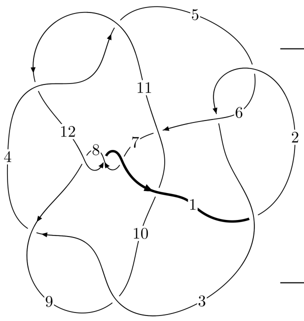
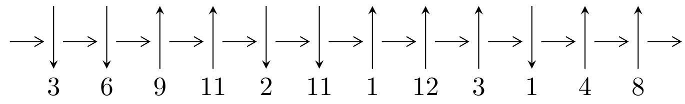
$12n_{0490}$ ($K12n_{0490}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 3u^{25} + 33u^{24} + \cdots + 4b + 36,\ 17u^{25} + 196u^{24} + \cdots + 32a + 656,\ u^{26} + 12u^{25} + \cdots + 288u + 32\rangle$$
$$I_2^u = \langle -333638458a^9u^2 + 2803980318a^8u^2 + \cdots - 878011078a - 1380422771,$$
$$a^9u^2 + 5a^8u^2 + \cdots + 528a + 584,\ u^3 - u^2 + 2u - 1\rangle$$
$$I_3^u = \langle 2u^{17} + 15u^{15} + \cdots + b + 2,\ 2u^{16} - 2u^{15} + \cdots + a + 4,\ u^{18} - u^{17} + \cdots - 4u + 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 74 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. $I_1^u = \langle 3u^{25} + 33u^{24} + \cdots + 4b + 36,\ 17u^{25} + 196u^{24} + \cdots + 32a + 656,\ u^{26} + 12u^{25} + \cdots + 288u + 32\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.531250u^{25} - 6.12500u^{24} + \cdots - 148.500u - 20.5000 \\ -\frac{3}{4}u^{25} - \frac{33}{4}u^{24} + \cdots - \frac{155}{2}u - 9 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -\frac{9}{32}u^{25} - \frac{21}{8}u^{24} + \cdots - 16u - \frac{7}{2} \\ \frac{1}{2}u^{25} + \frac{23}{4}u^{24} + \cdots + \frac{149}{2}u + 7 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -\frac{19}{32}u^{25} - \frac{105}{16}u^{24} + \cdots - 134u - 16 \\ -\frac{3}{16}u^{25} - \frac{17}{8}u^{24} + \cdots - 11u - 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 2.87500u^{25} + 30.5625u^{24} + \cdots + 671.750u + 82.5000 \\ -\frac{23}{16}u^{25} - \frac{137}{8}u^{24} + \cdots - \frac{483}{2}u - 26 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -\frac{57}{32}u^{25} - \frac{157}{8}u^{24} + \cdots - \frac{1077}{2}u - 68 \\ \frac{3}{4}u^{25} + \frac{69}{8}u^{24} + \cdots + 116u + 13 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -\frac{1}{32}u^{25} - \frac{3}{16}u^{24} + \cdots + 23u + 3 \\ \frac{9}{16}u^{25} + \frac{51}{8}u^{24} + \cdots + 155u + 19 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} \frac{1}{32}u^{25} + \frac{3}{16}u^{24} + \cdots - 21u - 2 \\ \frac{7}{16}u^{25} + \frac{37}{8}u^{24} + \cdots + 102u + 13 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{7}{4}u^{25} - 20u^{24} + \cdots - 292u - 18$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26} + 9u^{25} + \cdots + 96u + 64$
c_2, c_5	$u^{26} + 9u^{25} + \cdots + 24u + 8$
c_3, c_4, c_9 c_{11}	$u^{26} + 8u^{24} + \cdots + 3u + 1$
c_6, c_{10}	$u^{26} + u^{25} + \cdots + 14u + 1$
