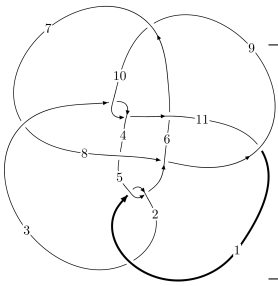
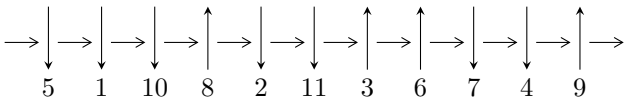
$11a_{125}$ ($K11a_{125}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 1.84217 \times 10^{296} u^{107} - 5.87629 \times 10^{295} u^{106} + \cdots + 2.24754 \times 10^{296} b - 2.30103 \times 10^{297},$$
$$6.03695 \times 10^{298} u^{107} + 3.59147 \times 10^{297} u^{106} + \cdots + 1.32605 \times 10^{298} a - 3.33008 \times 10^{300},$$
$$u^{108} + u^{107} + \cdots - 83u - 59\rangle$$
$$I_2^u = \langle u^{20} - 5u^{18} + \cdots - u^2 + b,\ 46965u^{20} + 32047u^{19} + \cdots + 721a + 56452,\ u^{21} - 6u^{19} + \cdots + u - 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 129 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. $\boldsymbol{I_1^u = \langle 1.84 \times 10^{296} u^{107} - 5.88 \times 10^{295} u^{106} + \cdots + 2.25 \times 10^{296} b - 2.30 \times 10^{297},\ 6.04 \times 10^{298} u^{107} + 3.59 \times 10^{297} u^{106} + \cdots + 1.33 \times 10^{298} a - 3.33 \times 10^{300},\ u^{108} + u^{107} + \cdots - 83u - 59 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -4.55258u^{107} - 0.270839u^{106} + \cdots + 163.283u + 251.128 \\ -0.819637u^{107} + 0.261454u^{106} + \cdots + 30.2031u + 10.2380 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -5.37222u^{107} - 0.00938531u^{106} + \cdots + 193.486u + 261.366 \\ -0.819637u^{107} + 0.261454u^{106} + \cdots + 30.2031u + 10.2380 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -6.62397u^{107} - 0.205128u^{106} + \cdots + 183.752u + 334.707 \\ -2.17222u^{107} - 0.986012u^{106} + \cdots - 26.5179u + 197.181 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -7.55781u^{107} - 0.253371u^{106} + \cdots + 270.915u + 397.061 \\ -0.697834u^{107} - 0.250517u^{106} + \cdots - 3.85380u + 42.6441 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 3.16584u^{107} - 1.50394u^{106} + \cdots - 237.293u - 92.9237 \\ 0.781089u^{107} - 0.0600302u^{106} + \cdots + 9.43331u - 62.4900 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 7.79988u^{107} + 1.89245u^{106} + \cdots - 175.618u - 567.148 \\ -1.58619u^{107} + 0.235617u^{106} + \cdots + 70.8587u + 86.7375 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 10.8546u^{107} + 1.12089u^{106} + \cdots - 350.252u - 602.137 \\ 2.49334u^{107} + 1.40596u^{106} + \cdots + 40.6084u - 227.462 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 10.8546u^{107} + 1.12089u^{106} + \cdots - 350.252u - 602.137 \\ 2.49334u^{107} + 1.40596u^{106} + \cdots + 40.6084u - 227.462 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.190628u^{107} + 5.28530u^{106} + \cdots + 317.291u - 531.973$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{108} + 3u^{107} + \cdots - 10u - 1$
