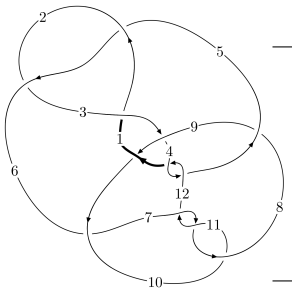
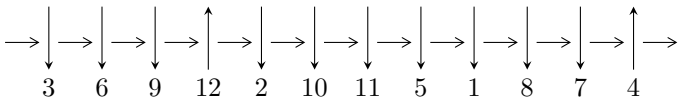
$12a_{0410}$ $(K12a_{0410})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 4.25183 \times 10^{585} u^{103} - 3.49672 \times 10^{585} u^{102} + \cdots + 8.74093 \times 10^{585} b + 3.71015 \times 10^{586},$$
$$6.16669 \times 10^{587} u^{103} - 4.95476 \times 10^{587} u^{102} + \cdots + 8.74093 \times 10^{585} a + 3.40901 \times 10^{588},\ u^{104} - u^{103} + \cdots +$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 104 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. $\boldsymbol{I_1^u = \langle 4.25 \times 10^{585} u^{103} - 3.50 \times 10^{585} u^{102} + \cdots + 8.74 \times 10^{585} b + 3.71 \times 10^{586},\ 6.17 \times 10^{587} u^{103} - 4.95 \times 10^{587} u^{102} + \cdots + 8.74 \times 10^{585} a + 3.41 \times 10^{588},\ u^{104} - u^{103} + \cdots + 4u - 1 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -70.5495u^{103} + 56.6846u^{102} + \cdots - 557.720u - 390.005 \\ -0.486427u^{103} + 0.400040u^{102} + \cdots - 5.53020u - 4.24457 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -102.717u^{103} + 81.0025u^{102} + \cdots - 543.733u - 496.837 \\ -1.37667u^{103} + 1.15211u^{102} + \cdots - 9.54433u - 8.96963 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -104.094u^{103} + 82.1546u^{102} + \cdots - 553.277u - 505.807 \\ -1.37667u^{103} + 1.15211u^{102} + \cdots - 9.54433u - 8.96963 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -323.391u^{103} + 228.074u^{102} + \cdots + 978.592u - 1309.82 \\ -15.2283u^{103} + 12.0817u^{102} + \cdots + 0.583226u - 70.8551 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 203.528u^{103} - 157.623u^{102} + \cdots - 787.570u + 388.116 \\ 9.83386u^{103} - 7.22442u^{102} + \cdots + 26.3806u + 44.1586 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 24.0836u^{103} - 18.0365u^{102} + \cdots - 147.484u + 38.3478 \\ 2.09265u^{103} - 1.51733u^{102} + \cdots + 0.457127u + 8.25296 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -250.120u^{103} + 167.113u^{102} + \cdots + 1343.51u - 959.073 \\ -14.4955u^{103} + 11.4521u^{102} + \cdots + 12.7671u - 66.7521 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -106.712u^{103} + 84.1220u^{102} + \cdots - 560.070u - 518.776 \\ -1.53073u^{103} + 1.27128u^{102} + \cdots - 9.55960u - 9.62036 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -195.042u^{103} + 137.460u^{102} + \cdots - 980.891u - 659.152 \\ -5.95727u^{103} + 4.33298u^{102} + \cdots + 14.3247u - 39.1433 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 8.88084u^{103} - 5.44978u^{102} + \cdots - 468.605u - 98.2415$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{104} + 43u^{103} + \cdots + 20u + 1$
