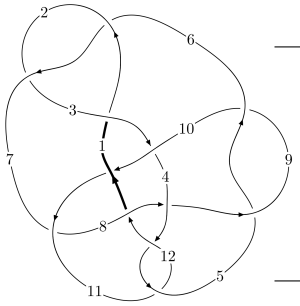
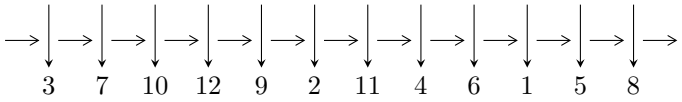
$12a_{0659}$ $(K12a_{0659})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 3.09510 \times 10^{887} u^{168} + 1.93391 \times 10^{887} u^{167} + \cdots + 5.11630 \times 10^{888} b - 1.15540 \times 10^{892}, \\ & 7.90794 \times 10^{888} u^{168} + 1.64481 \times 10^{891} u^{167} + \cdots + 9.53897 \times 10^{891} a + 2.08425 \times 10^{895}, \\ & u^{169} + 2u^{168} + \cdots + 65269u + 13051 \rangle \\ I_2^u = \langle & -9.26459 \times 10^{33} u^{37} + 1.06188 \times 10^{34} u^{36} + \cdots + 3.68110 \times 10^{33} b - 4.69466 \times 10^{34}, \\ & 1.86555 \times 10^{34} u^{37} + 2.19102 \times 10^{34} u^{36} + \cdots + 2.57677 \times 10^{34} a - 3.37189 \times 10^{35}, \ u^{38} - u^{37} + \cdots + 3u - 7 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 207 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. $\boldsymbol{I_1^u = \langle 3.10 \times 10^{887} u^{168} + 1.93 \times 10^{887} u^{167} + \cdots + 5.12 \times 10^{888} b - 1.16 \times 10^{892},\ 7.91 \times 10^{888} u^{168} + 1.64 \times 10^{891} u^{167} + \cdots + 9.54 \times 10^{891} a + 2.08 \times 10^{895},\ u^{169} + 2u^{168} + \cdots + 65269u + 13051 \rangle}$

