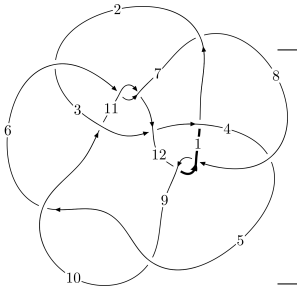
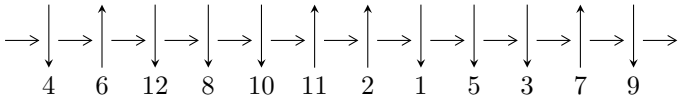
$12a_{0998}$ $(K12a_{0998})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 9.23532 \times 10^{824} u^{161} - 6.57296 \times 10^{825} u^{160} + \cdots + 3.97408 \times 10^{825} b + 3.77915 \times 10^{828}, \\ & 8.54087 \times 10^{826} u^{161} + 2.27504 \times 10^{828} u^{160} + \cdots + 5.48026 \times 10^{828} a - 3.72721 \times 10^{831}, \\ & u^{162} - 5u^{161} + \cdots + 9133u - 1379 \rangle \\ I_2^u = \langle & 1.78669 \times 10^{27} u^{36} + 1.25651 \times 10^{26} u^{35} + \cdots + 2.72369 \times 10^{26} b + 1.59434 \times 10^{27}, \\ & - 4.27607 \times 10^{26} u^{36} - 2.28243 \times 10^{26} u^{35} + \cdots + 9.07896 \times 10^{25} a - 8.22612 \times 10^{26}, \\ & u^{37} + 13u^{35} + \cdots + 4u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 199 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. $\boldsymbol{I_1^u = \langle 9.24 \times 10^{824} u^{161} - 6.57 \times 10^{825} u^{160} + \cdots + 3.97 \times 10^{825} b + 3.78 \times 10^{828},\ 8.54 \times 10^{826} u^{161} + 2.28 \times 10^{828} u^{160} + \cdots + 5.48 \times 10^{828} a - 3.73 \times 10^{831},\ u^{162} - 5u^{161} + \cdots + 9133u - 1379 \rangle}$

(i) Arc colorings

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

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

$$a_5 = \begin{pmatrix} -0.0155848u^{161} - 0.415133u^{160} + \cdots - 4034.89u + 680.116 \\ -0.232389u^{161} + 1.65396u^{160} + \cdots + 6136.17u - 950.950 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 0.249366u^{161} - 0.732722u^{160} + \cdots + 3590.36u - 671.653 \\ 0.135745u^{161} - 1.05334u^{160} + \cdots - 4779.66u + 770.743 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0466441u^{161} + 0.613048u^{160} + \cdots + 5373.45u - 850.883 \\ 0.350662u^{161} - 1.95858u^{160} + \cdots - 4358.67u + 625.210 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.247974u^{161} + 1.23882u^{160} + \cdots + 2101.28u - 270.834 \\ -0.232389u^{161} + 1.65396u^{160} + \cdots + 6136.17u - 950.950 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.00569413u^{161} + 0.433509u^{160} + \cdots + 4147.58u - 695.597 \\ 0.152721u^{161} - 0.692554u^{160} + \cdots - 352.971u + 8.02221 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.998800u^{161} + 4.54500u^{160} + \cdots + 1553.00u + 63.4474 \\ -0.398050u^{161} + 2.01079u^{160} + \cdots + 2899.90u - 364.505 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 0.0423463u^{161} - 0.419826u^{160} + \cdots - 1724.26u + 272.260 \\ -0.244538u^{161} + 1.52800u^{160} + \cdots + 4601.97u - 693.378 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.813964u^{161} - 3.50192u^{160} + \cdots + 875.215u - 366.609 \\ 0.153738u^{161} - 0.776005u^{160} + \cdots - 978.802u + 117.885 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.322129u^{161} + 0.340512u^{160} + \cdots - 12922.8u + 2312.72$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{162} + 10u^{161} + \cdots + 154u - 7$
c_2	$u^{162} + 8u^{160} + \cdots - 20u + 1$
c_3	$u^{162} - 2u^{161} + \cdots + 7626293679u + 965121761$
c_4	$u^{162} + 7u^{161} + \cdots + 31u - 1$
c_5, c_9	$u^{162} - 3u^{161} + \cdots + 6218386u - 528361$
c_6, c_{11}	$u^{162} - 51u^{160} + \cdots + 1717u + 437$
c_7	$u^{162} + u^{161} + \cdots - 6589604478u - 630454121$
c_8, c_{12}	$u^{162} + 5u^{161} + \cdots - 9133u - 1379$
c_{10}	$u^{162} - 2u^{161} + \cdots + 123u - 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{162} + 4y^{161} + \cdots - 4116y + 49$
c_2	$y^{162} + 16y^{161} + \cdots - 190y + 1$
c_3	$y^{162} - 54y^{161} + \cdots - 2.99 \times 10^{18}y + 9.31 \times 10^{17}$
c_4	$y^{162} - 13y^{161} + \cdots - 17y + 1$
c_5, c_9	$y^{162} - 131y^{161} + \cdots - 29177786074y + 279165346321$
