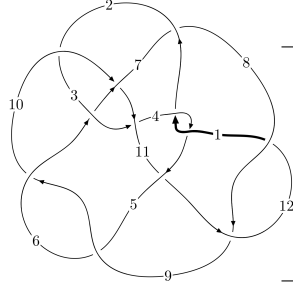
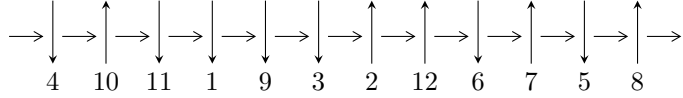


12a₁₁₉₅ (K12a₁₁₉₅)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 2.03927 \times 10^{912} u^{159} + 1.35894 \times 10^{912} u^{158} + \dots + 9.34788 \times 10^{913} b + 5.58125 \times 10^{916}, \\ - 9.45580 \times 10^{916} u^{159} + 1.94852 \times 10^{917} u^{158} + \dots + 4.24557 \times 10^{917} a + 1.74254 \times 10^{921}, \\ u^{160} - u^{159} + \dots - 330465u + 18167 \rangle$$

$$I_2^u = \langle -1.90847 \times 10^{34} u^{40} + 4.31793 \times 10^{34} u^{39} + \dots + 1.72831 \times 10^{34} b + 6.15425 \times 10^{34}, \\ - 4.98341 \times 10^{33} u^{40} - 1.50943 \times 10^{33} u^{39} + \dots + 8.64157 \times 10^{33} a + 4.31559 \times 10^{34}, u^{41} - 2u^{40} + \dots - 7u \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 201 representations.

¹The 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>).

²All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\mathbf{I. } J_1^u = \langle 2.04 \times 10^{912} u^{159} + 1.36 \times 10^{912} u^{158} + \dots + 9.35 \times 10^{913} b + 5.58 \times 10^{916}, -9.46 \times 10^{916} u^{159} + 1.95 \times 10^{917} u^{158} + \dots + 4.25 \times 10^{917} a + 1.74 \times 10^{921}, u^{160} - u^{159} + \dots - 330465u + 18167 \rangle$$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 0.222721u^{159} - 0.458952u^{158} + \dots + 78471.9u - 4104.37 \\ -0.0218153u^{159} - 0.0145375u^{158} + \dots + 9981.29u - 597.061 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.494545u^{159} - 0.943878u^{158} + \dots + 150603.u - 7798.92 \\ 0.267103u^{159} - 0.522995u^{158} + \dots + 85342.5u - 4468.50 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.476376u^{159} - 0.920698u^{158} + \dots + 148967.u - 7735.56 \\ 0.231839u^{159} - 0.476284u^{158} + \dots + 80476.5u - 4228.25 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.352143u^{159} + 0.116477u^{158} + \dots + 69816.5u - 4236.41 \\ -0.0688601u^{159} - 0.119045u^{158} + \dots + 61725.5u - 3476.43 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.0428579u^{159} - 0.445545u^{158} + \dots + 137371.u - 7495.66 \\ -0.231905u^{159} - 0.0320693u^{158} + \dots + 82452.8u - 4739.47 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.227637u^{159} - 0.353886u^{158} + \dots + 29899.4u - 1386.42 \\ 0.162107u^{159} - 0.459622u^{158} + \dots + 89079.0u - 4755.16 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.219745u^{159} + 0.241693u^{158} + \dots - 120809.u + 6892.80 \\ -0.0572576u^{159} + 0.476848u^{158} + \dots - 123113.u + 6728.65 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.139410u^{159} - 0.461545u^{158} + \dots + 112422.u - 6012.46 \\ 0.119660u^{159} - 0.178609u^{158} + \dots + 27642.6u - 1394.50 \end{pmatrix}$$

(ii) Obstruction class = -1

$$\mathbf{(iii) Cusp Shapes} = -0.237922u^{159} - 0.155452u^{158} + \dots + 121749.u - 6907.25$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{160} + 4u^{159} + \dots - 7828u + 1444$
c_2	$u^{160} + 3u^{159} + \dots + 341146u + 46381$
c_3	$u^{160} - 18u^{158} + \dots + 706845372u + 100225917$
c_5, c_9	$u^{160} + 2u^{159} + \dots + 6873u + 279$
c_6	$u^{160} + 8u^{159} + \dots + 40554u + 6463$
c_7	$u^{160} + 2u^{159} + \dots + 528175038798u + 68942737333$
c_8, c_{12}	$u^{160} + u^{159} + \dots + 330465u + 18167$
c_{10}	$u^{160} - 3u^{159} + \dots + 23u + 19$
c_{11}	$u^{160} - 28u^{158} + \dots - 135828304u + 2699248$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{160} + 94y^{159} + \dots + 135556944y + 2085136$
c_2	$y^{160} + 55y^{159} + \dots + 289002611650y + 2151197161$
c_3	$y^{160} - 36y^{159} + \dots + 235215438020548344y + 10045234438490889$
c_5, c_9	$y^{160} - 148y^{159} + \dots - 15857325y + 77841$
c_6	$y^{160} - 38y^{159} + \dots + 4276709054y + 41770369$
c_7	$y^{160} + 80y^{159} + \dots + 2.79 \times 10^{23}y + 4.75 \times 10^{21}$
c_8, c_{12}	$y^{160} + 105y^{159} + \dots + 15360514711y + 330039889$
c_{10}	$y^{160} + 13y^{159} + \dots + 34469y + 361$