(i) Arc colorings

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

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

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

$$a_8 = \begin{pmatrix} -0.000829014u^{168} - 0.172431u^{167} + \cdots - 12895.8u - 2184.99 \\ -0.0604950u^{168} - 0.0377989u^{167} + \cdots + 12402.5u + 2258.27 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0596660u^{168} - 0.134632u^{167} + \cdots - 25298.3u - 4443.26 \\ -0.0604950u^{168} - 0.0377989u^{167} + \cdots + 12402.5u + 2258.27 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.349624u^{168} + 0.751468u^{167} + \cdots - 2742.15u - 1350.08 \\ -0.295949u^{168} - 0.736332u^{167} + \cdots - 3667.78u + 102.662 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0470350u^{168} + 0.0467437u^{167} + \cdots - 7824.49u - 1349.44 \\ -0.105932u^{168} - 0.194999u^{167} + \cdots + 6946.06u + 1538.27 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} 0.0906963u^{168} - 0.0344680u^{167} + \cdots - 22511.8u - 3998.89 \\ -0.100914u^{168} - 0.208313u^{167} + \cdots + 4534.85u + 1032.82 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.447630u^{168} - 0.986075u^{167} + \cdots - 2487.51u + 557.448 \\ 0.149530u^{168} + 0.381710u^{167} + \cdots + 2813.98u + 79.8128 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.158314u^{168} + 0.624237u^{167} + \cdots + 19953.4u + 3201.62 \\ 0.00889723u^{168} - 0.170628u^{167} + \cdots - 17746.0u - 3123.31 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.00970490u^{168} + 0.419594u^{167} + \cdots + 39719.3u + 7112.40 \\ 0.0498702u^{168} - 0.124749u^{167} + \cdots - 21725.9u - 4006.80 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.41920u^{168} - 2.44682u^{167} + \cdots + 38884.9u + 9544.51$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{169} + 80u^{168} + \cdots + 99813u + 2401$
c_2, c_6	$u^{169} - 2u^{168} + \cdots - 49u + 49$
c_3	$u^{169} + 2u^{168} + \cdots + 11167u + 523$
c_4, c_{11}	$u^{169} + 2u^{168} + \cdots + 65269u + 13051$
c_5, c_9	$u^{169} + 16u^{168} + \cdots + 3871835u + 205027$
c_7	$u^{169} + 4u^{168} + \cdots - 7867u + 18377$
c_8	$u^{169} - u^{168} + \cdots + 2292504u + 164545$
c_{10}	$u^{169} - 14u^{168} + \cdots - 13650u + 6089$
c_{12}	$u^{169} - 3u^{168} + \cdots + 496671u + 144999$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{169} + 28y^{168} + \cdots - 55412679y - 5764801$
c_2, c_6	$y^{169} - 80y^{168} + \cdots + 99813y - 2401$
c_3	$y^{169} - 14y^{168} + \cdots - 3774107y - 273529$
c_4, c_{11}	$y^{169} + 90y^{168} + \cdots + 67826243y - 170328601$
c_5, c_9	$y^{169} - 216y^{168} + \cdots + 4325021500815y - 42036070729$
c_7	$y^{169} + 10y^{168} + \cdots + 44572417095y - 337714129$
c_8	$y^{169} + 7y^{168} + \cdots + 2188189227116y - 27075057025$
c_{10}	$y^{169} + 122y^{168} + \cdots + 1911336200y - 37075921$
c_{12}	$y^{169} + 141y^{168} + \cdots - 1184216769423y - 21024710001$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.071971 + 0.993217I$ $a = -6.75716 - 0.40615I$ $b = -0.147600 + 0.008410I$	$0.07454 - 2.04421I$	0
$u = 0.071971 - 0.993217I$ $a = -6.75716 + 0.40615I$ $b = -0.147600 - 0.008410I$	$0.07454 + 2.04421I$	0
$u = 0.404057 + 0.920241I$ $a = -0.21246 + 1.73079I$ $b = -1.079020 - 0.354825I$	$-6.35368 - 2.60436I$	0
$u = 0.404057 - 0.920241I$ $a = -0.21246 - 1.73079I$ $b = -1.079020 + 0.354825I$	$-6.35368 + 2.60436I$	0
$u = -0.824347 + 0.531630I$ $a = -0.013021 + 0.212634I$ $b = 0.737459 + 0.612624I$	$-5.27801 - 0.92055I$	0
$u = -0.824347 - 0.531630I$ $a = -0.013021 - 0.212634I$ $b = 0.737459 - 0.612624I$	$-5.27801 + 0.92055I$	0
$u = 0.390660 + 0.895610I$ $a = -1.053550 + 0.037286I$ $b = -0.23714 - 1.41292I$	$4.19117 - 1.87219I$	0
$u = 0.390660 - 0.895610I$ $a = -1.053550 - 0.037286I$ $b = -0.23714 + 1.41292I$	$4.19117 + 1.87219I$	0
$u = -0.188896 + 0.952600I$ $a = 1.54752 - 0.79819I$ $b = 0.576613 + 0.697087I$	$-0.96768 + 3.48500I$	0
$u = -0.188896 - 0.952600I$ $a = 1.54752 + 0.79819I$ $b = 0.576613 - 0.697087I$	$-0.96768 - 3.48500I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.375613 + 0.962743I$ $a = -0.56678 + 1.39008I$ $b = -1.57564 - 1.06478I$	$-6.02639 - 2.22210I$	0
