	0
$b = 0.858394 + 0.944654I$		
$u = -0.53482 + 1.36009I$		
$a = 1.062210 + 0.497907I$	$-4.99532 + 13.03690I$	0
$b = -0.870931 + 1.001330I$		
$u = -0.53482 - 1.36009I$		
$a = 1.062210 - 0.497907I$	$-4.99532 - 13.03690I$	0
$b = -0.870931 - 1.001330I$		
$u = -0.74441 + 1.26540I$		
$a = -0.860808 - 0.031820I$	$-1.76975 + 8.29393I$	0
$b = 0.674809 - 0.969090I$		
$u = -0.74441 - 1.26540I$		
$a = -0.860808 + 0.031820I$	$-1.76975 - 8.29393I$	0
$b = 0.674809 + 0.969090I$		
$u = 0.58744 + 1.36665I$		
$a = 1.103230 - 0.445508I$	$3.72944 - 12.99010I$	0
$b = -0.75977 - 1.31407I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.58744 - 1.36665I$		
$a = 1.103230 + 0.445508I$	$3.72944 + 12.99010I$	0
$b = -0.75977 + 1.31407I$		
$u = -0.481019 + 0.115239I$		
$a = -2.57650 - 1.56654I$	$-5.79343 - 1.38744I$	$-21.4132 + 3.7567I$
$b = 0.410191 + 0.171541I$		
$u = -0.481019 - 0.115239I$		
$a = -2.57650 + 1.56654I$	$-5.79343 + 1.38744I$	$-21.4132 - 3.7567I$
$b = 0.410191 - 0.171541I$		
$u = 0.33472 + 1.47214I$		
$a = 0.700783 - 0.204753I$	$6.39421 - 5.14609I$	0
$b = -0.089913 - 0.870847I$		
$u = 0.33472 - 1.47214I$		
$a = 0.700783 + 0.204753I$	$6.39421 + 5.14609I$	0
$b = -0.089913 + 0.870847I$		
$u = -0.81341 + 1.31169I$		
$a = 0.859631 + 0.210575I$	$4.15775 + 9.21113I$	0
$b = -0.93424 + 1.37043I$		
$u = -0.81341 - 1.31169I$		
$a = 0.859631 - 0.210575I$	$4.15775 - 9.21113I$	0
$b = -0.93424 - 1.37043I$		
$u = 0.62983 + 1.42064I$		
$a = -0.835401 + 0.360950I$	$4.16831 - 7.40726I$	0
$b = 0.85414 + 1.39486I$		
$u = 0.62983 - 1.42064I$		
$a = -0.835401 - 0.360950I$	$4.16831 + 7.40726I$	0
$b = 0.85414 - 1.39486I$		
$u = -0.71725 + 1.37949I$		
$a = 0.797230 - 0.166760I$	$1.04644 + 9.93426I$	0
$b = -0.018619 + 0.814905I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.71725 - 1.37949I$		
$a = 0.797230 + 0.166760I$	$1.04644 - 9.93426I$	0
$b = -0.018619 - 0.814905I$		
$u = -0.64339 + 1.43204I$		
$a = -0.995320 - 0.408568I$	$0.2685 + 19.6611I$	0
$b = 0.84996 - 1.37107I$		
$u = -0.64339 - 1.43204I$		
$a = -0.995320 + 0.408568I$	$0.2685 - 19.6611I$	0
$b = 0.84996 + 1.37107I$		
$u = 0.174232 + 0.311525I$		
$a = 1.35342 + 1.73252I$	$0.43885 - 3.97261I$	$-4.58867 + 6.30476I$
$b = 0.740310 + 0.767898I$		
$u = 0.174232 - 0.311525I$		
$a = 1.35342 - 1.73252I$	$0.43885 + 3.97261I$	$-4.58867 - 6.30476I$
$b = 0.740310 - 0.767898I$		
$u = 0.13350 + 1.66182I$		
$a = 0.182902 - 0.848840I$	$5.74598 - 3.15169I$	0
$b = -0.203284 - 1.015750I$		
$u = 0.13350 - 1.66182I$		
$a = 0.182902 + 0.848840I$	$5.74598 + 3.15169I$	0
$b = -0.203284 + 1.015750I$		
$u = -0.268321 + 0.180713I$		
$a = -0.03370 - 1.96521I$	$-0.115937 - 1.211200I$	$-1.71106 + 5.73798I$
$b = 0.390058 + 0.565987I$		
$u = -0.268321 - 0.180713I$		
$a = -0.03370 + 1.96521I$	$-0.115937 + 1.211200I$	$-1.71106 - 5.73798I$
$b = 0.390058 - 0.565987I$		
$u = -1.33860 + 1.24162I$		
$a = 0.190980 - 0.157162I$	$-3.95525 - 0.51884I$	0
$b = -0.134911 + 0.364622I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.33860 - 1.24162I$	$-3.95525 + 0.51884I$	0
$a = 0.190980 + 0.157162I$		
$b = -0.134911 - 0.364622I$		
$u = 0.0850182 + 0.0509450I$	$-0.098219 + 0.688436I$	$22.4733 + 24.2696I$
$a = 2.91243 + 1.22774I$		
$b = 0.41615 + 1.90731I$		
$u = 0.0850182 - 0.0509450I$	$-0.098219 - 0.688436I$	$22.4733 - 24.2696I$
$a = 2.91243 - 1.22774I$		
$b = 0.41615 - 1.90731I$		
$u = 2.06533$	$2.65860$	0
$a = 0.0739488$		
$b = -0.781278$		
$u = 0.32676 + 2.62056I$	$1.71445 + 0.27791I$	0
$a = 0.072490 - 0.126025I$		
$b = 0.059506 - 0.440324I$		
$u = 0.32676 - 2.62056I$	$1.71445 - 0.27791I$	0
$a = 0.072490 + 0.126025I$		
$b = 0.059506 + 0.440324I$		
$u = -4.68377$	$1.74563$	0
$a = 0.0246154$		
$b = -0.335586$		

