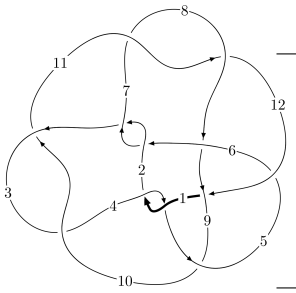
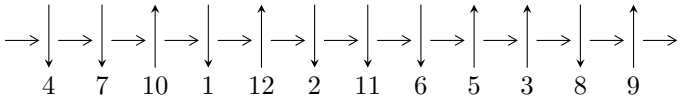
$12a_{1093}$ $(K12a_{1093})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle 2.41694 \times 10^{695} u^{134} + 4.64040 \times 10^{695} u^{133} + \cdots + 5.96213 \times 10^{699} b - 1.44042 \times 10^{700}, \\
&\quad - 1.38922 \times 10^{698} u^{134} - 1.25918 \times 10^{698} u^{133} + \cdots + 3.78595 \times 10^{701} a + 4.01348 \times 10^{701}, \\
&\quad u^{135} + u^{134} + \cdots - 29624u + 4064 \rangle \\
I_2^u &= \langle -8.63325 \times 10^{19} u^{27} - 6.49290 \times 10^{20} u^{26} + \cdots + 3.25555 \times 10^{19} b + 1.08679 \times 10^{21}, \\
&\quad 2.39039 \times 10^{20} u^{27} + 1.89818 \times 10^{21} u^{26} + \cdots + 6.51111 \times 10^{19} a - 4.16427 \times 10^{21},\ u^{28} + 8u^{27} + \cdots - 8u + 8 \rangle \\
I_3^u &= \langle -4a^3 + 4a^2 + 3b - 3a + 1,\ 4a^4 + 5a^2 + 2a + 2,\ u - 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 167 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. $\boldsymbol{I_1^u = \langle 2.42 \times 10^{695} u^{134} + 4.64 \times 10^{695} u^{133} + \cdots + 5.96 \times 10^{699} b - 1.44 \times 10^{700},\ -1.39 \times 10^{698} u^{134} - 1.26 \times 10^{698} u^{133} + \cdots + 3.79 \times 10^{701} a + 4.01 \times 10^{701},\ u^{135} + u^{134} + \cdots - 29624u + 4064 \rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.000366942u^{134} + 0.000332594u^{133} + \cdots + 67.1416u - 1.06010 \\ -0.0000405383u^{134} - 0.0000778313u^{133} + \cdots - 19.1811u + 2.41594 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 0.000326403u^{134} + 0.000254762u^{133} + \cdots + 47.9605u + 1.35585 \\ -0.0000405383u^{134} - 0.0000778313u^{133} + \cdots - 19.1811u + 2.41594 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.000256986u^{134} - 0.000372603u^{133} + \cdots + 73.1449u - 10.7816 \\ 0.0000667386u^{134} - 5.85205 \times 10^{-7} u^{133} + \cdots + 24.5301u - 1.64608 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.000634464u^{134} - 0.000889132u^{133} + \cdots - 14.6902u - 1.26794 \\ -0.0000357046u^{134} - 0.0000865215u^{133} + \cdots + 13.6147u - 1.72538 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.000272618u^{134} - 0.000395365u^{133} + \cdots + 75.5210u - 11.1880 \\ 0.0000860364u^{134} + 0.0000347660u^{133} + \cdots + 22.0063u - 1.21078 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.0000129880u^{134} - 0.000201145u^{133} + \cdots - 28.4490u + 8.78419 \\ -0.0000482932u^{134} - 0.0000371033u^{133} + \cdots - 18.7256u + 1.31562 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.000237685u^{134} - 0.000772866u^{133} + \cdots - 36.2106u + 10.8885 \\ -0.0000422265u^{134} - 0.0000873001u^{133} + \cdots - 19.4457u + 1.18457 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.000761097u^{134} - 0.00188751u^{133} + \cdots - 32.2015u + 9.78192 \\ -0.000255375u^{134} - 0.000516647u^{133} + \cdots - 21.9195u + 3.00457 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.000378821u^{134} + 0.000233338u^{133} + \cdots + 121.501u - 5.44603$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{135} - 9u^{134} + \cdots + 167083u + 63886$
c_2, c_6	$u^{135} - u^{134} + \cdots + 144633u + 4946$
c_3, c_{10}	$4(4u^{135} + 36u^{134} + \cdots + 2779214u + 127574)$
c_5	$u^{135} - 3u^{134} + \cdots + 45913u + 3188$
c_7, c_{11}	$u^{135} - u^{134} + \cdots - 29624u - 4064$
c_8	$4(4u^{135} - 56u^{134} + \cdots + 23579u - 1798)$
c_9	$u^{135} - 3u^{134} + \cdots + 48u + 16$
c_{12}	$4(4u^{135} + 8u^{134} + \cdots - 21656u - 7442)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{135} + 83y^{134} + \cdots - 6695683735y - 4081420996$
c_2, c_6	$y^{135} - 93y^{134} + \cdots - 1498427007y - 24462916$