$u = 0.375613 - 0.962743I$ $a = -0.56678 - 1.39008I$ $b = -1.57564 + 1.06478I$	$-6.02639 + 2.22210I$	0
$u = -0.397050 + 0.955002I$ $a = 0.22551 + 1.64884I$ $b = 0.751854 - 0.409735I$	$-0.35863 + 6.14587I$	0
$u = -0.397050 - 0.955002I$ $a = 0.22551 - 1.64884I$ $b = 0.751854 + 0.409735I$	$-0.35863 - 6.14587I$	0
$u = 0.141688 + 0.954367I$ $a = -1.55942 - 0.80579I$ $b = -0.633617 + 0.645514I$	$-0.241484 + 0.420460I$	0
$u = 0.141688 - 0.954367I$ $a = -1.55942 + 0.80579I$ $b = -0.633617 - 0.645514I$	$-0.241484 - 0.420460I$	0
$u = -0.182135 + 0.939602I$ $a = 0.151299 + 1.280790I$ $b = 0.279820 - 0.160729I$	$2.46874 + 2.52877I$	0
$u = -0.182135 - 0.939602I$ $a = 0.151299 - 1.280790I$ $b = 0.279820 + 0.160729I$	$2.46874 - 2.52877I$	0
$u = 0.416983 + 0.961676I$ $a = -0.24370 + 1.66418I$ $b = -0.735547 - 0.497363I$	$-2.77596 - 11.85740I$	0
$u = 0.416983 - 0.961676I$ $a = -0.24370 - 1.66418I$ $b = -0.735547 + 0.497363I$	$-2.77596 + 11.85740I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.946715+0.092314I$ $a=\ 0.832100-0.781319I$ $b=\ 0.379620-0.918901I$	$0.85553+8.76180I$	0
$u=-0.946715-0.092314I$ $a=\ 0.832100+0.781319I$ $b=\ 0.379620+0.918901I$	$0.85553-8.76180I$	0
$u=-0.263450+0.904249I$ $a=\ 0.045603+1.151000I$ $b=\ 1.18660-1.49972I$	$0.43172-1.78570I$	0
$u=-0.263450-0.904249I$ $a=\ 0.045603-1.151000I$ $b=\ 1.18660+1.49972I$	$0.43172+1.78570I$	0
$u=\ 0.342947+0.869493I$ $a=-0.237085-0.837871I$ $b=-0.210441+0.733591I$	$-1.25330-1.62013I$	0
$u=\ 0.342947-0.869493I$ $a=-0.237085+0.837871I$ $b=-0.210441-0.733591I$	$-1.25330+1.62013I$	0
$u=-0.513243+0.944588I$ $a=-0.493569-0.512567I$ $b=-0.283119+1.285920I$	$-3.96229+5.71948I$	0
$u=-0.513243-0.944588I$ $a=-0.493569+0.512567I$ $b=-0.283119-1.285920I$	$-3.96229-5.71948I$	0
$u=-1.050290+0.231064I$ $a=\ 0.238336-0.611188I$ $b=\ 0.670309-0.238520I$	$-5.20445-0.20484I$	0
$u=-1.050290-0.231064I$ $a=\ 0.238336+0.611188I$ $b=\ 0.670309+0.238520I$	$-5.20445+0.20484I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.790375+0.730412I$ $a=\ 0.646829-0.540363I$ $b=\ 0.740813-0.067067I$	$-3.73742+6.16455I$	0
$u=-0.790375-0.730412I$ $a=\ 0.646829+0.540363I$ $b=\ 0.740813+0.067067I$	$-3.73742-6.16455I$	0
$u=\ 0.228252+0.890872I$ $a=\ 0.674429-0.333317I$ $b=\ 2.33525-0.88707I$	$-2.13027-10.09330I$	0
$u=\ 0.228252-0.890872I$ $a=\ 0.674429+0.333317I$ $b=\ 2.33525+0.88707I$	$-2.13027+10.09330I$	0
$u=-1.026390+0.341642I$ $a=-0.386240-1.116300I$ $b=-0.921633-0.915020I$	$-6.48231-5.60638I$	0
$u=-1.026390-0.341642I$ $a=-0.386240+1.116300I$ $b=-0.921633+0.915020I$	$-6.48231+5.60638I$	0
$u=\ 0.140979+0.901460I$ $a=-1.31429-0.60895I$ $b=-0.385048+0.656951I$	$-0.37685-1.78132I$	0
$u=\ 0.140979-0.901460I$ $a=-1.31429+0.60895I$ $b=-0.385048-0.656951I$	$-0.37685+1.78132I$	0
$u=-0.545920+0.942971I$ $a=\ 0.174146-0.277879I$ $b=\ 0.493029+0.749605I$	$-3.52379+5.83913I$	0
$u=-0.545920-0.942971I$ $a=\ 0.174146+0.277879I$ $b=\ 0.493029-0.749605I$	$-3.52379-5.83913I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.195476+0.884441I$ $a=\ \ 1.55103-0.72463I$ $b=\ \ 0.476684+0.705196I$	$-1.17741-1.75927I$	0
$u=-0.195476-0.884441I$ $a=\ \ 1.55103+0.72463I$ $b=\ \ 0.476684-0.705196I$	$-1.17741+1.75927I$	0
$u=-0.873185+0.200462I$ $a=\ \ 0.480743+0.977257I$ $b=\ \ 0.323378+0.766446I$	$-2.18869-1.83282I$	0
$u=-0.873185-0.200462I$ $a=\ \ 0.480743-0.977257I$ $b=\ \ 0.323378-0.766446I$	$-2.18869+1.83282I$	0
$u=-0.305234+1.065120I$ $a=-1.65870-0.31151I$ $b=-0.927039+1.054910I$	$4.24308-1.31842I$	0
$u=-0.305234-1.065120I$ $a=-1.65870+0.31151I$ $b=-0.927039-1.054910I$	$4.24308+1.31842I$	0
$u=\ \ 0.288281+0.836276I$ $a=\ \ 0.080486+1.368210I$ $b=-0.94538-1.35979I$	$-2.18128+7.70563I$	0
$u=\ \ 0.288281-0.836276I$ $a=\ \ 0.080486-1.368210I$ $b=-0.94538+1.35979I$	$-2.18128-7.70563I$	0
$u=\ \ 0.880267+0.067169I$ $a=\ \ 0.722470-1.088100I$ $b=\ \ 0.903527-0.705991I$	$0.95739+5.08049I$	0
$u=\ \ 0.880267-0.067169I$ $a=\ \ 0.722470+1.088100I$ $b=\ \ 0.903527+0.705991I$	$0.95739-5.08049I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.305263 + 0.821841I$ $a = 0.244593 - 0.366378I$ $b = -0.83222 + 1.66655I$	$-0.95903 - 1.42850I$	0
$u = 0.305263 - 0.821841I$ $a = 0.244593 + 0.366378I$ $b = -0.83222 - 1.66655I$	$-0.95903 + 1.42850I$	0
