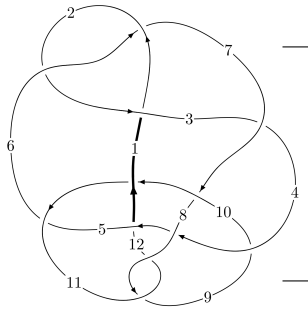
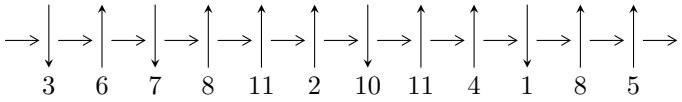
$12n_{0287}$ $(K12n_{0287})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -14u^{35} - 85u^{34} + \cdots + b - 25,\ -27u^{35} - 160u^{34} + \cdots + 2a - 59,\ u^{36} + 6u^{35} + \cdots + 11u + 2 \rangle$$

$$\begin{aligned} I_2^u = \langle & 2u^{15} + 7u^{13} - u^{12} + 12u^{11} - 4u^{10} + 7u^9 - 5u^8 - 2u^7 - u^6 - 5u^5 + 5u^4 + 3u^2 + b - u, \\ & u^{16} + 5u^{14} - u^{13} + 11u^{12} - 5u^{11} + 12u^{10} - 10u^9 + 4u^8 - 8u^7 - 3u^6 + 2u^5 - 3u^4 + 8u^3 - u^2 + a + 3u - 2, \\ & u^{17} - u^{16} + 5u^{15} - 4u^{14} + 12u^{13} - 9u^{12} + 16u^{11} - 10u^{10} + 10u^9 - 5u^8 + 3u^6 - 6u^5 + 6u^4 - 4u^3 + 4u^2 - 2u \rangle \end{aligned}$$

$$I_3^u = \langle -u^{17} + u^{16} + \cdots + b + 1,\ u^{17}a + 4u^{17} + \cdots + a^2 - 5,\ u^{18} - u^{17} + \cdots - u + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 89 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. $I_1^u = \langle -14u^{35} - 85u^{34} + \cdots + b - 25,\ -27u^{35} - 160u^{34} + \cdots + 2a - 59,\ u^{36} + 6u^{35} + \cdots + 11u + 2 \rangle$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} \frac{27}{2}u^{35} + 80u^{34} + \cdots + \frac{287}{2}u + \frac{59}{2} \\ 14u^{35} + 85u^{34} + \cdots + 135u + 25 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{5}{2}u^{35} + 15u^{34} + \cdots + \frac{55}{2}u + \frac{13}{2} \\ 3u^{35} + 17u^{34} + \cdots + 27u + 5 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2 + 1 \\ -u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} \frac{17}{2}u^{35} + 51u^{34} + \cdots + \frac{205}{2}u + \frac{41}{2} \\ 5u^{35} + 36u^{34} + \cdots + 85u + 17 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -\frac{1}{2}u^{35} - 5u^{34} + \cdots + \frac{1}{2}u + \frac{3}{2} \\ -2u^{35} - 14u^{34} + \cdots - 19u - 3 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} \frac{7}{2}u^{35} + 21u^{34} + \cdots + \frac{85}{2}u + \frac{17}{2} \\ u^{35} + 6u^{34} + \cdots + 30u + 7 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} \frac{13}{2}u^{35} + 38u^{34} + \cdots + \frac{121}{2}u + \frac{27}{2} \\ 11u^{35} + 63u^{34} + \cdots + 69u + 11 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$= -10u^{35} - 47u^{34} - 193u^{33} - 528u^{32} - 1308u^{31} - 2680u^{30} - 5100u^{29} - 8677u^{28} - 13841u^{27} - 20439u^{26} - 28425u^{25} - 37282u^{24} - 46259u^{23} - 54570u^{22} - 61115u^{21} - 65180u^{20} - 66272u^{19} - 64122u^{18} - 59268u^{17} - 52003u^{16} - 43524u^{15} - 34581u^{14} - 26106u^{13} - 18689u^{12} - 12638u^{11} - 8103u^{10} - 4980u^9 - 2882u^8 - 1585u^7 - 744u^6 - 322u^5 - 123u^4 - 56u^3 - 11u^2 + 11u + 16$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{36} + 18u^{35} + \cdots + 11u + 4$
