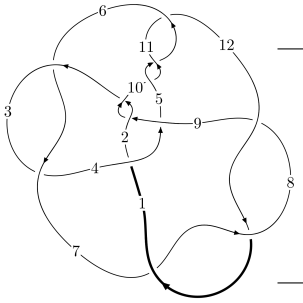
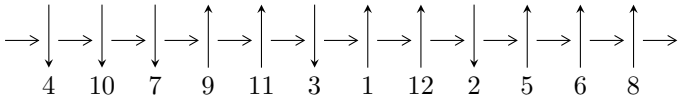
$12a_{1170}$ $(K12a_{1170})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 4.42559 \times 10^{207} u^{102} - 2.50511 \times 10^{206} u^{101} + \cdots + 7.24447 \times 10^{208} b - 6.34599 \times 10^{209},$$
$$- 3.30509 \times 10^{211} u^{102} + 6.96912 \times 10^{210} u^{101} + \cdots + 1.25329 \times 10^{211} a + 5.02027 \times 10^{213},$$
$$u^{103} + u^{102} + \cdots + 988u - 173 \rangle$$
$$I_2^u = \langle -14120u^{26} + 4722u^{25} + \cdots + 7787b - 8083,\ 18524u^{26} + 2179u^{25} + \cdots + 7787a - 2475,$$
$$u^{27} - 14u^{25} + \cdots + 4u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 130 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. $\boldsymbol{I_1^u = \langle 4.43 \times 10^{207} u^{102} - 2.51 \times 10^{206} u^{101} + \cdots + 7.24 \times 10^{208} b - 6.35 \times 10^{209},\ -3.31 \times 10^{211} u^{102} + 6.97 \times 10^{210} u^{101} + \cdots + 1.25 \times 10^{211} a + 5.02 \times 10^{213},\ u^{103} + u^{102} + \cdots + 988u - 173 \rangle}$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.63712u^{102} - 0.556064u^{101} + \cdots + 2614.38u - 400.566 \\ -0.0610892u^{102} + 0.00345796u^{101} + \cdots - 49.6740u + 8.75976 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 3.52331u^{102} - 0.839955u^{101} + \cdots + 3545.53u - 544.506 \\ 0.762710u^{102} - 0.270469u^{101} + \cdots + 839.144u - 128.842 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2.57603u^{102} - 0.552606u^{101} + \cdots + 2564.71u - 391.806 \\ -0.0610892u^{102} + 0.00345796u^{101} + \cdots - 49.6740u + 8.75976 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 2.21085u^{102} - 0.181129u^{101} + \cdots + 1993.54u - 299.459 \\ -0.120933u^{102} + 0.117634u^{101} + \cdots - 172.565u + 26.1483 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.00730u^{102} + 0.411475u^{101} + \cdots - 1126.72u + 174.496 \\ -1.64707u^{102} + 0.609439u^{101} + \cdots - 1807.03u + 281.022 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0593670u^{102} - 0.0345648u^{101} + \cdots + 33.9575u - 4.09273 \\ 1.01418u^{102} - 0.128591u^{101} + \cdots + 934.610u - 140.366 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 2.90932u^{102} - 0.278749u^{101} + \cdots + 2654.63u - 398.843 \\ 1.52886u^{102} - 0.105690u^{101} + \cdots + 1374.19u - 208.465 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.09664u^{102} + 0.747844u^{101} + \cdots - 2298.53u + 369.408$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{103} - 4u^{102} + \cdots + 63177613u - 8582393$
c_2, c_9	$u^{103} - u^{102} + \cdots + 1650u + 121$
c_3, c_6	$u^{103} - 43u^{101} + \cdots + 295139u + 37247$
