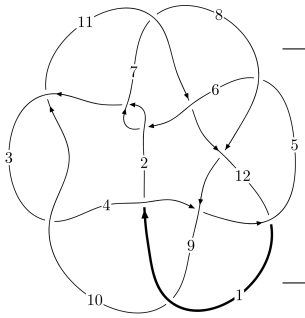
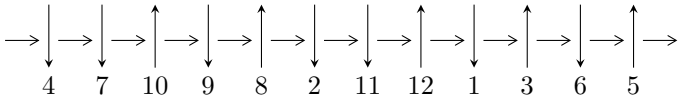
$12a_{1070}$ $(K12a_{1070})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 9.45965 \times 10^{1721} u^{173} - 4.57206 \times 10^{1722} u^{172} + \cdots + 2.43243 \times 10^{1723} b + 4.21326 \times 10^{1726},$$
$$1.64927 \times 10^{1727} u^{173} - 7.76624 \times 10^{1727} u^{172} + \cdots + 2.70790 \times 10^{1728} a + 9.82920 \times 10^{1731},$$
$$u^{174} - 5u^{173} + \cdots + 99447u + 22265\rangle$$
$$I_2^u = \langle 2.19598 \times 10^{92} u^{42} + 4.98103 \times 10^{91} u^{41} + \cdots + 3.59193 \times 10^{92} b + 1.33922 \times 10^{93},$$
$$4.87821 \times 10^{93} u^{42} + 1.67362 \times 10^{92} u^{41} + \cdots + 8.97983 \times 10^{93} a + 8.06880 \times 10^{94},\ u^{43} + 3u^{40} + \cdots + 29u -$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 217 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. $\boldsymbol{I_1^u = \langle 9.46 \times 10^{1721} u^{173} - 4.57 \times 10^{1722} u^{172} + \cdots + 2.43 \times 10^{1723} b + 4.21 \times 10^{1726},\ 1.65 \times 10^{1727} u^{173} - 7.77 \times 10^{1727} u^{172} + \cdots + 2.71 \times 10^{1728} a + 9.83 \times 10^{1731},\ u^{174} - 5u^{173} + \cdots + 99447u + 22265 \rangle}$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0609059u^{173} + 0.286799u^{172} + \cdots - 21655.1u - 3629.83 \\ -0.0388898u^{173} + 0.187963u^{172} + \cdots - 10866.0u - 1732.12 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0335835u^{173} + 0.154766u^{172} + \cdots - 13908.3u - 2292.47 \\ -0.0332061u^{173} + 0.159047u^{172} + \cdots - 9802.45u - 1630.20 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0989110u^{173} + 0.523817u^{172} + \cdots - 6895.26u + 2195.35 \\ 0.00602631u^{173} - 0.0328215u^{172} + \cdots - 493.733u - 342.048 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0158777u^{173} - 0.0132227u^{172} + \cdots - 45517.5u - 13549.2 \\ 0.0248900u^{173} - 0.119614u^{172} + \cdots + 8107.31u + 1055.68 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0960320u^{173} + 0.506440u^{172} + \cdots - 6276.04u + 2568.70 \\ -0.0544938u^{173} + 0.296688u^{172} + \cdots - 722.281u + 1762.03 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0220161u^{173} + 0.0988365u^{172} + \cdots - 10789.1u - 1897.71 \\ -0.0388898u^{173} + 0.187963u^{172} + \cdots - 10866.0u - 1732.12 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0777198u^{173} + 0.407364u^{172} + \cdots - 6627.03u + 1548.23 \\ -0.0272175u^{173} + 0.149275u^{172} + \cdots + 227.501u + 989.161 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0129804u^{173} + 0.0565859u^{172} + \cdots - 667.159u - 222.955 \\ 0.0435563u^{173} - 0.174852u^{172} + \cdots + 26617.6u + 6102.75 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.0113813u^{173} - 0.0221015u^{172} + \cdots + 20549.4u + 6441.65 \\ -0.0483948u^{173} + 0.274933u^{172} + \cdots + 3710.35u + 2959.34 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.103163u^{173} + 0.624534u^{172} + \cdots + 27015.3u + 11050.7$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$5(5u^{174} - 56u^{173} + \cdots - 31908u + 1387)$
c_2, c_6	$u^{174} - 2u^{173} + \cdots + 4042765u + 913579$
c_3, c_{10}	$u^{174} + u^{173} + \cdots + 131340u + 6023$
c_4	$5(5u^{174} + 26u^{173} + \cdots + 20363u + 1637)$
c_5	$5(5u^{174} + 86u^{173} + \cdots + 895002u + 151163)$
c_7	$5(5u^{174} + 43u^{173} + \cdots - 4.70613 \times 10^9 u - 3.70127 \times 10^8)$
c_8	$u^{174} + 4u^{173} + \cdots - 49199u + 15565$
c_9	$u^{174} + 5u^{173} + \cdots - 1040129u - 102703$
c_{11}	$u^{174} - u^{173} + \cdots + 18522u + 2029$
c_{12}	$u^{174} - 5u^{173} + \cdots + 99447u + 22265$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$25(25y^{174} - 1136y^{173} + \cdots - 8.80288 \times 10^7 y + 1923769)$
c_2, c_6	$y^{174} - 114y^{173} + \cdots - 29118856544981y + 834626589241$
c_3, c_{10}	$y^{174} + 147y^{173} + \cdots + 21193565398y + 36276529$
c_4	$25(25y^{174} + 4y^{173} + \cdots + 1.13562 \times 10^8 y + 2679769)$
c_5	$25(25y^{174} + 304y^{173} + \cdots - 4.27927 \times 10^{11} y + 2.28503 \times 10^{10})$
