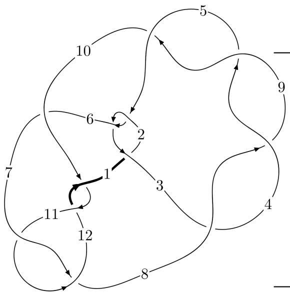
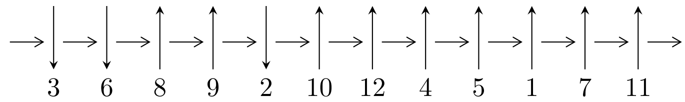
$12a_{0274}$ $(K12a_{0274})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.74822 \times 10^{78}u^{76} - 6.58436 \times 10^{78}u^{75} + \cdots + 3.26649 \times 10^{78}b - 2.45503 \times 10^{79},$$
$$3.83245 \times 10^{80}u^{76} + 1.21540 \times 10^{81}u^{75} + \cdots + 1.50259 \times 10^{80}a + 7.16663 \times 10^{81},\ u^{77} + 4u^{76} + \cdots - 83u +$$
$$I_2^u = \langle b,\ a^3 - a^2 + 2a - 1,\ u + 1\rangle$$
$$I_3^u = \langle -58a^5 - 93a^4 + 166a^3 + 145a^2 + 1375b - 1557a - 761,\ a^6 + 2a^5 - a^4 - 2a^3 + 14a^2 + 16a - 23,\ u - 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 86 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. $\boldsymbol{I_1^u = \langle -2.75 \times 10^{78} u^{76} - 6.58 \times 10^{78} u^{75} + \cdots + 3.27 \times 10^{78} b - 2.46 \times 10^{79},\ 3.83 \times 10^{80} u^{76} + 1.22 \times 10^{81} u^{75} + \cdots + 1.50 \times 10^{80} a + 7.17 \times 10^{81},\ u^{77} + 4u^{76} + \cdots - 83u + 23 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -2.55057u^{76} - 8.08869u^{75} + \cdots + 198.750u - 47.6953 \\ 0.841338u^{76} + 2.01573u^{75} + \cdots - 6.68307u + 7.51581 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.0655842u^{76} - 0.348936u^{75} + \cdots + 48.3109u - 3.54945 \\ 0.0711030u^{76} + 0.423687u^{75} + \cdots - 38.3393u + 8.52212 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -3.33726u^{76} - 10.1169u^{75} + \cdots + 200.943u - 51.1967 \\ 0.855842u^{76} + 2.09894u^{75} + \cdots - 11.7733u + 8.37597 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -3.39191u^{76} - 10.1044u^{75} + \cdots + 205.433u - 55.2111 \\ 0.841338u^{76} + 2.01573u^{75} + \cdots - 6.68307u + 7.51581 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.874063u^{76} + 3.35873u^{75} + \cdots - 110.479u + 22.8121 \\ -0.662021u^{76} - 2.14455u^{75} + \cdots + 63.8417u - 16.9405 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 3.78999u^{76} + 11.7097u^{75} + \cdots - 255.675u + 57.5747 \\ -1.08746u^{76} - 2.22875u^{75} + \cdots - 36.8047u + 1.34287 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.300634u^{76} + 0.554541u^{75} + \cdots + 21.2154u - 0.921596 \\ -0.0330706u^{76} + 0.409257u^{75} + \cdots - 65.3295u + 13.9071 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2.17395u^{76} + 8.19414u^{75} + \cdots - 265.163u + 68.6829$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{77} + 36u^{76} + \cdots + 18067u + 529$
c_2, c_5	$u^{77} + 4u^{76} + \cdots - 83u + 23$
c_3, c_4, c_8 c_9	$u^{77} + u^{76} + \cdots + 40u - 8$
