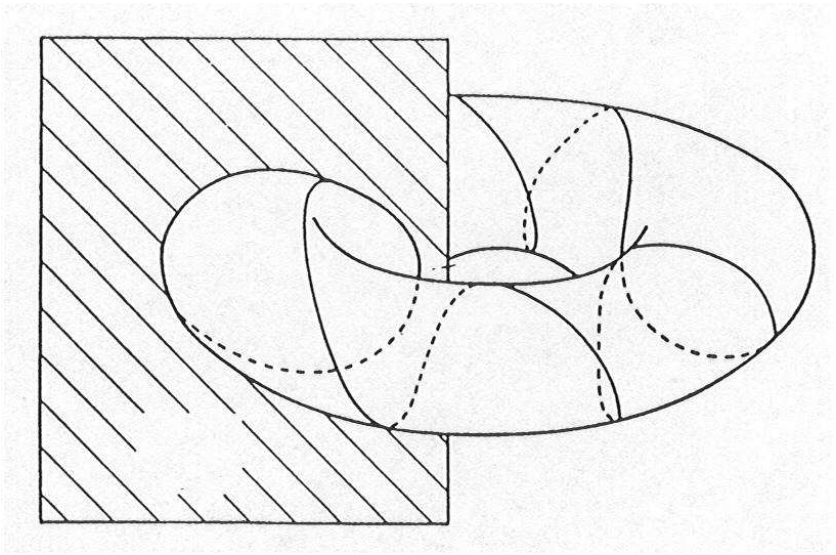
Poincaré Surface of Section [mln100]

- Calculate trajectory: $\theta(t),\ \phi(t),\ p_\theta(t),\ p_\phi(t)$.
- Select points with $p_\phi = 0,\ \dot{p}_\phi > 0$.
- Project these points onto a plane in (θ, ϕ, p_θ)-space.



Invariant torus specified by two actions J_1, J_2.

Position of phase point on a given torus specified by two angle coordinates: $\vartheta_1(t) = \omega_1(J_1, J_2)t + \vartheta_1^0,\ \vartheta_2(t) = \omega_2(J_1, J_2)t + \vartheta_2^0$.

Periodic trajectories: rational ω_1/ω_2.
Quasiperiodic trajectories: irrational ω_1/ω_2.