c_7	$25(25y^{174} - 1259y^{173} + \cdots - 7.99773 \times 10^{18} y + 1.36994 \times 10^{17})$
c_8	$y^{174} - 28y^{173} + \cdots - 20350176401y + 242269225$
c_9	$y^{174} - 39y^{173} + \cdots - 2659529379217y + 10547906209$
c_{11}	$y^{174} + y^{173} + \cdots + 126543508y + 4116841$
c_{12}	$y^{174} + 27y^{173} + \cdots + 39776918751y + 495730225$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.698557+0.698344I$ $a=0.153713-0.930338I$ $b=1.31046-0.91784I$	$0.20315-4.84690I$	0
$u=-0.698557-0.698344I$ $a=0.153713+0.930338I$ $b=1.31046+0.91784I$	$0.20315+4.84690I$	0
$u=0.286593+0.975011I$ $a=1.46215+0.51074I$ $b=0.267939-0.084996I$	$-1.81985-1.82722I$	0
$u=0.286593-0.975011I$ $a=1.46215-0.51074I$ $b=0.267939+0.084996I$	$-1.81985+1.82722I$	0
$u=-0.638165+0.744905I$ $a=-0.402101+0.324657I$ $b=-1.275630+0.347936I$	$0.86953+2.10430I$	0
$u=-0.638165-0.744905I$ $a=-0.402101-0.324657I$ $b=-1.275630-0.347936I$	$0.86953-2.10430I$	0
$u=0.777829+0.677184I$ $a=0.235396+0.509879I$ $b=1.37533+1.01890I$	$-0.15603+6.59194I$	0
$u=0.777829-0.677184I$ $a=0.235396-0.509879I$ $b=1.37533-1.01890I$	$-0.15603-6.59194I$	0
$u=0.005088+0.961021I$ $a=-0.212205+0.093270I$ $b=-1.80034+0.14656I$	$-7.04267+0.20044I$	0
$u=0.005088-0.961021I$ $a=-0.212205-0.093270I$ $b=-1.80034-0.14656I$	$-7.04267-0.20044I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.845850+0.450978I$ $a=\ \ 0.835697+0.397554I$ $b=-0.328803+0.365062I$	$-2.33913+0.17780I$	0
$u=-0.845850-0.450978I$ $a=\ \ 0.835697-0.397554I$ $b=-0.328803-0.365062I$	$-2.33913-0.17780I$	0
$u=\ \ 1.000410+0.312860I$ $a=-1.13257+0.90615I$ $b=\ \ 0.665417+0.372567I$	$-5.87512+0.12289I$	0
$u=\ \ 1.000410-0.312860I$ $a=-1.13257-0.90615I$ $b=\ \ 0.665417-0.372567I$	$-5.87512-0.12289I$	0
$u=\ \ 0.797274+0.682717I$ $a=\ \ 0.293997+0.663643I$ $b=\ \ 1.002460+0.711322I$	$1.47877+2.36268I$	0
$u=\ \ 0.797274-0.682717I$ $a=\ \ 0.293997-0.663643I$ $b=\ \ 1.002460-0.711322I$	$1.47877-2.36268I$	0
$u=\ \ 0.284471+0.905336I$ $a=-0.383310-0.450445I$ $b=-1.45671-0.43447I$	$0.85549+3.26802I$	0
$u=\ \ 0.284471-0.905336I$ $a=-0.383310+0.450445I$ $b=-1.45671+0.43447I$	$0.85549-3.26802I$	0
$u=-0.541287+0.766389I$ $a=\ \ 1.058720-0.937473I$ $b=\ \ 0.797198+0.116074I$	$-0.181454+0.443719I$	0
$u=-0.541287-0.766389I$ $a=\ \ 1.058720+0.937473I$ $b=\ \ 0.797198-0.116074I$	$-0.181454-0.443719I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.175493+1.056680I$ $a=-0.937739-0.770366I$ $b=\ 0.123094-0.880054I$	$-10.53250-4.51798I$	0
$u=-0.175493-1.056680I$ $a=-0.937739+0.770366I$ $b=\ 0.123094+0.880054I$	$-10.53250+4.51798I$	0
$u=\ 0.722774+0.575645I$ $a=\ 0.568934+0.744746I$ $b=\ 1.033990+0.137144I$	$2.53301+2.01681I$	0
$u=\ 0.722774-0.575645I$ $a=\ 0.568934-0.744746I$ $b=\ 1.033990-0.137144I$	$2.53301-2.01681I$	0
$u=-0.054555+1.097210I$ $a=-0.292802+0.882177I$ $b=\ 0.478007+0.899767I$	$-6.00326+0.51337I$	0
$u=-0.054555-1.097210I$ $a=-0.292802-0.882177I$ $b=\ 0.478007-0.899767I$	$-6.00326-0.51337I$	0
$u=-0.802357+0.764071I$ $a=-0.23165+1.39883I$ $b=-0.720143+0.315855I$	$1.40094-7.28274I$	0
$u=-0.802357-0.764071I$ $a=-0.23165-1.39883I$ $b=-0.720143-0.315855I$	$1.40094+7.28274I$	0
$u=-0.927107+0.607694I$ $a=\ 0.119337-0.431479I$ $b=\ 1.18174-0.80369I$	$2.36415-2.87487I$	0
$u=-0.927107-0.607694I$ $a=\ 0.119337+0.431479I$ $b=\ 1.18174+0.80369I$	$2.36415+2.87487I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.255798 + 0.831083I$ $a = 1.16903 + 1.15776I$ $b = 0.519313 + 0.654195I$	$-0.48095 + 2.13402I$	0
$u = 0.255798 - 0.831083I$ $a = 1.16903 - 1.15776I$ $b = 0.519313 - 0.654195I$	$-0.48095 - 2.13402I$	0
$u = -0.866531$ $a = 1.39589$ $b = -0.429024$	-2.42565	0
$u = 0.575877 + 0.646140I$ $a = 1.260670 + 0.598978I$ $b = 0.606518 - 0.366665I$	$-0.980758 - 0.917234I$	0
$u = 0.575877 - 0.646140I$ $a = 1.260670 - 0.598978I$ $b = 0.606518 + 0.366665I$	$-0.980758 + 0.917234I$	0
$u = -0.511372 + 0.695937I$ $a = 0.544200 - 1.206950I$ $b = 0.494477 + 0.045478I$	$0.077511 + 0.797727I$	0
$u = -0.511372 - 0.695937I$ $a = 0.544200 + 1.206950I$ $b = 0.494477 - 0.045478I$	$0.077511 - 0.797727I$	0
$u = 0.608205 + 0.961110I$ $a = 0.234990 + 1.299350I$ $b = 1.25675 + 1.42632I$	$-1.80993 + 5.69473I$	0
