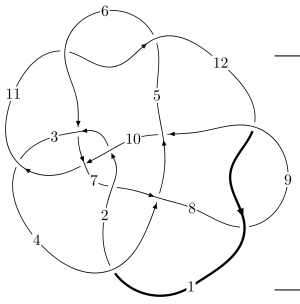
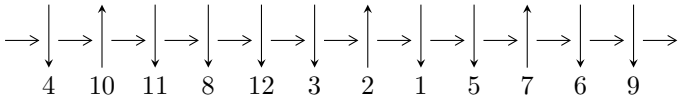
$12a_{1189}$ $(K12a_{1189})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.99880 \times 10^{1071} u^{178} - 1.17856 \times 10^{1071} u^{177} + \cdots + 3.13143 \times 10^{1072} b + 1.70801 \times 10^{1074},$$
$$8.49503 \times 10^{1072} u^{178} + 4.90132 \times 10^{1073} u^{177} + \cdots + 5.72157 \times 10^{1074} a - 8.86831 \times 10^{1076},$$
$$u^{179} + 73u^{177} + \cdots - 29822u - 1279 \rangle$$
$$I_2^u = \langle -4.84269 \times 10^{37} u^{45} - 1.67034 \times 10^{37} u^{44} + \cdots + 5.81192 \times 10^{37} b + 3.05918 \times 10^{38},$$
$$1.74495 \times 10^{39} u^{45} + 8.54988 \times 10^{38} u^{44} + \cdots + 9.88026 \times 10^{38} a - 3.34655 \times 10^{39},\ u^{46} + u^{45} + \cdots - 15u + 1$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 225 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. $\boldsymbol{I_1^u = \langle -3.00 \times 10^{1071} u^{178} - 1.18 \times 10^{1071} u^{177} + \cdots + 3.13 \times 10^{1072} b + 1.71 \times 10^{1074},\ 8.50 \times 10^{1072} u^{178} + 4.90 \times 10^{1073} u^{177} + \cdots + 5.72 \times 10^{1074} a - 8.87 \times 10^{1076},\ u^{179} + 73 u^{177} + \cdots - 29822 u - 1279 \rangle}$

(i) Arc colorings

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

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

$$a_5 = \begin{pmatrix} -0.0148474u^{178} - 0.0856639u^{177} + \cdots + 3341.59u + 154.998 \\ 0.0957646u^{178} + 0.0376364u^{177} + \cdots - 1370.56u - 54.5443 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 0.367758u^{178} - 0.176251u^{177} + \cdots + 2593.38u + 125.913 \\ -0.123380u^{178} + 0.116169u^{177} + \cdots - 1613.41u - 73.8663 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0809172u^{178} - 0.0480275u^{177} + \cdots + 1971.02u + 100.454 \\ 0.0957646u^{178} + 0.0376364u^{177} + \cdots - 1370.56u - 54.5443 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0368696u^{178} + 0.211587u^{177} + \cdots - 4548.32u - 222.936 \\ 0.0742994u^{178} - 0.0962500u^{177} + \cdots + 1794.54u + 81.1635 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.147173u^{178} - 0.293767u^{177} + \cdots + 6717.13u + 252.200 \\ 0.110671u^{178} + 0.0320006u^{177} + \cdots - 894.570u - 33.8387 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.143066u^{178} + 0.119170u^{177} + \cdots - 2663.65u - 100.286 \\ 0.0915930u^{178} + 0.0127491u^{177} + \cdots - 904.549u - 38.0392 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 0.0668388u^{178} - 0.0538365u^{177} + \cdots + 2403.04u + 118.319 \\ 0.0567337u^{178} + 0.0421875u^{177} + \cdots - 1255.47u - 50.5159 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.122140u^{178} + 0.0869151u^{177} + \cdots - 1281.44u - 18.3700 \\ 0.0298642u^{178} + 0.0769529u^{177} + \cdots - 1595.47u - 68.8104 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.555247u^{178} + 1.26086u^{177} + \cdots - 26877.2u - 1134.04$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{179}+3u^{178}+\cdots+5846731u+1313576$
c_2	$u^{179}+4u^{178}+\cdots+36391u+11019$
c_3	$u^{179}+25u^{177}+\cdots-341620u+43669$
c_4	$u^{179}-u^{178}+\cdots+5u+1$
c_5, c_{11}	$u^{179}-u^{178}+\cdots-21986697u+1238227$
c_6	$u^{179}-2u^{178}+\cdots-146753u+4679$
c_7	$u^{179}-2u^{178}+\cdots+20083300u+2036725$
c_8, c_{12}	$u^{179}+73u^{177}+\cdots-29822u+1279$
c_9	$u^{179}-u^{178}+\cdots-191134085123u+17016804162$
c_{10}	$u^{179}-7u^{178}+\cdots+57u+4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{179} + 29y^{178} + \cdots + 37780934306137y - 1725481907776$
c_2	$y^{179} + 8y^{178} + \cdots + 5723288023y - 121418361$
c_3	$y^{179} + 50y^{178} + \cdots - 139738921270y - 1906981561$
c_4	$y^{179} + 17y^{178} + \cdots - 429y - 1$
c_5, c_{11}	$y^{179} + 151y^{178} + \cdots + 108984338877843y - 1533206103529$
c_6	$y^{179} + 40y^{178} + \cdots + 4864670035y - 21893041$
c_7	$y^{179} + 62y^{178} + \cdots - 224749595737250y - 4148248725625$
c_8, c_{12}	$y^{179} + 146y^{178} + \cdots + 119524142y - 1635841$
c_9	$y^{179} + 87y^{178} + \cdots - 4.54 \times 10^{21}y - 2.90 \times 10^{20}$
