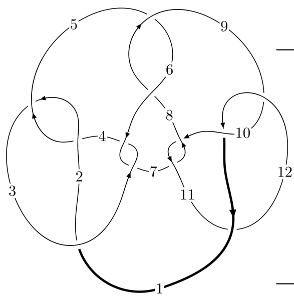
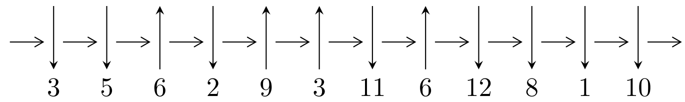
$12n_{0086}$ ($K12n_{0086}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.19780 \times 10^{241} u^{65} + 8.81073 \times 10^{241} u^{64} + \cdots + 3.02569 \times 10^{240} b + 9.53394 \times 10^{243}, \\ & 8.96655 \times 10^{240} u^{65} + 6.61765 \times 10^{241} u^{64} + \cdots + 3.02569 \times 10^{240} a + 6.94724 \times 10^{243}, \\ & u^{66} + 8u^{65} + \cdots - 7168u + 512 \rangle \\ I_2^u = \langle & u^5 - 2u^3 - u^2 + b + 2u + 1,\ u^5 + 2u^4 - u^3 - 3u^2 + a + 2,\ u^6 + u^5 - u^4 - 2u^3 + u + 1 \rangle \end{aligned}$$

$$\begin{aligned} I_1^v = \langle & a,\ 1742v^8 - 24207v^7 - 17107v^6 + 21829v^5 + 12682v^4 - 26226v^3 - 24997v^2 + 683b - 5624v + 648, \\ & v^9 - 13v^8 - 22v^7 + 15v^5 - 5v^4 - 25v^3 - 20v^2 - 7v - 1 \rangle \end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 81 representations.

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[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. $\boldsymbol{I_1^u = \langle 1.20 \times 10^{241} u^{65} + 8.81 \times 10^{241} u^{64} + \cdots + 3.03 \times 10^{240} b + 9.53 \times 10^{243},\ 8.97 \times 10^{240} u^{65} + 6.62 \times 10^{241} u^{64} + \cdots + 3.03 \times 10^{240} a + 6.95 \times 10^{243},\ u^{66} + 8u^{65} + \cdots - 7168u + 512 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -2.96348u^{65} - 21.8716u^{64} + \cdots + 37209.0u - 2296.09 \\ -3.95876u^{65} - 29.1198u^{64} + \cdots + 48993.3u - 3151.00 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.189192u^{65} - 1.42917u^{64} + \cdots + 3725.71u - 278.930 \\ -3.64017u^{65} - 26.9641u^{64} + \cdots + 48969.5u - 3124.72 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -3.82936u^{65} - 28.3933u^{64} + \cdots + 52695.2u - 3403.65 \\ -3.64017u^{65} - 26.9641u^{64} + \cdots + 48969.5u - 3124.72 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.597599u^{65} - 4.38854u^{64} + \cdots + 7145.50u - 452.205 \\ -1.29177u^{65} - 9.48251u^{64} + \cdots + 15607.1u - 1005.22 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.694167u^{65} - 5.09397u^{64} + \cdots + 8461.64u - 553.013 \\ -1.29177u^{65} - 9.48251u^{64} + \cdots + 15607.1u - 1005.22 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.694167u^{65} - 5.09397u^{64} + \cdots + 8461.64u - 553.013 \\ -0.988463u^{65} - 7.25680u^{64} + \cdots + 11959.0u - 770.026 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -3.85958u^{65} - 28.4537u^{64} + \cdots + 47856.5u - 2957.77 \\ -7.03239u^{65} - 51.8312u^{64} + \cdots + 89324.7u - 5730.22 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -4.70834u^{65} - 34.8004u^{64} + \cdots + 60886.6u - 3811.37 \\ -7.53902u^{65} - 55.6488u^{64} + \cdots + 97468.3u - 6242.36 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 12.0986u^{65} + 88.8600u^{64} + \cdots - 142679.u + 8879.59$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{66} + 21u^{65} + \cdots + 31524u + 1$