c_7, c_8, c_{12}	$u^{26} - 12u^{25} + \cdots - 288u + 32$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{26} + 19y^{25} + \cdots - 8704y + 4096$
c_2, c_5	$y^{26} - 9y^{25} + \cdots - 96y + 64$
c_3, c_4, c_9 c_{11}	$y^{26} + 16y^{25} + \cdots + 5y + 1$
c_6, c_{10}	$y^{26} + 39y^{25} + \cdots - 50y + 1$
c_7, c_8, c_{12}	$y^{26} + 22y^{25} + \cdots + 512y + 1024$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.373580 + 0.933614I$ $a = 0.280319 + 0.410765I$ $b = 0.406899 + 0.387993I$	$-0.83502 - 2.62007I$	$5.29205 + 6.35608I$
$u = -0.373580 - 0.933614I$ $a = 0.280319 - 0.410765I$ $b = 0.406899 - 0.387993I$	$-0.83502 + 2.62007I$	$5.29205 - 6.35608I$
$u = -0.977022 + 0.289560I$ $a = -0.999855 + 0.807238I$ $b = -0.329282 - 0.190408I$	$5.86673 - 2.98457I$	$2.91733 + 2.32225I$
$u = -0.977022 - 0.289560I$ $a = -0.999855 - 0.807238I$ $b = -0.329282 + 0.190408I$	$5.86673 + 2.98457I$	$2.91733 - 2.32225I$
$u = -1.040460 + 0.290353I$ $a = 0.885056 - 0.906575I$ $b = 0.321883 + 0.239511I$	$4.93150 - 9.47568I$	$1.22997 + 6.65192I$
$u = -1.040460 - 0.290353I$ $a = 0.885056 + 0.906575I$ $b = 0.321883 - 0.239511I$	$4.93150 + 9.47568I$	$1.22997 - 6.65192I$
$u = -0.893372 + 0.672431I$ $a = 0.616422 - 0.459995I$ $b = 0.580795 + 0.074295I$	$-1.98248 - 3.07677I$	$-3.82004 + 5.96476I$
$u = -0.893372 - 0.672431I$ $a = 0.616422 + 0.459995I$ $b = 0.580795 - 0.074295I$	$-1.98248 + 3.07677I$	$-3.82004 - 5.96476I$
$u = -0.658604 + 1.099520I$ $a = -0.357985 + 0.662624I$ $b = -0.744381 + 0.825205I$	$3.47939 - 2.75359I$	$0. + 1.54097I$
$u = -0.658604 - 1.099520I$ $a = -0.357985 - 0.662624I$ $b = -0.744381 - 0.825205I$	$3.47939 + 2.75359I$	$0. - 1.54097I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.737527 + 1.134930I$ $a = 0.473155 - 0.623862I$ $b = 1.037410 - 0.669242I$	$2.46178 + 3.30067I$	$-1.81816 - 2.93564I$
$u = -0.737527 - 1.134930I$ $a = 0.473155 + 0.623862I$ $b = 1.037410 + 0.669242I$	$2.46178 - 3.30067I$	$-1.81816 + 2.93564I$
$u = -0.500184 + 0.273597I$ $a = -1.113850 + 0.000222I$ $b = -0.361841 - 0.000040I$	$1.011870 - 0.620695I$	$7.41936 + 3.02549I$
$u = -0.500184 - 0.273597I$ $a = -1.113850 - 0.000222I$ $b = -0.361841 + 0.000040I$	$1.011870 + 0.620695I$	$7.41936 - 3.02549I$
$u = 0.345460 + 0.396654I$ $a = 0.416298 + 0.809635I$ $b = 0.415031 - 0.528152I$	$-1.54818 + 1.01569I$	$-2.49851 + 1.48185I$
$u = 0.345460 - 0.396654I$ $a = 0.416298 - 0.809635I$ $b = 0.415031 + 0.528152I$	$-1.54818 - 1.01569I$	$-2.49851 - 1.48185I$