$u = 0.608205 - 0.961110I$ $a = 0.234990 - 1.299350I$ $b = 1.25675 - 1.42632I$	$-1.80993 - 5.69473I$	0
$u = -0.682883 + 0.912097I$ $a = 0.039149 - 1.117710I$ $b = 0.59356 - 1.45838I$	$-3.12491 - 5.02083I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.682883-0.912097I$ $a=\ 0.039149+1.117710I$ $b=\ 0.59356+1.45838I$	$-3.12491+5.02083I$	0
$u=-0.487179+1.042030I$ $a=\ 0.43495-1.39281I$ $b=\ 1.43063-1.26062I$	$-0.97011-4.47185I$	0
$u=-0.487179-1.042030I$ $a=\ 0.43495+1.39281I$ $b=\ 1.43063+1.26062I$	$-0.97011+4.47185I$	0
$u=\ 0.946470+0.668264I$ $a=-0.036513-1.150930I$ $b=-0.647454-0.150459I$	$3.55036+2.34707I$	0
$u=\ 0.946470-0.668264I$ $a=-0.036513+1.150930I$ $b=-0.647454+0.150459I$	$3.55036-2.34707I$	0
$u=-0.991020+0.602042I$ $a=-0.404303+0.294539I$ $b=-0.915098+0.090311I$	$0.50080+2.53096I$	0
$u=-0.991020-0.602042I$ $a=-0.404303-0.294539I$ $b=-0.915098-0.090311I$	$0.50080-2.53096I$	0
$u=-0.263831+0.782920I$ $a=\ 1.38228+0.84270I$ $b=-0.626392+0.696389I$	$-10.23540-0.95787I$	0
$u=-0.263831-0.782920I$ $a=\ 1.38228-0.84270I$ $b=-0.626392-0.696389I$	$-10.23540+0.95787I$	0
$u=\ 0.209122+0.797922I$ $a=-0.48023-1.47143I$ $b=\ 0.55463-1.56139I$	$-9.6261+12.1455I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.209122 - 0.797922I$ $a = -0.48023 + 1.47143I$ $b = 0.55463 + 1.56139I$	$-9.6261 - 12.1455I$	0
$u = -0.801321 + 0.175615I$ $a = 0.148585 + 1.339030I$ $b = -1.001470 + 0.261162I$	$-2.45495 - 5.46892I$	0
$u = -0.801321 - 0.175615I$ $a = 0.148585 - 1.339030I$ $b = -1.001470 - 0.261162I$	$-2.45495 + 5.46892I$	0
$u = 0.242934 + 1.156360I$ $a = 0.148743 - 0.648518I$ $b = 0.861747 - 0.849795I$	$-9.29684 + 4.33006I$	0
$u = 0.242934 - 1.156360I$ $a = 0.148743 + 0.648518I$ $b = 0.861747 + 0.849795I$	$-9.29684 - 4.33006I$	0
$u = -0.249608 + 0.770434I$ $a = -0.60933 + 1.39576I$ $b = 0.540275 + 1.237460I$	$-5.49891 - 6.54979I$	0
$u = -0.249608 - 0.770434I$ $a = -0.60933 - 1.39576I$ $b = 0.540275 - 1.237460I$	$-5.49891 + 6.54979I$	0
$u = 0.194377 + 0.782367I$ $a = 1.04926 - 1.41865I$ $b = -0.789860 - 0.899191I$	$-5.55265 + 6.29089I$	0
$u = 0.194377 - 0.782367I$ $a = 1.04926 + 1.41865I$ $b = -0.789860 + 0.899191I$	$-5.55265 - 6.29089I$	0
$u = 0.150114 + 1.210260I$ $a = -1.24267 - 1.10173I$ $b = -1.61496 - 1.17761I$	$-7.21446 - 4.28518I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.150114 - 1.210260I$ $a = -1.24267 + 1.10173I$ $b = -1.61496 + 1.17761I$	$-7.21446 + 4.28518I$	0
$u = -0.147282 + 0.760873I$ $a = 0.097558 - 0.863741I$ $b = -0.926632 - 1.013020I$	$-5.16055 - 1.78984I$	0
$u = -0.147282 - 0.760873I$ $a = 0.097558 + 0.863741I$ $b = -0.926632 + 1.013020I$	$-5.16055 + 1.78984I$	0
$u = -0.179564 + 0.745503I$ $a = 1.28448 + 1.80784I$ $b = -0.703437 + 1.032030I$	$-9.3946 - 12.0069I$	0
$u = -0.179564 - 0.745503I$ $a = 1.28448 - 1.80784I$ $b = -0.703437 - 1.032030I$	$-9.3946 + 12.0069I$	0
$u = 0.702664 + 0.260466I$ $a = 0.765488 + 0.971831I$ $b = -0.734247 + 0.241748I$	$0.502167 + 0.910156I$	0
$u = 0.702664 - 0.260466I$ $a = 0.765488 - 0.971831I$ $b = -0.734247 - 0.241748I$	$0.502167 - 0.910156I$	0
$u = 0.406240 + 0.627758I$ $a = -0.322134 + 1.219860I$ $b = -0.43932 + 1.38441I$	$-4.27792 + 3.55649I$	0
$u = 0.406240 - 0.627758I$ $a = -0.322134 - 1.219860I$ $b = -0.43932 - 1.38441I$	$-4.27792 - 3.55649I$	0
$u = 0.198157 + 0.719343I$ $a = -0.96509 + 1.91995I$ $b = 0.55797 + 1.31214I$	$-3.41268 + 5.87575I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.198157 - 0.719343I$ $a = -0.96509 - 1.91995I$ $b = 0.55797 - 1.31214I$	$-3.41268 - 5.87575I$	0
$u = 0.250821 + 0.696797I$ $a = -0.564581 - 1.164710I$ $b = 0.958133 - 1.022980I$	$-9.80273 + 0.88141I$	0
$u = 0.250821 - 0.696797I$ $a = -0.564581 + 1.164710I$ $b = 0.958133 + 1.022980I$	$-9.80273 - 0.88141I$	0
$u = 0.112625 + 0.728978I$ $a = 0.73006 + 1.39591I$ $b = -0.205902 + 1.245750I$	$-1.23349 + 2.17322I$	0
$u = 0.112625 - 0.728978I$ $a = 0.73006 - 1.39591I$ $b = -0.205902 - 1.245750I$	$-1.23349 - 2.17322I$	0
$u = 0.012300 + 0.716267I$ $a = 0.68911 - 1.69349I$ $b = -0.41999 - 1.79681I$	$-3.36149 - 5.01600I$	0
$u = 0.012300 - 0.716267I$ $a = 0.68911 + 1.69349I$ $b = -0.41999 + 1.79681I$	$-3.36149 + 5.01600I$	0