II.

$$I_2^u = \langle 5.49 \times 10^{35}u^{35} + 2.03 \times 10^{36}u^{34} + \dots + 3.21 \times 10^{35}b + 9.35 \times 10^{35}, 1.11 \times 10^{36}u^{35} + 3.25 \times 10^{36}u^{34} + \dots + 3.21 \times 10^{35}a + 4.28 \times 10^{36}, u^{36} + 3u^{35} + \dots + 2u - 1 \rangle$$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_2 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -3.45929u^{35} - 10.1172u^{34} + \dots - 15.6682u - 13.3478 \\ -1.71201u^{35} - 6.33404u^{34} + \dots + 2.53692u - 2.91317 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -4.52875u^{35} - 14.2424u^{34} + \dots - 12.9497u - 12.8010 \\ -0.876788u^{35} - 3.53415u^{34} + \dots - 0.945543u - 2.54330 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -1.90584u^{35} - 6.76461u^{34} + \dots - 1.11450u - 1.28326 \\ -1.48836u^{35} - 4.75689u^{34} + \dots + 7.35670u - 2.93339 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -5.17130u^{35} - 16.4513u^{34} + \dots - 13.1313u - 16.2610 \\ -1.71201u^{35} - 6.33404u^{34} + \dots + 2.53692u - 2.91317 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1.03070u^{35} + 4.55011u^{34} + \dots + 4.59314u - 1.05912 \\ 0.828479u^{35} + 3.19495u^{34} + \dots + 0.402309u + 1.25562 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -2.36451u^{35} - 9.76073u^{34} + \dots + 11.2727u - 2.17784 \\ 0.626280u^{35} + 1.00614u^{34} + \dots + 7.66594u + 2.12680 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 4.55144u^{35} + 14.4335u^{34} + \dots + 19.5780u + 17.4542 \\ 2.42464u^{35} + 7.42685u^{34} + \dots - 1.91737u + 5.53466 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -2.34454u^{35} - 9.06402u^{34} + \dots + 4.03352u + 0.662079 \\ 0.393530u^{35} + 0.844576u^{34} + \dots - 2.14879u + 3.10696 \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes =  $1.94625u^{35} + 8.11137u^{34} + \dots + 29.4415u - 9.23077$