$u = -0.12954 + 1.47954I$ $a = 0.663655 + 0.382952I$ $b = 1.94741 + 0.15396I$	$-4.82392 - 2.67431I$	0
$u = -0.12954 - 1.47954I$ $a = 0.663655 - 0.382952I$ $b = 1.94741 - 0.15396I$	$-4.82392 + 2.67431I$	0
$u = -0.39186 + 1.47047I$ $a = 1.031950 + 0.307632I$ $b = 2.57514 + 0.41031I$	$0.23550 - 7.89653I$	0
$u = -0.39186 - 1.47047I$ $a = 1.031950 - 0.307632I$ $b = 2.57514 - 0.41031I$	$0.23550 + 7.89653I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.42139 + 1.47806I$ $a = -1.077660 - 0.235946I$ $b = -2.67192 - 0.32255I$	$-0.7052 - 14.6997I$	$0. + 7.55199I$
$u = -0.42139 - 1.47806I$ $a = -1.077660 + 0.235946I$ $b = -2.67192 + 0.32255I$	$-0.7052 + 14.6997I$	$0. - 7.55199I$
$u = 0.04653 + 1.56180I$ $a = -0.561335 - 0.336020I$ $b = -1.91553 + 0.15501I$	$-8.47892 + 2.46726I$	0
$u = 0.04653 - 1.56180I$ $a = -0.561335 + 0.336020I$ $b = -1.91553 - 0.15501I$	$-8.47892 - 2.46726I$	0
$u = -0.26846 + 1.59618I$ $a = -0.756170 - 0.252389I$ $b = -2.26161 - 0.13367I$	$-9.48266 - 7.26585I$	0
$u = -0.26846 - 1.59618I$ $a = -0.756170 + 0.252389I$ $b = -2.26161 + 0.13367I$	$-9.48266 + 7.26585I$	0

II. $\boldsymbol{I_2^u = \langle -3.34\times 10^8 a^9u^2 + 2.80\times 10^9 a^8u^2 + \cdots - 8.78\times 10^8 a - 1.38\times 10^9,\ a^9u^2 + 5a^8u^2 + \cdots + 528a + 584,\ u^3 - u^2 + 2u - 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} a \\ 0.209620a^9u^2 - 1.76170a^8u^2 + \cdots + 0.551640a + 0.867297 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.209620a^9u^2 + 1.76170a^8u^2 + \cdots + 0.448360a - 0.867297 \\ -1.52915a^9u^2 + 2.83867a^8u^2 + \cdots + 1.28335a + 1.54825 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -a^2u \\ -1.83712a^9u^2 + 2.43089a^8u^2 + \cdots - 0.217188a + 3.13850 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} a^3u^2 + a \\ -2.20070a^9u^2 + 2.46990a^8u^2 + \cdots - 1.35859a + 2.49562 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1.87891a^9u^2 - 3.01206a^8u^2 + \cdots - 0.212937a - 1.75521 \\ 2.51980a^9u^2 - 2.23306a^8u^2 + \cdots + 1.62064a - 2.93193 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.232543a^9u^2 + 1.95512a^8u^2 + \cdots + 0.115174a + 0.454433 \\ -a^2u^2 + 2u - 2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 2.70862a^9u^2 - 2.33692a^8u^2 + \cdots + 1.65477a - 1.76434 \\ 0.871503a^9u^2 + 0.0939733a^8u^2 + \cdots + 1.43758a + 1.37417 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{640570216}{1591637129}a^9u^2 + \frac{5775444576}{1591637129}a^8u^2 + \cdots + \frac{12123611228}{1591637129}a + \frac{11646488850}{1591637129}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^5 + u^4 + 4u^3 + 3u^2 + 3u + 1)^6$
