



U.S. DEPARTMENT OF
ENERGY

Office of
Science

ITER Project Status

for FESAC

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Take Away Message: Serious Fabrication Has Begun



The Site



PF Coil Winding Bldg

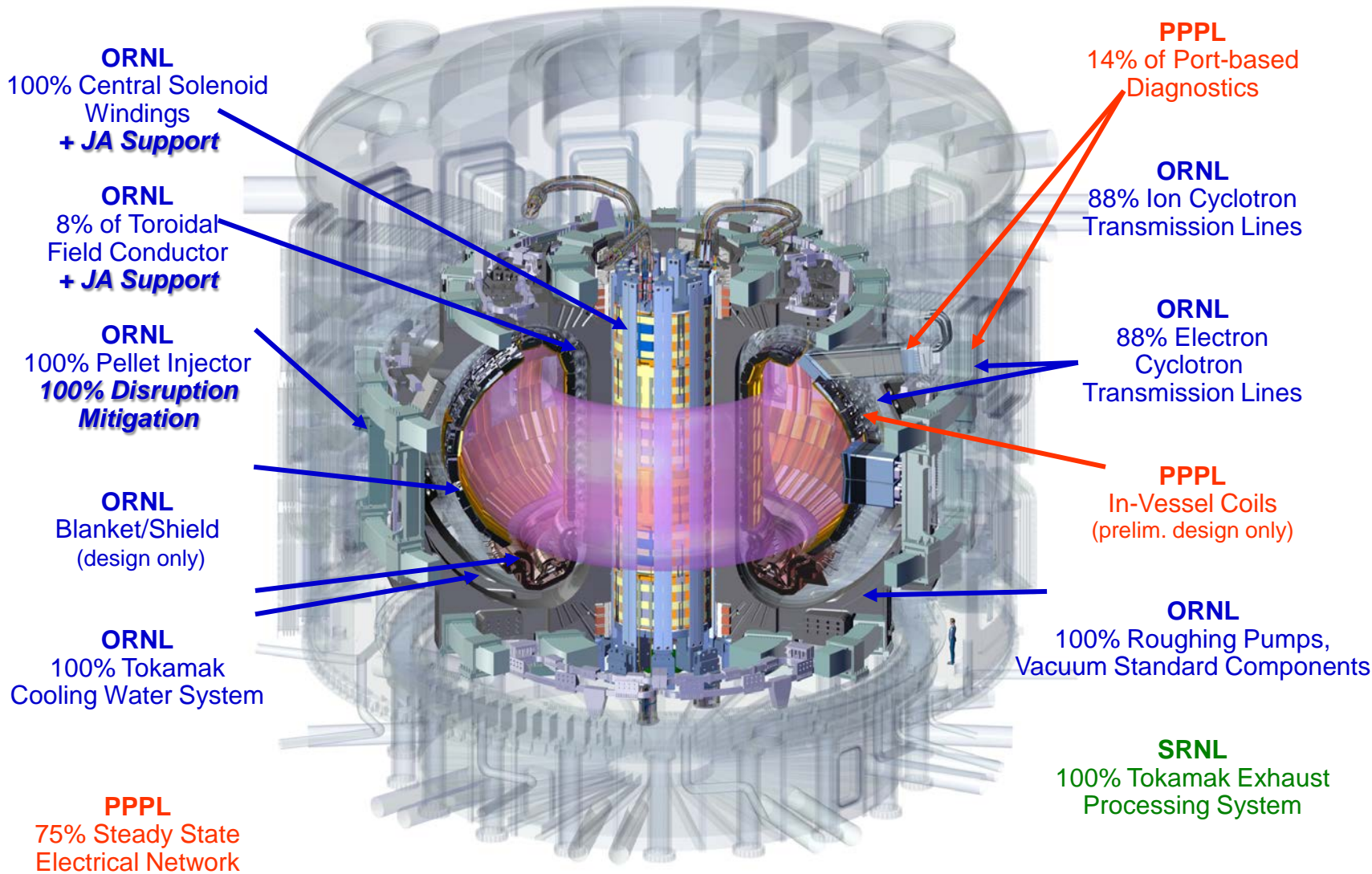