c_{11}	$y^{160} - 56y^{159} + \dots - 10507054762812928y + 7285939765504$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.771319 + 0.637206I$ $a = -0.878331 + 0.862171I$ $b = -0.484648 + 1.116990I$	$-5.69397 + 1.50187I$	0
$u = 0.771319 - 0.637206I$ $a = -0.878331 - 0.862171I$ $b = -0.484648 - 1.116990I$	$-5.69397 - 1.50187I$	0
$u = 0.022733 + 1.003480I$ $a = -0.261812 + 0.374866I$ $b = -1.33271 + 0.93030I$	$-1.67760 - 2.03203I$	0
$u = 0.022733 - 1.003480I$ $a = -0.261812 - 0.374866I$ $b = -1.33271 - 0.93030I$	$-1.67760 + 2.03203I$	0
$u = 0.929840 + 0.382995I$ $a = 0.280467 - 0.907021I$ $b = 0.386885 + 0.388981I$	$-0.85757 + 4.99990I$	0
$u = 0.929840 - 0.382995I$ $a = 0.280467 + 0.907021I$ $b = 0.386885 - 0.388981I$	$-0.85757 - 4.99990I$	0
$u = -0.212329 + 0.970022I$ $a = 0.323258 - 0.821506I$ $b = -0.021983 - 1.119710I$	$-0.84365 - 1.77714I$	0
$u = -0.212329 - 0.970022I$ $a = 0.323258 + 0.821506I$ $b = -0.021983 + 1.119710I$	$-0.84365 + 1.77714I$	0
$u = 0.986506 + 0.228196I$ $a = -0.749902 - 0.866777I$ $b = -0.008395 + 0.163431I$	$1.91050 - 8.98963I$	0
$u = 0.986506 - 0.228196I$ $a = -0.749902 + 0.866777I$ $b = -0.008395 - 0.163431I$	$1.91050 + 8.98963I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.193102 + 1.000310I$ $a = -0.812533 - 0.993476I$ $b = 0.280883 - 0.869016I$	$-3.66078 + 3.86809I$	0
$u = 0.193102 - 1.000310I$ $a = -0.812533 + 0.993476I$ $b = 0.280883 + 0.869016I$	$-3.66078 - 3.86809I$	0
$u = 0.019225 + 1.021360I$ $a = -1.65040 + 0.08303I$ $b = -0.178571 + 0.321455I$	$-1.76945 + 2.27520I$	0
$u = 0.019225 - 1.021360I$ $a = -1.65040 - 0.08303I$ $b = -0.178571 - 0.321455I$	$-1.76945 - 2.27520I$	0
$u = 0.352108 + 0.968435I$ $a = -0.270184 + 0.930458I$ $b = 0.10069 + 1.81270I$	$-2.83007 + 3.63849I$	0
$u = 0.352108 - 0.968435I$ $a = -0.270184 - 0.930458I$ $b = 0.10069 - 1.81270I$	$-2.83007 - 3.63849I$	0
$u = -0.890024 + 0.380460I$ $a = 1.018230 + 0.695440I$ $b = 0.294141 + 0.585359I$	$-6.58434 - 9.09290I$	0
$u = -0.890024 - 0.380460I$ $a = 1.018230 - 0.695440I$ $b = 0.294141 - 0.585359I$	$-6.58434 + 9.09290I$	0
$u = -0.311265 + 0.893265I$ $a = 0.303539 - 0.351570I$ $b = 0.91590 - 1.89089I$	$-0.99674 - 5.73801I$	0
$u = -0.311265 - 0.893265I$ $a = 0.303539 + 0.351570I$ $b = 0.91590 + 1.89089I$	$-0.99674 + 5.73801I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.191161 + 0.919191I$ $a = -0.857281 + 0.461508I$ $b = 0.34084 + 1.42315I$	$-1.25091 + 3.41761I$	0
$u = 0.191161 - 0.919191I$ $a = -0.857281 - 0.461508I$ $b = 0.34084 - 1.42315I$	$-1.25091 - 3.41761I$	0
$u = 0.718248 + 0.601639I$ $a = 0.038366 + 0.773545I$ $b = -0.840793 - 0.160007I$	$-1.40727 + 0.32935I$	0
$u = 0.718248 - 0.601639I$ $a = 0.038366 - 0.773545I$ $b = -0.840793 + 0.160007I$	$-1.40727 - 0.32935I$	0
$u = 0.928288 + 0.112945I$ $a = -0.664201 - 0.576783I$ $b = -0.777879 + 0.522774I$	$-0.911285 + 0.961081I$	0
$u = 0.928288 - 0.112945I$ $a = -0.664201 + 0.576783I$ $b = -0.777879 - 0.522774I$	$-0.911285 - 0.961081I$	0
$u = 0.183121 + 1.063230I$ $a = -0.349821 - 0.590510I$ $b = 0.48392 - 2.02054I$	$-3.96270 + 6.64572I$	0
$u = 0.183121 - 1.063230I$ $a = -0.349821 + 0.590510I$ $b = 0.48392 + 2.02054I$	$-3.96270 - 6.64572I$	0
$u = 0.015967 + 1.079850I$ $a = 2.28551 - 2.06721I$ $b = 1.26758 - 2.36916I$	$-6.54296 + 8.08154I$	0
$u = 0.015967 - 1.079850I$ $a = 2.28551 + 2.06721I$ $b = 1.26758 + 2.36916I$	$-6.54296 - 8.08154I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.113157 + 1.079860I$ $a = 0.65497 + 1.87674I$ $b = -0.17413 + 2.30420I$	$-7.21594 + 1.18947I$	0
$u = 0.113157 - 1.079860I$ $a = 0.65497 - 1.87674I$ $b = -0.17413 - 2.30420I$	$-7.21594 - 1.18947I$	0
$u = 0.388061 + 1.028440I$ $a = -0.161710 - 0.637116I$ $b = -1.06523 - 1.31134I$	$2.86422 - 0.13213I$	0
$u = 0.388061 - 1.028440I$ $a = -0.161710 + 0.637116I$ $b = -1.06523 + 1.31134I$	$2.86422 + 0.13213I$	0
$u = -1.082460 + 0.228095I$ $a = -0.956574 - 0.173480I$ $b = -0.150511 - 0.256263I$	$-5.18712 + 1.04076I$	0
$u = -1.082460 - 0.228095I$ $a = -0.956574 + 0.173480I$ $b = -0.150511 + 0.256263I$	$-5.18712 - 1.04076I$	0
