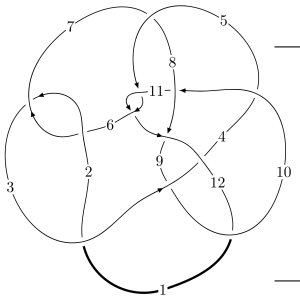
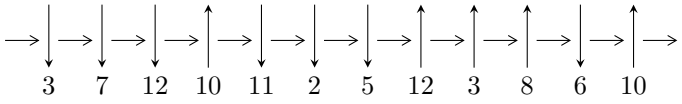
$12n_{0568}$ $(K12n_{0568})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 3.56196 \times 10^{180} u^{75} - 6.92402 \times 10^{180} u^{74} + \cdots + 4.56975 \times 10^{180} b - 7.18244 \times 10^{182}, \\ & 3.11091 \times 10^{181} u^{75} - 7.34911 \times 10^{181} u^{74} + \cdots + 1.32523 \times 10^{182} a - 3.27637 \times 10^{183}, \\ & u^{76} - 3u^{75} + \cdots + 936u + 232 \rangle \\ I_2^u = \langle & 248830399 u^{22} + 208402801 u^{21} + \cdots + 79543084 b - 1349697652, \\ & 410409361 u^{22} + 348035792 u^{21} + \cdots + 79543084 a - 2188204696,\ u^{23} + 2u^{22} + \cdots - 8u - 8 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 99 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. $I_1^u = \langle \mathbf{3.56 \times 10^{180} u^{75} - 6.92 \times 10^{180} u^{74} + \cdots + 4.57 \times 10^{180} b - 7.18 \times 10^{182},\ 3.11 \times 10^{181} u^{75} - 7.35 \times 10^{181} u^{74} + \cdots + 1.33 \times 10^{182} a - 3.28 \times 10^{183},\ u^{76} - 3u^{75} + \cdots + 936u + 232} \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.234745u^{75} + 0.554555u^{74} + \cdots + 169.599u + 24.7231 \\ -0.779466u^{75} + 1.51519u^{74} + \cdots + 787.398u + 157.174 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} 0.498809u^{75} - 0.947197u^{74} + \cdots - 460.943u - 87.1424 \\ 1.15577u^{75} - 2.09127u^{74} + \cdots - 1178.23u - 242.449 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.913618u^{75} - 1.62170u^{74} + \cdots - 954.260u - 197.783 \\ 0.641894u^{75} - 1.15647u^{74} + \cdots - 655.502u - 136.716 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.656963u^{75} + 1.14407u^{74} + \cdots + 717.288u + 155.306 \\ 1.15577u^{75} - 2.09127u^{74} + \cdots - 1178.23u - 242.449 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.631741u^{75} - 1.27025u^{74} + \cdots - 563.644u - 116.446 \\ 0.404533u^{75} - 0.758262u^{74} + \cdots - 382.358u - 76.2189 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.234311u^{75} + 0.585458u^{74} + \cdots + 97.6788u + 10.2271 \\ 1.16020u^{75} - 2.19526u^{74} + \cdots - 1139.10u - 227.223 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.458281u^{75} - 0.798480u^{74} + \cdots - 499.398u - 103.931 \\ 0.480346u^{75} - 0.857747u^{74} + \cdots - 496.673u - 104.640 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.15033u^{75} + 2.16962u^{74} + \cdots + 1108.09u + 217.684 \\ -1.71904u^{75} + 3.13616u^{74} + \cdots + 1745.42u + 358.560 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.983457u^{75} + 1.79316u^{74} + \cdots + 1053.18u + 204.030$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$4(4u^{76}+181u^{75}+\cdots+50u+1)$