c_2	$u^{108} + 49u^{107} + \cdots - 24u + 1$
c_3, c_{10}	$u^{108} + u^{107} + \cdots - 83u - 59$
c_4	$u^{108} + u^{107} + \cdots + 9996u + 1033$
c_6	$u^{108} + 5u^{107} + \cdots - 40u + 1$
c_7	$u^{108} + u^{107} + \cdots - 47121u - 5231$
c_8	$u^{108} - 3u^{107} + \cdots - 554u - 1$
c_9	$u^{108} + 6u^{107} + \cdots + 4092u + 176$
c_{11}	$u^{108} + 11u^{107} + \cdots + 776u + 56$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{108} - 49y^{107} + \cdots + 24y + 1$
c_2	$y^{108} + 27y^{107} + \cdots + 756y + 1$
c_3, c_{10}	$y^{108} - 65y^{107} + \cdots - 78869y + 3481$
c_4	$y^{108} - 5y^{107} + \cdots + 107533242y + 1067089$
c_6	$y^{108} - 9y^{107} + \cdots - 94y + 1$
c_7	$y^{108} + 19y^{107} + \cdots + 1542196425y + 27363361$
c_8	$y^{108} - 13y^{107} + \cdots - 315250y + 1$
c_9	$y^{108} - 22y^{107} + \cdots - 5774384y + 30976$
c_{11}	$y^{108} - 3y^{107} + \cdots + 93344y + 3136$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.974152+0.261389I$ $a=-0.03692+2.17388I$ $b=\ \ 0.669974+0.537090I$	$-0.02612+8.87697I$	0
$u=-0.974152-0.261389I$ $a=-0.03692-2.17388I$ $b=\ \ 0.669974-0.537090I$	$-0.02612-8.87697I$	0
$u=\ \ 0.947317+0.290364I$ $a=-0.05100+1.88670I$ $b=-0.525756+0.430022I$	$1.77660-4.02492I$	0
$u=\ \ 0.947317-0.290364I$ $a=-0.05100-1.88670I$ $b=-0.525756-0.430022I$	$1.77660+4.02492I$	0
$u=-0.821343+0.549763I$ $a=-0.183712-0.013594I$ $b=-0.810583+0.713014I$	$-0.01641+4.09614I$	0
$u=-0.821343-0.549763I$ $a=-0.183712+0.013594I$ $b=-0.810583-0.713014I$	$-0.01641-4.09614I$	0
$u=\ \ 0.984228+0.010410I$ $a=\ \ 1.18874+0.90018I$ $b=-0.322699+1.182530I$	$-4.12669-3.67423I$	0
$u=\ \ 0.984228-0.010410I$ $a=\ \ 1.18874-0.90018I$ $b=-0.322699-1.182530I$	$-4.12669+3.67423I$	0
$u=-0.962477+0.079682I$ $a=-0.757415-0.539055I$ $b=\ \ 0.58214-1.44592I$	$-1.112250+0.388404I$	0
$u=-0.962477-0.079682I$ $a=-0.757415+0.539055I$ $b=\ \ 0.58214+1.44592I$	$-1.112250-0.388404I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.870704 + 0.410766I$ $a = -0.279670 + 1.209090I$ $b = -0.103162 + 0.129699I$	$1.64684 - 2.43797I$	0
$u = \quad 0.870704 - 0.410766I$ $a = -0.279670 - 1.209090I$ $b = -0.103162 - 0.129699I$	$1.64684 + 2.43797I$	0
$u = \quad 0.726983 + 0.627227I$ $a = \quad 0.509551 - 0.049885I$ $b = \quad 0.596579 + 1.069470I$	$-0.029889 - 0.257369I$	0
$u = \quad 0.726983 - 0.627227I$ $a = \quad 0.509551 + 0.049885I$ $b = \quad 0.596579 - 1.069470I$	$-0.029889 + 0.257369I$	0
$u = -0.127716 + 1.038120I$ $a = -0.620092 + 0.238590I$ $b = \quad 0.737287 + 0.208133I$	$3.55118 + 3.28339I$	0
$u = -0.127716 - 1.038120I$ $a = -0.620092 - 0.238590I$ $b = \quad 0.737287 - 0.208133I$	$3.55118 - 3.28339I$	0
$u = \quad 0.904734 + 0.285757I$ $a = \quad 0.636986 + 0.528069I$ $b = -2.20932 - 0.22643I$	$0.67232 - 8.72797I$	0