$u = -0.048192 + 1.112590I$ $a = 0.446482 - 0.450424I$ $b = -1.45862 - 1.10483I$	$-5.73005 - 5.75625I$	0
$u = -0.048192 - 1.112590I$ $a = 0.446482 + 0.450424I$ $b = -1.45862 + 1.10483I$	$-5.73005 + 5.75625I$	0
$u = -0.339140 + 1.062200I$ $a = -1.24875 - 1.35121I$ $b = -0.42773 - 1.95657I$	$-2.54983 - 6.54010I$	0
$u = -0.339140 - 1.062200I$ $a = -1.24875 + 1.35121I$ $b = -0.42773 + 1.95657I$	$-2.54983 + 6.54010I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.093970 + 0.225847I$		
$a = 0.535300 - 0.544148I$	$4.83225 - 0.41382I$	0
$b = 0.263158 + 0.404730I$		
$u = -1.093970 - 0.225847I$		
$a = 0.535300 + 0.544148I$	$4.83225 + 0.41382I$	0
$b = 0.263158 - 0.404730I$		
$u = -0.079655 + 0.878752I$		
$a = 0.79266 + 2.49745I$	$-5.66263 - 8.18748I$	0
$b = 1.58996 + 2.35499I$		
$u = -0.079655 - 0.878752I$		
$a = 0.79266 - 2.49745I$	$-5.66263 + 8.18748I$	0
$b = 1.58996 - 2.35499I$		
$u = 0.051947 + 1.116560I$		
$a = -1.13100 - 1.98926I$	$-7.68881 + 0.18170I$	0
$b = -0.34451 - 2.25191I$		
$u = 0.051947 - 1.116560I$		
$a = -1.13100 + 1.98926I$	$-7.68881 - 0.18170I$	0
$b = -0.34451 + 2.25191I$		
$u = -0.036738 + 1.119980I$		
$a = 0.420703 + 0.920641I$	$-5.15528 - 3.20035I$	0
$b = -0.93864 + 1.60800I$		
$u = -0.036738 - 1.119980I$		
$a = 0.420703 - 0.920641I$	$-5.15528 + 3.20035I$	0
$b = -0.93864 - 1.60800I$		
$u = -0.471836 + 1.034540I$		
$a = 0.223447 - 0.891094I$	$0.37134 - 1.55621I$	0
$b = 0.82444 - 1.16768I$		
$u = -0.471836 - 1.034540I$		
$a = 0.223447 + 0.891094I$	$0.37134 + 1.55621I$	0
$b = 0.82444 + 1.16768I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.793344 + 0.332222I$ $a = -1.57013 + 0.37692I$ $b = -0.687251 - 0.912052I$	$-0.10292 + 4.82677I$	0
$u = -0.793344 - 0.332222I$ $a = -1.57013 - 0.37692I$ $b = -0.687251 + 0.912052I$	$-0.10292 - 4.82677I$	0
$u = -0.788394 + 0.301425I$ $a = 0.866249 - 0.959882I$ $b = -0.0250898 - 0.0834574I$	$0.756316 - 0.261149I$	0
$u = -0.788394 - 0.301425I$ $a = 0.866249 + 0.959882I$ $b = -0.0250898 + 0.0834574I$	$0.756316 + 0.261149I$	0
$u = 0.312537 + 1.119230I$ $a = 0.440519 + 1.271460I$ $b = 1.32997 + 1.85254I$	$1.65273 + 6.18718I$	0
$u = 0.312537 - 1.119230I$ $a = 0.440519 - 1.271460I$ $b = 1.32997 - 1.85254I$	$1.65273 - 6.18718I$	0
$u = -0.485941 + 0.677045I$ $a = 1.129400 - 0.792715I$ $b = -0.548995 - 0.549939I$	$-0.47469 + 2.27310I$	0
$u = -0.485941 - 0.677045I$ $a = 1.129400 + 0.792715I$ $b = -0.548995 + 0.549939I$	$-0.47469 - 2.27310I$	0
$u = -0.789850 + 0.225465I$ $a = 0.284065 - 1.160750I$ $b = 0.252789 + 0.295295I$	$2.68987 - 3.10360I$	0
$u = -0.789850 - 0.225465I$ $a = 0.284065 + 1.160750I$ $b = 0.252789 - 0.295295I$	$2.68987 + 3.10360I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.146895 + 1.195160I$		
$a = -0.435482 + 0.462232I$	$-3.64158 - 2.72765I$	0
$b = -0.636280 + 1.194530I$		
$u = -0.146895 - 1.195160I$		
$a = -0.435482 - 0.462232I$	$-3.64158 + 2.72765I$	0
$b = -0.636280 - 1.194530I$		
$u = 0.038248 + 1.203750I$		
$a = -0.127547 + 0.769202I$	$-5.58598 + 0.17460I$	0
$b = -0.13411 + 1.96529I$		
$u = 0.038248 - 1.203750I$		
$a = -0.127547 - 0.769202I$	$-5.58598 - 0.17460I$	0
$b = -0.13411 - 1.96529I$		
$u = -0.507786 + 1.096330I$		
$a = 0.431517 - 0.787097I$	$-1.63186 - 4.52471I$	0
$b = 0.87693 - 1.77504I$		
$u = -0.507786 - 1.096330I$		
$a = 0.431517 + 0.787097I$	$-1.63186 + 4.52471I$	0
$b = 0.87693 + 1.77504I$		
$u = 0.385112 + 1.145430I$		
$a = 0.736869 - 0.874360I$	$-3.82526 - 1.22877I$	0
$b = 0.18404 - 1.45269I$		
$u = 0.385112 - 1.145430I$		
$a = 0.736869 + 0.874360I$	$-3.82526 + 1.22877I$	0
$b = 0.18404 + 1.45269I$		
$u = 0.003758 + 1.224780I$		
$a = -0.325431 + 0.476596I$	$-5.74021 + 3.13154I$	0
$b = 0.96253 + 1.13630I$		
$u = 0.003758 - 1.224780I$		
$a = -0.325431 - 0.476596I$	$-5.74021 - 3.13154I$	0
$b = 0.96253 - 1.13630I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.170381 + 0.737075I$ $a = 0.45292 + 1.81818I$ $b = -0.29703 + 1.94984I$	$-1.22555 + 3.89889I$	0
