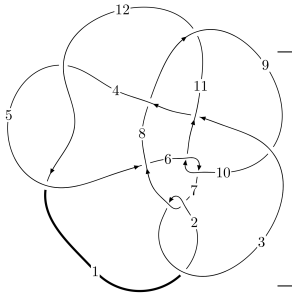
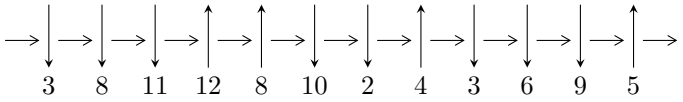
$12n_{0646}$ $(K12n_{0646})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.58803 \times 10^{237} u^{73} + 9.98357 \times 10^{236} u^{72} + \cdots + 1.04871 \times 10^{239} b - 4.84351 \times 10^{239}, \\ & 2.36054 \times 10^{238} u^{73} + 1.15336 \times 10^{239} u^{72} + \cdots + 6.18737 \times 10^{240} a + 6.07876 \times 10^{241}, \\ & u^{74} - 23u^{72} + \cdots - 1348u + 59 \rangle \\ I_2^u = \langle & 10945u^{22} + 124117u^{21} + \cdots + 323513b - 770040, \\ & - 1292813u^{22} - 1139926u^{21} + \cdots + 2264591a - 1752915,\ u^{23} + u^{22} + \cdots + 6u + 7 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 97 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. $\boldsymbol{I_1^u = \langle 1.59 \times 10^{237} u^{73} + 9.98 \times 10^{236} u^{72} + \cdots + 1.05 \times 10^{239} b - 4.84 \times 10^{239},\ 2.36 \times 10^{238} u^{73} + 1.15 \times 10^{239} u^{72} + \cdots + 6.19 \times 10^{240} a + 6.08 \times 10^{241},\ u^{74} - 23 u^{72} + \cdots - 1348 u + 59 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.00381509 u^{73} - 0.0186406 u^{72} + \cdots + 143.928 u - 9.82446 \\ -0.0151427 u^{73} - 0.00951988 u^{72} + \cdots - 57.5931 u + 4.61855 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.0113276 u^{73} - 0.00912068 u^{72} + \cdots + 201.521 u - 14.4430 \\ -0.0151427 u^{73} - 0.00951988 u^{72} + \cdots - 57.5931 u + 4.61855 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0317970 u^{73} + 0.0254113 u^{72} + \cdots + 41.9592 u - 9.10400 \\ -0.0151377 u^{73} - 0.0157835 u^{72} + \cdots + 8.09941 u - 0.430016 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0232878 u^{73} - 0.0230889 u^{72} + \cdots + 5.49692 u - 4.11660 \\ 0.0139050 u^{73} + 0.00829155 u^{72} + \cdots + 29.1837 u - 0.868546 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0319762 u^{73} - 0.0216255 u^{72} + \cdots - 71.9715 u + 6.77566 \\ 0.0246533 u^{73} + 0.0189372 u^{72} + \cdots + 32.4888 u - 1.70516 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0124870 u^{73} + 0.0121558 u^{72} + \cdots + 18.8902 u - 1.56877 \\ -0.0138331 u^{73} - 0.0119768 u^{72} + \cdots - 19.0668 u + 0.944486 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0344961 u^{73} - 0.0473584 u^{72} + \cdots + 140.483 u - 11.9122 \\ 0.0110322 u^{73} + 0.0116464 u^{72} + \cdots - 18.3283 u + 2.94677 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0361091 u^{73} - 0.0518980 u^{72} + \cdots + 169.740 u - 14.6086 \\ 0.0250197 u^{73} + 0.0231141 u^{72} + \cdots - 2.04277 u + 2.76319 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.00383692 u^{73} + 0.0116603 u^{72} + \cdots - 82.4847 u + 0.241670$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{74} + 83u^{73} + \cdots - 742961u + 32761$
c_2, c_7	$u^{74} + u^{73} + \cdots - 1071u + 181$
c_3	$u^{74} + 5u^{73} + \cdots + 35u + 67$
c_4, c_{12}	$u^{74} - 23u^{72} + \cdots - 1348u + 59$