c_6	$u^{77} - 2u^{76} + \cdots + 15744u + 1429$
c_7, c_{11}	$u^{77} + 2u^{76} + \cdots + 8u + 1$
c_{10}, c_{12}	$u^{77} - 26u^{76} + \cdots + 52u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{77} + 20y^{76} + \cdots + 58766823y - 279841$
c_2, c_5	$y^{77} - 36y^{76} + \cdots + 18067y - 529$
c_3, c_4, c_8 c_9	$y^{77} - 91y^{76} + \cdots + 1600y - 64$
c_6	$y^{77} - 18y^{76} + \cdots + 161870600y - 2042041$
c_7, c_{11}	$y^{77} - 26y^{76} + \cdots + 52y - 1$
c_{10}, c_{12}	$y^{77} + 54y^{76} + \cdots + 1876y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.909672 + 0.421724I$ $a = 1.145770 - 0.117310I$ $b = 1.316650 + 0.146721I$	$1.44070 + 0.67158I$	0
$u = 0.909672 - 0.421724I$ $a = 1.145770 + 0.117310I$ $b = 1.316650 - 0.146721I$	$1.44070 - 0.67158I$	0
$u = 0.958740 + 0.259334I$ $a = -1.02808 - 1.54394I$ $b = 0.436907 - 0.282220I$	$-4.69950 + 2.00322I$	0
$u = 0.958740 - 0.259334I$ $a = -1.02808 + 1.54394I$ $b = 0.436907 + 0.282220I$	$-4.69950 - 2.00322I$	0
$u = -0.406477 + 0.928601I$ $a = 0.445300 + 0.285962I$ $b = -1.61605 + 0.12297I$	$7.99937 - 3.55322I$	0
$u = -0.406477 - 0.928601I$ $a = 0.445300 - 0.285962I$ $b = -1.61605 - 0.12297I$	$7.99937 + 3.55322I$	0
$u = -0.836156 + 0.510128I$ $a = 1.39187 - 1.92431I$ $b = -1.54628 - 0.04973I$	$2.10806 - 0.97873I$	0
$u = -0.836156 - 0.510128I$ $a = 1.39187 + 1.92431I$ $b = -1.54628 + 0.04973I$	$2.10806 + 0.97873I$	0
$u = -0.846089 + 0.570762I$ $a = 0.455833 - 1.127310I$ $b = 0.119346 - 0.679087I$	$2.27118 + 2.27901I$	0
$u = -0.846089 - 0.570762I$ $a = 0.455833 + 1.127310I$ $b = 0.119346 + 0.679087I$	$2.27118 - 2.27901I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.597501 + 0.832618I$ $a = 0.671200 - 0.276505I$ $b = -1.62202 + 0.04903I$	$9.40242 - 0.58348I$	0
$u = -0.597501 - 0.832618I$ $a = 0.671200 + 0.276505I$ $b = -1.62202 - 0.04903I$	$9.40242 + 0.58348I$	0
$u = 0.802252 + 0.545356I$ $a = -0.874362 + 0.161172I$ $b = -1.201920 - 0.173318I$	$2.10589 - 4.47726I$	0
$u = 0.802252 - 0.545356I$ $a = -0.874362 - 0.161172I$ $b = -1.201920 + 0.173318I$	$2.10589 + 4.47726I$	0
$u = -0.890705 + 0.520123I$ $a = -1.08169 + 2.10827I$ $b = 1.54943 + 0.06669I$	$1.91630 + 5.14719I$	0
$u = -0.890705 - 0.520123I$ $a = -1.08169 - 2.10827I$ $b = 1.54943 - 0.06669I$	$1.91630 - 5.14719I$	0
$u = 0.991337 + 0.301788I$ $a = 0.82004 + 1.60677I$ $b = -0.462524 + 0.336790I$	$-4.95823 - 3.85716I$	0
$u = 0.991337 - 0.301788I$ $a = 0.82004 - 1.60677I$ $b = -0.462524 - 0.336790I$	$-4.95823 + 3.85716I$	0
$u = 0.836998 + 0.614038I$ $a = -0.041166 - 1.187280I$ $b = 0.857804 - 0.340914I$	$1.92653 - 0.25220I$	0