c_2, c_6	$u^{36} - 6u^{35} + \cdots - 11u + 2$
c_3	$u^{36} + 6u^{35} + \cdots + 721u + 74$
c_4, c_{12}	$u^{36} - 28u^{34} + \cdots + u + 1$
c_5, c_9	$u^{36} - 8u^{34} + \cdots - 19u + 23$
c_7, c_{10}	$u^{36} - 3u^{35} + \cdots - 4u + 1$
c_8, c_{11}	$u^{36} + 17u^{35} + \cdots - 1495u + 160$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{36} + 2y^{35} + \cdots + 415y + 16$
c_2, c_6	$y^{36} + 18y^{35} + \cdots + 11y + 4$
c_3	$y^{36} - 20y^{35} + \cdots - 111805y + 5476$
c_4, c_{12}	$y^{36} - 56y^{35} + \cdots - y + 1$
c_5, c_9	$y^{36} - 16y^{35} + \cdots - 5421y + 529$
c_7, c_{10}	$y^{36} + 9y^{35} + \cdots + 16y + 1$
c_8, c_{11}	$y^{36} - 29y^{35} + \cdots - 1047185y + 25600$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.149973+0.998728I$ $a=\ 0.826426+0.069933I$ $b=\ 0.978572-0.499137I$	$-2.48443-1.62652I$	$-2.33035+4.22312I$
$u=-0.149973-0.998728I$ $a=\ 0.826426-0.069933I$ $b=\ 0.978572+0.499137I$	$-2.48443+1.62652I$	$-2.33035-4.22312I$
$u=-0.991952+0.201272I$ $a=-0.095835-0.534611I$ $b=\ 0.1012230-0.0449035I$	$5.44078-0.44653I$	$17.6525+14.6221I$
$u=-0.991952-0.201272I$ $a=-0.095835+0.534611I$ $b=\ 0.1012230+0.0449035I$	$5.44078+0.44653I$	$17.6525-14.6221I$
$u=\ 0.722213+0.749533I$ $a=-0.458236-0.270213I$ $b=-0.182561+1.023860I$	$10.02280+8.45449I$	$8.41836-6.51159I$
$u=\ 0.722213-0.749533I$ $a=-0.458236+0.270213I$ $b=-0.182561-1.023860I$	$10.02280-8.45449I$	$8.41836+6.51159I$
$u=\ 0.704411+0.851124I$ $a=\ 0.304244-0.316418I$ $b=-0.793602-0.473087I$	$9.73048-3.08341I$	$8.49473+1.45967I$
$u=\ 0.704411-0.851124I$ $a=\ 0.304244+0.316418I$ $b=-0.793602+0.473087I$	$9.73048+3.08341I$	$8.49473-1.45967I$
$u=-0.839708+0.298444I$ $a=-2.16620+0.59359I$ $b=-0.604870-0.306470I$	$7.48792+11.15390I$	$7.02947-5.33510I$
$u=-0.839708-0.298444I$ $a=-2.16620-0.59359I$ $b=-0.604870+0.306470I$	$7.48792-11.15390I$	$7.02947+5.33510I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.459586 + 1.035300I$ $a = -0.189766 + 0.533405I$ $b = 0.983727 + 0.590961I$	$-0.955654 + 0.821545I$	$0. - 3.95614I$
$u = 0.459586 - 1.035300I$ $a = -0.189766 - 0.533405I$ $b = 0.983727 - 0.590961I$	$-0.955654 - 0.821545I$	$0. + 3.95614I$
$u = -0.349884 + 1.107310I$ $a = -0.40589 - 1.81289I$ $b = -1.19270 - 2.50026I$	$-4.05377 + 0.63572I$	$0.484295 - 0.443572I$
$u = -0.349884 - 1.107310I$ $a = -0.40589 + 1.81289I$ $b = -1.19270 + 2.50026I$	$-4.05377 - 0.63572I$	$0.484295 + 0.443572I$
$u = 0.489524 + 1.057530I$ $a = 0.323550 - 0.327963I$ $b = -0.560466 - 0.804802I$	$-0.66063 + 5.65062I$	$0.65729 - 7.68260I$