c_2, c_4	$u^{66} - 11u^{65} + \cdots + 184u - 1$
c_3, c_6	$u^{66} + 8u^{65} + \cdots - 7168u + 512$
c_5, c_8	$u^{66} + 3u^{65} + \cdots - 2u - 1$
c_7, c_{10}	$u^{66} - 2u^{65} + \cdots + 192u + 64$
c_9, c_{12}	$u^{66} - 8u^{65} + \cdots - 11u + 1$
c_{11}	$u^{66} + 28u^{65} + \cdots - 143u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{66} + 59y^{65} + \cdots - 992297680y + 1$
c_2, c_4	$y^{66} - 21y^{65} + \cdots - 31524y + 1$
c_3, c_6	$y^{66} - 60y^{65} + \cdots - 76021760y + 262144$
c_5, c_8	$y^{66} + 15y^{65} + \cdots - 20y + 1$
c_7, c_{10}	$y^{66} + 42y^{65} + \cdots + 77824y + 4096$
c_9, c_{12}	$y^{66} - 28y^{65} + \cdots + 143y + 1$
c_{11}	$y^{66} + 28y^{65} + \cdots - 12229y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.896621 + 0.222919I$ $a = -0.68390 + 2.68834I$ $b = -0.03058 - 1.93558I$	$-4.31795 + 0.78820I$	0
$u = -0.896621 - 0.222919I$ $a = -0.68390 - 2.68834I$ $b = -0.03058 + 1.93558I$	$-4.31795 - 0.78820I$	0
$u = -0.161444 + 0.873142I$ $a = 0.24159 - 2.29188I$ $b = 0.96672 - 2.19128I$	$-3.21013 + 1.26950I$	0
$u = -0.161444 - 0.873142I$ $a = 0.24159 + 2.29188I$ $b = 0.96672 + 2.19128I$	$-3.21013 - 1.26950I$	0
$u = 0.734614 + 0.498569I$ $a = -0.296201 + 0.045995I$ $b = 0.216817 + 0.815085I$	$1.31523 + 1.27199I$	0
$u = 0.734614 - 0.498569I$ $a = -0.296201 - 0.045995I$ $b = 0.216817 - 0.815085I$	$1.31523 - 1.27199I$	0
$u = 0.015880 + 1.156380I$ $a = -1.200970 + 0.600425I$ $b = -0.773578 + 1.087150I$	$-2.23471 + 2.98196I$	0
$u = 0.015880 - 1.156380I$ $a = -1.200970 - 0.600425I$ $b = -0.773578 - 1.087150I$	$-2.23471 - 2.98196I$	0
$u = 0.043693 + 0.829853I$ $a = 1.154180 + 0.810143I$ $b = 0.493220 - 0.823559I$	$2.07274 - 4.10478I$	0
$u = 0.043693 - 0.829853I$ $a = 1.154180 - 0.810143I$ $b = 0.493220 + 0.823559I$	$2.07274 + 4.10478I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.010290+0.635704I$ $a=\ 0.0712092-0.0097906I$ $b=\ 0.045899-0.458605I$	$-1.20228-5.48361I$	0
$u=-1.010290-0.635704I$ $a=\ 0.0712092+0.0097906I$ $b=\ 0.045899+0.458605I$	$-1.20228+5.48361I$	0
$u=-0.178380+0.763029I$ $a=-1.123200-0.224763I$ $b=-0.584767+0.854259I$	$2.74552+1.51786I$	0
$u=-0.178380-0.763029I$ $a=-1.123200+0.224763I$ $b=-0.584767-0.854259I$	$2.74552-1.51786I$	0
$u=\ 0.710476+0.000507I$ $a=-0.047677+0.256353I$ $b=-0.191197-0.906715I$	$1.17931-1.63015I$	$0.+3.30141I$
$u=\ 0.710476-0.000507I$ $a=-0.047677-0.256353I$ $b=-0.191197+0.906715I$	$1.17931+1.63015I$	$0.-3.30141I$
$u=-0.438003+0.525280I$ $a=-1.44839-0.54246I$ $b=-0.083240-0.461268I$	$-1.91057+0.79816I$	$-4.00000+0.I$
$u=-0.438003-0.525280I$ $a=-1.44839+0.54246I$ $b=-0.083240+0.461268I$	$-1.91057-0.79816I$	$-4.00000+0.I$
$u=-0.681040+0.017244I$ $a=\ 0.147299-0.561967I$ $b=-0.847666-0.591726I$	$-1.43375-2.91518I$	$0.+4.85019I$
$u=-0.681040-0.017244I$ $a=\ 0.147299+0.561967I$ $b=-0.847666+0.591726I$	$-1.43375+2.91518I$	$0.-4.85019I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.006104 + 0.635645I$ $a = 1.91287 - 1.80281I$ $b = 0.052848 - 0.610826I$	$-1.82059 - 0.01526I$	$-7.87182 + 0.48568I$
