Large Scale Superconducting Magnet Technology for MHD Power Generation

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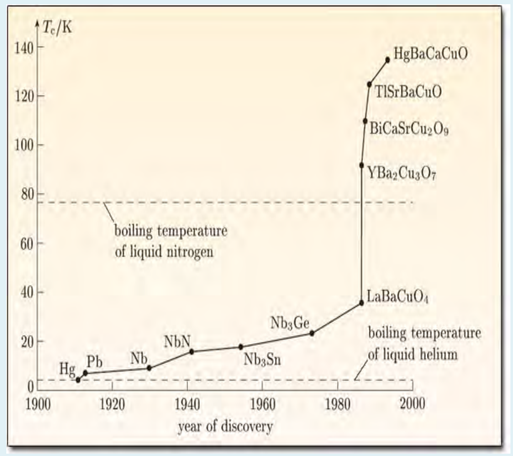
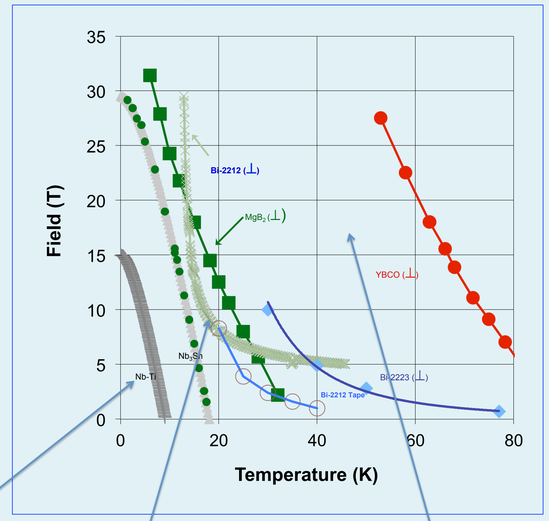
New superconductors developed since construction of prototype MHD magnets in 1970's-1990's



HTS make much higher magnetic fields and operating temperatures accessible



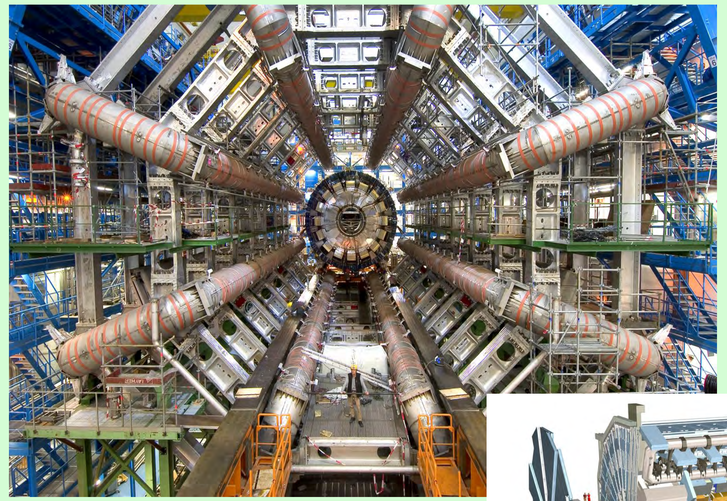
Previous Superconducting magnet designs were based on NbTi technology

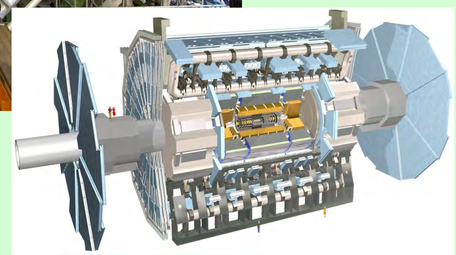
Nb_3Sn technology is available now

Will future magnets use High Temperature Superconductors (HTS)?