The Tokamak Pit

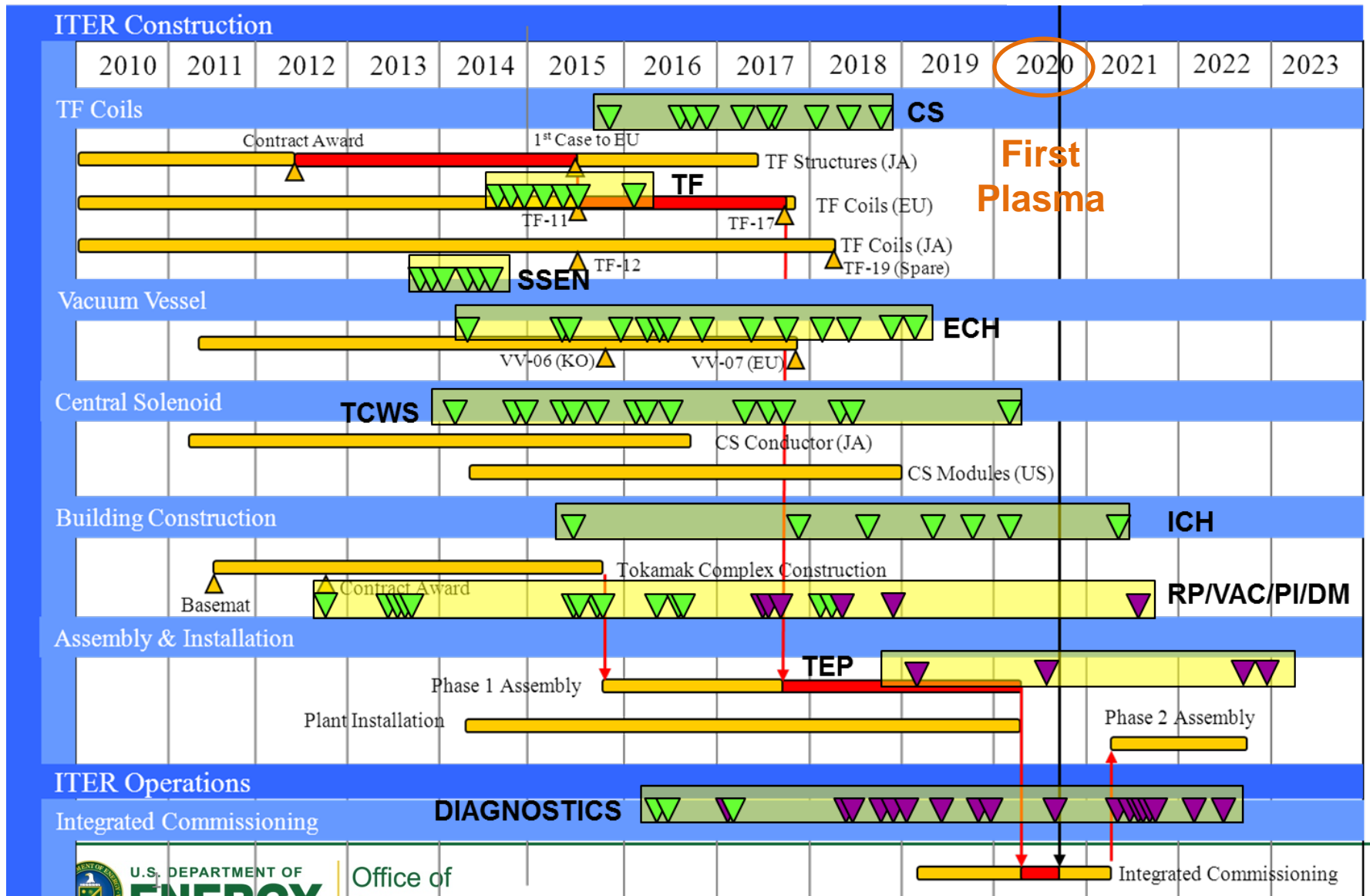


ITER Headquarters Bldg

Serious Fabrication Has Begun for U.S. Hardware Contributions



US Plan for 162 Deliverables is “Just in Time” for the International ITER Early-Finish Schedule



