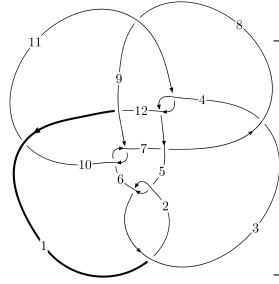
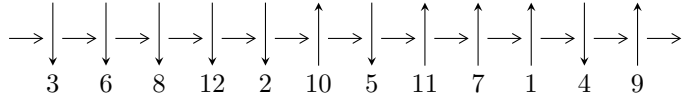


12a₀₃₃₅ (K12a₀₃₃₅)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -1.34989 \times 10^{918} u^{181} - 3.22581 \times 10^{917} u^{180} + \dots + 2.21461 \times 10^{916} b - 1.39411 \times 10^{921}, \\ - 2.57960 \times 10^{921} u^{181} - 4.86262 \times 10^{920} u^{180} + \dots + 1.81819 \times 10^{919} a - 2.49275 \times 10^{924}, \\ u^{182} + u^{181} + \dots - 206u + 821 \rangle$$

$$I_2^u = \langle 2.90138 \times 10^{52} u^{46} + 1.98487 \times 10^{52} u^{45} + \dots + 1.55520 \times 10^{51} b + 1.34305 \times 10^{53}, \\ 1.15009 \times 10^{54} u^{46} + 3.14995 \times 10^{53} u^{45} + \dots + 1.01088 \times 10^{53} a + 2.16660 \times 10^{54}, u^{47} - 14u^{45} + \dots + 22u - \dots \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 229 representations.

¹The 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>).

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

$$\mathbf{I. } I_1^u = \langle -1.35 \times 10^{918} u^{181} - 3.23 \times 10^{917} u^{180} + \dots + 2.21 \times 10^{916} b - 1.39 \times 10^{921}, -2.58 \times 10^{921} u^{181} - 4.86 \times 10^{920} u^{180} + \dots + 1.82 \times 10^{919} a - 2.49 \times 10^{924}, u^{182} + u^{181} + \dots - 206u + 821 \rangle$$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 141.877u^{181} + 26.7442u^{180} + \dots - 201040.u + 137100. \\ 60.9537u^{181} + 14.5660u^{180} + \dots - 97088.2u + 62950.8 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 120.003u^{181} + 19.8936u^{180} + \dots - 159392.u + 112213. \\ 71.7888u^{181} + 14.0222u^{180} + \dots - 108196.u + 71970.7 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 80.9232u^{181} + 12.1782u^{180} + \dots - 103952.u + 74149.7 \\ 60.9537u^{181} + 14.5660u^{180} + \dots - 97088.2u + 62950.8 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -84.3228u^{181} - 6.07795u^{180} + \dots + 96339.5u - 76337.0 \\ -82.9056u^{181} - 13.0190u^{180} + \dots + 117637.u - 82031.7 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 55.6039u^{181} + 6.99742u^{180} + \dots - 70181.4u + 51777.3 \\ 46.9689u^{181} + 8.17406u^{180} + \dots - 62154.9u + 41969.3 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 133.108u^{181} + 23.5681u^{180} + \dots - 184287.u + 127300. \\ 40.4958u^{181} + 10.4740u^{180} + \dots - 68001.0u + 43293.3 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 163.280u^{181} + 30.9427u^{180} + \dots - 239334.u + 161713. \\ 29.0074u^{181} + 6.92794u^{180} + \dots - 51325.4u + 32705.8 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 121.019u^{181} + 24.4340u^{180} + \dots - 183076.u + 122441. \\ 0.820038u^{181} + 2.02066u^{180} + \dots - 7688.34u + 4101.54 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $108.123u^{181} + 31.9670u^{180} + \dots - 230810.u + 140442.$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{182} + 88u^{181} + \dots + 1248578u + 100489$
c_2, c_5	$u^{182} + 4u^{181} + \dots - 2136u - 317$
c_3	$u^{182} + 2u^{181} + \dots + 9357303u - 1023065$
c_4, c_{11}	$u^{182} + u^{181} + \dots - 206u + 821$
c_6, c_9	$u^{182} - 11u^{181} + \dots - 271145u - 27293$
c_7	$u^{182} - 10u^{181} + \dots + 14736466u + 633233$
c_8	$u^{182} + 12u^{181} + \dots + 9037u + 1501$
c_{10}	$u^{182} + 18u^{181} + \dots - 267553107u - 15364313$
c_{12}	$u^{182} - 4u^{181} + \dots - 15899u - 1117$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{182} + 28y^{181} + \dots + 493256419046y + 10098039121$
c_2, c_5	$y^{182} - 88y^{181} + \dots - 1248578y + 100489$
c_3	$y^{182} - 24y^{181} + \dots - 76495395788829y + 1046661994225$
c_4, c_{11}	$y^{182} - 113y^{181} + \dots - 31772444y + 674041$
c_6, c_9	$y^{182} + 103y^{181} + \dots + 14649934201y + 744907849$
c_7	$y^{182} - 24y^{181} + \dots - 93975110617920y + 400984032289$
c_8	$y^{182} + 28y^{181} + \dots - 226333749y + 2253001$
c_{10}	$y^{182} + 10y^{181} + \dots - 449099208347609y + 236062113961969$
c_{12}	$y^{182} + 38y^{181} + \dots - 36140519y + 1247689$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.967487 + 0.254898I$ $a = -0.30773 + 2.82009I$ $b = -0.527290 + 0.418739I$	$-3.12735 - 10.86090I$	0
$u = 0.967487 - 0.254898I$ $a = -0.30773 - 2.82009I$ $b = -0.527290 - 0.418739I$	$-3.12735 + 10.86090I$	0
$u = -0.972948 + 0.203366I$ $a = -0.58964 - 2.90107I$ $b = -0.309357 - 0.446463I$	$-1.38924 + 5.27013I$	0
