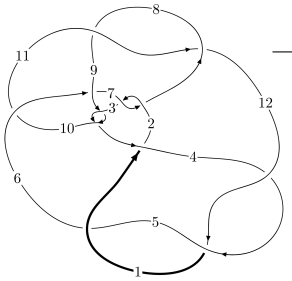
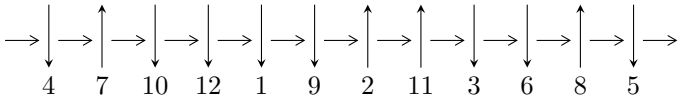
$12a_{1082}$ $(K12a_{1082})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle 7.37646 \times 10^{158} u^{119} + 1.70979 \times 10^{159} u^{118} + \cdots + 9.35321 \times 10^{158} b + 5.75418 \times 10^{158},$
$1.29225 \times 10^{159} u^{119} + 3.14232 \times 10^{159} u^{118} + \cdots + 9.35321 \times 10^{158} a - 2.96601 \times 10^{159},\ u^{120} + 3u^{119} + \cdots +$
$I_2^u = \langle -2u^{27} + 2u^{26} + \cdots + b + 2,\ -6u^{27} + 6u^{26} + \cdots + a - 8u,\ u^{28} - 2u^{27} + \cdots - 2u + 1 \rangle$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 148 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. $\boldsymbol{I_1^u = \langle 7.38 \times 10^{158} u^{119} + 1.71 \times 10^{159} u^{118} + \cdots + 9.35 \times 10^{158} b + 5.75 \times 10^{158},\ 1.29 \times 10^{159} u^{119} + 3.14 \times 10^{159} u^{118} + \cdots + 9.35 \times 10^{158} a - 2.97 \times 10^{159},\ u^{120} + 3u^{119} + \cdots + 8u - 1 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^3 - 2u \\ -u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^2 + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.38161u^{119} - 3.35961u^{118} + \cdots + 51.8433u + 3.17111 \\ -0.788655u^{119} - 1.82803u^{118} + \cdots + 23.3617u - 0.615209 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -2.07596u^{119} - 4.65251u^{118} + \cdots + 49.1162u + 3.92968 \\ -2.17737u^{119} - 4.16193u^{118} + \cdots + 13.1942u + 0.316698 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0726298u^{119} - 0.187189u^{118} + \cdots - 39.6037u + 6.85858 \\ 2.27088u^{119} + 3.37252u^{118} + \cdots + 13.7032u + 0.133101 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 2.01690u^{119} + 3.70837u^{118} + \cdots + 3.84406u + 4.68181 \\ -0.381437u^{119} - 0.853970u^{118} + \cdots + 10.7822u + 0.480982 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.73603u^{119} + 3.47491u^{118} + \cdots - 35.1363u + 8.10741 \\ -0.0452228u^{119} - 0.441756u^{118} + \cdots + 3.24667u + 1.38489 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.44612u^{119} + 3.70156u^{118} + \cdots + 72.8518u - 14.1062 \\ 0.640744u^{119} + 2.05119u^{118} + \cdots - 4.49843u - 1.93172 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2.90682u^{119} + 8.84972u^{118} + \cdots - 6.43341u - 13.9528$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{120} - 9u^{119} + \cdots - 3718u + 2197$
c_2, c_7	$u^{120} + u^{119} + \cdots + 505942u - 143161$
c_3, c_9	$u^{120} + u^{119} + \cdots - 497u - 991$
c_4, c_5, c_{12}	$u^{120} + 3u^{119} + \cdots + 8u - 1$
c_6	$u^{120} - 6u^{119} + \cdots - 111403235u + 12357323$
c_8, c_{11}	$u^{120} + 6u^{119} + \cdots + 64698u + 4996$
c_{10}	$u^{120} + 2u^{119} + \cdots + 86310u + 45641$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{120} - 3y^{119} + \cdots + 654218266y + 4826809$
c_2, c_7	$y^{120} + 103y^{119} + \cdots + 401123665620y + 20495071921$