$u = \quad 0.904734 - 0.285757I$ $a = \quad 0.636986 - 0.528069I$ $b = -2.20932 + 0.22643I$	$0.67232 + 8.72797I$	0
$u = -0.910645 + 0.192506I$ $a = -0.58789 + 1.78120I$ $b = \quad 0.385944 + 0.804425I$	$-2.35042 + 2.26476I$	0
$u = -0.910645 - 0.192506I$ $a = -0.58789 - 1.78120I$ $b = \quad 0.385944 - 0.804425I$	$-2.35042 - 2.26476I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.903214+0.219783I$ $a=-0.543275+0.336286I$ $b=\ 2.17612-0.58688I$	$1.86423+3.20245I$	0
$u=-0.903214-0.219783I$ $a=-0.543275-0.336286I$ $b=\ 2.17612+0.58688I$	$1.86423-3.20245I$	0
$u=\ 1.066670+0.106723I$ $a=\ 1.187770-0.127686I$ $b=-0.630782-0.730192I$	$-4.84250-3.77355I$	0
$u=\ 1.066670-0.106723I$ $a=\ 1.187770+0.127686I$ $b=-0.630782+0.730192I$	$-4.84250+3.77355I$	0
$u=-0.895542+0.603288I$ $a=\ 0.630755+0.940432I$ $b=-0.061847-0.334834I$	$-0.85408-1.78433I$	0
$u=-0.895542-0.603288I$ $a=\ 0.630755-0.940432I$ $b=-0.061847+0.334834I$	$-0.85408+1.78433I$	0
$u=\ 0.534951+0.717555I$ $a=\ 0.906959-0.057499I$ $b=-0.006657+1.274660I$	$0.45026-4.79181I$	0
$u=\ 0.534951-0.717555I$ $a=\ 0.906959+0.057499I$ $b=-0.006657-1.274660I$	$0.45026+4.79181I$	0
$u=\ 0.978238+0.528279I$ $a=\ 0.830922-0.731888I$ $b=\ 0.130929+1.208130I$	$-4.29595+1.62915I$	0
$u=\ 0.978238-0.528279I$ $a=\ 0.830922+0.731888I$ $b=\ 0.130929-1.208130I$	$-4.29595-1.62915I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.132879 + 1.112260I$ $a = 0.490463 + 0.469192I$ $b = -0.676211 - 0.179571I$	$4.46641 + 2.42852I$	0
$u = 0.132879 - 1.112260I$ $a = 0.490463 - 0.469192I$ $b = -0.676211 + 0.179571I$	$4.46641 - 2.42852I$	0
$u = -0.163742 + 1.117370I$ $a = -0.541417 + 0.966843I$ $b = 0.807554 - 1.027800I$	$0.81340 - 12.59150I$	0
$u = -0.163742 - 1.117370I$ $a = -0.541417 - 0.966843I$ $b = 0.807554 + 1.027800I$	$0.81340 + 12.59150I$	0
$u = 0.169000 + 1.121780I$ $a = 0.518616 + 0.885953I$ $b = -0.779199 - 0.872057I$	$2.97894 + 6.84382I$	0
$u = 0.169000 - 1.121780I$ $a = 0.518616 - 0.885953I$ $b = -0.779199 + 0.872057I$	$2.97894 - 6.84382I$	0
$u = -0.197636 + 1.125790I$ $a = -0.304167 + 0.875966I$ $b = 0.421882 - 0.817706I$	$-3.21665 - 3.93627I$	0
$u = -0.197636 - 1.125790I$ $a = -0.304167 - 0.875966I$ $b = 0.421882 + 0.817706I$	$-3.21665 + 3.93627I$	0
$u = -0.834451$ $a = 0.489255$ $b = -0.665164$	-1.38852	0
$u = -0.398165 + 0.716767I$ $a = -1.019530 - 0.052785I$ $b = 0.269627 + 1.067180I$	$1.014240 + 0.642379I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.398165-0.716767I$ $a=-1.019530+0.052785I$ $b=\ \ 0.269627-1.067180I$	$1.014240-0.642379I$	0
$u=\ \ 1.120110+0.400495I$ $a=\ \ 1.256760+0.503964I$ $b=-1.32125+1.02155I$	$-3.30658-4.72348I$	0
$u=\ \ 1.120110-0.400495I$ $a=\ \ 1.256760-0.503964I$ $b=-1.32125-1.02155I$	$-3.30658+4.72348I$	0