$u = -0.972948 - 0.203366I$ $a = -0.58964 + 2.90107I$ $b = -0.309357 + 0.446463I$	$-1.38924 - 5.27013I$	0
$u = -0.964022 + 0.232324I$ $a = -1.145130 - 0.287648I$ $b = -1.94767 - 0.06654I$	$-5.72746 + 3.46987I$	0
$u = -0.964022 - 0.232324I$ $a = -1.145130 + 0.287648I$ $b = -1.94767 + 0.06654I$	$-5.72746 - 3.46987I$	0
$u = -0.835164 + 0.566635I$ $a = 0.644360 - 0.085011I$ $b = -0.643442 - 0.474885I$	$-0.17421 + 2.27474I$	0
$u = -0.835164 - 0.566635I$ $a = 0.644360 + 0.085011I$ $b = -0.643442 + 0.474885I$	$-0.17421 - 2.27474I$	0
$u = -0.087874 + 1.011160I$ $a = 0.288761 + 0.253025I$ $b = -0.450031 + 0.263768I$	$2.76742 + 1.88734I$	0
$u = -0.087874 - 1.011160I$ $a = 0.288761 - 0.253025I$ $b = -0.450031 - 0.263768I$	$2.76742 - 1.88734I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.190909 + 0.964588I$	$2.70708 + 3.46168I$	0
$a = 0.151054 - 0.089980I$		
$b = 0.766391 + 0.876174I$		
$u = 0.190909 - 0.964588I$	$2.70708 - 3.46168I$	0
$a = 0.151054 + 0.089980I$		
$b = 0.766391 - 0.876174I$		
$u = -0.177215 + 0.965718I$	$0.75906 - 8.61755I$	0
$a = 0.127514 + 0.154046I$		
$b = 0.788455 - 1.005380I$		
$u = -0.177215 - 0.965718I$	$0.75906 + 8.61755I$	0
$a = 0.127514 - 0.154046I$		
$b = 0.788455 + 1.005380I$		
$u = -0.188554 + 1.008270I$	$1.59563 + 4.51296I$	0
$a = 0.074830 - 0.279695I$		
$b = 0.815872 - 0.134276I$		
$u = -0.188554 - 1.008270I$	$1.59563 - 4.51296I$	0
$a = 0.074830 + 0.279695I$		
$b = 0.815872 + 0.134276I$		
$u = 0.224357 + 1.008210I$	$3.07783 + 0.66639I$	0
$a = 0.154670 + 0.179447I$		
$b = 0.702336 + 0.438773I$		
$u = 0.224357 - 1.008210I$	$3.07783 - 0.66639I$	0
$a = 0.154670 - 0.179447I$		
$b = 0.702336 - 0.438773I$		
$u = 0.881875 + 0.540906I$	$-1.23669 - 7.22005I$	0
$a = 0.776942 - 0.091144I$		
$b = -0.622106 + 0.509657I$		
$u = 0.881875 - 0.540906I$	$-1.23669 + 7.22005I$	0
$a = 0.776942 + 0.091144I$		
$b = -0.622106 - 0.509657I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.018560 + 0.226948I$ $a = -1.68765 + 0.38404I$ $b = -2.28333 + 0.75686I$	$-3.80799 + 10.86370I$	0
$u = -1.018560 - 0.226948I$ $a = -1.68765 - 0.38404I$ $b = -2.28333 - 0.75686I$	$-3.80799 - 10.86370I$	0
$u = 1.015510 + 0.251706I$ $a = -1.312930 - 0.473605I$ $b = -1.86161 - 0.72946I$	$-1.59790 - 6.03649I$	0
$u = 1.015510 - 0.251706I$ $a = -1.312930 + 0.473605I$ $b = -1.86161 + 0.72946I$	$-1.59790 + 6.03649I$	0
$u = -1.040900 + 0.109055I$ $a = -0.81412 - 1.54675I$ $b = 0.575716 - 0.826385I$	$-2.93164 + 1.40135I$	0
$u = -1.040900 - 0.109055I$ $a = -0.81412 + 1.54675I$ $b = 0.575716 + 0.826385I$	$-2.93164 - 1.40135I$	0
$u = -0.181737 + 0.929233I$ $a = 0.294651 + 0.173941I$ $b = 0.444291 - 0.915303I$	$-2.16280 - 1.55039I$	0
$u = -0.181737 - 0.929233I$ $a = 0.294651 - 0.173941I$ $b = 0.444291 + 0.915303I$	$-2.16280 + 1.55039I$	0
$u = 1.056600 + 0.082970I$ $a = -0.26579 + 1.57419I$ $b = 0.90058 + 1.18850I$	$-5.51601 + 3.60018I$	0
$u = 1.056600 - 0.082970I$ $a = -0.26579 - 1.57419I$ $b = 0.90058 - 1.18850I$	$-5.51601 - 3.60018I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.902568 + 0.235395I$ $a = -0.555904 + 1.245760I$ $b = 1.154090 + 0.195908I$	$1.34326 + 2.98619I$	0
$u = -0.902568 - 0.235395I$ $a = -0.555904 - 1.245760I$ $b = 1.154090 - 0.195908I$	$1.34326 - 2.98619I$	0
$u = 0.966542 + 0.502109I$ $a = 0.572313 - 0.569869I$ $b = -0.320888 + 0.363036I$	$-3.01269 - 2.23958I$	0
$u = 0.966542 - 0.502109I$ $a = 0.572313 + 0.569869I$ $b = -0.320888 - 0.363036I$	$-3.01269 + 2.23958I$	0
$u = -0.125474 + 0.902003I$ $a = 0.219966 - 0.530351I$ $b = 0.727715 + 0.467107I$	$-0.526852 - 0.632760I$	0
$u = -0.125474 - 0.902003I$ $a = 0.219966 + 0.530351I$ $b = 0.727715 - 0.467107I$	$-0.526852 + 0.632760I$	0
$u = 1.044690 + 0.322840I$ $a = -0.595121 - 1.016790I$ $b = -0.826001 - 0.963467I$	$-0.77669 - 4.47027I$	0
$u = 1.044690 - 0.322840I$ $a = -0.595121 + 1.016790I$ $b = -0.826001 + 0.963467I$	$-0.77669 + 4.47027I$	0
$u = -0.904613$ $a = 0.111901$ $b = 1.33201$	-0.894512	0
$u = 1.097740 + 0.153075I$ $a = -0.55490 + 2.13977I$ $b = -0.092630 + 1.284410I$	$-7.74718 - 4.27725I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.097740 - 0.153075I$ $a = -0.55490 - 2.13977I$ $b = -0.092630 - 1.284410I$	$-7.74718 + 4.27725I$	0
$u = 0.845654 + 0.269944I$ $a = -0.50394 - 1.69302I$ $b = 1.184740 - 0.161306I$	$0.869585 + 1.087340I$	0