c_3, c_9	$y^{120} - 85y^{119} + \cdots - 45176967y + 982081$
c_4, c_5, c_{12}	$y^{120} - 111y^{119} + \cdots + 160y + 1$
c_6	$y^{120} - 54y^{119} + \cdots - 7346690606945771y + 152703431726329$
c_8, c_{11}	$y^{120} + 82y^{119} + \cdots + 638456276y + 24960016$
c_{10}	$y^{120} - 32y^{119} + \cdots - 57169443552y + 2083100881$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.758063 + 0.612639I$ $a = -1.22294 - 0.75012I$ $b = 0.470196 - 0.508802I$	$-9.18918 + 8.98662I$	0
$u = 0.758063 - 0.612639I$ $a = -1.22294 + 0.75012I$ $b = 0.470196 + 0.508802I$	$-9.18918 - 8.98662I$	0
$u = -0.995734 + 0.272083I$ $a = 0.138623 + 1.054390I$ $b = 0.907901 - 0.711733I$	$-4.04811 + 3.42712I$	0
$u = -0.995734 - 0.272083I$ $a = 0.138623 - 1.054390I$ $b = 0.907901 + 0.711733I$	$-4.04811 - 3.42712I$	0
$u = 0.614537 + 0.723379I$ $a = -0.382409 - 0.933491I$ $b = 0.520893 + 0.967316I$	$-2.87584 - 4.39613I$	0
$u = 0.614537 - 0.723379I$ $a = -0.382409 + 0.933491I$ $b = 0.520893 - 0.967316I$	$-2.87584 + 4.39613I$	0
$u = -0.160696 + 0.922940I$ $a = -1.051960 + 0.231090I$ $b = 1.049000 - 0.295188I$	$-1.37343 + 2.15773I$	0
$u = -0.160696 - 0.922940I$ $a = -1.051960 - 0.231090I$ $b = 1.049000 + 0.295188I$	$-1.37343 - 2.15773I$	0
$u = -1.058680 + 0.145296I$ $a = 0.460538 + 0.227295I$ $b = 0.840560 - 0.207999I$	$-1.56282 + 0.11358I$	0
$u = -1.058680 - 0.145296I$ $a = 0.460538 - 0.227295I$ $b = 0.840560 + 0.207999I$	$-1.56282 - 0.11358I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.771663+0.446424I$ $a=-1.14604+1.04772I$ $b=\ \ 0.541922+0.544394I$	$-4.96355-3.50876I$	0
$u=-0.771663-0.446424I$ $a=-1.14604-1.04772I$ $b=\ \ 0.541922-0.544394I$	$-4.96355+3.50876I$	0
$u=\ \ 0.357261+0.813565I$ $a=\ \ 1.15745+1.19649I$ $b=-1.19712-1.22505I$	$-7.9239-13.8663I$	0
$u=\ \ 0.357261-0.813565I$ $a=\ \ 1.15745-1.19649I$ $b=-1.19712+1.22505I$	$-7.9239+13.8663I$	0
$u=-0.404133+0.783971I$ $a=-0.866155+0.697337I$ $b=\ \ 0.748223-0.769256I$	$-1.51097+2.78695I$	0
$u=-0.404133-0.783971I$ $a=-0.866155-0.697337I$ $b=\ \ 0.748223+0.769256I$	$-1.51097-2.78695I$	0
$u=\ \ 1.094700+0.234164I$ $a=-0.577419-0.264483I$ $b=-0.549890+0.527872I$	$-4.54668-4.46609I$	0
$u=\ \ 1.094700-0.234164I$ $a=-0.577419+0.264483I$ $b=-0.549890-0.527872I$	$-4.54668+4.46609I$	0
$u=-1.033800+0.437885I$ $a=\ \ 0.257491-0.940473I$ $b=-0.686255-0.343745I$	$-4.07515+2.66051I$	0
$u=-1.033800-0.437885I$ $a=\ \ 0.257491+0.940473I$ $b=-0.686255+0.343745I$	$-4.07515-2.66051I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.131310 + 0.055315I$ $a = -0.151277 + 0.933019I$ $b = 0.13358 + 1.85091I$	$-9.53618 + 0.93120I$	0
$u = 1.131310 - 0.055315I$ $a = -0.151277 - 0.933019I$ $b = 0.13358 - 1.85091I$	$-9.53618 - 0.93120I$	0
$u = -0.440237 + 0.713965I$ $a = 0.992326 - 0.668774I$ $b = -0.325618 + 0.204381I$	$-1.69555 + 1.98381I$	0
$u = -0.440237 - 0.713965I$ $a = 0.992326 + 0.668774I$ $b = -0.325618 - 0.204381I$	$-1.69555 - 1.98381I$	0
$u = 0.347045 + 0.743011I$ $a = 0.869436 - 0.335291I$ $b = -0.018759 + 0.573045I$	$-2.03680 - 0.36310I$	0