c_{10}	$y^{179} + 13y^{178} + \cdots - 615y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.998280 + 0.070214I$ $a = 0.204320 + 0.216189I$ $b = 0.828235 + 0.365604I$	$-3.69915 - 2.13626I$	0
$u = 0.998280 - 0.070214I$ $a = 0.204320 - 0.216189I$ $b = 0.828235 - 0.365604I$	$-3.69915 + 2.13626I$	0
$u = -0.203391 + 0.977006I$ $a = -0.75818 + 1.94321I$ $b = 0.328121 - 0.205351I$	$-0.76644 + 6.70484I$	0
$u = -0.203391 - 0.977006I$ $a = -0.75818 - 1.94321I$ $b = 0.328121 + 0.205351I$	$-0.76644 - 6.70484I$	0
$u = 0.625829 + 0.796750I$ $a = 1.162870 - 0.699282I$ $b = 0.657821 - 0.037010I$	$-0.14305 - 2.48684I$	0
$u = 0.625829 - 0.796750I$ $a = 1.162870 + 0.699282I$ $b = 0.657821 + 0.037010I$	$-0.14305 + 2.48684I$	0
$u = -0.844809 + 0.481059I$ $a = -0.112688 - 0.317881I$ $b = -1.095970 + 0.680098I$	$1.42232 + 5.50398I$	0
$u = -0.844809 - 0.481059I$ $a = -0.112688 + 0.317881I$ $b = -1.095970 - 0.680098I$	$1.42232 - 5.50398I$	0
$u = -0.943635 + 0.028748I$ $a = -0.104136 + 0.225943I$ $b = 0.923089 + 0.734300I$	$-2.98651 - 9.84844I$	0
$u = -0.943635 - 0.028748I$ $a = -0.104136 - 0.225943I$ $b = 0.923089 - 0.734300I$	$-2.98651 + 9.84844I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.290224 + 1.030880I$ $a = -0.37203 + 2.63842I$ $b = -0.258940 - 0.074070I$	$4.41541 - 10.41770I$	0
$u = 0.290224 - 1.030880I$ $a = -0.37203 - 2.63842I$ $b = -0.258940 + 0.074070I$	$4.41541 + 10.41770I$	0
$u = -0.138430 + 1.078030I$ $a = -0.06314 - 1.47184I$ $b = -1.17336 + 1.00087I$	$1.99950 + 3.54359I$	0
$u = -0.138430 - 1.078030I$ $a = -0.06314 + 1.47184I$ $b = -1.17336 - 1.00087I$	$1.99950 - 3.54359I$	0
$u = -0.372417 + 0.815265I$ $a = -0.519155 - 0.487549I$ $b = -1.095430 + 0.156344I$	$-1.97343 + 2.95696I$	0
$u = -0.372417 - 0.815265I$ $a = -0.519155 + 0.487549I$ $b = -1.095430 - 0.156344I$	$-1.97343 - 2.95696I$	0
$u = 0.890167 + 0.076860I$ $a = 0.521445 + 0.218787I$ $b = 0.885195 - 0.800858I$	$-0.71037 + 2.97355I$	0
$u = 0.890167 - 0.076860I$ $a = 0.521445 - 0.218787I$ $b = 0.885195 + 0.800858I$	$-0.71037 - 2.97355I$	0
$u = -0.782405 + 0.424071I$ $a = 0.480978 - 0.907026I$ $b = -0.808448 - 0.228556I$	$1.179990 - 0.329076I$	0
$u = -0.782405 - 0.424071I$ $a = 0.480978 + 0.907026I$ $b = -0.808448 + 0.228556I$	$1.179990 + 0.329076I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.006310 + 1.112580I$ $a = 0.308509 + 1.086530I$ $b = 0.206645 - 0.801155I$	$2.54569 - 1.54986I$	0
$u = 0.006310 - 1.112580I$ $a = 0.308509 - 1.086530I$ $b = 0.206645 + 0.801155I$	$2.54569 + 1.54986I$	0
$u = 0.216435 + 1.099000I$ $a = 0.50639 + 2.07951I$ $b = -1.40103 - 1.83182I$	$1.29206 - 5.74333I$	0
$u = 0.216435 - 1.099000I$ $a = 0.50639 - 2.07951I$ $b = -1.40103 + 1.83182I$	$1.29206 + 5.74333I$	0
$u = -1.088110 + 0.266292I$ $a = 0.006643 + 0.193021I$ $b = 0.847155 - 0.701964I$	$3.54219 + 7.00380I$	0
$u = -1.088110 - 0.266292I$ $a = 0.006643 - 0.193021I$ $b = 0.847155 + 0.701964I$	$3.54219 - 7.00380I$	0
$u = -0.018113 + 1.129000I$ $a = -0.613434 - 0.794980I$ $b = -1.105060 + 0.461681I$	$2.53352 + 3.03096I$	0
$u = -0.018113 - 1.129000I$ $a = -0.613434 + 0.794980I$ $b = -1.105060 - 0.461681I$	$2.53352 - 3.03096I$	0
$u = -0.888857 + 0.699512I$ $a = -0.960511 - 0.010202I$ $b = -0.564599 + 0.295250I$	$1.74555 + 3.46899I$	0
$u = -0.888857 - 0.699512I$ $a = -0.960511 + 0.010202I$ $b = -0.564599 - 0.295250I$	$1.74555 - 3.46899I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.074897 + 1.144160I$ $a = -0.01616 - 2.27465I$ $b = 0.49613 + 2.17691I$	$2.28209 + 3.73578I$	0
$u = 0.074897 - 1.144160I$ $a = -0.01616 + 2.27465I$ $b = 0.49613 - 2.17691I$	$2.28209 - 3.73578I$	0
$u = -0.194250 + 1.155580I$ $a = 0.42104 - 1.89422I$ $b = -1.10300 + 1.17132I$	$-0.00825 + 3.71965I$	0
$u = -0.194250 - 1.155580I$ $a = 0.42104 + 1.89422I$ $b = -1.10300 - 1.17132I$	$-0.00825 - 3.71965I$	0
$u = 0.826046 + 0.000663I$ $a = -0.023868 + 0.148020I$ $b = -0.994024 - 0.482209I$	$-3.45729 - 0.07241I$	0
$u = 0.826046 - 0.000663I$ $a = -0.023868 - 0.148020I$ $b = -0.994024 + 0.482209I$	$-3.45729 + 0.07241I$	0
$u = -1.159600 + 0.191919I$ $a = 0.121254 + 0.287426I$ $b = 0.413498 - 0.567229I$	$4.65237 + 1.13699I$	0
$u = -1.159600 - 0.191919I$ $a = 0.121254 - 0.287426I$ $b = 0.413498 + 0.567229I$	$4.65237 - 1.13699I$	0
$u = -0.145521 + 0.809666I$ $a = 1.42063 + 0.66833I$ $b = -0.369397 - 0.675864I$	$1.19068 - 2.43159I$	0
