

2013 Day 1 Q3 (MHD)

a. Surface defined by $\hat{n} \cdot \vec{B} = 0 \quad \forall \hat{n} \in S$.
Surfaces which \vec{B} vectors lie tangent to.

b. Small externally applied perturbation to B field, intended
Resonant - same helicity as background B field ($H = \int A \cdot dB$)

c. On a rational surface, the fields are special in that the field lines are closed. For $q \notin \mathbb{Q}$, the field lines are ergodic and space-filling. So a RMP can very easily perturb the surface from a rational to irrational one, leading to very different transport properties. (expand).