$u = 0.347045 - 0.743011I$ $a = 0.869436 + 0.335291I$ $b = -0.018759 - 0.573045I$	$-2.03680 + 0.36310I$	0
$u = -0.296638 + 0.762588I$ $a = 1.32323 - 1.27789I$ $b = -1.33073 + 1.15712I$	$-3.39639 + 7.81505I$	0
$u = -0.296638 - 0.762588I$ $a = 1.32323 + 1.27789I$ $b = -1.33073 - 1.15712I$	$-3.39639 - 7.81505I$	0
$u = 1.193810 + 0.072843I$ $a = 0.616469 + 0.767214I$ $b = 0.758914 + 0.153228I$	$-2.23354 + 1.52529I$	0
$u = 1.193810 - 0.072843I$ $a = 0.616469 - 0.767214I$ $b = 0.758914 - 0.153228I$	$-2.23354 - 1.52529I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.045115+0.792707I$ $a=\ \ 0.995941+0.391751I$ $b=-0.248171-0.528968I$	$-1.174710+0.610806I$	$-5.85025+1.21411I$
$u=-0.045115-0.792707I$ $a=\ \ 0.995941-0.391751I$ $b=-0.248171+0.528968I$	$-1.174710-0.610806I$	$-5.85025-1.21411I$
$u=-1.213260+0.074521I$ $a=-0.738681-0.552826I$ $b=-0.95568+1.47398I$	$-2.10913+0.80254I$	0
$u=-1.213260-0.074521I$ $a=-0.738681+0.552826I$ $b=-0.95568-1.47398I$	$-2.10913-0.80254I$	0
$u=-0.714265+0.257828I$ $a=\ \ 0.95188-1.20880I$ $b=\ \ 0.284028+0.353544I$	$-4.34819-3.50064I$	$-10.15879+2.61062I$
$u=-0.714265-0.257828I$ $a=\ \ 0.95188+1.20880I$ $b=\ \ 0.284028-0.353544I$	$-4.34819+3.50064I$	$-10.15879-2.61062I$
$u=-0.267217+0.705736I$ $a=-1.37518+1.03742I$ $b=\ \ 0.584151-1.234020I$	$-2.73124+7.20564I$	$-7.22129-8.23166I$
$u=-0.267217-0.705736I$ $a=-1.37518-1.03742I$ $b=\ \ 0.584151+1.234020I$	$-2.73124-7.20564I$	$-7.22129+8.23166I$
$u=\ \ 0.293364+0.692080I$ $a=-0.65992+1.40520I$ $b=-0.22122-1.46251I$	$-3.72611-7.81436I$	$-5.94311+7.27559I$
$u=\ \ 0.293364-0.692080I$ $a=-0.65992-1.40520I$ $b=-0.22122+1.46251I$	$-3.72611+7.81436I$	$-5.94311-7.27559I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.164096+0.720950I$ $a=\ \ 0.242278+0.831725I$ $b=-0.196291-0.953290I$	$0.96231+3.37259I$	$-0.66181-5.02684I$
$u=-0.164096-0.720950I$ $a=\ \ 0.242278-0.831725I$ $b=-0.196291+0.953290I$	$0.96231-3.37259I$	$-0.66181+5.02684I$
$u=\ \ 1.255140+0.207604I$ $a=\ \ 0.600745-0.538593I$ $b=\ \ 1.30795+0.56083I$	$-0.95909-4.01812I$	0
$u=\ \ 1.255140-0.207604I$ $a=\ \ 0.600745+0.538593I$ $b=\ \ 1.30795-0.56083I$	$-0.95909+4.01812I$	0
$u=-0.719676$ $a=\ \ 0.701794$ $b=\ \ 0.424952$	-1.50335	-6.04810
$u=-1.273630+0.227101I$ $a=-0.623129+0.007221I$ $b=-0.024009+1.071650I$	$-1.12960+2.12830I$	0
$u=-1.273630-0.227101I$ $a=-0.623129-0.007221I$ $b=-0.024009-1.071650I$	$-1.12960-2.12830I$	0
$u=\ \ 0.297171+0.631786I$ $a=\ \ 1.29874+1.61569I$ $b=-1.50993-1.26578I$	$-8.12476-1.41435I$	$-10.19810+3.32175I$
$u=\ \ 0.297171-0.631786I$ $a=\ \ 1.29874-1.61569I$ $b=-1.50993+1.26578I$	$-8.12476+1.41435I$	$-10.19810-3.32175I$
$u=\ \ 0.593856+0.322694I$ $a=-1.144100+0.499841I$ $b=-0.117888-1.239260I$	$-5.01452+4.11784I$	$-8.48824-1.68058I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.593856 - 0.322694I$ $a = -1.144100 - 0.499841I$ $b = -0.117888 + 1.239260I$	$-5.01452 - 4.11784I$	$-8.48824 + 1.68058I$
