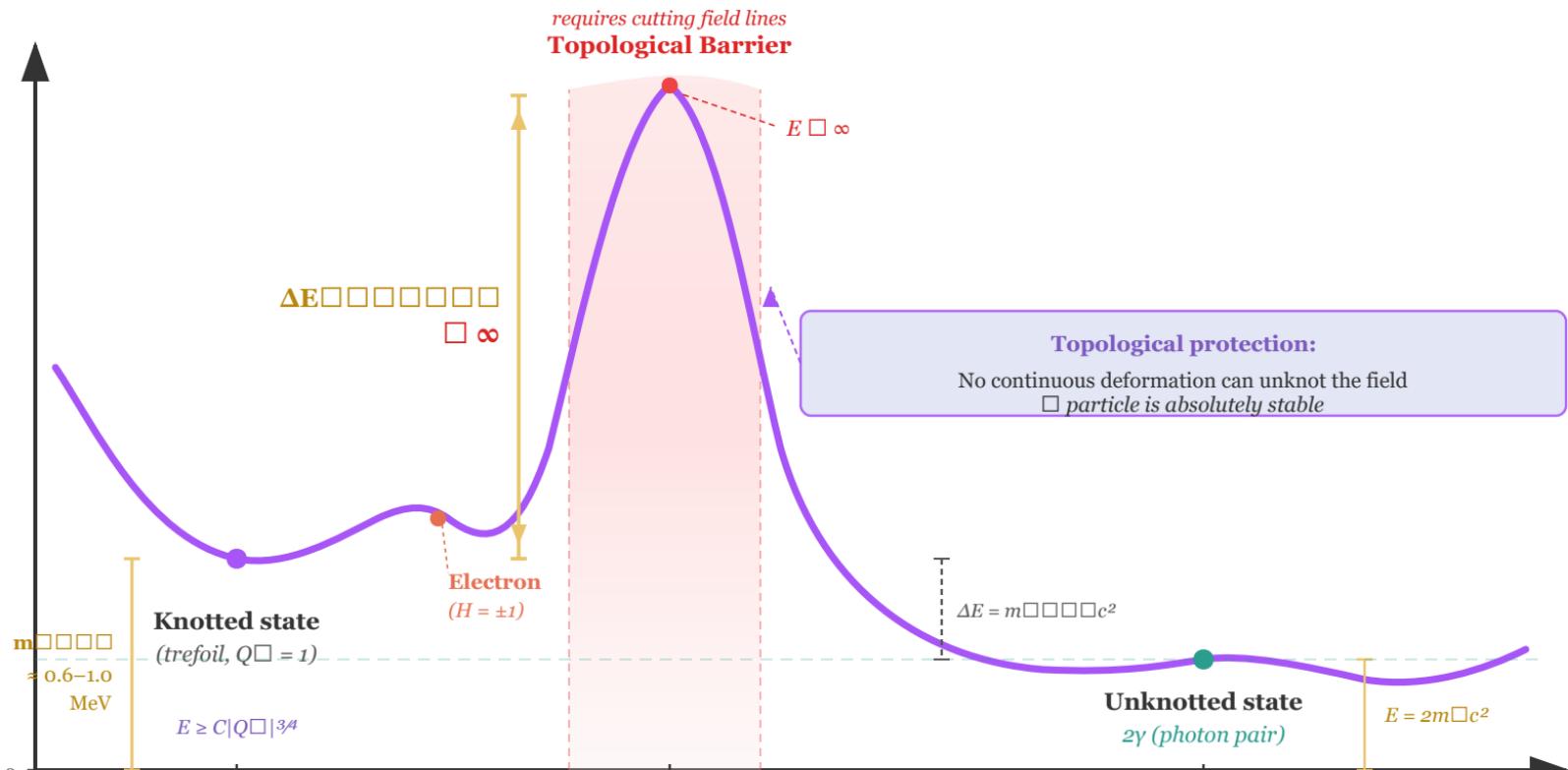


Energy E



requires cutting field lines
Topological Barrier

Topological protection:
No continuous deformation can unknot the field
 \square particle is absolutely stable

Topology Change Parameter

(continuous deformation of field configuration)

Figure 5: Energy landscape – topological energy barrier prevents decay of knotted configurations.
The barrier height diverges ($\Delta E \square \infty$) because unknotting requires discontinuous field surgery.