$u = -0.170381 - 0.737075I$ $a = 0.45292 - 1.81818I$ $b = -0.29703 - 1.94984I$	$-1.22555 - 3.89889I$	0
$u = 0.248270 + 0.714425I$ $a = -0.015415 - 0.474095I$ $b = -1.050810 - 0.319934I$	$-1.44296 - 1.53470I$	0
$u = 0.248270 - 0.714425I$ $a = -0.015415 + 0.474095I$ $b = -1.050810 + 0.319934I$	$-1.44296 + 1.53470I$	0
$u = 0.701027 + 0.271853I$ $a = 0.938700 + 0.760765I$ $b = -0.158470 - 0.480526I$	$1.33311 - 3.17107I$	0
$u = 0.701027 - 0.271853I$ $a = 0.938700 - 0.760765I$ $b = -0.158470 + 0.480526I$	$1.33311 + 3.17107I$	0
$u = 0.424720 + 1.183200I$ $a = 0.016532 + 0.971665I$ $b = 0.84910 + 1.86937I$	$-1.53801 + 7.47985I$	0
$u = 0.424720 - 1.183200I$ $a = 0.016532 - 0.971665I$ $b = 0.84910 - 1.86937I$	$-1.53801 - 7.47985I$	0
$u = 1.260680 + 0.052977I$ $a = -0.733708 - 0.431970I$ $b = -0.338946 + 0.350189I$	$-3.93925 - 5.16916I$	0
$u = 1.260680 - 0.052977I$ $a = -0.733708 + 0.431970I$ $b = -0.338946 - 0.350189I$	$-3.93925 + 5.16916I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.624978 + 0.381968I$ $a = -1.30233 + 0.86319I$ $b = -0.763440 + 0.814076I$	$-5.71505 + 1.46266I$	0
$u = 0.624978 - 0.381968I$ $a = -1.30233 - 0.86319I$ $b = -0.763440 - 0.814076I$	$-5.71505 - 1.46266I$	0
$u = -0.448956 + 1.187160I$ $a = -0.09626 + 2.00763I$ $b = -0.91109 + 2.56937I$	$-2.83904 - 9.49173I$	0
$u = -0.448956 - 1.187160I$ $a = -0.09626 - 2.00763I$ $b = -0.91109 - 2.56937I$	$-2.83904 + 9.49173I$	0
$u = -1.266150 + 0.203428I$ $a = -0.770800 + 0.179739I$ $b = -0.199623 - 0.622947I$	$-2.65691 + 4.12603I$	0
$u = -1.266150 - 0.203428I$ $a = -0.770800 - 0.179739I$ $b = -0.199623 + 0.622947I$	$-2.65691 - 4.12603I$	0
$u = 0.572284 + 0.429818I$ $a = -1.05476 - 1.25532I$ $b = 0.137410 + 0.259897I$	$4.77299 + 4.00153I$	0
$u = 0.572284 - 0.429818I$ $a = -1.05476 + 1.25532I$ $b = 0.137410 - 0.259897I$	$4.77299 - 4.00153I$	0
$u = -1.312040 + 0.004704I$ $a = 0.676803 - 0.455758I$ $b = 0.290545 + 0.435528I$	$-3.6980 + 13.6691I$	0
$u = -1.312040 - 0.004704I$ $a = 0.676803 + 0.455758I$ $b = 0.290545 - 0.435528I$	$-3.6980 - 13.6691I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.533669 + 1.221510I$ $a = -0.357373 - 0.938096I$ $b = -1.02542 - 1.85578I$	$-1.2187 + 14.4133I$	0
$u = 0.533669 - 1.221510I$ $a = -0.357373 + 0.938096I$ $b = -1.02542 + 1.85578I$	$-1.2187 - 14.4133I$	0
$u = -0.367274 + 1.293060I$ $a = -0.276160 + 0.782809I$ $b = -1.07384 + 1.57529I$	$-1.89105 - 7.16268I$	0
$u = -0.367274 - 1.293060I$ $a = -0.276160 - 0.782809I$ $b = -1.07384 - 1.57529I$	$-1.89105 + 7.16268I$	0
$u = -0.206745 + 1.329860I$ $a = -0.691173 - 0.328586I$ $b = -1.068150 - 0.488779I$	$-4.49979 - 3.43539I$	0
$u = -0.206745 - 1.329860I$ $a = -0.691173 + 0.328586I$ $b = -1.068150 + 0.488779I$	$-4.49979 + 3.43539I$	0
$u = -0.523543 + 1.252300I$ $a = 0.319372 - 1.085070I$ $b = 0.95238 - 1.66839I$	$1.48788 - 5.16257I$	0
$u = -0.523543 - 1.252300I$ $a = 0.319372 + 1.085070I$ $b = 0.95238 + 1.66839I$	$1.48788 + 5.16257I$	0
$u = 0.366217 + 1.326070I$ $a = -0.429611 - 1.018580I$ $b = 0.09687 - 1.67663I$	$-10.62430 + 5.37850I$	0
$u = 0.366217 - 1.326070I$ $a = -0.429611 + 1.018580I$ $b = 0.09687 + 1.67663I$	$-10.62430 - 5.37850I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.241300 + 1.357060I$		
$a = 0.480348 + 1.161640I$	$-10.27410 + 3.62043I$	0
$b = 0.23429 + 2.02195I$		
$u = 0.241300 - 1.357060I$		
$a = 0.480348 - 1.161640I$	$-10.27410 - 3.62043I$	0
$b = 0.23429 - 2.02195I$		
$u = -0.596376 + 1.255710I$		
$a = -0.002940 + 0.597827I$	$0.87079 - 7.02461I$	0
$b = -0.68621 + 1.27720I$		
$u = -0.596376 - 1.255710I$		
$a = -0.002940 - 0.597827I$	$0.87079 + 7.02461I$	0
$b = -0.68621 - 1.27720I$		
$u = 0.070293 + 1.402540I$		
$a = 1.73238 + 0.14815I$	$-8.75345 + 5.70112I$	0
$b = 2.08880 + 0.12438I$		
$u = 0.070293 - 1.402540I$		
$a = 1.73238 - 0.14815I$	$-8.75345 - 5.70112I$	0
$b = 2.08880 - 0.12438I$		
$u = 0.15398 + 1.40780I$		
$a = -1.44312 - 1.07283I$	$-7.92244 + 2.88032I$	0
$b = -2.01266 - 1.31893I$		
$u = 0.15398 - 1.40780I$		
$a = -1.44312 + 1.07283I$	$-7.92244 - 2.88032I$	0
$b = -2.01266 + 1.31893I$		
