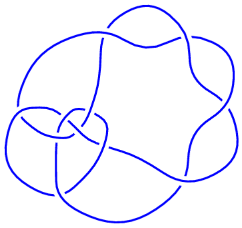
$11a_{249}$ $(K11a_{249})$



[1]

Arc Sequences

$$\rightarrow \overset{\uparrow}{9} \rightarrow \overset{\downarrow}{8} \rightarrow \overset{\downarrow}{1} \rightarrow \overset{\uparrow}{2} \rightarrow \overset{\downarrow}{3} \rightarrow \overset{\uparrow}{11} \rightarrow \overset{\uparrow}{10} \rightarrow \overset{\uparrow}{5} \rightarrow \overset{\downarrow}{4} \rightarrow \overset{\uparrow}{7} \rightarrow \overset{\uparrow}{6} \rightarrow$$

Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{3} I_i^u$$

$$\begin{aligned}
I_1^u = \langle & u^{11} + 7u^{10} + 25u^9 + 56u^8 + 89u^7 + 107u^6 + 104u^5 + 82u^4 + 51u^3 + 23u^2 + 7u + 1, \\
& -3u^{10} - 20u^9 - 68u^8 - 144u^7 - 216u^6 - 245u^5 - 225u^4 - 165u^3 - 92u^2 + b - 35u - 7, \\
& 7u^{10} + 46u^9 + 155u^8 + 324u^7 + 479u^6 + 533u^5 + 483u^4 + 349u^3 + 192u^2 + a + 69u + 14\rangle \\
I_2^u = \langle & b^{38} - 3b^{37} + \cdots + b + 2,\ 4.58733 \times 10^{54}u + 8.87933 \times 10^{52}b^{37} + \cdots - 2.42120 \times 10^{54}b + 3.86883 \times 10^{54}, \\
& -4.89816 \times 10^{53}b^{37} + 1.11617 \times 10^{54}b^{36} + \cdots + 4.58733 \times 10^{54}a - 4.00411 \times 10^{54}\rangle \\
I_3^u = \langle & u^{31} - 18u^{30} + \cdots + 9u - 2, \\
& -6.43786 \times 10^{16}u^{30} + 1.10214 \times 10^{18}u^{29} + \cdots + 2.34871 \times 10^{16}b - 1.67655 \times 10^{17}, \\
& 1.67655 \times 10^{17}u^{30} - 2.88904 \times 10^{18}u^{29} + \cdots + 4.69742 \times 10^{16}a + 7.31175 \times 10^{17}\rangle
\end{aligned}$$

There are 3 irreducible components with 80 representations.

[1] The knot diagram image is adapter from "C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, http://www.indiana.edu/ knotinfo"