c_6, c_{11}	$y^{162} - 102y^{161} + \cdots - 3102787y + 190969$
c_7	$y^{162} + 73y^{161} + \cdots + 2.01 \times 10^{19}y + 3.97 \times 10^{17}$
c_8, c_{12}	$y^{162} + 97y^{161} + \cdots - 11736785y + 1901641$
c_{10}	$y^{162} - 6y^{161} + \cdots - 5063y + 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.364438+0.934578I$ $a=\ \ 0.86922-1.96405I$ $b=-0.332857+0.194362I$	$-5.55873+5.66135I$	0
$u=-0.364438-0.934578I$ $a=\ \ 0.86922+1.96405I$ $b=-0.332857-0.194362I$	$-5.55873-5.66135I$	0
$u=-0.072129+1.027860I$ $a=-0.636429-0.480890I$ $b=-0.172441+0.679991I$	$2.29357-2.45523I$	0
$u=-0.072129-1.027860I$ $a=-0.636429+0.480890I$ $b=-0.172441-0.679991I$	$2.29357+2.45523I$	0
$u=\ \ 0.470589+0.920034I$ $a=-0.07190-2.12268I$ $b=\ \ 0.76812+1.60658I$	$-0.83623-4.97202I$	0
$u=\ \ 0.470589-0.920034I$ $a=-0.07190+2.12268I$ $b=\ \ 0.76812-1.60658I$	$-0.83623+4.97202I$	0
$u=\ \ 0.220408+1.010250I$ $a=-0.400546-1.323730I$ $b=-0.315050+1.042240I$	$1.89460-2.94833I$	0
$u=\ \ 0.220408-1.010250I$ $a=-0.400546+1.323730I$ $b=-0.315050-1.042240I$	$1.89460+2.94833I$	0
$u=\ \ 0.450212+0.931702I$ $a=-0.54552-1.99644I$ $b=\ \ 0.543613+0.211021I$	$-2.71791-11.48510I$	0
$u=\ \ 0.450212-0.931702I$ $a=-0.54552+1.99644I$ $b=\ \ 0.543613-0.211021I$	$-2.71791+11.48510I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.824197+0.640695I$ $a=\ \ 0.172573-0.338696I$ $b=\ \ 1.034890-0.230430I$	$-3.03988+5.26417I$	0
$u=-0.824197-0.640695I$ $a=\ \ 0.172573+0.338696I$ $b=\ \ 1.034890+0.230430I$	$-3.03988-5.26417I$	0
$u=\ \ 0.372414+0.877222I$ $a=\ \ 1.16096+1.73885I$ $b=-0.756263-0.088084I$	$-2.88184+0.92994I$	0
$u=\ \ 0.372414-0.877222I$ $a=\ \ 1.16096-1.73885I$ $b=-0.756263+0.088084I$	$-2.88184-0.92994I$	0
$u=-0.311668+0.895614I$ $a=-0.44991+2.51594I$ $b=\ \ 0.511881-1.204870I$	$-3.42601+1.93989I$	0
$u=-0.311668-0.895614I$ $a=-0.44991-2.51594I$ $b=\ \ 0.511881+1.204870I$	$-3.42601-1.93989I$	0
$u=\ \ 0.214606+0.921083I$ $a=-1.86429+1.76707I$ $b=\ \ 2.18602-1.91828I$	$-1.34785-9.76566I$	0
$u=\ \ 0.214606-0.921083I$ $a=-1.86429-1.76707I$ $b=\ \ 2.18602+1.91828I$	$-1.34785+9.76566I$	0
$u=\ \ 0.363781+0.994655I$ $a=-0.595660-0.023343I$ $b=\ \ 0.831366-0.015985I$	$-0.62485-1.65369I$	0
$u=\ \ 0.363781-0.994655I$ $a=-0.595660+0.023343I$ $b=\ \ 0.831366+0.015985I$	$-0.62485+1.65369I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.310080+0.888024I$ $a=\ \ 0.36728-2.88425I$ $b=-0.65828+2.02432I$	$-5.38995-1.50217I$	0
$u=-0.310080-0.888024I$ $a=\ \ 0.36728+2.88425I$ $b=-0.65828-2.02432I$	$-5.38995+1.50217I$	0
$u=-0.391447+0.847504I$ $a=-0.66560+2.24197I$ $b=\ \ 0.713508-0.549552I$	$-3.89774+1.76552I$	0
$u=-0.391447-0.847504I$ $a=-0.66560-2.24197I$ $b=\ \ 0.713508+0.549552I$	$-3.89774-1.76552I$	0
$u=-0.912869+0.183465I$ $a=-0.0037704+0.1269540I$ $b=-0.284123+0.658858I$	$3.84065-1.36973I$	0
$u=-0.912869-0.183465I$ $a=-0.0037704-0.1269540I$ $b=-0.284123-0.658858I$	$3.84065+1.36973I$	0
$u=-0.970833+0.477295I$ $a=-0.693410+0.238527I$ $b=\ \ 0.997093+0.943625I$	$-3.86036-4.39205I$	0
$u=-0.970833-0.477295I$ $a=-0.693410-0.238527I$ $b=\ \ 0.997093-0.943625I$	$-3.86036+4.39205I$	0
$u=-0.393745+1.010210I$ $a=\ \ 0.42093+1.42013I$ $b=\ \ 0.963756-0.962346I$	$0.77778+4.28953I$	0
$u=-0.393745-1.010210I$ $a=\ \ 0.42093-1.42013I$ $b=\ \ 0.963756+0.962346I$	$0.77778-4.28953I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.320600+1.041220I$ $a=-0.67910-1.50315I$ $b=-0.711051+0.543143I$	$3.13808-1.44812I$	0
$u=-0.320600-1.041220I$ $a=-0.67910+1.50315I$ $b=-0.711051-0.543143I$	$3.13808+1.44812I$	0
$u=-0.116410+0.898199I$ $a=0.29642+2.39237I$ $b=0.578282-1.155400I$	$0.46297+3.03319I$	0
$u=-0.116410-0.898199I$ $a=0.29642-2.39237I$ $b=0.578282+1.155400I$	$0.46297-3.03319I$	0
$u=0.097092+0.897734I$ $a=0.27466+2.05124I$ $b=0.88611-1.15198I$	$1.19045+1.64565I$	0