$u = 0.836998 - 0.614038I$ $a = -0.041166 + 1.187280I$ $b = 0.857804 + 0.340914I$	$1.92653 + 0.25220I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.890297+0.288879I$ $a=-0.425721+0.887659I$ $b=-0.165105+0.473169I$	$-1.49628+1.00710I$	0
$u=-0.890297-0.288879I$ $a=-0.425721-0.887659I$ $b=-0.165105-0.473169I$	$-1.49628-1.00710I$	0
$u=-0.400975+0.987005I$ $a=-0.303931-0.289012I$ $b=1.63234-0.13703I$	$9.29601-9.22325I$	0
$u=-0.400975-0.987005I$ $a=-0.303931+0.289012I$ $b=1.63234+0.13703I$	$9.29601+9.22325I$	0
$u=1.06557$ $a=1.39720$ $b=1.43866$	3.34047	0
$u=0.418780+0.816135I$ $a=-0.148801-0.514697I$ $b=-0.782315-0.480447I$	$1.05052+6.88705I$	$9.76091-6.50910I$
$u=0.418780-0.816135I$ $a=-0.148801+0.514697I$ $b=-0.782315+0.480447I$	$1.05052-6.88705I$	$9.76091+6.50910I$
$u=0.573921+0.715342I$ $a=-0.261874-0.208626I$ $b=-0.895579-0.336201I$	$5.54189+1.10408I$	$15.4148-1.4693I$
$u=0.573921-0.715342I$ $a=-0.261874+0.208626I$ $b=-0.895579+0.336201I$	$5.54189-1.10408I$	$15.4148+1.4693I$
$u=-0.540901+0.962764I$ $a=-0.345496+0.047931I$ $b=1.65287-0.08862I$	$14.3060-2.7130I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.540901 - 0.962764I$ $a = -0.345496 - 0.047931I$ $b = 1.65287 + 0.08862I$	$14.3060 + 2.7130I$	0
$u = 0.970781 + 0.539274I$ $a = 0.23436 + 1.40764I$ $b = -0.708068 + 0.428688I$	$0.09329 - 4.18401I$	0
$u = 0.970781 - 0.539274I$ $a = 0.23436 - 1.40764I$ $b = -0.708068 - 0.428688I$	$0.09329 + 4.18401I$	0
$u = -0.695841 + 0.894243I$ $a = -0.401450 + 0.493510I$ $b = 1.65626 - 0.02689I$	$11.38460 + 4.14926I$	0
$u = -0.695841 - 0.894243I$ $a = -0.401450 - 0.493510I$ $b = 1.65626 + 0.02689I$	$11.38460 - 4.14926I$	0
$u = 0.643060 + 0.568525I$ $a = -0.462709 + 0.784941I$ $b = -1.075780 + 0.071760I$	$2.18683 - 4.44396I$	$11.04197 + 6.64377I$
$u = 0.643060 - 0.568525I$ $a = -0.462709 - 0.784941I$ $b = -1.075780 - 0.071760I$	$2.18683 + 4.44396I$	$11.04197 - 6.64377I$
$u = -1.15096$ $a = 0.896231$ $b = 0.456757$	-0.0502180	0
$u = -1.024390 + 0.528329I$ $a = -0.596620 + 1.107350I$ $b = -0.262025 + 0.677567I$	$-3.39577 + 2.31723I$	0
$u = -1.024390 - 0.528329I$ $a = -0.596620 - 1.107350I$ $b = -0.262025 - 0.677567I$	$-3.39577 - 2.31723I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.373401 + 0.749056I$ $a = 0.027274 + 0.494073I$ $b = 0.721323 + 0.440410I$	$0.00960 + 1.45996I$	$7.97618 - 1.67296I$
$u = 0.373401 - 0.749056I$ $a = 0.027274 - 0.494073I$ $b = 0.721323 - 0.440410I$	$0.00960 - 1.45996I$	$7.97618 + 1.67296I$
$u = -1.017340 + 0.584382I$ $a = 0.580607 - 1.153790I$ $b = 0.244773 - 0.720969I$	$-2.43522 + 7.84920I$	0