$u = 0.845654 - 0.269944I$ $a = -0.50394 + 1.69302I$ $b = 1.184740 + 0.161306I$	$0.869585 - 1.087340I$	0
$u = -0.686245 + 0.884213I$ $a = 0.697850 - 0.543633I$ $b = 0.522071 - 0.953460I$	$-1.93310 - 3.36486I$	0
$u = -0.686245 - 0.884213I$ $a = 0.697850 + 0.543633I$ $b = 0.522071 + 0.953460I$	$-1.93310 + 3.36486I$	0
$u = 0.794036 + 0.346649I$ $a = -0.50176 - 2.09286I$ $b = 0.266950 - 1.366250I$	$0.63985 - 3.63929I$	0
$u = 0.794036 - 0.346649I$ $a = -0.50176 + 2.09286I$ $b = 0.266950 + 1.366250I$	$0.63985 + 3.63929I$	0
$u = -1.029160 + 0.477949I$ $a = 0.404807 + 0.839756I$ $b = -0.0919135 - 0.1001910I$	$-3.12868 + 5.39424I$	0
$u = -1.029160 - 0.477949I$ $a = 0.404807 - 0.839756I$ $b = -0.0919135 + 0.1001910I$	$-3.12868 - 5.39424I$	0
$u = 0.859021 + 0.068455I$ $a = 1.28643 + 1.53746I$ $b = -0.024971 + 1.198640I$	$-4.57409 + 3.98923I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.859021 - 0.068455I$ $a = 1.28643 - 1.53746I$ $b = -0.024971 - 1.198640I$	$-4.57409 - 3.98923I$	0
$u = -0.828816 + 0.233513I$ $a = 1.70869 + 1.06062I$ $b = 2.05532 + 0.02976I$	$0.70268 + 3.98023I$	0
$u = -0.828816 - 0.233513I$ $a = 1.70869 - 1.06062I$ $b = 2.05532 - 0.02976I$	$0.70268 - 3.98023I$	0
$u = -1.073330 + 0.389701I$ $a = -0.39369 + 1.49829I$ $b = -0.128585 + 1.390040I$	$-2.42151 + 0.21578I$	0
$u = -1.073330 - 0.389701I$ $a = -0.39369 - 1.49829I$ $b = -0.128585 - 1.390040I$	$-2.42151 - 0.21578I$	0
$u = 0.039549 + 1.143810I$ $a = 0.113502 - 0.244648I$ $b = -0.495855 - 0.488469I$	$3.02568 + 4.10336I$	0
$u = 0.039549 - 1.143810I$ $a = 0.113502 + 0.244648I$ $b = -0.495855 + 0.488469I$	$3.02568 - 4.10336I$	0
$u = -0.830570 + 0.190076I$ $a = 1.16119 + 2.45289I$ $b = 1.71178 + 1.17409I$	$0.79093 - 1.72256I$	0
$u = -0.830570 - 0.190076I$ $a = 1.16119 - 2.45289I$ $b = 1.71178 - 1.17409I$	$0.79093 + 1.72256I$	0
$u = -1.111580 + 0.293633I$ $a = 0.676713 - 0.864211I$ $b = -0.132839 - 0.819369I$	$-2.18156 + 0.29500I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.111580 - 0.293633I$ $a = 0.676713 + 0.864211I$ $b = -0.132839 + 0.819369I$	$-2.18156 - 0.29500I$	0
$u = -0.091803 + 1.149840I$ $a = -0.152431 + 0.040485I$ $b = -0.767848 + 0.977705I$	$-2.3826 - 14.7160I$	0
$u = -0.091803 - 1.149840I$ $a = -0.152431 - 0.040485I$ $b = -0.767848 - 0.977705I$	$-2.3826 + 14.7160I$	0
$u = -1.130360 + 0.243015I$ $a = 0.183032 + 1.263930I$ $b = 0.126383 + 0.781885I$	$-2.18054 + 0.55221I$	0
$u = -1.130360 - 0.243015I$ $a = 0.183032 - 1.263930I$ $b = 0.126383 - 0.781885I$	$-2.18054 - 0.55221I$	0
$u = 0.831880 + 0.140724I$ $a = 0.449526 + 1.305320I$ $b = -0.86648 + 1.12924I$	$-6.01676 - 3.73627I$	0
$u = 0.831880 - 0.140724I$ $a = 0.449526 - 1.305320I$ $b = -0.86648 - 1.12924I$	$-6.01676 + 3.73627I$	0
$u = 0.816362 + 0.202099I$ $a = 0.45395 - 2.55803I$ $b = 1.05437 - 1.31858I$	$2.01808 - 2.50159I$	0
$u = 0.816362 - 0.202099I$ $a = 0.45395 + 2.55803I$ $b = 1.05437 + 1.31858I$	$2.01808 + 2.50159I$	0
$u = 0.091974 + 1.163770I$ $a = -0.121939 - 0.091019I$ $b = -0.715818 - 0.903719I$	$0.11624 + 8.88617I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.091974 - 1.163770I$ $a = -0.121939 + 0.091019I$ $b = -0.715818 + 0.903719I$	$0.11624 - 8.88617I$	0
$u = -0.820782 + 0.032222I$ $a = 1.24352 - 1.26259I$ $b = -0.288376 - 0.805581I$	$-1.97928 + 0.64810I$	0
$u = -0.820782 - 0.032222I$ $a = 1.24352 + 1.26259I$ $b = -0.288376 + 0.805581I$	$-1.97928 - 0.64810I$	0
$u = -0.652670 + 0.491541I$ $a = -1.10110 + 1.73190I$ $b = 0.074773 + 1.411070I$	$-2.15560 + 8.39299I$	0
$u = -0.652670 - 0.491541I$ $a = -1.10110 - 1.73190I$ $b = 0.074773 - 1.411070I$	$-2.15560 - 8.39299I$	0
$u = -0.123985 + 1.192230I$ $a = -0.187716 + 0.214512I$ $b = -0.528592 + 0.944275I$	$-5.97006 - 5.25269I$	0
$u = -0.123985 - 1.192230I$ $a = -0.187716 - 0.214512I$ $b = -0.528592 - 0.944275I$	$-5.97006 + 5.25269I$	0
$u = 1.163770 + 0.287263I$ $a = -0.18328 + 2.07475I$ $b = -0.86881 + 1.19628I$	$-7.39230 - 4.74598I$	0
$u = 1.163770 - 0.287263I$ $a = -0.18328 - 2.07475I$ $b = -0.86881 - 1.19628I$	$-7.39230 + 4.74598I$	0
$u = 0.753493 + 0.263496I$ $a = 1.339370 - 0.396029I$ $b = 1.59112 + 0.32797I$	$2.05563 - 0.00213I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.753493 - 0.263496I$ $a = 1.339370 + 0.396029I$ $b = 1.59112 - 0.32797I$	$2.05563 + 0.00213I$	0
$u = 0.107950 + 0.785700I$ $a = 0.463913 + 0.664939I$ $b = 0.591399 - 0.651827I$	$-0.69567 - 2.35740I$	0