$u = -0.36539 + 1.37089I$		
$a = 0.368191 - 1.029030I$	$-11.9011 - 13.4082I$	0
$b = 0.01615 - 1.88284I$		
$u = -0.36539 - 1.37089I$		
$a = 0.368191 + 1.029030I$	$-11.9011 + 13.4082I$	0
$b = 0.01615 + 1.88284I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.55963 + 1.32820I$ $a = -0.330042 - 1.188310I$ $b = -0.85538 - 1.46121I$	$-4.79671 + 4.65674I$	0
$u = 0.55963 - 1.32820I$ $a = -0.330042 + 1.188310I$ $b = -0.85538 + 1.46121I$	$-4.79671 - 4.65674I$	0
$u = -1.41738 + 0.26867I$ $a = -0.066927 + 0.261952I$ $b = 0.157318 - 0.402861I$	$4.32946 + 0.49134I$	0
$u = -1.41738 - 0.26867I$ $a = -0.066927 - 0.261952I$ $b = 0.157318 + 0.402861I$	$4.32946 - 0.49134I$	0
$u = 0.21953 + 1.43065I$ $a = 0.972718 + 0.841552I$ $b = 1.09866 + 1.28048I$	$-8.47419 + 5.75201I$	0
$u = 0.21953 - 1.43065I$ $a = 0.972718 - 0.841552I$ $b = 1.09866 - 1.28048I$	$-8.47419 - 5.75201I$	0
$u = -0.461117 + 0.297405I$ $a = 0.673049 - 0.745905I$ $b = 0.189026 - 0.287413I$	$0.877529 - 1.031680I$	0
$u = -0.461117 - 0.297405I$ $a = 0.673049 + 0.745905I$ $b = 0.189026 + 0.287413I$	$0.877529 + 1.031680I$	0
$u = 0.476211 + 0.261545I$ $a = 1.73825 - 1.23491I$ $b = 0.677847 - 0.231017I$	$-5.14917 + 0.94616I$	0
$u = 0.476211 - 0.261545I$ $a = 1.73825 + 1.23491I$ $b = 0.677847 + 0.231017I$	$-5.14917 - 0.94616I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.37846 + 1.41696I$ $a = -0.203143 + 0.912738I$ $b = 0.05857 + 1.74835I$	$-10.61080 - 4.04474I$	0
$u = -0.37846 - 1.41696I$ $a = -0.203143 - 0.912738I$ $b = 0.05857 - 1.74835I$	$-10.61080 + 4.04474I$	0
$u = -0.30689 + 1.45855I$ $a = -0.374028 + 0.577175I$ $b = 0.170856 + 1.068930I$	$-8.82195 - 1.43934I$	0
$u = -0.30689 - 1.45855I$ $a = -0.374028 - 0.577175I$ $b = 0.170856 - 1.068930I$	$-8.82195 + 1.43934I$	0
$u = 0.380278 + 0.330357I$ $a = -0.0621875 + 0.0343678I$ $b = -1.010000 - 0.196503I$	$-1.85407 - 1.13333I$	0
$u = 0.380278 - 0.330357I$ $a = -0.0621875 - 0.0343678I$ $b = -1.010000 + 0.196503I$	$-1.85407 + 1.13333I$	0
$u = -0.67450 + 1.33711I$ $a = 0.065441 + 0.933565I$ $b = -0.16160 + 1.62092I$	$-8.46875 - 7.38395I$	0
$u = -0.67450 - 1.33711I$ $a = 0.065441 - 0.933565I$ $b = -0.16160 - 1.62092I$	$-8.46875 + 7.38395I$	0
$u = 0.251192 + 0.432476I$ $a = 3.02441 + 0.67825I$ $b = 0.460875 - 0.371861I$	$4.05011 - 3.41466I$	$11.3240 - 10.5501I$
$u = 0.251192 - 0.432476I$ $a = 3.02441 - 0.67825I$ $b = 0.460875 + 0.371861I$	$4.05011 + 3.41466I$	$11.3240 + 10.5501I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.72800 + 1.31378I$		
$a = 0.255955 - 1.010980I$	$-7.94125 + 4.99424I$	0
$b = -0.20136 - 1.59818I$		
$u = 0.72800 - 1.31378I$		
$a = 0.255955 + 1.010980I$	$-7.94125 - 4.99424I$	0
$b = -0.20136 + 1.59818I$		
$u = 0.09550 + 1.50794I$		
$a = 0.363142 - 0.345910I$	$-4.32371 - 4.70566I$	0
$b = 0.865257 - 0.533965I$		
$u = 0.09550 - 1.50794I$		
$a = 0.363142 + 0.345910I$	$-4.32371 + 4.70566I$	0
$b = 0.865257 + 0.533965I$		
$u = 0.58023 + 1.39854I$		
$a = -0.333307 - 1.219160I$	$-8.2640 + 11.5613I$	0
$b = -0.88707 - 1.92612I$		
$u = 0.58023 - 1.39854I$		
$a = -0.333307 + 1.219160I$	$-8.2640 - 11.5613I$	0
$b = -0.88707 + 1.92612I$		
$u = -0.63153 + 1.38691I$		
$a = -0.043485 + 1.149410I$	$-6.51467 - 10.82670I$	0
$b = -0.68966 + 1.92416I$		
$u = -0.63153 - 1.38691I$		
$a = -0.043485 - 1.149410I$	$-6.51467 + 10.82670I$	0
$b = -0.68966 - 1.92416I$		
$u = -0.58847 + 1.41912I$		
$a = 0.299592 - 1.221220I$	$-8.2027 - 20.2163I$	0
$b = 0.94418 - 1.96269I$		
$u = -0.58847 - 1.41912I$		
$a = 0.299592 + 1.221220I$	$-8.2027 + 20.2163I$	0
$b = 0.94418 + 1.96269I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.45748 + 1.46989I$ $a = 0.502954 + 1.174800I$ $b = 1.19330 + 1.83621I$	$-6.61253 + 10.16070I$	0
$u = 0.45748 - 1.46989I$ $a = 0.502954 - 1.174800I$ $b = 1.19330 - 1.83621I$	$-6.61253 - 10.16070I$	0
$u = 0.310820 + 0.308657I$ $a = 0.03495 - 2.33270I$ $b = 0.780590 - 0.100267I$	$-3.00308 + 3.55964I$	$-9.14461 - 7.54866I$
$u = 0.310820 - 0.308657I$ $a = 0.03495 + 2.33270I$ $b = 0.780590 + 0.100267I$	$-3.00308 - 3.55964I$	$-9.14461 + 7.54866I$