c_2, c_5	$(u^5 - u^4 + u^2 + u - 1)^6$
c_3, c_4, c_9 c_{11}	$u^{30} - u^{29} + \cdots + 1390u + 773$
c_6, c_{10}	$u^{30} - 3u^{29} + \cdots - 9926u + 2939$
c_7, c_8, c_{12}	$(u^3 + u^2 + 2u + 1)^{10}$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^5 + 7y^4 + 16y^3 + 13y^2 + 3y - 1)^6$
c_2, c_5	$(y^5 - y^4 + 4y^3 - 3y^2 + 3y - 1)^6$
c_3, c_4, c_9 c_{11}	$y^{30} + 15y^{29} + \cdots + 5878292y + 597529$
c_6, c_{10}	$y^{30} + 19y^{29} + \cdots - 67383832y + 8637721$
c_7, c_8, c_{12}	$(y^3 + 3y^2 + 2y - 1)^{10}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.215080 + 1.307140I$ $a = -1.014630 + 0.047968I$ $b = -2.30589 - 0.97577I$	$-8.84111 + 2.82812I$	$-11.11859 - 2.97945I$
$u = 0.215080 + 1.307140I$ $a = 0.771849 - 0.683924I$ $b = 1.093870 - 0.106141I$	$-6.13913 + 5.04209I$	$-2.62407 - 7.20234I$
$u = 0.215080 + 1.307140I$ $a = -1.115000 - 0.034024I$ $b = -2.93266 - 0.29143I$	$-6.13913 + 5.04209I$	$-2.62407 - 7.20234I$
$u = 0.215080 + 1.307140I$ $a = -0.784986 + 0.155927I$ $b = -2.90073 + 1.14869I$	$2.99936 + 6.15987I$	$-1.59102 - 5.34173I$
$u = 0.215080 + 1.307140I$ $a = 1.217270 + 0.148472I$ $b = 2.62933 + 0.23436I$	$-6.13913 + 0.61415I$	$-2.62407 + 1.24344I$
$u = 0.215080 + 1.307140I$ $a = 0.305785 + 1.223910I$ $b = 0.871169 + 0.998250I$	$2.99936 - 0.50362I$	$-1.59102 - 0.61717I$
$u = 0.215080 + 1.307140I$ $a = 0.683723 - 0.136389I$ $b = 2.59396 - 1.27411I$	$2.99936 - 0.50362I$	$-1.59102 - 0.61717I$
$u = 0.215080 + 1.307140I$ $a = -0.127449 - 1.308880I$ $b = -0.575167 - 1.111610I$	$2.99936 + 6.15987I$	$-1.59102 - 5.34173I$
$u = 0.215080 + 1.307140I$ $a = 1.290360 - 0.282036I$ $b = 2.26738 + 0.12156I$	$-8.84111 + 2.82812I$	$-11.11859 - 2.97945I$
$u = 0.215080 + 1.307140I$ $a = -0.564558 + 0.306692I$ $b = -0.833786 - 0.795800I$	$-6.13913 + 0.61415I$	$-2.62407 + 1.24344I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.215080 - 1.307140I$ $a = -1.014630 - 0.047968I$ $b = -2.30589 + 0.97577I$	$-8.84111 - 2.82812I$	$-11.11859 + 2.97945I$
$u = 0.215080 - 1.307140I$ $a = 0.771849 + 0.683924I$ $b = 1.093870 + 0.106141I$	$-6.13913 - 5.04209I$	$-2.62407 + 7.20234I$
$u = 0.215080 - 1.307140I$ $a = -1.115000 + 0.034024I$ $b = -2.93266 + 0.29143I$	$-6.13913 - 5.04209I$	$-2.62407 + 7.20234I$
$u = 0.215080 - 1.307140I$ $a = -0.784986 - 0.155927I$ $b = -2.90073 - 1.14869I$	$2.99936 - 6.15987I$	$-1.59102 + 5.34173I$