$u = 0.489524 - 1.057530I$ $a = 0.323550 + 0.327963I$ $b = -0.560466 + 0.804802I$	$-0.66063 - 5.65062I$	$0.65729 + 7.68260I$
$u = -0.477205 + 1.078410I$ $a = -0.219824 + 1.300630I$ $b = -0.24654 + 1.84787I$	$-0.93062 - 3.45682I$	$3.69827 + 2.78118I$
$u = -0.477205 - 1.078410I$ $a = -0.219824 - 1.300630I$ $b = -0.24654 - 1.84787I$	$-0.93062 + 3.45682I$	$3.69827 - 2.78118I$
$u = -0.516662 + 1.118490I$ $a = 0.37409 - 2.28317I$ $b = 0.64651 - 3.41250I$	$-2.89301 - 8.21064I$	$2.73606 + 6.67381I$
$u = -0.516662 - 1.118490I$ $a = 0.37409 + 2.28317I$ $b = 0.64651 + 3.41250I$	$-2.89301 + 8.21064I$	$2.73606 - 6.67381I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.235187+1.215000I$ $a=\ 0.269343+1.318210I$ $b=\ 1.29431+2.00975I$	$2.56736+7.86975I$	$1.57367-3.75977I$
$u=-0.235187-1.215000I$ $a=\ 0.269343-1.318210I$ $b=\ 1.29431-2.00975I$	$2.56736-7.86975I$	$1.57367+3.75977I$
$u=\ 0.437735+0.549718I$ $a=\ 0.890033+0.585768I$ $b=\ 0.312734-1.109250I$	$0.56302+2.97658I$	$7.22028+1.12421I$
$u=\ 0.437735-0.549718I$ $a=\ 0.890033-0.585768I$ $b=\ 0.312734+1.109250I$	$0.56302-2.97658I$	$7.22028-1.12421I$
$u=-0.579068+1.162280I$ $a=-0.18131+2.07088I$ $b=-0.66974+3.26898I$	$4.9093-16.4009I$	$4.03368+8.81881I$
$u=-0.579068-1.162280I$ $a=-0.18131-2.07088I$ $b=-0.66974-3.26898I$	$4.9093+16.4009I$	$4.03368-8.81881I$
$u=-0.645401+0.250421I$ $a=\ 2.56211-0.68246I$ $b=\ 0.796733-0.012403I$	$-0.44102+3.68764I$	$6.93148-2.97663I$
$u=-0.645401-0.250421I$ $a=\ 2.56211+0.68246I$ $b=\ 0.796733+0.012403I$	$-0.44102-3.68764I$	$6.93148+2.97663I$
$u=-0.379298+1.270510I$ $a=-0.367307+0.599503I$ $b=-0.495507+1.221510I$	$0.75632-4.99885I$	$0.+9.16274I$
$u=-0.379298-1.270510I$ $a=-0.367307-0.599503I$ $b=-0.495507-1.221510I$	$0.75632+4.99885I$	$0.-9.16274I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.507489 + 0.424879I$ $a = -0.697425 - 0.253280I$ $b = 0.190814 + 0.745125I$	$1.18510 - 1.52172I$	$5.49872 + 4.62592I$
$u = 0.507489 - 0.424879I$ $a = -0.697425 + 0.253280I$ $b = 0.190814 - 0.745125I$	$1.18510 + 1.52172I$	$5.49872 - 4.62592I$
$u = -0.505579 + 0.388688I$ $a = -1.192940 + 0.572586I$ $b = -0.480909 + 0.224460I$	$1.086520 - 0.606535I$	$7.97928 + 3.45064I$
$u = -0.505579 - 0.388688I$ $a = -1.192940 - 0.572586I$ $b = -0.480909 - 0.224460I$	$1.086520 + 0.606535I$	$7.97928 - 3.45064I$
$u = -0.651042 + 1.222950I$ $a = 0.174939 - 0.327220I$ $b = 0.422269 - 0.499103I$	$2.39061 - 5.47394I$	$20.9532 + 20.3381I$
$u = -0.651042 - 1.222950I$ $a = 0.174939 + 0.327220I$ $b = 0.422269 + 0.499103I$	$2.39061 + 5.47394I$	$20.9532 - 20.3381I$

II.