$u = 0.40246 + 1.51659I$ $a = -0.239997 - 0.600596I$ $b = 0.165277 - 0.828672I$	$-9.47807 + 1.09420I$	0
$u = 0.40246 - 1.51659I$ $a = -0.239997 + 0.600596I$ $b = 0.165277 + 0.828672I$	$-9.47807 - 1.09420I$	0
$u = 0.323168 + 0.276129I$ $a = 1.28688 - 0.66363I$ $b = -0.231336 - 0.218065I$	$-1.35697 - 0.78698I$	$-4.61483 + 0.I$
$u = 0.323168 - 0.276129I$ $a = 1.28688 + 0.66363I$ $b = -0.231336 + 0.218065I$	$-1.35697 + 0.78698I$	$-4.61483 + 0.I$
$u = -0.83498 + 1.34845I$ $a = -0.258565 - 0.759130I$ $b = 0.030686 - 1.336400I$	$-8.79556 + 2.43577I$	0
$u = -0.83498 - 1.34845I$ $a = -0.258565 + 0.759130I$ $b = 0.030686 + 1.336400I$	$-8.79556 - 2.43577I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.342694 + 0.060758I$ $a = -1.91156 + 1.21730I$ $b = 0.043009 + 0.951918I$	$-1.28324 + 4.45890I$	$-2.67295 - 6.46132I$
$u = 0.342694 - 0.060758I$ $a = -1.91156 - 1.21730I$ $b = 0.043009 - 0.951918I$	$-1.28324 - 4.45890I$	$-2.67295 + 6.46132I$
$u = 0.66432 + 1.58517I$ $a = 0.258644 + 0.807061I$ $b = 0.82952 + 1.32959I$	$-4.38043 + 9.74516I$	0
$u = 0.66432 - 1.58517I$ $a = 0.258644 - 0.807061I$ $b = 0.82952 - 1.32959I$	$-4.38043 - 9.74516I$	0
$u = 0.001860 + 0.251704I$ $a = -3.06934 + 1.68254I$ $b = 1.181710 - 0.337517I$	$-3.45857 + 5.38370I$	$-2.31636 - 2.96404I$
$u = 0.001860 - 0.251704I$ $a = -3.06934 - 1.68254I$ $b = 1.181710 + 0.337517I$	$-3.45857 - 5.38370I$	$-2.31636 + 2.96404I$
$u = -0.37870 + 1.73609I$ $a = 0.274293 - 0.349257I$ $b = -0.149930 - 0.504723I$	$-9.42360 + 6.52384I$	0
$u = -0.37870 - 1.73609I$ $a = 0.274293 + 0.349257I$ $b = -0.149930 + 0.504723I$	$-9.42360 - 6.52384I$	0
$u = 1.91147 + 0.31167I$ $a = 0.337860 + 0.017754I$ $b = 0.141213 - 0.437150I$	$0.564712 - 0.995876I$	0
$u = 1.91147 - 0.31167I$ $a = 0.337860 - 0.017754I$ $b = 0.141213 + 0.437150I$	$0.564712 + 0.995876I$	0

II.

$$I_2^u = \langle -1.91 \times 10^{34} u^{40} + 4.32 \times 10^{34} u^{39} + \dots + 1.73 \times 10^{34} b + 6.15 \times 10^{34}, -4.98 \times 10^{33} u^{40} - 1.51 \times 10^{33} u^{39} + \dots + 8.64 \times 10^{33} a + 4.32 \times 10^{34}, u^{41} - 2u^{40} + \dots - 7u - 1 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_8 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_5 &= \begin{pmatrix} 0.576679u^{40} + 0.174671u^{39} + \dots - 41.7184u - 4.99399 \\ 1.10424u^{40} - 2.49835u^{39} + \dots - 19.7422u - 3.56084 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 1 \\ -u^2 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 0.0914809u^{40} + 1.58300u^{39} + \dots - 31.8491u - 2.76118 \\ 1.29274u^{40} - 2.19655u^{39} + \dots - 22.3226u - 3.99878 \end{pmatrix} \\ a_1 &= \begin{pmatrix} u \\ u \end{pmatrix} \\ a_4 &= \begin{pmatrix} 1.06614u^{40} - 0.0349515u^{39} + \dots - 52.5161u - 6.61189 \\ 1.59370u^{40} - 2.70797u^{39} + \dots - 30.5399u - 5.17874 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -5.39355u^{40} + 12.9450u^{39} + \dots + 3.59682u - 4.09460 \\ -1.60769u^{40} + 4.86865u^{39} + \dots - 18.2711u - 5.04514 \end{pmatrix} \\ a_7 &= \begin{pmatrix} -10.1372u^{40} + 21.5335u^{39} + \dots + 87.3627u + 8.87303 \\ 2.09659u^{40} - 4.20073u^{39} + \dots - 47.5987u - 8.66112 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} 4.62445u^{40} - 11.6106u^{39} + \dots + 16.3273u + 7.42658 \\ 0.0845920u^{40} - 0.849733u^{39} + \dots + 19.6707u + 3.83661 \end{pmatrix} \\ a_3 &= \begin{pmatrix} -5.72204u^{40} + 14.1222u^{39} + \dots + 16.6537u - 2.18064 \\ -0.174254u^{40} + 1.48731u^{39} + \dots - 26.4939u - 6.02517 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 2.72481u^{40} - 5.71934u^{39} + \dots - 36.8874u - 6.16863 \\ -0.897301u^{40} + 0.986169u^{39} + \dots + 19.9870u + 3.87721 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = $-14.4325u^{40} + 34.0396u^{39} + \dots + 18.3069u - 20.7789$

(iv) u -Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{41} - 9u^{40} + \dots + 104u - 16$
c_2	$u^{41} + 12u^{39} + \dots - 2u + 1$
c_3	$u^{41} + u^{40} + \dots - 28u + 19$