$u = 0.215080 - 1.307140I$ $a = 1.217270 - 0.148472I$ $b = 2.62933 - 0.23436I$	$-6.13913 - 0.61415I$	$-2.62407 - 1.24344I$
$u = 0.215080 - 1.307140I$ $a = 0.305785 - 1.223910I$ $b = 0.871169 - 0.998250I$	$2.99936 + 0.50362I$	$-1.59102 + 0.61717I$
$u = 0.215080 - 1.307140I$ $a = 0.683723 + 0.136389I$ $b = 2.59396 + 1.27411I$	$2.99936 + 0.50362I$	$-1.59102 + 0.61717I$
$u = 0.215080 - 1.307140I$ $a = -0.127449 + 1.308880I$ $b = -0.575167 + 1.111610I$	$2.99936 - 6.15987I$	$-1.59102 + 5.34173I$
$u = 0.215080 - 1.307140I$ $a = 1.290360 + 0.282036I$ $b = 2.26738 - 0.12156I$	$-8.84111 - 2.82812I$	$-11.11859 + 2.97945I$
$u = 0.215080 - 1.307140I$ $a = -0.564558 - 0.306692I$ $b = -0.833786 + 0.795800I$	$-6.13913 - 0.61415I$	$-2.62407 - 1.24344I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.569840$ $a = -0.494172 + 1.023630I$ $b = 0.055265 + 0.919402I$	$-2.00154 - 2.21397I$	$3.90519 + 4.22289I$
$u = 0.569840$ $a = -0.494172 - 1.023630I$ $b = 0.055265 - 0.919402I$	$-2.00154 + 2.21397I$	$3.90519 - 4.22289I$
$u = 0.569840$ $a = -1.81678 + 0.97410I$ $b = -0.401412 - 1.037940I$	$7.13694 + 3.33174I$	$4.93825 - 2.36228I$
$u = 0.569840$ $a = -1.81678 - 0.97410I$ $b = -0.401412 + 1.037940I$	$7.13694 - 3.33174I$	$4.93825 + 2.36228I$
$u = 0.569840$ $a = 1.73970 + 1.26637I$ $b = 0.470359 - 0.966293I$	$7.13694 + 3.33174I$	$4.93825 - 2.36228I$
$u = 0.569840$ $a = 1.73970 - 1.26637I$ $b = 0.470359 + 0.966293I$	$7.13694 - 3.33174I$	$4.93825 + 2.36228I$
$u = 0.569840$ $a = 0.18462 + 2.19674I$ $b = 0.221651 - 0.130016I$	$-2.00154 + 2.21397I$	$3.90519 - 4.22289I$
$u = 0.569840$ $a = 0.18462 - 2.19674I$ $b = 0.221651 + 0.130016I$	$-2.00154 - 2.21397I$	$3.90519 + 4.22289I$
$u = 0.569840$ $a = -0.27573 + 2.20498I$ $b = 0.246656 + 0.540491I$	-4.70353	$-4.58932 + 0.I$
$u = 0.569840$ $a = -0.27573 - 2.20498I$ $b = 0.246656 - 0.540491I$	-4.70353	$-4.58932 + 0.I$

III.

$\boldsymbol{I^u_3 = \langle 2u^{17}+15u^{15}+\cdots+b+2,\ 2u^{16}-2u^{15}+\cdots+a+4,\ u^{18}-u^{17}+\cdots-4u+1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2u^{16} + 2u^{15} + \cdots - 4u - 4 \\ -2u^{17} - 15u^{15} + \cdots + 4u - 2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2u^{17} - 4u^{16} + \cdots - 21u^2 - 4 \\ -3u^{16} + 4u^{15} + \cdots + 6u - 2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2u^{17} + 2u^{16} + \cdots - 22u + 5 \\ -u^{17} + 2u^{16} + \cdots - 4u + 2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^{17} - 3u^{16} + \cdots + 13u - 2 \\ -3u^{17} - 21u^{15} + \cdots + 19u - 5 