$u = -0.145521 - 0.809666I$ $a = 1.42063 - 0.66833I$ $b = -0.369397 + 0.675864I$	$1.19068 + 2.43159I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.210116+1.160010I$ $a=-0.82802+1.54617I$ $b=\ \ 1.45093-1.05280I$	$-0.00427-2.20221I$	0
$u=-0.210116-1.160010I$ $a=-0.82802-1.54617I$ $b=\ \ 1.45093+1.05280I$	$-0.00427+2.20221I$	0
$u=\ \ 0.023813+1.191270I$ $a=\ \ 1.06050+2.25117I$ $b=\ \ 0.509622-0.755946I$	$6.40961+8.79257I$	0
$u=\ \ 0.023813-1.191270I$ $a=\ \ 1.06050-2.25117I$ $b=\ \ 0.509622+0.755946I$	$6.40961-8.79257I$	0
$u=\ \ 0.017408+1.204010I$ $a=-0.422614-1.333090I$ $b=\ \ 1.52675+0.83299I$	$6.26412-2.13728I$	0
$u=\ \ 0.017408-1.204010I$ $a=-0.422614+1.333090I$ $b=\ \ 1.52675-0.83299I$	$6.26412+2.13728I$	0
$u=\ \ 0.621296+0.497334I$ $a=\ \ 0.685258+0.198504I$ $b=\ \ 0.909730+0.446928I$	$-1.98136-4.27856I$	0
$u=\ \ 0.621296-0.497334I$ $a=\ \ 0.685258-0.198504I$ $b=\ \ 0.909730-0.446928I$	$-1.98136+4.27856I$	0
$u=-0.779323+0.133995I$ $a=-0.027444-0.585367I$ $b=-0.862957-0.735222I$	$-2.54274-3.40144I$	0
$u=-0.779323-0.133995I$ $a=-0.027444+0.585367I$ $b=-0.862957+0.735222I$	$-2.54274+3.40144I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.785809 + 0.069975I$ $a = 0.410376 + 0.362473I$ $b = -0.775894 + 0.557055I$	$-0.678724 + 1.153220I$	0
$u = 0.785809 - 0.069975I$ $a = 0.410376 - 0.362473I$ $b = -0.775894 - 0.557055I$	$-0.678724 - 1.153220I$	0
$u = 0.631661 + 0.470397I$ $a = -1.64955 - 0.45249I$ $b = -0.822070 + 0.053916I$	$2.89936 + 6.75098I$	0
$u = 0.631661 - 0.470397I$ $a = -1.64955 + 0.45249I$ $b = -0.822070 - 0.053916I$	$2.89936 - 6.75098I$	0
$u = 0.584502 + 0.527544I$ $a = 1.359900 + 0.125024I$ $b = -0.949435 + 0.827786I$	$-0.38675 + 2.66722I$	0
$u = 0.584502 - 0.527544I$ $a = 1.359900 - 0.125024I$ $b = -0.949435 - 0.827786I$	$-0.38675 - 2.66722I$	0
$u = -0.383802 + 1.150470I$ $a = -0.47772 - 1.56105I$ $b = -0.39683 + 1.50899I$	$4.23779 + 6.18551I$	0
$u = -0.383802 - 1.150470I$ $a = -0.47772 + 1.56105I$ $b = -0.39683 - 1.50899I$	$4.23779 - 6.18551I$	0
$u = 1.187980 + 0.246415I$ $a = -0.100408 + 0.159658I$ $b = -0.904353 - 0.768967I$	$2.3271 - 14.9993I$	0
$u = 1.187980 - 0.246415I$ $a = -0.100408 - 0.159658I$ $b = -0.904353 + 0.768967I$	$2.3271 + 14.9993I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.249436 + 1.191870I$ $a = -0.77682 + 1.80243I$ $b = -0.612784 - 0.851292I$	$2.94167 - 7.34369I$	0
$u = 0.249436 - 1.191870I$ $a = -0.77682 - 1.80243I$ $b = -0.612784 + 0.851292I$	$2.94167 + 7.34369I$	0
$u = 0.483159 + 1.124930I$ $a = 0.179283 - 0.941424I$ $b = 0.413858 + 0.268609I$	$-0.52339 - 3.21299I$	0
$u = 0.483159 - 1.124930I$ $a = 0.179283 + 0.941424I$ $b = 0.413858 - 0.268609I$	$-0.52339 + 3.21299I$	0
$u = -0.194489 + 0.748093I$ $a = 0.32961 - 1.62739I$ $b = -0.448962 - 0.009640I$	$-1.97376 - 0.12088I$	0
$u = -0.194489 - 0.748093I$ $a = 0.32961 + 1.62739I$ $b = -0.448962 + 0.009640I$	$-1.97376 + 0.12088I$	0
$u = -0.113811 + 1.225650I$ $a = 0.04586 - 2.49718I$ $b = 0.325548 + 1.375430I$	$7.75387 + 2.04834I$	0
$u = -0.113811 - 1.225650I$ $a = 0.04586 + 2.49718I$ $b = 0.325548 - 1.375430I$	$7.75387 - 2.04834I$	0
$u = -0.107242 + 1.227000I$ $a = -0.91817 - 1.76488I$ $b = 1.35755 + 1.58563I$	$8.50074 + 3.17466I$	0
$u = -0.107242 - 1.227000I$ $a = -0.91817 + 1.76488I$ $b = 1.35755 - 1.58563I$	$8.50074 - 3.17466I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.635049+1.063310I$ $a=-0.377986-0.663571I$ $b=\ \ 0.0093248-0.0686050I$	$2.92788+2.78840I$	0
$u=-0.635049-1.063310I$ $a=-0.377986+0.663571I$ $b=\ \ 0.0093248+0.0686050I$	$2.92788-2.78840I$	0
$u=\ \ 0.022331+1.251760I$ $a=-0.875358+0.965655I$ $b=\ \ 1.92228-1.02277I$	$7.95765-3.75761I$	0
$u=\ \ 0.022331-1.251760I$ $a=-0.875358-0.965655I$ $b=\ \ 1.92228+1.02277I$	$7.95765+3.75761I$	0
$u=-0.114488+1.248380I$ $a=-0.20368+2.39590I$ $b=-0.095086-1.109260I$	$8.82921-0.06805I$	0
$u=-0.114488-1.248380I$ $a=-0.20368-2.39590I$ $b=-0.095086+1.109260I$	$8.82921+0.06805I$	0
$u=\ \ 0.365143+1.208030I$ $a=\ \ 0.589842-0.246454I$ $b=\ \ 0.257695+0.328767I$	$3.20830-2.72130I$	0
$u=\ \ 0.365143-1.208030I$ $a=\ \ 0.589842+0.246454I$ $b=\ \ 0.257695-0.328767I$	$3.20830+2.72130I$	0