c_4	$u^{41} + 9u^{40} + \dots + 104u + 16$
c_5	$u^{41} - u^{40} + \dots + 43u - 7$
c_6	$u^{41} + u^{40} + \dots + 2u - 1$
c_7	$u^{41} + u^{40} + \dots - 64u - 13$
c_8	$u^{41} - 2u^{40} + \dots - 7u - 1$
c_9	$u^{41} + u^{40} + \dots + 43u + 7$
c_{10}	$u^{41} + 4u^{40} + \dots + u + 1$
c_{11}	$u^{41} + u^{40} + \dots + 72u - 16$
c_{12}	$u^{41} + 2u^{40} + \dots - 7u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{41} + 31y^{40} + \dots - 6336y - 256$
c_2	$y^{41} + 24y^{40} + \dots - 6y - 1$
c_3	$y^{41} + 13y^{40} + \dots + 2684y - 361$
c_5, c_9	$y^{41} - 39y^{40} + \dots + 1513y - 49$
c_6	$y^{41} - 9y^{40} + \dots - 18y - 1$
c_7	$y^{41} + 25y^{40} + \dots - 14026y - 169$
c_8, c_{12}	$y^{41} + 22y^{40} + \dots - 15y - 1$
c_{10}	$y^{41} + 2y^{40} + \dots - 9y - 1$
c_{11}	$y^{41} - 11y^{40} + \dots + 4928y - 256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.653673 + 0.770366I$ $a = -0.928968 + 1.004440I$ $b = -0.52315 + 1.53397I$	$-5.36063 + 1.82344I$	$-1.93006 - 8.65844I$
$u = 0.653673 - 0.770366I$ $a = -0.928968 - 1.004440I$ $b = -0.52315 - 1.53397I$	$-5.36063 - 1.82344I$	$-1.93006 + 8.65844I$
$u = -0.128068 + 0.981348I$ $a = 0.004238 + 0.701217I$ $b = 1.32562 + 1.38547I$	$-4.62644 - 5.92395I$	$-8.64477 + 6.04384I$
$u = -0.128068 - 0.981348I$ $a = 0.004238 - 0.701217I$ $b = 1.32562 - 1.38547I$	$-4.62644 + 5.92395I$	$-8.64477 - 6.04384I$
$u = -0.404106 + 0.865537I$ $a = 1.72376 + 1.97330I$ $b = 0.91738 + 2.63983I$	$-5.06376 - 9.09405I$	$-3.93908 + 10.44163I$
$u = -0.404106 - 0.865537I$ $a = 1.72376 - 1.97330I$ $b = 0.91738 - 2.63983I$	$-5.06376 + 9.09405I$	$-3.93908 - 10.44163I$
$u = 0.946334 + 0.012439I$ $a = -0.905222 - 0.692734I$ $b = -0.441836 + 0.545756I$	$-1.32955 - 4.11472I$	$-3.91875 + 3.97414I$
$u = 0.946334 - 0.012439I$ $a = -0.905222 + 0.692734I$ $b = -0.441836 - 0.545756I$	$-1.32955 + 4.11472I$	$-3.91875 - 3.97414I$
$u = -0.399603 + 1.035580I$ $a = 0.321001 - 0.617956I$ $b = 0.93000 - 1.79326I$	$-1.54349 - 5.19906I$	$-7.67105 + 8.93966I$
$u = -0.399603 - 1.035580I$ $a = 0.321001 + 0.617956I$ $b = 0.93000 + 1.79326I$	$-1.54349 + 5.19906I$	$-7.67105 - 8.93966I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.160940 + 0.836515I$ $a = -0.604184 + 1.174570I$ $b = 0.15630 + 2.15428I$	$-1.77117 + 4.89244I$	$-6.39905 - 8.05871I$
$u = 0.160940 - 0.836515I$ $a = -0.604184 - 1.174570I$ $b = 0.15630 - 2.15428I$	$-1.77117 - 4.89244I$	$-6.39905 + 8.05871I$
$u = -0.007823 + 1.153970I$ $a = 0.764588 - 0.076128I$ $b = -0.671638 + 0.130451I$	$-5.51927 + 5.01766I$	$-9.27336 - 3.26638I$
$u = -0.007823 - 1.153970I$ $a = 0.764588 + 0.076128I$ $b = -0.671638 - 0.130451I$	$-5.51927 - 5.01766I$	$-9.27336 + 3.26638I$
$u = 0.011870 + 1.204260I$ $a = -0.189739 - 0.882905I$ $b = 0.66312 - 1.68206I$	$-5.81721 - 1.98084I$	$-13.17545 + 1.19110I$
$u = 0.011870 - 1.204260I$ $a = -0.189739 + 0.882905I$ $b = 0.66312 + 1.68206I$	$-5.81721 + 1.98084I$	$-13.17545 - 1.19110I$
$u = 0.754492$ $a = -1.44952$ $b = -0.486032$	-4.73364	-8.25260
$u = -0.430176 + 1.238830I$ $a = -0.025175 - 1.005670I$ $b = 0.75219 - 1.64329I$	$-0.04165 - 6.50234I$	0
$u = -0.430176 - 1.238830I$ $a = -0.025175 + 1.005670I$ $b = 0.75219 + 1.64329I$	$-0.04165 + 6.50234I$	0
$u = -0.042069 + 1.361190I$ $a = -0.323396 - 0.397069I$ $b = -0.668081 - 0.270937I$	$-4.14046 - 3.97453I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.042069 - 1.361190I$ $a = -0.323396 + 0.397069I$ $b = -0.668081 + 0.270937I$	$-4.14046 + 3.97453I$	0
$u = -0.311164 + 0.551974I$ $a = 1.42786 - 0.68868I$ $b = -0.803556 - 0.349495I$	$-0.00208 + 1.91158I$	$3.45417 - 0.10204I$
$u = -0.311164 - 0.551974I$ $a = 1.42786 + 0.68868I$ $b = -0.803556 + 0.349495I$	$-0.00208 - 1.91158I$	$3.45417 + 0.10204I$
$u = 0.268025 + 1.370370I$ $a = -0.91565 - 1.29508I$ $b = -1.36884 - 1.52178I$	$-8.12096 + 2.25189I$	0
$u = 0.268025 - 1.370370I$ $a = -0.91565 + 1.29508I$ $b = -1.36884 + 1.52178I$	$-8.12096 - 2.25189I$	0
$u = 0.308115 + 1.366570I$ $a = -0.390102 - 1.022600I$ $b = -0.10536 - 1.73827I$	$-9.47232 + 3.78088I$	0