c_5	$u^{74} + 12u^{73} + \cdots + 241794036u + 20549479$
c_6, c_{10}	$u^{74} + 9u^{72} + \cdots + 14u + 1$
c_8	$u^{74} - 3u^{73} + \cdots + 9u - 1$
c_9	$u^{74} - u^{73} + \cdots + 5432040u - 294541$
c_{11}	$u^{74} - u^{73} + \cdots + 26u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{74} - 171y^{73} + \cdots - 248386801315y + 1073283121$
c_2, c_7	$y^{74} - 83y^{73} + \cdots + 742961y + 32761$
c_3	$y^{74} - 23y^{73} + \cdots - 170601y + 4489$
c_4, c_{12}	$y^{74} - 46y^{73} + \cdots - 867912y + 3481$
c_5	$y^{74} + 72y^{73} + \cdots + 4872087324166162y + 422281087171441$
c_6, c_{10}	$y^{74} + 18y^{73} + \cdots - 460y + 1$
c_8	$y^{74} - 9y^{73} + \cdots - 129y + 1$
c_9	$y^{74} - 41y^{73} + \cdots - 4467923151064y + 86754400681$
c_{11}	$y^{74} + 7y^{73} + \cdots - 144y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.655798+0.766408I$ $a=\ \ 0.869120+0.744224I$ $b=-1.35513+0.70847I$	$-8.29346+2.75368I$	0
$u=-0.655798-0.766408I$ $a=\ \ 0.869120-0.744224I$ $b=-1.35513-0.70847I$	$-8.29346-2.75368I$	0
$u=-0.965313+0.158931I$ $a=\ \ 0.972971-0.580114I$ $b=-0.574458+0.287498I$	$1.82145-4.11786I$	$0.+8.23328I$
$u=-0.965313-0.158931I$ $a=\ \ 0.972971+0.580114I$ $b=-0.574458-0.287498I$	$1.82145+4.11786I$	$0.-8.23328I$
$u=-0.915463+0.481248I$ $a=-1.301600-0.360841I$ $b=\ \ 1.42148-0.29716I$	$-7.16001-3.26958I$	0
$u=-0.915463-0.481248I$ $a=-1.301600+0.360841I$ $b=\ \ 1.42148+0.29716I$	$-7.16001+3.26958I$	0
$u=-0.846052+0.596785I$ $a=-0.148846-0.608636I$ $b=-1.10293-1.17110I$	$-7.32108-1.01128I$	0
$u=-0.846052-0.596785I$ $a=-0.148846+0.608636I$ $b=-1.10293+1.17110I$	$-7.32108+1.01128I$	0
$u=-0.964557+0.396965I$ $a=-0.392535-1.170080I$ $b=\ \ 1.22014-1.00039I$	$1.18006-5.95366I$	0
$u=-0.964557-0.396965I$ $a=-0.392535+1.170080I$ $b=\ \ 1.22014+1.00039I$	$1.18006+5.95366I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.985961 + 0.412954I$ $a = -2.13540 - 0.84349I$ $b = 0.367620 + 0.144013I$	$-5.83823 + 6.62476I$	0
$u = 0.985961 - 0.412954I$ $a = -2.13540 + 0.84349I$ $b = 0.367620 - 0.144013I$	$-5.83823 - 6.62476I$	0
$u = 0.774737 + 0.472773I$ $a = 0.78398 + 1.88499I$ $b = -0.437396 + 0.860845I$	$-6.51675 - 3.02533I$	$-7.09255 + 5.00598I$
$u = 0.774737 - 0.472773I$ $a = 0.78398 - 1.88499I$ $b = -0.437396 - 0.860845I$	$-6.51675 + 3.02533I$	$-7.09255 - 5.00598I$
$u = -0.894325$ $a = -1.14517$ $b = 0.120420$	-0.954299	-9.82620
$u = 0.021010 + 0.882929I$ $a = -0.855935 - 0.904683I$ $b = -0.535620 - 0.743252I$	$-2.26108 + 2.43230I$	$-9.75705 - 2.77573I$
$u = 0.021010 - 0.882929I$ $a = -0.855935 + 0.904683I$ $b = -0.535620 + 0.743252I$	$-2.26108 - 2.43230I$	$-9.75705 + 2.77573I$
$u = 0.753306 + 0.428451I$ $a = -0.01914 + 1.95753I$ $b = 0.815160 + 0.718326I$	$2.81045 + 5.61623I$	$-4.20124 - 6.00638I$
$u = 0.753306 - 0.428451I$ $a = -0.01914 - 1.95753I$ $b = 0.815160 - 0.718326I$	$2.81045 - 5.61623I$	$-4.20124 + 6.00638I$