c_2, c_6	$2(2u^{76}-u^{75}+\cdots-2u+1)$
c_3	$u^{76}-7u^{75}+\cdots+842u+773$
c_4	$u^{76}+u^{75}+\cdots+137983u+158846$
c_5, c_{11}	$u^{76}-3u^{75}+\cdots+936u+232$
c_7	$u^{76}-5u^{75}+\cdots-19313u+1532$
c_8	$u^{76}-4u^{75}+\cdots+20080608u+2598032$
c_9	$2(2u^{76}+u^{75}+\cdots+296u+712)$
c_{10}	$4(4u^{76}+27u^{75}+\cdots+3218u+419)$
c_{12}	$2(2u^{76}+7u^{75}+\cdots+11068u+1009)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$16(16y^{76}+15y^{75}+\cdots-166y+1)$
c_2, c_6	$4(4y^{76}-181y^{75}+\cdots-50y+1)$
c_3	$y^{76}-107y^{75}+\cdots-13723192y+597529$
c_4	$y^{76}+33y^{75}+\cdots+325811545407y+25232051716$
c_5, c_{11}	$y^{76}-51y^{75}+\cdots-1128512y+53824$
c_7	$y^{76}-11y^{75}+\cdots-47423585y+2347024$
c_8	$y^{76}+62y^{75}+\cdots+198572181119104y+6749770273024$
c_9	$4(4y^{76}+367y^{75}+\cdots+3.78022\times10^{7}y+506944)$
c_{10}	$16(16y^{76}+487y^{75}+\cdots+8708976y+175561)$
c_{12}	$4(4y^{76}+331y^{75}+\cdots+2.10845\times10^{8}y+1018081)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.005098+1.009090I$ $a=\ \ 0.393251+0.810515I$ $b=-0.705606+0.017434I$	$-4.16391-4.94670I$	$0.+3.45130I$
$u=-0.005098-1.009090I$ $a=\ \ 0.393251-0.810515I$ $b=-0.705606-0.017434I$	$-4.16391+4.94670I$	$0.-3.45130I$
$u=\ \ 0.933682+0.297571I$ $a=-0.108605-0.446950I$ $b=\ \ 0.636825+0.264630I$	$-0.08245-4.80485I$	0
$u=\ \ 0.933682-0.297571I$ $a=-0.108605+0.446950I$ $b=\ \ 0.636825-0.264630I$	$-0.08245+4.80485I$	0
$u=\ \ 0.176764+1.009050I$ $a=-0.361751-0.893889I$ $b=\ \ 1.61810+0.10958I$	$1.70045+2.91637I$	0
$u=\ \ 0.176764-1.009050I$ $a=-0.361751+0.893889I$ $b=\ \ 1.61810-0.10958I$	$1.70045-2.91637I$	0
$u=\ \ 1.018160+0.180797I$ $a=-3.61763+0.47037I$ $b=-2.95467-0.94404I$	$-6.55599-2.35969I$	0
$u=\ \ 1.018160-0.180797I$ $a=-3.61763-0.47037I$ $b=-2.95467+0.94404I$	$-6.55599+2.35969I$	0
$u=-1.037780+0.050306I$ $a=-2.18608-0.36963I$ $b=-1.068720-0.752547I$	$-2.48276+0.74819I$	0
$u=-1.037780-0.050306I$ $a=-2.18608+0.36963I$ $b=-1.068720+0.752547I$	$-2.48276-0.74819I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.279819+0.894406I$ $a=-0.240842-0.954939I$ $b=\ \ 0.473947+0.149110I$	$2.20675+2.15189I$	$-2.00000-6.97084I$