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^{17} - 2u^{16} + \cdots + 27u - 5 \\ -2u^{17} + u^{16} + \cdots + 6u - 3 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{16} - 8u^{14} + \cdots - 15u + 1 \\ -u^{16} + u^{15} + \cdots - 19u^2 + 3u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2u^{17} + u^{16} + \cdots - 19u + 4 \\ -u^{17} + u^{16} + \cdots - u + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2u^{17} + 7u^{16} - 24u^{15} + 61u^{14} - 112u^{13} + 219u^{12} - 282u^{11} + 425u^{10} - 445u^9 + 493u^8 - 466u^7 + 358u^6 - 299u^5 + 167u^4 - 81u^3 + 44u^2 + 7u - 5$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} - 8u^{17} + \cdots - 8u + 1$
c_2	$u^{18} + 2u^{17} + \cdots + 2u + 1$
c_3, c_{11}	$u^{18} + 7u^{16} + \cdots + 13u^2 + 1$
c_4, c_9	$u^{18} + 7u^{16} + \cdots + 13u^2 + 1$
c_5	$u^{18} - 2u^{17} + \cdots - 2u + 1$
c_6, c_{10}	$u^{18} + u^{17} + \cdots + u + 1$
c_7, c_8	$u^{18} - u^{17} + \cdots - 4u + 1$
c_{12}	$u^{18} + u^{17} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{18} + 12y^{17} + \cdots + 16y + 1$
c_2, c_5	$y^{18} - 8y^{17} + \cdots - 8y + 1$
c_3, c_4, c_9 c_{11}	$y^{18} + 14y^{17} + \cdots + 26y + 1$
c_6, c_{10}	$y^{18} + 5y^{17} + \cdots - 9y + 1$
c_7, c_8, c_{12}	$y^{18} + 19y^{17} + \cdots + 26y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.548156+0.847238I$ $a=-0.223507+0.171449I$ $b=-0.275267-0.419395I$	$-1.41562-2.18118I$	$-2.40356+0.24504I$
$u=-0.548156-0.847238I$ $a=-0.223507-0.171449I$ $b=-0.275267+0.419395I$	$-1.41562+2.18118I$	$-2.40356-0.24504I$
$u=-0.289325+0.967313I$ $a=-0.214015-0.827701I$ $b=\ \ 1.143520-0.792525I$	$4.75616-4.41472I$	$1.35648+3.62940I$
$u=-0.289325-0.967313I$ $a=-0.214015+0.827701I$ $b=\ \ 1.143520+0.792525I$	$4.75616+4.41472I$	$1.35648-3.62940I$
$u=-0.301562+1.039980I$ $a=-0.015170+0.829040I$ $b=-1.39264+0.54596I$	$4.48430+2.10133I$	$1.59454-2.04993I$
$u=-0.301562-1.039980I$ $a=-0.015170-0.829040I$ $b=-1.39264-0.54596I$	$4.48430-2.10133I$	$1.59454+2.04993I$
$u=\ \ 0.826816+0.217598I$ $a=-0.35619-1.39245I$ $b=-0.265916-0.214656I$	$-4.52038+1.43762I$	$-3.35124-4.60330I$
$u=\ \ 0.826816-0.217598I$ $a=-0.35619+1.39245I$ $b=-0.265916+0.214656I$	$-4.52038-1.43762I$	$-3.35124+4.60330I$
$u=\ \ 0.278515+1.287490I$ $a=-1.123880+0.058895I$ $b=-2.12241-0.53151I$	$-7.92752+2.43301I$	$-1.35565+0.52411I$
$u=\ \ 0.278515-1.287490I$ $a=-1.123880-0.058895I$ $b=-2.12241+0.53151I$	$-7.92752-2.43301I$	$-1.35565-0.52411I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.094154 + 1.349150I$ $a = -0.996965 + 0.368074I$ $b = -2.30279 - 0.39041I$	$-7.09698 + 2.98270I$	$-3.08593 - 3.04995I$
