

$N=2$  toda  $\Rightarrow L(z) 2 \times 2$

spectral curve  $\det(\lambda - L(z)) = 0 \Rightarrow \lambda^2 = f(z)$

Hyperelliptic curve

toda:  $f(z) = z(z-1)(z+1) \quad \lambda \in \mathbb{C}$

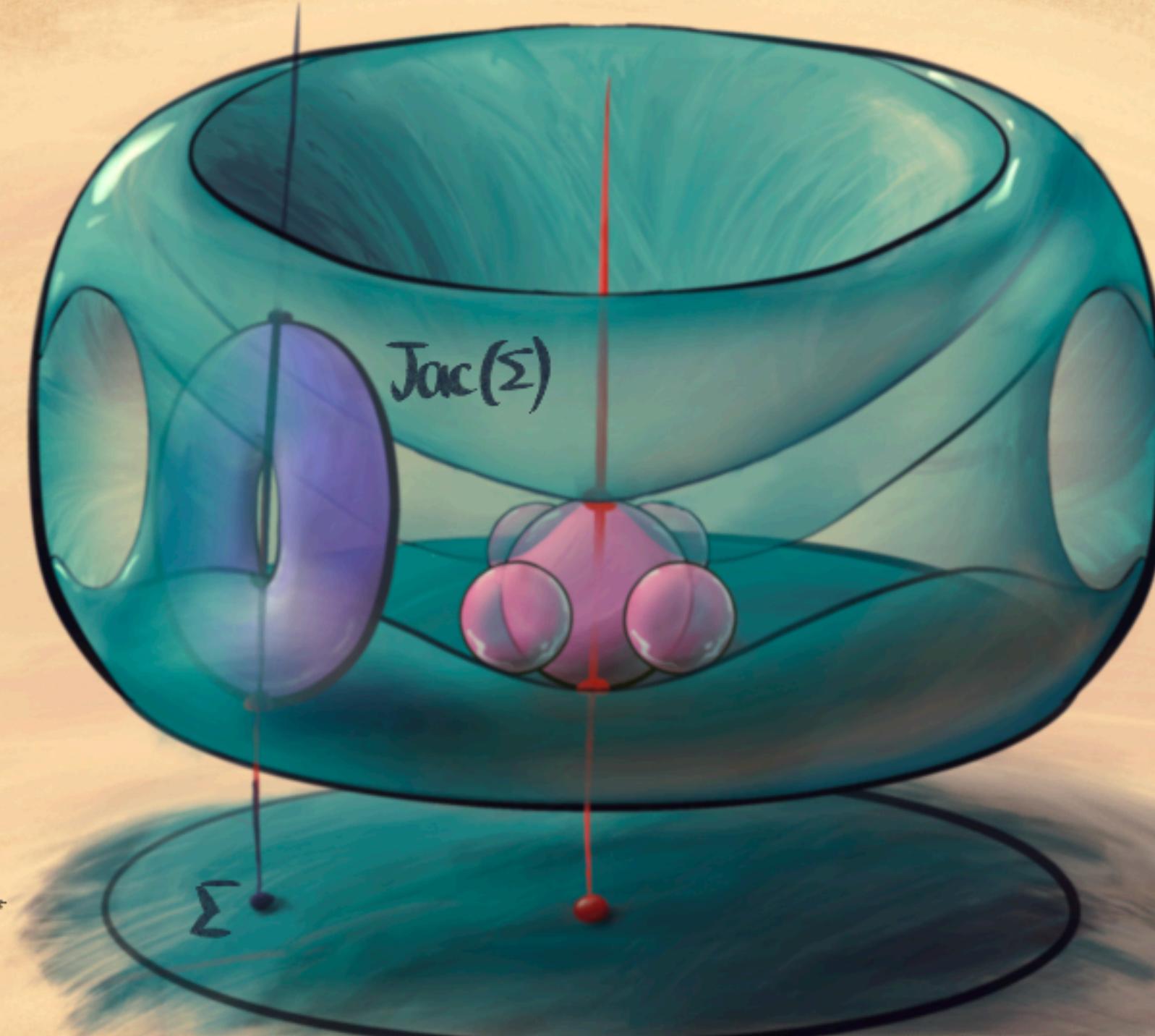
spectral curve = conserved quantity

genus g curve

Defined by  
2g-1 roots



fiber for spectral curve  $\Sigma$ :  
space of line bundles  $Jac(\Sigma)$   
line bundle  $\approx$  choice of phase around loops in  $\Sigma$   
 $Jac(\Sigma) \cong \text{Hom}(\pi_1(\Sigma), U(1)) \cong U(1)^{\frac{g-1}{2}}$ , a torus!  
flow linear on  $Jac(\Sigma)$ !



Lagrangian torus fibration!

Sieberg  
Witten  
Summit

Nipotent  
cone

Gauge  
grove

Lagrangian tori

Liouville

Soliton  
Swamp

Spectral  
cemetery

CP  
Spectral  
carrie