Very large scale superconducting magnet technology is available now

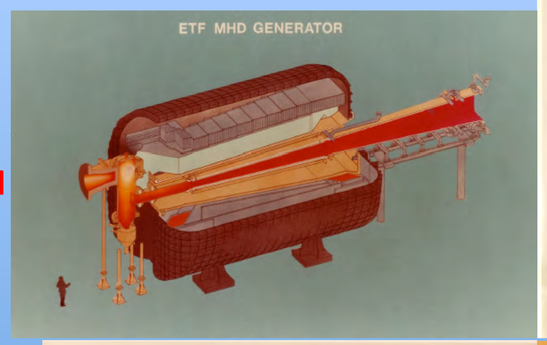
State-of-the-Art NbTi Magnets

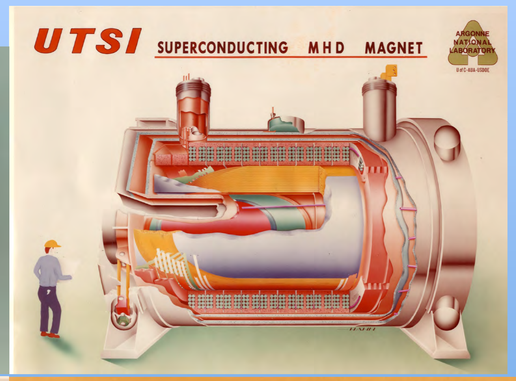


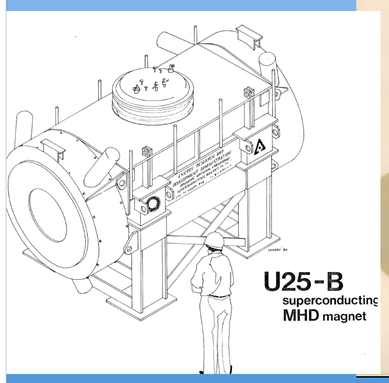


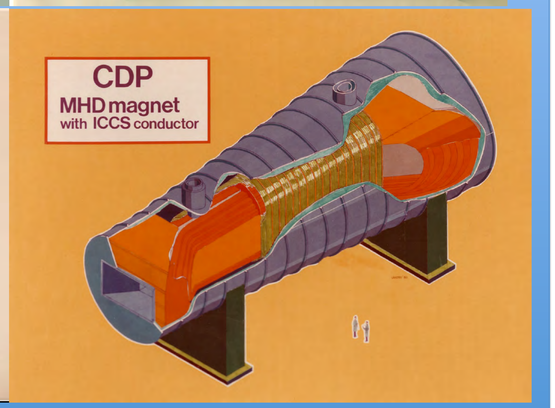
• Atlas Detector Magnet under construction for the Large Hadron Collider (LHC) experiment at CERN

An extensive superconducting MHD magnet development program was carried out in 1980's-1990's

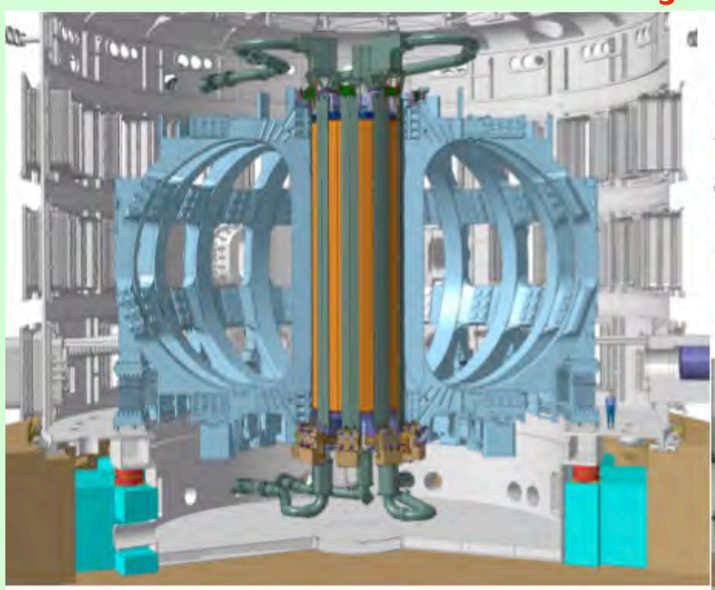








State-of-the-Art Nb_3Sn Magnets



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