$u=-0.279819-0.894406I$ $a=-0.240842+0.954939I$ $b=\ \ 0.473947-0.149110I$	$2.20675-2.15189I$	$-2.00000+6.97084I$
$u=-0.931439+0.093793I$ $a=\ \ 0.353517-0.205717I$ $b=-0.228533+0.380605I$	$-1.57052+0.52011I$	$-4.24531+0.I$
$u=-0.931439-0.093793I$ $a=\ \ 0.353517+0.205717I$ $b=-0.228533-0.380605I$	$-1.57052-0.52011I$	$-4.24531+0.I$
$u=-1.077730+0.076763I$ $a=\ \ 1.84215+0.42920I$ $b=\ \ 0.682352-0.497417I$	$-3.02707-0.18143I$	0
$u=-1.077730-0.076763I$ $a=\ \ 1.84215-0.42920I$ $b=\ \ 0.682352+0.497417I$	$-3.02707+0.18143I$	0
$u=-1.109660+0.203084I$ $a=\ \ 1.61262+1.92333I$ $b=\ \ 1.65697+2.09432I$	$-9.86665+5.91796I$	0
$u=-1.109660-0.203084I$ $a=\ \ 1.61262-1.92333I$ $b=\ \ 1.65697-2.09432I$	$-9.86665-5.91796I$	0
$u=\ \ 1.136350+0.003599I$ $a=-1.064320-0.075553I$ $b=-1.72518-0.75050I$	$-7.54536+1.24468I$	0
$u=\ \ 1.136350-0.003599I$ $a=-1.064320+0.075553I$ $b=-1.72518+0.75050I$	$-7.54536-1.24468I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.544396+1.000180I$ $a=-0.095435+0.415036I$ $b=\ 1.69336+0.10370I$	$-8.85105+1.75177I$	0
$u=-0.544396-1.000180I$ $a=-0.095435-0.415036I$ $b=\ 1.69336-0.10370I$	$-8.85105-1.75177I$	0
$u=\ 1.167580+0.149402I$ $a=\ 1.72845-0.61424I$ $b=\ 1.52072-0.86765I$	$-2.82519-4.47594I$	0
$u=\ 1.167580-0.149402I$ $a=\ 1.72845+0.61424I$ $b=\ 1.52072+0.86765I$	$-2.82519+4.47594I$	0
$u=\ 1.141340+0.356267I$ $a=-1.97705+0.57022I$ $b=-1.379620-0.269089I$	$-8.60220-8.16498I$	0
$u=\ 1.141340-0.356267I$ $a=-1.97705-0.57022I$ $b=-1.379620+0.269089I$	$-8.60220+8.16498I$	0
$u=\ 1.100400+0.514009I$ $a=\ 0.182278-0.554378I$ $b=\ 0.476968-0.410769I$	$-0.63838-5.02004I$	0
$u=\ 1.100400-0.514009I$ $a=\ 0.182278+0.554378I$ $b=\ 0.476968+0.410769I$	$-0.63838+5.02004I$	0
$u=\ 1.111630+0.510249I$ $a=\ 0.303809-0.263324I$ $b=\ 0.425849-0.400376I$	$-0.68506-5.04397I$	0
$u=\ 1.111630-0.510249I$ $a=\ 0.303809+0.263324I$ $b=\ 0.425849+0.400376I$	$-0.68506+5.04397I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.741491 + 0.975965I$ $a = 0.627850 - 0.813152I$ $b = 0.160474 + 1.091760I$	$0.664828 + 0.016710I$	0
$u = 0.741491 - 0.975965I$ $a = 0.627850 + 0.813152I$ $b = 0.160474 - 1.091760I$	$0.664828 - 0.016710I$	0
$u = 0.002030 + 1.272340I$ $a = 0.513090 + 0.516566I$ $b = -2.01029 - 0.25360I$	$-6.77946 + 10.25100I$	0
$u = 0.002030 - 1.272340I$ $a = 0.513090 - 0.516566I$ $b = -2.01029 + 0.25360I$	$-6.77946 - 10.25100I$	0
$u = -0.290112 + 1.251830I$ $a = 0.721546 - 0.371631I$ $b = -2.33695 - 0.28961I$	$-0.46245 - 2.32653I$	0