c_3, c_{10}	$16(16y^{135} + 1560y^{134} + \cdots + 6.92965 \times 10^{11}y - 1.62751 \times 10^{10})$
c_5	$y^{135} + 23y^{134} + \cdots - 394825095y - 10163344$
c_7, c_{11}	$y^{135} - 119y^{134} + \cdots - 1894424256y - 16516096$
c_8	$16(16y^{135} - 568y^{134} + \cdots + 1426485y - 3232804)$
c_9	$y^{135} - 11y^{134} + \cdots - 9664y - 256$
c_{12}	$16(16y^{135} - 248y^{134} + \cdots + 3.86816 \times 10^{9}y - 5.53834 \times 10^{7})$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.042300 + 0.173887I$ $a = 0.346749 + 0.407337I$ $b = -0.307688 + 0.981724I$	$1.69401 + 1.01081I$	0
$u = 1.042300 - 0.173887I$ $a = 0.346749 - 0.407337I$ $b = -0.307688 - 0.981724I$	$1.69401 - 1.01081I$	0
$u = 0.375168 + 0.842996I$ $a = -1.168620 - 0.783699I$ $b = 1.266540 + 0.437731I$	$-0.31064 - 4.93968I$	0
$u = 0.375168 - 0.842996I$ $a = -1.168620 + 0.783699I$ $b = 1.266540 - 0.437731I$	$-0.31064 + 4.93968I$	0
$u = 1.022720 + 0.353185I$ $a = -0.572973 - 0.159218I$ $b = 0.0470834 - 0.0646180I$	$-1.88121 - 1.43775I$	0
$u = 1.022720 - 0.353185I$ $a = -0.572973 + 0.159218I$ $b = 0.0470834 + 0.0646180I$	$-1.88121 + 1.43775I$	0
$u = 0.354628 + 0.844423I$ $a = 1.000250 + 0.197229I$ $b = -1.235060 - 0.186530I$	$-1.62494 - 3.37205I$	0
$u = 0.354628 - 0.844423I$ $a = 1.000250 - 0.197229I$ $b = -1.235060 + 0.186530I$	$-1.62494 + 3.37205I$	0
$u = 0.196400 + 0.873449I$ $a = 0.010733 + 0.241199I$ $b = -0.929415 - 0.243228I$	$-1.17539 - 3.86755I$	0
$u = 0.196400 - 0.873449I$ $a = 0.010733 - 0.241199I$ $b = -0.929415 + 0.243228I$	$-1.17539 + 3.86755I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.801867+0.367668I$ $a=\ \ 0.412833+0.031474I$ $b=-0.442433-0.840044I$	$3.52686+1.14515I$	0
$u=-0.801867-0.367668I$ $a=\ \ 0.412833-0.031474I$ $b=-0.442433+0.840044I$	$3.52686-1.14515I$	0
$u=\ \ 1.111190+0.197400I$ $a=\ \ 0.480641-0.738811I$ $b=\ \ 0.182267+0.083453I$	$-0.360365+0.099354I$	0
$u=\ \ 1.111190-0.197400I$ $a=\ \ 0.480641+0.738811I$ $b=\ \ 0.182267-0.083453I$	$-0.360365-0.099354I$	0
$u=\ \ 0.022742+1.129890I$ $a=-1.182390+0.135167I$ $b=\ \ 1.228750-0.290479I$	$-0.54814+5.33540I$	0
$u=\ \ 0.022742-1.129890I$ $a=-1.182390-0.135167I$ $b=\ \ 1.228750+0.290479I$	$-0.54814-5.33540I$	0
$u=-0.159127+0.855147I$ $a=-0.227634+1.081360I$ $b=\ \ 0.498582-0.643015I$	$4.39896-3.63479I$	0
$u=-0.159127-0.855147I$ $a=-0.227634-1.081360I$ $b=\ \ 0.498582+0.643015I$	$4.39896+3.63479I$	0
$u=-1.13139$ $a=\ \ 0.635787$ $b=\ \ 1.35448$	-3.56663	0
$u=-1.048410+0.435361I$ $a=\ \ 0.206817+0.414636I$ $b=\ \ 0.165033-0.667697I$	$-1.22010+4.85217I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.048410-0.435361I$ $a=\ \ 0.206817-0.414636I$ $b=\ \ 0.165033+0.667697I$	$-1.22010-4.85217I$	0
$u=\ \ 0.954327+0.634536I$ $a=-0.514396-1.112860I$ $b=\ \ 1.072350+0.058424I$	$-1.88379-0.20890I$	0
$u=\ \ 0.954327-0.634536I$ $a=-0.514396+1.112860I$ $b=\ \ 1.072350-0.058424I$	$-1.88379+0.20890I$	0
$u=\ \ 1.144330+0.102749I$ $a=-3.05782+0.27062I$ $b=-1.126760+0.024099I$	$-3.55565-0.36823I$	0
$u=\ \ 1.144330-0.102749I$ $a=-3.05782-0.27062I$ $b=-1.126760-0.024099I$	$-3.55565+0.36823I$	0
$u=-1.143620+0.134733I$ $a=-0.866453-0.423763I$ $b=-1.138170+0.364873I$	$1.13499+5.51192I$	0
$u=-1.143620-0.134733I$ $a=-0.866453+0.423763I$ $b=-1.138170-0.364873I$	$1.13499-5.51192I$	0
$u=\ \ 0.070649+0.802633I$ $a=\ \ 0.147155-1.238800I$ $b=\ \ 0.925272+0.559974I$	$3.20324-8.18296I$	0
$u=\ \ 0.070649-0.802633I$ $a=\ \ 0.147155+1.238800I$ $b=\ \ 0.925272-0.559974I$	$3.20324+8.18296I$	0
$u=\ \ 0.589697+0.497831I$ $a=\ \ 1.50479+2.22725I$ $b=-1.042400-0.259599I$	$-2.99902-1.02719I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.589697 - 0.497831I$ $a = 1.50479 - 2.22725I$ $b = -1.042400 + 0.259599I$	$-2.99902 + 1.02719I$	0
$u = 1.247530 + 0.044901I$ $a = -0.062702 + 1.064240I$ $b = 0.29135 - 1.59005I$	$-0.43890 - 2.75667I$	0