$u = 0.308115 - 1.366570I$ $a = -0.390102 + 1.022600I$ $b = -0.10536 + 1.73827I$	$-9.47232 - 3.78088I$	0
$u = -1.46734 + 0.23034I$ $a = 0.234414 - 0.174882I$ $b = 0.019798 + 0.446854I$	$4.15259 + 0.71042I$	0
$u = -1.46734 - 0.23034I$ $a = 0.234414 + 0.174882I$ $b = 0.019798 - 0.446854I$	$4.15259 - 0.71042I$	0
$u = -0.06441 + 1.53517I$ $a = 1.323460 - 0.282166I$ $b = 1.85061 - 0.24572I$	$-8.02190 + 6.16209I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.06441 - 1.53517I$ $a = 1.323460 + 0.282166I$ $b = 1.85061 + 0.24572I$	$-8.02190 - 6.16209I$	0
$u = 0.54406 + 1.43865I$ $a = -0.294156 - 1.143990I$ $b = -0.94120 - 1.81765I$	$-5.98246 + 9.81475I$	0
$u = 0.54406 - 1.43865I$ $a = -0.294156 + 1.143990I$ $b = -0.94120 + 1.81765I$	$-5.98246 - 9.81475I$	0
$u = -0.132473 + 0.411596I$ $a = 3.42549 - 0.14673I$ $b = 0.259425 + 0.497644I$	$3.88970 + 3.58530I$	$-12.2058 - 13.6470I$
$u = -0.132473 - 0.411596I$ $a = 3.42549 + 0.14673I$ $b = 0.259425 - 0.497644I$	$3.88970 - 3.58530I$	$-12.2058 + 13.6470I$
$u = -0.275375 + 0.330192I$ $a = 0.668299 + 0.649597I$ $b = -0.973512 + 0.297420I$	$-2.24908 + 1.34917I$	$-17.5370 - 4.7980I$
$u = -0.275375 - 0.330192I$ $a = 0.668299 - 0.649597I$ $b = -0.973512 - 0.297420I$	$-2.24908 - 1.34917I$	$-17.5370 + 4.7980I$
$u = -0.345825 + 0.167545I$ $a = 1.13929 - 2.38510I$ $b = -1.019320 + 0.077077I$	$-0.00099 + 2.03436I$	$1.52306 - 3.75822I$
$u = -0.345825 - 0.167545I$ $a = 1.13929 + 2.38510I$ $b = -1.019320 - 0.077077I$	$-0.00099 - 2.03436I$	$1.52306 + 3.75822I$
$u = 1.73816 + 0.16506I$ $a = 0.268942 - 0.181667I$ $b = 0.385064 + 0.374805I$	$0.880460 - 0.443974I$	0

	Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$1.73816 - 0.16506I$		
$a =$	$0.268942 + 0.181667I$	$0.880460 + 0.443974I$	0
$b =$	$0.385064 - 0.374805I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{41} - 9u^{40} + \dots + 104u - 16)(u^{160} + 4u^{159} + \dots - 7828u + 1444)$
c_2	$(u^{41} + 12u^{39} + \dots - 2u + 1)(u^{160} + 3u^{159} + \dots + 341146u + 46381)$
c_3	$(u^{41} + u^{40} + \dots - 28u + 19)$ $\cdot (u^{160} - 18u^{158} + \dots + 706845372u + 100225917)$
c_4	$(u^{41} + 9u^{40} + \dots + 104u + 16)(u^{160} + 4u^{159} + \dots - 7828u + 1444)$
c_5	$(u^{41} - u^{40} + \dots + 43u - 7)(u^{160} + 2u^{159} + \dots + 6873u + 279)$
c_6	$(u^{41} + u^{40} + \dots + 2u - 1)(u^{160} + 8u^{159} + \dots + 40554u + 6463)$
c_7	$(u^{41} + u^{40} + \dots - 64u - 13)$ $\cdot (u^{160} + 2u^{159} + \dots + 528175038798u + 68942737333)$
c_8	$(u^{41} - 2u^{40} + \dots - 7u - 1)(u^{160} + u^{159} + \dots + 330465u + 18167)$
c_9	$(u^{41} + u^{40} + \dots + 43u + 7)(u^{160} + 2u^{159} + \dots + 6873u + 279)$
c_{10}	$(u^{41} + 4u^{40} + \dots + u + 1)(u^{160} - 3u^{159} + \dots + 23u + 19)$
c_{11}	$(u^{41} + u^{40} + \dots + 72u - 16)$ $\cdot (u^{160} - 28u^{158} + \dots - 135828304u + 2699248)$
c_{12}	$(u^{41} + 2u^{40} + \dots - 7u + 1)(u^{160} + u^{159} + \dots + 330465u + 18167)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{41} + 31y^{40} + \dots - 6336y - 256)$ $\cdot (y^{160} + 94y^{159} + \dots + 135556944y + 2085136)$
c_2	$(y^{41} + 24y^{40} + \dots - 6y - 1)$ $\cdot (y^{160} + 55y^{159} + \dots + 289002611650y + 2151197161)$
c_3	$(y^{41} + 13y^{40} + \dots + 2684y - 361)$ $\cdot (y^{160} - 36y^{159} + \dots + 235215438020548344y + 10045234438490889)$
c_5, c_9	$(y^{41} - 39y^{40} + \dots + 1513y - 49)$ $\cdot (y^{160} - 148y^{159} + \dots - 15857325y + 77841)$
c_6	$(y^{41} - 9y^{40} + \dots - 18y - 1)$ $\cdot (y^{160} - 38y^{159} + \dots + 4276709054y + 41770369)$
c_7	$(y^{41} + 25y^{40} + \dots - 14026y - 169)$ $\cdot (y^{160} + 80y^{159} + \dots + 2.79 \times 10^{23}y + 4.75 \times 10^{21})$
c_8, c_{12}	$(y^{41} + 22y^{40} + \dots - 15y - 1)$ $\cdot (y^{160} + 105y^{159} + \dots + 15360514711y + 330039889)$
c_{10}	$(y^{41} + 2y^{40} + \dots - 9y - 1)(y^{160} + 13y^{159} + \dots + 34469y + 361)$
c_{11}	$(y^{41} - 11y^{40} + \dots + 4928y - 256)$ $\cdot (y^{160} - 56y^{159} + \dots - 10507054762812928y + 7285939765504)$