$u=-1.133440+0.447556I$ $a=-1.40826+0.51127I$ $b=\ \ 1.33693+1.47390I$	$-4.55602+8.69100I$	0
$u=-1.133440-0.447556I$ $a=-1.40826-0.51127I$ $b=\ \ 1.33693-1.47390I$	$-4.55602-8.69100I$	0
$u=-0.735283+0.258478I$ $a=\ \ 0.131993-1.382150I$ $b=-0.91333-1.27864I$	$2.25905-0.80230I$	0
$u=-0.735283-0.258478I$ $a=\ \ 0.131993+1.382150I$ $b=-0.91333+1.27864I$	$2.25905+0.80230I$	0
$u=\ \ 1.136570+0.494217I$ $a=\ \ 1.232080-0.166947I$ $b=-0.27028+1.43055I$	$-5.27860-5.21926I$	0
$u=\ \ 1.136570-0.494217I$ $a=\ \ 1.232080+0.166947I$ $b=-0.27028-1.43055I$	$-5.27860+5.21926I$	0
$u=\ \ 1.194790+0.353430I$ $a=\ \ 1.217590+0.419263I$ $b=-0.797116+0.838560I$	$-3.57518-4.92310I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.194790 - 0.353430I$ $a = 1.217590 - 0.419263I$ $b = -0.797116 - 0.838560I$	$-3.57518 + 4.92310I$	0
$u = -1.073590 + 0.645480I$ $a = -0.696546 - 0.301950I$ $b = 0.115944 + 1.063470I$	$-1.85031 + 2.56322I$	0
$u = -1.073590 - 0.645480I$ $a = -0.696546 + 0.301950I$ $b = 0.115944 - 1.063470I$	$-1.85031 - 2.56322I$	0
$u = -1.167860 + 0.453399I$ $a = -1.44149 + 0.26526I$ $b = 0.80245 + 1.59814I$	$-5.45176 + 2.92622I$	0
$u = -1.167860 - 0.453399I$ $a = -1.44149 - 0.26526I$ $b = 0.80245 - 1.59814I$	$-5.45176 - 2.92622I$	0
$u = -1.240790 + 0.240630I$ $a = 0.534776 - 0.182654I$ $b = -1.31764 - 1.44251I$	$-1.79007 + 3.25272I$	0
$u = -1.240790 - 0.240630I$ $a = 0.534776 + 0.182654I$ $b = -1.31764 + 1.44251I$	$-1.79007 - 3.25272I$	0
$u = 0.650808 + 0.342791I$ $a = -0.34559 - 1.62139I$ $b = 1.19891 - 0.98678I$	$1.33081 + 5.80685I$	$0. - 2.96583I$
$u = 0.650808 - 0.342791I$ $a = -0.34559 + 1.62139I$ $b = 1.19891 + 0.98678I$	$1.33081 - 5.80685I$	$0. + 2.96583I$
$u = -1.246090 + 0.227495I$ $a = -1.342510 + 0.414670I$ $b = 0.294925 + 0.427196I$	$-5.57876 + 2.04823I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.246090-0.227495I$ $a=-1.342510-0.414670I$ $b=\ 0.294925-0.427196I$	$-5.57876-2.04823I$	0
$u=\ 1.230250+0.309018I$ $a=-0.629731-0.227256I$ $b=\ 1.05197-1.70214I$	$-3.85058-9.33974I$	0
$u=\ 1.230250-0.309018I$ $a=-0.629731+0.227256I$ $b=\ 1.05197+1.70214I$	$-3.85058+9.33974I$	0
$u=-0.589715+0.333188I$ $a=\ 0.771112-0.727221I$ $b=-0.700623+0.496327I$	$-1.78626+0.19440I$	$-6.62499-2.10710I$
$u=-0.589715-0.333188I$ $a=\ 0.771112+0.727221I$ $b=-0.700623-0.496327I$	$-1.78626-0.19440I$	$-6.62499+2.10710I$
$u=-0.351167+0.578931I$ $a=\ 0.78828+1.37252I$ $b=-0.829992-0.595666I$	$0.49504+6.34073I$	$-1.73992-6.59022I$
$u=-0.351167-0.578931I$ $a=\ 0.78828-1.37252I$ $b=-0.829992+0.595666I$	$0.49504-6.34073I$	$-1.73992+6.59022I$
$u=-0.621401+0.199241I$ $a=\ 2.07344-0.92194I$ $b=-1.201380+0.401495I$	$1.06241-6.45710I$	$0.+1.42723I$