$u = -0.290112 - 1.251830I$ $a = 0.721546 + 0.371631I$ $b = -2.33695 + 0.28961I$	$-0.46245 + 2.32653I$	0
$u = 0.319419 + 0.638323I$ $a = 0.266507 + 0.149010I$ $b = 0.429896 + 0.399818I$	$1.58623 + 0.62032I$	$1.131389 - 0.019601I$
$u = 0.319419 - 0.638323I$ $a = 0.266507 - 0.149010I$ $b = 0.429896 - 0.399818I$	$1.58623 - 0.62032I$	$1.131389 + 0.019601I$
$u = 0.385520 + 0.578821I$ $a = 0.497687 - 0.253565I$ $b = 0.308115 + 0.179903I$	$1.44081 + 0.61682I$	$4.83546 + 0.93463I$
$u = 0.385520 - 0.578821I$ $a = 0.497687 + 0.253565I$ $b = 0.308115 - 0.179903I$	$1.44081 - 0.61682I$	$4.83546 - 0.93463I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.214200+0.479278I$ $a=-0.030527+0.386320I$ $b=-0.171089-0.244683I$	$-0.85536+2.82110I$	0
$u=-1.214200-0.479278I$ $a=-0.030527-0.386320I$ $b=-0.171089+0.244683I$	$-0.85536-2.82110I$	0
$u=1.274540+0.287916I$ $a=-2.15458+0.40448I$ $b=-2.52672-0.90327I$	$-6.55815-1.94136I$	0
$u=1.274540-0.287916I$ $a=-2.15458-0.40448I$ $b=-2.52672+0.90327I$	$-6.55815+1.94136I$	0
$u=0.194290+0.652674I$ $a=0.004037-0.292078I$ $b=-1.108940+0.699571I$	$-5.77638+4.37759I$	$-3.04054-1.90544I$
$u=0.194290-0.652674I$ $a=0.004037+0.292078I$ $b=-1.108940-0.699571I$	$-5.77638-4.37759I$	$-3.04054+1.90544I$
$u=-1.316740+0.342524I$ $a=2.22467+0.45472I$ $b=2.84462-0.86702I$	$-3.74572+7.98813I$	0
$u=-1.316740-0.342524I$ $a=2.22467-0.45472I$ $b=2.84462+0.86702I$	$-3.74572-7.98813I$	0
$u=-0.540950+0.287850I$ $a=1.59281-1.42860I$ $b=1.005260-0.506933I$	$-8.08495-3.80008I$	$-6.48316+2.78169I$
$u=-0.540950-0.287850I$ $a=1.59281+1.42860I$ $b=1.005260+0.506933I$	$-8.08495+3.80008I$	$-6.48316-2.78169I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.280390 + 0.542150I$ $a = -0.405570 + 0.444554I$ $b = -1.39952 + 0.78269I$	$-8.14535 - 0.29592I$	0
$u = 1.280390 - 0.542150I$ $a = -0.405570 - 0.444554I$ $b = -1.39952 - 0.78269I$	$-8.14535 + 0.29592I$	0
$u = 1.369510 + 0.269960I$ $a = 1.75943 - 0.21348I$ $b = 1.79429 + 1.07646I$	$-15.0106 - 5.5218I$	0
$u = 1.369510 - 0.269960I$ $a = 1.75943 + 0.21348I$ $b = 1.79429 - 1.07646I$	$-15.0106 + 5.5218I$	0
$u = -1.390460 + 0.141716I$ $a = -1.70864 - 0.95421I$ $b = -2.53555 - 0.75803I$	$-10.89910 - 1.69454I$	0
$u = -1.390460 - 0.141716I$ $a = -1.70864 + 0.95421I$ $b = -2.53555 + 0.75803I$	$-10.89910 + 1.69454I$	0
$u = 1.329630 + 0.472866I$ $a = 1.82348 - 0.90583I$ $b = 2.91957 + 0.23245I$	$-2.19507 - 8.22505I$	0