$u = 0.845381 + 0.156772I$ $a = -0.179363 + 0.806483I$ $b = 0.937521 + 0.034650I$	$2.50679 + 0.22280I$	$1.160362 - 0.536343I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.845381 - 0.156772I$ $a = -0.179363 - 0.806483I$ $b = 0.937521 - 0.034650I$	$2.50679 - 0.22280I$	$1.160362 + 0.536343I$
$u = -0.747820 + 0.348453I$ $a = 0.02740 - 1.73267I$ $b = 0.281766 - 0.913256I$	$-1.09279 - 2.96806I$	$-12.4081 + 9.2557I$
$u = -0.747820 - 0.348453I$ $a = 0.02740 + 1.73267I$ $b = 0.281766 + 0.913256I$	$-1.09279 + 2.96806I$	$-12.4081 - 9.2557I$
$u = 1.097690 + 0.464463I$ $a = -0.09607 - 1.62484I$ $b = 0.098368 - 0.983912I$	$-6.21900 + 4.81585I$	0
$u = 1.097690 - 0.464463I$ $a = -0.09607 + 1.62484I$ $b = 0.098368 + 0.983912I$	$-6.21900 - 4.81585I$	0
$u = -1.049620 + 0.578940I$ $a = 0.147679 + 0.427039I$ $b = 0.92680 + 1.54482I$	$-7.02322 - 7.85025I$	0
$u = -1.049620 - 0.578940I$ $a = 0.147679 - 0.427039I$ $b = 0.92680 - 1.54482I$	$-7.02322 + 7.85025I$	0
$u = -1.202410 + 0.158541I$ $a = 0.089960 + 0.140257I$ $b = -0.784654 - 0.680195I$	$1.55515 + 3.70197I$	0
$u = -1.202410 - 0.158541I$ $a = 0.089960 - 0.140257I$ $b = -0.784654 + 0.680195I$	$1.55515 - 3.70197I$	0
$u = 0.771268 + 0.039152I$ $a = 0.981686 - 0.957054I$ $b = -1.49247 - 0.58340I$	$1.74698 + 0.32926I$	$-1.62591 + 0.32056I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.771268 - 0.039152I$ $a = 0.981686 + 0.957054I$ $b = -1.49247 + 0.58340I$	$1.74698 - 0.32926I$	$-1.62591 - 0.32056I$
$u = 0.919006 + 0.821173I$ $a = -0.192595 + 0.795743I$ $b = 1.17685 + 0.91692I$	$1.35546 + 3.43403I$	0
$u = 0.919006 - 0.821173I$ $a = -0.192595 - 0.795743I$ $b = 1.17685 - 0.91692I$	$1.35546 - 3.43403I$	0
$u = -1.243770 + 0.270809I$ $a = 0.596369 + 1.181910I$ $b = -0.997710 + 0.666984I$	$6.67491 - 4.74644I$	0
$u = -1.243770 - 0.270809I$ $a = 0.596369 - 1.181910I$ $b = -0.997710 - 0.666984I$	$6.67491 + 4.74644I$	0
$u = 0.470959 + 0.537045I$ $a = 2.62151 - 1.11038I$ $b = -0.046697 - 0.372483I$	$-8.14386 - 0.75783I$	$-15.9338 - 3.9359I$
$u = 0.470959 - 0.537045I$ $a = 2.62151 + 1.11038I$ $b = -0.046697 + 0.372483I$	$-8.14386 + 0.75783I$	$-15.9338 + 3.9359I$
$u = 1.282620 + 0.200693I$ $a = 0.554347 - 0.664419I$ $b = -1.40018 - 1.15063I$	$2.91081 + 4.20783I$	0
$u = 1.282620 - 0.200693I$ $a = 0.554347 + 0.664419I$ $b = -1.40018 + 1.15063I$	$2.91081 - 4.20783I$	0
$u = -1.298030 + 0.205140I$ $a = -0.432301 - 1.003540I$ $b = 1.09376 - 1.17630I$	$1.90861 - 6.12809I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.298030-0.205140I$ $a=-0.432301+1.003540I$ $b=\ \ 1.09376+1.17630I$	$1.90861+6.12809I$	0
$u=\ \ 1.312430+0.246619I$ $a=-0.159546+0.445122I$ $b=\ \ 0.847012+0.717184I$	$2.74861+1.42952I$	0
$u=\ \ 1.312430-0.246619I$ $a=-0.159546-0.445122I$ $b=\ \ 0.847012-0.717184I$	$2.74861-1.42952I$	0
$u=-0.328781+1.323690I$ $a=\ \ 0.348126+0.339963I$ $b=\ \ 0.525286+0.880984I$	$-1.14232+4.08189I$	0
$u=-0.328781-1.323690I$ $a=\ \ 0.348126-0.339963I$ $b=\ \ 0.525286-0.880984I$	$-1.14232-4.08189I$	0