$u=-0.621401-0.199241I$ $a=\ 2.07344+0.92194I$ $b=-1.201380-0.401495I$	$1.06241+6.45710I$	$0.-1.42723I$
$u=-0.052871+0.646559I$ $a=\ 0.41145-1.50671I$ $b=-0.382161+1.102240I$	$-2.32226+1.24315I$	$-7.51601-1.77666I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.052871-0.646559I$ $a=\ \ 0.41145+1.50671I$ $b=-0.382161-1.102240I$	$-2.32226-1.24315I$	$-7.51601+1.77666I$
$u=-1.326700+0.305400I$ $a=-1.235880+0.564675I$ $b=\ \ 0.259224+0.925110I$	$-5.13430+8.04503I$	0
$u=-1.326700-0.305400I$ $a=-1.235880-0.564675I$ $b=\ \ 0.259224-0.925110I$	$-5.13430-8.04503I$	0
$u=\ \ 1.317900+0.402678I$ $a=\ \ 1.078710+0.489570I$ $b=-0.474582+1.090480I$	$-3.99132-4.54373I$	0
$u=\ \ 1.317900-0.402678I$ $a=\ \ 1.078710-0.489570I$ $b=-0.474582-1.090480I$	$-3.99132+4.54373I$	0
$u=-0.179585+0.579606I$ $a=\ \ 0.83381-1.86662I$ $b=-0.947899+0.787439I$	$-1.83419-4.63645I$	$-4.58372+7.30891I$
$u=-0.179585-0.579606I$ $a=\ \ 0.83381+1.86662I$ $b=-0.947899-0.787439I$	$-1.83419+4.63645I$	$-4.58372-7.30891I$
$u=\ \ 0.568576+0.208009I$ $a=-2.01454-0.40120I$ $b=\ \ 1.136210+0.244875I$	$2.86820+1.36185I$	$3.07135+2.06335I$
$u=\ \ 0.568576-0.208009I$ $a=-2.01454+0.40120I$ $b=\ \ 1.136210-0.244875I$	$2.86820-1.36185I$	$3.07135-2.06335I$
$u=\ \ 1.368310+0.298986I$ $a=-0.624843-0.019539I$ $b=\ \ 0.448426-1.103470I$	$-8.89731-0.89969I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.368310 - 0.298986I$ $a = -0.624843 + 0.019539I$ $b = 0.448426 + 1.103470I$	$-8.89731 + 0.89969I$	0
$u = 0.435771 + 0.408529I$ $a = -1.26938 + 1.01935I$ $b = 0.914517 - 0.262108I$	$2.65024 - 1.18829I$	$2.48161 + 2.04057I$
$u = 0.435771 - 0.408529I$ $a = -1.26938 - 1.01935I$ $b = 0.914517 + 0.262108I$	$2.65024 + 1.18829I$	$2.48161 - 2.04057I$
$u = -1.310200 + 0.507870I$ $a = 0.687774 - 0.140558I$ $b = -1.022390 - 0.630758I$	$-0.17375 + 2.12643I$	0
$u = -1.310200 - 0.507870I$ $a = 0.687774 + 0.140558I$ $b = -1.022390 + 0.630758I$	$-0.17375 - 2.12643I$	0
$u = 1.30647 + 0.56763I$ $a = -0.847975 - 0.175210I$ $b = 1.050390 - 0.899685I$	$0.76601 - 8.29993I$	0
$u = 1.30647 - 0.56763I$ $a = -0.847975 + 0.175210I$ $b = 1.050390 + 0.899685I$	$0.76601 + 8.29993I$	0
$u = 1.30666 + 0.59592I$ $a = -1.114890 - 0.225093I$ $b = 1.01748 - 1.35533I$	$-0.60805 - 12.89860I$	0
$u = 1.30666 - 0.59592I$ $a = -1.114890 + 0.225093I$ $b = 1.01748 + 1.35533I$	$-0.60805 + 12.89860I$	0
$u = -1.30939 + 0.59543I$ $a = 1.086590 - 0.077025I$ $b = -0.80339 - 1.23187I$	$-6.77231 + 10.02240I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.30939-0.59543I$ $a=\ \ 1.086590+0.077025I$ $b=-0.80339+1.23187I$	$-6.77231-10.02240I$	0
$u=-1.30900+0.59703I$ $a=\ \ 1.179420-0.236168I$ $b=-0.99652-1.46631I$	$-2.7876+18.6455I$	0
$u=-1.30900-0.59703I$ $a=\ \ 1.179420+0.236168I$ $b=-0.99652+1.46631I$	$-2.7876-18.6455I$	0