$u = 0.235947 + 0.623765I$ $a = -1.57054 - 0.72572I$ $b = 1.60485 + 1.23476I$	$-7.32776 - 3.51777I$	$-11.20872 + 5.37878I$
$u = 0.235947 - 0.623765I$ $a = -1.57054 + 0.72572I$ $b = 1.60485 - 1.23476I$	$-7.32776 + 3.51777I$	$-11.20872 - 5.37878I$
$u = 1.338000 + 0.055970I$ $a = -0.097785 - 1.142750I$ $b = -0.57344 + 1.56737I$	$-11.78960 - 1.92476I$	0
$u = 1.338000 - 0.055970I$ $a = -0.097785 + 1.142750I$ $b = -0.57344 - 1.56737I$	$-11.78960 + 1.92476I$	0
$u = 0.012576 + 0.632373I$ $a = 0.577328 - 1.252450I$ $b = -0.562925 + 0.991272I$	$2.83723 + 0.97754I$	$3.54382 - 2.20940I$
$u = 0.012576 - 0.632373I$ $a = 0.577328 + 1.252450I$ $b = -0.562925 - 0.991272I$	$2.83723 - 0.97754I$	$3.54382 + 2.20940I$
$u = 1.352470 + 0.213334I$ $a = -0.414971 - 0.200004I$ $b = -0.860846 - 0.278696I$	$-5.08107 - 3.53397I$	0
$u = 1.352470 - 0.213334I$ $a = -0.414971 + 0.200004I$ $b = -0.860846 + 0.278696I$	$-5.08107 + 3.53397I$	0
$u = 0.230584 + 0.580687I$ $a = -1.42586 - 1.37552I$ $b = 0.552732 + 1.125940I$	$0.27877 - 3.72484I$	$-0.25287 + 3.53714I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.230584 - 0.580687I$ $a = -1.42586 + 1.37552I$ $b = 0.552732 - 1.125940I$	$0.27877 + 3.72484I$	$-0.25287 - 3.53714I$
$u = 1.351520 + 0.300209I$ $a = -0.439642 + 0.118954I$ $b = -0.352361 - 1.056070I$	$-3.81291 - 7.07815I$	0
$u = 1.351520 - 0.300209I$ $a = -0.439642 - 0.118954I$ $b = -0.352361 + 1.056070I$	$-3.81291 + 7.07815I$	0
$u = -1.377860 + 0.198340I$ $a = -0.092721 + 0.816913I$ $b = 1.33537 - 1.57047I$	$-5.39823 + 1.12081I$	0
$u = -1.377860 - 0.198340I$ $a = -0.092721 - 0.816913I$ $b = 1.33537 + 1.57047I$	$-5.39823 - 1.12081I$	0
$u = 1.39625$ $a = -0.427157$ $b = 0.0766782$	-7.75893	0
$u = 1.308430 + 0.495916I$ $a = 0.136018 + 0.735283I$ $b = -1.094890 - 0.176787I$	$-5.94181 - 7.24846I$	0
$u = 1.308430 - 0.495916I$ $a = 0.136018 - 0.735283I$ $b = -1.094890 + 0.176787I$	$-5.94181 + 7.24846I$	0
$u = -1.397780 + 0.124154I$ $a = -0.214087 + 0.312942I$ $b = -1.87470 + 0.94938I$	$-10.21350 + 4.66937I$	0
$u = -1.397780 - 0.124154I$ $a = -0.214087 - 0.312942I$ $b = -1.87470 - 0.94938I$	$-10.21350 - 4.66937I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.399710 + 0.129687I$ $a = -0.122996 - 0.787009I$ $b = 1.25500 + 2.69944I$	$-10.24600 + 2.33584I$	0
$u = 1.399710 - 0.129687I$ $a = -0.122996 + 0.787009I$ $b = 1.25500 - 2.69944I$	$-10.24600 - 2.33584I$	0
$u = -1.394160 + 0.180221I$ $a = -0.223833 + 1.000450I$ $b = -0.36504 - 1.80456I$	$-13.52120 + 1.36381I$	0
$u = -1.394160 - 0.180221I$ $a = -0.223833 - 1.000450I$ $b = -0.36504 + 1.80456I$	$-13.52120 - 1.36381I$	0
$u = -1.390760 + 0.230878I$ $a = -0.152323 - 0.959451I$ $b = -1.59968 + 1.94546I$	$-4.90359 + 6.72120I$	0
$u = -1.390760 - 0.230878I$ $a = -0.152323 + 0.959451I$ $b = -1.59968 - 1.94546I$	$-4.90359 - 6.72120I$	0
$u = 1.393660 + 0.218126I$ $a = 1.111440 + 0.019269I$ $b = 0.60142 + 1.46469I$	$-4.60265 - 4.02663I$	0
$u = 1.393660 - 0.218126I$ $a = 1.111440 - 0.019269I$ $b = 0.60142 - 1.46469I$	$-4.60265 + 4.02663I$	0