$u=-0.185617+1.251140I$ $a=-0.774356-0.613941I$ $b=\ \ 1.43282+0.51073I$	$7.71028+0.74474I$	0
$u=-0.185617-1.251140I$ $a=-0.774356+0.613941I$ $b=\ \ 1.43282-0.51073I$	$7.71028-0.74474I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.103702+1.277190I$ $a=-1.003770+0.287151I$ $b=-0.417110+0.048559I$	$8.51114+4.80921I$	0
$u=-0.103702-1.277190I$ $a=-1.003770-0.287151I$ $b=-0.417110-0.048559I$	$8.51114-4.80921I$	0
$u=-0.170448+1.278170I$ $a=-0.389770+1.297600I$ $b=-0.330182-0.644056I$	$8.25077+4.62962I$	0
$u=-0.170448-1.278170I$ $a=-0.389770-1.297600I$ $b=-0.330182+0.644056I$	$8.25077-4.62962I$	0
$u=0.397944+1.230100I$ $a=0.23725+1.58258I$ $b=-1.04418-1.34440I$	$2.86710-5.49138I$	0
$u=0.397944-1.230100I$ $a=0.23725-1.58258I$ $b=-1.04418+1.34440I$	$2.86710+5.49138I$	0
$u=0.446695+0.547985I$ $a=0.261230-1.037440I$ $b=0.096193-0.330347I$	$-1.65076+0.00178I$	0
$u=0.446695-0.547985I$ $a=0.261230+1.037440I$ $b=0.096193+0.330347I$	$-1.65076-0.00178I$	0
$u=-0.366648+1.240290I$ $a=0.11509-1.63909I$ $b=-1.27312+1.27248I$	$0.94882+7.57807I$	0
$u=-0.366648-1.240290I$ $a=0.11509+1.63909I$ $b=-1.27312-1.27248I$	$0.94882-7.57807I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.643626+0.285842I$ $a=\ \ 0.613101-0.132101I$ $b=-0.072595-0.778572I$	$1.66696-2.04600I$	0
$u=-0.643626-0.285842I$ $a=\ \ 0.613101+0.132101I$ $b=-0.072595+0.778572I$	$1.66696+2.04600I$	0
$u=-0.242807+1.283280I$ $a=\ \ 0.24156+1.43134I$ $b=\ \ 0.626920-1.126360I$	$6.28019+0.85783I$	0
$u=-0.242807-1.283280I$ $a=\ \ 0.24156-1.43134I$ $b=\ \ 0.626920+1.126360I$	$6.28019-0.85783I$	0
$u=\ \ 0.410919+1.242810I$ $a=\ \ 0.30865-1.89714I$ $b=\ \ 0.863993+0.926733I$	$2.91836-7.61545I$	0
$u=\ \ 0.410919-1.242810I$ $a=\ \ 0.30865+1.89714I$ $b=\ \ 0.863993-0.926733I$	$2.91836+7.61545I$	0
$u=\ \ 0.155410+1.303880I$ $a=\ \ 0.67228-1.53393I$ $b=-1.11516+1.60434I$	$8.2513-11.5465I$	0
$u=\ \ 0.155410-1.303880I$ $a=\ \ 0.67228+1.53393I$ $b=-1.11516-1.60434I$	$8.2513+11.5465I$	0
$u=\ \ 0.201549+1.299930I$ $a=\ \ 0.101200+1.383800I$ $b=-0.423003-1.347180I$	$3.44395-2.18570I$	0
$u=\ \ 0.201549-1.299930I$ $a=\ \ 0.101200-1.383800I$ $b=-0.423003+1.347180I$	$3.44395+2.18570I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.304710 + 0.180077I$ $a = 0.163292 - 0.069937I$ $b = 0.723149 + 0.765600I$	$0.31743 - 5.99046I$	0
$u = 1.304710 - 0.180077I$ $a = 0.163292 + 0.069937I$ $b = 0.723149 - 0.765600I$	$0.31743 + 5.99046I$	0
$u = -0.090633 + 1.314910I$ $a = 0.43670 + 1.86425I$ $b = -0.77136 - 1.59838I$	$9.06702 + 0.85994I$	0
$u = -0.090633 - 1.314910I$ $a = 0.43670 - 1.86425I$ $b = -0.77136 + 1.59838I$	$9.06702 - 0.85994I$	0
$u = 0.090553 + 1.335030I$ $a = -0.452867 + 1.304370I$ $b = 1.06997 - 1.43960I$	$6.05699 - 3.39709I$	0
$u = 0.090553 - 1.335030I$ $a = -0.452867 - 1.304370I$ $b = 1.06997 + 1.43960I$	$6.05699 + 3.39709I$	0
$u = 0.384891 + 1.282870I$ $a = 0.21091 + 1.69027I$ $b = -0.96471 - 1.09154I$	$0.54498 - 4.43862I$	0
$u = 0.384891 - 1.282870I$ $a = 0.21091 - 1.69027I$ $b = -0.96471 + 1.09154I$	$0.54498 + 4.43862I$	0
$u = -0.139341 + 1.339880I$ $a = 0.843954 - 1.000690I$ $b = -0.006600 + 0.259961I$	$6.93368 + 2.60158I$	0
$u = -0.139341 - 1.339880I$ $a = 0.843954 + 1.000690I$ $b = -0.006600 - 0.259961I$	$6.93368 - 2.60158I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.439185+1.284530I$ $a=-0.16852+1.63813I$ $b=\ \ 1.22503-1.29989I$	$0.9410+14.7563I$	0
$u=-0.439185-1.284530I$ $a=-0.16852-1.63813I$ $b=\ \ 1.22503+1.29989I$	$0.9410-14.7563I$	0
$u=\ \ 0.034929+1.382310I$ $a=\ \ 0.355457-0.643970I$ $b=-1.32388+0.63484I$	$9.32991+5.01848I$	0
$u=\ \ 0.034929-1.382310I$ $a=\ \ 0.355457+0.643970I$ $b=-1.32388-0.63484I$	$9.32991-5.01848I$	0
$u=\ \ 0.463070+1.306100I$ $a=-0.064865-1.217200I$ $b=\ \ 1.119520+0.862680I$	$0.53708-7.30527I$	0
$u=\ \ 0.463070-1.306100I$ $a=-0.064865+1.217200I$ $b=\ \ 1.119520-0.862680I$	$0.53708+7.30527I$	0
$u=-0.609709+0.055814I$ $a=\ \ 0.136530+1.379740I$ $b=\ \ 0.674762-0.378146I$	$3.92673+2.05013I$	0
$u=-0.609709-0.055814I$ $a=\ \ 0.136530-1.379740I$ $b=\ \ 0.674762+0.378146I$	$3.92673-2.05013I$	0
$u=\ \ 0.257075+1.364150I$ $a=-0.56622-1.38757I$ $b=\ \ 1.43235+1.10842I$	$3.56575-7.27647I$	0