$u = -1.017340 - 0.584382I$ $a = 0.580607 + 1.153790I$ $b = 0.244773 + 0.720969I$	$-2.43522 - 7.84920I$	0
$u = -0.550357 + 0.611012I$ $a = 0.327725 - 1.139910I$ $b = -0.076911 - 0.650916I$	$-1.07363 - 3.09170I$	$6.13866 + 1.90820I$
$u = -0.550357 - 0.611012I$ $a = 0.327725 + 1.139910I$ $b = -0.076911 + 0.650916I$	$-1.07363 + 3.09170I$	$6.13866 - 1.90820I$
$u = 1.013480 + 0.645468I$ $a = -0.05966 - 1.47790I$ $b = 0.784663 - 0.521607I$	$4.27243 - 6.32707I$	0
$u = 1.013480 - 0.645468I$ $a = -0.05966 + 1.47790I$ $b = 0.784663 + 0.521607I$	$4.27243 + 6.32707I$	0
$u = -1.191670 + 0.202786I$ $a = -0.937769 + 0.691714I$ $b = -0.500980 + 0.368243I$	$-4.82096 + 1.25692I$	0
$u = -1.191670 - 0.202786I$ $a = -0.937769 - 0.691714I$ $b = -0.500980 - 0.368243I$	$-4.82096 - 1.25692I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.218840 + 0.157900I$ $a = 1.046590 - 0.605303I$ $b = 0.556485 - 0.309636I$	$-4.31085 - 4.23744I$	0
$u = -1.218840 - 0.157900I$ $a = 1.046590 + 0.605303I$ $b = 0.556485 + 0.309636I$	$-4.31085 + 4.23744I$	0
$u = 0.590345 + 0.485361I$ $a = -0.231755 - 0.263888I$ $b = 0.740376 + 0.068232I$	$1.195250 - 0.076686I$	$9.28796 - 0.38114I$
$u = 0.590345 - 0.485361I$ $a = -0.231755 + 0.263888I$ $b = 0.740376 - 0.068232I$	$1.195250 + 0.076686I$	$9.28796 + 0.38114I$
$u = -0.994216 + 0.757099I$ $a = 0.10861 - 1.43993I$ $b = -1.63961 - 0.09571I$	$10.46370 + 1.91251I$	0
$u = -0.994216 - 0.757099I$ $a = 0.10861 + 1.43993I$ $b = -1.63961 + 0.09571I$	$10.46370 - 1.91251I$	0
$u = -1.048280 + 0.682578I$ $a = -0.04252 + 1.74716I$ $b = 1.61286 + 0.12210I$	$8.02968 + 6.23821I$	0
$u = -1.048280 - 0.682578I$ $a = -0.04252 - 1.74716I$ $b = 1.61286 - 0.12210I$	$8.02968 - 6.23821I$	0
$u = 1.102630 + 0.596774I$ $a = 0.11430 + 1.60963I$ $b = -0.699462 + 0.578264I$	$-2.08597 - 6.55777I$	0
$u = 1.102630 - 0.596774I$ $a = 0.11430 - 1.60963I$ $b = -0.699462 - 0.578264I$	$-2.08597 + 6.55777I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.114800 + 0.628614I$ $a = -0.06903 - 1.61630I$ $b = 0.722493 - 0.603009I$	$-1.00381 - 12.28950I$	0
$u = 1.114800 - 0.628614I$ $a = -0.06903 + 1.61630I$ $b = 0.722493 + 0.603009I$	$-1.00381 + 12.28950I$	0
$u = 1.306230 + 0.170113I$ $a = 1.395400 + 0.041474I$ $b = 1.54130 + 0.08244I$	$2.08330 + 0.27442I$	0
$u = 1.306230 - 0.170113I$ $a = 1.395400 - 0.041474I$ $b = 1.54130 - 0.08244I$	$2.08330 - 0.27442I$	0
$u = -1.119810 + 0.728835I$ $a = -0.22423 - 1.66256I$ $b = -1.63651 - 0.15001I$	$12.5328 + 8.8745I$	0
$u = -1.119810 - 0.728835I$ $a = -0.22423 + 1.66256I$ $b = -1.63651 + 0.15001I$	$12.5328 - 8.8745I$	0