I. $I^u_1 = \langle u^{11}+7u^{10}+\cdots+7u+1,\ -3u^{10}-20u^9+\cdots+b-7,\ 7u^{10}+46u^9+\cdots+a+14\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-7u^{10}-46u^9+\cdots-69u-14\\3u^{10}+20u^9+\cdots+35u+7\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-2u^{10}-13u^9+\cdots-28u-8\\u^{10}+6u^9+\cdots+5u+2\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-6u^{10}-40u^9+\cdots-59u-12\\2u^{10}+14u^9+\cdots+25u+5\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-7u^{10}-46u^9+\cdots-69u-14\\2u^{10}+13u^9+\cdots+21u+4\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^{10}-7u^9+\cdots-23u-6\\u+1\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u^{10}+7u^9+\cdots+22u+5\\-u^2-u-1\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-3u^{10}-18u^9+\cdots-11u-2\\2u^{10}+12u^9+\cdots+9u+1\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-2u^{10}-13u^9+\cdots-24u-6\\u^4+2u^3+3u^2+u+1\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-2u^{10}-13u^9+\cdots-24u-6\\u^4+2u^3+3u^2+u+1\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.36843 - 1.30090I$ $a = 0.449427 + 0.074042I$ $b = -0.518686 - 0.685983I$	$-6.19976 + 3.82276I$	$-1.00855 - 7.16549I$
$u = -1.36843 + 1.30090I$ $a = 0.449427 - 0.074042I$ $b = -0.518686 + 0.685983I$	$-6.19976 - 3.82276I$	$-1.00855 + 7.16549I$
$u = -1.09333 - 1.07979I$ $a = -0.624329 - 0.030831I$ $b = 0.649310 + 0.707855I$	$0.53546 + 3.67768I$	$-0.32060 - 6.20780I$
$u = -1.09333 + 1.07979I$ $a = -0.624329 + 0.030831I$ $b = 0.649310 - 0.707855I$	$0.53546 - 3.67768I$	$-0.32060 + 6.20780I$
$u = -0.761198 - 0.578009I$ $a = 1.320636 - 0.079264I$ $b = -1.051081 - 0.703004I$	$-1.93683 + 3.97193I$	$3.41224 - 7.38669I$
$u = -0.761198 + 0.578009I$ $a = 1.320636 + 0.079264I$ $b = -1.051081 + 0.703004I$	$-1.93683 - 3.97193I$	$3.41224 + 7.38669I$
$u = -0.367437$ $a = -3.42188$ $b = 1.25733$	1.17683	-7.25194
$u = -0.288198 - 0.578824I$ $a = 1.16201 - 1.12106I$ $b = -0.983784 - 0.349510I$	$-1.97960 + 4.20350I$	$-1.84188 - 8.05769I$
$u = -0.288198 + 0.578824I$ $a = 1.16201 + 1.12106I$ $b = -0.983784 + 0.349510I$	$-1.97960 - 4.20350I$	$-1.84188 + 8.05769I$
$u = 0.194877 - 0.899165I$ $a = -0.096800 + 0.883533I$ $b = 0.775578 + 0.259220I$	$-10.74691 + 6.11277I$	$-2.11524 - 4.58856I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.194877 + 0.899165I$ $a = -0.096800 - 0.883533I$ $b = 0.775578 - 0.259220I$	$-10.74691 - 6.11277I$	$-2.11524 + 4.58856I$

II.