$u=\ \ 0.257075-1.364150I$ $a=-0.56622+1.38757I$ $b=\ \ 1.43235-1.10842I$	$3.56575+7.27647I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.378569 + 1.338160I$ $a = 0.435186 + 0.491855I$ $b = -0.795964 - 0.312266I$	$0.68573 - 4.16554I$	0
$u = 0.378569 - 1.338160I$ $a = 0.435186 - 0.491855I$ $b = -0.795964 + 0.312266I$	$0.68573 + 4.16554I$	0
$u = -1.298540 + 0.513967I$ $a = -0.064489 - 0.209489I$ $b = -0.855010 + 0.388559I$	$-0.03462 + 4.26199I$	0
$u = -1.298540 - 0.513967I$ $a = -0.064489 + 0.209489I$ $b = -0.855010 - 0.388559I$	$-0.03462 - 4.26199I$	0
$u = 0.30588 + 1.42139I$ $a = -0.398325 + 0.923794I$ $b = 0.371200 - 1.303650I$	$4.17498 - 1.59789I$	0
$u = 0.30588 - 1.42139I$ $a = -0.398325 - 0.923794I$ $b = 0.371200 + 1.303650I$	$4.17498 + 1.59789I$	0
$u = -0.49961 + 1.39030I$ $a = 0.220140 + 1.356470I$ $b = 0.771349 - 0.920223I$	$9.50488 + 6.74938I$	0
$u = -0.49961 - 1.39030I$ $a = 0.220140 - 1.356470I$ $b = 0.771349 + 0.920223I$	$9.50488 - 6.74938I$	0
$u = -0.33114 + 1.44257I$ $a = -0.17359 + 1.41406I$ $b = 0.545284 - 1.142050I$	$9.13491 + 5.48995I$	0
$u = -0.33114 - 1.44257I$ $a = -0.17359 - 1.41406I$ $b = 0.545284 + 1.142050I$	$9.13491 - 5.48995I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.093246+0.507658I$ $a=\ \ 1.64842-0.20794I$ $b=\ \ 1.047540+0.200219I$	$-2.32298-4.61628I$	0
$u=-0.093246-0.507658I$ $a=\ \ 1.64842+0.20794I$ $b=\ \ 1.047540-0.200219I$	$-2.32298+4.61628I$	0
$u=-0.45846+1.44016I$ $a=-0.13078+1.55658I$ $b=\ \ 1.07022-1.19387I$	$8.8716+12.4466I$	0
$u=-0.45846-1.44016I$ $a=-0.13078-1.55658I$ $b=\ \ 1.07022+1.19387I$	$8.8716-12.4466I$	0
$u=\ \ 1.51900+0.06359I$ $a=-0.0649271-0.0640506I$ $b=-0.002932+0.619160I$	$5.72325-5.31159I$	0
$u=\ \ 1.51900-0.06359I$ $a=-0.0649271+0.0640506I$ $b=-0.002932-0.619160I$	$5.72325+5.31159I$	0
$u=-0.399520+0.260760I$ $a=\ \ 0.133516-0.811184I$ $b=-1.091310-0.540982I$	$-2.73427-1.28384I$	$-10.88552-6.54893I$
$u=-0.399520-0.260760I$ $a=\ \ 0.133516+0.811184I$ $b=-1.091310+0.540982I$	$-2.73427+1.28384I$	$-10.88552+6.54893I$
$u=-0.433406+0.184226I$ $a=-0.521760+1.009030I$ $b=\ \ 1.300370+0.247196I$	$-2.94009+4.85777I$	$-11.97988-6.50743I$
$u=-0.433406-0.184226I$ $a=-0.521760-1.009030I$ $b=\ \ 1.300370-0.247196I$	$-2.94009-4.85777I$	$-11.97988+6.50743I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.38357+1.49047I$ $a=\ \ 0.37168-1.52416I$ $b=-1.26676+1.14140I$	$7.62701+10.10910I$	0
$u=-0.38357-1.49047I$ $a=\ \ 0.37168+1.52416I$ $b=-1.26676-1.14140I$	$7.62701-10.10910I$	0
$u=\ \ 0.49491+1.46231I$ $a=\ \ 0.09508+1.50167I$ $b=-1.18822-1.15834I$	$7.6789-20.8785I$	0
$u=\ \ 0.49491-1.46231I$ $a=\ \ 0.09508-1.50167I$ $b=-1.18822+1.15834I$	$7.6789+20.8785I$	0
$u=\ \ 0.51872+1.46291I$ $a=\ \ 0.001229-1.358830I$ $b=\ \ 1.15596+1.11393I$	$5.54009-12.22370I$	0
$u=\ \ 0.51872-1.46291I$ $a=\ \ 0.001229+1.358830I$ $b=\ \ 1.15596-1.11393I$	$5.54009+12.22370I$	0
$u=\ \ 0.447734$ $a=\ \ 0.640594$ $b=-0.402420$	-0.864310	-11.5170
$u=-0.55341+1.45156I$ $a=-0.211448-0.981514I$ $b=-0.265708+0.968493I$	$8.99467+5.46938I$	0
$u=-0.55341-1.45156I$ $a=-0.211448+0.981514I$ $b=-0.265708-0.968493I$	$8.99467-5.46938I$	0
$u=-0.35214+1.53375I$ $a=-0.359554-0.232667I$ $b=\ \ 0.045673+0.396769I$	$1.73721-4.72813I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.35214-1.53375I$ $a=-0.359554+0.232667I$ $b=\ 0.045673-0.396769I$	$1.73721+4.72813I$	0
$u=\ 0.51799+1.49237I$ $a=\ 0.118693-1.159800I$ $b=\ 0.661464+1.224790I$	$11.1270-11.9955I$	0
$u=\ 0.51799-1.49237I$ $a=\ 0.118693+1.159800I$ $b=\ 0.661464-1.224790I$	$11.1270+11.9955I$	0
$u=-0.031765+0.416097I$ $a=\ 2.76429-1.19414I$ $b=-0.089787-0.577594I$	$0.62842-2.66552I$	$-4.00579+2.58807I$
$u=-0.031765-0.416097I$ $a=\ 2.76429+1.19414I$ $b=-0.089787+0.577594I$	$0.62842+2.66552I$	$-4.00579-2.58807I$
$u=-0.240198+0.338937I$ $a=-2.43410+0.81191I$ $b=\ 0.625335-0.605027I$	$3.51197+2.40698I$	$-0.80229-5.49120I$
$u=-0.240198-0.338937I$ $a=-2.43410-0.81191I$ $b=\ 0.625335+0.605027I$	$3.51197-2.40698I$	$-0.80229+5.49120I$
$u=\ 0.53323+1.51056I$ $a=-0.142604+1.071320I$ $b=-0.782093-1.045840I$	$10.99100-1.64523I$	0
$u=\ 0.53323-1.51056I$ $a=-0.142604-1.071320I$ $b=-0.782093+1.045840I$	$10.99100+1.64523I$	0