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

Crossings	u-Polynomials at each crossing
$c_1$	$u^{36} - 3u^{35} + \cdots - 2u - 1$
$c_2$	$u^{36} + u^{35} + \cdots + u + 1$
$c_3$	$u^{36} + 4u^{35} + \cdots + 5u + 1$
$c_4$	$u^{36} + 3u^{35} + \cdots + 2u - 1$
$c_5$	$u^{36} - 12u^{34} + \cdots - 7u + 1$
$c_6$	$u^{36} - 4u^{35} + \cdots - 5u + 1$
$c_7$	$u^{36} - u^{35} + \cdots - 20u + 1$
$c_8$	$u^{36} - u^{35} + \cdots - 2u - 1$
$c_9$	$u^{36} - u^{35} + \cdots - u + 1$
$c_{10}$	$u^{36} - 11u^{34} + \cdots + 7u - 1$
$c_{11}$	$u^{36} + u^{35} + \cdots + 20u + 1$
$c_{12}$	$u^{36} + 2u^{34} + \cdots + 28u + 1$



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

Crossings	Riley Polynomials at each crossing
$c_1, c_4$	$y^{36} + 9y^{35} + \cdots - 8y + 1$
$c_2, c_9$	$y^{36} - 29y^{35} + \cdots - 41y + 1$
$c_3, c_6$	$y^{36} - 14y^{35} + \cdots - 23y + 1$
$c_5$	$y^{36} - 24y^{35} + \cdots - 9y + 1$
$c_7, c_{11}$	$y^{36} - 27y^{35} + \cdots - 410y + 1$
$c_8$	$y^{36} + 19y^{35} + \cdots - 12y + 1$
$c_{10}$	$y^{36} - 22y^{35} + \cdots + 43y + 1$
$c_{12}$	$y^{36} + 4y^{35} + \cdots - 718y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.513433 + 0.879138I$		
$a = 1.21089 - 0.93698I$	$2.91514 + 3.61842I$	$-6.84211 - 8.43726I$
$b = -0.510423 + 0.653036I$		
$u = -0.513433 - 0.879138I$		
$a = 1.21089 + 0.93698I$	$2.91514 - 3.61842I$	$-6.84211 + 8.43726I$
$b = -0.510423 - 0.653036I$		
$u = 0.148121 + 1.104210I$		
$a = 0.684123 - 0.666890I$	$3.15811 - 3.20115I$	$0.53801 + 4.68884I$
$b = -0.92847 - 1.76071I$		
$u = 0.148121 - 1.104210I$		
$a = 0.684123 + 0.666890I$	$3.15811 + 3.20115I$	$0.53801 - 4.68884I$
$b = -0.92847 + 1.76071I$		
$u = 0.078217 + 0.877293I$		
$a = 1.47699 - 0.16598I$	$4.70897 - 1.41043I$	$4.33738 - 0.25252I$
$b = -0.730905 - 1.024890I$		
$u = 0.078217 - 0.877293I$		
$a = 1.47699 + 0.16598I$	$4.70897 + 1.41043I$	$4.33738 + 0.25252I$
$b = -0.730905 + 1.024890I$		
$u = -0.028012 + 1.120900I$		
$a = -1.120000 + 0.850450I$	$5.87666 + 1.19684I$	$2.23238 - 1.35617I$
$b = -0.029812 + 0.891231I$		
$u = -0.028012 - 1.120900I$		
$a = -1.120000 - 0.850450I$	$5.87666 - 1.19684I$	$2.23238 + 1.35617I$
$b = -0.029812 - 0.891231I$		
$u = -0.325229 + 1.091960I$		
$a = -0.855422 - 0.327155I$	$1.52175 + 5.31684I$	$-1.54367 - 9.17326I$
$b = 1.15753 - 1.14792I$		
$u = -0.325229 - 1.091960I$		
$a = -0.855422 + 0.327155I$	$1.52175 - 5.31684I$	$-1.54367 + 9.17326I$
$b = 1.15753 + 1.14792I$		