c_4	$u^{103} + 3u^{102} + \cdots - 1835136u - 186624$
c_5, c_{10}, c_{11}	$u^{103} - u^{102} + \cdots + 988u + 173$
c_7, c_8, c_{12}	$u^{103} - 2u^{102} + \cdots - 30u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{103} - 52y^{102} + \cdots + 1577684931052899y - 73657469606449$
c_2, c_9	$y^{103} - 65y^{102} + \cdots + 1848880y - 14641$
c_3, c_6	$y^{103} - 86y^{102} + \cdots + 48391156629y - 1387339009$
c_4	$y^{103} + 17y^{102} + \cdots - 8707129344y - 34828517376$
c_5, c_{10}, c_{11}	$y^{103} - 95y^{102} + \cdots + 361302y - 29929$
c_7, c_8, c_{12}	$y^{103} + 108y^{102} + \cdots + 550y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.163469+0.988899I$ $a=-0.591459-0.190851I$ $b=-0.748728+0.545340I$	$-6.44274+2.21725I$	0
$u=-0.163469-0.988899I$ $a=-0.591459+0.190851I$ $b=-0.748728-0.545340I$	$-6.44274-2.21725I$	0
$u=\ \ 0.148774+1.006360I$ $a=-0.533227-0.467991I$ $b=-0.937387-0.029345I$	$-4.91008-0.21953I$	0
$u=\ \ 0.148774-1.006360I$ $a=-0.533227+0.467991I$ $b=-0.937387+0.029345I$	$-4.91008+0.21953I$	0
$u=\ \ 0.308856+0.996841I$ $a=\ \ 0.508556+0.686687I$ $b=\ \ 1.308710-0.505019I$	$-13.0326+11.9617I$	0
$u=\ \ 0.308856-0.996841I$ $a=\ \ 0.508556-0.686687I$ $b=\ \ 1.308710+0.505019I$	$-13.0326-11.9617I$	0
$u=-0.355663+0.883558I$ $a=-0.412153+0.744444I$ $b=-1.321570-0.470564I$	$-6.21746-8.08999I$	0
$u=-0.355663-0.883558I$ $a=-0.412153-0.744444I$ $b=-1.321570+0.470564I$	$-6.21746+8.08999I$	0
$u=\ \ 1.07709$ $a=\ \ 1.26022$ $b=-1.65241$	-4.86975	0
$u=-1.077500+0.054072I$ $a=-0.96184+2.44614I$ $b=\ \ 0.754223-0.685328I$	$-7.36224+3.53097I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.077500-0.054072I$ $a=-0.96184-2.44614I$ $b=\ \ 0.754223+0.685328I$	$-7.36224-3.53097I$	0
$u=-0.602949+0.675187I$ $a=-0.514379+0.099696I$ $b=-1.057750+0.378820I$	$-7.29391+1.35242I$	0
$u=-0.602949-0.675187I$ $a=-0.514379-0.099696I$ $b=-1.057750-0.378820I$	$-7.29391-1.35242I$	0
$u=-0.872020+0.737402I$ $a=-0.379150-0.431654I$ $b=\ \ 1.189340-0.253433I$	$-4.73880+2.62050I$	0
$u=-0.872020-0.737402I$ $a=-0.379150+0.431654I$ $b=\ \ 1.189340+0.253433I$	$-4.73880-2.62050I$	0
$u=-0.628905+0.565862I$ $a=-1.52949+0.21220I$ $b=-0.148704-0.361724I$	$-7.72167+2.60859I$	0
$u=-0.628905-0.565862I$ $a=-1.52949-0.21220I$ $b=-0.148704+0.361724I$	$-7.72167-2.60859I$	0
$u=-1.171930+0.003108I$ $a=-0.37127-2.28954I$ $b=-0.846318+0.077461I$	$-6.66294-3.80860I$	0
$u=-1.171930-0.003108I$ $a=-0.37127+2.28954I$ $b=-0.846318-0.077461I$	$-6.66294+3.80860I$	0
$u=\ \ 0.105899+0.791296I$ $a=\ \ 0.802570-0.217865I$ $b=\ \ 0.816903+0.299056I$	$-1.41896-1.54298I$	$6.41871+1.97711I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.105899 - 0.791296I$ $a = 0.802570 + 0.217865I$ $b = 0.816903 - 0.299056I$	$-1.41896 + 1.54298I$	$6.41871 - 1.97711I$