$u=\ 0.319298+0.207119I$ $a=-3.07842-0.99914I$ $b=-0.325177+0.936873I$	$3.61042-9.67396I$	$-4.12093+6.33022I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.319298 - 0.207119I$ $a = -3.07842 + 0.99914I$ $b = -0.325177 - 0.936873I$	$3.61042 + 9.67396I$	$-4.12093 - 6.33022I$
$u = -0.50052 + 1.54688I$ $a = 0.222091 - 1.163020I$ $b = -1.16503 + 0.85712I$	$6.28451 + 10.54120I$	0
$u = -0.50052 - 1.54688I$ $a = 0.222091 + 1.163020I$ $b = -1.16503 - 0.85712I$	$6.28451 - 10.54120I$	0
$u = -0.306759 + 0.139588I$ $a = -1.47319 + 1.61825I$ $b = -0.234622 - 1.259470I$	$4.43980 - 0.52965I$	$-1.67145 - 5.73714I$
$u = -0.306759 - 0.139588I$ $a = -1.47319 - 1.61825I$ $b = -0.234622 + 1.259470I$	$4.43980 + 0.52965I$	$-1.67145 + 5.73714I$
$u = 0.324834 + 0.043379I$ $a = -2.55594 - 0.21697I$ $b = -0.133881 - 0.991505I$	$-0.48447 - 4.94408I$	$-7.56913 + 6.57049I$
$u = 0.324834 - 0.043379I$ $a = -2.55594 + 0.21697I$ $b = -0.133881 + 0.991505I$	$-0.48447 + 4.94408I$	$-7.56913 - 6.57049I$
$u = -0.324938 + 0.035219I$ $a = 1.18690 + 2.60542I$ $b = 0.474361 - 1.061070I$	$4.95498 - 1.64270I$	$0.04560 + 8.58397I$
$u = -0.324938 - 0.035219I$ $a = 1.18690 - 2.60542I$ $b = 0.474361 + 1.061070I$	$4.95498 + 1.64270I$	$0.04560 - 8.58397I$
$u = 0.50301 + 1.62307I$ $a = -0.071443 + 0.633607I$ $b = -0.212027 - 0.894000I$	$5.15575 - 1.52551I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.50301 - 1.62307I$ $a = -0.071443 - 0.633607I$ $b = -0.212027 + 0.894000I$	$5.15575 + 1.52551I$	0
$u = -0.27840 + 1.82173I$ $a = -0.468774 + 0.350549I$ $b = 0.700060 - 0.298099I$	$4.28005 + 6.63787I$	0
$u = -0.27840 - 1.82173I$ $a = -0.468774 - 0.350549I$ $b = 0.700060 + 0.298099I$	$4.28005 - 6.63787I$	0
$u = -0.1071980 + 0.0665947I$ $a = -7.90852 + 8.10695I$ $b = 0.579777 + 0.501459I$	$4.30159 + 3.83216I$	$-4.17753 + 3.28369I$
$u = -0.1071980 - 0.0665947I$ $a = -7.90852 - 8.10695I$ $b = 0.579777 - 0.501459I$	$4.30159 - 3.83216I$	$-4.17753 - 3.28369I$
$u = -0.88693 + 1.70717I$ $a = -0.159998 - 0.257897I$ $b = -0.074882 + 0.385192I$	$6.43245 + 0.46794I$	0
$u = -0.88693 - 1.70717I$ $a = -0.159998 + 0.257897I$ $b = -0.074882 - 0.385192I$	$6.43245 - 0.46794I$	0
$u = 1.10158 + 1.78633I$ $a = 0.167184 - 0.132960I$ $b = -0.118368 + 0.388366I$	$5.53618 + 7.13137I$	0
$u = 1.10158 - 1.78633I$ $a = 0.167184 + 0.132960I$ $b = -0.118368 - 0.388366I$	$5.53618 - 7.13137I$	0

II. $I_2^u = \langle -4.84 \times 10^{37} u^{45} - 1.67 \times 10^{37} u^{44} + \cdots + 5.81 \times 10^{37} b + 3.06 \times 10^{38},\ 1.74 \times 10^{39} u^{45} + 8.55 \times 10^{38} u^{44} + \cdots + 9.88 \times 10^{38} a - 3.35 \times 10^{39},\ u^{46} + u^{45} + \cdots - 15u + 17 \rangle$

(i) Arc colorings

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

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

$$a_5 = \begin{pmatrix} -1.76610u^{45} - 0.865349u^{44} + \cdots - 27.1471u + 3.38711 \\ 0.833234u^{45} + 0.287399u^{44} + \cdots + 16.7662u - 5.26362 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 1.43817u^{45} + 1.42819u^{44} + \cdots + 12.7808u - 2.18132 \\ -0.549856u^{45} - 1.01154u^{44} + \cdots + 4.33049u - 7.51884 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.932866u^{45} - 0.577950u^{44} + \cdots - 10.3809u - 1.87652 \\ 0.833234u^{45} + 0.287399u^{44} + \cdots + 16.7662u - 5.26362 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.627399u^{45} + 1.38189u^{44} + \cdots - 4.11173u + 7.32639 \\ -0.0530489u^{45} + 0.262012u^{44} + \cdots - 6.60077u + 7.63109 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.28107u^{45} + 0.908212u^{44} + \cdots + 31.8902u - 6.48337 \\ -1.27369u^{45} - 0.960422u^{44} + \cdots - 11.1214u + 3.60309 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.999033u^{45} - 0.507507u^{44} + \cdots - 17.0493u + 6.38514 \\ 0.715675u^{45} + 0.492645u^{44} + \cdots + 19.4988u - 3.75157 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -1.62537u^{45} - 0.154000u^{44} + \cdots - 32.7980u + 8.83228 \\ 0.257695u^{45} - 0.919908u^{44} + \cdots + 17.2820u - 9.51889 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.130947u^{45} + 0.867637u^{44} + \cdots - 3.27412u + 11.2197 \\ -0.779485u^{45} - 1.71494u^{44} + \cdots + 9.13620u - 20.6847 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3.49374u^{45} - 0.666137u^{44} + \cdots - 51.6295u + 80.6632$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{46} - 10u^{45} + \cdots - 12u + 5$