$u=0.097092-0.897734I$ $a=0.27466-2.05124I$ $b=0.88611+1.15198I$	$1.19045-1.64565I$	0
$u=-0.891860+0.064694I$ $a=-0.428218-0.116662I$ $b=-0.678883+0.845513I$	$0.89156+9.33028I$	0
$u=-0.891860-0.064694I$ $a=-0.428218+0.116662I$ $b=-0.678883-0.845513I$	$0.89156-9.33028I$	0
$u=0.786309+0.411248I$ $a=-0.049283+0.540545I$ $b=-0.403456+0.692027I$	$0.10597+2.26797I$	0
$u=0.786309-0.411248I$ $a=-0.049283-0.540545I$ $b=-0.403456-0.692027I$	$0.10597-2.26797I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.163941+1.106140I$ $a=-0.357828-1.230940I$ $b=-0.474645+0.827331I$	$3.48167-0.20197I$	0
$u=-0.163941-1.106140I$ $a=-0.357828+1.230940I$ $b=-0.474645-0.827331I$	$3.48167+0.20197I$	0
$u=\ \ 0.243873+0.840752I$ $a=-0.51667-3.11789I$ $b=\ \ 0.44313+1.99332I$	$-1.54021+7.62998I$	0
$u=\ \ 0.243873-0.840752I$ $a=-0.51667+3.11789I$ $b=\ \ 0.44313-1.99332I$	$-1.54021-7.62998I$	0
$u=\ \ 0.232019+0.837153I$ $a=\ \ 0.047617+0.530137I$ $b=-1.71465-0.17854I$	$-3.26228-3.63513I$	0
$u=\ \ 0.232019-0.837153I$ $a=\ \ 0.047617-0.530137I$ $b=-1.71465+0.17854I$	$-3.26228+3.63513I$	0
$u=\ \ 0.266581+1.102810I$ $a=\ \ 1.10999-1.34708I$ $b=\ \ 0.714540+0.568665I$	$2.99165-5.15780I$	0
$u=\ \ 0.266581-1.102810I$ $a=\ \ 1.10999+1.34708I$ $b=\ \ 0.714540-0.568665I$	$2.99165+5.15780I$	0
$u=-0.606113+0.609465I$ $a=\ \ 0.45906+1.60732I$ $b=\ \ 0.0757464-0.0929989I$	$-3.06934+0.21594I$	0
$u=-0.606113-0.609465I$ $a=\ \ 0.45906-1.60732I$ $b=\ \ 0.0757464+0.0929989I$	$-3.06934-0.21594I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.344061+0.785259I$ $a=-0.219841-0.017551I$ $b=\ \ 1.52017+0.23677I$	$-4.13877+1.49546I$	0
$u=-0.344061-0.785259I$ $a=-0.219841+0.017551I$ $b=\ \ 1.52017-0.23677I$	$-4.13877-1.49546I$	0
$u=\ \ 0.377243+1.079690I$ $a=\ \ 0.66964+2.29990I$ $b=-1.31043-1.54420I$	$-2.68655-6.47774I$	0
$u=\ \ 0.377243-1.079690I$ $a=\ \ 0.66964-2.29990I$ $b=-1.31043+1.54420I$	$-2.68655+6.47774I$	0
$u=\ \ 0.661510+0.937882I$ $a=\ \ 0.120789+1.176160I$ $b=-0.386487-0.072293I$	$-3.11658-2.42529I$	0
$u=\ \ 0.661510-0.937882I$ $a=\ \ 0.120789-1.176160I$ $b=-0.386487+0.072293I$	$-3.11658+2.42529I$	0
$u=\ \ 0.771181+0.329252I$ $a=-1.015280-0.069156I$ $b=\ \ 1.010490-0.465741I$	$-2.43641+0.42484I$	0
$u=\ \ 0.771181-0.329252I$ $a=-1.015280+0.069156I$ $b=\ \ 1.010490+0.465741I$	$-2.43641-0.42484I$	0
$u=\ \ 1.157130+0.107211I$ $a=-0.388259+0.150849I$ $b=\ \ 0.978873-0.510007I$	$-3.90579+1.42576I$	0
$u=\ \ 1.157130-0.107211I$ $a=-0.388259-0.150849I$ $b=\ \ 0.978873+0.510007I$	$-3.90579-1.42576I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.806838 + 0.159092I$ $a = 0.406641 - 0.555858I$ $b = 0.749684 + 0.808394I$	$-2.92159 - 2.82949I$	0
$u = 0.806838 - 0.159092I$ $a = 0.406641 + 0.555858I$ $b = 0.749684 - 0.808394I$	$-2.92159 + 2.82949I$	0
$u = 0.164300 + 1.166300I$ $a = 0.40487 + 1.53897I$ $b = -1.31111 - 1.24487I$	$6.61795 - 5.56113I$	0
$u = 0.164300 - 1.166300I$ $a = 0.40487 - 1.53897I$ $b = -1.31111 + 1.24487I$	$6.61795 + 5.56113I$	0
$u = -0.229741 + 1.168240I$ $a = 1.073950 + 0.359029I$ $b = -1.42203 - 0.52963I$	$3.78599 + 6.86988I$	0
$u = -0.229741 - 1.168240I$ $a = 1.073950 - 0.359029I$ $b = -1.42203 + 0.52963I$	$3.78599 - 6.86988I$	0
$u = 0.209152 + 1.172510I$ $a = 0.546711 - 1.069460I$ $b = 0.682784 + 0.910734I$	$7.21378 + 2.63594I$	0
$u = 0.209152 - 1.172510I$ $a = 0.546711 + 1.069460I$ $b = 0.682784 - 0.910734I$	$7.21378 - 2.63594I$	0
$u = 0.534017 + 1.065840I$ $a = -0.532712 + 1.085270I$ $b = -0.898208 - 0.947645I$	$2.08854 - 7.19173I$	0
$u = 0.534017 - 1.065840I$ $a = -0.532712 - 1.085270I$ $b = -0.898208 + 0.947645I$	$2.08854 + 7.19173I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.186720 + 0.130375I$ $a = 0.122739 - 0.267315I$ $b = -1.031870 - 0.353936I$	$-5.55147 - 3.48791I$	0