$u = 0.490914 + 0.629055I$ $a = -0.476329 - 0.380374I$ $b = -0.003180 + 0.620411I$	$-4.41593 + 2.12959I$	$0. - 3.53620I$
$u = 0.490914 - 0.629055I$ $a = -0.476329 + 0.380374I$ $b = -0.003180 - 0.620411I$	$-4.41593 - 2.12959I$	$0. + 3.53620I$
$u = 1.22309$ $a = 0.188600$ $b = 1.50392$	-3.65106	0
$u = -0.271827 + 0.725757I$ $a = 0.220702 + 0.499597I$ $b = -0.015448 - 0.998350I$	$-8.96397 - 6.66223I$	$-3.44910 + 5.30281I$
$u = -0.271827 - 0.725757I$ $a = 0.220702 - 0.499597I$ $b = -0.015448 + 0.998350I$	$-8.96397 + 6.66223I$	$-3.44910 - 5.30281I$
$u = -0.361443 + 0.682704I$ $a = 1.48533 - 1.04786I$ $b = 1.181590 + 0.340135I$	$-7.85310 - 5.70542I$	$-4.85454 + 6.34482I$
$u = -0.361443 - 0.682704I$ $a = 1.48533 + 1.04786I$ $b = 1.181590 - 0.340135I$	$-7.85310 + 5.70542I$	$-4.85454 - 6.34482I$
$u = 0.311724 + 0.705848I$ $a = 0.298127 + 0.920391I$ $b = 1.37182 - 0.45974I$	$-6.19903 + 2.87469I$	$-4.74003 - 2.88086I$
$u = 0.311724 - 0.705848I$ $a = 0.298127 - 0.920391I$ $b = 1.37182 + 0.45974I$	$-6.19903 - 2.87469I$	$-4.74003 + 2.88086I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.226940+0.216577I$ $a=-1.015060+0.249853I$ $b=\ 1.63652-0.36861I$	$-9.70259-4.17421I$	0
$u=-1.226940-0.216577I$ $a=-1.015060-0.249853I$ $b=\ 1.63652+0.36861I$	$-9.70259+4.17421I$	0
$u=\ 1.257550+0.031034I$ $a=-0.002060+1.398640I$ $b=\ 0.846329-0.213131I$	$1.05682-2.10482I$	0
$u=\ 1.257550-0.031034I$ $a=-0.002060-1.398640I$ $b=\ 0.846329+0.213131I$	$1.05682+2.10482I$	0
$u=\ 0.464001+0.557793I$ $a=\ 0.38104-1.39756I$ $b=-1.226570-0.062274I$	$-5.41171+1.01005I$	$-5.80459-5.38237I$
$u=\ 0.464001-0.557793I$ $a=\ 0.38104+1.39756I$ $b=-1.226570+0.062274I$	$-5.41171-1.01005I$	$-5.80459+5.38237I$
$u=-1.272480+0.139287I$ $a=-0.212489+0.033918I$ $b=-1.51526+0.05400I$	$-8.65236+0.21313I$	0
$u=-1.272480-0.139287I$ $a=-0.212489-0.033918I$ $b=-1.51526-0.05400I$	$-8.65236-0.21313I$	0
$u=\ 1.280880+0.143923I$ $a=\ 0.77359+1.92507I$ $b=-0.643782-1.233920I$	$1.77334-0.63372I$	0
$u=\ 1.280880-0.143923I$ $a=\ 0.77359-1.92507I$ $b=-0.643782+1.233920I$	$1.77334+0.63372I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.294700 + 0.130665I$ $a = 0.30319 - 1.75188I$ $b = -1.170630 + 0.675828I$	$2.04315 + 3.44056I$	0
$u = 1.294700 - 0.130665I$ $a = 0.30319 + 1.75188I$ $b = -1.170630 - 0.675828I$	$2.04315 - 3.44056I$	0
$u = 1.075950 + 0.773996I$ $a = 0.346356 - 0.195540I$ $b = -1.180260 - 0.373125I$	$-10.84940 - 5.89850I$	0
$u = 1.075950 - 0.773996I$ $a = 0.346356 + 0.195540I$ $b = -1.180260 + 0.373125I$	$-10.84940 + 5.89850I$	0
$u = 1.335050 + 0.255112I$ $a = -0.90176 + 1.98132I$ $b = 1.135570 - 0.705009I$	$-8.60939 + 2.09321I$	0