$u=\ \ 0.396021+0.484207I$ $a=-0.478537+0.330222I$ $b=-0.14607+1.42484I$	$-1.06612+2.28791I$	$-9.94456-3.29711I$
$u=\ \ 0.396021-0.484207I$ $a=-0.478537-0.330222I$ $b=-0.14607-1.42484I$	$-1.06612-2.28791I$	$-9.94456+3.29711I$
$u=-0.378716+0.457118I$ $a=\ \ 1.64287-0.19150I$ $b=\ \ 0.780151-0.056187I$	$3.34314+2.04546I$	$-1.45171-1.17441I$
$u=-0.378716-0.457118I$ $a=\ \ 1.64287+0.19150I$ $b=\ \ 0.780151+0.056187I$	$3.34314-2.04546I$	$-1.45171+1.17441I$
$u=-1.23386+0.70848I$ $a=\ \ 0.298842+0.935259I$ $b=-1.27459+1.00051I$	$1.59205-10.86400I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.23386-0.70848I$ $a=\ \ 0.298842-0.935259I$ $b=-1.27459-1.00051I$	$1.59205+10.86400I$	0
$u=\ \ 1.39427+0.45022I$ $a=-0.240132-0.502315I$ $b=-0.452753-0.074158I$	$4.81856-1.48237I$	0
$u=\ \ 1.39427-0.45022I$ $a=-0.240132+0.502315I$ $b=-0.452753+0.074158I$	$4.81856+1.48237I$	0
$u=-1.47129$ $a=-0.811222$ $b=\ \ 0.288330$	-1.54712	0
$u=\ \ 1.43434+0.38897I$ $a=-0.540506+0.537467I$ $b=\ \ 1.36368+0.82268I$	$2.16075+2.17644I$	0
$u=\ \ 1.43434-0.38897I$ $a=-0.540506-0.537467I$ $b=\ \ 1.36368-0.82268I$	$2.16075-2.17644I$	0
$u=\ \ 0.11140+1.48650I$ $a=-0.446418+0.632857I$ $b=-0.726218+0.933179I$	$-10.06450-9.11027I$	0
$u=\ \ 0.11140-1.48650I$ $a=-0.446418-0.632857I$ $b=-0.726218-0.933179I$	$-10.06450+9.11027I$	0
$u=\ \ 1.27797+0.77796I$ $a=\ \ 0.054128-0.537788I$ $b=-0.661480-0.188312I$	$2.27044+3.86617I$	0
$u=\ \ 1.27797-0.77796I$ $a=\ \ 0.054128+0.537788I$ $b=-0.661480+0.188312I$	$2.27044-3.86617I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.50265 + 1.41427I$ $a = 0.552978 - 0.455848I$ $b = 0.585875 - 0.772913I$	$-9.71632 - 1.35291I$	0
$u = 0.50265 - 1.41427I$ $a = 0.552978 + 0.455848I$ $b = 0.585875 + 0.772913I$	$-9.71632 + 1.35291I$	0
$u = 1.26097 + 0.83176I$ $a = 0.199374 - 1.092040I$ $b = -1.05828 - 1.03852I$	$-7.22130 + 8.96738I$	0
$u = 1.26097 - 0.83176I$ $a = 0.199374 + 1.092040I$ $b = -1.05828 + 1.03852I$	$-7.22130 - 8.96738I$	0
$u = -0.478233$ $a = -1.48533$ $b = -0.193213$	-1.01756	-9.85560
$u = 1.44910 + 0.71346I$ $a = -0.339147 + 0.994028I$ $b = 1.20794 + 1.04725I$	$-5.8720 + 16.6158I$	0
$u = 1.44910 - 0.71346I$ $a = -0.339147 - 0.994028I$ $b = 1.20794 - 1.04725I$	$-5.8720 - 16.6158I$	0
$u = -1.43999 + 0.91289I$ $a = 0.078936 - 0.637578I$ $b = 0.840470 - 0.448062I$	$-3.71000 - 8.50390I$	0
$u = -1.43999 - 0.91289I$ $a = 0.078936 + 0.637578I$ $b = 0.840470 + 0.448062I$	$-3.71000 + 8.50390I$	0
$u = -1.20485 + 1.21909I$ $a = -0.197169 + 0.455659I$ $b = -0.678604 + 0.449090I$	$-5.22524 - 0.83630I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.20485-1.21909I$ $a=-0.197169-0.455659I$ $b=-0.678604-0.449090I$	$-5.22524+0.83630I$	0
$u=\ 0.0777028+0.0283731I$ $a=\ 2.71739+4.75753I$ $b=\ 0.447185-1.220730I$	$-0.88271-2.35880I$	$-7.30268-2.94254I$
$u=\ 0.0777028-0.0283731I$ $a=\ 2.71739-4.75753I$ $b=\ 0.447185+1.220730I$	$-0.88271+2.35880I$	$-7.30268+2.94254I$
$u=-2.48363$ $a=\ 0.0328074$ $b=\ 0.360820$	-2.98919	0

II.