$u = -0.229473 + 0.539634I$ $a = -1.28148 - 1.86660I$ $b = -0.06183 + 1.62357I$	$0.606565 + 1.201870I$	$-10.56206 - 6.88957I$
$u = -0.229473 - 0.539634I$ $a = -1.28148 + 1.86660I$ $b = -0.06183 - 1.62357I$	$0.606565 - 1.201870I$	$-10.56206 + 6.88957I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.39466+0.24727I$ $a=\ \ 0.001851-0.833863I$ $b=-3.08790+0.93606I$	$-12.5379+6.7134I$	0
$u=-1.39466-0.24727I$ $a=\ \ 0.001851+0.833863I$ $b=-3.08790-0.93606I$	$-12.5379-6.7134I$	0
$u=\ \ 1.42192+0.10390I$ $a=-0.303312+0.815867I$ $b=-1.49389-1.92620I$	$-10.51730-3.96053I$	0
$u=\ \ 1.42192-0.10390I$ $a=-0.303312-0.815867I$ $b=-1.49389+1.92620I$	$-10.51730+3.96053I$	0
$u=-1.42260+0.14062I$ $a=\ \ 0.781669-0.266456I$ $b=\ \ 0.619383-1.235640I$	$-11.07080-2.43540I$	0
$u=-1.42260-0.14062I$ $a=\ \ 0.781669+0.266456I$ $b=\ \ 0.619383+1.235640I$	$-11.07080+2.43540I$	0
$u=-1.42046+0.17926I$ $a=\ \ 0.506393-1.120470I$ $b=-0.607801+0.428830I$	$-14.5928+4.1561I$	0
$u=-1.42046-0.17926I$ $a=\ \ 0.506393+1.120470I$ $b=-0.607801-0.428830I$	$-14.5928-4.1561I$	0
$u=\ \ 1.40901+0.27697I$ $a=-0.052276+0.948632I$ $b=-1.78482-2.12821I$	$-8.08136-10.77760I$	0
$u=\ \ 1.40901-0.27697I$ $a=-0.052276-0.948632I$ $b=-1.78482+2.12821I$	$-8.08136+10.77760I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.379883 + 0.415061I$ $a = -2.44465 - 1.26285I$ $b = 0.624684 - 0.580136I$	$-8.88592 - 1.83926I$	$-12.72836 + 5.81559I$
$u = 0.379883 - 0.415061I$ $a = -2.44465 + 1.26285I$ $b = 0.624684 + 0.580136I$	$-8.88592 + 1.83926I$	$-12.72836 - 5.81559I$
$u = -1.41699 + 0.24634I$ $a = 0.380244 + 1.024980I$ $b = 2.34865 - 1.24482I$	$-13.6123 + 4.6362I$	0
$u = -1.41699 - 0.24634I$ $a = 0.380244 - 1.024980I$ $b = 2.34865 + 1.24482I$	$-13.6123 - 4.6362I$	0
$u = -1.41909 + 0.26969I$ $a = 0.898900 + 0.166070I$ $b = 0.74340 - 1.28203I$	$-9.2019 + 11.3180I$	0
$u = -1.41909 - 0.26969I$ $a = 0.898900 - 0.166070I$ $b = 0.74340 + 1.28203I$	$-9.2019 - 11.3180I$	0
$u = 1.45048 + 0.06075I$ $a = 0.179933 + 1.069800I$ $b = -0.490788 - 0.997127I$	$-12.12480 + 2.31290I$	0
$u = 1.45048 - 0.06075I$ $a = 0.179933 - 1.069800I$ $b = -0.490788 + 0.997127I$	$-12.12480 - 2.31290I$	0
$u = -1.43022 + 0.28124I$ $a = -0.505724 + 0.128919I$ $b = -0.431087 + 0.172604I$	$-7.68688 + 4.06026I$	0
$u = -1.43022 - 0.28124I$ $a = -0.505724 - 0.128919I$ $b = -0.431087 - 0.172604I$	$-7.68688 - 4.06026I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.42692 + 0.29959I$ $a = 0.230261 - 1.084960I$ $b = 2.16361 + 1.32117I$	$-8.9036 - 11.6654I$	0
$u = 1.42692 - 0.29959I$ $a = 0.230261 + 1.084960I$ $b = 2.16361 - 1.32117I$	$-8.9036 + 11.6654I$	0
$u = 1.44405 + 0.30923I$ $a = -0.046586 + 0.780044I$ $b = -1.76079 - 1.09227I$	$-7.34225 - 6.78476I$	0
$u = 1.44405 - 0.30923I$ $a = -0.046586 - 0.780044I$ $b = -1.76079 + 1.09227I$	$-7.34225 + 6.78476I$	0
$u = 1.45362 + 0.27555I$ $a = -0.120895 - 0.821422I$ $b = 0.84776 + 1.13648I$	$-7.69994 - 5.61368I$	0