$u = 1.335050 - 0.255112I$ $a = -0.90176 - 1.98132I$ $b = 1.135570 + 0.705009I$	$-8.60939 - 2.09321I$	0
$u = -0.095046 + 0.631459I$ $a = -0.496801 + 1.267380I$ $b = -1.37659 - 0.50675I$	$-13.14390 + 1.13556I$	$-8.55420 - 0.03226I$
$u = -0.095046 - 0.631459I$ $a = -0.496801 - 1.267380I$ $b = -1.37659 + 0.50675I$	$-13.14390 - 1.13556I$	$-8.55420 + 0.03226I$
$u = -1.351620 + 0.205622I$ $a = -0.024226 + 0.882590I$ $b = -1.038360 - 0.313115I$	$3.21905 - 1.39563I$	0
$u = -1.351620 - 0.205622I$ $a = -0.024226 - 0.882590I$ $b = -1.038360 + 0.313115I$	$3.21905 + 1.39563I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.313730 + 0.394243I$ $a = 0.056019 + 0.659577I$ $b = 1.147300 - 0.264206I$	$-1.03514 + 5.20228I$	0
$u = 1.313730 - 0.394243I$ $a = 0.056019 - 0.659577I$ $b = 1.147300 + 0.264206I$	$-1.03514 - 5.20228I$	0
$u = -1.357810 + 0.216982I$ $a = -0.55330 + 1.73398I$ $b = 0.308420 - 1.315980I$	$3.01469 - 5.61170I$	0
$u = -1.357810 - 0.216982I$ $a = -0.55330 - 1.73398I$ $b = 0.308420 + 1.315980I$	$3.01469 + 5.61170I$	0
$u = -1.379540 + 0.031326I$ $a = 0.69699 + 1.39227I$ $b = -0.486815 - 0.973303I$	$4.28030 - 2.60522I$	0
$u = -1.379540 - 0.031326I$ $a = 0.69699 - 1.39227I$ $b = -0.486815 + 0.973303I$	$4.28030 + 2.60522I$	0
$u = 1.370240 + 0.187367I$ $a = 1.26961 - 1.92551I$ $b = -1.041860 + 0.127705I$	$-7.44439 + 4.78630I$	0
$u = 1.370240 - 0.187367I$ $a = 1.26961 + 1.92551I$ $b = -1.041860 - 0.127705I$	$-7.44439 - 4.78630I$	0
$u = 0.239390 + 0.546734I$ $a = -1.68003 - 0.75967I$ $b = -1.083750 + 0.335393I$	$-1.54209 + 3.82264I$	$-0.07568 - 8.96990I$
$u = 0.239390 - 0.546734I$ $a = -1.68003 + 0.75967I$ $b = -1.083750 - 0.335393I$	$-1.54209 - 3.82264I$	$-0.07568 + 8.96990I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.391810+0.222257I$ $a=-0.10698-1.56171I$ $b=\ \ 1.250250+0.503870I$	$3.67266-6.68722I$	0
$u=-1.391810-0.222257I$ $a=-0.10698+1.56171I$ $b=\ \ 1.250250-0.503870I$	$3.67266+6.68722I$	0
$u=-1.32198+0.51188I$ $a=\ \ 0.300031-1.351340I$ $b=\ \ 1.005000+0.620415I$	$-2.76178-7.71289I$	0
$u=-1.32198-0.51188I$ $a=\ \ 0.300031+1.351340I$ $b=\ \ 1.005000-0.620415I$	$-2.76178+7.71289I$	0
$u=-1.40594+0.20070I$ $a=\ \ 0.443778-0.848526I$ $b=-0.589409+0.674801I$	$3.93805-1.47027I$	0
$u=-1.40594-0.20070I$ $a=\ \ 0.443778+0.848526I$ $b=-0.589409-0.674801I$	$3.93805+1.47027I$	0
$u=\ \ 0.176451+0.548688I$ $a=\ \ 0.987463+0.166992I$ $b=\ \ 0.932813+0.343087I$	$-1.44409-1.40048I$	$1.16471-2.54727I$
$u=\ \ 0.176451-0.548688I$ $a=\ \ 0.987463-0.166992I$ $b=\ \ 0.932813-0.343087I$	$-1.44409+1.40048I$	$1.16471+2.54727I$
$u=\ \ 1.37131+0.39232I$ $a=-0.065719-1.386650I$ $b=-0.974871+0.522895I$	$2.78263+6.10315I$	0