$u = -0.169987 + 0.853044I$ $a = -0.529312 - 0.408865I$ $b = -2.69051 - 0.66691I$	$0.03715 + 3.89112I$	0
$u = -0.169987 - 0.853044I$ $a = -0.529312 + 0.408865I$ $b = -2.69051 + 0.66691I$	$0.03715 - 3.89112I$	0
$u = 0.217144 + 1.116520I$ $a = -0.824075 + 1.077390I$ $b = -0.360306 - 0.396861I$	$1.87631 + 2.16809I$	0
$u = 0.217144 - 1.116520I$ $a = -0.824075 - 1.077390I$ $b = -0.360306 + 0.396861I$	$1.87631 - 2.16809I$	0
$u = 1.117860 + 0.236165I$ $a = 0.451781 - 0.995277I$ $b = 0.856043 - 0.861770I$	$-0.88968 + 8.60210I$	0
$u = 1.117860 - 0.236165I$ $a = 0.451781 + 0.995277I$ $b = 0.856043 + 0.861770I$	$-0.88968 - 8.60210I$	0
$u = 0.119812 + 1.139070I$ $a = -0.782041 + 0.202206I$ $b = -0.79641 - 1.53061I$	$6.36764 - 0.28160I$	0
$u = 0.119812 - 1.139070I$ $a = -0.782041 - 0.202206I$ $b = -0.79641 + 1.53061I$	$6.36764 + 0.28160I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.691698+0.928258I$ $a=1.122520-0.367720I$ $b=0.28163-1.55427I$	$1.17602-1.69304I$	0
$u=-0.691698-0.928258I$ $a=1.122520+0.367720I$ $b=0.28163+1.55427I$	$1.17602+1.69304I$	0
$u=-0.503719+0.671993I$ $a=-0.576045-1.044330I$ $b=-0.217398+0.766926I$	$-4.20057-1.38927I$	0
$u=-0.503719-0.671993I$ $a=-0.576045+1.044330I$ $b=-0.217398-0.766926I$	$-4.20057+1.38927I$	0
$u=0.830280+0.085868I$ $a=-0.908349-0.917650I$ $b=-0.315914-0.925502I$	$2.73800-3.67058I$	0
$u=0.830280-0.085868I$ $a=-0.908349+0.917650I$ $b=-0.315914+0.925502I$	$2.73800+3.67058I$	0
$u=0.393657+1.101140I$ $a=-1.043910+0.072237I$ $b=-0.783103-0.212485I$	$-0.92755-2.66990I$	0
$u=0.393657-1.101140I$ $a=-1.043910-0.072237I$ $b=-0.783103+0.212485I$	$-0.92755+2.66990I$	0
$u=0.369621+1.129080I$ $a=1.50291-0.23061I$ $b=0.839731+1.065180I$	$6.24642-4.46939I$	0
$u=0.369621-1.129080I$ $a=1.50291+0.23061I$ $b=0.839731-1.065180I$	$6.24642+4.46939I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.057317+1.192530I$ $a=-0.831583+0.027728I$ $b=-0.237122+0.648927I$	$-0.17178-2.28821I$	0
$u=-0.057317-1.192530I$ $a=-0.831583-0.027728I$ $b=-0.237122-0.648927I$	$-0.17178+2.28821I$	0
$u=0.496350+0.624439I$ $a=-0.935939-0.842250I$ $b=-0.814318-0.052970I$	$-1.70913-1.86501I$	0
$u=0.496350-0.624439I$ $a=-0.935939+0.842250I$ $b=-0.814318+0.052970I$	$-1.70913+1.86501I$	0
$u=-1.174790+0.265699I$ $a=-0.410477-0.958935I$ $b=-0.831369-0.879557I$	$-3.1868-14.1215I$	0
$u=-1.174790-0.265699I$ $a=-0.410477+0.958935I$ $b=-0.831369+0.879557I$	$-3.1868+14.1215I$	0
$u=-0.154009+1.206350I$ $a=0.796943+0.196662I$ $b=0.86302-1.36563I$	$5.87383+5.14582I$	0
$u=-0.154009-1.206350I$ $a=0.796943-0.196662I$ $b=0.86302+1.36563I$	$5.87383-5.14582I$	0
$u=1.127950+0.475936I$ $a=-0.213103+0.358544I$ $b=-0.634742+0.602299I$	$-5.97733-1.37962I$	0
$u=1.127950-0.475936I$ $a=-0.213103-0.358544I$ $b=-0.634742-0.602299I$	$-5.97733+1.37962I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.658536 + 1.035650I$ $a = -0.854151 - 0.382246I$ $b = -0.07277 - 1.44169I$	$4.57555 - 2.56623I$	0
$u = 0.658536 - 1.035650I$ $a = -0.854151 + 0.382246I$ $b = -0.07277 + 1.44169I$	$4.57555 + 2.56623I$	0
$u = -0.257982 + 1.200630I$ $a = 0.708670 + 0.398371I$ $b = 0.520250 - 0.715455I$	$2.84934 + 2.13074I$	0
$u = -0.257982 - 1.200630I$ $a = 0.708670 - 0.398371I$ $b = 0.520250 + 0.715455I$	$2.84934 - 2.13074I$	0
$u = -1.170530 + 0.374934I$ $a = 0.209174 + 0.511854I$ $b = 0.532513 + 0.573892I$	$-3.34643 - 0.99719I$	0
$u = -1.170530 - 0.374934I$ $a = 0.209174 - 0.511854I$ $b = 0.532513 - 0.573892I$	$-3.34643 + 0.99719I$	0
$u = 0.319044 + 0.671473I$ $a = 1.59772 - 0.82338I$ $b = 1.70423 + 0.00615I$	$-7.20616 - 0.68122I$	0
$u = 0.319044 - 0.671473I$ $a = 1.59772 + 0.82338I$ $b = 1.70423 - 0.00615I$	$-7.20616 + 0.68122I$	0
$u = -0.751941 + 1.012280I$ $a = 0.812655 - 0.629044I$ $b = -0.10547 - 1.55256I$	$1.41455 + 7.41770I$	0
$u = -0.751941 - 1.012280I$ $a = 0.812655 + 0.629044I$ $b = -0.10547 + 1.55256I$	$1.41455 - 7.41770I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.417618+1.195530I$ $a=\ 0.984447+0.463603I$ $b=\ 1.42520-1.25467I$	$3.96135+3.75228I$	0
$u=-0.417618-1.195530I$ $a=\ 0.984447-0.463603I$ $b=\ 1.42520+1.25467I$	$3.96135-3.75228I$	0
$u=\ 1.204870+0.390600I$ $a=-0.296872+0.461394I$ $b=-0.569100+0.638486I$	$-5.23463+4.94808I$	0