$u = -0.611777 + 1.131880I$ $a = 0.535873 - 1.270270I$ $b = 1.36383 - 0.99408I$	$0.94559 - 7.30095I$	0
$u = -0.611777 - 1.131880I$ $a = 0.535873 + 1.270270I$ $b = 1.36383 + 0.99408I$	$0.94559 + 7.30095I$	0
$u = 0.651776 + 1.117950I$ $a = 0.570116 + 1.125680I$ $b = 1.23932 + 0.82609I$	$0.95264 + 3.36395I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.651776 - 1.117950I$ $a = 0.570116 - 1.125680I$ $b = 1.23932 - 0.82609I$	$0.95264 - 3.36395I$	0
$u = -1.295940 + 0.030903I$ $a = 0.063963 + 0.561503I$ $b = -0.223017 + 1.157010I$	$-6.08074 + 1.25624I$	0
$u = -1.295940 - 0.030903I$ $a = 0.063963 - 0.561503I$ $b = -0.223017 - 1.157010I$	$-6.08074 - 1.25624I$	0
$u = 1.094250 + 0.708501I$ $a = -0.186822 + 1.169910I$ $b = 0.793730 + 0.204094I$	$-4.38058 + 11.80110I$	0
$u = 1.094250 - 0.708501I$ $a = -0.186822 - 1.169910I$ $b = 0.793730 - 0.204094I$	$-4.38058 - 11.80110I$	0
$u = -0.333192 + 1.262880I$ $a = -0.613897 + 0.950369I$ $b = -1.055780 + 0.934948I$	$-4.77209 - 0.29815I$	0
$u = -0.333192 - 1.262880I$ $a = -0.613897 - 0.950369I$ $b = -1.055780 - 0.934948I$	$-4.77209 + 0.29815I$	0
$u = -1.082110 + 0.763463I$ $a = -0.171161 + 0.642479I$ $b = -1.17354 + 0.99192I$	$-4.00669 - 12.34730I$	0
$u = -1.082110 - 0.763463I$ $a = -0.171161 - 0.642479I$ $b = -1.17354 - 0.99192I$	$-4.00669 + 12.34730I$	0
$u = -0.220677 + 0.600123I$ $a = 0.00755 + 2.68929I$ $b = 0.072745 + 0.822959I$	$-3.13155 + 0.26316I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.220677-0.600123I$ $a=\ 0.00755-2.68929I$ $b=\ 0.072745-0.822959I$	$-3.13155-0.26316I$	0
$u=-1.257840+0.550767I$ $a=-0.398887+0.486472I$ $b=-0.675981-0.267111I$	$1.15286+7.04250I$	0
$u=-1.257840-0.550767I$ $a=-0.398887-0.486472I$ $b=-0.675981+0.267111I$	$1.15286-7.04250I$	0
$u=\ 1.290170+0.501658I$ $a=-0.219468-0.522462I$ $b=-0.710149+0.135926I$	$3.84262-2.30352I$	0
$u=\ 1.290170-0.501658I$ $a=-0.219468+0.522462I$ $b=-0.710149-0.135926I$	$3.84262+2.30352I$	0
$u=\ 0.799597+1.156690I$ $a=\ 0.349055+0.789079I$ $b=\ 0.752699+0.785735I$	$-0.19670+3.55546I$	0
$u=\ 0.799597-1.156690I$ $a=\ 0.349055-0.789079I$ $b=\ 0.752699-0.785735I$	$-0.19670-3.55546I$	0
$u=\ 1.142150+0.826984I$ $a=-0.402222-0.166493I$ $b=-0.918767+0.332474I$	$-1.27049-3.91812I$	0
$u=\ 1.142150-0.826984I$ $a=-0.402222+0.166493I$ $b=-0.918767-0.332474I$	$-1.27049+3.91812I$	0
$u=-0.821463+1.148550I$ $a=-0.315176+1.120810I$ $b=-1.085010+0.904450I$	$-1.11595-9.21521I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.821463-1.148550I$ $a=-0.315176-1.120810I$ $b=-1.085010-0.904450I$	$-1.11595+9.21521I$	0
$u=-0.553317+0.165592I$ $a=\ \ 0.49304-1.40119I$ $b=\ \ 1.069740+0.068772I$	$2.99083+2.58429I$	0
$u=-0.553317-0.165592I$ $a=\ \ 0.49304+1.40119I$ $b=\ \ 1.069740-0.068772I$	$2.99083-2.58429I$	0
$u=\ \ 0.89946+1.10401I$ $a=-0.148590-1.179960I$ $b=-1.19778-0.90123I$	$-2.24975+11.19620I$	0
$u=\ \ 0.89946-1.10401I$ $a=-0.148590+1.179960I$ $b=-1.19778+0.90123I$	$-2.24975-11.19620I$	0
$u=\ \ 0.490609+0.296218I$ $a=\ \ 3.62633-2.14313I$ $b=-0.270436-0.540690I$	$-3.26217-0.63444I$	0
$u=\ \ 0.490609-0.296218I$ $a=\ \ 3.62633+2.14313I$ $b=-0.270436+0.540690I$	$-3.26217+0.63444I$	0
$u=-0.181450+0.536148I$ $a=-1.39502-1.57834I$ $b=\ \ 0.708170-0.919987I$	$-0.48097-2.63825I$	0
$u=-0.181450-0.536148I$ $a=-1.39502+1.57834I$ $b=\ \ 0.708170+0.919987I$	$-0.48097+2.63825I$	0
$u=-0.115839+0.536849I$ $a=\ \ 0.19472-2.51682I$ $b=-0.594750-1.248220I$	$-2.23824-1.72680I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.115839-0.536849I$ $a=\ \ 0.19472+2.51682I$ $b=-0.594750+1.248220I$	$-2.23824+1.72680I$	0
$u=-0.06203+1.45567I$ $a=-1.213840+0.020611I$ $b=-1.81759-0.06295I$	$-7.31851+2.33385I$	0
$u=-0.06203-1.45567I$ $a=-1.213840-0.020611I$ $b=-1.81759+0.06295I$	$-7.31851-2.33385I$	0
$u=-0.220042+0.473742I$ $a=\ \ 1.77471-0.54880I$ $b=\ \ 1.171200+0.218867I$	$2.93102+2.64801I$	0
$u=-0.220042-0.473742I$ $a=\ \ 1.77471+0.54880I$ $b=\ \ 1.171200-0.218867I$	$2.93102-2.64801I$	0
$u=-0.84950+1.22225I$ $a=-0.331990+1.028060I$ $b=-1.32677+1.05932I$	$-0.9195-14.4023I$	0
$u=-0.84950-1.22225I$ $a=-0.331990-1.028060I$ $b=-1.32677-1.05932I$	$-0.9195+14.4023I$	0
$u=-1.33065+0.69969I$ $a=-0.221693-0.788381I$ $b=\ \ 0.744855-0.260699I$	$-0.19341-5.63100I$	0