$u = -1.164610 + 0.659606I$ $a = 0.33637 + 1.89170I$ $b = 1.60778 + 0.17375I$	$5.70123 + 9.37064I$	0
$u = -1.164610 - 0.659606I$ $a = 0.33637 - 1.89170I$ $b = 1.60778 - 0.17375I$	$5.70123 - 9.37064I$	0
$u = -0.376520 + 0.530963I$ $a = -0.323876 + 1.114950I$ $b = 0.156016 + 0.563558I$	$-1.67624 + 1.95624I$	$4.81633 - 4.78600I$
$u = -0.376520 - 0.530963I$ $a = -0.323876 - 1.114950I$ $b = 0.156016 - 0.563558I$	$-1.67624 - 1.95624I$	$4.81633 + 4.78600I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.36189$ $a = -1.42452$ $b = -1.57196$	7.09596	0
$u = -1.188130 + 0.675633I$ $a = -0.40955 - 1.84238I$ $b = -1.61626 - 0.18395I$	$6.8851 + 15.2545I$	0
$u = -1.188130 - 0.675633I$ $a = -0.40955 + 1.84238I$ $b = -1.61626 + 0.18395I$	$6.8851 - 15.2545I$	0
$u = 1.370940 + 0.151238I$ $a = -1.41752 - 0.04527I$ $b = -1.57417 - 0.07529I$	$3.00302 + 5.57310I$	0
$u = 1.370940 - 0.151238I$ $a = -1.41752 + 0.04527I$ $b = -1.57417 + 0.07529I$	$3.00302 - 5.57310I$	0
$u = 0.510245$ $a = -2.32566$ $b = -1.33755$	5.64254	18.1120
$u = 0.256713$ $a = -1.32663$ $b = 0.357915$	0.734621	14.2980

II. $\boldsymbol{I_2^u = \langle b,\ a^3 - a^2 + 2a - 1,\ u + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} a \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} a^2 + 1 \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -a \end{pmatrix}$$
$$a_9 = \begin{pmatrix} a \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} a \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -1 \\ -a^2 - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2a^2 - 2a + 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = \quad 0.215080 + 1.307140I$ $b = \quad 0$	$-4.66906 + 2.82812I$	$4.89456 - 3.73884I$
$u = -1.00000$ $a = \quad 0.215080 - 1.307140I$ $b = \quad 0$	$-4.66906 - 2.82812I$	$4.89456 + 3.73884I$
$u = -1.00000$ $a = \quad 0.569840$ $b = \quad 0$	-0.531480	0.210880

III. $\boldsymbol{I_3^u =}$
$\boldsymbol{\langle -58a^5+1375b+\cdots-1557a-761,\ a^6+2a^5-a^4-2a^3+14a^2+16a-23,\ u-1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} a \\ 0.0421818a^5 + 0.0676364a^4 + \cdots + 1.13236a + 0.553455 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.0167273a^5 + 0.0785455a^4 + \cdots + 0.121455a + 0.0298182 \\ -0.0167273a^5 - 0.0785455a^4 + \cdots - 0.121455a - 0.0298182 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.0421818a^5 + 0.0676364a^4 + \cdots + 1.13236a + 0.553455 \\ 0.0843636a^5 + 0.135273a^4 + \cdots + 1.26473a + 1.10691 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.0421818a^5 - 0.0676364a^4 + \cdots - 0.132364a - 0.553455 \\ 0.0421818a^5 + 0.0676364a^4 + \cdots + 1.13236a + 0.553455 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.0167273a^5 - 0.0785455a^4 + \cdots - 0.121455a - 0.0298182 \\ 2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -a \\ -0.0421818a^5 - 0.0676364a^4 + \cdots - 1.13236a - 0.553455 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.0167273a^5 + 0.0785455a^4 + \cdots + 0.121455a + 2.02982 \\ 0.0501818a^5 + 0.235636a^4 + \cdots + 0.364364a + 2.08945 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{48}{1375}a^5 + \frac{492}{1375}a^4 + \frac{896}{1375}a^3 + \frac{24}{275}a^2 + \frac{608}{1375}a + \frac{13784}{1375}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u-1)^6$
c_2	$(u+1)^6$
c_3, c_4, c_8 c_9	$(u^2-2)^3$
c_6, c_{12}	$(u^3-u^2+2u-1)^2$
c_7	$(u^3+u^2-1)^2$
c_{10}	$(u^3+u^2+2u+1)^2$
c_{11}	$(u^3-u^2+1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y-1)^6$
c_3, c_4, c_8 c_9	$(y-2)^6$
c_6, c_{10}, c_{12}	$(y^3+3y^2+2y-1)^2$
c_7, c_{11}	$(y^3-y^2+2y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 0.844373$ $b = 1.41421$	4.40332	11.0200
$u = 1.00000$ $a = 1.19913 + 1.30714I$ $b = 1.41421$	$0.26574 - 2.82812I$	$4.49024 + 2.97945I$
$u = 1.00000$ $a = 1.19913 - 1.30714I$ $b = 1.41421$	$0.26574 + 2.82812I$	$4.49024 - 2.97945I$
$u = 1.00000$ $a = -1.98405$ $b = -1.41421$	4.40332	11.0200
$u = 1.00000$ $a = -1.62929 + 1.30714I$ $b = -1.41421$	$0.26574 - 2.82812I$	$4.49024 + 2.97945I$
$u = 1.00000$ $a = -1.62929 - 1.30714I$ $b = -1.41421$	$0.26574 + 2.82812I$	$4.49024 - 2.97945I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^{77}+36u^{76}+\cdots+18067u+529)$
c_2	$((u-1)^3)(u+1)^6(u^{77}+4u^{76}+\cdots-83u+23)$
c_3, c_4, c_8 c_9	$u^3(u^2-2)^3(u^{77}+u^{76}+\cdots+40u-8)$
c_5	$((u-1)^6)(u+1)^3(u^{77}+4u^{76}+\cdots-83u+23)$
c_6	$(u^3-u^2+2u-1)^2(u^3+u^2+2u+1)$ $\cdot(u^{77}-2u^{76}+\cdots+15744u+1429)$
c_7	$(u^3-u^2+1)(u^3+u^2-1)^2(u^{77}+2u^{76}+\cdots+8u+1)$
c_{10}	$((u^3+u^2+2u+1)^3)(u^{77}-26u^{76}+\cdots+52u-1)$
c_{11}	$((u^3-u^2+1)^2)(u^3+u^2-1)(u^{77}+2u^{76}+\cdots+8u+1)$
c_{12}	$((u^3-u^2+2u-1)^3)(u^{77}-26u^{76}+\cdots+52u-1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^9)(y^{77}+20y^{76}+\cdots+5.87668\times 10^7 y-279841)$
c_2, c_5	$((y-1)^9)(y^{77}-36y^{76}+\cdots+18067y-529)$
c_3, c_4, c_8 c_9	$y^3(y-2)^6(y^{77}-91y^{76}+\cdots+1600y-64)$
c_6	$((y^3+3y^2+2y-1)^3)(y^{77}-18y^{76}+\cdots+1.61871\times 10^8 y-2042041)$
c_7, c_{11}	$((y^3-y^2+2y-1)^3)(y^{77}-26y^{76}+\cdots+52y-1)$
c_{10}, c_{12}	$((y^3+3y^2+2y-1)^3)(y^{77}+54y^{76}+\cdots+1876y-1)$