$u=\ \ 1.37131-0.39232I$ $a=-0.065719+1.386650I$ $b=-0.974871-0.522895I$	$2.78263-6.10315I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.39372 + 0.34641I$ $a = -0.439984 - 0.716866I$ $b = 0.537474 + 0.809666I$	$-1.36824 + 2.40734I$	0
$u = 1.39372 - 0.34641I$ $a = -0.439984 + 0.716866I$ $b = 0.537474 - 0.809666I$	$-1.36824 - 2.40734I$	0
$u = 1.40623 + 0.29514I$ $a = 0.50972 + 1.49283I$ $b = -0.170937 - 1.237640I$	$-3.63110 + 10.38570I$	0
$u = 1.40623 - 0.29514I$ $a = 0.50972 - 1.49283I$ $b = -0.170937 + 1.237640I$	$-3.63110 - 10.38570I$	0
$u = 1.44137 + 0.07431I$ $a = -0.457323 - 1.145870I$ $b = 0.195596 + 0.830593I$	$6.96115 + 1.71433I$	0
$u = 1.44137 - 0.07431I$ $a = -0.457323 + 1.145870I$ $b = 0.195596 - 0.830593I$	$6.96115 - 1.71433I$	0
$u = -1.42573 + 0.28898I$ $a = 0.67409 + 1.73211I$ $b = -1.29458 - 0.73199I$	$-0.65286 - 6.52840I$	0
$u = -1.42573 - 0.28898I$ $a = 0.67409 - 1.73211I$ $b = -1.29458 + 0.73199I$	$-0.65286 + 6.52840I$	0
$u = 0.136945 + 0.525189I$ $a = -0.234026 + 0.787036I$ $b = 0.088035 - 1.093760I$	$-1.76645 + 2.84055I$	$-5.12535 - 7.41118I$
$u = 0.136945 - 0.525189I$ $a = -0.234026 - 0.787036I$ $b = 0.088035 + 1.093760I$	$-1.76645 - 2.84055I$	$-5.12535 + 7.41118I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.43626 + 0.27026I$ $a = -0.03467 - 1.53295I$ $b = -1.312900 + 0.404767I$	$-2.12327 + 9.20386I$	0
$u = 1.43626 - 0.27026I$ $a = -0.03467 + 1.53295I$ $b = -1.312900 - 0.404767I$	$-2.12327 - 9.20386I$	0
$u = -1.44967 + 0.27501I$ $a = -0.470859 - 1.282600I$ $b = 0.935619 + 0.271046I$	$0.81975 - 4.30759I$	0
$u = -1.44967 - 0.27501I$ $a = -0.470859 + 1.282600I$ $b = 0.935619 - 0.271046I$	$0.81975 + 4.30759I$	0
$u = -0.444690 + 0.238651I$ $a = 0.494032 - 0.216745I$ $b = -0.229109 + 0.464427I$	$0.875316 - 0.539204I$	$8.56392 + 3.34487I$
$u = -0.444690 - 0.238651I$ $a = 0.494032 + 0.216745I$ $b = -0.229109 - 0.464427I$	$0.875316 + 0.539204I$	$8.56392 - 3.34487I$
$u = 0.231682 + 0.444621I$ $a = 1.39827 - 0.99782I$ $b = 0.1247550 - 0.0207505I$	$-1.54224 - 0.94902I$	$-3.24191 - 2.63088I$
$u = 0.231682 - 0.444621I$ $a = 1.39827 + 0.99782I$ $b = 0.1247550 + 0.0207505I$	$-1.54224 + 0.94902I$	$-3.24191 + 2.63088I$
$u = -1.48951 + 0.18747I$ $a = 0.338760 - 0.988303I$ $b = 0.054812 + 0.668005I$	$2.04907 - 5.05169I$	0
$u = -1.48951 - 0.18747I$ $a = 0.338760 + 0.988303I$ $b = 0.054812 - 0.668005I$	$2.04907 + 5.05169I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.46206 + 0.34712I$ $a = -0.45408 + 1.64902I$ $b = 1.34151 - 0.67420I$	$-0.41844 + 12.52450I$	0
$u = 1.46206 - 0.34712I$ $a = -0.45408 - 1.64902I$ $b = 1.34151 + 0.67420I$	$-0.41844 - 12.52450I$	0
$u = -0.117083 + 0.475098I$ $a = 1.09475 - 3.21547I$ $b = 1.281850 + 0.018230I$	$-12.26510 - 2.33618I$	$-10.53285 + 3.12812I$