$\boldsymbol{I_2^u = \langle 2u^{15}+7u^{13}+\cdots+b-u,\ u^{16}+5u^{14}+\cdots+a-2,\ u^{17}-u^{16}+\cdots-2u+1\rangle}$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^4+u^2+1 \\ u^4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^{16}-5u^{14}+\cdots-3u+2 \\ -2u^{15}-7u^{13}+\cdots-3u^2+u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 2u^{16}-u^{15}+\cdots+4u-3 \\ u^{16}+5u^{14}+\cdots+2u-1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2+1 \\ -u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2u^{16}+u^{15}+\cdots-4u+2 \\ -u^{16}-4u^{14}+\cdots-u+1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 3u^{16}-5u^{15}+\cdots+11u-7 \\ u^{16}-4u^{15}+\cdots+6u-5 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -2u^{16}+u^{15}+\cdots-5u+2 \\ -u^{16}+u^{15}+\cdots-2u+2 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -5u^{16}+2u^{15}+\cdots-12u+8 \\ -2u^{16}-2u^{15}+\cdots-2u+2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 6u^{15}-4u^{14}+24u^{13}-12u^{12}+48u^{11}-20u^{10}+44u^9-6u^8+6u^7+12u^6-21u^5+22u^4-14u^3+10u^2-u+6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{17} - 9u^{16} + \cdots - 4u + 1$
c_2	$u^{17} - u^{16} + \cdots - 2u + 1$
c_3	$u^{17} + u^{16} + \cdots + 2u + 5$
c_4, c_{12}	$u^{17} - 2u^{16} + \cdots - 3u + 1$
c_5, c_9	$u^{17} - 8u^{15} + \cdots - u + 1$
c_6	$u^{17} + u^{16} + \cdots - 2u - 1$
c_7, c_{10}	$u^{17} - 3u^{16} + \cdots + 2u + 1$
c_8	$u^{17} + 14u^{16} + \cdots + 23u + 5$
c_{11}	$u^{17} - 14u^{16} + \cdots + 23u - 5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{17} + y^{16} + \cdots - 8y - 1$
c_2, c_6	$y^{17} + 9y^{16} + \cdots - 4y - 1$
c_3	$y^{17} - 13y^{16} + \cdots - 86y - 25$
c_4, c_{12}	$y^{17} - 16y^{16} + \cdots - 3y - 1$
c_5, c_9	$y^{17} - 16y^{16} + \cdots + 9y - 1$
c_7, c_{10}	$y^{17} - 7y^{16} + \cdots + 4y - 1$
c_8, c_{11}	$y^{17} - 18y^{16} + \cdots - 371y - 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.431008+0.942233I$ $a=\ \ 0.209460+0.502451I$ $b=-0.824758+0.503665I$	$-0.436145-0.105477I$	$5.17968-2.38886I$