$u = 1.329630 - 0.472866I$ $a = 1.82348 + 0.90583I$ $b = 2.91957 - 0.23245I$	$-2.19507 + 8.22505I$	0
$u = -1.33351 + 0.50009I$ $a = 0.205326 - 0.345072I$ $b = 0.181642 + 0.317254I$	$-8.32222 + 10.32410I$	0
$u = -1.33351 - 0.50009I$ $a = 0.205326 + 0.345072I$ $b = 0.181642 - 0.317254I$	$-8.32222 - 10.32410I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.097023 + 0.516748I$ $a = -1.53614 + 0.33142I$ $b = 1.267050 + 0.268926I$	$0.63412 - 4.46156I$	$-3.76825 + 6.77202I$
$u = 0.097023 - 0.516748I$ $a = -1.53614 - 0.33142I$ $b = 1.267050 - 0.268926I$	$0.63412 + 4.46156I$	$-3.76825 - 6.77202I$
$u = -1.34581 + 0.61160I$ $a = -1.62036 - 0.84261I$ $b = -2.53126 + 1.02229I$	$-4.08423 + 8.86167I$	0
$u = -1.34581 - 0.61160I$ $a = -1.62036 + 0.84261I$ $b = -2.53126 - 1.02229I$	$-4.08423 - 8.86167I$	0
$u = 1.48533 + 0.07762I$ $a = -1.79656 + 0.60283I$ $b = -3.47474 + 0.80956I$	$-8.62358 + 1.01784I$	0
$u = 1.48533 - 0.07762I$ $a = -1.79656 - 0.60283I$ $b = -3.47474 - 0.80956I$	$-8.62358 - 1.01784I$	0
$u = 1.41487 + 0.58489I$ $a = -1.63665 + 0.81194I$ $b = -2.79765 - 0.68796I$	$-11.2576 - 16.6985I$	0
$u = 1.41487 - 0.58489I$ $a = -1.63665 - 0.81194I$ $b = -2.79765 + 0.68796I$	$-11.2576 + 16.6985I$	0
$u = -0.386897 + 0.249171I$ $a = 2.06957 - 0.41148I$ $b = -0.267376 + 0.524327I$	$-3.14659 + 1.15669I$	$0.68364 - 1.66386I$
$u = -0.386897 - 0.249171I$ $a = 2.06957 + 0.41148I$ $b = -0.267376 - 0.524327I$	$-3.14659 - 1.15669I$	$0.68364 + 1.66386I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.30406+0.82899I$ $a=\ \ 1.05664+1.05525I$ $b=\ \ 2.16979-0.68015I$	$-10.94130+5.20376I$	0
$u=-1.30406-0.82899I$ $a=\ \ 1.05664-1.05525I$ $b=\ \ 2.16979+0.68015I$	$-10.94130-5.20376I$	0
$u=-0.420966+0.043691I$ $a=\ \ 1.177750-0.720907I$ $b=-0.633678+0.044005I$	$-1.261910+0.263190I$	$-8.70761+0.23744I$
$u=-0.420966-0.043691I$ $a=\ \ 1.177750+0.720907I$ $b=-0.633678-0.044005I$	$-1.261910-0.263190I$	$-8.70761-0.23744I$
$u=-1.65030+0.51603I$ $a=-1.148450-0.155755I$ $b=-1.90968+1.96171I$	$-12.01700-3.30289I$	0
$u=-1.65030-0.51603I$ $a=-1.148450+0.155755I$ $b=-1.90968-1.96171I$	$-12.01700+3.30289I$	0

