

**Swirl Flow Field (VAM)**



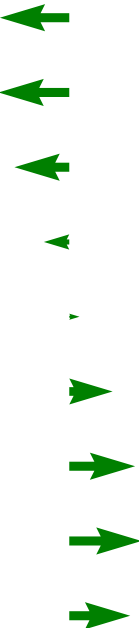
$\vec{v}(x) \rightarrow \vec{v}(x) + \nabla\theta(x)$

Gauge = swirl redundancy



Topological Equivalence

**Gauge Field (SM)**



$A_\mu(x) \rightarrow A_\mu(x) + \partial_\mu\theta(x)$

Gauge = phase freedom