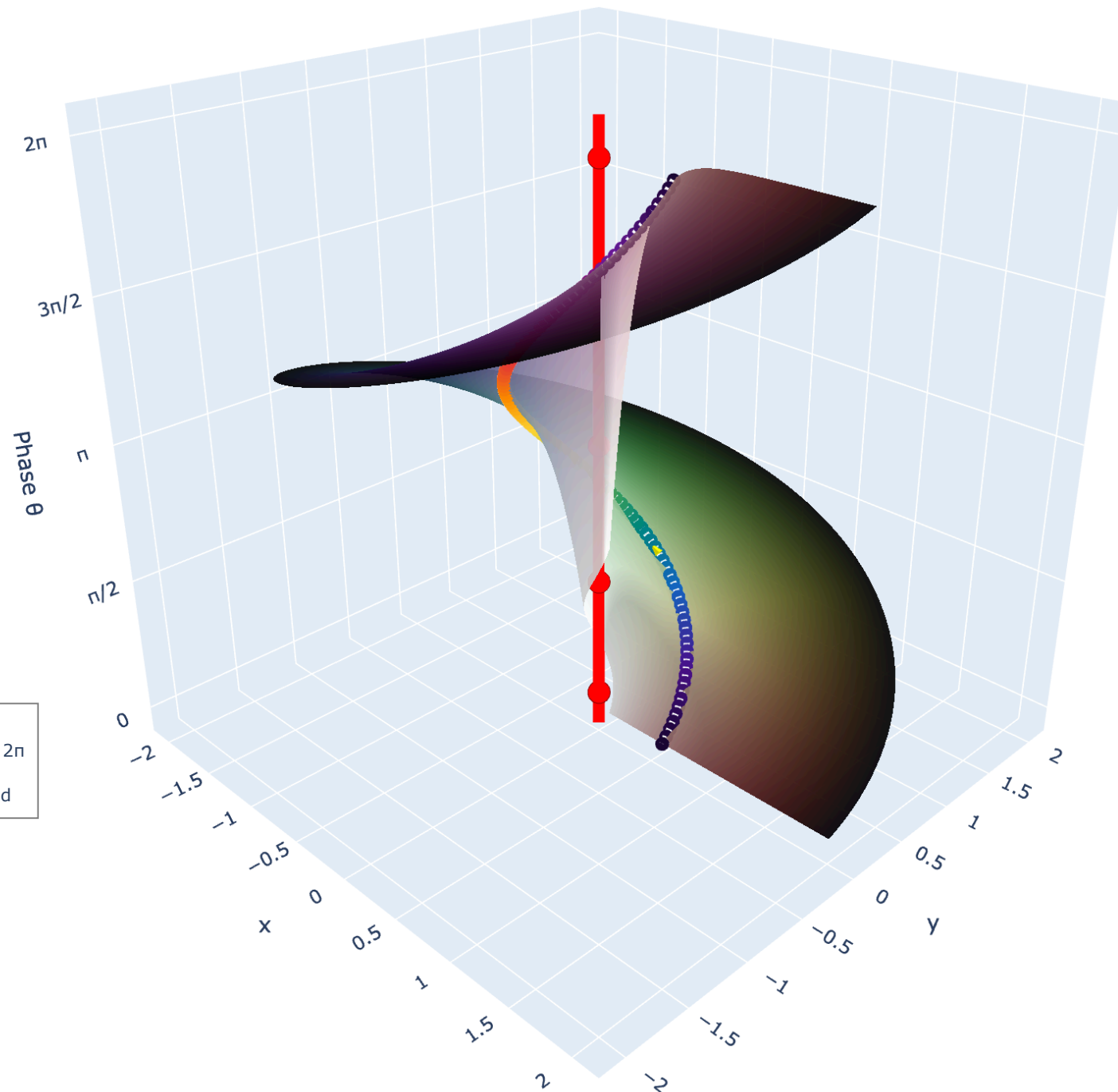


Chiral Vortex: Phase Winding (twist) \times Amplitude (funnel) \rightarrow Particle at Core



Topology creates the particle:

Loop around core \rightarrow phase winds 2π
This winding cannot be removed
 \therefore Particle is topologically protected

Surface encodes:

Twist = Phase θ | Funnel = $|x| \rightarrow 0$
Brightness = $|J_s|$ (current)