c_2	$u^{46} + u^{45} + \cdots - 2u + 1$
c_3	$u^{46} + u^{45} + \cdots - 9u + 1$
c_4	$u^{46} + 2u^{45} + \cdots + 4u + 1$
c_5	$u^{46} + 18u^{44} + \cdots - 4u + 1$
c_6	$u^{46} - 3u^{45} + \cdots - 6u + 1$
c_7	$u^{46} - u^{45} + \cdots - 5u + 1$
c_8	$u^{46} + u^{45} + \cdots - 15u + 17$
c_9	$u^{46} + 18u^{44} + \cdots + 21u + 1$
c_{10}	$u^{46} - u^{44} + \cdots - 3u + 1$
c_{11}	$u^{46} + 18u^{44} + \cdots + 4u + 1$
c_{12}	$u^{46} - u^{45} + \cdots + 15u + 17$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{46} + 2y^{45} + \cdots + 86y + 25$
c_2	$y^{46} + 21y^{45} + \cdots + 4y + 1$
c_3	$y^{46} + 31y^{45} + \cdots - 15y + 1$
c_4	$y^{46} + 10y^{45} + \cdots + 16y + 1$
c_5, c_{11}	$y^{46} + 36y^{45} + \cdots - 124y + 1$
c_6	$y^{46} + 9y^{45} + \cdots + 28y^2 + 1$
c_7	$y^{46} + 27y^{45} + \cdots + 45y + 1$
c_8, c_{12}	$y^{46} + 43y^{45} + \cdots + 761y + 289$
c_9	$y^{46} + 36y^{45} + \cdots + 139y + 1$
c_{10}	$y^{46} - 2y^{45} + \cdots + 11y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.223161+1.037080I$ $a=\ \ 0.368712+1.193520I$ $b=\ \ 0.134601-1.341660I$	$1.25009-3.69630I$	$-4.64083+6.19411I$
$u=-0.223161-1.037080I$ $a=\ \ 0.368712-1.193520I$ $b=\ \ 0.134601+1.341660I$	$1.25009+3.69630I$	$-4.64083-6.19411I$
$u=\ \ 0.250991+1.053960I$ $a=\ \ 1.12540-2.73704I$ $b=\ \ 0.132515+0.738713I$	$5.02052-10.40650I$	$3.11487+10.24020I$
$u=\ \ 0.250991-1.053960I$ $a=\ \ 1.12540+2.73704I$ $b=\ \ 0.132515-0.738713I$	$5.02052+10.40650I$	$3.11487-10.24020I$
$u=-0.115902+1.085320I$ $a=\ \ 0.05415-2.31336I$ $b=-0.86041+1.78865I$	$1.71809+5.10243I$	$-1.26332-6.20890I$
$u=-0.115902-1.085320I$ $a=\ \ 0.05415+2.31336I$ $b=-0.86041-1.78865I$	$1.71809-5.10243I$	$-1.26332+6.20890I$
$u=-0.828572+0.717005I$ $a=\ \ 1.067220+0.220883I$ $b=\ \ 0.691685-0.130730I$	$1.28644+3.15826I$	$-11.58903-1.22826I$
$u=-0.828572-0.717005I$ $a=\ \ 1.067220-0.220883I$ $b=\ \ 0.691685+0.130730I$	$1.28644-3.15826I$	$-11.58903+1.22826I$
$u=\ \ 0.468667+0.710834I$ $a=-0.483149+0.672371I$ $b=-0.970232-0.263149I$	$-2.30589-2.36967I$	$-12.92574+0.51582I$
$u=\ \ 0.468667-0.710834I$ $a=-0.483149-0.672371I$ $b=-0.970232+0.263149I$	$-2.30589+2.36967I$	$-12.92574-0.51582I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.469923 + 0.674458I$ $a = -1.64032 + 0.05693I$ $b = 0.282210 - 0.576764I$	$4.63273 - 4.42952I$	$2.79341 + 7.29767I$
$u = 0.469923 - 0.674458I$ $a = -1.64032 - 0.05693I$ $b = 0.282210 + 0.576764I$	$4.63273 + 4.42952I$	$2.79341 - 7.29767I$
$u = -1.150660 + 0.415375I$ $a = 0.135961 + 0.191249I$ $b = 0.881731 - 0.614966I$	$0.70251 + 4.94486I$	0
$u = -1.150660 - 0.415375I$ $a = 0.135961 - 0.191249I$ $b = 0.881731 + 0.614966I$	$0.70251 - 4.94486I$	0
$u = -0.112964 + 1.219830I$ $a = -0.46593 - 1.87995I$ $b = 0.91353 + 1.33612I$	$8.03357 + 3.01728I$	0
$u = -0.112964 - 1.219830I$ $a = -0.46593 + 1.87995I$ $b = 0.91353 - 1.33612I$	$8.03357 - 3.01728I$	0
$u = -0.028174 + 1.246190I$ $a = -0.368690 - 0.772652I$ $b = 1.49757 + 0.73540I$	$7.63217 + 3.52333I$	0
$u = -0.028174 - 1.246190I$ $a = -0.368690 + 0.772652I$ $b = 1.49757 - 0.73540I$	$7.63217 - 3.52333I$	0
$u = -0.096804 + 1.250500I$ $a = 0.10094 + 2.48618I$ $b = -0.35301 - 1.39992I$	$7.94712 + 0.38549I$	0
$u = -0.096804 - 1.250500I$ $a = 0.10094 - 2.48618I$ $b = -0.35301 + 1.39992I$	$7.94712 - 0.38549I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.470092 + 0.577864I$ $a = -2.08697 - 0.29062I$ $b = -0.596408 - 0.373381I$	$0.05543 - 3.51741I$	$-9.80661 + 8.41145I$
$u = 0.470092 - 0.577864I$ $a = -2.08697 + 0.29062I$ $b = -0.596408 + 0.373381I$	$0.05543 + 3.51741I$	$-9.80661 - 8.41145I$
$u = 0.349173 + 1.210350I$ $a = 0.30048 + 1.57899I$ $b = -1.15753 - 1.35239I$	$2.48280 - 5.85418I$	0
$u = 0.349173 - 1.210350I$ $a = 0.30048 - 1.57899I$ $b = -1.15753 + 1.35239I$	$2.48280 + 5.85418I$	0
$u = 0.355818 + 1.235540I$ $a = -0.13876 + 1.61934I$ $b = -0.973581 - 1.005470I$	$0.86459 - 6.07412I$	0
$u = 0.355818 - 1.235540I$ $a = -0.13876 - 1.61934I$ $b = -0.973581 + 1.005470I$	$0.86459 + 6.07412I$	0
$u = 0.676814 + 0.036574I$ $a = -0.474402 + 0.347448I$ $b = -0.875066 + 0.539978I$	$-2.78999 + 2.06593I$	$-11.46474 - 3.72622I$