$u=-1.44914+0.24366I$ $a=\ \ 0.550715+0.054229I$ $b=-0.104588-0.667664I$	$-2.85677-1.64370I$	0
$u=-1.44914-0.24366I$ $a=\ \ 0.550715-0.054229I$ $b=-0.104588+0.667664I$	$-2.85677+1.64370I$	0
$u=-0.027355+0.526426I$ $a=-1.27042-1.03315I$ $b=\ \ 0.397552+0.647777I$	$-0.10044+1.46604I$	$-1.33207-4.65115I$
$u=-0.027355-0.526426I$ $a=-1.27042+1.03315I$ $b=\ \ 0.397552-0.647777I$	$-0.10044-1.46604I$	$-1.33207+4.65115I$
$u=\ \ 0.296819+0.409793I$ $a=-0.83453-2.24685I$ $b=\ \ 0.972948+0.114369I$	$-0.86286+1.24545I$	$0.709038+0.323843I$
$u=\ \ 0.296819-0.409793I$ $a=-0.83453+2.24685I$ $b=\ \ 0.972948-0.114369I$	$-0.86286-1.24545I$	$0.709038-0.323843I$
$u=-1.35572+0.64284I$ $a=-0.609435+0.254910I$ $b=\ \ 0.513726+0.977254I$	$-0.11523+4.15027I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.35572-0.64284I$ $a=-0.609435-0.254910I$ $b=\ \ 0.513726-0.977254I$	$-0.11523-4.15027I$	0
$u=\ \ 1.47738+0.29180I$ $a=-0.576871+0.099376I$ $b=-0.086794-0.812436I$	$-4.87730+7.27293I$	0
$u=\ \ 1.47738-0.29180I$ $a=-0.576871-0.099376I$ $b=-0.086794+0.812436I$	$-4.87730-7.27293I$	0
$u=\ \ 1.40109+0.57788I$ $a=\ \ 0.653418+0.408344I$ $b=-0.599849+1.050720I$	$-1.23164-9.21086I$	0
$u=\ \ 1.40109-0.57788I$ $a=\ \ 0.653418-0.408344I$ $b=-0.599849-1.050720I$	$-1.23164+9.21086I$	0
$u=-0.21671+1.52116I$ $a=\ \ 0.0068364-0.0753318I$ $b=-0.013805+0.393561I$	$4.02171+2.95510I$	0
$u=-0.21671-1.52116I$ $a=\ \ 0.0068364+0.0753318I$ $b=-0.013805-0.393561I$	$4.02171-2.95510I$	0
$u=\ \ 1.68133$ $a=-0.497549$ $b=\ \ 0.905522$	-10.1758	0

II. $I_2^u = \langle u^{20} - 5u^{18} + \cdots - u^2 + b,\ 46965u^{20} + 32047u^{19} + \cdots + 721a + 56452,\ u^{21} - 6u^{19} + \cdots + u - 1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -65.1387u^{20} - 44.4480u^{19} + \cdots - 29.5784u - 78.2968 \\ -u^{20} + 5u^{18} + \cdots + 8u^3 + u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -66.1387u^{20} - 44.4480u^{19} + \cdots - 29.5784u - 78.2968 \\ -u^{20} + 5u^{18} + \cdots + 8u^3 + u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 45.5978u^{20} + 35.4008u^{19} + \cdots + 21.6227u + 70.7393 \\ -46.7642u^{20} - 34.3384u^{19} + \cdots - 21.9168u - 69.2954 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -83.4924u^{20} - 55.9404u^{19} + \cdots - 39.7032u - 99.3537 \\ 7.41331u^{20} + 5.59501u^{19} + \cdots + 3.26352u + 9.56449 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 73.8960u^{20} + 47.9140u^{19} + \cdots + 53.3162u + 104.277 \\ -70.2954u^{20} - 46.7642u^{19} + \cdots - 43.2219u - 91.2122 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -2.38974u^{20} + 0.771151u^{19} + \cdots - 21.2552u - 13.2940 \\ 52.3856u^{20} + 34.1054u^{19} + \cdots + 37.5479u + 71.3051 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -77.2302u^{20} - 