$u = -0.006104 - 0.635645I$ $a = 1.91287 + 1.80281I$ $b = 0.052848 + 0.610826I$	$-1.82059 + 0.01526I$	$-7.87182 - 0.48568I$
$u = -0.619648 + 0.008490I$ $a = -0.511507 - 0.814092I$ $b = 1.051820 - 0.516985I$	$-5.23148 - 1.44469I$	$-2.19147 + 1.36304I$
$u = -0.619648 - 0.008490I$ $a = -0.511507 + 0.814092I$ $b = 1.051820 + 0.516985I$	$-5.23148 + 1.44469I$	$-2.19147 - 1.36304I$
$u = -0.598433 + 0.144408I$ $a = -0.338653 + 0.326080I$ $b = 0.823727 + 0.764068I$	$-4.86194 - 7.45999I$	$-0.96246 + 11.41011I$
$u = -0.598433 - 0.144408I$ $a = -0.338653 - 0.326080I$ $b = 0.823727 - 0.764068I$	$-4.86194 + 7.45999I$	$-0.96246 - 11.41011I$
$u = 0.557706 + 0.143081I$ $a = 2.02290 + 5.39960I$ $b = 0.061106 - 0.673706I$	$0.81136 + 2.64313I$	$13.7570 - 9.2546I$
$u = 0.557706 - 0.143081I$ $a = 2.02290 - 5.39960I$ $b = 0.061106 + 0.673706I$	$0.81136 - 2.64313I$	$13.7570 + 9.2546I$
$u = 1.47897 + 0.04915I$ $a = 0.36193 - 1.79756I$ $b = -1.17938 + 2.79473I$	$2.17496 + 0.19887I$	0
$u = 1.47897 - 0.04915I$ $a = 0.36193 + 1.79756I$ $b = -1.17938 - 2.79473I$	$2.17496 - 0.19887I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.49869 + 0.12364I$ $a = 0.028754 + 0.149012I$ $b = -1.196520 - 0.662560I$	$3.57906 + 2.47635I$	0
$u = 1.49869 - 0.12364I$ $a = 0.028754 - 0.149012I$ $b = -1.196520 + 0.662560I$	$3.57906 - 2.47635I$	0
$u = -1.51285 + 0.03928I$ $a = 0.346340 - 1.327240I$ $b = -1.21560 + 1.60059I$	$7.72304 - 2.79945I$	0
$u = -1.51285 - 0.03928I$ $a = 0.346340 + 1.327240I$ $b = -1.21560 - 1.60059I$	$7.72304 + 2.79945I$	0
$u = -1.47811 + 0.34080I$ $a = -0.1005600 - 0.0917447I$ $b = -0.972026 + 0.012478I$	$3.17239 - 3.89822I$	0
$u = -1.47811 - 0.34080I$ $a = -0.1005600 + 0.0917447I$ $b = -0.972026 - 0.012478I$	$3.17239 + 3.89822I$	0
$u = -1.46366 + 0.47734I$ $a = -0.26778 + 1.74931I$ $b = -1.79456 - 2.53218I$	$1.18870 - 6.56344I$	0
$u = -1.46366 - 0.47734I$ $a = -0.26778 - 1.74931I$ $b = -1.79456 + 2.53218I$	$1.18870 + 6.56344I$	0
$u = 1.47312 + 0.46657I$ $a = 0.767438 + 1.139500I$ $b = -0.63144 - 1.94704I$	$6.78475 + 9.23321I$	0
$u = 1.47312 - 0.46657I$ $a = 0.767438 - 1.139500I$ $b = -0.63144 + 1.94704I$	$6.78475 - 9.23321I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.45244 + 1.51129I$ $a = 0.073063 + 0.503097I$ $b = 0.72561 + 2.13556I$	$2.19847 + 2.32521I$	0
$u = 0.45244 - 1.51129I$ $a = 0.073063 - 0.503097I$ $b = 0.72561 - 2.13556I$	$2.19847 - 2.32521I$	0
$u = 1.60960 + 0.20036I$ $a = -0.031037 + 0.149711I$ $b = 1.349420 - 0.252092I$	$4.03833 + 2.66127I$	0
$u = 1.60960 - 0.20036I$ $a = -0.031037 - 0.149711I$ $b = 1.349420 + 0.252092I$	$4.03833 - 2.66127I$	0
$u = -1.62095 + 0.14520I$ $a = -0.146836 - 1.371110I$ $b = 1.32921 + 1.94937I$	$9.29382 - 3.78649I$	0
$u = -1.62095 - 0.14520I$ $a = -0.146836 + 1.371110I$ $b = 1.32921 - 1.94937I$	$9.29382 + 3.78649I$	0
$u = -1.52811 + 0.57582I$ $a = 0.0964491 + 0.0666214I$ $b = 0.958300 - 0.287281I$	$2.66554 - 9.42263I$	0