$u = -0.117083 - 0.475098I$ $a = 1.09475 + 3.21547I$ $b = 1.281850 - 0.018230I$	$-12.26510 + 2.33618I$	$-10.53285 - 3.12812I$
$u = 1.51553 + 0.04926I$ $a = -0.266853 - 0.907652I$ $b = 0.841983 + 0.604287I$	$0.423741 + 1.047520I$	0
$u = 1.51553 - 0.04926I$ $a = -0.266853 + 0.907652I$ $b = 0.841983 - 0.604287I$	$0.423741 - 1.047520I$	0
$u = -1.46779 + 0.40036I$ $a = 0.28041 + 1.65642I$ $b = -1.35365 - 0.64128I$	$-7.3788 - 16.9573I$	0
$u = -1.46779 - 0.40036I$ $a = 0.28041 - 1.65642I$ $b = -1.35365 + 0.64128I$	$-7.3788 + 16.9573I$	0
$u = -1.60867 + 0.21300I$ $a = -0.624560 - 0.561577I$ $b = 0.816195 + 0.103220I$	$1.26198 - 4.34942I$	0
$u = -1.60867 - 0.21300I$ $a = -0.624560 + 0.561577I$ $b = 0.816195 - 0.103220I$	$1.26198 + 4.34942I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 1.66835$ $a = \ 0.793424$ $b = -0.838679$	4.88689	0
$u = \ 0.258533 + 0.051841I$ $a = -1.52355 - 0.14854I$ $b = \ 0.659382 - 0.673270I$	$-0.93662 + 2.23751I$	$7.62015 - 5.07795I$
$u = \ 0.258533 - 0.051841I$ $a = -1.52355 + 0.14854I$ $b = \ 0.659382 + 0.673270I$	$-0.93662 - 2.23751I$	$7.62015 + 5.07795I$

II. $I_2^u = \langle -14120u^{26} + 4722u^{25} + \cdots + 7787b - 8083,\ 18524u^{26} + 2179u^{25} + \cdots + 7787a - 2475,\ u^{27} - 14u^{25} + \cdots + 4u^2 + 1 \rangle$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2.37884u^{26} - 0.279825u^{25} + \cdots - 1.25029u + 0.317837 \\ 1.81328u^{26} - 0.606395u^{25} + \cdots - 0.629125u + 1.03801 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -2.82561u^{26} - 2.83254u^{25} + \cdots + 5.07590u + 2.51470 \\ 1.37884u^{26} - 1.72017u^{25} + \cdots + 0.250289u + 0.682163 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.565558u^{26} - 0.886221u^{25} + \cdots - 1.87941u + 1.35585 \\ 1.81328u^{26} - 0.606395u^{25} + \cdots - 0.629125u + 1.03801 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 3.44728u^{26} - 1.01233u^{25} + \cdots - 3.80313u + 0.446770 \\ -0.740979u^{26} - 1.92359u^{25} + \cdots - 1.00141u + 0.553872 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.76178u^{26} + 5.03930u^{25} + \cdots - 0.315012u - 2.48658 \\ -1.01233u^{26} + 5.56106u^{25} + \cdots + 2.44677u - 4.44728 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 2.29986u^{26} + 1.15539u^{25} + \cdots - 2.91884u + 1.72300 \\ 3.97059u^{26} + 4.34879u^{25} + \cdots - 2.19468u - 3.84821 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 4.82612u^{26} - 0.732503u^{25} + \cdots - 2.55284u + 0.128933 \\ 1.27135u^{26} - 0.484654u^{25} + \cdots - 2.44818u - 0.998844 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{55565}{7787}u^{26} + \frac{9124}{7787}u^{25} + \cdots + \frac{61630}{7787}u - \frac{61674}{7787}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{27} - 9u^{26} + \cdots + 9u - 1$