$u=\ 1.204870-0.390600I$ $a=-0.296872-0.461394I$ $b=-0.569100-0.638486I$	$-5.23463-4.94808I$	0
$u=-0.532213+1.153990I$ $a=-1.261510-0.056165I$ $b=-0.764913+1.059370I$	$0.66304+6.88978I$	0
$u=-0.532213-1.153990I$ $a=-1.261510+0.056165I$ $b=-0.764913-1.059370I$	$0.66304-6.88978I$	0
$u=\ 0.467359+0.543481I$ $a=\ 1.64874-0.21188I$ $b=\ 1.365060-0.296866I$	$-3.99349+8.14520I$	0
$u=\ 0.467359-0.543481I$ $a=\ 1.64874+0.21188I$ $b=\ 1.365060+0.296866I$	$-3.99349-8.14520I$	0
$u=-0.326108+1.241560I$ $a=\ 0.770191+0.247372I$ $b=\ 1.209640-0.534494I$	$3.81852+3.16843I$	0
$u=-0.326108-1.241560I$ $a=\ 0.770191-0.247372I$ $b=\ 1.209640+0.534494I$	$3.81852-3.16843I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.285360 + 0.651720I$ $a = 0.84047 - 1.17009I$ $b = 2.04145 - 0.14960I$	$-7.10053 - 0.86035I$	0
$u = 0.285360 - 0.651720I$ $a = 0.84047 + 1.17009I$ $b = 2.04145 + 0.14960I$	$-7.10053 + 0.86035I$	0
$u = -0.259118 + 1.266840I$ $a = 0.508936 + 0.283237I$ $b = 0.303794 - 0.853968I$	$2.78104 + 2.08109I$	0
$u = -0.259118 - 1.266840I$ $a = 0.508936 - 0.283237I$ $b = 0.303794 + 0.853968I$	$2.78104 - 2.08109I$	0
$u = -0.536068 + 1.179860I$ $a = -0.659149 + 0.517664I$ $b = 0.003379 + 0.684091I$	$3.19553 + 4.85072I$	0
$u = -0.536068 - 1.179860I$ $a = -0.659149 - 0.517664I$ $b = 0.003379 - 0.684091I$	$3.19553 - 4.85072I$	0
$u = 0.281539 + 1.276110I$ $a = 0.497110 - 0.083958I$ $b = 1.39022 + 1.54914I$	$3.64245 - 4.08039I$	0
$u = 0.281539 - 1.276110I$ $a = 0.497110 + 0.083958I$ $b = 1.39022 - 1.54914I$	$3.64245 + 4.08039I$	0
$u = -0.686384 + 0.091439I$ $a = -1.00242 + 1.03295I$ $b = -0.803790 + 0.536793I$	$0.347701 - 0.238946I$	0
$u = -0.686384 - 0.091439I$ $a = -1.00242 - 1.03295I$ $b = -0.803790 - 0.536793I$	$0.347701 + 0.238946I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.366346 + 1.275320I$ $a = -0.744893 + 0.162439I$ $b = -1.203740 - 0.264801I$	$2.56246 - 8.44652I$	0
$u = 0.366346 - 1.275320I$ $a = -0.744893 - 0.162439I$ $b = -1.203740 + 0.264801I$	$2.56246 + 8.44652I$	0
$u = 0.441247 + 1.251820I$ $a = 1.287610 - 0.266463I$ $b = 0.784742 + 1.039990I$	$6.69747 - 8.17069I$	0
$u = 0.441247 - 1.251820I$ $a = 1.287610 + 0.266463I$ $b = 0.784742 - 1.039990I$	$6.69747 + 8.17069I$	0
$u = -1.274550 + 0.372534I$ $a = 0.117699 + 0.535596I$ $b = 0.463124 + 0.469958I$	$-3.04091 - 0.52569I$	0
$u = -1.274550 - 0.372534I$ $a = 0.117699 - 0.535596I$ $b = 0.463124 - 0.469958I$	$-3.04091 + 0.52569I$	0
$u = 0.401648 + 1.266480I$ $a = 0.697790 + 0.357500I$ $b = 0.081924 + 0.653907I$	$5.12104 + 0.53108I$	0
$u = 0.401648 - 1.266480I$ $a = 0.697790 - 0.357500I$ $b = 0.081924 - 0.653907I$	$5.12104 - 0.53108I$	0
$u = 0.500054 + 1.235120I$ $a = -1.100900 + 0.336027I$ $b = -1.28711 - 1.36603I$	$4.46681 - 10.03180I$	0
$u = 0.500054 - 1.235120I$ $a = -1.100900 - 0.336027I$ $b = -1.28711 + 1.36603I$	$4.46681 + 10.03180I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.362080 + 0.062506I$ $a = -0.145788 + 0.496549I$ $b = -0.525907 + 0.324411I$	$-5.54514 + 2.31776I$	0
$u = 1.362080 - 0.062506I$ $a = -0.145788 - 0.496549I$ $b = -0.525907 - 0.324411I$	$-5.54514 - 2.31776I$	0
$u = -0.460706 + 1.283840I$ $a = -1.242990 - 0.284796I$ $b = -0.777099 + 1.038040I$	$5.0311 + 13.6329I$	0
$u = -0.460706 - 1.283840I$ $a = -1.242990 + 0.284796I$ $b = -0.777099 - 1.038040I$	$5.0311 - 13.6329I$	0
$u = 0.637316 + 1.208840I$ $a = 0.785291 - 0.308889I$ $b = 0.729433 + 1.168050I$	$-3.43554 - 4.83997I$	0
$u = 0.637316 - 1.208840I$ $a = 0.785291 + 0.308889I$ $b = 0.729433 - 1.168050I$	$-3.43554 + 4.83997I$	0
$u = -0.387993 + 0.493788I$ $a = -1.85677 - 0.29078I$ $b = -1.325860 - 0.185760I$	$-1.64923 - 2.66846I$	$-12.00000 + 0.I$
$u = -0.387993 - 0.493788I$ $a = -1.85677 + 0.29078I$ $b = -1.325860 + 0.185760I$	$-1.64923 + 2.66846I$	$-12.00000 + 0.I$
$u = -0.625993 + 1.222900I$ $a = 1.211070 + 0.180452I$ $b = 1.14043 - 1.48804I$	$-3.69394 + 11.54680I$	0
$u = -0.625993 - 1.222900I$ $a = 1.211070 - 0.180452I$ $b = 1.14043 + 1.48804I$	$-3.69394 - 11.54680I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.549587 + 1.277010I$ $a = -0.540999 - 0.152276I$ $b = -0.076538 - 1.151240I$	$6.05434 - 1.46489I$	0