$u=-1.33065-0.69969I$ $a=-0.221693+0.788381I$ $b=\ \ 0.744855+0.260699I$	$-0.19341+5.63100I$	0
$u=\ \ 0.94668+1.18622I$ $a=-0.201048+0.829241I$ $b=\ \ 1.000920+0.806937I$	$-8.80636+10.58140I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.94668 - 1.18622I$ $a = -0.201048 - 0.829241I$ $b = 1.000920 - 0.806937I$	$-8.80636 - 10.58140I$	0
$u = 0.88670 + 1.24539I$ $a = -0.307547 - 0.936198I$ $b = -1.29343 - 0.90713I$	$1.65262 + 9.92613I$	0
$u = 0.88670 - 1.24539I$ $a = -0.307547 + 0.936198I$ $b = -1.29343 + 0.90713I$	$1.65262 - 9.92613I$	0
$u = 1.34671 + 0.73433I$ $a = -0.118527 - 0.564655I$ $b = -0.899901 - 0.826656I$	$0.42207 + 5.47200I$	0
$u = 1.34671 - 0.73433I$ $a = -0.118527 + 0.564655I$ $b = -0.899901 + 0.826656I$	$0.42207 - 5.47200I$	0
$u = -0.99265 + 1.17806I$ $a = -0.007176 + 0.833472I$ $b = -1.031860 + 0.865244I$	$-4.65365 - 8.62326I$	0
$u = -0.99265 - 1.17806I$ $a = -0.007176 - 0.833472I$ $b = -1.031860 - 0.865244I$	$-4.65365 + 8.62326I$	0
$u = -0.084456 + 0.424516I$ $a = 1.17976 + 1.12873I$ $b = -1.63890 + 1.36770I$	$-7.56176 + 2.94115I$	$-14.6857 - 8.9067I$
$u = -0.084456 - 0.424516I$ $a = 1.17976 - 1.12873I$ $b = -1.63890 - 1.36770I$	$-7.56176 - 2.94115I$	$-14.6857 + 8.9067I$
$u = 0.92408 + 1.26703I$ $a = -0.227806 - 0.831645I$ $b = -0.694121 - 1.102820I$	$-9.7940 + 11.2351I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.92408 - 1.26703I$ $a = -0.227806 + 0.831645I$ $b = -0.694121 + 1.102820I$	$-9.7940 - 11.2351I$	0
$u = -0.98954 + 1.22074I$ $a = 0.112589 - 0.447020I$ $b = 0.363005 - 0.715653I$	$-4.32237 - 0.26233I$	0
$u = -0.98954 - 1.22074I$ $a = 0.112589 + 0.447020I$ $b = 0.363005 + 0.715653I$	$-4.32237 + 0.26233I$	0
$u = 0.038001 + 0.418790I$ $a = 1.164310 - 0.181216I$ $b = -0.095035 + 0.391095I$	$-0.248346 + 1.213100I$	$-2.72388 - 5.69548I$
$u = 0.038001 - 0.418790I$ $a = 1.164310 + 0.181216I$ $b = -0.095035 - 0.391095I$	$-0.248346 - 1.213100I$	$-2.72388 + 5.69548I$
$u = -0.096090 + 0.388968I$ $a = 2.38192 - 3.55111I$ $b = -0.659082 - 0.663307I$	$-2.62062 - 1.41430I$	$-3.94478 + 0.06865I$
$u = -0.096090 - 0.388968I$ $a = 2.38192 + 3.55111I$ $b = -0.659082 + 0.663307I$	$-2.62062 + 1.41430I$	$-3.94478 - 0.06865I$
$u = -0.263583 + 0.280572I$ $a = 2.82561 + 6.35307I$ $b = -0.009472 + 0.412114I$	$-3.14177 + 0.40281I$	$-27.0293 + 9.6281I$
$u = -0.263583 - 0.280572I$ $a = 2.82561 - 6.35307I$ $b = -0.009472 - 0.412114I$	$-3.14177 - 0.40281I$	$-27.0293 - 9.6281I$
$u = 1.11794 + 1.18101I$ $a = -0.050544 - 0.516327I$ $b = -1.028840 - 0.529730I$	$1.61093 + 4.97787I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.11794 - 1.18101I$ $a = -0.050544 + 0.516327I$ $b = -1.028840 + 0.529730I$	$1.61093 - 4.97787I$	0
$u = -0.139179 + 0.345188I$ $a = -0.53055 + 2.94483I$ $b = -0.870351 + 0.998346I$	$-4.61565 + 4.21154I$	$-2.55330 - 4.71575I$
$u = -0.139179 - 0.345188I$ $a = -0.53055 - 2.94483I$ $b = -0.870351 - 0.998346I$	$-4.61565 - 4.21154I$	$-2.55330 + 4.71575I$
$u = 0.95960 + 1.33335I$ $a = 0.281181 + 0.951718I$ $b = 1.30109 + 0.97142I$	$-7.3576 + 20.6882I$	0
$u = 0.95960 - 1.33335I$ $a = 0.281181 - 0.951718I$ $b = 1.30109 - 0.97142I$	$-7.3576 - 20.6882I$	0
$u = -1.30144 + 1.03418I$ $a = 0.066747 - 0.653122I$ $b = 0.563203 - 0.516373I$	$0.12223 - 5.28114I$	0
$u = -1.30144 - 1.03418I$ $a = 0.066747 + 0.653122I$ $b = 0.563203 + 0.516373I$	$0.12223 + 5.28114I$	0
$u = -1.66422$ $a = 0.146634$ $b = -0.481038$	-2.61283	0
$u = 0.290060 + 0.143251I$ $a = -0.491330 + 0.094407I$ $b = -0.93760 - 1.75627I$	$-5.02541 - 3.67449I$	$12.1116 + 13.0351I$
$u = 0.290060 - 0.143251I$ $a = -0.491330 - 0.094407I$ $b = -0.93760 + 1.75627I$	$-5.02541 + 3.67449I$	$12.1116 - 13.0351I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.99799+1.37897I$ $a=0.284600-0.861481I$ $b=1.23348-0.88214I$	$-3.4160-14.0358I$	0
$u=-0.99799-1.37897I$ $a=0.284600+0.861481I$ $b=1.23348+0.88214I$	$-3.4160+14.0358I$	0
$u=1.08748+1.31772I$ $a=0.157623+0.795555I$ $b=1.019010+0.904028I$	$-9.46636+7.92017I$	0
$u=1.08748-1.31772I$ $a=0.157623-0.795555I$ $b=1.019010-0.904028I$	$-9.46636-7.92017I$	0
$u=0.70961+1.56919I$ $a=-0.150522-0.492393I$ $b=-0.668814-0.615224I$	$-9.90210+3.10349I$	0