$u = 0.107950 - 0.785700I$ $a = 0.463913 - 0.664939I$ $b = 0.591399 + 0.651827I$	$-0.69567 + 2.35740I$	0
$u = 0.740181 + 0.211944I$ $a = -0.18516 - 2.40295I$ $b = 0.869246 + 0.000051I$	$1.24046 - 3.64897I$	0
$u = 0.740181 - 0.211944I$ $a = -0.18516 + 2.40295I$ $b = 0.869246 - 0.000051I$	$1.24046 + 3.64897I$	0
$u = 0.186853 + 0.745839I$ $a = 0.570063 - 0.226380I$ $b = -0.377541 + 1.061550I$	$-4.93131 + 3.00209I$	0
$u = 0.186853 - 0.745839I$ $a = 0.570063 + 0.226380I$ $b = -0.377541 - 1.061550I$	$-4.93131 - 3.00209I$	0
$u = -0.756680 + 0.127634I$ $a = 0.26849 + 2.59397I$ $b = 0.553438 + 0.106524I$	$1.95300 - 0.85678I$	0
$u = -0.756680 - 0.127634I$ $a = 0.26849 - 2.59397I$ $b = 0.553438 - 0.106524I$	$1.95300 + 0.85678I$	0
$u = -0.344323 + 0.660503I$ $a = 0.591243 + 0.061273I$ $b = -0.487752 - 0.795580I$	$-2.28977 + 1.07163I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.344323 - 0.660503I$		
$a = 0.591243 - 0.061273I$	$-2.28977 - 1.07163I$	0
$b = -0.487752 + 0.795580I$		
$u = -1.199300 + 0.373122I$		
$a = 0.19788 - 1.95359I$	$-9.14257 + 7.70288I$	0
$b = -1.08041 - 1.28324I$		
$u = -1.199300 - 0.373122I$		
$a = 0.19788 + 1.95359I$	$-9.14257 - 7.70288I$	0
$b = -1.08041 + 1.28324I$		
$u = 1.079450 + 0.663461I$		
$a = -0.955256 - 0.403685I$	$-7.33039 - 0.30758I$	0
$b = -0.339660 - 0.998737I$		
$u = 1.079450 - 0.663461I$		
$a = -0.955256 + 0.403685I$	$-7.33039 + 0.30758I$	0
$b = -0.339660 + 0.998737I$		
$u = 1.241750 + 0.253562I$		
$a = 0.684281 + 0.911896I$	$-4.23859 + 4.48465I$	0
$b = -0.006589 + 1.029910I$		
$u = 1.241750 - 0.253562I$		
$a = 0.684281 - 0.911896I$	$-4.23859 - 4.48465I$	0
$b = -0.006589 - 1.029910I$		
$u = 1.250080 + 0.232396I$		
$a = -1.14474 - 1.42100I$	$-7.09566 - 10.38340I$	0
$b = 0.399400 - 0.722182I$		
$u = 1.250080 - 0.232396I$		
$a = -1.14474 + 1.42100I$	$-7.09566 + 10.38340I$	0
$b = 0.399400 + 0.722182I$		
$u = -1.265370 + 0.176655I$		
$a = -0.64177 - 1.82730I$	$-9.01501 + 2.67631I$	0
$b = -1.02336 - 1.67538I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.265370 - 0.176655I$ $a = -0.64177 + 1.82730I$ $b = -1.02336 + 1.67538I$	$-9.01501 - 2.67631I$	0
$u = -1.268980 + 0.150779I$ $a = -1.03357 + 1.68922I$ $b = 0.270307 + 0.624618I$	$-4.47587 + 4.20612I$	0
$u = -1.268980 - 0.150779I$ $a = -1.03357 - 1.68922I$ $b = 0.270307 - 0.624618I$	$-4.47587 - 4.20612I$	0
$u = 1.232410 + 0.390277I$ $a = 0.522585 + 1.014120I$ $b = -0.439523 + 1.066630I$	$-6.60849 - 2.65473I$	0
$u = 1.232410 - 0.390277I$ $a = 0.522585 - 1.014120I$ $b = -0.439523 - 1.066630I$	$-6.60849 + 2.65473I$	0
$u = 1.258340 + 0.337700I$ $a = -0.00392 + 1.63921I$ $b = -0.98995 + 1.28321I$	$-6.79341 - 4.56023I$	0
$u = 1.258340 - 0.337700I$ $a = -0.00392 - 1.63921I$ $b = -0.98995 - 1.28321I$	$-6.79341 + 4.56023I$	0
$u = -1.247690 + 0.386127I$ $a = 0.32318 - 1.66360I$ $b = -0.95670 - 1.37948I$	$-9.09310 + 0.98977I$	0
$u = -1.247690 - 0.386127I$ $a = 0.32318 + 1.66360I$ $b = -0.95670 + 1.37948I$	$-9.09310 - 0.98977I$	0
$u = -1.190540 + 0.577083I$ $a = 0.330241 - 0.698491I$ $b = -0.637800 - 0.621744I$	$-0.41051 + 2.49024I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.190540 - 0.577083I$ $a = 0.330241 + 0.698491I$ $b = -0.637800 + 0.621744I$	$-0.41051 - 2.49024I$	0
$u = 1.201020 + 0.595854I$ $a = -0.789266 - 0.964724I$ $b = 0.101052 - 1.388490I$	$-7.61925 - 8.13804I$	0
$u = 1.201020 - 0.595854I$ $a = -0.789266 + 0.964724I$ $b = 0.101052 + 1.388490I$	$-7.61925 + 8.13804I$	0
$u = -1.250390 + 0.505659I$ $a = 0.000169 + 1.368790I$ $b = 0.534564 + 0.877548I$	$-1.70396 + 0.79317I$	0
$u = -1.250390 - 0.505659I$ $a = 0.000169 - 1.368790I$ $b = 0.534564 - 0.877548I$	$-1.70396 - 0.79317I$	0
$u = -0.490023 + 0.426406I$ $a = -0.62903 - 1.96581I$ $b = -0.838322 - 0.462429I$	$-4.57982 - 0.64855I$	0
$u = -0.490023 - 0.426406I$ $a = -0.62903 + 1.96581I$ $b = -0.838322 + 0.462429I$	$-4.57982 + 0.64855I$	0
$u = 1.243620 + 0.530660I$ $a = -0.06973 - 1.50158I$ $b = 0.756744 - 1.077000I$	$-0.16242 - 6.09615I$	0
$u = 1.243620 - 0.530660I$ $a = -0.06973 + 1.50158I$ $b = 0.756744 + 1.077000I$	$-0.16242 + 6.09615I$	0
$u = 1.327170 + 0.274433I$ $a = -0.38436 + 1.45530I$ $b = -1.15380 + 1.30447I$	$-6.32752 - 4.77261I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.327170 - 0.274433I$ $a = -0.38436 - 1.45530I$ $b = -1.15380 - 1.30447I$	$-6.32752 + 4.77261I$	0
$u = 1.250580 + 0.544743I$ $a = -0.20568 - 1.64799I$ $b = 0.98355 - 1.32703I$	$-0.60284 - 8.89547I$	0
