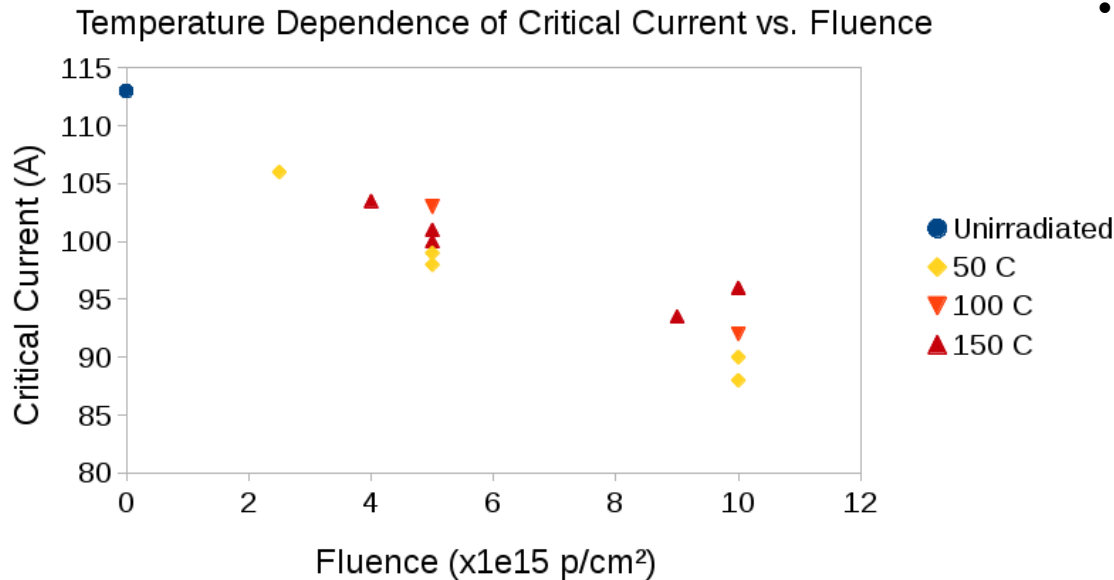
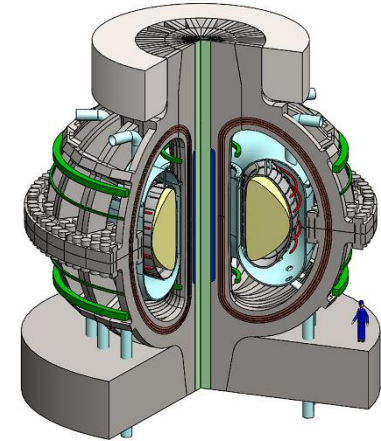


Determination of HTS radiation damage limits will inform compact fusion reactor design

- **Neutron damage to high-temperature superconductors (HTS) important to understand for compact fusion reactors:**
 - ARC reactor design produces 525 MW of fusion power at $R = 3.3$ m $B_0 = 9.2$ T, but lifetime of superconducting coils limits further size reduction.
 - Little work has been performed assessing HTS performance beyond ITER fluence levels.



- **Technique being developed to determine similarity between neutron and ion irradiation of HTS:**
 - Temperature of ion irradiation affects critical current degradation
 - Experiments underway to cryogenically irradiate HTS