$u=0.70961-1.56919I$ $a=-0.150522+0.492393I$ $b=-0.668814+0.615224I$	$-9.90210-3.10349I$	0
$u=-0.91677+1.46292I$ $a=0.055923-0.611296I$ $b=1.125320-0.588167I$	$-3.86507-5.01540I$	0
$u=-0.91677-1.46292I$ $a=0.055923+0.611296I$ $b=1.125320+0.588167I$	$-3.86507+5.01540I$	0
$u=1.67614+0.43217I$ $a=0.224532+0.338491I$ $b=0.717375-0.248405I$	$-4.72266-11.98590I$	0
$u=1.67614-0.43217I$ $a=0.224532-0.338491I$ $b=0.717375+0.248405I$	$-4.72266+11.98590I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.82719+0.24069I$ $a=0.106346-0.335872I$ $b=0.681520+0.068443I$	$-0.37425+4.81592I$	0
$u=-1.82719-0.24069I$ $a=0.106346+0.335872I$ $b=0.681520-0.068443I$	$-0.37425-4.81592I$	0
$u=-0.99249+1.56960I$ $a=-0.365273+0.569703I$ $b=-0.585277+0.714740I$	$-3.35832-5.80503I$	0
$u=-0.99249-1.56960I$ $a=-0.365273-0.569703I$ $b=-0.585277-0.714740I$	$-3.35832+5.80503I$	0
$u=1.64072+1.00134I$ $a=-0.053417-0.408403I$ $b=0.012520-0.699900I$	$-7.31376-2.39241I$	0
$u=1.64072-1.00134I$ $a=-0.053417+0.408403I$ $b=0.012520+0.699900I$	$-7.31376+2.39241I$	0
$u=1.55257+1.28589I$ $a=-0.211675+0.275367I$ $b=0.752719+0.325935I$	$-8.13598-2.08507I$	0
$u=1.55257-1.28589I$ $a=-0.211675-0.275367I$ $b=0.752719-0.325935I$	$-8.13598+2.08507I$	0
$u=0.64807+1.96275I$ $a=0.1032820-0.0053284I$ $b=1.103900-0.042111I$	$-7.35260-3.85233I$	0
$u=0.64807-1.96275I$ $a=0.1032820+0.0053284I$ $b=1.103900+0.042111I$	$-7.35260+3.85233I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.73668+1.97286I$ $a=-0.477194+0.155210I$ $b=-0.225351-0.089631I$	$-6.59783+4.29179I$	0
$u=-0.73668-1.97286I$ $a=-0.477194-0.155210I$ $b=-0.225351+0.089631I$	$-6.59783-4.29179I$	0
$u=2.10417+0.08907I$ $a=0.008352+0.242377I$ $b=0.348991+0.091544I$	$-6.92257+2.06689I$	0
$u=2.10417-0.08907I$ $a=0.008352-0.242377I$ $b=0.348991-0.091544I$	$-6.92257-2.06689I$	0

II. $I_2^u =$
$\langle \mathbf{2.20\times 10^{92}u^{42}+4.98\times 10^{91}u^{41}+\cdots+3.59\times 10^{92}b+1.34\times 10^{93},\ 4.88\times 10^{93}u^{42}+}$
$\mathbf{1.67\times 10^{92}u^{41}+\cdots+8.98\times 10^{93}a+8.07\times 10^{94},\ u^{43}+3u^{40}+\cdots+29u-5}\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.543241u^{42} - 0.0186376u^{41} + \cdots + 35.8005u - 8.98547 \\ -0.611364u^{42} - 0.138673u^{41} + \cdots + 24.3011u - 3.72841 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.00954061u^{42} + 0.0531113u^{41} + \cdots + 13.6751u - 5.16387 \\ -0.516413u^{42} - 0.0766073u^{41} + \cdots + 23.7133u - 4.08716 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.779644u^{42} - 0.629478u^{41} + \cdots + 12.3398u + 2.98557 \\ -0.422298u^{42} - 0.304567u^{41} + \cdots + 3.94325u + 3.11848 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.637196u^{42} - 0.837805u^{41} + \cdots - 2.87160u + 2.33016 \\ -0.533736u^{42} - 0.174525u^{41} + \cdots + 33.3300u - 6.53224 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -1.15920u^{42} - 0.790623u^{41} + \cdots + 24.4131u + 0.451391 \\ -0.784602u^{42} - 0.212634u^{41} + \cdots + 46.1295u - 4.24119 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.0681224u^{42} + 0.120035u^{41} + \cdots + 11.4994u - 5.25706 \\ -0.611364u^{42} - 0.138673u^{41} + \cdots + 24.3011u - 3.72841 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.0346612u^{42} - 0.289104u^{41} + \cdots - 15.5687u + 3.34954 \\ -0.322685u^{42} - 0.0358064u^{41} + \cdots + 25.9652u - 3.48245 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.854800u^{42} - 0.0394659u^{41} + \cdots + 43.5500u - 5.14552 \\ 0.165268u^{42} - 0.212244u^{41} + \cdots - 35.5649u + 7.98029 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.473309u^{42} - 0.989039u^{41} + \cdots - 32.1000u + 5.80277 \\ -0.516302u^{42} + 0.0447521u^{41} + \cdots + 49.5329u - 10.8970 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -0.528983u^{42} - 2.91631u^{41} + \cdots - 269.467u + 67.1743$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$5(5u^{43} - 49u^{42} + \cdots - 10u - 1)$
c_2	$u^{43} + u^{42} + \cdots + 3u - 1$
c_3	$u^{43} + 18u^{41} + \cdots - 2u + 1$
c_4	$5(5u^{43} - u^{42} + \cdots - u - 1)$
c_5	$5(5u^{43} + 19u^{42} + \cdots + 2u - 1)$
c_6	$u^{43} - u^{42} + \cdots + 3u + 1$