$u = -1.52811 - 0.57582I$ $a = 0.0964491 - 0.0666214I$ $b = 0.958300 + 0.287281I$	$2.66554 + 9.42263I$	0
$u = 1.61436 + 0.32070I$ $a = -0.579677 - 1.239460I$ $b = 0.64699 + 2.29322I$	$8.98485 + 3.05406I$	0
$u = 1.61436 - 0.32070I$ $a = -0.579677 + 1.239460I$ $b = 0.64699 - 2.29322I$	$8.98485 - 3.05406I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.17931+1.15054I$ $a=-0.565320+0.704718I$ $b=-1.72394-0.50610I$	$-1.42259-0.46359I$	0
$u=-1.17931-1.15054I$ $a=-0.565320-0.704718I$ $b=-1.72394+0.50610I$	$-1.42259+0.46359I$	0
$u=-1.56100+0.72853I$ $a=\ \ 0.337392-0.874324I$ $b=\ \ 1.67630+1.29876I$	$-1.87995+4.31692I$	0
$u=-1.56100-0.72853I$ $a=\ \ 0.337392+0.874324I$ $b=\ \ 1.67630-1.29876I$	$-1.87995-4.31692I$	0
$u=\ \ 0.11530+1.78369I$ $a=-0.289375-0.485587I$ $b=-0.66341-2.67095I$	$1.02644+7.74901I$	0
$u=\ \ 0.11530-1.78369I$ $a=-0.289375+0.485587I$ $b=-0.66341+2.67095I$	$1.02644-7.74901I$	0
$u=-1.65910+0.67262I$ $a=\ \ 0.481831-1.322710I$ $b=\ \ 1.33635+2.65341I$	$8.24876-10.14770I$	0
$u=-1.65910-0.67262I$ $a=\ \ 0.481831+1.322710I$ $b=\ \ 1.33635-2.65341I$	$8.24876+10.14770I$	0
$u=-1.60879+0.80973I$ $a=-0.657052+1.243910I$ $b=-1.24884-2.74717I$	$5.9981-16.5072I$	0
$u=-1.60879-0.80973I$ $a=-0.657052-1.243910I$ $b=-1.24884+2.74717I$	$5.9981+16.5072I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.104054$ $a = -86.7705$ $b = 0.408951$	-2.82917	365.350
$u = 1.89844 + 0.28442I$ $a = 0.119565 + 1.273780I$ $b = 0.64384 - 3.14134I$	$9.83371 + 2.67210I$	0
$u = 1.89844 - 0.28442I$ $a = 0.119565 - 1.273780I$ $b = 0.64384 + 3.14134I$	$9.83371 - 2.67210I$	0
$u = 0.0750607$ $a = 9.20491$ $b = -0.556076$	-1.20362	-8.91660
$u = 1.90900 + 0.52880I$ $a = -0.341894 - 1.190340I$ $b = -0.66785 + 3.28864I$	$8.19227 + 8.99833I$	0
$u = 1.90900 - 0.52880I$ $a = -0.341894 + 1.190340I$ $b = -0.66785 - 3.28864I$	$8.19227 - 8.99833I$	0

II. $\boldsymbol{I_2^u =}$
$\boldsymbol{\langle u^5-2u^3-u^2+b+2u+1,\ u^5+2u^4-u^3-3u^2+a+2,\ u^6+u^5-u^4-2u^3+u+1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^5-2u^4+u^3+3u^2-2 \\ -u^5+2u^3+u^2-2u-1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^2+1 \\ -u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^4-u^2+1 \\ u^4 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^2-1 \\ u^4 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2-1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^5-2u^4+u^3+3u^2-2 \\ -u^5+2u^3+u^2-2u-1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^5-2u^4+u^3+4u^2-3 \\ -u^5+2u^3+2u^2-2u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3u^5-u^4-4u^3-3u^2+8u-8$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_8	$y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1$
c_2, c_3, c_4 c_6	$y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1$
c_7, c_{10}	y^6
c_9, c_{11}, c_{12}	$(y-1)^6$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.002190 + 0.295542I$ $a = 0.344968 - 0.764807I$ $b = -0.769407 + 0.497010I$	$0.245672 + 0.924305I$	$-5.68949 - 0.25702I$