$u = 1.250580 - 0.544743I$ $a = -0.20568 + 1.64799I$ $b = 0.98355 + 1.32703I$	$-0.60284 + 8.89547I$	0
$u = -1.348520 + 0.212276I$ $a = -0.64362 - 1.46962I$ $b = -1.30906 - 1.44394I$	$-7.90985 + 9.00865I$	0
$u = -1.348520 - 0.212276I$ $a = -0.64362 + 1.46962I$ $b = -1.30906 + 1.44394I$	$-7.90985 - 9.00865I$	0
$u = -1.252690 + 0.547183I$ $a = -0.25567 + 1.70519I$ $b = 1.04603 + 1.41864I$	$-2.5811 + 14.0617I$	0
$u = -1.252690 - 0.547183I$ $a = -0.25567 - 1.70519I$ $b = 1.04603 - 1.41864I$	$-2.5811 - 14.0617I$	0
$u = -1.258110 + 0.545589I$ $a = -0.33758 + 1.48795I$ $b = 0.76343 + 1.44186I$	$-5.49882 + 6.94092I$	0
$u = -1.258110 - 0.545589I$ $a = -0.33758 - 1.48795I$ $b = 0.76343 - 1.44186I$	$-5.49882 - 6.94092I$	0
$u = -0.563917 + 0.234469I$ $a = 1.396420 + 0.070335I$ $b = -0.902138 + 0.405808I$	$-0.36641 - 3.02530I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.563917 - 0.234469I$ $a = 1.396420 - 0.070335I$ $b = -0.902138 - 0.405808I$	$-0.36641 + 3.02530I$	0
$u = -1.302430 + 0.497353I$ $a = 0.002203 + 1.382010I$ $b = 0.82900 + 1.38995I$	$-4.76193 + 7.14291I$	0
$u = -1.302430 - 0.497353I$ $a = 0.002203 - 1.382010I$ $b = 0.82900 - 1.38995I$	$-4.76193 - 7.14291I$	0
$u = -1.206260 + 0.703503I$ $a = -0.575121 + 0.588176I$ $b = 0.070606 + 0.951096I$	$-4.26061 + 4.53255I$	0
$u = -1.206260 - 0.703503I$ $a = -0.575121 - 0.588176I$ $b = 0.070606 - 0.951096I$	$-4.26061 - 4.53255I$	0
$u = 0.499712 + 0.328573I$ $a = 1.346910 + 0.056551I$ $b = -1.064240 - 0.432848I$	$-1.92088 + 8.14717I$	0
$u = 0.499712 - 0.328573I$ $a = 1.346910 - 0.056551I$ $b = -1.064240 + 0.432848I$	$-1.92088 - 8.14717I$	0
$u = 1.279260 + 0.585636I$ $a = 0.212322 + 0.711208I$ $b = -0.771852 + 0.657770I$	$-1.36807 - 7.95981I$	0
$u = 1.279260 - 0.585636I$ $a = 0.212322 - 0.711208I$ $b = -0.771852 - 0.657770I$	$-1.36807 + 7.95981I$	0
$u = 0.458083 + 0.375316I$ $a = 1.014560 + 0.017135I$ $b = 0.933547 + 0.428630I$	$1.48452 + 0.24598I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.458083 - 0.375316I$		
$a = 1.014560 - 0.017135I$	$1.48452 - 0.24598I$	0
$b = 0.933547 - 0.428630I$		
$u = -1.35920 + 0.46098I$		
$a = 0.33236 - 1.40819I$	$-1.33627 + 3.25688I$	0
$b = -0.478055 - 0.796358I$		
$u = -1.35920 - 0.46098I$		
$a = 0.33236 + 1.40819I$	$-1.33627 - 3.25688I$	0
$b = -0.478055 + 0.796358I$		
$u = 0.137136 + 0.522429I$		
$a = 1.35737 + 0.93214I$	$0.66176 + 3.13185I$	0
$b = 0.236107 - 0.701864I$		
$u = 0.137136 - 0.522429I$		
$a = 1.35737 - 0.93214I$	$0.66176 - 3.13185I$	0
$b = 0.236107 + 0.701864I$		
$u = 1.35284 + 0.54975I$		
$a = 0.239246 + 1.386270I$	$-1.11529 - 9.99689I$	0
$b = -0.680725 + 0.959726I$		
$u = 1.35284 - 0.54975I$		
$a = 0.239246 - 1.386270I$	$-1.11529 + 9.99689I$	0
$b = -0.680725 - 0.959726I$		
$u = 0.090290 + 0.531560I$		
$a = 0.809875 - 0.180341I$	$-5.52094 - 4.14895I$	0
$b = -0.761436 + 0.989699I$		
$u = 0.090290 - 0.531560I$		
$a = 0.809875 + 0.180341I$	$-5.52094 + 4.14895I$	0
$b = -0.761436 - 0.989699I$		
$u = 1.37301 + 0.50046I$		
$a = 0.236119 - 1.185890I$	$-5.11354 - 4.53270I$	0
$b = 1.08257 - 1.15709I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.37301 - 0.50046I$		
$a = 0.236119 + 1.185890I$	$-5.11354 + 4.53270I$	0
$b = 1.08257 + 1.15709I$		
$u = -1.34145 + 0.58069I$		
$a = 0.15394 - 1.61859I$	$-6.3143 + 20.7901I$	0
$b = -1.01784 - 1.39051I$		
$u = -1.34145 - 0.58069I$		
$a = 0.15394 + 1.61859I$	$-6.3143 - 20.7901I$	0
$b = -1.01784 + 1.39051I$		
$u = 1.34340 + 0.58186I$		
$a = 0.16385 + 1.56913I$	$-3.8297 - 14.9948I$	0
$b = -0.95738 + 1.31261I$		
$u = 1.34340 - 0.58186I$		
$a = 0.16385 - 1.56913I$	$-3.8297 + 14.9948I$	0
$b = -0.95738 - 1.31261I$		
$u = -1.34658 + 0.59072I$		
$a = 0.25884 - 1.54502I$	$-9.8712 + 11.4792I$	0
$b = -0.75965 - 1.35910I$		
$u = -1.34658 - 0.59072I$		
$a = 0.25884 + 1.54502I$	$-9.8712 - 11.4792I$	0
$b = -0.75965 + 1.35910I$		
$u = -0.00527 + 1.48621I$		
$a = 0.102694 + 0.138749I$	$2.73298 + 1.48892I$	0
$b = 0.008483 - 0.159656I$		
$u = -0.00527 - 1.48621I$		
$a = 0.102694 - 0.138749I$	$2.73298 - 1.48892I$	0
$b = 0.008483 + 0.159656I$		
$u = 1.47579 + 0.28984I$		
$a = -0.549226 - 1.063220I$	$-11.80630 - 0.40330I$	0
$b = 0.109329 - 0.862747I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.47579 - 0.28984I$ $a = -0.549226 + 1.063220I$ $b = 0.109329 + 0.862747I$	$-11.80630 + 0.40330I$	0