$u = 1.186720 - 0.130375I$ $a = 0.122739 + 0.267315I$ $b = -1.031870 + 0.353936I$	$-5.55147 + 3.48791I$	0
$u = 0.699594 + 0.389663I$ $a = 0.734219 + 0.561172I$ $b = -1.39063 + 0.71130I$	$-5.24687 + 2.56948I$	0
$u = 0.699594 - 0.389663I$ $a = 0.734219 - 0.561172I$ $b = -1.39063 - 0.71130I$	$-5.24687 - 2.56948I$	0
$u = -0.205139 + 0.765278I$ $a = 2.35615 + 0.84988I$ $b = -2.40542 - 1.00145I$	$-5.94594 + 4.08185I$	0
$u = -0.205139 - 0.765278I$ $a = 2.35615 - 0.84988I$ $b = -2.40542 + 1.00145I$	$-5.94594 - 4.08185I$	0
$u = -1.191480 + 0.201121I$ $a = 0.357582 - 0.038222I$ $b = -0.989193 - 0.638748I$	$-8.68398 - 7.97867I$	0
$u = -1.191480 - 0.201121I$ $a = 0.357582 + 0.038222I$ $b = -0.989193 + 0.638748I$	$-8.68398 + 7.97867I$	0
$u = -0.574892 + 0.538574I$ $a = -0.049805 + 0.670653I$ $b = 0.581537 + 0.538844I$	$-0.564082 - 0.508237I$	0
$u = -0.574892 - 0.538574I$ $a = -0.049805 - 0.670653I$ $b = 0.581537 - 0.538844I$	$-0.564082 + 0.508237I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.517573 + 0.589444I$ $a = 0.528011 + 0.361764I$ $b = 1.286560 - 0.073312I$	$-3.71324 + 7.51749I$	0
$u = 0.517573 - 0.589444I$ $a = 0.528011 - 0.361764I$ $b = 1.286560 + 0.073312I$	$-3.71324 - 7.51749I$	0
$u = -0.267810 + 0.736990I$ $a = -1.103070 - 0.401870I$ $b = 1.73016 + 0.75060I$	$-3.97022 + 0.82701I$	0
$u = -0.267810 - 0.736990I$ $a = -1.103070 + 0.401870I$ $b = 1.73016 - 0.75060I$	$-3.97022 - 0.82701I$	0
$u = 0.768778$ $a = -0.651744$ $b = 0.848211$	-2.34602	0
$u = 1.220030 + 0.201057I$ $a = -0.355676 - 0.095655I$ $b = 0.973679 - 0.700983I$	$-4.6749 + 13.9821I$	0
$u = 1.220030 - 0.201057I$ $a = -0.355676 + 0.095655I$ $b = 0.973679 + 0.700983I$	$-4.6749 - 13.9821I$	0
$u = 0.119079 + 1.248970I$ $a = 0.046518 - 1.260750I$ $b = 0.288159 + 1.223160I$	$5.76699 - 0.13761I$	0
$u = 0.119079 - 1.248970I$ $a = 0.046518 + 1.260750I$ $b = 0.288159 - 1.223160I$	$5.76699 + 0.13761I$	0
$u = 0.015363 + 0.744446I$ $a = -0.68018 - 3.03958I$ $b = -0.0651071 - 0.0587446I$	$1.16480 + 3.56817I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.015363 - 0.744446I$ $a = -0.68018 + 3.03958I$ $b = -0.0651071 + 0.0587446I$	$1.16480 - 3.56817I$	0
$u = \quad 0.451879 + 1.177700I$ $a = -0.160243 + 0.918075I$ $b = -0.955567 - 0.566284I$	$1.42035 - 4.28275I$	0
$u = \quad 0.451879 - 1.177700I$ $a = -0.160243 - 0.918075I$ $b = -0.955567 + 0.566284I$	$1.42035 + 4.28275I$	0
$u = -0.405379 + 1.213330I$ $a = -0.005210 + 1.060340I$ $b = \quad 1.23613 - 0.72021I$	$2.42413 + 6.61656I$	0
$u = -0.405379 - 1.213330I$ $a = -0.005210 - 1.060340I$ $b = \quad 1.23613 + 0.72021I$	$2.42413 - 6.61656I$	0
$u = \quad 0.232500 + 1.263780I$ $a = -0.795764 + 0.021249I$ $b = -0.175320 - 0.007922I$	$2.99505 - 2.82754I$	0
$u = \quad 0.232500 - 1.263780I$ $a = -0.795764 - 0.021249I$ $b = -0.175320 + 0.007922I$	$2.99505 + 2.82754I$	0
$u = \quad 0.458145 + 1.205510I$ $a = -0.225543 - 1.361610I$ $b = \quad 0.632795 + 1.068440I$	$1.19269 - 4.38789I$	0
$u = \quad 0.458145 - 1.205510I$ $a = -0.225543 + 1.361610I$ $b = \quad 0.632795 - 1.068440I$	$1.19269 + 4.38789I$	0
$u = \quad 0.355653 + 1.242190I$ $a = -0.271384 + 0.724896I$ $b = -0.436091 - 0.372334I$	$1.90326 - 3.46781I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.355653 - 1.242190I$ $a = -0.271384 - 0.724896I$ $b = -0.436091 + 0.372334I$	$1.90326 + 3.46781I$	0
$u = -0.297337 + 0.639542I$ $a = -0.885418 + 0.534884I$ $b = -1.199570 - 0.095345I$	$-6.51120 - 2.54569I$	0
$u = -0.297337 - 0.639542I$ $a = -0.885418 - 0.534884I$ $b = -1.199570 + 0.095345I$	$-6.51120 + 2.54569I$	0
$u = 0.972236 + 0.857350I$ $a = 0.639413 - 0.578890I$ $b = -0.050352 + 1.081050I$	$1.64760 + 3.82927I$	0
$u = 0.972236 - 0.857350I$ $a = 0.639413 + 0.578890I$ $b = -0.050352 - 1.081050I$	$1.64760 - 3.82927I$	0
$u = 0.547963 + 1.186880I$ $a = 0.26683 + 1.76222I$ $b = -1.33264 - 1.34488I$	$-2.63927 - 7.45734I$	0