c_2, c_5	$u^{104} + 7u^{103} + \cdots + 6u + 1$
c_3	$u^{104} - u^{103} + \cdots + 4u - 1$
c_4, c_{12}	$u^{104} + 7u^{103} + \cdots + 6u + 1$
c_6	$u^{104} + u^{103} + \cdots - 159742u - 10001$
c_7, c_{10}, c_{11}	$u^{104} - u^{103} + \cdots - 16u - 1$
c_8	$u^{104} + 5u^{103} + \cdots + 1611520u - 285184$
c_9	$u^{104} + 7u^{103} + \cdots + 14816u + 928$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{104} + 37y^{103} + \cdots - 404y + 1$
c_2, c_5	$y^{104} - 43y^{103} + \cdots - 20y + 1$
c_3	$y^{104} - 7y^{103} + \cdots - 84y + 1$
c_4, c_{12}	$y^{104} + 73y^{103} + \cdots - 20y + 1$
c_6	$y^{104} - 35y^{103} + \cdots - 15905585468y + 100020001$
c_7, c_{10}, c_{11}	$y^{104} + 89y^{103} + \cdots - 156y + 1$
c_8	$y^{104} - 199y^{103} + \cdots - 3752188116992y + 81329913856$
c_9	$y^{104} + 145y^{103} + \cdots - 51493888y + 861184$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.563363 + 0.821946I$ $a = 0.444185 - 0.891149I$ $b = -0.454391 + 0.989162I$	$6.57214 - 6.48719I$	0
$u = 0.563363 - 0.821946I$ $a = 0.444185 + 0.891149I$ $b = -0.454391 - 0.989162I$	$6.57214 + 6.48719I$	0
$u = -0.621126 + 0.769884I$ $a = -0.56396 - 1.81731I$ $b = -1.029360 + 0.485493I$	$1.01084 + 5.03860I$	0
$u = -0.621126 - 0.769884I$ $a = -0.56396 + 1.81731I$ $b = -1.029360 - 0.485493I$	$1.01084 - 5.03860I$	0
$u = 0.388922 + 0.904890I$ $a = 0.596870 - 0.870016I$ $b = -0.542166 + 0.717661I$	$2.80919 + 0.07810I$	0
$u = 0.388922 - 0.904890I$ $a = 0.596870 + 0.870016I$ $b = -0.542166 - 0.717661I$	$2.80919 - 0.07810I$	0
$u = 0.970515 + 0.147136I$ $a = 0.875999 - 0.444927I$ $b = 0.674437 + 0.541246I$	$4.46398 + 2.11638I$	0
$u = 0.970515 - 0.147136I$ $a = 0.875999 + 0.444927I$ $b = 0.674437 - 0.541246I$	$4.46398 - 2.11638I$	0
$u = -0.505334 + 0.804558I$ $a = 0.453957 + 0.831515I$ $b = -0.399937 - 0.890019I$	$1.50309 + 3.13338I$	0
$u = -0.505334 - 0.804558I$ $a = 0.453957 - 0.831515I$ $b = -0.399937 + 0.890019I$	$1.50309 - 3.13338I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.825078 + 0.437544I$ $a = 0.366274 - 0.209695I$ $b = 0.946141 - 0.486683I$	$-1.62694 + 3.28109I$	0
$u = 0.825078 - 0.437544I$ $a = 0.366274 + 0.209695I$ $b = 0.946141 + 0.486683I$	$-1.62694 - 3.28109I$	0
$u = -0.960850 + 0.560302I$ $a = 0.0740763 + 0.0415182I$ $b = 0.959373 + 0.560649I$	$3.58609 - 6.59895I$	0
$u = -0.960850 - 0.560302I$ $a = 0.0740763 - 0.0415182I$ $b = 0.959373 - 0.560649I$	$3.58609 + 6.59895I$	0
$u = -0.808529 + 0.272807I$ $a = -0.32342 - 2.08395I$ $b = -0.530241 - 0.185700I$	$1.61075 - 4.42335I$	0
$u = -0.808529 - 0.272807I$ $a = -0.32342 + 2.08395I$ $b = -0.530241 + 0.185700I$	$1.61075 + 4.42335I$	0