$u = 0.549587 - 1.277010I$ $a = -0.540999 + 0.152276I$ $b = -0.076538 + 1.151240I$	$6.05434 + 1.46489I$	0
$u = -0.326097 + 1.361830I$ $a = -0.552958 - 0.058000I$ $b = -1.30839 + 1.29618I$	$2.65004 + 9.62282I$	0
$u = -0.326097 - 1.361830I$ $a = -0.552958 + 0.058000I$ $b = -1.30839 - 1.29618I$	$2.65004 - 9.62282I$	0
$u = -0.63358 + 1.26993I$ $a = -0.874402 - 0.207084I$ $b = -0.790637 + 1.106560I$	$-0.31462 + 7.34345I$	0
$u = -0.63358 - 1.26993I$ $a = -0.874402 + 0.207084I$ $b = -0.790637 - 1.106560I$	$-0.31462 - 7.34345I$	0
$u = 0.579966 + 0.013541I$ $a = 1.60299 - 0.77169I$ $b = 0.727515 + 0.281532I$	$-1.18981 + 4.87986I$	$-15.8912 - 3.9873I$
$u = 0.579966 - 0.013541I$ $a = 1.60299 + 0.77169I$ $b = 0.727515 - 0.281532I$	$-1.18981 - 4.87986I$	$-15.8912 + 3.9873I$
$u = 0.62155 + 1.28592I$ $a = -1.134970 + 0.171022I$ $b = -1.12481 - 1.41157I$	$2.4268 - 14.7556I$	0
$u = 0.62155 - 1.28592I$ $a = -1.134970 - 0.171022I$ $b = -1.12481 + 1.41157I$	$2.4268 + 14.7556I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.65882 + 1.27004I$ $a = 0.896377 - 0.288670I$ $b = 0.751488 + 1.101580I$	$-2.26883 - 11.47300I$	0
$u = 0.65882 - 1.27004I$ $a = 0.896377 + 0.288670I$ $b = 0.751488 - 1.101580I$	$-2.26883 + 11.47300I$	0
$u = -0.65851 + 1.27373I$ $a = -0.908575 - 0.068206I$ $b = -0.823797 + 1.051330I$	$0.01803 + 7.21034I$	0
$u = -0.65851 - 1.27373I$ $a = -0.908575 + 0.068206I$ $b = -0.823797 - 1.051330I$	$0.01803 - 7.21034I$	0
$u = -0.64684 + 1.29797I$ $a = 1.128780 + 0.144397I$ $b = 1.09753 - 1.40683I$	$0.1064 + 20.5307I$	0
$u = -0.64684 - 1.29797I$ $a = 1.128780 - 0.144397I$ $b = 1.09753 + 1.40683I$	$0.1064 - 20.5307I$	0
$u = -0.50679 + 1.37075I$ $a = 0.442779 - 0.100032I$ $b = 0.068053 - 1.066280I$	$4.73469 - 3.19415I$	0
$u = -0.50679 - 1.37075I$ $a = 0.442779 + 0.100032I$ $b = 0.068053 + 1.066280I$	$4.73469 + 3.19415I$	0
$u = 0.461982 + 0.275435I$ $a = 1.44013 - 1.31027I$ $b = 0.398216 + 0.394923I$	$-3.26709 - 0.84766I$	$-18.3637 + 6.4036I$
$u = 0.461982 - 0.275435I$ $a = 1.44013 + 1.31027I$ $b = 0.398216 - 0.394923I$	$-3.26709 + 0.84766I$	$-18.3637 - 6.4036I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.42750 + 0.33983I$ $a = -0.094293 + 0.501375I$ $b = -0.434215 + 0.396138I$	$-4.55201 - 3.61108I$	0
$u = 1.42750 - 0.33983I$ $a = -0.094293 - 0.501375I$ $b = -0.434215 - 0.396138I$	$-4.55201 + 3.61108I$	0
$u = 0.18209 + 1.45775I$ $a = 0.618881 + 0.151242I$ $b = 0.166141 + 0.570926I$	$5.32517 + 3.69723I$	0
$u = 0.18209 - 1.45775I$ $a = 0.618881 - 0.151242I$ $b = 0.166141 - 0.570926I$	$5.32517 - 3.69723I$	0
$u = -0.491184 + 0.050903I$ $a = -1.70747 + 0.82728I$ $b = -0.814520 - 0.086870I$	$0.1139450 + 0.0585443I$	$-13.14286 + 0.40039I$
$u = -0.491184 - 0.050903I$ $a = -1.70747 - 0.82728I$ $b = -0.814520 + 0.086870I$	$0.1139450 - 0.0585443I$	$-13.14286 - 0.40039I$
$u = 0.74593 + 1.32001I$ $a = 0.840737 + 0.050275I$ $b = 0.864487 + 0.988023I$	$-1.27042 - 3.78503I$	0
$u = 0.74593 - 1.32001I$ $a = 0.840737 - 0.050275I$ $b = 0.864487 - 0.988023I$	$-1.27042 + 3.78503I$	0
$u = -0.10574 + 1.51875I$ $a = -0.584620 + 0.107132I$ $b = -0.187179 + 0.546848I$	$3.59311 - 9.01922I$	0
$u = -0.10574 - 1.51875I$ $a = -0.584620 - 0.107132I$ $b = -0.187179 - 0.546848I$	$3.59311 + 9.01922I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.59836+1.41395I$ $a=-0.716438-0.027394I$ $b=-0.98163+1.06231I$	$-0.34029+5.82757I$	0
$u=-0.59836-1.41395I$ $a=-0.716438+0.027394I$ $b=-0.98163-1.06231I$	$-0.34029-5.82757I$	0
$u=\ \ 0.426735+0.033911I$ $a=-1.09192+2.18646I$ $b=-0.054255+0.882433I$	$3.26162+1.20745I$	$-7.28255-1.87636I$
$u=\ \ 0.426735-0.033911I$ $a=-1.09192-2.18646I$ $b=-0.054255-0.882433I$	$3.26162-1.20745I$	$-7.28255+1.87636I$
$u=\ \ 0.68631+1.42394I$ $a=\ \ 0.750957+0.021780I$ $b=\ \ 0.943056+1.000890I$	$-1.20093-9.43391I$	0
$u=\ \ 0.68631-1.42394I$ $a=\ \ 0.750957-0.021780I$ $b=\ \ 0.943056-1.000890I$	$-1.20093+9.43391I$	0
$u=-0.315928$ $a=-1.13775$ $b=-0.374314$	-0.563077	-17.5550
$u=-0.258979+0.162846I$ $a=-0.47515+3.35050I$ $b=-0.093737+0.817413I$	$1.88658+3.77577I$	$-9.36355-4.34894I$
$u=-0.258979-0.162846I$ $a=-0.47515-3.35050I$ $b=-0.093737-0.817413I$	$1.88658-3.77577I$	$-9.36355+4.34894I$