$u = 1.247530 - 0.044901I$ $a = -0.062702 - 1.064240I$ $b = 0.29135 + 1.59005I$	$-0.43890 + 2.75667I$	0
$u = 1.206180 + 0.321812I$ $a = -0.699746 - 0.904447I$ $b = 0.279818 + 0.437371I$	$-2.64241 - 1.39108I$	0
$u = 1.206180 - 0.321812I$ $a = -0.699746 + 0.904447I$ $b = 0.279818 - 0.437371I$	$-2.64241 + 1.39108I$	0
$u = -0.065848 + 0.734715I$ $a = 1.343790 - 0.368790I$ $b = 0.249533 + 0.416123I$	$-2.16498 + 3.13445I$	0
$u = -0.065848 - 0.734715I$ $a = 1.343790 + 0.368790I$ $b = 0.249533 - 0.416123I$	$-2.16498 - 3.13445I$	0
$u = -1.166810 + 0.520013I$ $a = -0.525072 - 0.212443I$ $b = 0.364620 + 0.638008I$	$1.37419 + 8.55632I$	0
$u = -1.166810 - 0.520013I$ $a = -0.525072 + 0.212443I$ $b = 0.364620 - 0.638008I$	$1.37419 - 8.55632I$	0
$u = 1.310890 + 0.161661I$ $a = -0.011416 + 1.141330I$ $b = -1.55424 - 0.69969I$	$-10.91190 - 0.94916I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.310890 - 0.161661I$ $a = -0.011416 - 1.141330I$ $b = -1.55424 + 0.69969I$	$-10.91190 + 0.94916I$	0
$u = -0.480429 + 0.464829I$ $a = -0.352588 - 0.945776I$ $b = -0.723371 + 0.738770I$	$4.27948 + 2.23809I$	$4.54515 - 5.49892I$
$u = -0.480429 - 0.464829I$ $a = -0.352588 + 0.945776I$ $b = -0.723371 - 0.738770I$	$4.27948 - 2.23809I$	$4.54515 + 5.49892I$
$u = -0.191359 + 0.634607I$ $a = -1.29441 + 1.35250I$ $b = -0.239430 - 0.753076I$	$2.25960 + 8.95544I$	$0.96042 - 5.62815I$
$u = -0.191359 - 0.634607I$ $a = -1.29441 - 1.35250I$ $b = -0.239430 + 0.753076I$	$2.25960 - 8.95544I$	$0.96042 + 5.62815I$
$u = 0.602700 + 0.272402I$ $a = -0.387320 - 1.134790I$ $b = 0.381962 + 0.379655I$	$-0.73020 - 1.27106I$	$-3.86635 + 5.97415I$
$u = 0.602700 - 0.272402I$ $a = -0.387320 + 1.134790I$ $b = 0.381962 - 0.379655I$	$-0.73020 + 1.27106I$	$-3.86635 - 5.97415I$
$u = 1.342040 + 0.066163I$ $a = 0.936528 + 0.270389I$ $b = 1.294650 + 0.053531I$	$-5.87244 - 1.86792I$	0
$u = 1.342040 - 0.066163I$ $a = 0.936528 - 0.270389I$ $b = 1.294650 - 0.053531I$	$-5.87244 + 1.86792I$	0
$u = -0.909402 + 0.994660I$ $a = -0.679504 + 0.080206I$ $b = -0.711336 - 0.042991I$	$-0.23833 - 4.47513I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.909402-0.994660I$ $a=-0.679504-0.080206I$ $b=-0.711336+0.042991I$	$-0.23833+4.47513I$	0
$u=0.233125+0.599818I$ $a=-0.94256-1.34302I$ $b=0.069701+0.451974I$	$-0.07055-2.23972I$	$-1.51477+4.66806I$
$u=0.233125-0.599818I$ $a=-0.94256+1.34302I$ $b=0.069701-0.451974I$	$-0.07055+2.23972I$	$-1.51477-4.66806I$
$u=-1.363400+0.023484I$ $a=-0.076224-0.915469I$ $b=0.11300+1.77332I$	$-1.054640+0.485171I$	0
$u=-1.363400-0.023484I$ $a=-0.076224+0.915469I$ $b=0.11300-1.77332I$	$-1.054640-0.485171I$	0
$u=-1.335590+0.317660I$ $a=0.395922-0.138955I$ $b=1.284070+0.201909I$	$-4.79277+1.63021I$	0
$u=-1.335590-0.317660I$ $a=0.395922+0.138955I$ $b=1.284070-0.201909I$	$-4.79277-1.63021I$	0
$u=1.370570+0.124918I$ $a=0.054734-0.900852I$ $b=1.72236+0.45746I$	$-8.86658+4.55321I$	0
$u=1.370570-0.124918I$ $a=0.054734+0.900852I$ $b=1.72236-0.45746I$	$-8.86658-4.55321I$	0
$u=-1.364160+0.204311I$ $a=0.303537+1.217300I$ $b=1.53226-0.40111I$	$-8.83628+8.82618I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.364160-0.204311I$ $a=\ 0.303537-1.217300I$ $b=\ 1.53226+0.40111I$	$-8.83628-8.82618I$	0
$u=-0.215689+0.577714I$ $a=-0.480099-0.643883I$ $b=-0.157789+0.504487I$	$1.14682-1.00992I$	$4.28803+1.80888I$
$u=-0.215689-0.577714I$ $a=-0.480099+0.643883I$ $b=-0.157789-0.504487I$	$1.14682+1.00992I$	$4.28803-1.80888I$
$u=\ 1.366910+0.232578I$ $a=\ 0.113598+1.000880I$ $b=-0.177813-1.256780I$	$-6.81809-6.36491I$	0
$u=\ 1.366910-0.232578I$ $a=\ 0.113598-1.000880I$ $b=-0.177813+1.256780I$	$-6.81809+6.36491I$	0
$u=-1.358780+0.296370I$ $a=\ 1.028200+0.546258I$ $b=\ 1.200670-0.300277I$	$-1.36283+12.03610I$	0