$\boldsymbol{I_2^u = \langle 1.09\times 10^4 u^{22} + 1.24\times 10^5 u^{21} + \cdots + 3.24\times 10^5 b - 7.70\times 10^5,\ -1.29\times 10^6 u^{22} - 1.14\times 10^6 u^{21} + \cdots + 2.26\times 10^6 a - 1.75\times 10^6,\ u^{23} + u^{22} + \cdots + 6u + 7\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.570881u^{22} + 0.503369u^{21} + \cdots + 0.996580u + 0.774054 \\ -0.0338317u^{22} - 0.383654u^{21} + \cdots + 4.19368u + 2.38024 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.604713u^{22} + 0.887023u^{21} + \cdots - 3.19710u - 1.60619 \\ -0.0338317u^{22} - 0.383654u^{21} + \cdots + 4.19368u + 2.38024 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.715072u^{22} + 1.60066u^{21} + \cdots - 8.26166u - 0.692739 \\ 0.140643u^{22} + 0.0151895u^{21} + \cdots + 3.15600u + 2.81671 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.174507u^{22} - 1.00570u^{21} + \cdots + 6.80089u + 5.50371 \\ 0.444573u^{22} + 0.348014u^{21} + \cdots - 3.73106u + 0.847542 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.741805u^{22} - 0.369258u^{21} + \cdots - 2.84354u - 2.11154 \\ 0.00713109u^{22} + 0.988770u^{21} + \cdots - 3.38884u - 3.70637 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.32743u^{22} - 0.253648u^{21} + \cdots - 5.63410u - 1.62524 \\ -0.143311u^{22} + 0.692522u^{21} + \cdots - 1.19043u - 3.87800 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.448108u^{22} - 0.0775385u^{21} + \cdots - 5.26590u - 2.41661 \\ -0.00353927u^{22} - 0.180382u^{21} + \cdots + 5.47344u + 2.04846 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.274671u^{22} + 0.497193u^{21} + \cdots + 4.96111u - 2.93448 \\ -0.0900397u^{22} - 0.245724u^{21} + \cdots + 1.23296u + 2.27996 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{116070}{323513}u^{22} - \frac{673312}{323513}u^{21} + \cdots + \frac{8778130}{323513}u + \frac{3192863}{323513}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{23} - 22u^{22} + \cdots + 13u - 1$
c_2	$u^{23} - 11u^{21} + \cdots + 3u - 1$
c_3	$u^{23} - 5u^{21} + \cdots - u + 1$
c_4	$u^{23} + u^{22} + \cdots + 6u + 7$
c_5	$u^{23} + u^{22} + \cdots - 214u - 19$
c_6	$u^{23} + u^{22} + \cdots - 2u + 1$
c_7	$u^{23} - 11u^{21} + \cdots + 3u + 1$
c_8	$u^{23} - 2u^{21} + \cdots + 3u - 1$
c_9	$u^{23} - 4u^{21} + \cdots - 130u + 77$
c_{10}	$u^{23} - u^{22} + \cdots - 2u - 1$
c_{11}	$u^{23} + 4u^{21} + \cdots + 2u - 1$
c_{12}	$u^{23} - u^{22} + \cdots + 6u - 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{23} - 30y^{22} + \cdots - 39y - 1$