$u = 1.45362 - 0.27555I$ $a = -0.120895 + 0.821422I$ $b = 0.84776 - 1.13648I$	$-7.69994 + 5.61368I$	0
$u = -1.46032 + 0.31665I$ $a = 0.187544 + 1.022960I$ $b = 2.08623 - 1.47677I$	$-13.7489 + 17.9654I$	0
$u = -1.46032 - 0.31665I$ $a = 0.187544 - 1.022960I$ $b = 2.08623 + 1.47677I$	$-13.7489 - 17.9654I$	0
$u = 0.244134 + 0.391602I$ $a = 2.58490 + 1.59798I$ $b = 0.316070 + 0.051031I$	$-8.25063 + 0.91007I$	$-11.62517 + 4.79001I$
$u = 0.244134 - 0.391602I$ $a = 2.58490 - 1.59798I$ $b = 0.316070 - 0.051031I$	$-8.25063 - 0.91007I$	$-11.62517 - 4.79001I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.217230 + 0.369963I$ $a = 1.89119 + 0.57807I$ $b = -0.340274 - 0.448029I$	$-0.368588 + 1.265160I$	$-2.25179 - 3.62102I$
$u = 0.217230 - 0.369963I$ $a = 1.89119 - 0.57807I$ $b = -0.340274 + 0.448029I$	$-0.368588 - 1.265160I$	$-2.25179 + 3.62102I$
$u = -1.54616 + 0.29161I$ $a = -0.138716 - 0.722300I$ $b = -1.26539 + 1.37382I$	$-9.88404 + 8.26349I$	0
$u = -1.54616 - 0.29161I$ $a = -0.138716 + 0.722300I$ $b = -1.26539 - 1.37382I$	$-9.88404 - 8.26349I$	0
$u = -1.57236 + 0.09089I$ $a = 0.245716 - 0.867731I$ $b = -0.184668 + 0.823457I$	$-17.1654 - 6.6641I$	0
$u = -1.57236 - 0.09089I$ $a = 0.245716 + 0.867731I$ $b = -0.184668 - 0.823457I$	$-17.1654 + 6.6641I$	0
$u = -0.163051 + 0.387369I$ $a = 0.788549 - 0.241422I$ $b = 0.143746 - 0.498230I$	$-0.376531 + 1.022460I$	$-6.80239 - 5.91412I$
$u = -0.163051 - 0.387369I$ $a = 0.788549 + 0.241422I$ $b = 0.143746 + 0.498230I$	$-0.376531 - 1.022460I$	$-6.80239 + 5.91412I$
$u = 0.0304396 + 0.1031070I$ $a = 5.54320 + 4.04883I$ $b = 0.53363 + 1.75865I$	$-5.11882 - 3.47087I$	$-9.75395 - 3.64216I$
$u = 0.0304396 - 0.1031070I$ $a = 5.54320 - 4.04883I$ $b = 0.53363 - 1.75865I$	$-5.11882 + 3.47087I$	$-9.75395 + 3.64216I$

II. $I_2^u =$
$\langle -2u^{27}+2u^{26}+\cdots+b+2,\ -6u^{27}+6u^{26}+\cdots+a-8u,\ u^{28}-2u^{27}+\cdots-2u+1\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u \\ -u^3+u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^3-2u \\ -u^3+u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^2+1 \\ -u^4+2u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 6u^{27}-6u^{26}+\cdots-51u^2+8u \\ 2u^{27}-2u^{26}+\cdots+5u-2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 6u^{27}-6u^{26}+\cdots+8u+1 \\ -u^{26}-u^{25}+\cdots+3u-1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -8u^{27}+7u^{26}+\cdots-34u+8 \\ 13u^{27}-8u^{26}+\cdots+12u-7 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^{27}-3u^{26}+\cdots+5u-6 \\ -2u^{27}+u^{26}+\cdots-5u+1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 2u^{27}-26u^{25}+\cdots-29u+2 \\ 7u^{27}-4u^{26}+\cdots+9u-4 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -4u^{27}-2u^{26}+\cdots+29u-3 \\ -4u^{27}+3u^{26}+\cdots-6u+2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 8u^{27}+4u^{26}-114u^{25}-47u^{24}+692u^{23}+279u^{22}-2304u^{21}-1118u^{20}+4432u^{19}+3178u^{18}-4420u^{17}-6104u^{16}+429u^{15}+7139u^{14}+4379u^{13}-3848u^{12}-5287u^{11}-685u^{10}+2779u^9+1565u^8-493u^7-162u^6-239u^5-111u^4+114u^3-93u^2+36u-12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 6u^{27} + \cdots + 4u + 1$