$u = 1.002190 - 0.295542I$ $a = 0.344968 + 0.764807I$ $b = -0.769407 - 0.497010I$	$0.245672 - 0.924305I$	$-5.68949 + 0.25702I$
$u = -0.428243 + 0.664531I$ $a = -1.68613 - 1.92635I$ $b = 0.66103 - 1.45708I$	$-3.53554 + 0.92430I$	$-12.60470 + 5.55069I$
$u = -0.428243 - 0.664531I$ $a = -1.68613 + 1.92635I$ $b = 0.66103 + 1.45708I$	$-3.53554 - 0.92430I$	$-12.60470 - 5.55069I$
$u = -1.073950 + 0.558752I$ $a = -0.158836 + 0.437639I$ $b = -0.391622 - 0.558752I$	$-1.64493 - 5.69302I$	$-11.7058 + 8.3306I$
$u = -1.073950 - 0.558752I$ $a = -0.158836 - 0.437639I$ $b = -0.391622 + 0.558752I$	$-1.64493 + 5.69302I$	$-11.7058 - 8.3306I$

III. $I_1^v = \langle a,\ 1742v^8 - 24207v^7 + \cdots + 683b + 648,\ v^9 - 13v^8 + \cdots - 7v - 1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 0 \\ -2.55051v^8 + 35.4422v^7 + \cdots + 8.23426v - 0.948755 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ 0.0146413v^8 - 2.49048v^7 + \cdots + 26.1640v + 6.53587 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0146413v^8 - 2.49048v^7 + \cdots + 26.1640v + 7.53587 \\ 0.0146413v^8 - 2.49048v^7 + \cdots + 26.1640v + 6.53587 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.01464v^8 - 15.4905v^7 + \cdots + 6.16398v + 0.535871 \\ v^8 - 13v^7 - 22v^6 + 15v^4 - 5v^3 - 25v^2 - 20v - 7 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.01464v^8 + 15.4905v^7 + \cdots - 5.16398v - 0.535871 \\ -v^8 + 13v^7 + 22v^6 - 15v^4 + 5v^3 + 25v^2 + 20v + 7 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.01464v^8 + 15.4905v^7 + \cdots - 6.16398v - 0.535871 \\ -v^8 + 13v^7 + 22v^6 - 15v^4 + 5v^3 + 25v^2 + 20v + 7 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -2.55051v^8 + 35.4422v^7 + \cdots + 8.23426v - 0.948755 \\ -3.04539v^8 + 45.0205v^7 + \cdots - 17.1083v - 5.46120 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.535871v^8 - 5.95168v^7 + \cdots - 7.39824v + 1.41288 \\ -11.9649v^8 + 161.823v^7 + \cdots + 128.794v + 26.4861 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= \frac{1777}{683}v^8 - \frac{26404}{683}v^7 + \frac{7013}{683}v^6 + \frac{29374}{683}v^5 - \frac{14769}{683}v^4 - \frac{23374}{683}v^3 - \frac{329}{683}v^2 + \frac{9111}{683}v - \frac{4901}{683}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^9$
c_3, c_6	u^9
c_4	$(u+1)^9$
c_5	$u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1$
c_7	$u^9+u^8+2u^7+u^6+3u^5+u^4+2u^3+u-1$
c_8	$u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1$
c_9	$u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1$
c_{10}	$u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1$
c_{11}	$u^9-5u^8+12u^7-15u^6+9u^5+u^4-4u^3+2u^2+u-1$
c_{12}	$u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^9$
c_3, c_6	y^9
c_5, c_8	$y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1$
c_7, c_{10}	$y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1$