$u=-0.431008-0.942233I$ $a=\ \ 0.209460-0.502451I$ $b=-0.824758-0.503665I$	$-0.436145+0.105477I$	$5.17968+2.38886I$
$u=-0.874680$ $a=-0.192244$ $b=\ \ 0.315231$	5.41472	11.0230
$u=-0.468457+0.715892I$ $a=-0.678237+0.210938I$ $b=-0.173523-0.977457I$	$0.24900-3.62004I$	$1.98563+8.95063I$
$u=-0.468457-0.715892I$ $a=-0.678237-0.210938I$ $b=-0.173523+0.977457I$	$0.24900+3.62004I$	$1.98563-8.95063I$
$u=\ \ 0.464004+1.050320I$ $a=-0.31217+3.03749I$ $b=-0.65170+4.08273I$	$5.02616+3.30361I$	$0.39237-4.97703I$
$u=\ \ 0.464004-1.050320I$ $a=-0.31217-3.03749I$ $b=-0.65170-4.08273I$	$5.02616-3.30361I$	$0.39237+4.97703I$
$u=\ \ 0.773218+0.228170I$ $a=-1.92418-0.33198I$ $b=-0.478975+0.164410I$	$-2.06386-4.46334I$	$0.46360+4.84315I$
$u=\ \ 0.773218-0.228170I$ $a=-1.92418+0.33198I$ $b=-0.478975-0.164410I$	$-2.06386+4.46334I$	$0.46360-4.84315I$
$u=\ \ 0.305634+1.188350I$ $a=\ \ 0.051305-1.236500I$ $b=\ \ 0.65454-1.98487I$	$-6.36852-1.01335I$	$-5.48366+1.62767I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.305634 - 1.188350I$ $a = 0.051305 + 1.236500I$ $b = 0.65454 + 1.98487I$	$-6.36852 + 1.01335I$	$-5.48366 - 1.62767I$
$u = 0.539603 + 1.156090I$ $a = -0.00613 - 1.80864I$ $b = -0.17533 - 2.86609I$	$-4.76857 + 9.35771I$	$-2.38330 - 7.93311I$
$u = 0.539603 - 1.156090I$ $a = -0.00613 + 1.80864I$ $b = -0.17533 + 2.86609I$	$-4.76857 - 9.35771I$	$-2.38330 + 7.93311I$
$u = -0.596101 + 1.176370I$ $a = -0.0194796 - 0.1364700I$ $b = 0.343510 - 0.109245I$	$2.18794 - 5.27328I$	$-0.326316 - 0.621275I$
$u = -0.596101 - 1.176370I$ $a = -0.0194796 + 0.1364700I$ $b = 0.343510 + 0.109245I$	$2.18794 + 5.27328I$	$-0.326316 + 0.621275I$
$u = 0.350446 + 0.524920I$ $a = 2.77555 - 1.60523I$ $b = 1.64862 - 0.37193I$	$6.75650 + 0.40196I$	$5.16061 + 1.96558I$
$u = 0.350446 - 0.524920I$ $a = 2.77555 + 1.60523I$ $b = 1.64862 + 0.37193I$	$6.75650 - 0.40196I$	$5.16061 - 1.96558I$

III.