The U.S. Focus is shifting to Fabrication

2012

- Complete R&D
- Advance Design with Industry
- Long-lead Procurement
- Baseline Domestic Project

2013

- Engage Industry to Begin Fabrication



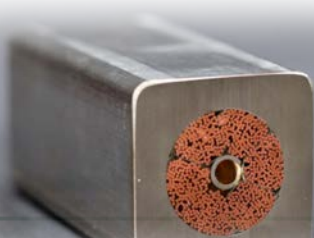
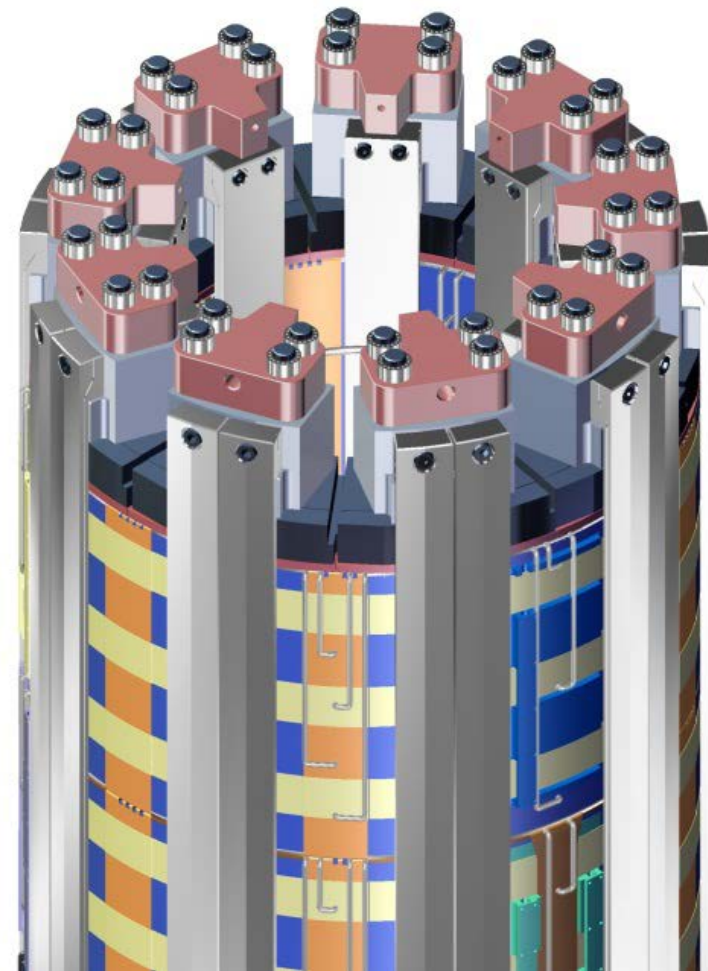
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For Illustration: US Progress and Plans for the Central Solenoid