$\boldsymbol{I_2^u = \langle b^{38} - 3b^{37} + \cdots + b + 2,\ 4.59\times10^{54}u + 8.88\times10^{52}b^{37} + \cdots - 2.42\times10^{54}b + 3.87\times10^{54},\ -4.90\times10^{53}b^{37} + 1.12\times10^{54}b^{36} + \cdots + 4.59\times10^{54}a - 4.00\times10^{54}\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.106776b^{37} - 0.243317b^{36} + \cdots - 3.87478b + 0.872863 \\ b \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0770105b^{37} - 0.269747b^{36} + \cdots + 0.766087b + 0.786448 \\ b^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0 \\ -0.0193562b^{37} + 0.0401654b^{36} + \cdots + 0.527801b - 0.843373 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0193562b^{37} - 0.0401654b^{36} + \cdots - 0.527801b + 0.843373 \\ -0.0193562b^{37} + 0.0401654b^{36} + \cdots + 0.527801b - 0.843373 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.236222b^{37} - 0.619530b^{36} + \cdots - 1.13048b + 0.801637 \\ -0.129447b^{37} + 0.376213b^{36} + \cdots - 1.74431b + 0.0712254 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.106776b^{37} - 0.243317b^{36} + \cdots - 3.87478b + 0.872863 \\ -0.173648b^{37} + 0.485834b^{36} + \cdots - 2.18592b + 0.180158 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0576543b^{37} + 0.229582b^{36} + \cdots - 1.29389b + 0.0569245 \\ -0.0235171b^{37} + 0.0336024b^{36} + \cdots + 0.527090b - 0.858926 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.104891b^{37} - 0.342773b^{36} + \cdots + 0.739410b - 0.663114 \\ -0.128874b^{37} + 0.319677b^{36} + \cdots + 1.49076b + 0.0695768 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.107667b^{37} - 0.218314b^{36} + \cdots - 2.13163b + 0.583411 \\ -0.138624b^{37} + 0.348063b^{36} + \cdots - 1.21249b + 0.451142 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0817296b^{37} - 0.223769b^{36} + \cdots + 0.494583b + 0.842102 \\ 0.0825869b^{37} - 0.198639b^{36} + \cdots - 1.80932b - 0.383815 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0817296b^{37} - 0.223769b^{36} + \cdots + 0.494583b + 0.842102 \\ 0.0825869b^{37} - 0.198639b^{36} + \cdots - 1.80932b - 0.383815 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.515417 - 0.216459I$ $a = 1.50321 - 0.17445I$ $b = -1.68623 - 0.65647I$	$-1.04093 - 4.49011I$	$7.2217 + 12.2703I$
$u = 0.515417 + 0.216459I$ $a = 1.50321 + 0.17445I$ $b = -1.68623 + 0.65647I$	$-1.04093 + 4.49011I$	$7.2217 - 12.2703I$
$u = -0.411578 - 0.796293I$ $a = 0.653005 + 0.185362I$ $b = -1.08993 - 1.20830I$	$-3.51553 + 4.24269I$	$-6.97656 - 8.05146I$
$u = -0.411578 + 0.796293I$ $a = 0.653005 - 0.185362I$ $b = -1.08993 + 1.20830I$	$-3.51553 - 4.24269I$	$-6.97656 + 8.05146I$
$u = -1.04957 - 1.25847I$ $a = 0.630103 + 0.096256I$ $b = -1.055724 - 0.582482I$	$-7.20594 + 5.75076I$	$-0.89404 - 7.30960I$
$u = -1.04957 + 1.25847I$ $a = 0.630103 - 0.096256I$ $b = -1.055724 + 0.582482I$	$-7.20594 - 5.75076I$	$-0.89404 + 7.30960I$
$u = 0.515417 + 0.216459I$ $a = 2.32638 - 2.25067I$ $b = -0.737020 - 0.415298I$	$-1.04093 + 4.49011I$	$7.2217 - 12.2703I$
$u = 0.515417 - 0.216459I$ $a = 2.32638 + 2.25067I$ $b = -0.737020 + 0.415298I$	$-1.04093 - 4.49011I$	$7.2217 + 12.2703I$
$u = -1.07839 - 0.92133I$ $a = 0.762474 + 0.143602I$ $b = -0.696896 - 0.469381I$	$0.95751 + 2.93464I$	$5.91453 + 1.99663I$