$u = -0.464602 + 0.150603I$ $a = -1.16388 - 3.54937I$ $b = -0.766226 - 1.151040I$	$-2.28151 - 8.69540I$	$0. + 4.30114I$
$u = -0.464602 - 0.150603I$ $a = -1.16388 + 3.54937I$ $b = -0.766226 + 1.151040I$	$-2.28151 + 8.69540I$	$0. - 4.30114I$
$u = -0.40847 + 1.49083I$ $a = -0.019917 - 0.175940I$ $b = -0.0426896 + 0.1019610I$	$2.46139 + 4.34383I$	0
$u = -0.40847 - 1.49083I$ $a = -0.019917 + 0.175940I$ $b = -0.0426896 - 0.1019610I$	$2.46139 - 4.34383I$	0
$u = 1.45120 + 0.54244I$ $a = 0.321634 - 0.816869I$ $b = 1.046230 - 0.694732I$	$-3.60511 - 10.20840I$	0
$u = 1.45120 - 0.54244I$ $a = 0.321634 + 0.816869I$ $b = 1.046230 + 0.694732I$	$-3.60511 + 10.20840I$	0
$u = -0.443920$ $a = 1.06128$ $b = 0.0546188$	-0.910151	-11.4070
$u = -1.44146 + 0.60882I$ $a = 0.127731 + 0.715132I$ $b = 0.781262 + 0.679976I$	$-2.31935 + 5.53454I$	0
$u = -1.44146 - 0.60882I$ $a = 0.127731 - 0.715132I$ $b = 0.781262 - 0.679976I$	$-2.31935 - 5.53454I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.53405 + 0.33866I$ $a = -0.394386 + 0.735351I$ $b = 0.039617 + 0.817119I$	$-5.43574 - 2.99336I$	0
$u = -1.53405 - 0.33866I$ $a = -0.394386 - 0.735351I$ $b = 0.039617 - 0.817119I$	$-5.43574 + 2.99336I$	0
$u = 1.53169 + 0.37881I$ $a = -0.504272 - 0.638100I$ $b = -0.016873 - 0.840689I$	$-7.77632 + 8.84108I$	0
$u = 1.53169 - 0.37881I$ $a = -0.504272 + 0.638100I$ $b = -0.016873 + 0.840689I$	$-7.77632 - 8.84108I$	0
$u = -0.045591 + 0.419352I$ $a = 2.06623 - 0.13714I$ $b = 0.041357 + 0.585616I$	$1.84649 + 1.49859I$	$1.71665 - 3.18263I$
$u = -0.045591 - 0.419352I$ $a = 2.06623 + 0.13714I$ $b = 0.041357 - 0.585616I$	$1.84649 - 1.49859I$	$1.71665 + 3.18263I$
$u = 0.340065 + 0.227248I$ $a = -0.06323 + 3.57673I$ $b = -0.555145 + 0.892699I$	$0.13863 + 3.60138I$	$0.707136 - 1.018842I$
$u = 0.340065 - 0.227248I$ $a = -0.06323 - 3.57673I$ $b = -0.555145 - 0.892699I$	$0.13863 - 3.60138I$	$0.707136 + 1.018842I$
$u = 0.192999 + 0.295018I$ $a = 1.077820 + 0.093282I$ $b = -0.992207 - 0.758059I$	$-4.55239 + 2.14279I$	$0.84674 + 3.42738I$
$u = 0.192999 - 0.295018I$ $a = 1.077820 - 0.093282I$ $b = -0.992207 + 0.758059I$	$-4.55239 - 2.14279I$	$0.84674 - 3.42738I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.65412 + 0.03387I$		
$a = -0.169939 - 1.396720I$	$-11.87070 - 0.00423I$	0
$b = -0.002160 - 0.831633I$		
$u = 1.65412 - 0.03387I$		
$a = -0.169939 + 1.396720I$	$-11.87070 + 0.00423I$	0
$b = -0.002160 + 0.831633I$		

$$\text{II. } I_2^u = \langle 2.90 \times 10^{52} u^{46} + 1.98 \times 10^{52} u^{45} + \dots + 1.56 \times 10^{51} b + 1.34 \times 10^{53}, 1.15 \times 10^{54} u^{46} + 3.15 \times 10^{53} u^{45} + \dots + 1.01 \times 10^{53} a + 2.17 \times 10^{54}, u^{47} - 14u^{45} + \dots + 22u - 5 \rangle$$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -11.3772u^{46} - 3.11604u^{45} + \dots + 12.7802u - 21.4328 \\ -18.6560u^{46} - 12.7628u^{45} + \dots + 276.348u - 86.3588 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -4.43668u^{46} + 0.763475u^{45} + \dots + 111.108u - 38.3966 \\ 1.70932u^{46} - 4.54241u^{45} + \dots + 108.873u - 15.0617 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 7.27883u^{46} + 9.64675u^{45} + \dots - 263.568u + 64.9260 \\ -18.6560u^{46} - 12.7628u^{45} + \dots + 276.348u - 86.3588 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.71300u^{46} + 5.20585u^{45} + \dots + 72.2141u - 27.8985 \\ 0.791965u^{46} + 7.72928u^{45} + \dots - 376.925u + 95.4057 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 21.8719u^{46} + 1.26403u^{45} + \dots + 84.7675u + 20.1723 \\ -2.68860u^{46} - 0.337691u^{45} + \dots - 95.9220u + 24.6307 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -4.43230u^{46} + 4.59548u^{45} + \dots - 148.787u + 19.5765 \\ -14.3067u^{46} - 9.75470u^{45} + \dots + 214.139u - 66.2657 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 5.21616u^{46} + 12.4608u^{45} + \dots - 355.423u + 80.1633 \\ -6.63107u^{46} + 2.48523u^{45} + \dots - 97.2484u + 5.58692 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 21.3283u^{46} - 1.97448u^{45} + \dots + 40.9224u + 35.5953 \\ -1.12322u^{46} - 4.68109u^{45} + \dots + 90.5828u - 18.9323 \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = 31.3541u^{46} - 23.9200u^{45} + \dots + 698.106u - 92.0366$$

(iv) u -Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{47} - 27u^{46} + \dots + 34u - 1$
c_2	$u^{47} + 3u^{46} + \dots + 4u - 1$