$u = -0.717693 + 0.898837I$ $a = -0.28560 - 1.56028I$ $b = -1.060130 + 0.592917I$	$1.24152 + 4.96360I$	0
$u = -0.717693 - 0.898837I$ $a = -0.28560 + 1.56028I$ $b = -1.060130 - 0.592917I$	$1.24152 - 4.96360I$	0
$u = -0.520163 + 1.029420I$ $a = 0.516539 + 0.934515I$ $b = -0.693321 - 0.824652I$	$8.89831 - 1.49693I$	0
$u = -0.520163 - 1.029420I$ $a = 0.516539 - 0.934515I$ $b = -0.693321 + 0.824652I$	$8.89831 + 1.49693I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.241022 + 0.772602I$ $a = 0.79562 + 2.59697I$ $b = -0.901827 - 0.433942I$	$-2.08746 - 1.73740I$	0
$u = 0.241022 - 0.772602I$ $a = 0.79562 - 2.59697I$ $b = -0.901827 + 0.433942I$	$-2.08746 + 1.73740I$	0
$u = 0.803988 + 0.896157I$ $a = -0.25183 + 1.43561I$ $b = -1.138880 - 0.645059I$	$-0.70178 - 8.77355I$	0
$u = 0.803988 - 0.896157I$ $a = -0.25183 - 1.43561I$ $b = -1.138880 + 0.645059I$	$-0.70178 + 8.77355I$	0
$u = 0.497385 + 0.621008I$ $a = 0.078179 - 0.664644I$ $b = 0.056824 + 0.865095I$	$4.05431 - 1.11668I$	0
$u = 0.497385 - 0.621008I$ $a = 0.078179 + 0.664644I$ $b = 0.056824 - 0.865095I$	$4.05431 + 1.11668I$	0
$u = -0.791300 + 0.046534I$ $a = 0.815917 - 0.154042I$ $b = 0.796187 + 0.354222I$	$-0.902576 - 0.388396I$	0
$u = -0.791300 - 0.046534I$ $a = 0.815917 + 0.154042I$ $b = 0.796187 - 0.354222I$	$-0.902576 + 0.388396I$	0
$u = -0.508719 + 0.607540I$ $a = 0.182981 + 1.047660I$ $b = 0.986634 + 0.373347I$	$1.059970 - 0.844026I$	0
$u = -0.508719 - 0.607540I$ $a = 0.182981 - 1.047660I$ $b = 0.986634 - 0.373347I$	$1.059970 + 0.844026I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.928727 + 0.802627I$ $a = -0.196145 + 1.138220I$ $b = -0.135690 - 0.300460I$	$-3.72257 + 0.98676I$	0
$u = 0.928727 - 0.802627I$ $a = -0.196145 - 1.138220I$ $b = -0.135690 + 0.300460I$	$-3.72257 - 0.98676I$	0
$u = -0.075525 + 0.763689I$ $a = 1.75244 - 1.84311I$ $b = -0.840944 + 0.347075I$	$2.01306 - 1.82511I$	0
$u = -0.075525 - 0.763689I$ $a = 1.75244 + 1.84311I$ $b = -0.840944 - 0.347075I$	$2.01306 + 1.82511I$	0
$u = -0.830605 + 0.911793I$ $a = -0.21117 - 1.42184I$ $b = -1.156170 + 0.688727I$	$4.41171 + 12.55190I$	0
$u = -0.830605 - 0.911793I$ $a = -0.21117 + 1.42184I$ $b = -1.156170 - 0.688727I$	$4.41171 - 12.55190I$	0
$u = -0.548337 + 0.469959I$ $a = -0.328853 + 1.044760I$ $b = 0.515000 - 1.053110I$	$2.07251 + 7.18772I$	$-6.8037 - 12.4590I$
$u = -0.548337 - 0.469959I$ $a = -0.328853 - 1.044760I$ $b = 0.515000 + 1.053110I$	$2.07251 - 7.18772I$	$-6.8037 + 12.4590I$
$u = 1.108980 + 0.641111I$ $a = -0.333073 + 0.138039I$ $b = -1.285360 - 0.021076I$	$-4.80953 - 10.09280I$	0