$u = -1.07839 + 0.92133I$ $a = 0.762474 - 0.143602I$ $b = -0.696896 + 0.469381I$	$0.95751 - 2.93464I$	$5.91453 - 1.99663I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.28782 - 0.69169I$ $a = 0.459527 - 0.117863I$ $b = -0.641791 - 0.869001I$	$-5.53623 + 2.54405I$	$2.47148 - 1.82962I$
$u = -1.28782 + 0.69169I$ $a = 0.459527 + 0.117863I$ $b = -0.641791 + 0.869001I$	$-5.53623 - 2.54405I$	$2.47148 + 1.82962I$
$u = -1.05045 - 1.11478I$ $a = 0.693372 - 0.174940I$ $b = -0.586289 - 0.833189I$	$0.35999 + 4.82230I$	$1.96421 - 11.27699I$
$u = -1.05045 + 1.11478I$ $a = 0.693372 + 0.174940I$ $b = -0.586289 + 0.833189I$	$0.35999 - 4.82230I$	$1.96421 + 11.27699I$
$u = -0.738136 - 0.285129I$ $a = 1.10600 + 1.37073I$ $b = -0.137444 - 0.241386I$	$0.28629 + 1.78365I$	$6.84779 - 6.86635I$
$u = -0.738136 + 0.285129I$ $a = 1.10600 - 1.37073I$ $b = -0.137444 + 0.241386I$	$0.28629 - 1.78365I$	$6.84779 + 6.86635I$
$u = -0.224406 - 0.979990I$ $a = 1.37565 - 0.97416I$ $b = -0.044238 - 0.736140I$	$-12.42406 + 5.72328I$	$-8.36068 - 4.92699I$
$u = -0.224406 + 0.979990I$ $a = 1.37565 + 0.97416I$ $b = -0.044238 + 0.736140I$	$-12.42406 - 5.72328I$	$-8.36068 + 4.92699I$
$u = -0.411578 + 0.796293I$ $a = -1.75580 - 0.46123I$ $b = 0.121160 - 0.596274I$	$-3.51553 - 4.24269I$	$-6.97656 + 8.05146I$
$u = -0.411578 - 0.796293I$ $a = -1.75580 + 0.46123I$ $b = 0.121160 + 0.596274I$	$-3.51553 + 4.24269I$	$-6.97656 - 8.05146I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.738136+0.285129I$ $a=-0.271948+0.221972I$ $b=\ \ 0.425547-1.327140I$	$0.28629-1.78365I$	$6.84779+6.86635I$
$u=-0.738136-0.285129I$ $a=-0.271948-0.221972I$ $b=\ \ 0.425547+1.327140I$	$0.28629+1.78365I$	$6.84779-6.86635I$
$u=-1.04957+1.25847I$ $a=-0.685609-0.267094I$ $b=\ \ 0.540203-0.893992I$	$-7.20594-5.75076I$	$-0.89404+7.30960I$
$u=-1.04957-1.25847I$ $a=-0.685609+0.267094I$ $b=\ \ 0.540203+0.893992I$	$-7.20594+5.75076I$	$-0.89404-7.30960I$
$u=\ \ 0.578057-0.369314I$ $a=-1.27658-2.30534I$ $b=\ \ 0.670229-0.595527I$	$-9.67769-7.32811I$	$-0.00586+9.90539I$
$u=\ \ 0.578057+0.369314I$ $a=-1.27658+2.30534I$ $b=\ \ 0.670229+0.595527I$	$-9.67769+7.32811I$	$-0.00586-9.90539I$
$u=-1.28782+0.69169I$ $a=-0.668063+0.315970I$ $b=\ \ 0.673312-0.166062I$	$-5.53623-2.54405I$	$2.47148+1.82962I$
$u=-1.28782-0.69169I$ $a=-0.668063-0.315970I$ $b=\ \ 0.673312+0.166062I$	$-5.53623+2.54405I$	$2.47148-1.82962I$
$u=-1.07839+0.92133I$ $a=-0.588525-0.067549I$ $b=\ \ 0.689942-0.857350I$	$0.95751-2.93464I$	$5.91453-1.99663I$
$u=-1.07839-0.92133I$ $a=-0.588525+0.067549I$ $b=\ \ 0.689942+0.857350I$	$0.95751+2.93464I$	$5.91453+1.99663I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.493766$ $a = -3.35445$ $b = 0.901861$	1.57116	17.6348
$u = -1.05045 + 1.11478I$ $a = -0.658382 + 0.094468I$ $b = 0.923375 - 0.589195I$	$0.35999 - 4.82230I$	$1.96421 + 11.27699I$
$u = -1.05045 - 1.11478I$ $a = -0.658382 - 0.094468I$ $b = 0.923375 + 0.589195I$	$0.35999 + 4.82230I$	$1.96421 - 11.27699I$
$u = -0.224406 + 0.979990I$ $a = -0.723567 + 0.120546I$ $b = 1.26338 - 1.12952I$	$-12.42406 - 5.72328I$	$-8.36068 + 4.92699I$
$u = -0.224406 - 0.979990I$ $a = -0.723567 - 0.120546I$ $b = 1.26338 + 1.12952I$	$-12.42406 + 5.72328I$	$-8.36068 - 4.92699I$
$u = 0.578057 + 0.369314I$ $a = -1.290780 - 0.205558I$ $b = 1.58933 - 0.86116I$	$-9.67769 + 7.32811I$	$-0.00586 - 9.90539I$
$u = 0.578057 - 0.369314I$ $a = -1.290780 + 0.205558I$ $b = 1.58933 + 0.86116I$	$-9.67769 - 7.32811I$	$-0.00586 + 9.90539I$
$u = 0.493766$ $a = -1.82649$ $b = 1.65632$	1.57116	17.6348