$u=-1.358780-0.296370I$ $a=\ 1.028200-0.546258I$ $b=\ 1.200670+0.300277I$	$-1.36283-12.03610I$	0
$u=-0.552495+1.276640I$ $a=\ 0.760402-0.645705I$ $b=-1.231820+0.364232I$	$-0.93888+13.06600I$	0
$u=-0.552495-1.276640I$ $a=\ 0.760402+0.645705I$ $b=-1.231820-0.364232I$	$-0.93888-13.06600I$	0
$u=-1.375590+0.219896I$ $a=\ 0.075988+0.951451I$ $b=\ 0.116657-1.130850I$	$-5.14161+5.17075I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.375590-0.219896I$ $a=\ \ 0.075988-0.951451I$ $b=\ \ 0.116657+1.130850I$	$-5.14161-5.17075I$	0
$u=\ \ 1.41743+0.07077I$ $a=-0.725147+0.008665I$ $b=-1.269580-0.371743I$	$-1.74448-3.57691I$	0
$u=\ \ 1.41743-0.07077I$ $a=-0.725147-0.008665I$ $b=-1.269580+0.371743I$	$-1.74448+3.57691I$	0
$u=\ \ 1.40797+0.23590I$ $a=\ \ 0.038714-0.960594I$ $b=-0.03228+1.45259I$	$-2.94161-12.06880I$	0
$u=\ \ 1.40797-0.23590I$ $a=\ \ 0.038714+0.960594I$ $b=-0.03228-1.45259I$	$-2.94161+12.06880I$	0
$u=-1.41081+0.23225I$ $a=-0.117600-1.149320I$ $b=-1.39130+0.37598I$	$-12.38160+4.31096I$	0
$u=-1.41081-0.23225I$ $a=-0.117600+1.149320I$ $b=-1.39130-0.37598I$	$-12.38160-4.31096I$	0
$u=\ \ 0.47262+1.35028I$ $a=\ \ 0.662873+0.516213I$ $b=-1.202530-0.201857I$	$-3.72221-4.65897I$	0
$u=\ \ 0.47262-1.35028I$ $a=\ \ 0.662873-0.516213I$ $b=-1.202530+0.201857I$	$-3.72221+4.65897I$	0
$u=\ \ 1.36870+0.43012I$ $a=-0.048845-1.093760I$ $b=\ \ 1.53952+0.65447I$	$-4.93365-10.71610I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.36870 - 0.43012I$ $a = -0.048845 + 1.093760I$ $b = 1.53952 - 0.65447I$	$-4.93365 + 10.71610I$	0
$u = -1.40699 + 0.28586I$ $a = -0.538071 - 0.349707I$ $b = -1.375900 + 0.165577I$	$-6.37288 + 7.80768I$	0
$u = -1.40699 - 0.28586I$ $a = -0.538071 + 0.349707I$ $b = -1.375900 - 0.165577I$	$-6.37288 - 7.80768I$	0
$u = 0.554723 + 0.096353I$ $a = -2.19070 - 2.89012I$ $b = 1.047180 + 0.168131I$	$-2.57316 - 0.08276I$	$-4.96565 - 4.99334I$
$u = 0.554723 - 0.096353I$ $a = -2.19070 + 2.89012I$ $b = 1.047180 - 0.168131I$	$-2.57316 + 0.08276I$	$-4.96565 + 4.99334I$
$u = -1.42651 + 0.18499I$ $a = 0.120355 - 0.948175I$ $b = 0.074932 + 0.947346I$	$-7.64328 + 0.39151I$	0
$u = -1.42651 - 0.18499I$ $a = 0.120355 + 0.948175I$ $b = 0.074932 - 0.947346I$	$-7.64328 - 0.39151I$	0
$u = 0.166896 + 0.530884I$ $a = 2.35827 + 0.99102I$ $b = -1.339650 + 0.107874I$	$-7.18424 - 1.37750I$	$-11.02196 + 1.26654I$
$u = 0.166896 - 0.530884I$ $a = 2.35827 - 0.99102I$ $b = -1.339650 - 0.107874I$	$-7.18424 + 1.37750I$	$-11.02196 - 1.26654I$
$u = 1.23894 + 0.76058I$ $a = 0.118410 + 0.507302I$ $b = 0.769646 - 0.497899I$	$-0.42265 + 3.03966I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.23894 - 0.76058I$ $a = 0.118410 - 0.507302I$ $b = 0.769646 + 0.497899I$	$-0.42265 - 3.03966I$	0
$u = -1.45338 + 0.11952I$ $a = 0.042917 + 0.887662I$ $b = 1.43555 - 0.65299I$	$-9.04455 + 1.32229I$	0
$u = -1.45338 - 0.11952I$ $a = 0.042917 - 0.887662I$ $b = 1.43555 + 0.65299I$	$-9.04455 - 1.32229I$	0
$u = 1.35728 + 0.55924I$ $a = 0.160665 + 0.886116I$ $b = -1.53445 - 0.31053I$	$-7.62426 - 3.59528I$	0
$u = 1.35728 - 0.55924I$ $a = 0.160665 - 0.886116I$ $b = -1.53445 + 0.31053I$	$-7.62426 + 3.59528I$	0
$u = -1.50604 + 0.16491I$ $a = 0.033133 - 1.095000I$ $b = -1.16900 + 0.86994I$	$-9.83470 + 3.48502I$	0
$u = -1.50604 - 0.16491I$ $a = 0.033133 + 1.095000I$ $b = -1.16900 - 0.86994I$	$-9.83470 - 3.48502I$	0
$u = -1.48334 + 0.30897I$ $a = 0.114199 + 0.988801I$ $b = 1.64351 - 0.68221I$	$-6.32039 + 9.09736I$	0
$u = -1.48334 - 0.30897I$ $a = 0.114199 - 0.988801I$ $b = 1.64351 + 0.68221I$	$-6.32039 - 9.09736I$	0
$u = -1.48380 + 0.30742I$ $a = -0.089633 - 0.768425I$ $b = -1.66465 + 0.44823I$	$-7.61781 + 7.52234I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.48380-0.30742I$ $a=-0.089633+0.768425I$ $b=-1.66465-0.44823I$	$-7.61781-7.52234I$	0