c_9, c_{12}	$y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1$
c_{11}	$y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v = 0.920144 + 0.598375I$ $a = 0$ $b = 0.140343 + 0.966856I$	$0.13850 - 2.09337I$	$-4.31028 + 3.82038I$
$v = 0.920144 - 0.598375I$ $a = 0$ $b = 0.140343 - 0.966856I$	$0.13850 + 2.09337I$	$-4.31028 - 3.82038I$
$v = -0.590648 + 0.449402I$ $a = 0$ $b = 0.628449 + 0.875112I$	$-2.26187 - 2.45442I$	$-6.95900 + 1.69416I$
$v = -0.590648 - 0.449402I$ $a = 0$ $b = 0.628449 - 0.875112I$	$-2.26187 + 2.45442I$	$-6.95900 - 1.69416I$
$v = -0.719281 + 0.119276I$ $a = 0$ $b = -0.796005 + 0.733148I$	$-6.01628 - 1.33617I$	$-13.56769 + 0.26615I$
$v = -0.719281 - 0.119276I$ $a = 0$ $b = -0.796005 - 0.733148I$	$-6.01628 + 1.33617I$	$-13.56769 - 0.26615I$
$v = -0.365868 + 0.247975I$ $a = 0$ $b = -0.728966 - 0.986295I$	$-5.24306 - 7.08493I$	$-11.54551 + 1.34000I$
$v = -0.365868 - 0.247975I$ $a = 0$ $b = -0.728966 + 0.986295I$	$-5.24306 + 7.08493I$	$-11.54551 - 1.34000I$
$v = 14.5113$ $a = 0$ $b = 0.512358$	-2.84338	-223.240

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^9(u^6-3u^5+5u^4-4u^3+2u^2-u+1)$ $\cdot(u^{66}+21u^{65}+\cdots+31524u+1)$
c_2	$((u-1)^9)(u^6+u^5+\cdots+u+1)(u^{66}-11u^{65}+\cdots+184u-1)$
c_3	$u^9(u^6-u^5+\cdots-u+1)(u^{66}+8u^{65}+\cdots-7168u+512)$
c_4	$((u+1)^9)(u^6-u^5+\cdots-u+1)(u^{66}-11u^{65}+\cdots+184u-1)$
c_5	$(u^6+3u^5+5u^4+4u^3+2u^2+u+1)$ $\cdot(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{66}+3u^{65}+\cdots-2u-1)$
c_6	$u^9(u^6+u^5+\cdots+u+1)(u^{66}+8u^{65}+\cdots-7168u+512)$
c_7	$u^6(u^9+u^8+2u^7+u^6+3u^5+u^4+2u^3+u-1)$ $\cdot(u^{66}-2u^{65}+\cdots+192u+64)$
c_8	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)$ $\cdot(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^{66}+3u^{65}+\cdots-2u-1)$
c_9	$(u-1)^6(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{66}-8u^{65}+\cdots-11u+1)$
c_{10}	$u^6(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot(u^{66}-2u^{65}+\cdots+192u+64)$
c_{11}	$(u-1)^6(u^9-5u^8+12u^7-15u^6+9u^5+u^4-4u^3+2u^2+u-1)$ $\cdot(u^{66}+28u^{65}+\cdots-143u+1)$
c_{12}	$(u+1)^6(u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1)$ $\cdot(u^{66}-8u^{65}+\cdots-11u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^9(y^6+y^5+5y^4+6y^2+3y+1)$ $\cdot(y^{66}+59y^{65}+\cdots-992297680y+1)$
c_2, c_4	$(y-1)^9(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{66}-21y^{65}+\cdots-31524y+1)$
c_3, c_6	$y^9(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{66}-60y^{65}+\cdots-76021760y+262144)$
c_5, c_8	$(y^6+y^5+5y^4+6y^2+3y+1)$ $\cdot(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot(y^{66}+15y^{65}+\cdots-20y+1)$
c_7, c_{10}	$y^6(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{66}+42y^{65}+\cdots+77824y+4096)$
c_9, c_{12}	$(y-1)^6(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{66}-28y^{65}+\cdots+143y+1)$
c_{11}	$(y-1)^6(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(y^{66}+28y^{65}+\cdots-12229y+1)$