c_3	$u^{47} + u^{46} + \dots + 5u - 1$
c_4	$u^{47} - 14u^{45} + \dots + 22u + 5$
c_5	$u^{47} - 3u^{46} + \dots + 4u + 1$
c_6	$u^{47} + 18u^{46} + \dots + 73u + 5$
c_7	$u^{47} + 3u^{46} + \dots - 18u + 5$
c_8	$u^{47} + 5u^{46} + \dots + 3u + 1$
c_9	$u^{47} - 18u^{46} + \dots + 73u - 5$
c_{10}	$u^{47} + u^{46} + \dots - 33u + 5$
c_{11}	$u^{47} - 14u^{45} + \dots + 22u - 5$
c_{12}	$u^{47} + 3u^{46} + \dots + 7u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{47} + y^{46} + \dots + 62y - 1$
c_2, c_5	$y^{47} - 27y^{46} + \dots + 34y - 1$
c_3	$y^{47} + 13y^{46} + \dots + 29y - 1$
c_4, c_{11}	$y^{47} - 28y^{46} + \dots + 604y - 25$
c_6, c_9	$y^{47} + 24y^{46} + \dots - 521y - 25$
c_7	$y^{47} - 23y^{46} + \dots + 344y - 25$
c_8	$y^{47} - 11y^{46} + \dots - 7y - 1$
c_{10}	$y^{47} - 21y^{46} + \dots + 69y - 25$
c_{12}	$y^{47} + 27y^{46} + \dots - 5y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.464174 + 0.870325I$		
$a = 0.943277 + 0.252341I$	$-2.34055 + 2.89236I$	$-9.31056 + 0.I$
$b = 0.520750 + 0.880085I$		
$u = 0.464174 - 0.870325I$		
$a = 0.943277 - 0.252341I$	$-2.34055 - 2.89236I$	$-9.31056 + 0.I$
$b = 0.520750 - 0.880085I$		
$u = -0.908286 + 0.225806I$		
$a = 0.93278 + 1.40918I$	$0.10624 + 3.79429I$	$-11.66811 - 6.10729I$
$b = 1.61302 + 0.08073I$		
$u = -0.908286 - 0.225806I$		
$a = 0.93278 - 1.40918I$	$0.10624 - 3.79429I$	$-11.66811 + 6.10729I$
$b = 1.61302 - 0.08073I$		
$u = 0.851476 + 0.294853I$		
$a = 0.342248 - 1.087160I$	$1.090700 - 0.120524I$	$-3.56317 + 4.82730I$
$b = 1.180730 + 0.029589I$		
$u = 0.851476 - 0.294853I$		
$a = 0.342248 + 1.087160I$	$1.090700 + 0.120524I$	$-3.56317 - 4.82730I$
$b = 1.180730 - 0.029589I$		
$u = -0.883980 + 0.159185I$		
$a = 0.77981 + 2.38701I$	$0.35671 - 1.97271I$	$-10.80786 + 6.63303I$
$b = 1.53030 + 0.80147I$		
$u = -0.883980 - 0.159185I$		
$a = 0.77981 - 2.38701I$	$0.35671 + 1.97271I$	$-10.80786 - 6.63303I$
$b = 1.53030 - 0.80147I$		
$u = 0.846541 + 0.143784I$		
$a = 0.11073 - 2.42188I$	$1.53193 - 2.06909I$	$-3.03438 - 1.39616I$
$b = 1.044370 - 0.749226I$		
$u = 0.846541 - 0.143784I$		
$a = 0.11073 + 2.42188I$	$1.53193 + 2.06909I$	$-3.03438 + 1.39616I$
$b = 1.044370 + 0.749226I$		

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.832459 + 0.156906I$ $a = -0.42961 - 2.03983I$ $b = -0.738592 - 0.362930I$	$-1.09044 - 4.47000I$	$-2.59037 + 2.58099I$
$u = 0.832459 - 0.156906I$ $a = -0.42961 + 2.03983I$ $b = -0.738592 + 0.362930I$	$-1.09044 + 4.47000I$	$-2.59037 - 2.58099I$
$u = 1.062980 + 0.468044I$ $a = 0.283714 - 0.281880I$ $b = -0.462117 + 0.105249I$	$-2.43860 - 3.68515I$	0
$u = 1.062980 - 0.468044I$ $a = 0.283714 + 0.281880I$ $b = -0.462117 - 0.105249I$	$-2.43860 + 3.68515I$	0
$u = -0.802681 + 0.105385I$ $a = -1.18167 + 2.17345I$ $b = -1.113360 + 0.580955I$	$-3.13213 + 9.51085I$	$-6.58393 - 7.56950I$
$u = -0.802681 - 0.105385I$ $a = -1.18167 - 2.17345I$ $b = -1.113360 - 0.580955I$	$-3.13213 - 9.51085I$	$-6.58393 + 7.56950I$
$u = 0.127319 + 0.780455I$ $a = -0.424025 - 0.067120I$ $b = 0.749630 + 0.001987I$	$3.27471 - 2.58421I$	$4.42623 + 4.53453I$
$u = 0.127319 - 0.780455I$ $a = -0.424025 + 0.067120I$ $b = 0.749630 - 0.001987I$	$3.27471 + 2.58421I$	$4.42623 - 4.53453I$
$u = 1.195450 + 0.298418I$ $a = -0.16527 + 2.02873I$ $b = -0.94937 + 1.60923I$	$-7.90191 - 5.88237I$	0
$u = 1.195450 - 0.298418I$ $a = -0.16527 - 2.02873I$ $b = -0.94937 - 1.60923I$	$-7.90191 + 5.88237I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.218980 + 0.237237I$ $a = -0.53325 - 1.80996I$ $b = -1.30166 - 1.29178I$	$-8.15003 + 3.44640I$	0
$u = -1.218980 - 0.237237I$ $a = -0.53325 + 1.80996I$ $b = -1.30166 + 1.29178I$	$-8.15003 - 3.44640I$	0
$u = 0.103910 + 0.700748I$ $a = 0.255921 + 0.825886I$ $b = 0.642637 - 0.401400I$	$0.042342 - 0.310715I$	$-0.35673 + 1.97790I$
$u = 0.103910 - 0.700748I$ $a = 0.255921 - 0.825886I$ $b = 0.642637 + 0.401400I$	$0.042342 + 0.310715I$	$-0.35673 - 1.97790I$
$u = -1.305640 + 0.178891I$ $a = -0.329280 - 0.958596I$ $b = -1.004600 - 0.385939I$	$-5.58072 + 9.42974I$	0
$u = -1.305640 - 0.178891I$ $a = -0.329280 + 0.958596I$ $b = -1.004600 + 0.385939I$	$-5.58072 - 9.42974I$	0
$u = 1.319910 + 0.171278I$ $a = 0.144853 + 1.146140I$ $b = -0.571070 + 0.471670I$	$-3.71341 - 3.97336I$	0
$u = 1.319910 - 0.171278I$ $a = 0.144853 - 1.146140I$ $b = -0.571070 - 0.471670I$	$-3.71341 + 3.97336I$	0