$u = 0.676814 - 0.036574I$ $a = -0.474402 - 0.347448I$ $b = -0.875066 - 0.539978I$	$-2.78999 - 2.06593I$	$-11.46474 + 3.72622I$
$u = -0.072648 + 0.666820I$ $a = 0.630152 - 0.511575I$ $b = 1.192400 - 0.044916I$	$-1.88745 + 5.02358I$	$-2.19878 - 9.30472I$
$u = -0.072648 - 0.666820I$ $a = 0.630152 + 0.511575I$ $b = 1.192400 + 0.044916I$	$-1.88745 - 5.02358I$	$-2.19878 + 9.30472I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.506942 + 0.379495I$ $a = 1.47492 + 0.55349I$ $b = -0.984417 + 0.694598I$	$-0.38449 + 2.35124I$	$-7.01272 + 5.44593I$
$u = 0.506942 - 0.379495I$ $a = 1.47492 - 0.55349I$ $b = -0.984417 - 0.694598I$	$-0.38449 - 2.35124I$	$-7.01272 - 5.44593I$
$u = 0.11063 + 1.47375I$ $a = -0.425127 - 0.447680I$ $b = 0.597164 + 0.215378I$	$1.12182 - 4.76151I$	0
$u = 0.11063 - 1.47375I$ $a = -0.425127 + 0.447680I$ $b = 0.597164 - 0.215378I$	$1.12182 + 4.76151I$	0
$u = -0.43117 + 1.41938I$ $a = -0.077335 - 1.187230I$ $b = -0.330859 + 0.950723I$	$8.42870 + 4.93111I$	0
$u = -0.43117 - 1.41938I$ $a = -0.077335 + 1.187230I$ $b = -0.330859 - 0.950723I$	$8.42870 - 4.93111I$	0
$u = -0.37828 + 1.43591I$ $a = -0.394028 - 0.829729I$ $b = 0.272875 + 1.233060I$	$4.24060 + 1.37765I$	0
$u = -0.37828 - 1.43591I$ $a = -0.394028 + 0.829729I$ $b = 0.272875 - 1.233060I$	$4.24060 - 1.37765I$	0
$u = -0.55804 + 1.43557I$ $a = -0.149122 - 0.295135I$ $b = 0.365558 + 0.055872I$	$6.10433 + 0.33728I$	0
$u = -0.55804 - 1.43557I$ $a = -0.149122 + 0.295135I$ $b = 0.365558 - 0.055872I$	$6.10433 - 0.33728I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.44640+1.52513I$ $a=-0.284884+1.298840I$ $b=\ \ 1.20551-1.00157I$	$6.93372+10.57190I$	0
$u=-0.44640-1.52513I$ $a=-0.284884-1.298840I$ $b=\ \ 1.20551+1.00157I$	$6.93372-10.57190I$	0
$u=-0.374889+0.078377I$ $a=\ \ 1.11389-1.51227I$ $b=\ \ 0.022127+1.141100I$	$4.36024+1.09175I$	$-4.35566-5.06235I$
$u=-0.374889-0.078377I$ $a=\ \ 1.11389+1.51227I$ $b=\ \ 0.022127-1.141100I$	$4.36024-1.09175I$	$-4.35566+5.06235I$
$u=\ \ 0.65863+1.59486I$ $a=-0.030167-0.253594I$ $b=-0.087969-0.167241I$	$5.28452+7.01439I$	0
$u=\ \ 0.65863-1.59486I$ $a=-0.030167+0.253594I$ $b=-0.087969+0.167241I$	$5.28452-7.01439I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{46}-10u^{45}+\cdots-12u+5)$ $\cdot(u^{179}+3u^{178}+\cdots+5846731u+1313576)$
c_2	$(u^{46}+u^{45}+\cdots-2u+1)(u^{179}+4u^{178}+\cdots+36391u+11019)$
c_3	$(u^{46}+u^{45}+\cdots-9u+1)(u^{179}+25u^{177}+\cdots-341620u+43669)$
c_4	$(u^{46}+2u^{45}+\cdots+4u+1)(u^{179}-u^{178}+\cdots+5u+1)$
c_5	$(u^{46}+18u^{44}+\cdots-4u+1)$ $\cdot(u^{179}-u^{178}+\cdots-21986697u+1238227)$
c_6	$(u^{46}-3u^{45}+\cdots-6u+1)(u^{179}-2u^{178}+\cdots-146753u+4679)$
c_7	$(u^{46}-u^{45}+\cdots-5u+1)(u^{179}-2u^{178}+\cdots+2.00833\times10^{7}u+2036725)$
c_8	$(u^{46}+u^{45}+\cdots-15u+17)(u^{179}+73u^{177}+\cdots-29822u+1279)$
c_9	$(u^{46}+18u^{44}+\cdots+21u+1)$ $\cdot(u^{179}-u^{178}+\cdots-191134085123u+17016804162)$
c_{10}	$(u^{46}-u^{44}+\cdots-3u+1)(u^{179}-7u^{178}+\cdots+57u+4)$
c_{11}	$(u^{46}+18u^{44}+\cdots+4u+1)$ $\cdot(u^{179}-u^{178}+\cdots-21986697u+1238227)$
c_{12}	$(u^{46}-u^{45}+\cdots+15u+17)(u^{179}+73u^{177}+\cdots-29822u+1279)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{46}+2y^{45}+\cdots+86y+25)$ $\cdot(y^{179}+29y^{178}+\cdots+37780934306137y-1725481907776)$
c_2	$(y^{46}+21y^{45}+\cdots+4y+1)$ $\cdot(y^{179}+8y^{178}+\cdots+5723288023y-121418361)$
c_3	$(y^{46}+31y^{45}+\cdots-15y+1)$ $\cdot(y^{179}+50y^{178}+\cdots-139738921270y-1906981561)$
c_4	$(y^{46}+10y^{45}+\cdots+16y+1)(y^{179}+17y^{178}+\cdots-429y-1)$
c_5, c_{11}	$(y^{46}+36y^{45}+\cdots-124y+1)$ $\cdot(y^{179}+151y^{178}+\cdots+108984338877843y-1533206103529)$
c_6	$(y^{46}+9y^{45}+\cdots+28y^2+1)$ $\cdot(y^{179}+40y^{178}+\cdots+4864670035y-21893041)$
c_7	$(y^{46}+27y^{45}+\cdots+45y+1)$ $\cdot(y^{179}+62y^{178}+\cdots-224749595737250y-4148248725625)$
c_8, c_{12}	$(y^{46}+43y^{45}+\cdots+761y+289)$ $\cdot(y^{179}+146y^{178}+\cdots+119524142y-1635841)$
c_9	$(y^{46}+36y^{45}+\cdots+139y+1)$ $\cdot(y^{179}+87y^{178}+\cdots-4.54\times10^{21}y-2.90\times10^{20})$
c_{10}	$(y^{46}-2y^{45}+\cdots+11y+1)(y^{179}+13y^{178}+\cdots-615y-16)$