$u = 1.108980 - 0.641111I$ $a = -0.333073 - 0.138039I$ $b = -1.285360 + 0.021076I$	$-4.80953 + 10.09280I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.773737 + 1.036650I$ $a = -0.14378 + 1.50023I$ $b = -0.982973 - 0.702090I$	$7.99891 - 4.19713I$	0
$u = 0.773737 - 1.036650I$ $a = -0.14378 - 1.50023I$ $b = -0.982973 + 0.702090I$	$7.99891 + 4.19713I$	0
$u = -1.154320 + 0.625941I$ $a = -0.329904 - 0.003143I$ $b = -1.250860 - 0.033111I$	$-9.49573 + 5.97236I$	0
$u = -1.154320 - 0.625941I$ $a = -0.329904 + 0.003143I$ $b = -1.250860 + 0.033111I$	$-9.49573 - 5.97236I$	0
$u = 0.679111$ $a = 0.284649$ $b = 1.33147$	-4.78114	-21.9600
$u = -0.678215 + 0.013252I$ $a = 0.237565 + 0.197940I$ $b = 1.364900 - 0.142720I$	$-0.85837 + 3.39314I$	$-16.6981 - 3.5212I$
$u = -0.678215 - 0.013252I$ $a = 0.237565 - 0.197940I$ $b = 1.364900 + 0.142720I$	$-0.85837 - 3.39314I$	$-16.6981 + 3.5212I$
$u = 0.514461 + 0.432962I$ $a = -0.475888 - 1.078040I$ $b = 0.607901 + 0.957836I$	$-2.47422 - 3.90065I$	$-12.9937 + 12.0198I$
$u = 0.514461 - 0.432962I$ $a = -0.475888 + 1.078040I$ $b = 0.607901 - 0.957836I$	$-2.47422 + 3.90065I$	$-12.9937 - 12.0198I$
$u = -0.363724 + 0.562108I$ $a = -0.699635 + 0.105819I$ $b = 0.448049 - 0.543530I$	$-0.67399 + 1.89363I$	$-4.47866 - 2.55693I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.363724-0.562108I$ $a=-0.699635-0.105819I$ $b=\ \ 0.448049+0.543530I$	$-0.67399-1.89363I$	$-4.47866+2.55693I$
$u=\ \ 0.546846+0.348271I$ $a=\ \ 1.136730+0.190671I$ $b=\ \ 0.104676+0.374668I$	$3.28029-2.14163I$	$-5.02286+4.41654I$
$u=\ \ 0.546846-0.348271I$ $a=\ \ 1.136730-0.190671I$ $b=\ \ 0.104676-0.374668I$	$3.28029+2.14163I$	$-5.02286-4.41654I$
$u=-0.528143+0.344252I$ $a=-0.479136+1.328600I$ $b=\ \ 0.815535-0.943051I$	$0.934910+1.041190I$	$-10.52989-8.15027I$
$u=-0.528143-0.344252I$ $a=-0.479136-1.328600I$ $b=\ \ 0.815535+0.943051I$	$0.934910-1.041190I$	$-10.52989+8.15027I$
$u=\ \ 1.233470+0.601611I$ $a=-0.324632-0.186405I$ $b=-1.191290+0.103160I$	$-6.60481-1.68850I$	0
$u=\ \ 1.233470-0.601611I$ $a=-0.324632+0.186405I$ $b=-1.191290-0.103160I$	$-6.60481+1.68850I$	0
$u=\ \ 0.616964+0.103413I$ $a=\ \ 0.161187-1.006650I$ $b=\ \ 1.275880+0.605464I$	$-0.589345+0.680571I$	$-17.4751+1.3227I$
$u=\ \ 0.616964-0.103413I$ $a=\ \ 0.161187+1.006650I$ $b=\ \ 1.275880-0.605464I$	$-0.589345-0.680571I$	$-17.4751-1.3227I$
$u=-0.868038+1.069790I$ $a=-0.299836-0.985915I$ $b=\ \ 0.294814+0.475607I$	$-1.45640+3.06534I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.868038-1.069790I$ $a=-0.299836+0.985915I$ $b=\ \ 0.294814-0.475607I$	$-1.45640-3.06534I$	0
$u=\ \ 0.591931+0.186775I$ $a=-0.090390-1.313950I$ $b=\ \ 1.17202+0.80496I$	$-0.19970-5.86738I$	$-15.9124+10.3490I$
$u=\ \ 0.591931-0.186775I$ $a=-0.090390+1.313950I$ $b=\ \ 1.17202-0.80496I$	$-0.19970+5.86738I$	$-15.9124-10.3490I$