c_7	$5(5u^{43} - 28u^{42} + \cdots + 96u - 23)$
c_8	$u^{43} - 5u^{42} + \cdots + 33u + 5$
c_9	$u^{43} - 2u^{42} + \cdots + 7u - 1$
c_{10}	$u^{43} + 18u^{41} + \cdots - 2u - 1$
c_{11}	$u^{43} - 3u^{41} + \cdots + 24u - 7$
c_{12}	$u^{43} + 3u^{40} + \cdots + 29u - 5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$25(25y^{43} - 431y^{42} + \cdots + 12y - 1)$
c_2, c_6	$y^{43} - 25y^{42} + \cdots + 27y - 1$
c_3, c_{10}	$y^{43} + 36y^{42} + \cdots + 16y - 1$
c_4	$25(25y^{43} + 9y^{42} + \cdots - 49y - 1)$
c_5	$25(25y^{43} + 9y^{42} + \cdots - 42y - 1)$
c_7	$25(25y^{43} - 14y^{42} + \cdots - 5458y - 529)$
c_8	$y^{43} - 7y^{42} + \cdots + 799y - 25$
c_9	$y^{43} - 2y^{42} + \cdots + 3y - 1$
c_{11}	$y^{43} - 6y^{42} + \cdots + 86y - 49$
c_{12}	$y^{43} - 4y^{41} + \cdots - 429y - 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.556790 + 0.776040I$ $a = -0.27205 + 1.43734I$ $b = 0.82049 + 1.54065I$	$-2.39854 + 6.39263I$	$-5.3128 - 13.2800I$
$u = 0.556790 - 0.776040I$ $a = -0.27205 - 1.43734I$ $b = 0.82049 - 1.54065I$	$-2.39854 - 6.39263I$	$-5.3128 + 13.2800I$
$u = -0.694928 + 0.839495I$ $a = 0.168950 - 0.612752I$ $b = 1.24058 - 0.70850I$	$1.51294 - 4.14357I$	$-0.90402 + 6.48166I$
$u = -0.694928 - 0.839495I$ $a = 0.168950 + 0.612752I$ $b = 1.24058 + 0.70850I$	$1.51294 + 4.14357I$	$-0.90402 - 6.48166I$
$u = -0.791731 + 0.797854I$ $a = -0.186496 + 0.103236I$ $b = -1.27464 + 0.67328I$	$-7.03451 + 2.27388I$	$-5.91863 - 0.71785I$
$u = -0.791731 - 0.797854I$ $a = -0.186496 - 0.103236I$ $b = -1.27464 - 0.67328I$	$-7.03451 - 2.27388I$	$-5.91863 + 0.71785I$
$u = -0.202011 + 0.850604I$ $a = 1.52918 + 0.01638I$ $b = 0.928828 + 0.407229I$	$0.253606 + 1.357090I$	$3.61437 - 3.84354I$
$u = -0.202011 - 0.850604I$ $a = 1.52918 - 0.01638I$ $b = 0.928828 - 0.407229I$	$0.253606 - 1.357090I$	$3.61437 + 3.84354I$
$u = -0.476699 + 1.045770I$ $a = 0.54008 - 1.47117I$ $b = 1.46667 - 1.38739I$	$-0.75963 - 4.74920I$	$4.22142 + 13.19281I$
$u = -0.476699 - 1.045770I$ $a = 0.54008 + 1.47117I$ $b = 1.46667 + 1.38739I$	$-0.75963 + 4.74920I$	$4.22142 - 13.19281I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.166080 + 0.418612I$ $a = -0.321377 - 0.409252I$ $b = -0.881302 + 0.050258I$	$1.23924 - 3.22977I$	$1.48899 + 5.43305I$
$u = 1.166080 - 0.418612I$ $a = -0.321377 + 0.409252I$ $b = -0.881302 - 0.050258I$	$1.23924 + 3.22977I$	$1.48899 - 5.43305I$
$u = 0.169422 + 0.713839I$ $a = 0.08334 + 1.76046I$ $b = -0.38958 + 1.44126I$	$-2.67871 + 2.16540I$	$-10.97156 - 6.34483I$
$u = 0.169422 - 0.713839I$ $a = 0.08334 - 1.76046I$ $b = -0.38958 - 1.44126I$	$-2.67871 - 2.16540I$	$-10.97156 + 6.34483I$
$u = -0.204579 + 1.320380I$ $a = -0.249412 + 0.114511I$ $b = 0.666163 - 0.156047I$	$-9.97890 - 1.49978I$	$-11.46097 + 0.I$
$u = -0.204579 - 1.320380I$ $a = -0.249412 - 0.114511I$ $b = 0.666163 + 0.156047I$	$-9.97890 + 1.49978I$	$-11.46097 + 0.I$
$u = -0.657060 + 0.014753I$ $a = -0.43157 + 1.65827I$ $b = 0.714383 - 0.074558I$	$1.21426 - 1.58784I$	$2.79726 + 4.34298I$
$u = -0.657060 - 0.014753I$ $a = -0.43157 - 1.65827I$ $b = 0.714383 + 0.074558I$	$1.21426 + 1.58784I$	$2.79726 - 4.34298I$
$u = -1.157590 + 0.683990I$ $a = 0.385524 + 0.766848I$ $b = -0.667169 + 0.869664I$	$-6.67019 - 12.32510I$	$-6.76858 + 9.83023I$
$u = -1.157590 - 0.683990I$ $a = 0.385524 - 0.766848I$ $b = -0.667169 - 0.869664I$	$-6.67019 + 12.32510I$	$-6.76858 - 9.83023I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.470420 + 0.363487I$ $a = -0.36973 + 3.05300I$ $b = 0.201207 - 0.118286I$	$-2.89072 - 0.40354I$	$0.39400 - 1.91239I$
$u = 0.470420 - 0.363487I$ $a = -0.36973 - 3.05300I$ $b = 0.201207 + 0.118286I$	$-2.89072 + 0.40354I$	$0.39400 + 1.91239I$
$u = 0.323574 + 0.486748I$ $a = 1.27447 - 3.56315I$ $b = -0.086520 - 0.790804I$	$-2.09872 - 0.41471I$	$-3.81177 - 3.99106I$
$u = 0.323574 - 0.486748I$ $a = 1.27447 + 3.56315I$ $b = -0.086520 + 0.790804I$	$-2.09872 + 0.41471I$	$-3.81177 + 3.99106I$
$u = -1.05892 + 0.94539I$ $a = 0.106465 - 0.655573I$ $b = 0.974372 - 0.679342I$	$1.76068 - 4.34655I$	0
$u = -1.05892 - 0.94539I$ $a = 0.106465 + 0.655573I$ $b = 0.974372 + 0.679342I$	$1.76068 + 4.34655I$	0