III. $\boldsymbol{I_3^u =}$
$\boldsymbol{\langle u^{31} - 18u^{30} + \cdots + 9u - 2,\ -6.44 \times 10^{16} u^{30} + 1.10 \times 10^{18} u^{29} + \cdots + 2.35 \times 10^{16} b - 1.68 \times 10^{17},\ 1.68 \times 10^{17} u^{30} - 2.89 \times 10^{18} u^{29} + \cdots + 4.70 \times 10^{16} a + 7.31 \times 10^{17} \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -3.56910u^{30} + 61.5027u^{29} + \cdots + 43.9285u - 15.5655 \\ 2.74102u^{30} - 46.9251u^{29} + \cdots - 16.5564u + 7.13819 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.171955u^{30} + 2.39812u^{29} + \cdots - 11.3254u + 0.525233 \\ 0.697078u^{30} - 11.5738u^{29} + \cdots - 1.07283u + 0.343911 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -2.50894u^{30} + 44.8099u^{29} + \cdots + 42.6341u - 14.9098 \\ 1.68086u^{30} - 30.2323u^{29} + \cdots - 15.2620u + 6.48251 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -3.56910u^{30} + 61.5027u^{29} + \cdots + 43.9285u - 15.5655 \\ 0.327843u^{30} - 4.84101u^{29} + \cdots + 0.974575u + 1.65616 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.525123u^{30} - 9.17573u^{29} + \cdots - 12.3983u + 0.869144 \\ -0.107032u^{30} + 1.84477u^{29} + \cdots + 3.41886u - 0.497279 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.418091u^{30} + 7.33096u^{29} + \cdots + 8.97941u - 0.371864 \\ -0.148337u^{30} + 2.80671u^{29} + \cdots - 1.00899u + 0.232754 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -3.56530u^{30} + 61.2844u^{29} + \cdots + 31.8555u - 10.6430 \\ 1.88808u^{30} - 31.5090u^{29} + \cdots - 5.97424u + 2.23883 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.266424u^{30} + 4.14984u^{29} + \cdots - 1.26350u - 1.41033 \\ -0.681484u^{30} + 11.5953u^{29} + \cdots + 6.62646u - 1.12571 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.266424u^{30} + 4.14984u^{29} + \cdots - 1.26350u - 1.41033 \\ -0.681484u^{30} + 11.5953u^{29} + \cdots + 6.62646u - 1.12571 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_3^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.820463-0.969056I$ $a=-0.317068-0.231913I$ $b=-0.035406-0.497532I$	$-6.26363+2.63858I$	$-0.212948-1.344148I$
$u=-0.820463+0.969056I$ $a=-0.317068+0.231913I$ $b=-0.035406+0.497532I$	$-6.26363-2.63858I$	$-0.212948+1.344148I$
$u=-0.601916-0.348059I$ $a=\ \ 0.329838+0.607739I$ $b=-0.012994+0.480611I$	$0.46001+1.35442I$	$4.73574-4.98058I$
$u=-0.601916+0.348059I$ $a=\ \ 0.329838-0.607739I$ $b=-0.012994-0.480611I$	$0.46001-1.35442I$	$4.73574+4.98058I$
$u=-0.274791-0.339138I$ $a=\ \ 1.78304+2.03553I$ $b=-0.200363+1.164044I$	$-10.59831+0.24605I$	$-5.82124+0.53648I$
$u=-0.274791+0.339138I$ $a=\ \ 1.78304-2.03553I$ $b=-0.200363-1.164044I$	$-10.59831-0.24605I$	$-5.82124-0.53648I$
$u=-0.118864-0.216184I$ $a=-3.51140-2.51887I$ $b=\ \ 0.127160-1.058510I$	$-2.68102+0.05226I$	$-6.06626+0.22401I$
$u=-0.118864+0.216184I$ $a=-3.51140+2.51887I$ $b=\ \ 0.127160+1.058510I$	$-2.68102-0.05226I$	$-6.06626-0.22401I$
$u=\ \ 0.468761$ $a=-2.26892$ $b=\ \ 1.06358$	1.65420	10.7786
$u=\ \ 0.584969-0.320915I$ $a=\ \ 1.97927-0.07859I$ $b=-1.132593+0.681149I$	$-2.27354-3.50893I$	$-5.54486-3.57796I$