c_2	$u^{28} + 15u^{26} + \cdots - 4u + 1$
c_3	$u^{28} - 9u^{26} + \cdots + u + 1$
c_4, c_5	$u^{28} - 2u^{27} + \cdots - 2u + 1$
c_6	$u^{28} - 11u^{27} + \cdots - 11u + 1$
c_7	$u^{28} + 15u^{26} + \cdots + 4u + 1$
c_8	$u^{28} + 5u^{27} + \cdots + 5u + 1$
c_9	$u^{28} - 9u^{26} + \cdots - u + 1$
c_{10}	$u^{28} - u^{27} + \cdots + 2u + 1$
c_{11}	$u^{28} - 5u^{27} + \cdots - 5u + 1$
c_{12}	$u^{28} + 2u^{27} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} + 4y^{27} + \cdots + 12y + 1$
c_2, c_7	$y^{28} + 30y^{27} + \cdots + 18y + 1$
c_3, c_9	$y^{28} - 18y^{27} + \cdots + 3y + 1$
c_4, c_5, c_{12}	$y^{28} - 28y^{27} + \cdots + 22y + 1$
c_6	$y^{28} - 7y^{27} + \cdots - 25y + 1$
c_8, c_{11}	$y^{28} + 17y^{27} + \cdots + 13y + 1$
c_{10}	$y^{28} - 5y^{27} + \cdots + 18y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.226786+0.922069I$ $a=\ 0.810932-0.039377I$ $b=-0.311597-0.150544I$	$-0.42346+1.45389I$	$1.12327-2.39365I$
$u=-0.226786-0.922069I$ $a=\ 0.810932+0.039377I$ $b=-0.311597+0.150544I$	$-0.42346-1.45389I$	$1.12327+2.39365I$
$u=-0.542882+0.743757I$ $a=-0.679455+0.910762I$ $b=\ 0.599496-0.758661I$	$-1.60070+3.70313I$	$-4.84453-8.48426I$
$u=-0.542882-0.743757I$ $a=-0.679455-0.910762I$ $b=\ 0.599496+0.758661I$	$-1.60070-3.70313I$	$-4.84453+8.48426I$
$u=-1.130710+0.071807I$ $a=\ 0.451300+0.743375I$ $b=\ 0.653196-0.236536I$	$-1.93774+2.26114I$	$-5.63577-5.37479I$
$u=-1.130710-0.071807I$ $a=\ 0.451300-0.743375I$ $b=\ 0.653196+0.236536I$	$-1.93774-2.26114I$	$-5.63577+5.37479I$
$u=-1.221060+0.187532I$ $a=\ 0.525667+0.282363I$ $b=\ 0.039023-1.251230I$	$-2.10303+1.88451I$	$-8.95900-3.19260I$
$u=-1.221060-0.187532I$ $a=\ 0.525667-0.282363I$ $b=\ 0.039023+1.251230I$	$-2.10303-1.88451I$	$-8.95900+3.19260I$
$u=\ 1.266800+0.101729I$ $a=\ 0.330851+0.460950I$ $b=\ 0.06333+2.42389I$	$-8.34689+2.37883I$	$-8.66446-2.75796I$
$u=\ 1.266800-0.101729I$ $a=\ 0.330851-0.460950I$ $b=\ 0.06333-2.42389I$	$-8.34689-2.37883I$	$-8.66446+2.75796I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.351230 + 0.112969I$ $a = -0.034822 - 1.114500I$ $b = 0.36679 + 2.30790I$	$-12.33140 + 0.03616I$	$-13.73712 - 0.26284I$
$u = 1.351230 - 0.112969I$ $a = -0.034822 + 1.114500I$ $b = 0.36679 - 2.30790I$	$-12.33140 - 0.03616I$	$-13.73712 + 0.26284I$
$u = 1.311410 + 0.397683I$ $a = -0.121084 - 0.454282I$ $b = -0.019863 + 0.349320I$	$-5.09637 - 6.22551I$	$-8.74107 + 5.08707I$
$u = 1.311410 - 0.397683I$ $a = -0.121084 + 0.454282I$ $b = -0.019863 - 0.349320I$	$-5.09637 + 6.22551I$	$-8.74107 - 5.08707I$
$u = 1.368250 + 0.222269I$ $a = -0.841608 - 0.004405I$ $b = -0.807875 - 0.941225I$	$-3.69262 - 3.64639I$	$-5.80285 + 2.19695I$
$u = 1.368250 - 0.222269I$ $a = -0.841608 + 0.004405I$ $b = -0.807875 + 0.941225I$	$-3.69262 + 3.64639I$	$-5.80285 - 2.19695I$