$u=1.48766+0.32268I$ $a=-0.348951+0.273680I$ $b=-1.219050+0.019417I$	$-5.64071-1.20331I$	0
$u=1.48766-0.32268I$ $a=-0.348951-0.273680I$ $b=-1.219050-0.019417I$	$-5.64071+1.20331I$	0
$u=0.402262+0.257570I$ $a=1.95201+1.22303I$ $b=0.415463+0.682574I$	$2.37310+1.85175I$	$1.04912+4.13975I$
$u=0.402262-0.257570I$ $a=1.95201-1.22303I$ $b=0.415463-0.682574I$	$2.37310-1.85175I$	$1.04912-4.13975I$
$u=-1.52532+0.08162I$ $a=-0.206381+0.757439I$ $b=-0.654357-1.078820I$	$-1.97987-3.60140I$	0
$u=-1.52532-0.08162I$ $a=-0.206381-0.757439I$ $b=-0.654357+1.078820I$	$-1.97987+3.60140I$	0
$u=1.54797+0.30024I$ $a=0.368668-0.644436I$ $b=0.946432+0.256661I$	$-0.770708-0.402618I$	0
$u=1.54797-0.30024I$ $a=0.368668+0.644436I$ $b=0.946432-0.256661I$	$-0.770708+0.402618I$	0
$u=0.006561+0.421077I$ $a=-3.10103-0.78230I$ $b=1.47845+0.02527I$	$-4.28585-6.43451I$	$-6.90078+7.59467I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.006561 - 0.421077I$ $a = -3.10103 + 0.78230I$ $b = 1.47845 - 0.02527I$	$-4.28585 + 6.43451I$	$-6.90078 - 7.59467I$
$u = -1.54733 + 0.47993I$ $a = -0.082141 - 1.068240I$ $b = -1.41677 + 0.50168I$	$-9.9791 + 10.9194I$	0
$u = -1.54733 - 0.47993I$ $a = -0.082141 + 1.068240I$ $b = -1.41677 - 0.50168I$	$-9.9791 - 10.9194I$	0
$u = -0.160611 + 0.310524I$ $a = 0.656557 + 0.375953I$ $b = -0.869358 - 0.803511I$	$4.08762 - 3.24713I$	$9.21382 - 3.43619I$
$u = -0.160611 - 0.310524I$ $a = 0.656557 - 0.375953I$ $b = -0.869358 + 0.803511I$	$4.08762 + 3.24713I$	$9.21382 + 3.43619I$
$u = 0.150937 + 0.313289I$ $a = 0.97833 + 1.39527I$ $b = -0.742342 - 0.934781I$	$4.11166 - 3.33292I$	$12.2705 + 8.4944I$
$u = 0.150937 - 0.313289I$ $a = 0.97833 - 1.39527I$ $b = -0.742342 + 0.934781I$	$4.11166 + 3.33292I$	$12.2705 - 8.4944I$
$u = 1.59745 + 0.46157I$ $a = -0.052135 + 1.018600I$ $b = -1.49284 - 0.62222I$	$-7.6932 - 19.2467I$	0
$u = 1.59745 - 0.46157I$ $a = -0.052135 - 1.018600I$ $b = -1.49284 + 0.62222I$	$-7.6932 + 19.2467I$	0
$u = 1.64496 + 0.49440I$ $a = -0.025299 - 0.885736I$ $b = 1.47554 + 0.51149I$	$-12.0871 - 12.5253I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.64496 - 0.49440I$ $a = -0.025299 + 0.885736I$ $b = 1.47554 - 0.51149I$	$-12.0871 + 12.5253I$	0
$u = -1.69602 + 0.30220I$ $a = 0.022326 + 0.807898I$ $b = 1.085640 - 0.201002I$	$-6.51925 + 0.92808I$	0
$u = -1.69602 - 0.30220I$ $a = 0.022326 - 0.807898I$ $b = 1.085640 + 0.201002I$	$-6.51925 - 0.92808I$	0
$u = -0.72177 + 1.61517I$ $a = -0.616813 + 0.357221I$ $b = 1.180720 - 0.179480I$	$-4.87164 + 5.39508I$	0
$u = -0.72177 - 1.61517I$ $a = -0.616813 - 0.357221I$ $b = 1.180720 + 0.179480I$	$-4.87164 - 5.39508I$	0
$u = -0.014582 + 0.225788I$ $a = 1.66916 + 2.22161I$ $b = 0.877366 - 0.279079I$	$-1.56711 + 0.85614I$	$-4.99249 + 0.59420I$
$u = -0.014582 - 0.225788I$ $a = 1.66916 - 2.22161I$ $b = 0.877366 + 0.279079I$	$-1.56711 - 0.85614I$	$-4.99249 - 0.59420I$
$u = -1.72626 + 0.43559I$ $a = 0.020457 + 0.862571I$ $b = 1.319720 - 0.482481I$	$-11.56470 + 5.56108I$	0
$u = -1.72626 - 0.43559I$ $a = 0.020457 - 0.862571I$ $b = 1.319720 + 0.482481I$	$-11.56470 - 5.56108I$	0
$u = -0.86040 + 1.59480I$ $a = 0.572015 - 0.247042I$ $b = -1.131260 + 0.017977I$	$-1.75043 - 4.32646I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.86040-1.59480I$ $a=\ \ 0.572015+0.247042I$ $b=-1.131260-0.017977I$	$-1.75043+4.32646I$	0
$u=-0.036179+0.166320I$ $a=\ \ 5.26506+1.27592I$ $b=\ \ 0.153818-0.957523I$	$3.35131+0.04338I$	$6.27768-0.37776I$
$u=-0.036179-0.166320I$ $a=\ \ 5.26506-1.27592I$ $b=\ \ 0.153818+0.957523I$	$3.35131-0.04338I$	$6.27768+0.37776I$
$u=\ \ 1.67118+0.82464I$ $a=\ \ 0.198220+0.642612I$ $b=-1.384220-0.237924I$	$-7.73090-4.06573I$	0
$u=\ \ 1.67118-0.82464I$ $a=\ \ 0.198220-0.642612I$ $b=-1.384220+0.237924I$	$-7.73090+4.06573I$	0