II. $\boldsymbol{I_2^u = \langle 2.49\times 10^8 u^{22} + 2.08\times 10^8 u^{21} + \cdots + 7.95\times 10^7 b - 1.35\times 10^9,\ 4.10\times 10^8 u^{22} + 3.48\times 10^8 u^{21} + \cdots + 7.95\times 10^7 a - 2.19\times 10^9,\ u^{23} + 2u^{22} + \cdots - 8u - 8\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -5.15959u^{22} - 4.37544u^{21} + \cdots + 13.1329u + 27.5097 \\ -3.12825u^{22} - 2.62000u^{21} + \cdots + 7.89685u + 16.9681 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} 5.96267u^{22} + 5.49417u^{21} + \cdots - 13.9666u - 37.3530 \\ 3.71013u^{22} + 4.51949u^{21} + \cdots - 2.41295u - 30.8696 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.180806u^{22} + 1.09306u^{21} + \cdots + 4.41132u - 6.09049 \\ 2.40989u^{22} + 2.40623u^{21} + \cdots - 5.49037u - 16.5146 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 2.25254u^{22} + 0.974685u^{21} + \cdots - 11.5536u - 6.48339 \\ 3.71013u^{22} + 4.51949u^{21} + \cdots - 2.41295u - 30.8696 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -4.92777u^{22} - 6.66663u^{21} + \cdots - 3.35723u + 31.9947 \\ -3.71013u^{22} - 4.51949u^{21} + \cdots + 2.41295u + 30.8696 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -3.86653u^{22} - 5.39577u^{21} + \cdots - 1.15260u + 30.2425 \\ 1.89779u^{22} + 2.79821u^{21} + \cdots + 0.830807u - 20.7597 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2.71997u^{22} - 3.16714u^{21} + \cdots + 3.22271u + 23.5905 \\ 5.45629u^{22} + 4.93488u^{21} + \cdots - 15.1772u - 33.8649 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 4.16367u^{22} + 3.18690u^{21} + \cdots - 13.2821u - 21.7105 \\ 2.88236u^{22} + 4.09623u^{21} + \cdots + 1.72423u - 28.5228 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{5516374159}{636344672}u^{22} + \frac{9107813537}{636344672}u^{21} + \cdots + \frac{301737269}{39771542}u - \frac{9773924821}{79543084}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$4(4u^{23} - 65u^{22} + \cdots + 15u - 1)$
c_2	$2(2u^{23} + u^{22} + \cdots - 3u + 1)$
c_3	$u^{23} + 6u^{22} + \cdots + 17u + 1$
c_4	$u^{23} + 3u^{21} + \cdots + 33u + 14$
c_5	$u^{23} + 2u^{22} + \cdots - 8u - 8$
c_6	$2(2u^{23} - u^{22} + \cdots - 3u - 1)$
c_7	$u^{23} + 2u^{22} + \cdots - u - 4$
c_8	$u^{23} - 3u^{22} + \cdots + 40u - 16$
c_9	$2(2u^{23} - 3u^{22} + \cdots - 8u - 8)$
c_{10}	$4(4u^{23} - 41u^{22} + \cdots + 5u - 1)$
c_{11}	$u^{23} - 2u^{22} + \cdots - 8u + 8$
c_{12}	$2(2u^{23} + u^{22} + \cdots - u + 1)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$16(16y^{23} - 321y^{22} + \cdots - 13y - 1)$
c_2, c_6	$4(4y^{23} - 65y^{22} + \cdots + 15y - 1)$
c_3	$y^{23} - 22y^{22} + \cdots - 11y - 1$
c_4	$y^{23} + 6y^{22} + \cdots + 1061y - 196$
c_5, c_{11}	$y^{23} - 14y^{22} + \cdots + 256y - 64$
c_7	$y^{23} + 2y^{22} + \cdots + 73y - 16$