$\boldsymbol{I_3^u = \langle -u^{17}+u^{16}+\cdots+b+1,\ u^{17}a+4u^{17}+\cdots+a^2-5,\ u^{18}-u^{17}+\cdots-u+1\rangle}$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^4+u^2+1 \\ u^4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} a \\ u^{17}-u^{16}+\cdots+u-1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^{17}+u^{16}+\cdots-a-1 \\ -2u^{17}+2u^{16}+\cdots-2u+1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2+1 \\ -u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^{17}-u^{16}+\cdots+a+1 \\ 2u^{17}-2u^{16}+\cdots+2u-1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 3u^{17}-3u^{16}+\cdots-a-4 \\ 4u^{17}-4u^{16}+\cdots+4u-3 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{17}-u^{16}+\cdots+a+1 \\ 2u^{17}-2u^{16}+\cdots+u-1 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -3u^{17}+2u^{16}+\cdots-3a-2 \\ -6u^{17}+5u^{16}+\cdots-6u+3 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{17}+4u^{16}-16u^{15}+12u^{14}-32u^{13}+24u^{12}-36u^{11}+28u^{10}-24u^9+28u^8-12u^7+16u^6-8u^5+8u^4-8u^3-4u+14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^{18}+9u^{17}+\cdots+u+1)^2$
c_2, c_6	$(u^{18}+u^{17}+\cdots+u+1)^2$
c_3	$(u^{18}-u^{17}+\cdots-u+5)^2$
c_4, c_{12}	$u^{36}+u^{35}+\cdots-4000u+889$
c_5, c_9	$u^{36}+u^{35}+\cdots-84188u+25097$
c_7, c_{10}	$u^{36}-15u^{35}+\cdots-340u+25$
c_8, c_{11}	$(u^{18}-15u^{17}+\cdots+29u+3)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^{18}+y^{17}+\cdots+9y+1)^2$
c_2, c_6	$(y^{18}+9y^{17}+\cdots+y+1)^2$
c_3	$(y^{18}-7y^{17}+\cdots-91y+25)^2$
c_4, c_{12}	$y^{36}-45y^{35}+\cdots-11217180y+790321$
c_5, c_9	$y^{36}-25y^{35}+\cdots-7934994452y+629859409$
c_7, c_{10}	$y^{36}-9y^{35}+\cdots+14100y+625$
c_8, c_{11}	$(y^{18}-35y^{17}+\cdots-211y+9)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.606951+0.762732I$ $a=-0.672810+0.417119I$ $b=-0.184656-0.365220I$	$1.63218-2.36433I$	$8.96106+3.34702I$
$u=-0.606951+0.762732I$ $a=\ \ 0.085009+0.384811I$ $b=-0.428365+0.927160I$	$1.63218-2.36433I$	$8.96106+3.34702I$
$u=-0.606951-0.762732I$ $a=-0.672810-0.417119I$ $b=-0.184656+0.365220I$	$1.63218+2.36433I$	$8.96106-3.34702I$
$u=-0.606951-0.762732I$ $a=\ \ 0.085009-0.384811I$ $b=-0.428365-0.927160I$	$1.63218+2.36433I$	$8.96106-3.34702I$
$u=-0.320154+1.065080I$ $a=-1.344920+0.399822I$ $b=-0.333397+0.527308I$	$2.99038-0.58479I$	$3.81506-0.42463I$
$u=-0.320154+1.065080I$ $a=-0.54509+1.40985I$ $b=-1.52871+2.64353I$	$2.99038-0.58479I$	$3.81506-0.42463I$
$u=-0.320154-1.065080I$ $a=-1.344920-0.399822I$ $b=-0.333397-0.527308I$	$2.99038+0.58479I$	$3.81506+0.42463I$
$u=-0.320154-1.065080I$ $a=-0.54509-1.40985I$ $b=-1.52871-2.64353I$	$2.99038+0.58479I$	$3.81506+0.42463I$