c_2, c_7	$y^{23} - 22y^{22} + \cdots + 13y - 1$
c_3	$y^{23} - 10y^{22} + \cdots + 11y - 1$
c_4, c_{12}	$y^{23} - 25y^{22} + \cdots + 414y - 49$
c_5	$y^{23} + 9y^{22} + \cdots - 7860y - 361$
c_6, c_{10}	$y^{23} + 15y^{22} + \cdots - 22y - 1$
c_8	$y^{23} - 4y^{22} + \cdots + 31y - 1$
c_9	$y^{23} - 8y^{22} + \cdots + 27526y - 5929$
c_{11}	$y^{23} + 8y^{22} + \cdots - 6y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.940151+0.436724I$ $a=\ \ 1.38542-1.03904I$ $b=-0.375096-0.652275I$	$-6.14502-6.06691I$	$-7.76620+2.70001I$
$u=-0.940151-0.436724I$ $a=\ \ 1.38542+1.03904I$ $b=-0.375096+0.652275I$	$-6.14502+6.06691I$	$-7.76620-2.70001I$
$u=-0.899734+0.566100I$ $a=\ \ 0.666138-0.686902I$ $b=\ \ 0.587866+0.237361I$	$3.26577+3.29082I$	$1.12702-5.35953I$
$u=-0.899734-0.566100I$ $a=\ \ 0.666138+0.686902I$ $b=\ \ 0.587866-0.237361I$	$3.26577-3.29082I$	$1.12702+5.35953I$
$u=\ \ 1.167050+0.232734I$ $a=-0.746928+1.034470I$ $b=\ \ 1.145920+0.467030I$	$5.42529+3.86107I$	$0.38428-3.23578I$
$u=\ \ 1.167050-0.232734I$ $a=-0.746928-1.034470I$ $b=\ \ 1.145920-0.467030I$	$5.42529-3.86107I$	$0.38428+3.23578I$
$u=-0.193140+0.771651I$ $a=-0.749439-0.320841I$ $b=-0.598832-0.904838I$	$-0.70593+3.60670I$	$-4.29911-3.93608I$
$u=-0.193140-0.771651I$ $a=-0.749439+0.320841I$ $b=-0.598832+0.904838I$	$-0.70593-3.60670I$	$-4.29911+3.93608I$
$u=-1.203350+0.187731I$ $a=\ \ 0.50630+1.32809I$ $b=-0.956631+0.862062I$	$4.95788-5.88075I$	$-0.13221+5.80716I$
$u=-1.203350-0.187731I$ $a=\ \ 0.50630-1.32809I$ $b=-0.956631-0.862062I$	$4.95788+5.88075I$	$-0.13221-5.80716I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.154040 + 0.447461I$ $a = -0.362840 - 0.500105I$ $b = -0.706629 - 0.294864I$	$4.63415 - 0.90682I$	$1.28962 - 4.52518I$
$u = 1.154040 - 0.447461I$ $a = -0.362840 + 0.500105I$ $b = -0.706629 + 0.294864I$	$4.63415 + 0.90682I$	$1.28962 + 4.52518I$
$u = -1.280170 + 0.173459I$ $a = -0.442367 - 0.893767I$ $b = 1.23555 - 1.29461I$	$2.71445 - 6.27245I$	$2.92402 + 8.05584I$
$u = -1.280170 - 0.173459I$ $a = -0.442367 + 0.893767I$ $b = 1.23555 + 1.29461I$	$2.71445 + 6.27245I$	$2.92402 - 8.05584I$
$u = 0.637930 + 0.249825I$ $a = -0.023201 - 1.259190I$ $b = -0.400551 - 1.237650I$	$-0.49072 + 2.75096I$	$2.90356 - 6.14599I$
$u = 0.637930 - 0.249825I$ $a = -0.023201 + 1.259190I$ $b = -0.400551 + 1.237650I$	$-0.49072 - 2.75096I$	$2.90356 + 6.14599I$
$u = -0.430937 + 0.491432I$ $a = -1.97377 - 0.90570I$ $b = 0.716053 + 0.206167I$	$-7.54393 + 1.02790I$	$-3.87032 - 0.83091I$