c_8	$y^{23} + 23y^{22} + \cdots + 6080y - 256$
c_9	$4(4y^{23} + 51y^{22} + \cdots + 384y - 64)$
c_{10}	$16(16y^{23} - 297y^{22} + \cdots - 3y - 1)$
c_{12}	$4(4y^{23} + 31y^{22} + \cdots + 13y - 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.356302 + 0.921246I$ $a = -0.426449 - 0.898055I$ $b = 1.81269 - 0.26418I$	$2.07565 + 3.56521I$	$0.83283 - 7.40934I$
$u = 0.356302 - 0.921246I$ $a = -0.426449 + 0.898055I$ $b = 1.81269 + 0.26418I$	$2.07565 - 3.56521I$	$0.83283 + 7.40934I$
$u = -0.659298 + 0.709797I$ $a = 0.183477 + 0.380951I$ $b = -0.351559 - 0.549190I$	$0.91405 - 1.41548I$	$-1.11361 + 5.21408I$
$u = -0.659298 - 0.709797I$ $a = 0.183477 - 0.380951I$ $b = -0.351559 + 0.549190I$	$0.91405 + 1.41548I$	$-1.11361 - 5.21408I$
$u = 1.04960$ $a = -2.61659$ $b = -0.614702$	-3.12449	-70.7810
$u = -0.974176 + 0.395630I$ $a = 1.57498 + 1.75261I$ $b = 1.40615 + 0.67428I$	$-8.68718 + 5.83308I$	$-5.34407 - 4.88575I$
$u = -0.974176 - 0.395630I$ $a = 1.57498 - 1.75261I$ $b = 1.40615 - 0.67428I$	$-8.68718 - 5.83308I$	$-5.34407 + 4.88575I$
$u = -0.969026 + 0.417007I$ $a = -0.357355 - 0.102308I$ $b = 0.217924 - 0.434540I$	$0.08939 + 5.69307I$	$0.41476 - 11.59398I$
$u = -0.969026 - 0.417007I$ $a = -0.357355 + 0.102308I$ $b = 0.217924 + 0.434540I$	$0.08939 - 5.69307I$	$0.41476 + 11.59398I$
$u = -0.446659 + 0.962675I$ $a = -0.182179 - 0.915290I$ $b = 0.156899 + 0.194953I$	$2.40763 + 1.37050I$	$-0.171489 + 1.394959I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.446659-0.962675I$ $a=-0.182179+0.915290I$ $b=\ \ 0.156899-0.194953I$	$2.40763-1.37050I$	$-0.171489-1.394959I$
$u=\ \ 0.235891+0.795309I$ $a=\ \ 0.720914-0.951185I$ $b=-0.991580+0.519972I$	$-0.059835-1.122220I$	$-4.89482+1.47895I$
$u=\ \ 0.235891-0.795309I$ $a=\ \ 0.720914+0.951185I$ $b=-0.991580-0.519972I$	$-0.059835+1.122220I$	$-4.89482-1.47895I$
$u=\ \ 0.728014+0.278875I$ $a=-2.47522+1.35985I$ $b=-2.16573-0.15001I$	$-5.70885-2.28203I$	$-0.70922+2.28852I$
$u=\ \ 0.728014-0.278875I$ $a=-2.47522-1.35985I$ $b=-2.16573+0.15001I$	$-5.70885+2.28203I$	$-0.70922-2.28852I$
$u=-1.184950+0.568415I$ $a=\ \ 0.040381+0.403877I$ $b=-0.070996-0.158742I$	$-0.10085+4.15383I$	$-1.76815-1.34475I$
$u=-1.184950-0.568415I$ $a=\ \ 0.040381-0.403877I$ $b=-0.070996+0.158742I$	$-0.10085-4.15383I$	$-1.76815+1.34475I$
$u=\ \ 1.319470+0.481768I$ $a=\ \ 1.90814-0.84640I$ $b=\ \ 2.92161+0.56057I$	$-1.35982-8.75350I$	$-1.07603+8.75787I$