$u = 0.547963 - 1.186880I$ $a = 0.26683 - 1.76222I$ $b = -1.33264 + 1.34488I$	$-2.63927 + 7.45734I$	0
$u = 0.678007 + 0.047241I$ $a = 0.140486 - 0.746286I$ $b = -1.240580 - 0.388666I$	$-5.50525 - 2.82985I$	0
$u = 0.678007 - 0.047241I$ $a = 0.140486 + 0.746286I$ $b = -1.240580 + 0.388666I$	$-5.50525 + 2.82985I$	0
$u = -0.408977 + 1.268690I$ $a = -0.060877 - 1.378580I$ $b = -0.81864 + 1.18696I$	$8.21262 + 3.04629I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.408977-1.268690I$ $a=-0.060877+1.378580I$ $b=-0.81864-1.18696I$	$8.21262-3.04629I$	0
$u=\ \ 0.661322+0.048311I$ $a=-0.928372+0.296275I$ $b=-0.513047+0.152421I$	$-1.77744+0.10685I$	0
$u=\ \ 0.661322-0.048311I$ $a=-0.928372-0.296275I$ $b=-0.513047-0.152421I$	$-1.77744-0.10685I$	0
$u=-0.659297+1.177180I$ $a=\ \ 0.11442+1.61581I$ $b=\ \ 1.12442-1.44563I$	$-1.62101+10.37210I$	0
$u=-0.659297-1.177180I$ $a=\ \ 0.11442-1.61581I$ $b=\ \ 1.12442+1.44563I$	$-1.62101-10.37210I$	0
$u=-0.468350+1.265950I$ $a=-0.26558-1.46714I$ $b=-0.97625+1.03305I$	$4.8664+14.1213I$	0
$u=-0.468350-1.265950I$ $a=-0.26558+1.46714I$ $b=-0.97625-1.03305I$	$4.8664-14.1213I$	0
$u=\ \ 0.438907+1.277280I$ $a=\ \ 0.20120-1.63828I$ $b=\ \ 0.841423+1.029190I$	$1.33959-7.27539I$	0
$u=\ \ 0.438907-1.277280I$ $a=\ \ 0.20120+1.63828I$ $b=\ \ 0.841423-1.029190I$	$1.33959+7.27539I$	0
$u=-0.644489$ $a=\ \ 1.79194$ $b=-0.387949$	-2.93629	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.392414+1.306810I$ $a=\ \ 0.299638-1.273980I$ $b=-0.49194+1.33829I$	$1.73293+4.05578I$	0
$u=-0.392414-1.306810I$ $a=\ \ 0.299638+1.273980I$ $b=-0.49194-1.33829I$	$1.73293-4.05578I$	0
$u=-0.530279+1.283350I$ $a=\ \ 0.411497+0.757143I$ $b=\ \ 0.443492-0.868600I$	$7.30029+6.82022I$	0
$u=-0.530279-1.283350I$ $a=\ \ 0.411497-0.757143I$ $b=\ \ 0.443492+0.868600I$	$7.30029-6.82022I$	0
$u=-0.296647+1.369300I$ $a=-1.14212+1.27258I$ $b=\ \ 1.83066-1.10168I$	$3.28256+8.71826I$	0
$u=-0.296647-1.369300I$ $a=-1.14212-1.27258I$ $b=\ \ 1.83066+1.10168I$	$3.28256-8.71826I$	0
$u=\ \ 0.76816+1.18824I$ $a=-0.416791+1.151450I$ $b=-0.43883-1.38613I$	$3.02169-10.61870I$	0
$u=\ \ 0.76816-1.18824I$ $a=-0.416791-1.151450I$ $b=-0.43883+1.38613I$	$3.02169+10.61870I$	0
$u=\ \ 0.60070+1.31150I$ $a=-0.22928-1.63770I$ $b=\ \ 1.02806+1.22287I$	$-0.16949-7.55453I$	0
$u=\ \ 0.60070-1.31150I$ $a=-0.22928+1.63770I$ $b=\ \ 1.02806-1.22287I$	$-0.16949+7.55453I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.63165+1.30519I$ $a=\ \ 0.16100-1.54221I$ $b=-1.17961+1.20670I$	$-5.2028+14.3290I$	0
$u=-0.63165-1.30519I$ $a=\ \ 0.16100+1.54221I$ $b=-1.17961-1.20670I$	$-5.2028-14.3290I$	0
$u=-1.44349+0.15752I$ $a=-0.240446+0.080460I$ $b=\ \ 0.778245+0.310240I$	$-5.51155-0.58477I$	0
$u=-1.44349-0.15752I$ $a=-0.240446-0.080460I$ $b=\ \ 0.778245-0.310240I$	$-5.51155+0.58477I$	0
$u=\ \ 0.64397+1.31980I$ $a=-0.14683-1.51265I$ $b=\ \ 1.22958+1.24816I$	$-1.1409-20.4698I$	0
$u=\ \ 0.64397-1.31980I$ $a=-0.14683+1.51265I$ $b=\ \ 1.22958-1.24816I$	$-1.1409+20.4698I$	0
$u=-0.79296+1.26164I$ $a=\ \ 0.137567+0.992154I$ $b=\ \ 0.599164-0.879129I$	$-1.60175+7.75698I$	0
$u=-0.79296-1.26164I$ $a=\ \ 0.137567-0.992154I$ $b=\ \ 0.599164+0.879129I$	$-1.60175-7.75698I$	0
$u=\ \ 0.62958+1.37014I$ $a=-0.322343-0.870657I$ $b=\ \ 0.772853+0.773447I$	$0.66563-5.13185I$	0
$u=\ \ 0.62958-1.37014I$ $a=-0.322343+0.870657I$ $b=\ \ 0.772853-0.773447I$	$0.66563+5.13185I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.55959+1.40172I$ $a=\ \ 0.384263+0.528790I$ $b=-0.138130-0.688054I$	$4.55170-3.86551I$	0
$u=-0.55959-1.40172I$ $a=\ \ 0.384263-0.528790I$ $b=-0.138130+0.688054I$	$4.55170+3.86551I$	0
$u=-0.478101+0.078092I$ $a=\ \ 1.15589+1.45481I$ $b=\ \ 0.641890+0.436587I$	$-0.94899-2.96707I$	$-6.23165+9.33212I$