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.582575 + 0.993759I$		
$a = -0.712941 - 0.290134I$	$-4.24924 + 0.91101I$	$-7.06733 - 1.09824I$
$b = 0.305738 + 0.032706I$		
$u = 0.582575 - 0.993759I$		
$a = -0.712941 + 0.290134I$	$-4.24924 - 0.91101I$	$-7.06733 + 1.09824I$
$b = 0.305738 - 0.032706I$		
$u = 0.656433 + 0.962827I$		
$a = -0.950023 - 0.386967I$	$-1.30948 - 10.82960I$	$-4.00000 + 9.18795I$
$b = 0.922459 + 0.714702I$		
$u = 0.656433 - 0.962827I$		
$a = -0.950023 + 0.386967I$	$-1.30948 + 10.82960I$	$-4.00000 - 9.18795I$
$b = 0.922459 - 0.714702I$		
$u = 0.110848 + 0.826584I$		
$a = 0.15987 + 1.93676I$	$-6.24945 - 2.94276I$	$-6.41571 + 3.50365I$
$b = -0.135559 + 1.249010I$		
$u = 0.110848 - 0.826584I$		
$a = 0.15987 - 1.93676I$	$-6.24945 + 2.94276I$	$-6.41571 - 3.50365I$
$b = -0.135559 - 1.249010I$		
$u = -1.23273$		
$a = -0.466371$	$-2.13658$	$-23.3520$
$b = 0.587579$		
$u = 0.225514 + 1.260070I$		
$a = 1.57213 - 0.81403I$	$-1.90275 - 4.14418I$	$13.1117 + 7.7273I$
$b = -0.412773 - 0.430998I$		
$u = 0.225514 - 1.260070I$		
$a = 1.57213 + 0.81403I$	$-1.90275 + 4.14418I$	$13.1117 - 7.7273I$
$b = -0.412773 + 0.430998I$		
$u = -0.406209 + 1.224760I$		
$a = -0.906751 - 0.448915I$	$1.40303 + 5.18405I$	$0$
$b = 0.868717 - 0.986190I$		

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.406209 - 1.224760I$		
$a = -0.906751 + 0.448915I$	$1.40303 - 5.18405I$	0
$b = 0.868717 + 0.986190I$		
$u = -0.648514$		
$a = 0.935052$	1.30043	-4.10800
$b = -1.64043$		
$u = -0.53294 + 1.37657I$		
$a = -0.887638 - 0.081145I$	$4.81586 + 0.79648I$	0
$b = -0.032126 - 0.700402I$		
$u = -0.53294 - 1.37657I$		
$a = -0.887638 + 0.081145I$	$4.81586 - 0.79648I$	0
$b = -0.032126 + 0.700402I$		
$u = -0.69539 + 1.31543I$		
$a = 0.883060 + 0.312348I$	$5.27957 + 8.62308I$	0
$b = -0.88795 + 1.40407I$		
$u = -0.69539 - 1.31543I$		
$a = 0.883060 - 0.312348I$	$5.27957 - 8.62308I$	0
$b = -0.88795 - 1.40407I$		
$u = -0.13835 + 1.53495I$		
$a = 0.011485 + 0.672209I$	$6.78820 + 2.69969I$	0
$b = -0.172141 + 1.105550I$		
$u = -0.13835 - 1.53495I$		
$a = 0.011485 - 0.672209I$	$6.78820 - 2.69969I$	0
$b = -0.172141 - 1.105550I$		
$u = -0.409575 + 0.067248I$		
$a = -0.562893 + 0.386600I$	$-0.257106 - 0.711076I$	$-18.0984 - 11.8298I$
$b = 0.98420 - 1.47344I$		
$u = -0.409575 - 0.067248I$		
$a = -0.562893 - 0.386600I$	$-0.257106 + 0.711076I$	$-18.0984 + 11.8298I$
$b = 0.98420 + 1.47344I$		