$u=-0.588394+0.142921I$ $a=\ \ 0.082609+1.246190I$ $b=\ \ 1.196880-0.701859I$	$-4.36091+2.54856I$	$-22.8255-6.6552I$
$u=-0.588394-0.142921I$ $a=\ \ 0.082609-1.246190I$ $b=\ \ 1.196880+0.701859I$	$-4.36091-2.54856I$	$-22.8255+6.6552I$
$u=-1.04004+1.03217I$ $a=-0.551356-0.879784I$ $b=\ \ 0.490615+0.933211I$	$1.92360+12.58100I$	0
$u=-1.04004-1.03217I$ $a=-0.551356+0.879784I$ $b=\ \ 0.490615-0.933211I$	$1.92360-12.58100I$	0
$u=\ \ 1.03517+1.04171I$ $a=-0.515586+0.900439I$ $b=\ \ 0.456752-0.891030I$	$-3.29144-8.47835I$	0
$u=\ \ 1.03517-1.04171I$ $a=-0.515586-0.900439I$ $b=\ \ 0.456752+0.891030I$	$-3.29144+8.47835I$	0
$u=-1.02615+1.06514I$ $a=-0.447832-0.911579I$ $b=\ \ 0.434256+0.795553I$	$-1.21263+4.04668I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.02615-1.06514I$ $a=-0.447832+0.911579I$ $b=\ \ 0.434256-0.795553I$	$-1.21263-4.04668I$	0
$u=-0.459257$ $a=\ \ 1.01669$ $b=\ \ 0.220418$	-0.783430	-12.3850
$u=\ \ 1.13472+1.07528I$ $a=-0.374927+0.755335I$ $b=\ \ 0.642091-0.737555I$	$6.67772-3.43727I$	0
$u=\ \ 1.13472-1.07528I$ $a=-0.374927-0.755335I$ $b=\ \ 0.642091+0.737555I$	$6.67772+3.43727I$	0
$u=-1.27994+0.93580I$ $a=-0.228492-1.201280I$ $b=-0.534879+0.497663I$	$1.69291-4.76934I$	0
$u=-1.27994-0.93580I$ $a=-0.228492+1.201280I$ $b=-0.534879-0.497663I$	$1.69291+4.76934I$	0
$u=\ \ 1.18881+1.11014I$ $a=\ \ 0.22480-1.52647I$ $b=\ \ 1.132280+0.683492I$	$-0.0478-18.5019I$	0
$u=\ \ 1.18881-1.11014I$ $a=\ \ 0.22480+1.52647I$ $b=\ \ 1.132280-0.683492I$	$-0.0478+18.5019I$	0
$u=-0.193816+0.301765I$ $a=-4.2506-14.1470I$ $b=-0.911434+0.459625I$	$1.36741+4.74474I$	$4.6304-28.6080I$
$u=-0.193816-0.301765I$ $a=-4.2506+14.1470I$ $b=-0.911434-0.459625I$	$1.36741-4.74474I$	$4.6304+28.6080I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.12086 + 1.64891I$ $a = -0.237789 - 1.104930I$ $b = 0.876849 + 0.233377I$	$-1.58816 + 3.67691I$	0
$u = 0.12086 - 1.64891I$ $a = -0.237789 + 1.104930I$ $b = 0.876849 - 0.233377I$	$-1.58816 - 3.67691I$	0
$u = -1.20612 + 1.14721I$ $a = 0.19311 + 1.49297I$ $b = 1.126050 - 0.656619I$	$-5.3218 + 14.1793I$	0
$u = -1.20612 - 1.14721I$ $a = 0.19311 - 1.49297I$ $b = 1.126050 + 0.656619I$	$-5.3218 - 14.1793I$	0
$u = 0.318133 + 0.043089I$ $a = 2.36401 - 4.12070I$ $b = 0.918651 + 0.537939I$	$-1.80006 - 2.05759I$	$-8.77434 + 2.54557I$
$u = 0.318133 - 0.043089I$ $a = 2.36401 + 4.12070I$ $b = 0.918651 - 0.537939I$	$-1.80006 + 2.05759I$	$-8.77434 - 2.54557I$
$u = 1.25730 + 1.20177I$ $a = 0.16715 - 1.42834I$ $b = 1.100520 + 0.623230I$	$-3.17569 - 9.37700I$	0
$u = 1.25730 - 1.20177I$ $a = 0.16715 + 1.42834I$ $b = 1.100520 - 0.623230I$	$-3.17569 + 9.37700I$	0