$u=-0.478101-0.078092I$ $a=\ \ 1.15589-1.45481I$ $b=\ \ 0.641890-0.436587I$	$-0.94899+2.96707I$	$-6.23165-9.33212I$
$u=-0.74269+1.32272I$ $a=-0.059880+1.093190I$ $b=\ \ 0.982891-0.884431I$	$-1.95412+7.93835I$	0
$u=-0.74269-1.32272I$ $a=-0.059880-1.093190I$ $b=\ \ 0.982891+0.884431I$	$-1.95412-7.93835I$	0
$u=\ \ 0.64430+1.42560I$ $a=\ \ 0.325887+1.093300I$ $b=-1.30920-0.89071I$	$-0.82655-10.04040I$	0
$u=\ \ 0.64430-1.42560I$ $a=\ \ 0.325887-1.093300I$ $b=-1.30920+0.89071I$	$-0.82655+10.04040I$	0
$u=\ \ 0.25015+1.56425I$ $a=\ \ 0.383683+0.311453I$ $b=-0.0804358-0.1008080I$	$-1.26364-2.15985I$	0
$u=\ \ 0.25015-1.56425I$ $a=\ \ 0.383683-0.311453I$ $b=-0.0804358+0.1008080I$	$-1.26364+2.15985I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.03041+1.20674I$ $a=-0.165170-0.573251I$ $b=-0.215571+0.728769I$	$-2.75137+0.34242I$	0
$u=-1.03041-1.20674I$ $a=-0.165170+0.573251I$ $b=-0.215571-0.728769I$	$-2.75137-0.34242I$	0
$u=-0.406661+0.027543I$ $a=-1.97717-1.26169I$ $b=-0.588042+0.756972I$	$0.68402-4.19525I$	$-6.22230+5.15795I$
$u=-0.406661-0.027543I$ $a=-1.97717+1.26169I$ $b=-0.588042-0.756972I$	$0.68402+4.19525I$	$-6.22230-5.15795I$
$u=-0.173526+0.354609I$ $a=-0.922755+0.592818I$ $b=\ 0.425194+0.480196I$	$-0.250034-1.189480I$	$-3.34735+5.14170I$
$u=-0.173526-0.354609I$ $a=-0.922755-0.592818I$ $b=\ 0.425194-0.480196I$	$-0.250034+1.189480I$	$-3.34735-5.14170I$
$u=\ 0.85769+1.37283I$ $a=-0.137411+0.586640I$ $b=-0.092810-0.472677I$	$-1.22941-2.59294I$	0
$u=\ 0.85769-1.37283I$ $a=-0.137411-0.586640I$ $b=-0.092810+0.472677I$	$-1.22941+2.59294I$	0
$u=\ 0.173407+0.086261I$ $a=\ 3.14023+3.92856I$ $b=-0.452594+0.674156I$	$3.45461+4.27929I$	$-0.72048-7.86524I$
$u=\ 0.173407-0.086261I$ $a=\ 3.14023-3.92856I$ $b=-0.452594-0.674156I$	$3.45461-4.27929I$	$-0.72048+7.86524I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.09687+1.86628I$		
$a=$	$-0.350507+0.096746I$	$2.20757+7.66533I$	0
$b=$	$0.050346-0.190936I$		
$u=$	$0.09687-1.86628I$		
$a=$	$-0.350507-0.096746I$	$2.20757-7.66533I$	0
$b=$	$0.050346+0.190936I$		

II. $I_2^u = \langle \mathbf{1.79 \times 10^{27} u^{36} + 1.26 \times 10^{26} u^{35} + \cdots + 2.72 \times 10^{26} b + 1.59 \times 10^{27},\ -4.28 \times 10^{26} u^{36} - 2.28 \times 10^{26} u^{35} + \cdots + 9.08 \times 10^{25} a - 8.23 \times 10^{26},\ u^{37} + 13 u^{35} + \cdots + 4u + 1} \rangle$

(i) Arc colorings

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

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

$$a_5 = \begin{pmatrix} 4.70987u^{36} + 2.51398u^{35} + \cdots + 43.9785u + 9.06064 \\ -6.55981u^{36} - 0.461327u^{35} + \cdots - 34.1937u - 5.85361 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -0.599955u^{36} - 2.68288u^{35} + \cdots - 23.4625u - 2.77216 \\ -4.81956u^{36} + 0.335459u^{35} + \cdots - 11.2351u - 0.449214 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -12.0608u^{36} + 5.01612u^{35} + \cdots + 3.72057u + 5.40064 \\ 4.34249u^{36} + 0.612017u^{35} + \cdots + 21.3640u + 4.09719 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.84994u^{36} + 2.05265u^{35} + \cdots + 9.78478u + 3.20703 \\ -6.55981u^{36} - 0.461327u^{35} + \cdots - 34.1937u - 5.85361 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2.52467u^{36} - 1.68904u^{35} + \cdots - 18.8729u - 5.95832 \\ -1.89012u^{36} + 0.884845u^{35} + \cdots - 10.5759u - 2.84562 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -3.39237u^{36} + 4.33018u^{35} + \cdots - 4.40795u - 0.166576 \\ -0.694772u^{36} - 0.821823u^{35} + \cdots - 3.18209u - 1.47497 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 0.231506u^{36} + 2.66785u^{35} + \cdots + 20.8392u + 4.55320 \\ -5.72193u^{36} + 0.273225u^{35} + \cdots - 27.6816u - 5.12263 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -3.44098u^{36} - 3.65129u^{35} + \cdots - 6.11822u - 0.499858 \\ 0.177586u^{36} + 1.73735u^{35} + \cdots + 14.5787u + 4.67796 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{84405017803098940034254549 2}{907895913803714592764129 51} u^{36} + \frac{17938505650549732951665613 9}{907895913803714592764129 51} u^{35} + \cdots - \frac{13487911769636579978331245 26}{907895913803714592764129 51} u - \frac{16966548287288601446171325 04}{907895913803714592764129 51}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{37} - 11u^{36} + \cdots + 3u - 1$