$u = -1.386730 + 0.137225I$ $a = -0.288267 + 0.986443I$ $b = -0.594616 - 0.605073I$	$-12.83980 + 3.15598I$	$-13.8528 - 3.9585I$
$u = -1.386730 - 0.137225I$ $a = -0.288267 - 0.986443I$ $b = -0.594616 + 0.605073I$	$-12.83980 - 3.15598I$	$-13.8528 + 3.9585I$
$u = -0.142885 + 0.564127I$ $a = 0.73374 + 1.54388I$ $b = 0.265172 - 1.254550I$	$1.160140 + 0.762431I$	$0.073804 + 0.154677I$
$u = -0.142885 - 0.564127I$ $a = 0.73374 - 1.54388I$ $b = 0.265172 + 1.254550I$	$1.160140 - 0.762431I$	$0.073804 - 0.154677I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.43774+0.21260I$ $a=-0.186840-0.656465I$ $b=-2.30607+1.46989I$	$-10.76430+6.37236I$	$-12.79242-5.59516I$
$u=-1.43774-0.21260I$ $a=-0.186840+0.656465I$ $b=-2.30607-1.46989I$	$-10.76430-6.37236I$	$-12.79242+5.59516I$
$u=1.47355+0.31709I$ $a=-0.023202+0.820560I$ $b=-1.49094-1.21794I$	$-7.94110-7.71551I$	$-12.2861+7.7929I$
$u=1.47355-0.31709I$ $a=-0.023202-0.820560I$ $b=-1.49094+1.21794I$	$-7.94110+7.71551I$	$-12.2861-7.7929I$
$u=0.263446+0.383109I$ $a=-0.92761-1.51891I$ $b=0.96295+1.84197I$	$-5.06773-3.92340I$	$-7.7415+12.8296I$
$u=0.263446-0.383109I$ $a=-0.92761+1.51891I$ $b=0.96295-1.84197I$	$-5.06773+3.92340I$	$-7.7415-12.8296I$
$u=0.054116+0.297330I$ $a=4.75040+0.35248I$ $b=0.081015+0.817773I$	$-7.97185-1.50215I$	$-4.63946+5.05675I$
$u=0.054116-0.297330I$ $a=4.75040-0.35248I$ $b=0.081015-0.817773I$	$-7.97185+1.50215I$	$-4.63946-5.05675I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{28}-6u^{27}+\cdots+4u+1)(u^{120}-9u^{119}+\cdots-3718u+2197)$
c_2	$(u^{28}+15u^{26}+\cdots-4u+1)(u^{120}+u^{119}+\cdots+505942u-143161)$
c_3	$(u^{28}-9u^{26}+\cdots+u+1)(u^{120}+u^{119}+\cdots-497u-991)$
c_4, c_5	$(u^{28}-2u^{27}+\cdots-2u+1)(u^{120}+3u^{119}+\cdots+8u-1)$
c_6	$(u^{28}-11u^{27}+\cdots-11u+1)$ $\cdot(u^{120}-6u^{119}+\cdots-111403235u+12357323)$
c_7	$(u^{28}+15u^{26}+\cdots+4u+1)(u^{120}+u^{119}+\cdots+505942u-143161)$
c_8	$(u^{28}+5u^{27}+\cdots+5u+1)(u^{120}+6u^{119}+\cdots+64698u+4996)$
c_9	$(u^{28}-9u^{26}+\cdots-u+1)(u^{120}+u^{119}+\cdots-497u-991)$
c_{10}	$(u^{28}-u^{27}+\cdots+2u+1)(u^{120}+2u^{119}+\cdots+86310u+45641)$
c_{11}	$(u^{28}-5u^{27}+\cdots-5u+1)(u^{120}+6u^{119}+\cdots+64698u+4996)$
c_{12}	$(u^{28}+2u^{27}+\cdots+2u+1)(u^{120}+3u^{119}+\cdots+8u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{28}+4y^{27}+\cdots+12y+1)$ $\cdot(y^{120}-3y^{119}+\cdots+654218266y+4826809)$
c_2, c_7	$(y^{28}+30y^{27}+\cdots+18y+1)$ $\cdot(y^{120}+103y^{119}+\cdots+401123665620y+20495071921)$
c_3, c_9	$(y^{28}-18y^{27}+\cdots+3y+1)$ $\cdot(y^{120}-85y^{119}+\cdots-45176967y+982081)$
c_4, c_5, c_{12}	$(y^{28}-28y^{27}+\cdots+22y+1)(y^{120}-111y^{119}+\cdots+160y+1)$
c_6	$(y^{28}-7y^{27}+\cdots-25y+1)$ $\cdot(y^{120}-54y^{119}+\cdots-7346690606945771y+152703431726329)$
c_8, c_{11}	$(y^{28}+17y^{27}+\cdots+13y+1)$ $\cdot(y^{120}+82y^{119}+\cdots+638456276y+24960016)$
c_{10}	$(y^{28}-5y^{27}+\cdots+18y+1)$ $\cdot(y^{120}-32y^{119}+\cdots-57169443552y+2083100881)$