II.

$\boldsymbol{I_2^u = \langle -9.26\times10^{33}u^{37}+1.06\times10^{34}u^{36}+\cdots+3.68\times10^{33}b-4.69\times10^{34},\ 1.87\times10^{34}u^{37}+2.19\times10^{34}u^{36}+\cdots+2.58\times10^{34}a-3.37\times10^{35},\ u^{38}-u^{37}+\cdots+3u-7\rangle}$

(i) Arc colorings

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

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

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

$$a_8 = \begin{pmatrix}-0.723989u^{37} - 0.850300u^{36} + \cdots + 0.383767u + 13.0857\\ 2.51680u^{37} - 2.88467u^{36} + \cdots - 43.6600u + 12.7534\end{pmatrix}$$

$$a_9 = \begin{pmatrix}-3.24079u^{37} + 2.03437u^{36} + \cdots + 44.0437u + 0.332291\\ 2.51680u^{37} - 2.88467u^{36} + \cdots - 43.6600u + 12.7534\end{pmatrix}$$

$$a_6 = \begin{pmatrix}-8.22814u^{37} - 0.924459u^{36} + \cdots + 27.6477u + 80.0862\\ 1.57429u^{37} - 1.37040u^{36} + \cdots - 12.2577u - 0.932079\end{pmatrix}$$

$$a_1 = \begin{pmatrix}9.26890u^{37} - 14.0994u^{36} + \cdots - 84.0408u + 28.8621\\ 2.12031u^{37} - 2.67917u^{36} + \cdots - 34.2608u + 16.6758\end{pmatrix}$$

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

$$a_7 = \begin{pmatrix}-1.85035u^{37} - 0.0597323u^{36} + \cdots + 17.6445u + 12.7405\\ 1.95897u^{37} - 2.42053u^{36} + \cdots - 33.2764u + 10.0577\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}37.1266u^{37} + 12.7977u^{36} + \cdots - 48.3304u - 384.256\\ -0.831295u^{37} + 1.67225u^{36} + \cdots + 14.7637u - 10.0765\end{pmatrix}$$

$$a_3 = \begin{pmatrix}6.11229u^{37} - 1.96358u^{36} + \cdots - 17.0243u - 31.1563\\ 1.73365u^{37} - 0.728736u^{36} + \cdots - 16.0674u - 14.6397\end{pmatrix}$$