53.1637u^{19} + \cdots - 63.1401u - 116.053 \\ 80.0361u^{20} + 55.7365u^{19} + \cdots + 53.1304u + 119.237 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -77.2302u^{20} - 53.1637u^{19} + \cdots - 63.1401u - 116.053 \\ 80.0361u^{20} + 55.7365u^{19} + \cdots + 53.1304u + 119.237 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{221218}{721}u^{20} - \frac{159840}{721}u^{19} + \cdots - \frac{126596}{721}u - \frac{319747}{721}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{21}+2u^{20}+\cdots-2u+1$
c_2	$u^{21}+12u^{20}+\cdots+16u+1$
c_3	$u^{21}-6u^{19}+\cdots+u-1$
c_4	$u^{21}+4u^{19}+\cdots+4u-1$
c_5	$u^{21}-2u^{20}+\cdots-2u-1$
c_6	$u^{21}+4u^{20}+\cdots-2u+1$
c_7	$u^{21}-2u^{19}+\cdots-u-1$
c_8	$u^{21}-10u^{20}+\cdots+14u-1$
c_9	$u^{21}+11u^{20}+\cdots+13u+1$
c_{10}	$u^{21}-6u^{19}+\cdots+u+1$
c_{11}	$u^{21}-2u^{20}+\cdots+4u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{21} - 12y^{20} + \cdots + 16y - 1$
c_2	$y^{21} - 32y^{19} + \cdots + 32y - 1$
c_3, c_{10}	$y^{21} - 12y^{20} + \cdots + 17y - 1$
c_4	$y^{21} + 8y^{20} + \cdots + 10y - 1$
c_6	$y^{21} - 12y^{20} + \cdots + 10y - 1$
c_7	$y^{21} - 4y^{20} + \cdots - 13y - 1$
c_8	$y^{21} + 4y^{20} + \cdots + 30y - 1$
c_9	$y^{21} + 3y^{20} + \cdots + 9y - 1$
c_{11}	$y^{21} - 10y^{20} + \cdots + 12y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.811779+0.525216I$ $a=-0.416139+0.357404I$ $b=-0.047757+0.917442I$	$0.03935+2.07134I$	$-2.34444-4.05360I$
$u=-0.811779-0.525216I$ $a=-0.416139-0.357404I$ $b=-0.047757-0.917442I$	$0.03935-2.07134I$	$-2.34444+4.05360I$
$u=-1.164180+0.407269I$ $a=-1.47478+0.24901I$ $b=\ \ 0.648863+1.098050I$	$-4.60181+6.44318I$	$-7.37974-8.53245I$
$u=-1.164180-0.407269I$ $a=-1.47478-0.24901I$ $b=\ \ 0.648863-1.098050I$	$-4.60181-6.44318I$	$-7.37974+8.53245I$
$u=\ \ 1.192030+0.359383I$ $a=\ \ 1.34557+0.63757I$ $b=-0.800423+1.118690I$	$-4.47877-3.55604I$	$-8.08226+2.55945I$
$u=\ \ 1.192030-0.359383I$ $a=\ \ 1.34557-0.63757I$ $b=-0.800423-1.118690I$	$-4.47877+3.55604I$	$-8.08226-2.55945I$
$u=-0.723384+0.071228I$ $a=\ \ 0.384515+1.232070I$ $b=-1.40553+0.44847I$	$2.04450+2.21685I$	$-1.36797-1.77620I$
$u=-0.723384-0.071228I$ $a=\ \ 0.384515-1.232070I$ $b=-1.40553-0.44847I$	$2.04450-2.21685I$	$-1.36797+1.77620I$
$u=\ \ 0.704084+0.011197I$ $a=-0.62546+1.76874I$ $b=\ \ 1.393860+0.065773I$	$0.56292-7.20934I$	$-5.36435+8.25630I$
$u=\ \ 0.704084-0.011197I$ $a=-0.62546-1.76874I$ $b=\ \ 1.393860-0.065773I$	$0.56292+7.20934I$	$-5.36435-8.25630I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.360973+0.591606I$ $a=\ 0.18473-1.61907I$ $b=-0.112329+0.524379I$	$-2.04047-2.71990I$	$-4.21528+3.94147I$
$u=-0.360973-0.591606I$ $a=\ 0.18473+1.61907I$ $b=-0.112329-0.524379I$	$-2.04047+2.71990I$	$-4.21528-3.94147I$