c_2	$u^{37} - u^{36} + \cdots - 3u - 1$
c_3	$u^{37} - 3u^{36} + \cdots + 2u + 1$
c_4	$u^{37} - 6u^{35} + \cdots - 4u - 1$
c_5	$u^{37} - 15u^{35} + \cdots - 55u - 7$
c_6	$u^{37} + u^{36} + \cdots + 12u - 1$
c_7	$u^{37} + 11u^{35} + \cdots - 3u + 5$
c_8	$u^{37} + 13u^{35} + \cdots + 4u + 1$
c_9	$u^{37} - 15u^{35} + \cdots - 55u + 7$
c_{10}	$u^{37} - u^{36} + \cdots + 4u - 1$
c_{11}	$u^{37} - u^{36} + \cdots + 12u + 1$
c_{12}	$u^{37} + 13u^{35} + \cdots + 4u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{37} - 7y^{36} + \cdots - 7y - 1$
c_2	$y^{37} + 9y^{36} + \cdots - 9y - 1$
c_3	$y^{37} - 13y^{36} + \cdots - 46y - 1$
c_4	$y^{37} - 12y^{36} + \cdots + 26y - 1$
c_5, c_9	$y^{37} - 30y^{36} + \cdots + 1527y - 49$
c_6, c_{11}	$y^{37} - 25y^{36} + \cdots + 120y - 1$
c_7	$y^{37} + 22y^{36} + \cdots - 511y - 25$
c_8, c_{12}	$y^{37} + 26y^{36} + \cdots - 14y - 1$
c_{10}	$y^{37} - y^{36} + \cdots + 8y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.032070 + 0.111786I$ $a = 0.316576 + 0.034191I$ $b = -0.972459 + 0.468106I$	$-3.51349 + 1.44951I$	$-5.41957 - 2.94424I$
$u = 1.032070 - 0.111786I$ $a = 0.316576 - 0.034191I$ $b = -0.972459 - 0.468106I$	$-3.51349 - 1.44951I$	$-5.41957 + 2.94424I$
$u = -0.444782 + 0.949309I$ $a = -0.994064 - 0.589237I$ $b = 0.122296 + 0.658604I$	$4.14354 - 3.04058I$	$2.38383 + 1.83641I$
$u = -0.444782 - 0.949309I$ $a = -0.994064 + 0.589237I$ $b = 0.122296 - 0.658604I$	$4.14354 + 3.04058I$	$2.38383 - 1.83641I$
$u = 0.481767 + 0.935817I$ $a = 0.12481 + 1.66020I$ $b = -0.834364 - 1.056510I$	$-0.93646 - 4.03621I$	$-9.02583 + 4.60989I$
$u = 0.481767 - 0.935817I$ $a = 0.12481 - 1.66020I$ $b = -0.834364 + 1.056510I$	$-0.93646 + 4.03621I$	$-9.02583 - 4.60989I$
$u = -0.500083 + 0.771262I$ $a = -0.13725 + 1.92485I$ $b = 0.536463 - 0.289303I$	$-3.13833 + 0.97825I$	$-6.34036 - 4.44625I$
$u = -0.500083 - 0.771262I$ $a = -0.13725 - 1.92485I$ $b = 0.536463 + 0.289303I$	$-3.13833 - 0.97825I$	$-6.34036 + 4.44625I$
$u = -0.015458 + 0.876685I$ $a = -0.75524 - 2.96914I$ $b = -0.156822 + 0.776418I$	$1.67825 + 3.73359I$	$4.83791 - 7.50112I$
$u = -0.015458 - 0.876685I$ $a = -0.75524 + 2.96914I$ $b = -0.156822 - 0.776418I$	$1.67825 - 3.73359I$	$4.83791 + 7.50112I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.831837+0.147819I$ $a=-0.321371+0.657272I$ $b=\ \ 1.227440+0.564758I$	$-4.45307-3.22609I$	$-6.17702+3.43581I$
$u=-0.831837-0.147819I$ $a=-0.321371-0.657272I$ $b=\ \ 1.227440-0.564758I$	$-4.45307+3.22609I$	$-6.17702-3.43581I$
$u=\ \ 0.204287+0.818402I$ $a=\ \ 1.26623-2.61765I$ $b=-1.28180+1.75398I$	$-1.69251-9.30048I$	$-8.00537+4.74846I$
$u=\ \ 0.204287-0.818402I$ $a=\ \ 1.26623+2.61765I$ $b=-1.28180-1.75398I$	$-1.69251+9.30048I$	$-8.00537-4.74846I$
$u=-0.134827+0.799184I$ $a=-0.82128-1.46788I$ $b=\ \ 1.69086+0.83155I$	$-5.54622+3.70220I$	$-5.11113-0.65212I$
$u=-0.134827-0.799184I$ $a=-0.82128+1.46788I$ $b=\ \ 1.69086-0.83155I$	$-5.54622-3.70220I$	$-5.11113+0.65212I$
$u=\ \ 0.416723+1.131290I$ $a=-0.413336+1.114760I$ $b=-0.975991-0.746453I$	$1.42599-5.63695I$	$-3.56832+6.31621I$
$u=\ \ 0.416723-1.131290I$ $a=-0.413336-1.114760I$ $b=-0.975991+0.746453I$	$1.42599+5.63695I$	$-3.56832-6.31621I$
$u=-0.335518+1.174090I$ $a=-0.240120+0.765234I$ $b=\ \ 1.171990-0.766271I$	$5.52378+6.35317I$	$0.58085-7.03684I$