$u=\ \ 0.483861+1.030980I$ $a=-0.41599+2.66215I$ $b=-0.88355+4.52483I$	$5.97153+3.09151I$	$11.11493-2.77317I$
$u=\ \ 0.483861+1.030980I$ $a=-0.32117-3.24954I$ $b=-0.56235-3.23198I$	$5.97153+3.09151I$	$11.11493-2.77317I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.483861 - 1.030980I$ $a = -0.41599 - 2.66215I$ $b = -0.88355 - 4.52483I$	$5.97153 - 3.09151I$	$11.11493 + 2.77317I$
$u = 0.483861 - 1.030980I$ $a = -0.32117 + 3.24954I$ $b = -0.56235 + 3.23198I$	$5.97153 - 3.09151I$	$11.11493 + 2.77317I$
$u = 0.781793 + 0.257942I$ $a = 1.50733 + 0.37688I$ $b = 0.649577 - 0.040046I$	$-0.79783 - 3.98828I$	$8.01934 + 2.30410I$
$u = 0.781793 + 0.257942I$ $a = -1.81527 - 0.39003I$ $b = -0.249789 + 0.261114I$	$-0.79783 - 3.98828I$	$8.01934 + 2.30410I$
$u = 0.781793 - 0.257942I$ $a = 1.50733 - 0.37688I$ $b = 0.649577 + 0.040046I$	$-0.79783 + 3.98828I$	$8.01934 - 2.30410I$
$u = 0.781793 - 0.257942I$ $a = -1.81527 + 0.39003I$ $b = -0.249789 - 0.261114I$	$-0.79783 + 3.98828I$	$8.01934 - 2.30410I$
$u = 0.286599 + 1.176040I$ $a = 0.129696 - 1.018410I$ $b = 0.84736 - 1.88349I$	$-5.21072 - 0.69909I$	$2.61745 - 0.31146I$
$u = 0.286599 + 1.176040I$ $a = 0.111176 + 1.187900I$ $b = -0.28946 + 1.60976I$	$-5.21072 - 0.69909I$	$2.61745 - 0.31146I$
$u = 0.286599 - 1.176040I$ $a = 0.129696 + 1.018410I$ $b = 0.84736 + 1.88349I$	$-5.21072 + 0.69909I$	$2.61745 + 0.31146I$
$u = 0.286599 - 1.176040I$ $a = 0.111176 - 1.187900I$ $b = -0.28946 - 1.60976I$	$-5.21072 + 0.69909I$	$2.61745 + 0.31146I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.527745+1.103190I$ $a=1.191070+0.466746I$ $b=2.91002+0.99091I$	$4.40791-6.64525I$	$7.35959+7.71274I$
$u=-0.527745+1.103190I$ $a=1.43943+1.42860I$ $b=0.83094+1.94919I$	$4.40791-6.64525I$	$7.35959+7.71274I$
$u=-0.527745-1.103190I$ $a=1.191070-0.466746I$ $b=2.91002-0.99091I$	$4.40791+6.64525I$	$7.35959-7.71274I$
$u=-0.527745-1.103190I$ $a=1.43943-1.42860I$ $b=0.83094-1.94919I$	$4.40791+6.64525I$	$7.35959-7.71274I$
$u=0.500651+0.525564I$ $a=-2.56302-0.46993I$ $b=-2.37571+0.29310I$	$7.49746+0.97328I$	$14.1139-4.5518I$
$u=0.500651+0.525564I$ $a=3.00132-1.06603I$ $b=0.551934-0.024389I$	$7.49746+0.97328I$	$14.1139-4.5518I$
$u=0.500651-0.525564I$ $a=-2.56302+0.46993I$ $b=-2.37571-0.29310I$	$7.49746-0.97328I$	$14.1139+4.5518I$
$u=0.500651-0.525564I$ $a=3.00132+1.06603I$ $b=0.551934+0.024389I$	$7.49746-0.97328I$	$14.1139+4.5518I$
$u=0.548853+1.153160I$ $a=0.00604-1.65136I$ $b=-0.30591-2.86421I$	$-3.42686+8.95499I$	$4.97585-5.84784I$