II.

$\boldsymbol{I_2^u = \langle -8.63\times10^{19}u^{27}-6.49\times10^{20}u^{26}+\cdots+3.26\times10^{19}b+1.09\times10^{21},\ 2.39\times10^{20}u^{27}+1.90\times10^{21}u^{26}+\cdots+6.51\times10^{19}a-4.16\times10^{21},\ u^{28}+8u^{27}+\cdots-8u+8\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_8 = \begin{pmatrix}1\\u^2\end{pmatrix}$$

$$a_3 = \begin{pmatrix}-3.67124u^{27}-29.1529u^{26}+\cdots+193.957u+63.9564\\2.65185u^{27}+19.9441u^{26}+\cdots-97.5835u-33.3826\end{pmatrix}$$

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

$$a_2 = \begin{pmatrix}-1.01939u^{27}-9.20884u^{26}+\cdots+96.3739u+30.5738\\2.65185u^{27}+19.9441u^{26}+\cdots-97.5835u-33.3826\end{pmatrix}$$

$$a_6 = \begin{pmatrix}-0.708822u^{27}-5.95009u^{26}+\cdots+42.4867u+17.7117\\-2.05568u^{27}-17.8008u^{26}+\cdots+156.338u+71.5457\end{pmatrix}$$

$$a_9 = \begin{pmatrix}2.85416u^{27}+21.8393u^{26}+\cdots-129.209u-38.1544\\0.306762u^{27}+1.22461u^{26}+\cdots+17.6117u+16.9938\end{pmatrix}$$

$$a_5 = \begin{pmatrix}-1.25931u^{27}-9.17692u^{26}+\cdots+31.8707u+5.50419\\-2.86301u^{27}-23.7455u^{26}+\cdots+180.775u+74.3363\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}0.427332u^{27}+3.78947u^{26}+\cdots-34.9555u-13.3036\\1.07587u^{27}+8.28077u^{26}+\cdots-43.0591u-10.7749\end{pmatrix}$$