$u=-0.335518-1.174090I$ $a=-0.240120-0.765234I$ $b=\ \ 1.171990+0.766271I$	$5.52378-6.35317I$	$0.58085+7.03684I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.096272 + 1.235980I$ $a = 0.522511 - 0.704186I$ $b = 0.260122 + 0.048183I$	$3.09309 - 3.79740I$	$2.14124 + 7.78975I$
$u = 0.096272 - 1.235980I$ $a = 0.522511 + 0.704186I$ $b = 0.260122 - 0.048183I$	$3.09309 + 3.79740I$	$2.14124 - 7.78975I$
$u = -0.685057$ $a = 1.37121$ $b = -0.592879$	-4.17470	-10.1620
$u = -0.314230 + 0.596806I$ $a = 0.563270 + 0.616967I$ $b = 1.45075 - 0.26310I$	$-3.88047 + 3.20112I$	$-9.17094 - 3.22595I$
$u = -0.314230 - 0.596806I$ $a = 0.563270 - 0.616967I$ $b = 1.45075 + 0.26310I$	$-3.88047 - 3.20112I$	$-9.17094 + 3.22595I$
$u = 0.456685 + 0.430540I$ $a = -0.05767 + 1.58690I$ $b = -0.423648 + 0.454503I$	$-0.90318 + 1.99976I$	$-7.28606 - 1.41380I$
$u = 0.456685 - 0.430540I$ $a = -0.05767 - 1.58690I$ $b = -0.423648 - 0.454503I$	$-0.90318 - 1.99976I$	$-7.28606 + 1.41380I$
$u = 0.59209 + 1.28876I$ $a = 0.20459 + 1.51580I$ $b = -1.05370 - 1.16198I$	$0.02394 - 7.28634I$	0
$u = 0.59209 - 1.28876I$ $a = 0.20459 - 1.51580I$ $b = -1.05370 + 1.16198I$	$0.02394 + 7.28634I$	0
$u = -0.67933 + 1.29847I$ $a = -0.117622 + 1.264610I$ $b = 1.17956 - 1.08513I$	$-0.96344 + 9.17123I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.67933-1.29847I$ $a=-0.117622-1.264610I$ $b=1.17956+1.08513I$	$-0.96344-9.17123I$	0
$u=-0.309801+0.369830I$ $a=1.46862+1.73365I$ $b=-0.925035-0.435702I$	$-4.17455-0.06083I$	$-9.83061-0.08111I$
$u=-0.309801-0.369830I$ $a=1.46862-1.73365I$ $b=-0.925035+0.435702I$	$-4.17455+0.06083I$	$-9.83061+0.08111I$
$u=-0.16391+1.65671I$ $a=0.689926-0.283256I$ $b=-0.867592+0.150982I$	$1.61772+7.61604I$	0
$u=-0.16391-1.65671I$ $a=0.689926+0.283256I$ $b=-0.867592-0.150982I$	$1.61772-7.61604I$	0
$u=0.79240+1.56795I$ $a=0.015806-0.505360I$ $b=0.148383+0.508195I$	$-1.02164-2.57938I$	0
$u=0.79240-1.56795I$ $a=0.015806+0.505360I$ $b=0.148383-0.508195I$	$-1.02164+2.57938I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{37}-11u^{36}+\cdots+3u-1)(u^{162}+10u^{161}+\cdots+154u-7)$
c_2	$(u^{37}-u^{36}+\cdots-3u-1)(u^{162}+8u^{160}+\cdots-20u+1)$
c_3	$(u^{37}-3u^{36}+\cdots+2u+1)$ $\cdot(u^{162}-2u^{161}+\cdots+7626293679u+965121761)$
c_4	$(u^{37}-6u^{35}+\cdots-4u-1)(u^{162}+7u^{161}+\cdots+31u-1)$
c_5	$(u^{37}-15u^{35}+\cdots-55u-7)$ $\cdot(u^{162}-3u^{161}+\cdots+6218386u-528361)$
c_6	$(u^{37}+u^{36}+\cdots+12u-1)(u^{162}-51u^{160}+\cdots+1717u+437)$
c_7	$(u^{37}+11u^{35}+\cdots-3u+5)$ $\cdot(u^{162}+u^{161}+\cdots-6589604478u-630454121)$
c_8	$(u^{37}+13u^{35}+\cdots+4u+1)(u^{162}+5u^{161}+\cdots-9133u-1379)$
c_9	$(u^{37}-15u^{35}+\cdots-55u+7)$ $\cdot(u^{162}-3u^{161}+\cdots+6218386u-528361)$
c_{10}	$(u^{37}-u^{36}+\cdots+4u-1)(u^{162}-2u^{161}+\cdots+123u-7)$
c_{11}	$(u^{37}-u^{36}+\cdots+12u+1)(u^{162}-51u^{160}+\cdots+1717u+437)$
c_{12}	$(u^{37}+13u^{35}+\cdots+4u-1)(u^{162}+5u^{161}+\cdots-9133u-1379)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{37}-7y^{36}+\cdots-7y-1)(y^{162}+4y^{161}+\cdots-4116y+49)$
c_2	$(y^{37}+9y^{36}+\cdots-9y-1)(y^{162}+16y^{161}+\cdots-190y+1)$
c_3	$(y^{37}-13y^{36}+\cdots-46y-1)$ $\cdot(y^{162}-54y^{161}+\cdots-2.99\times10^{18}y+9.31\times10^{17})$
c_4	$(y^{37}-12y^{36}+\cdots+26y-1)(y^{162}-13y^{161}+\cdots-17y+1)$
c_5, c_9	$(y^{37}-30y^{36}+\cdots+1527y-49)$ $\cdot(y^{162}-131y^{161}+\cdots-29177786074y+279165346321)$
c_6, c_{11}	$(y^{37}-25y^{36}+\cdots+120y-1)$ $\cdot(y^{162}-102y^{161}+\cdots-3102787y+190969)$
c_7	$(y^{37}+22y^{36}+\cdots-511y-25)$ $\cdot(y^{162}+73y^{161}+\cdots+2.01\times10^{19}y+3.97\times10^{17})$
c_8, c_{12}	$(y^{37}+26y^{36}+\cdots-14y-1)$ $\cdot(y^{162}+97y^{161}+\cdots-11736785y+1901641)$
c_{10}	$(y^{37}-y^{36}+\cdots+8y-1)(y^{162}-6y^{161}+\cdots-5063y+49)$