c_2	$u^{27} - 9u^{25} + \cdots - 9u^2 + 1$
c_3	$u^{27} + 5u^{26} + \cdots - u - 1$
c_4	$u^{27} + 9u^{24} + \cdots + 6u + 1$
c_5	$u^{27} - 14u^{25} + \cdots - 4u^2 - 1$
c_6	$u^{27} - 5u^{26} + \cdots - u + 1$
c_7, c_8	$u^{27} - u^{26} + \cdots + 2u^2 + 1$
c_9	$u^{27} - 9u^{25} + \cdots + 9u^2 - 1$
c_{10}, c_{11}	$u^{27} - 14u^{25} + \cdots + 4u^2 + 1$
c_{12}	$u^{27} + u^{26} + \cdots - 2u^2 - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{27} - 5y^{26} + \cdots + 9y - 1$
c_2, c_9	$y^{27} - 18y^{26} + \cdots + 18y - 1$
c_3, c_6	$y^{27} - 27y^{26} + \cdots + 23y - 1$
c_4	$y^{27} + 4y^{25} + \cdots - 28y - 1$
c_5, c_{10}, c_{11}	$y^{27} - 28y^{26} + \cdots - 8y - 1$
c_7, c_8, c_{12}	$y^{27} + 31y^{26} + \cdots - 4y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.178461+1.059330I$ $a=-0.501654+0.038992I$ $b=-0.914813+0.304102I$	$-4.49201+1.28363I$	$0.00863-4.75604I$
$u=-0.178461-1.059330I$ $a=-0.501654-0.038992I$ $b=-0.914813-0.304102I$	$-4.49201-1.28363I$	$0.00863+4.75604I$
$u=\ \ 1.225950+0.044396I$ $a=-0.053533-1.197970I$ $b=\ \ 1.43699+0.21234I$	$-8.81556+2.23652I$	$-2.93770-1.86369I$
$u=\ \ 1.225950-0.044396I$ $a=-0.053533+1.197970I$ $b=\ \ 1.43699-0.21234I$	$-8.81556-2.23652I$	$-2.93770+1.86369I$
$u=-1.23985$ $a=\ \ 0.132233$ $b=-1.57234$	-3.33235	12.7060
$u=-1.278010+0.160463I$ $a=-0.90757-2.42130I$ $b=\ \ 0.747351+0.401554I$	$-5.96314-5.05182I$	$1.73722+6.44260I$
$u=-1.278010-0.160463I$ $a=-0.90757+2.42130I$ $b=\ \ 0.747351-0.401554I$	$-5.96314+5.05182I$	$1.73722-6.44260I$
$u=-0.566521+0.372171I$ $a=-2.24929+1.20168I$ $b=-0.750776+0.202122I$	$-8.70764+3.10431I$	$-8.61462-1.93050I$
$u=-0.566521-0.372171I$ $a=-2.24929-1.20168I$ $b=-0.750776-0.202122I$	$-8.70764-3.10431I$	$-8.61462+1.93050I$
$u=\ \ 0.263208+0.612353I$ $a=\ \ 1.153050-0.124169I$ $b=\ \ 0.792168+0.355618I$	$-1.87135-1.81844I$	$-7.99122+8.03791I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.263208 - 0.612353I$ $a = 1.153050 + 0.124169I$ $b = 0.792168 - 0.355618I$	$-1.87135 + 1.81844I$	$-7.99122 - 8.03791I$
$u = 0.637005 + 0.108893I$ $a = 1.73464 + 0.81603I$ $b = -1.320340 + 0.115354I$	$-11.08090 - 1.68505I$	$-3.83078 + 0.31507I$
$u = 0.637005 - 0.108893I$ $a = 1.73464 - 0.81603I$ $b = -1.320340 - 0.115354I$	$-11.08090 + 1.68505I$	$-3.83078 - 0.31507I$
$u = -1.351200 + 0.130165I$ $a = 0.69406 - 1.41117I$ $b = -0.795438 + 0.980456I$	$3.04368 + 0.34981I$	$3.57563 - 0.23318I$
$u = -1.351200 - 0.130165I$ $a = 0.69406 + 1.41117I$ $b = -0.795438 - 0.980456I$	$3.04368 - 0.34981I$	$3.57563 + 0.23318I$
$u = 1.357980 + 0.272155I$ $a = 0.23312 - 1.66014I$ $b = -1.020190 + 0.550891I$	$2.07234 + 5.20061I$	$0.94399 - 4.84173I$