$u=0.548853+1.153160I$ $a=0.22040+1.64693I$ $b=0.40384+2.31431I$	$-3.42686+8.95499I$	$4.97585-5.84784I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.548853 - 1.153160I$ $a = 0.00604 + 1.65136I$ $b = -0.30591 + 2.86421I$	$-3.42686 - 8.95499I$	$4.97585 + 5.84784I$
$u = 0.548853 - 1.153160I$ $a = 0.22040 - 1.64693I$ $b = 0.40384 - 2.31431I$	$-3.42686 - 8.95499I$	$4.97585 + 5.84784I$
$u = -0.646907 + 0.309141I$ $a = -1.50508 - 0.65497I$ $b = -0.59498 - 1.52441I$	$6.67515 + 2.06052I$	$11.02279 - 4.27827I$
$u = -0.646907 + 0.309141I$ $a = -1.00812 - 2.23459I$ $b = 0.043192 + 0.359954I$	$6.67515 + 2.06052I$	$11.02279 - 4.27827I$
$u = -0.646907 - 0.309141I$ $a = -1.50508 + 0.65497I$ $b = -0.59498 + 1.52441I$	$6.67515 - 2.06052I$	$11.02279 + 4.27827I$
$u = -0.646907 - 0.309141I$ $a = -1.00812 + 2.23459I$ $b = 0.043192 - 0.359954I$	$6.67515 - 2.06052I$	$11.02279 + 4.27827I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{17}-9u^{16}+\cdots-4u+1)(u^{18}+9u^{17}+\cdots+u+1)^2$ $\cdot(u^{36}+18u^{35}+\cdots+11u+4)$
c_2	$(u^{17}-u^{16}+\cdots-2u+1)(u^{18}+u^{17}+\cdots+u+1)^2$ $\cdot(u^{36}-6u^{35}+\cdots-11u+2)$
c_3	$(u^{17}+u^{16}+\cdots+2u+5)(u^{18}-u^{17}+\cdots-u+5)^2$ $\cdot(u^{36}+6u^{35}+\cdots+721u+74)$
c_4, c_{12}	$(u^{17}-2u^{16}+\cdots-3u+1)(u^{36}-28u^{34}+\cdots+u+1)$ $\cdot(u^{36}+u^{35}+\cdots-4000u+889)$
c_5, c_9	$(u^{17}-8u^{15}+\cdots-u+1)(u^{36}-8u^{34}+\cdots-19u+23)$ $\cdot(u^{36}+u^{35}+\cdots-84188u+25097)$
c_6	$(u^{17}+u^{16}+\cdots-2u-1)(u^{18}+u^{17}+\cdots+u+1)^2$ $\cdot(u^{36}-6u^{35}+\cdots-11u+2)$
c_7, c_{10}	$(u^{17}-3u^{16}+\cdots+2u+1)(u^{36}-15u^{35}+\cdots-340u+25)$ $\cdot(u^{36}-3u^{35}+\cdots-4u+1)$
c_8	$(u^{17}+14u^{16}+\cdots+23u+5)(u^{18}-15u^{17}+\cdots+29u+3)^2$ $\cdot(u^{36}+17u^{35}+\cdots-1495u+160)$
c_{11}	$(u^{17}-14u^{16}+\cdots+23u-5)(u^{18}-15u^{17}+\cdots+29u+3)^2$ $\cdot(u^{36}+17u^{35}+\cdots-1495u+160)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{17}+y^{16}+\cdots-8y-1)(y^{18}+y^{17}+\cdots+9y+1)^2$ $\cdot(y^{36}+2y^{35}+\cdots+415y+16)$
c_2, c_6	$(y^{17}+9y^{16}+\cdots-4y-1)(y^{18}+9y^{17}+\cdots+y+1)^2$ $\cdot(y^{36}+18y^{35}+\cdots+11y+4)$
c_3	$(y^{17}-13y^{16}+\cdots-86y-25)(y^{18}-7y^{17}+\cdots-91y+25)^2$ $\cdot(y^{36}-20y^{35}+\cdots-111805y+5476)$
c_4, c_{12}	$(y^{17}-16y^{16}+\cdots-3y-1)(y^{36}-56y^{35}+\cdots-y+1)$ $\cdot(y^{36}-45y^{35}+\cdots-11217180y+790321)$
c_5, c_9	$(y^{17}-16y^{16}+\cdots+9y-1)$ $\cdot(y^{36}-25y^{35}+\cdots-7934994452y+629859409)$ $\cdot(y^{36}-16y^{35}+\cdots-5421y+529)$
c_7, c_{10}	$(y^{17}-7y^{16}+\cdots+4y-1)(y^{36}-9y^{35}+\cdots+14100y+625)$ $\cdot(y^{36}+9y^{35}+\cdots+16y+1)$
c_8, c_{11}	$(y^{17}-18y^{16}+\cdots-371y-25)(y^{18}-35y^{17}+\cdots-211y+9)^2$ $\cdot(y^{36}-29y^{35}+\cdots-1047185y+25600)$