$$a_4 = \begin{pmatrix}-1.79782u^{27}-15.2972u^{26}+\cdots+136.501u+56.1966\\1.95089u^{27}+14.9813u^{26}+\cdots-82.1888u-29.0749\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-0.401388u^{27}-4.92700u^{26}+\cdots+64.3024u+31.7889\\0.397796u^{27}+2.02739u^{26}+\cdots+23.5681u+16.8218\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{394793400711041839109}{32555539438267640596}u^{27}+\frac{1598655739224354867781}{16277697191338202 98}u^{26}+\cdots-\frac{5870200545912186563669}{8138884859566910149}u-\frac{28170204985982650 56590}{8138884859566910149}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 4u^{27} + \cdots + 7u + 11$
c_2	$u^{28} - 8u^{26} + \cdots - 3u + 1$
c_3	$u^{28} + 20u^{26} + \cdots - 3u + 1$
c_4	$u^{28} + 4u^{27} + \cdots - 7u + 11$
c_5	$u^{28} + 4u^{27} + \cdots + 2u + 1$
c_6	$u^{28} - 8u^{26} + \cdots + 3u + 1$
c_7	$u^{28} + 8u^{27} + \cdots - 8u + 8$
c_8	$u^{28} + 2u^{27} + \cdots - 2u + 1$
c_9	$u^{28} - 2u^{26} + \cdots - 5u + 1$
c_{10}	$u^{28} + 20u^{26} + \cdots + 3u + 1$
c_{11}	$u^{28} - 8u^{27} + \cdots + 8u + 8$
c_{12}	$u^{28} + 8u^{27} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{28} + 16y^{27} + \cdots - 1303y + 121$
c_2, c_6	$y^{28} - 16y^{27} + \cdots - 17y + 1$
c_3, c_{10}	$y^{28} + 40y^{27} + \cdots + 25y + 1$
c_5	$y^{28} + 28y^{26} + \cdots + 26y + 1$
c_7, c_{11}	$y^{28} - 22y^{27} + \cdots - 2400y + 64$
c_8	$y^{28} + 10y^{27} + \cdots + 30y + 1$
c_9	$y^{28} - 4y^{27} + \cdots + 7y + 1$
c_{12}	$y^{28} - 24y^{27} + \cdots - 8y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.910839+0.434438I$ $a=\ \ 0.312452+0.876534I$ $b=-0.294158+0.309787I$	$0.58923+9.74117I$	$-4.79861-7.87315I$
$u=-0.910839-0.434438I$ $a=\ \ 0.312452-0.876534I$ $b=-0.294158-0.309787I$	$0.58923-9.74117I$	$-4.79861+7.87315I$
$u=-0.680005+0.790938I$ $a=\ \ 0.589930-0.555705I$ $b=\ \ 0.526735-0.131533I$	$-2.84642+4.03958I$	$-8.94088-7.34599I$
$u=-0.680005-0.790938I$ $a=\ \ 0.589930+0.555705I$ $b=\ \ 0.526735+0.131533I$	$-2.84642-4.03958I$	$-8.94088+7.34599I$
$u=\ \ 0.868104+0.339318I$ $a=\ \ 0.585065+0.055680I$ $b=-0.653088-0.182615I$	$-2.45602-1.86090I$	$-11.69528+5.63652I$
$u=\ \ 0.868104-0.339318I$ $a=\ \ 0.585065-0.055680I$ $b=-0.653088+0.182615I$	$-2.45602+1.86090I$	$-11.69528-5.63652I$
$u=\ \ 0.836999+0.209158I$ $a=-0.45024-3.76533I$ $b=\ \ 1.016550+0.081884I$	$-3.00802-0.33993I$	$-15.1405-8.7169I$
$u=\ \ 0.836999-0.209158I$ $a=-0.45024+3.76533I$ $b=\ \ 1.016550-0.081884I$	$-3.00802+0.33993I$	$-15.1405+8.7169I$
$u=\ \ 0.010000+1.325500I$ $a=\ \ 0.852023+0.160238I$ $b=-1.252560-0.145977I$	$-2.84947-4.84439I$	$-4.79416+8.05358I$
$u=\ \ 0.010000-1.325500I$ $a=\ \ 0.852023-0.160238I$ $b=-1.252560+0.145977I$	$-2.84947+4.84439I$	$-4.79416-8.05358I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.344360+0.040974I$ $a=\ \ 0.137321-0.945020I$ $b=-0.01652+1.63265I$	$-1.14864-1.70263I$	$-4.13504+2.39464I$
$u=-1.344360-0.040974I$ $a=\ \ 0.137321+0.945020I$ $b=-0.01652-1.63265I$	$-1.14864+1.70263I$	$-4.13504-2.39464I$
$u=\ \ 1.334600+0.167808I$ $a=-0.717151-0.115563I$ $b=-1.222900+0.091680I$	$-4.69435-0.72547I$	$-5.65126-0.44890I$
$u=\ \ 1.334600-0.167808I$ $a=-0.717151+0.115563I$ $b=-1.222900-0.091680I$	$-4.69435+0.72547I$	$-5.65126+0.44890I$
$u=-1.40149+0.31952I$ $a=-0.156423-1.029110I$ $b=-1.67721+0.49060I$	$-7.35549+9.70199I$	$-6.04463-9.23208I$
$u=-1.40149-0.31952I$ $a=-0.156423+1.029110I$ $b=-1.67721-0.49060I$	$-7.35549-9.70199I$	$-6.04463+9.23208I$
$u=-0.492292+0.151949I$ $a=-0.08723-1.83695I$ $b=-0.195745-0.773770I$	$2.33333+2.46306I$	$-0.12775-9.01325I$
$u=-0.492292-0.151949I$ $a=-0.08723+1.83695I$ $b=-0.195745+0.773770I$	$2.33333-2.46306I$	$-0.12775+9.01325I$
$u=-1.48570+0.20641I$ $a=-0.011308+1.052660I$ $b=\ \ 1.226100-0.687863I$	$-10.88640+2.96877I$	$-10.70058+0.I$
$u=-1.48570-0.20641I$ $a=-0.011308-1.052660I$ $b=\ \ 1.226100+0.687863I$	$-10.88640-2.96877I$	$-10.70058+0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.48158 + 0.34652I$ $a = 0.099930 + 0.238205I$ $b = 0.876400 - 0.516074I$	$-0.26016 + 2.05832I$	0
$u = 1.48158 - 0.34652I$ $a = 0.099930 - 0.238205I$ $b = 0.876400 + 0.516074I$	$-0.26016 - 2.05832I$	0
$u = -1.02120 + 1.27692I$ $a = -0.514136 + 0.101363I$ $b = -0.656941 - 0.135069I$	$0.06264 - 4.62577I$	0
$u = -1.02120 - 1.27692I$ $a = -0.514136 - 0.101363I$ $b = -0.656941 + 0.135069I$	$0.06264 + 4.62577I$	0
$u = -1.49360 + 0.79240I$ $a = -0.231274 + 0.715617I$ $b = 1.45455 - 0.21466I$	$-7.48967 + 4.17396I$	0
$u = -1.49360 - 0.79240I$ $a = -0.231274 - 0.715617I$ $b = 1.45455 + 0.21466I$	$-7.48967 - 4.17396I$	0
$u = 0.298202 + 0.002383I$ $a = 0.34104 - 1.67044I$ $b = 0.868783 + 0.906398I$	$3.82086 - 3.34428I$	$-18.0773 + 7.2866I$
$u = 0.298202 - 0.002383I$ $a = 0.34104 + 1.67044I$ $b = 0.868783 - 0.906398I$	$3.82086 + 3.34428I$	$-18.0773 - 7.2866I$

III. $I_3^u = \langle -4a^3 + 4a^2 + 3b - 3a + 1,\ 4a^4 + 5a^2 + 2a + 2,\ u - 1 \rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_3 = \begin{pmatrix} a \\ \frac{4}{3}a^3 - \frac{4}{3}a^2 + a - \frac{1}{3} \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{4}{3}a^3 - \frac{4}{3}a^2 + 2a - \frac{1}{3} \\ \frac{4}{3}a^3 - \frac{4}{3}a^2 + a - \frac{1}{3} \end{pmatrix}$$

$$a_6 = \begin{pmatrix} \frac{4}{3}a^3 + \frac{2}{3}a^2 + a + \frac{8}{3} \\ 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -4a^3 - a^2 - 3a - 3 \\ -\frac{4}{3}a^3 - \frac{2}{3}a^2 - a - \frac{2}{3} \end{pmatrix}$$