$u=\ 1.265480+0.338640I$ $a=\ 0.641702+0.643672I$ $b=-0.932784+0.946751I$	$-2.32920-8.44205I$	$-5.83292+8.04405I$
$u=\ 1.265480-0.338640I$ $a=\ 0.641702-0.643672I$ $b=-0.932784-0.946751I$	$-2.32920+8.44205I$	$-5.83292-8.04405I$
$u=-1.284750+0.320553I$ $a=-0.534098+0.330108I$ $b=\ 0.989081+0.901960I$	$-1.12577+3.02403I$	$-1.94886-3.97151I$
$u=-1.284750-0.320553I$ $a=-0.534098-0.330108I$ $b=\ 0.989081-0.901960I$	$-1.12577-3.02403I$	$-1.94886+3.97151I$
$u=\ 0.527823+0.088481I$ $a=\ 0.32212-2.49639I$ $b=\ 0.696834+0.210590I$	$-1.73524+1.16661I$	$-7.91238-0.48584I$
$u=\ 0.527823-0.088481I$ $a=\ 0.32212+2.49639I$ $b=\ 0.696834-0.210590I$	$-1.73524-1.16661I$	$-7.91238+0.48584I$
$u=-0.19100+1.56011I$ $a=-0.072058-0.193819I$ $b=\ 0.023605+0.455058I$	$3.93251+3.01415I$	$-34.7582-22.9567I$
$u=-0.19100-1.56011I$ $a=-0.072058+0.193819I$ $b=\ 0.023605-0.455058I$	$3.93251-3.01415I$	$-34.7582+22.9567I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.69330$		
$a = \quad 0.487808$	-10.1449	126.410
$b = -0.906837$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{21}+2u^{20}+\cdots-2u+1)(u^{108}+3u^{107}+\cdots-10u-1)$
c_2	$(u^{21}+12u^{20}+\cdots+16u+1)(u^{108}+49u^{107}+\cdots-24u+1)$
c_3	$(u^{21}-6u^{19}+\cdots+u-1)(u^{108}+u^{107}+\cdots-83u-59)$
c_4	$(u^{21}+4u^{19}+\cdots+4u-1)(u^{108}+u^{107}+\cdots+9996u+1033)$
c_5	$(u^{21}-2u^{20}+\cdots-2u-1)(u^{108}+3u^{107}+\cdots-10u-1)$
c_6	$(u^{21}+4u^{20}+\cdots-2u+1)(u^{108}+5u^{107}+\cdots-40u+1)$
c_7	$(u^{21}-2u^{19}+\cdots-u-1)(u^{108}+u^{107}+\cdots-47121u-5231)$
c_8	$(u^{21}-10u^{20}+\cdots+14u-1)(u^{108}-3u^{107}+\cdots-554u-1)$
c_9	$(u^{21}+11u^{20}+\cdots+13u+1)(u^{108}+6u^{107}+\cdots+4092u+176)$
c_{10}	$(u^{21}-6u^{19}+\cdots+u+1)(u^{108}+u^{107}+\cdots-83u-59)$
c_{11}	$(u^{21}-2u^{20}+\cdots+4u+1)(u^{108}+11u^{107}+\cdots+776u+56)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{21} - 12y^{20} + \cdots + 16y - 1)(y^{108} - 49y^{107} + \cdots + 24y + 1)$
c_2	$(y^{21} - 32y^{19} + \cdots + 32y - 1)(y^{108} + 27y^{107} + \cdots + 756y + 1)$
c_3, c_{10}	$(y^{21} - 12y^{20} + \cdots + 17y - 1)(y^{108} - 65y^{107} + \cdots - 78869y + 3481)$
c_4	$(y^{21} + 8y^{20} + \cdots + 10y - 1)$ $\cdot (y^{108} - 5y^{107} + \cdots + 107533242y + 1067089)$
c_6	$(y^{21} - 12y^{20} + \cdots + 10y - 1)(y^{108} - 9y^{107} + \cdots - 94y + 1)$
c_7	$(y^{21} - 4y^{20} + \cdots - 13y - 1)$ $\cdot (y^{108} + 19y^{107} + \cdots + 1542196425y + 27363361)$
c_8	$(y^{21} + 4y^{20} + \cdots + 30y - 1)(y^{108} - 13y^{107} + \cdots - 315250y + 1)$
c_9	$(y^{21} + 3y^{20} + \cdots + 9y - 1)(y^{108} - 22y^{107} + \cdots - 5774384y + 30976)$
c_{11}	$(y^{21} - 10y^{20} + \cdots + 12y - 1)(y^{108} - 3y^{107} + \cdots + 93344y + 3136)$