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.584969 + 0.320915I$ $a = 1.97927 + 0.07859I$ $b = -1.132593 - 0.681149I$	$-2.27354 + 3.50893I$	$-5.54486 + 3.57796I$
$u = 0.597602 - 0.982772I$ $a = 0.464322 - 0.414291I$ $b = 0.129674 + 0.703904I$	$-1.59180 + 1.67665I$	$-1.00415 - 4.26501I$
$u = 0.597602 + 0.982772I$ $a = 0.464322 + 0.414291I$ $b = 0.129674 - 0.703904I$	$-1.59180 - 1.67665I$	$-1.00415 + 4.26501I$
$u = 0.635637 - 0.910703I$ $a = -1.301784 - 0.079393I$ $b = 0.89977 - 1.13507I$	$-13.53412 - 2.42013I$	$-5.54670 + 3.19451I$
$u = 0.635637 + 0.910703I$ $a = -1.301784 + 0.079393I$ $b = 0.89977 + 1.13507I$	$-13.53412 + 2.42013I$	$-5.54670 - 3.19451I$
$u = 0.85550 - 1.42895I$ $a = -0.266071 + 0.310360I$ $b = -0.215865 - 0.645716I$	$-3.65186 + 4.72376I$	$-6.73915 - 9.01491I$
$u = 0.85550 + 1.42895I$ $a = -0.266071 - 0.310360I$ $b = -0.215865 + 0.645716I$	$-3.65186 - 4.72376I$	$-6.73915 + 9.01491I$
$u = 0.883115 - 0.812609I$ $a = 1.258867 - 0.154721I$ $b = -0.98600 + 1.15960I$	$-3.95736 - 4.34211I$	$-3.34603 + 4.21375I$
$u = 0.883115 + 0.812609I$ $a = 1.258867 + 0.154721I$ $b = -0.98600 - 1.15960I$	$-3.95736 + 4.34211I$	$-3.34603 - 4.21375I$
$u = 1.066576 - 0.898291I$ $a = -1.092749 + 0.204381I$ $b = 0.98191 - 1.19959I$	$-0.50248 - 8.50614I$	$2.27465 + 6.40928I$