$$a_2 = \begin{pmatrix}6.48762u^{37} - 2.56459u^{36} + \cdots - 36.7660u - 30.9268\\ 0.762781u^{37} - 0.240655u^{36} + \cdots + 4.30962u - 1.45314\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 111.194u^{37} + 332.362u^{36} + \cdots + 1066.10u - 3234.87$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{38} - 23u^{37} + \cdots - 7u + 1$
c_2	$u^{38} - u^{37} + \cdots + 3u - 1$
c_3	$u^{38} - u^{37} + \cdots - 23u - 1$
c_4	$u^{38} - u^{37} + \cdots + 3u - 7$
c_5	$u^{38} - 13u^{37} + \cdots + 23u - 1$
c_6	$u^{38} + u^{37} + \cdots - 3u - 1$
c_7	$u^{38} + 3u^{37} + \cdots - 23u - 1$
c_8	$u^{38} - 8u^{36} + \cdots - 26u - 1$
c_9	$u^{38} + 13u^{37} + \cdots - 23u - 1$
c_{10}	$u^{38} - 3u^{37} + \cdots - 4u + 1$
c_{11}	$u^{38} + u^{37} + \cdots - 3u - 7$
c_{12}	$u^{38} + 51u^{36} + \cdots - u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{38} - 7y^{37} + \cdots - 15y + 1$
c_2, c_6	$y^{38} - 23y^{37} + \cdots - 7y + 1$
c_3	$y^{38} - 25y^{37} + \cdots - 139y + 1$
c_4, c_{11}	$y^{38} + 15y^{37} + \cdots + 579y + 49$
c_5, c_9	$y^{38} - 131y^{37} + \cdots - 129y + 1$
c_7	$y^{38} + 15y^{37} + \cdots - 245y + 1$
c_8	$y^{38} - 16y^{37} + \cdots - 214y + 1$
c_{10}	$y^{38} + 91y^{37} + \cdots + 18y + 1$
c_{12}	$y^{38} + 102y^{37} + \cdots + 25y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.068785+0.993757I$ $a=\ 7.07867-0.37129I$ $b=\ 0.146536+0.007922I$	$0.07285+2.04381I$	$-2468.30+564.31I$
$u=-0.068785-0.993757I$ $a=\ 7.07867+0.37129I$ $b=\ 0.146536-0.007922I$	$0.07285-2.04381I$	$-2468.30-564.31I$
$u=\ 0.379396+0.958969I$ $a=\ 0.44378-1.56719I$ $b=\ 1.52903+0.70091I$	$-5.80841-2.52072I$	$-2.76515+10.18901I$
$u=\ 0.379396-0.958969I$ $a=\ 0.44378+1.56719I$ $b=\ 1.52903-0.70091I$	$-5.80841+2.52072I$	$-2.76515-10.18901I$
$u=-0.160849+0.919053I$ $a=\ 0.912315-0.656141I$ $b=\ 0.567111+1.178310I$	$-0.114988+0.771095I$	$-7.72641+0.95934I$
$u=-0.160849-0.919053I$ $a=\ 0.912315+0.656141I$ $b=\ 0.567111-1.178310I$	$-0.114988-0.771095I$	$-7.72641-0.95934I$
$u=-1.067580+0.069500I$ $a=-0.105560-0.276581I$ $b=\ 0.385980-0.195825I$	$-2.95888+0.24404I$	$-10.57984-0.79073I$
$u=-1.067580-0.069500I$ $a=-0.105560+0.276581I$ $b=\ 0.385980+0.195825I$	$-2.95888-0.24404I$	$-10.57984+0.79073I$
$u=\ 0.371270+1.011370I$ $a=-0.952047+0.218055I$ $b=-0.158359-1.262700I$	$4.72908-2.22947I$	$-4.76251+6.78709I$
$u=\ 0.371270-1.011370I$ $a=-0.952047-0.218055I$ $b=-0.158359+1.262700I$	$4.72908+2.22947I$	$-4.76251-6.78709I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.376578+1.009440I$ $a=\ \ 1.313460+0.235500I$ $b=\ \ 0.326565-1.049960I$	$3.09141-1.93771I$	$-8.58187+2.13613I$
$u=-0.376578-1.009440I$ $a=\ \ 1.313460-0.235500I$ $b=\ \ 0.326565+1.049960I$	$3.09141+1.93771I$	$-8.58187-2.13613I$
$u=\ \ 0.382917+1.095880I$ $a=-0.756944-0.132904I$ $b=-0.518391-1.273920I$	$5.09611-1.09151I$	$-6.59309+0.I$
$u=\ \ 0.382917-1.095880I$ $a=-0.756944+0.132904I$ $b=-0.518391+1.273920I$	$5.09611+1.09151I$	$-6.59309+0.I$
$u=-0.490221+1.064390I$ $a=\ \ 0.826867-0.449663I$ $b=\ \ 0.354296-1.063230I$	$3.23123+5.69135I$	$-8.12016-7.77869I$
$u=-0.490221-1.064390I$ $a=\ \ 0.826867+0.449663I$ $b=\ \ 0.354296+1.063230I$	$3.23123-5.69135I$	$-8.12016+7.77869I$
$u=-1.174720+0.404625I$ $a=-0.024841+0.588420I$ $b=\ \ 0.537932+0.627187I$	$-4.49252-1.42875I$	$-12.00000+5.81313I$
$u=-1.174720-0.404625I$ $a=-0.024841-0.588420I$ $b=\ \ 0.537932-0.627187I$	$-4.49252+1.42875I$	$-12.00000-5.81313I$
$u=\ \ 0.250495+0.693972I$ $a=-1.29832+1.32181I$ $b=-2.04339-0.17245I$	$-6.86514-0.47302I$	$-5.18177-7.37772I$
$u=\ \ 0.250495-0.693972I$ $a=-1.29832-1.32181I$ $b=-2.04339+0.17245I$	$-6.86514+0.47302I$	$-5.18177+7.37772I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.037736 + 0.700019I$ $a = 0.144597 + 1.035880I$ $b = 2.04926 - 0.70121I$	$-0.20117 - 3.23268I$	$-11.87116 + 1.40793I$
$u = 0.037736 - 0.700019I$ $a = 0.144597 - 1.035880I$ $b = 2.04926 + 0.70121I$	$-0.20117 + 3.23268I$	$-11.87116 - 1.40793I$
$u = -0.309769 + 1.263930I$ $a = -0.546290 - 0.408662I$ $b = -1.53756 + 0.95894I$	$2.71461 + 4.34687I$	$-12.00000 + 0.I$
$u = -0.309769 - 1.263930I$ $a = -0.546290 + 0.408662I$ $b = -1.53756 - 0.95894I$	$2.71461 - 4.34687I$	$-12.00000 + 0.I$
$u = 1.300020 + 0.086048I$ $a = 0.061768 - 0.396046I$ $b = -0.350842 - 0.340254I$	$-4.42186 - 4.29625I$	$-12.0000 + 7.9362I$
$u = 1.300020 - 0.086048I$ $a = 0.061768 + 0.396046I$ $b = -0.350842 + 0.340254I$	$-4.42186 + 4.29625I$	$-12.0000 - 7.9362I$
$u = 1.342560 + 0.225323I$ $a = 0.045226 + 0.455874I$ $b = -0.413455 + 0.482302I$	$-5.20028 - 1.53354I$	0
$u = 1.342560 - 0.225323I$ $a = 0.045226 - 0.455874I$ $b = -0.413455 - 0.482302I$	$-5.20028 + 1.53354I$	0
$u = -0.142519 + 0.615332I$ $a = 0.283657 + 1.263000I$ $b = -1.60004 - 0.71953I$	$-2.62440 + 9.28142I$	$-14.3549 - 6.0990I$
$u = -0.142519 - 0.615332I$ $a = 0.283657 - 1.263000I$ $b = -1.60004 + 0.71953I$	$-2.62440 - 9.28142I$	$-14.3549 + 6.0990I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.602124$ $a=-1.13727$ $b=\ \ 0.0915077$	-2.74115	-13.6670
$u=\ \ 0.37133+1.40651I$ $a=\ \ 0.581579-0.249094I$ $b=\ \ 1.26441+0.76896I$	$1.68475-10.02920I$	0
$u=\ \ 0.37133-1.40651I$ $a=\ \ 0.581579+0.249094I$ $b=\ \ 1.26441-0.76896I$	$1.68475+10.02920I$	0
$u=-0.73117+1.28190I$ $a=-0.832593+0.075547I$ $b=-0.708190+1.183670I$	$-1.54865+8.27468I$	0
$u=-0.73117-1.28190I$ $a=-0.832593-0.075547I$ $b=-0.708190-1.183670I$	$-1.54865-8.27468I$	0
$u=\ \ 0.448452$ $a=-2.04065$ $b=-1.38914$	-7.49490	-22.5450
$u=\ \ 0.66330+1.41579I$ $a=\ \ 0.699351-0.027828I$ $b=\ \ 0.817924+0.956923I$	$-1.00493-5.58039I$	0
$u=\ \ 0.66330-1.41579I$ $a=\ \ 0.699351+0.027828I$ $b=\ \ 0.817924-0.956923I$	$-1.00493+5.58039I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{38}-23u^{37}+\cdots-7u+1)(u^{169}+80u^{168}+\cdots+99813u+2401)$
c_2	$(u^{38}-u^{37}+\cdots+3u-1)(u^{169}-2u^{168}+\cdots-49u+49)$
c_3	$(u^{38}-u^{37}+\cdots-23u-1)(u^{169}+2u^{168}+\cdots+11167u+523)$
c_4	$(u^{38}-u^{37}+\cdots+3u-7)(u^{169}+2u^{168}+\cdots+65269u+13051)$
c_5	$(u^{38}-13u^{37}+\cdots+23u-1)$ $\cdot(u^{169}+16u^{168}+\cdots+3871835u+205027)$
c_6	$(u^{38}+u^{37}+\cdots-3u-1)(u^{169}-2u^{168}+\cdots-49u+49)$
c_7	$(u^{38}+3u^{37}+\cdots-23u-1)(u^{169}+4u^{168}+\cdots-7867u+18377)$
c_8	$(u^{38}-8u^{36}+\cdots-26u-1)(u^{169}-u^{168}+\cdots+2292504u+164545)$
c_9	$(u^{38}+13u^{37}+\cdots-23u-1)$ $\cdot(u^{169}+16u^{168}+\cdots+3871835u+205027)$
c_{10}	$(u^{38}-3u^{37}+\cdots-4u+1)(u^{169}-14u^{168}+\cdots-13650u+6089)$
c_{11}	$(u^{38}+u^{37}+\cdots-3u-7)(u^{169}+2u^{168}+\cdots+65269u+13051)$
c_{12}	$(u^{38}+51u^{36}+\cdots-u-1)(u^{169}-3u^{168}+\cdots+496671u+144999)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{38} - 7y^{37} + \cdots - 15y + 1)$ $\cdot (y^{169} + 28y^{168} + \cdots - 55412679y - 5764801)$
c_2, c_6	$(y^{38} - 23y^{37} + \cdots - 7y + 1)(y^{169} - 80y^{168} + \cdots + 99813y - 2401)$
c_3	$(y^{38} - 25y^{37} + \cdots - 139y + 1)$ $\cdot (y^{169} - 14y^{168} + \cdots - 3774107y - 273529)$
c_4, c_{11}	$(y^{38} + 15y^{37} + \cdots + 579y + 49)$ $\cdot (y^{169} + 90y^{168} + \cdots + 67826243y - 170328601)$
c_5, c_9	$(y^{38} - 131y^{37} + \cdots - 129y + 1)$ $\cdot (y^{169} - 216y^{168} + \cdots + 4325021500815y - 42036070729)$
c_7	$(y^{38} + 15y^{37} + \cdots - 245y + 1)$ $\cdot (y^{169} + 10y^{168} + \cdots + 44572417095y - 337714129)$
c_8	$(y^{38} - 16y^{37} + \cdots - 214y + 1)$ $\cdot (y^{169} + 7y^{168} + \cdots + 2188189227116y - 27075057025)$
c_{10}	$(y^{38} + 91y^{37} + \cdots + 18y + 1)$ $\cdot (y^{169} + 122y^{168} + \cdots + 1911336200y - 37075921)$
c_{12}	$(y^{38} + 102y^{37} + \cdots + 25y + 1)$ $\cdot (y^{169} + 141y^{168} + \cdots - 1184216769423y - 21024710001)$