$$a_5 = \begin{pmatrix} \frac{4}{3}a^3 + \frac{2}{3}a^2 + a + \frac{5}{3} \\ 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -a^2 \\ \frac{4}{3}a^3 + \frac{2}{3}a^2 + a + \frac{5}{3} \end{pmatrix}$$

$$a_4 = \begin{pmatrix} a^3 + a \\ \frac{2}{3}a^3 - \frac{2}{3}a^2 + \frac{1}{3} \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 2a^3 - \frac{3}{2}a^2 + 2a \\ -a^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_4 c_6	$(u^2+1)^2$
c_3	$4(4u^4+5u^2+2u+2)$
c_5, c_7	$(u-1)^4$
c_8	$4(4u^4+12u^3+9u^2+1)$
c_9	$u^4+2u^3-3u^2-4u+8$
c_{10}	$4(4u^4+5u^2-2u+2)$
c_{11}	$(u+1)^4$
c_{12}	$4(4u^4+4u^3-3u^2-2u+2)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6	$(y+1)^4$
c_3, c_{10}	$16(16y^4+40y^3+41y^2+16y+4)$
c_5, c_7, c_{11}	$(y-1)^4$
c_8	$16(16y^4-72y^3+89y^2+18y+1)$
c_9	$y^4-10y^3+41y^2-64y+64$
c_{12}	$16(16y^4-40y^3+41y^2-16y+4)$

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	1.00000		
$a=$	$0.308302+1.060890I$	1.64493	0
$b=$	$-1.000000I$		
$u=$	1.00000		
$a=$	$0.308302-1.060890I$	1.64493	0
$b=$	$1.000000I$		
$u=$	1.00000		
$a=$	$-0.308302+0.560894I$	1.64493	0
$b=$	$1.000000I$		
$u=$	1.00000		
$a=$	$-0.308302-0.560894I$	1.64493	0
$b=$	$-1.000000I$		

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2+1)^2)(u^{28}-4u^{27}+\cdots+7u+11)$ $\cdot(u^{135}-9u^{134}+\cdots+167083u+63886)$
c_2	$((u^2+1)^2)(u^{28}-8u^{26}+\cdots-3u+1)$ $\cdot(u^{135}-u^{134}+\cdots+144633u+4946)$
c_3	$16(4u^4+5u^2+2u+2)(u^{28}+20u^{26}+\cdots-3u+1)$ $\cdot(4u^{135}+36u^{134}+\cdots+2779214u+127574)$
c_4	$((u^2+1)^2)(u^{28}+4u^{27}+\cdots-7u+11)$ $\cdot(u^{135}-9u^{134}+\cdots+167083u+63886)$
c_5	$((u-1)^4)(u^{28}+4u^{27}+\cdots+2u+1)$ $\cdot(u^{135}-3u^{134}+\cdots+45913u+3188)$
c_6	$((u^2+1)^2)(u^{28}-8u^{26}+\cdots+3u+1)$ $\cdot(u^{135}-u^{134}+\cdots+144633u+4946)$
c_7	$((u-1)^4)(u^{28}+8u^{27}+\cdots-8u+8)(u^{135}-u^{134}+\cdots-29624u-4064)$
c_8	$16(4u^4+12u^3+9u^2+1)(u^{28}+2u^{27}+\cdots-2u+1)$ $\cdot(4u^{135}-56u^{134}+\cdots+23579u-1798)$
c_9	$(u^4+2u^3-3u^2-4u+8)(u^{28}-2u^{26}+\cdots-5u+1)$ $\cdot(u^{135}-3u^{134}+\cdots+48u+16)$
c_{10}	$16(4u^4+5u^2-2u+2)(u^{28}+20u^{26}+\cdots+3u+1)$ $\cdot(4u^{135}+36u^{134}+\cdots+2779214u+127574)$
c_{11}	$((u+1)^4)(u^{28}-8u^{27}+\cdots+8u+8)(u^{135}-u^{134}+\cdots-29624u-4064)$
c_{12}	$16(4u^4+4u^3+\cdots-2u+2)(u^{28}+8u^{27}+\cdots+4u+1)$ $\cdot(4u^{135}+8u^{134}+\cdots-\frac{}{31}21656u-7442)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y+1)^4)(y^{28}+16y^{27}+\cdots-1303y+121)$ $\cdot(y^{135}+83y^{134}+\cdots-6695683735y-4081420996)$
c_2, c_6	$((y+1)^4)(y^{28}-16y^{27}+\cdots-17y+1)$ $\cdot(y^{135}-93y^{134}+\cdots-1498427007y-24462916)$
c_3, c_{10}	$256(16y^4+40y^3+\cdots+16y+4)(y^{28}+40y^{27}+\cdots+25y+1)$ $\cdot(16y^{135}+1560y^{134}+\cdots+692965499916y-16275125476)$
c_5	$((y-1)^4)(y^{28}+28y^{26}+\cdots+26y+1)$ $\cdot(y^{135}+23y^{134}+\cdots-394825095y-10163344)$
c_7, c_{11}	$((y-1)^4)(y^{28}-22y^{27}+\cdots-2400y+64)$ $\cdot(y^{135}-119y^{134}+\cdots-1894424256y-16516096)$
c_8	$256(16y^4-72y^3+\cdots+18y+1)(y^{28}+10y^{27}+\cdots+30y+1)$ $\cdot(16y^{135}-568y^{134}+\cdots+1426485y-3232804)$
c_9	$(y^4-10y^3+41y^2-64y+64)(y^{28}-4y^{27}+\cdots+7y+1)$ $\cdot(y^{135}-11y^{134}+\cdots-9664y-256)$
c_{12}	$256(16y^4-40y^3+\cdots-16y+4)(y^{28}-24y^{27}+\cdots-8y+1)$ $\cdot(16y^{135}-248y^{134}+\cdots+3868160488y-55383364)$