$u = 0.84515 + 1.16341I$ $a = -0.258390 - 1.123220I$ $b = -1.19377 - 0.93952I$	$-0.69384 + 10.26020I$	0
$u = 0.84515 - 1.16341I$ $a = -0.258390 + 1.123220I$ $b = -1.19377 + 0.93952I$	$-0.69384 - 10.26020I$	0
$u = 0.87080 + 1.18725I$ $a = 0.302680 + 0.773077I$ $b = 0.516809 + 0.798885I$	$-0.69829 + 4.85061I$	0
$u = 0.87080 - 1.18725I$ $a = 0.302680 - 0.773077I$ $b = 0.516809 - 0.798885I$	$-0.69829 - 4.85061I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.48213$ $a = -0.416704$ $b = \ \ 0.459569$	-2.80542	-27.7530
$u = \ \ 0.51270 + 1.45587I$ $a = -0.657613 - 0.417530I$ $b = -0.888098 - 0.609756I$	$-6.27957 - 3.52135I$	0
$u = \ \ 0.51270 - 1.45587I$ $a = -0.657613 + 0.417530I$ $b = -0.888098 + 0.609756I$	$-6.27957 + 3.52135I$	0
$u = -0.37621 + 1.51368I$ $a = -0.629667 + 0.492125I$ $b = -1.40125 + 0.25678I$	$-6.71145 + 3.05035I$	0
$u = -0.37621 - 1.51368I$ $a = -0.629667 - 0.492125I$ $b = -1.40125 - 0.25678I$	$-6.71145 - 3.05035I$	0
$u = \ \ 0.125402 + 0.408333I$ $a = \ \ 0.290471 - 1.159820I$ $b = -1.06357 - 1.77406I$	$-5.21691 - 3.60350I$	$-25.3910 - 0.5733I$
$u = \ \ 0.125402 - 0.408333I$ $a = \ \ 0.290471 + 1.159820I$ $b = -1.06357 + 1.77406I$	$-5.21691 + 3.60350I$	$-25.3910 + 0.5733I$
$u = \ \ 0.219767 + 0.290534I$ $a = -2.13576 - 1.01100I$ $b = -1.41637 + 0.04367I$	$1.94432 - 3.01981I$	$-0.44739 + 4.73880I$
$u = \ \ 0.219767 - 0.290534I$ $a = -2.13576 + 1.01100I$ $b = -1.41637 - 0.04367I$	$1.94432 + 3.01981I$	$-0.44739 - 4.73880I$
$u = \ \ 1.63462 + 0.77300I$ $a = \ \ 0.126829 - 0.490818I$ $b = -0.661340 - 0.499457I$	$-1.23774 + 5.75062I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.63462 - 0.77300I$ $a = 0.126829 + 0.490818I$ $b = -0.661340 + 0.499457I$	$-1.23774 - 5.75062I$	0
$u = -2.01605 + 0.41307I$ $a = 0.032427 + 0.265234I$ $b = -0.335677 + 0.411678I$	$-7.10237 + 1.72470I$	0
$u = -2.01605 - 0.41307I$ $a = 0.032427 - 0.265234I$ $b = -0.335677 - 0.411678I$	$-7.10237 - 1.72470I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$25(5u^{43}-49u^{42}+\cdots-10u-1)$ $\cdot(5u^{174}-56u^{173}+\cdots-31908u+1387)$
c_2	$(u^{43}+u^{42}+\cdots+3u-1)(u^{174}-2u^{173}+\cdots+4042765u+913579)$
c_3	$(u^{43}+18u^{41}+\cdots-2u+1)(u^{174}+u^{173}+\cdots+131340u+6023)$
c_4	$25(5u^{43}-u^{42}+\cdots-u-1)(5u^{174}+26u^{173}+\cdots+20363u+1637)$
c_5	$25(5u^{43}+19u^{42}+\cdots+2u-1)$ $\cdot(5u^{174}+86u^{173}+\cdots+895002u+151163)$
c_6	$(u^{43}-u^{42}+\cdots+3u+1)(u^{174}-2u^{173}+\cdots+4042765u+913579)$
c_7	$25(5u^{43}-28u^{42}+\cdots+96u-23)$ $\cdot(5u^{174}+43u^{173}+\cdots-4706126254u-370127167)$
c_8	$(u^{43}-5u^{42}+\cdots+33u+5)(u^{174}+4u^{173}+\cdots-49199u+15565)$
c_9	$(u^{43}-2u^{42}+\cdots+7u-1)(u^{174}+5u^{173}+\cdots-1040129u-102703)$
c_{10}	$(u^{43}+18u^{41}+\cdots-2u-1)(u^{174}+u^{173}+\cdots+131340u+6023)$
c_{11}	$(u^{43}-3u^{41}+\cdots+24u-7)(u^{174}-u^{173}+\cdots+18522u+2029)$
c_{12}	$(u^{43}+3u^{40}+\cdots+29u-5)(u^{174}-5u^{173}+\cdots+99447u+22265)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$625(25y^{43} - 431y^{42} + \cdots + 12y - 1)$ $\cdot (25y^{174} - 1136y^{173} + \cdots - 88028778y + 1923769)$
c_2, c_6	$(y^{43} - 25y^{42} + \cdots + 27y - 1)$ $\cdot (y^{174} - 114y^{173} + \cdots - 29118856544981y + 834626589241)$
c_3, c_{10}	$(y^{43} + 36y^{42} + \cdots + 16y - 1)$ $\cdot (y^{174} + 147y^{173} + \cdots + 21193565398y + 36276529)$
c_4	$625(25y^{43} + 9y^{42} + \cdots - 49y - 1)$ $\cdot (25y^{174} + 4y^{173} + \cdots + 113562295y + 2679769)$
c_5	$625(25y^{43} + 9y^{42} + \cdots - 42y - 1)$ $\cdot (25y^{174} + 304y^{173} + \cdots - 427926854100y + 22850252569)$
c_7	$625(25y^{43} - 14y^{42} + \cdots - 5458y - 529)$ $\cdot (25y^{174} - 1259y^{173} + \cdots - 8.00 \times 10^{18}y + 1.37 \times 10^{17})$
c_8	$(y^{43} - 7y^{42} + \cdots + 799y - 25)$ $\cdot (y^{174} - 28y^{173} + \cdots - 20350176401y + 242269225)$
c_9	$(y^{43} - 2y^{42} + \cdots + 3y - 1)$ $\cdot (y^{174} - 39y^{173} + \cdots - 2659529379217y + 10547906209)$
c_{11}	$(y^{43} - 6y^{42} + \cdots + 86y - 49)$ $\cdot (y^{174} + y^{173} + \cdots + 126543508y + 4116841)$
c_{12}	$(y^{43} - 4y^{41} + \cdots - 429y - 25)$ $\cdot (y^{174} + 27y^{173} + \cdots + 39776918751y + 495730225)$