$u = 0.094154 - 1.349150I$ $a = -0.996965 - 0.368074I$ $b = -2.30279 + 0.39041I$	$-7.09698 - 2.98270I$	$-3.08593 + 3.04995I$
$u = -0.01485 + 1.49543I$ $a = 0.746594 - 0.367613I$ $b = 2.22443 + 0.33307I$	$-9.34606 - 2.01452I$	$-7.23332 - 0.16467I$
$u = -0.01485 - 1.49543I$ $a = 0.746594 + 0.367613I$ $b = 2.22443 - 0.33307I$	$-9.34606 + 2.01452I$	$-7.23332 + 0.16467I$
$u = 0.35110 + 1.52606I$ $a = 0.830916 - 0.030800I$ $b = 2.13840 + 0.29887I$	$-10.29080 + 5.91942I$	$-5.83679 - 3.74571I$
$u = 0.35110 - 1.52606I$ $a = 0.830916 + 0.030800I$ $b = 2.13840 - 0.29887I$	$-10.29080 - 5.91942I$	$-5.83679 + 3.74571I$
$u = 0.103300 + 0.232173I$ $a = -3.64778 - 2.10197I$ $b = -0.147325 - 0.979951I$	$-3.18667 - 2.11613I$	$-5.18453 + 3.64144I$
$u = 0.103300 - 0.232173I$ $a = -3.64778 + 2.10197I$ $b = -0.147325 + 0.979951I$	$-3.18667 + 2.11613I$	$-5.18453 - 3.64144I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^5+u^4+4u^3+3u^2+3u+1)^6)(u^{18}-8u^{17}+\cdots-8u+1)$ $\cdot(u^{26}+9u^{25}+\cdots+96u+64)$
c_2	$((u^5-u^4+u^2+u-1)^6)(u^{18}+2u^{17}+\cdots+2u+1)$ $\cdot(u^{26}+9u^{25}+\cdots+24u+8)$
c_3, c_{11}	$(u^{18}+7u^{16}+\cdots+13u^2+1)(u^{26}+8u^{24}+\cdots+3u+1)$ $\cdot(u^{30}-u^{29}+\cdots+1390u+773)$
c_4, c_9	$(u^{18}+7u^{16}+\cdots+13u^2+1)(u^{26}+8u^{24}+\cdots+3u+1)$ $\cdot(u^{30}-u^{29}+\cdots+1390u+773)$
c_5	$((u^5-u^4+u^2+u-1)^6)(u^{18}-2u^{17}+\cdots-2u+1)$ $\cdot(u^{26}+9u^{25}+\cdots+24u+8)$
c_6, c_{10}	$(u^{18}+u^{17}+\cdots+u+1)(u^{26}+u^{25}+\cdots+14u+1)$ $\cdot(u^{30}-3u^{29}+\cdots-9926u+2939)$
c_7, c_8	$((u^3+u^2+2u+1)^{10})(u^{18}-u^{17}+\cdots-4u+1)$ $\cdot(u^{26}-12u^{25}+\cdots-288u+32)$
c_{12}	$((u^3+u^2+2u+1)^{10})(u^{18}+u^{17}+\cdots+4u+1)$ $\cdot(u^{26}-12u^{25}+\cdots-288u+32)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^5+7y^4+16y^3+13y^2+3y-1)^6)(y^{18}+12y^{17}+\cdots+16y+1)$ $\cdot(y^{26}+19y^{25}+\cdots-8704y+4096)$
c_2, c_5	$((y^5-y^4+4y^3-3y^2+3y-1)^6)(y^{18}-8y^{17}+\cdots-8y+1)$ $\cdot(y^{26}-9y^{25}+\cdots-96y+64)$
c_3, c_4, c_9 c_{11}	$(y^{18}+14y^{17}+\cdots+26y+1)(y^{26}+16y^{25}+\cdots+5y+1)$ $\cdot(y^{30}+15y^{29}+\cdots+5878292y+597529)$
c_6, c_{10}	$(y^{18}+5y^{17}+\cdots-9y+1)(y^{26}+39y^{25}+\cdots-50y+1)$ $\cdot(y^{30}+19y^{29}+\cdots-67383832y+8637721)$
c_7, c_8, c_{12}	$((y^3+3y^2+2y-1)^{10})(y^{18}+19y^{17}+\cdots+26y+1)$ $\cdot(y^{26}+22y^{25}+\cdots+512y+1024)$