$u = 1.274470 + 0.534342I$ $a = -0.044487 - 1.288780I$ $b = 0.73918 - 1.39356I$	$-5.22442 - 8.06410I$	0
$u = 1.274470 - 0.534342I$ $a = -0.044487 + 1.288780I$ $b = 0.73918 + 1.39356I$	$-5.22442 + 8.06410I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.606511 + 0.106447I$		
$a = -1.27711 + 0.72289I$	$-5.31170 + 2.31563I$	$-9.78601 - 0.43292I$
$b = -1.203870 - 0.322155I$		
$u = -0.606511 - 0.106447I$		
$a = -1.27711 - 0.72289I$	$-5.31170 - 2.31563I$	$-9.78601 + 0.43292I$
$b = -1.203870 + 0.322155I$		
$u = 1.33381 + 0.53688I$		
$a = -0.395698 - 1.023340I$	$-1.43784 - 2.57775I$	0
$b = 0.450728 - 0.721321I$		
$u = 1.33381 - 0.53688I$		
$a = -0.395698 + 1.023340I$	$-1.43784 + 2.57775I$	0
$b = 0.450728 + 0.721321I$		
$u = -1.34770 + 0.51517I$		
$a = 0.084794 + 1.121010I$	$-4.32334 + 5.17369I$	0
$b = 0.94188 + 1.17295I$		
$u = -1.34770 - 0.51517I$		
$a = 0.084794 - 1.121010I$	$-4.32334 - 5.17369I$	0
$b = 0.94188 - 1.17295I$		
$u = -1.35524 + 0.60281I$		
$a = -0.192018 + 0.888477I$	$-1.80796 + 8.47959I$	0
$b = 0.701107 + 0.781403I$		
$u = -1.35524 - 0.60281I$		
$a = -0.192018 - 0.888477I$	$-1.80796 - 8.47959I$	0
$b = 0.701107 - 0.781403I$		
$u = 0.212485 + 0.432920I$		
$a = -0.932247 - 0.265843I$	$-4.86490 + 3.09871I$	$-3.90878 - 3.28688I$
$b = -0.752489 - 0.914087I$		
$u = 0.212485 - 0.432920I$		
$a = -0.932247 + 0.265843I$	$-4.86490 - 3.09871I$	$-3.90878 + 3.28688I$
$b = -0.752489 + 0.914087I$		

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.04605 + 1.53095I$ $a = 0.0636720 - 0.0041572I$ $b = 0.169065 - 0.343459I$	$2.67031 - 1.62517I$	0
$u = -0.04605 - 1.53095I$ $a = 0.0636720 + 0.0041572I$ $b = 0.169065 + 0.343459I$	$2.67031 + 1.62517I$	0
$u = 0.39097 + 1.55235I$ $a = 0.0052671 + 0.0511749I$ $b = -0.004617 + 0.356914I$	$2.32739 - 4.35402I$	0
$u = 0.39097 - 1.55235I$ $a = 0.0052671 - 0.0511749I$ $b = -0.004617 - 0.356914I$	$2.32739 + 4.35402I$	0
$u = 0.307234$ $a = -1.53407$ $b = 0.750276$	0.240630	-0.671310
$u = -1.69451 + 0.06714I$ $a = -0.075357 + 1.354430I$ $b = -0.056801 + 0.819170I$	$-11.77540 - 0.34750I$	0
$u = -1.69451 - 0.06714I$ $a = -0.075357 - 1.354430I$ $b = -0.056801 - 0.819170I$	$-11.77540 + 0.34750I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{47} - 27u^{46} + \dots + 34u - 1)$ $\cdot (u^{182} + 88u^{181} + \dots + 1248578u + 100489)$
c_2	$(u^{47} + 3u^{46} + \dots + 4u - 1)(u^{182} + 4u^{181} + \dots - 2136u - 317)$
c_3	$(u^{47} + u^{46} + \dots + 5u - 1)(u^{182} + 2u^{181} + \dots + 9357303u - 1023065)$
c_4	$(u^{47} - 14u^{45} + \dots + 22u + 5)(u^{182} + u^{181} + \dots - 206u + 821)$
c_5	$(u^{47} - 3u^{46} + \dots + 4u + 1)(u^{182} + 4u^{181} + \dots - 2136u - 317)$
c_6	$(u^{47} + 18u^{46} + \dots + 73u + 5)(u^{182} - 11u^{181} + \dots - 271145u - 27293)$
c_7	$(u^{47} + 3u^{46} + \dots - 18u + 5)$ $\cdot (u^{182} - 10u^{181} + \dots + 14736466u + 633233)$
c_8	$(u^{47} + 5u^{46} + \dots + 3u + 1)(u^{182} + 12u^{181} + \dots + 9037u + 1501)$
c_9	$(u^{47} - 18u^{46} + \dots + 73u - 5)(u^{182} - 11u^{181} + \dots - 271145u - 27293)$
c_{10}	$(u^{47} + u^{46} + \dots - 33u + 5)$ $\cdot (u^{182} + 18u^{181} + \dots - 267553107u - 15364313)$
c_{11}	$(u^{47} - 14u^{45} + \dots + 22u - 5)(u^{182} + u^{181} + \dots - 206u + 821)$
c_{12}	$(u^{47} + 3u^{46} + \dots + 7u - 1)(u^{182} - 4u^{181} + \dots - 15899u - 1117)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{47} + y^{46} + \dots + 62y - 1)$ $\cdot (y^{182} + 28y^{181} + \dots + 493256419046y + 10098039121)$
c_2, c_5	$(y^{47} - 27y^{46} + \dots + 34y - 1)$ $\cdot (y^{182} - 88y^{181} + \dots - 1248578y + 100489)$
c_3	$(y^{47} + 13y^{46} + \dots + 29y - 1)$ $\cdot (y^{182} - 24y^{181} + \dots - 76495395788829y + 1046661994225)$
c_4, c_{11}	$(y^{47} - 28y^{46} + \dots + 604y - 25)$ $\cdot (y^{182} - 113y^{181} + \dots - 31772444y + 674041)$
c_6, c_9	$(y^{47} + 24y^{46} + \dots - 521y - 25)$ $\cdot (y^{182} + 103y^{181} + \dots + 14649934201y + 744907849)$
c_7	$(y^{47} - 23y^{46} + \dots + 344y - 25)$ $\cdot (y^{182} - 24y^{181} + \dots - 93975110617920y + 400984032289)$
c_8	$(y^{47} - 11y^{46} + \dots - 7y - 1)$ $\cdot (y^{182} + 28y^{181} + \dots - 226333749y + 2253001)$
c_{10}	$(y^{47} - 21y^{46} + \dots + 69y - 25)$ $\cdot (y^{182} + 10y^{181} + \dots - 449099208347609y + 236062113961969)$
c_{12}	$(y^{47} + 27y^{46} + \dots - 5y - 1)$ $\cdot (y^{182} + 38y^{181} + \dots - 36140519y + 1247689)$