$u = 1.357980 - 0.272155I$ $a = 0.23312 + 1.66014I$ $b = -1.020190 - 0.550891I$	$2.07234 - 5.20061I$	$0.94399 + 4.84173I$
$u = 1.383990 + 0.120392I$ $a = 0.37532 - 1.45684I$ $b = -0.145971 + 0.867562I$	$3.18073 + 3.53763I$	$1.86571 - 4.35233I$
$u = 1.383990 - 0.120392I$ $a = 0.37532 + 1.45684I$ $b = -0.145971 - 0.867562I$	$3.18073 - 3.53763I$	$1.86571 + 4.35233I$
$u = -0.589097$ $a = -1.85264$ $b = 1.38999$	-5.80436	-9.10980

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.37965+0.42301I$ $a=\ 0.072793-1.134180I$ $b=\ 1.142380+0.418935I$	$-0.41807-6.63882I$	$0.+6.47149I$
$u=-1.37965-0.42301I$ $a=\ 0.072793+1.134180I$ $b=\ 1.142380-0.418935I$	$-0.41807+6.63882I$	$0.-6.47149I$
$u=-1.58090$ $a=\ 0.00497375$ $b=-0.429374$	5.63913	9.77320
$u=\ 1.57624+0.26978I$ $a=-0.321916-0.141330I$ $b=\ 0.621577+0.225495I$	$1.72667+3.65087I$	$3.09245+1.60166I$
$u=\ 1.57624-0.26978I$ $a=-0.321916+0.141330I$ $b=\ 0.621577-0.225495I$	$1.72667-3.65087I$	$3.09245-1.60166I$
$u=\ 0.014394+0.311217I$ $a=\ 0.62869-1.94450I$ $b=\ 0.512933+0.784386I$	$-1.46957-2.03695I$	$-5.03324-0.05675I$
$u=\ 0.014394-0.311217I$ $a=\ 0.62869+1.94450I$ $b=\ 0.512933-0.784386I$	$-1.46957+2.03695I$	$-5.03324+0.05675I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{27}-9u^{26}+\cdots+9u-1)$ $\cdot(u^{103}-4u^{102}+\cdots+63177613u-8582393)$
c_2	$(u^{27}-9u^{25}+\cdots-9u^2+1)(u^{103}-u^{102}+\cdots+1650u+121)$
c_3	$(u^{27}+5u^{26}+\cdots-u-1)(u^{103}-43u^{101}+\cdots+295139u+37247)$
c_4	$(u^{27}+9u^{24}+\cdots+6u+1)(u^{103}+3u^{102}+\cdots-1835136u-186624)$
c_5	$(u^{27}-14u^{25}+\cdots-4u^2-1)(u^{103}-u^{102}+\cdots+988u+173)$
c_6	$(u^{27}-5u^{26}+\cdots-u+1)(u^{103}-43u^{101}+\cdots+295139u+37247)$
c_7, c_8	$(u^{27}-u^{26}+\cdots+2u^2+1)(u^{103}-2u^{102}+\cdots-30u-1)$
c_9	$(u^{27}-9u^{25}+\cdots+9u^2-1)(u^{103}-u^{102}+\cdots+1650u+121)$
c_{10}, c_{11}	$(u^{27}-14u^{25}+\cdots+4u^2+1)(u^{103}-u^{102}+\cdots+988u+173)$
c_{12}	$(u^{27}+u^{26}+\cdots-2u^2-1)(u^{103}-2u^{102}+\cdots-30u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{27} - 5y^{26} + \cdots + 9y - 1)$ $\cdot (y^{103} - 52y^{102} + \cdots + 1577684931052899y - 73657469606449)$
c_2, c_9	$(y^{27} - 18y^{26} + \cdots + 18y - 1)$ $\cdot (y^{103} - 65y^{102} + \cdots + 1848880y - 14641)$
c_3, c_6	$(y^{27} - 27y^{26} + \cdots + 23y - 1)$ $\cdot (y^{103} - 86y^{102} + \cdots + 48391156629y - 1387339009)$
c_4	$(y^{27} + 4y^{25} + \cdots - 28y - 1)$ $\cdot (y^{103} + 17y^{102} + \cdots - 8707129344y - 34828517376)$
c_5, c_{10}, c_{11}	$(y^{27} - 28y^{26} + \cdots - 8y - 1)(y^{103} - 95y^{102} + \cdots + 361302y - 29929)$
c_7, c_8, c_{12}	$(y^{27} + 31y^{26} + \cdots - 4y - 1)(y^{103} + 108y^{102} + \cdots + 550y - 1)$