$u = -0.172426 + 0.188300I$ $a = 23.8746 - 18.6316I$ $b = -0.847748 - 0.537795I$	$1.38082 + 0.72027I$	$-1.7376 - 54.7659I$
$u = -0.172426 - 0.188300I$ $a = 23.8746 + 18.6316I$ $b = -0.847748 + 0.537795I$	$1.38082 - 0.72027I$	$-1.7376 + 54.7659I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.203979 + 0.019491I$ $a = -24.7660 + 37.7640I$ $b = -0.843694 + 0.490511I$	$-2.71693 + 2.03390I$	$-94.2346 + 14.3841I$
$u = 0.203979 - 0.019491I$ $a = -24.7660 - 37.7640I$ $b = -0.843694 - 0.490511I$	$-2.71693 - 2.03390I$	$-94.2346 - 14.3841I$
$u = -1.48989 + 1.04196I$ $a = 0.292330 + 1.277470I$ $b = 0.996033 - 0.647512I$	$5.60690 + 8.72189I$	0
$u = -1.48989 - 1.04196I$ $a = 0.292330 - 1.277470I$ $b = 0.996033 + 0.647512I$	$5.60690 - 8.72189I$	0
$u = 1.88590 + 0.28154I$ $a = -0.246019 - 0.815284I$ $b = -0.912559 + 0.304758I$	$-4.50986 - 1.24814I$	0
$u = 1.88590 - 0.28154I$ $a = -0.246019 + 0.815284I$ $b = -0.912559 - 0.304758I$	$-4.50986 + 1.24814I$	0
$u = 1.46046 + 1.60505I$ $a = 0.155240 - 0.823314I$ $b = -0.998169 + 0.552449I$	$0.38251 + 9.17605I$	0
$u = 1.46046 - 1.60505I$ $a = 0.155240 + 0.823314I$ $b = -0.998169 - 0.552449I$	$0.38251 - 9.17605I$	0
$u = 1.43763 + 1.70063I$ $a = 0.040194 - 1.224600I$ $b = 1.007560 + 0.505269I$	$-3.17734 - 7.04580I$	0
$u = 1.43763 - 1.70063I$ $a = 0.040194 + 1.224600I$ $b = 1.007560 - 0.505269I$	$-3.17734 + 7.04580I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.76981+2.17891I$ $a=-0.095447+1.148870I$ $b=\ \ 0.952498-0.398631I$	$-5.87156+1.43086I$	0
$u=-0.76981-2.17891I$ $a=-0.095447-1.148870I$ $b=\ \ 0.952498+0.398631I$	$-5.87156-1.43086I$	0
$u=-2.01108+1.27353I$ $a=\ \ 0.018017+0.800933I$ $b=-0.983353-0.460952I$	$-5.42846-4.28254I$	0
$u=-2.01108-1.27353I$ $a=\ \ 0.018017-0.800933I$ $b=-0.983353+0.460952I$	$-5.42846+4.28254I$	0

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{104} + 43u^{103} + \cdots + 20u + 1$
c_2, c_5	$u^{104} + 7u^{103} + \cdots + 6u + 1$
c_3	$u^{104} - u^{103} + \cdots + 4u - 1$
c_4, c_{12}	$u^{104} + 7u^{103} + \cdots + 6u + 1$
c_6	$u^{104} + u^{103} + \cdots - 159742u - 10001$
c_7, c_{10}, c_{11}	$u^{104} - u^{103} + \cdots - 16u - 1$
c_8	$u^{104} + 5u^{103} + \cdots + 1611520u - 285184$
c_9	$u^{104} + 7u^{103} + \cdots + 14816u + 928$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{104}+37y^{103}+\cdots-404y+1$
c_2, c_5	$y^{104}-43y^{103}+\cdots-20y+1$
c_3	$y^{104}-7y^{103}+\cdots-84y+1$
c_4, c_{12}	$y^{104}+73y^{103}+\cdots-20y+1$
c_6	$y^{104}-35y^{103}+\cdots-15905585468y+100020001$
c_7, c_{10}, c_{11}	$y^{104}+89y^{103}+\cdots-156y+1$
c_8	$y^{104}-199y^{103}+\cdots-3752188116992y+81329913856$
c_9	$y^{104}+145y^{103}+\cdots-51493888y+861184$