Whitehead Link — Two Loops, Linking Number Zero

+1 and −1 crossings cancel ☐ lk = 0

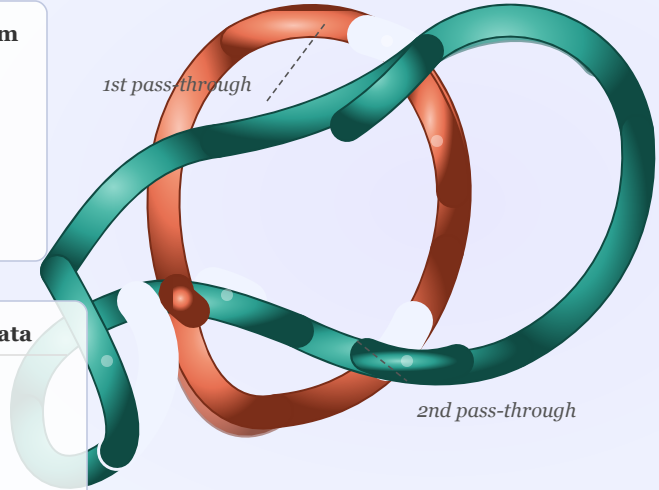
E-field loop

B-field loop

○ Crossing point (5 total)

Crossing Diagram

5 crossings, lk = 0



Topological Data

Components: 2
Crossings: 5
lk(L₁, L₂) = 0
μ☐(1,2,1,2) ≠ 0
Unknotting: ∞

Whitehead Link (L5a1)

Linking number: **0**

Detected by:
Milnor μ-invariant ≠ 0

☐ = 0 ☐ Q = 0
Dark matter candidate

Mass estimate: **~0.7–1.3 MeV**

Cannot be unlinked
☐ topologically stable

Key insight: Non-trivial topology with zero helicity ☐ zero charge ☐ invisible to EM, yet topologically protected from decay. A natural dark matter candidate.

Figure 8: Whitehead link — two loops linked but with linking number 0 (☐ = 0)

The simplest non-trivially linked configuration invisible to helicity-based detection