$u = -0.430937 - 0.491432I$ $a = -1.97377 + 0.90570I$ $b = 0.716053 - 0.206167I$	$-7.54393 - 1.02790I$	$-3.87032 + 0.83091I$
$u = 1.361540 + 0.157735I$ $a = -0.127050 + 0.265071I$ $b = 0.941423 + 0.657717I$	$3.28773 + 2.35398I$	$1.50757 - 4.79947I$
$u = 1.361540 - 0.157735I$ $a = -0.127050 - 0.265071I$ $b = 0.941423 - 0.657717I$	$3.28773 - 2.35398I$	$1.50757 + 4.79947I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.307310 + 0.445348I$ $a = \quad 0.501766 - 0.593735I$ $b = -1.48600 - 0.92539I$	$2.02704 + 2.55701I$	$-2.41189 - 10.60905I$
$u = \quad 1.307310 - 0.445348I$ $a = \quad 0.501766 + 0.593735I$ $b = -1.48600 + 0.92539I$	$2.02704 - 2.55701I$	$-2.41189 + 10.60905I$
$u = -2.36076$ $a = \quad 0.160525$ $b = -0.206162$	-3.11418	-34.3130

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{23}-22u^{22}+\cdots+13u-1)(u^{74}+83u^{73}+\cdots-742961u+32761)$
c_2	$(u^{23}-11u^{21}+\cdots+3u-1)(u^{74}+u^{73}+\cdots-1071u+181)$
c_3	$(u^{23}-5u^{21}+\cdots-u+1)(u^{74}+5u^{73}+\cdots+35u+67)$
c_4	$(u^{23}+u^{22}+\cdots+6u+7)(u^{74}-23u^{72}+\cdots-1348u+59)$
c_5	$(u^{23}+u^{22}+\cdots-214u-19)$ $\cdot(u^{74}+12u^{73}+\cdots+241794036u+20549479)$
c_6	$(u^{23}+u^{22}+\cdots-2u+1)(u^{74}+9u^{72}+\cdots+14u+1)$
c_7	$(u^{23}-11u^{21}+\cdots+3u+1)(u^{74}+u^{73}+\cdots-1071u+181)$
c_8	$(u^{23}-2u^{21}+\cdots+3u-1)(u^{74}-3u^{73}+\cdots+9u-1)$
c_9	$(u^{23}-4u^{21}+\cdots-130u+77)(u^{74}-u^{73}+\cdots+5432040u-294541)$
c_{10}	$(u^{23}-u^{22}+\cdots-2u-1)(u^{74}+9u^{72}+\cdots+14u+1)$
c_{11}	$(u^{23}+4u^{21}+\cdots+2u-1)(u^{74}-u^{73}+\cdots+26u-1)$
c_{12}	$(u^{23}-u^{22}+\cdots+6u-7)(u^{74}-23u^{72}+\cdots-1348u+59)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{23} - 30y^{22} + \cdots - 39y - 1)$ $\cdot (y^{74} - 171y^{73} + \cdots - 248386801315y + 1073283121)$
c_2, c_7	$(y^{23} - 22y^{22} + \cdots + 13y - 1)(y^{74} - 83y^{73} + \cdots + 742961y + 32761)$
c_3	$(y^{23} - 10y^{22} + \cdots + 11y - 1)(y^{74} - 23y^{73} + \cdots - 170601y + 4489)$
c_4, c_{12}	$(y^{23} - 25y^{22} + \cdots + 414y - 49)(y^{74} - 46y^{73} + \cdots - 867912y + 3481)$
c_5	$(y^{23} + 9y^{22} + \cdots - 7860y - 361)$ $\cdot (y^{74} + 72y^{73} + \cdots + 4872087324166162y + 422281087171441)$
c_6, c_{10}	$(y^{23} + 15y^{22} + \cdots - 22y - 1)(y^{74} + 18y^{73} + \cdots - 460y + 1)$
c_8	$(y^{23} - 4y^{22} + \cdots + 31y - 1)(y^{74} - 9y^{73} + \cdots - 129y + 1)$
c_9	$(y^{23} - 8y^{22} + \cdots + 27526y - 5929)$ $\cdot (y^{74} - 41y^{73} + \cdots - 4467923151064y + 86754400681)$
c_{11}	$(y^{23} + 8y^{22} + \cdots - 6y - 1)(y^{74} + 7y^{73} + \cdots - 144y + 1)$