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.281928 + 0.193042I$		
$a = 2.78458 - 2.66812I$	$-5.32747 + 1.20247I$	$-4.76585 + 3.05762I$
$b = 0.094472 - 0.525816I$		
$u = 0.281928 - 0.193042I$		
$a = 2.78458 + 2.66812I$	$-5.32747 - 1.20247I$	$-4.76585 - 3.05762I$
$b = 0.094472 + 0.525816I$		
$u = 0.255351 + 0.208955I$		
$a = -3.08002 + 2.15745I$	$-5.74121 + 3.05209I$	$-7.75223 - 2.39920I$
$b = 0.089146 + 1.404570I$		
$u = 0.255351 - 0.208955I$		
$a = -3.08002 - 2.15745I$	$-5.74121 - 3.05209I$	$-7.75223 + 2.39920I$
$b = 0.089146 - 1.404570I$		
$u = -2.84496$		
$a = 0.104423$	2.52288	0
$b = -0.637791$		
$u = 3.14650$		
$a = 0.0119985$	1.77107	0
$b = -0.473565$		

### III. u-Polynomials

Crossings	u-Polynomials at each crossing
$c_1$	$(u^{36} - 3u^{35} + \dots - 2u - 1)(u^{147} - 8u^{146} + \dots + 61480u + 5747)$
$c_2$	$(u^{36} + u^{35} + \dots + u + 1)(u^{147} - 2u^{146} + \dots + 1.10468 \times 10^7 u + 496609)$
$c_3$	$(u^{36} + 4u^{35} + \dots + 5u + 1)(u^{147} - 3u^{146} + \dots + 108035u + 24613)$
$c_4$	$(u^{36} + 3u^{35} + \dots + 2u - 1)(u^{147} - 8u^{146} + \dots + 61480u + 5747)$
$c_5$	$(u^{36} - 12u^{34} + \dots - 7u + 1)(u^{147} - 3u^{146} + \dots - 73u - 61)$
$c_6$	$(u^{36} - 4u^{35} + \dots - 5u + 1)(u^{147} - 3u^{146} + \dots + 108035u + 24613)$
$c_7$	$(u^{36} - u^{35} + \dots - 20u + 1)(u^{147} - 2u^{146} + \dots - 51044u + 7693)$
$c_8$	$(u^{36} - u^{35} + \dots - 2u - 1)(u^{147} + 6u^{146} + \dots - 435868u + 78457)$
$c_9$	$(u^{36} - u^{35} + \dots - u + 1)(u^{147} - 2u^{146} + \dots + 1.10468 \times 10^7 u + 496609)$
$c_{10}$	$(u^{36} - 11u^{34} + \dots + 7u - 1) \\ \cdot (u^{147} + u^{146} + \dots + 4068286687u + 578211329)$
$c_{11}$	$(u^{36} + u^{35} + \dots + 20u + 1)(u^{147} - 2u^{146} + \dots - 51044u + 7693)$
$c_{12}$	$(u^{36} + 2u^{34} + \dots + 28u + 1)(u^{147} + 7u^{146} + \dots + 24u - 1)$

#### IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
$c_1, c_4$	$(y^{36} + 9y^{35} + \dots - 8y + 1) \\ \cdot (y^{147} + 80y^{146} + \dots + 2204675628y - 33028009)$
$c_2, c_9$	$(y^{36} - 29y^{35} + \dots - 41y + 1) \\ \cdot (y^{147} - 110y^{146} + \dots + 135599578671993y - 246620498881)$
$c_3, c_6$	$(y^{36} - 14y^{35} + \dots - 23y + 1) \\ \cdot (y^{147} - 83y^{146} + \dots + 10185969771y - 605799769)$
$c_5$	$(y^{36} - 24y^{35} + \dots - 9y + 1)(y^{147} - 29y^{146} + \dots - 148879y - 3721)$
$c_7, c_{11}$	$(y^{36} - 27y^{35} + \dots - 410y + 1) \\ \cdot (y^{147} - 104y^{146} + \dots + 12402263874y - 59182249)$
$c_8$	$(y^{36} + 19y^{35} + \dots - 12y + 1) \\ \cdot (y^{147} + 54y^{146} + \dots - 169630825840y - 6155500849)$
$c_{10}$	$(y^{36} - 22y^{35} + \dots + 43y + 1) \\ \cdot (y^{147} + 17y^{146} + \dots - 2.57 \times 10^{18}y - 3.34 \times 10^{17})$
$c_{12}$	$(y^{36} + 4y^{35} + \dots - 718y + 1)(y^{147} + 7y^{146} + \dots + 230y - 1)$