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.066576 + 0.898291I$ $a = -1.092749 - 0.204381I$ $b = 0.98191 + 1.19959I$	$-0.50248 + 8.50614I$	$2.27465 - 6.40928I$
$u = 1.08814 - 1.67666I$ $a = 0.186230 - 0.277331I$ $b = 0.262346 + 0.614020I$	$-11.79763 + 6.65579I$	$-8.98349 - 7.87798I$
$u = 1.08814 + 1.67666I$ $a = 0.186230 + 0.277331I$ $b = 0.262346 - 0.614020I$	$-11.79763 - 6.65579I$	$-8.98349 + 7.87798I$
$u = 1.103349 - 0.495344I$ $a = -0.153264 + 0.743170I$ $b = -0.199021 - 0.895895I$	$-3.38752 - 1.12904I$	$-5.86333 + 1.96216I$
$u = 1.103349 + 0.495344I$ $a = -0.153264 - 0.743170I$ $b = -0.199021 + 0.895895I$	$-3.38752 + 1.12904I$	$-5.86333 - 1.96216I$
$u = 1.13497 - 1.01283I$ $a = 1.007238 - 0.164519I$ $b = -0.97655 + 1.20688I$	$-2.69978 - 12.95637I$	$-0.23261 + 9.43614I$
$u = 1.13497 + 1.01283I$ $a = 1.007238 + 0.164519I$ $b = -0.97655 - 1.20688I$	$-2.69978 + 12.95637I$	$-0.23261 - 9.43614I$
$u = 1.16837 - 1.10955I$ $a = -0.958125 + 0.127302I$ $b = 0.97820 - 1.21183I$	$-11.1484 - 15.7970I$	$-2.20815 + 7.99406I$
$u = 1.16837 + 1.10955I$ $a = -0.958125 - 0.127302I$ $b = 0.97820 + 1.21183I$	$-11.1484 + 15.7970I$	$-2.20815 - 7.99406I$
$u = 1.46342 - 0.49107I$ $a = -0.023890 - 0.637373I$ $b = 0.347953 + 0.921012I$	$-11.09130 - 3.32383I$	$-6.33079 + 0.18698I$
$u = 1.46342 + 0.49107I$ $a = -0.023890 + 0.637373I$ $b = 0.347953 - 0.921012I$	$-11.09130 + 3.32383I$	$-6.33079 - 0.18698I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_8	$(u^{11}+u^{10}-2u^9-3u^8+2u^7+3u^6-2u^5-3u^4+u^3+2u^2-1)$ $(u^{31}+u^{30}+\cdots+u+1)(u^{38}+3u^{37}+\cdots-u+2)$
c_2, c_9	$(u^{11}-2u^9-u^8+3u^7+2u^6-3u^5-2u^4+3u^3+2u^2-u-1)$ $(u^{31}-u^{29}+\cdots-u+2)(u^{38}+u^{37}+\cdots+20u+1)$
c_3, c_5	$(u^{11}+4u^{10}+\cdots+5u+1)(u^{31}+4u^{30}+\cdots+18u-1)$ $(u^{38}-u^{37}+\cdots-35u-44)$
c_4	$(u^{11}-7u^{10}+\cdots+7u-1)$ $(1-5u^2+5u^3+10u^4-24u^5+4u^6+48u^7-65u^8+4u^9+79u^{10}-71u^{11}-57u^{12}+208u^{13}$ $(u^{31}+18u^{30}+\cdots+9u+2)$
c_6, c_7	$(u^{11}+2u^{10}+\cdots+2u+1)$ $(1+2u+7u^2+21u^3+54u^4+110u^5+212u^6+346u^7+503u^8+626u^9+659u^{10}+615u^{11}+$ $(u^{31}-5u^{30}+\cdots-29u+4)$
c_{10}, c_{11}	$(u^{11}-2u^{10}+\cdots+2u-1)$ $(1+2u+7u^2+21u^3+54u^4+110u^5+212u^6+346u^7+503u^8+626u^9+659u^{10}+615u^{11}+$ $(u^{31}-5u^{30}+\cdots-29u+4)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_8	$(y^{11} - 5y^{10} + \cdots + 4y - 1)(y^{31} + 13y^{30} + \cdots - 33y - 1)$ $(y^{38} - 9y^{37} + \cdots + 59y + 4)$
c_2, c_9	$(y^{11} - 4y^{10} + \cdots + 5y - 1)(y^{31} - 2y^{30} + \cdots + 77y - 4)$ $(y^{38} - 5y^{37} + \cdots - 114y + 1)$
c_3, c_5	$(y^{11} + 4y^{10} + \cdots - 3y - 1)(y^{31} - 26y^{30} + \cdots + 92y - 1)$ $(y^{38} + 3y^{37} + \cdots - 35633y + 1936)$
c_4	$(y^{11} + y^{10} + \cdots + 3y - 1)$ $(-1 + 10y - 45y^2 + 117y^3 - 170y^4 + 168y^5 - 76y^6 + 300y^7 - 263y^8 + 210y^9 + 407y^{10} + 517$ $(y^{31} + 36y^{29} + \cdots - 43y - 4)$
c_6, c_7, c_{10} c_{11}	$(y^{11} + 14y^{10} + \cdots - 18y - 1)$ $(-1 - 10y - 73y^2 - 299y^3 - 886y^4 - 2120y^5 - 4564y^6 - 6796y^7 - 2931y^8 + 1.27 \times 10^4 y^9 + 3$ $(y^{31} + 37y^{30} + \cdots - 39y - 16)$