$u=\ \ 1.319470-0.481768I$ $a=\ \ 1.90814+0.84640I$ $b=\ \ 2.92161-0.56057I$	$-1.35982+8.75350I$	$-1.07603-8.75787I$
$u=-1.383620+0.262159I$ $a=-1.090950-0.766666I$ $b=-1.47323-0.28646I$	$-10.42060-2.61211I$	$-7.27563+4.52171I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.383620-0.262159I$ $a=-1.090950+0.766666I$ $b=-1.47323+0.28646I$	$-10.42060+2.61211I$	$-7.27563-4.52171I$
$u=\ \ 1.45325+0.11507I$ $a=-2.33744-0.07338I$ $b=-4.15483-0.72662I$	$-8.84112+0.24124I$	$-10.76982+2.03355I$
$u=\ \ 1.45325-0.11507I$ $a=-2.33744+0.07338I$ $b=-4.15483+0.72662I$	$-8.84112-0.24124I$	$-10.76982-2.03355I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$16(4u^{23}-65u^{22}+\cdots+15u-1)(4u^{76}+181u^{75}+\cdots+50u+1)$
c_2	$4(2u^{23}+u^{22}+\cdots-3u+1)(2u^{76}-u^{75}+\cdots-2u+1)$
c_3	$(u^{23}+6u^{22}+\cdots+17u+1)(u^{76}-7u^{75}+\cdots+842u+773)$
c_4	$(u^{23}+3u^{21}+\cdots+33u+14)(u^{76}+u^{75}+\cdots+137983u+158846)$
c_5	$(u^{23}+2u^{22}+\cdots-8u-8)(u^{76}-3u^{75}+\cdots+936u+232)$
c_6	$4(2u^{23}-u^{22}+\cdots-3u-1)(2u^{76}-u^{75}+\cdots-2u+1)$
c_7	$(u^{23}+2u^{22}+\cdots-u-4)(u^{76}-5u^{75}+\cdots-19313u+1532)$
c_8	$(u^{23}-3u^{22}+\cdots+40u-16)$ $\cdot(u^{76}-4u^{75}+\cdots+20080608u+2598032)$
c_9	$4(2u^{23}-3u^{22}+\cdots-8u-8)(2u^{76}+u^{75}+\cdots+296u+712)$
c_{10}	$16(4u^{23}-41u^{22}+\cdots+5u-1)(4u^{76}+27u^{75}+\cdots+3218u+419)$
c_{11}	$(u^{23}-2u^{22}+\cdots-8u+8)(u^{76}-3u^{75}+\cdots+936u+232)$
c_{12}	$4(2u^{23}+u^{22}+\cdots-u+1)(2u^{76}+7u^{75}+\cdots+11068u+1009)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$256(16y^{23}-321y^{22}+\cdots-13y-1)(16y^{76}+15y^{75}+\cdots-166y+1)$
c_2, c_6	$16(4y^{23}-65y^{22}+\cdots+15y-1)(4y^{76}-181y^{75}+\cdots-50y+1)$
c_3	$(y^{23}-22y^{22}+\cdots-11y-1)$ $\cdot(y^{76}-107y^{75}+\cdots-13723192y+597529)$
c_4	$(y^{23}+6y^{22}+\cdots+1061y-196)$ $\cdot(y^{76}+33y^{75}+\cdots+325811545407y+25232051716)$
c_5, c_{11}	$(y^{23}-14y^{22}+\cdots+256y-64)$ $\cdot(y^{76}-51y^{75}+\cdots-1128512y+53824)$
c_7	$(y^{23}+2y^{22}+\cdots+73y-16)$ $\cdot(y^{76}-11y^{75}+\cdots-47423585y+2347024)$
c_8	$(y^{23}+23y^{22}+\cdots+6080y-256)$ $\cdot(y^{76}+62y^{75}+\cdots+198572181119104y+6749770273024)$
c_9	$16(4y^{23}+51y^{22}+\cdots+384y-64)$ $\cdot(4y^{76}+367y^{75}+\cdots+37802176y+506944)$
c_{10}	$256(16y^{23}-297y^{22}+\cdots-3y-1)$ $\cdot(16y^{76}+487y^{75}+\cdots+8708976y+175561)$
c_{12}	$16(4y^{23}+31y^{22}+\cdots+13y-1)$ $\cdot(4y^{76}+331y^{75}+\cdots+210844724y+1018081)$