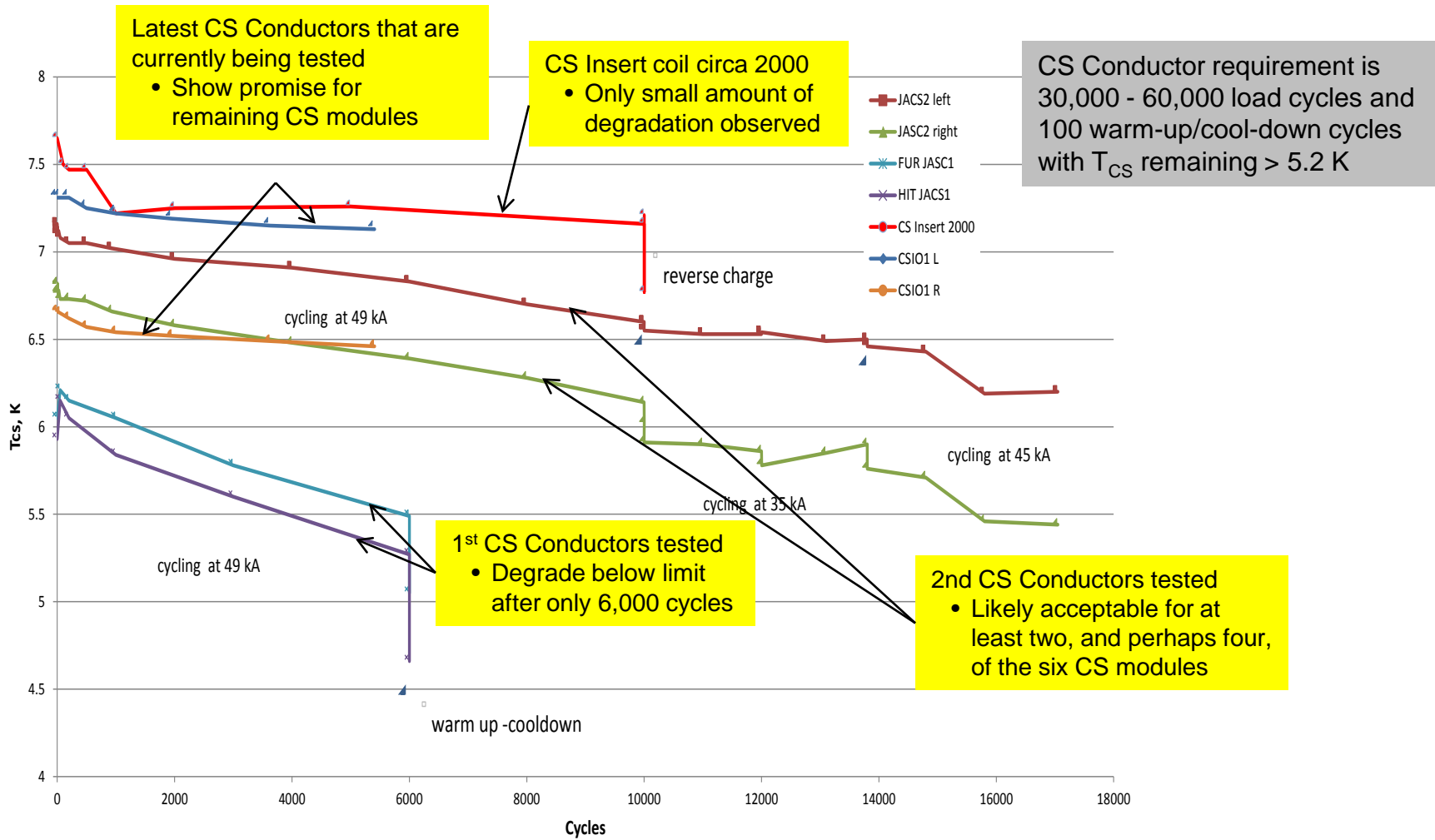


- **Contract placed for module fabrication with General Atomics (July 2011)**
- **Successful Preliminary Design Review (September 2011)**
- **Manufacturing input to structures design is being provided by industry (4 BOA contractors)**
- **Assembly tooling on track for Preliminary Design Review (September 2012)**
- **Technical and schedule issues are being addressed**



Degradation on CS Insert (2000) and SULTAN

JACS1, JACS2, CSIO1(45 kA, 11.5T) and CS Insert (2000) Tcs evolution (40 kA, 13 T)



Central Solenoid Conductor Testing

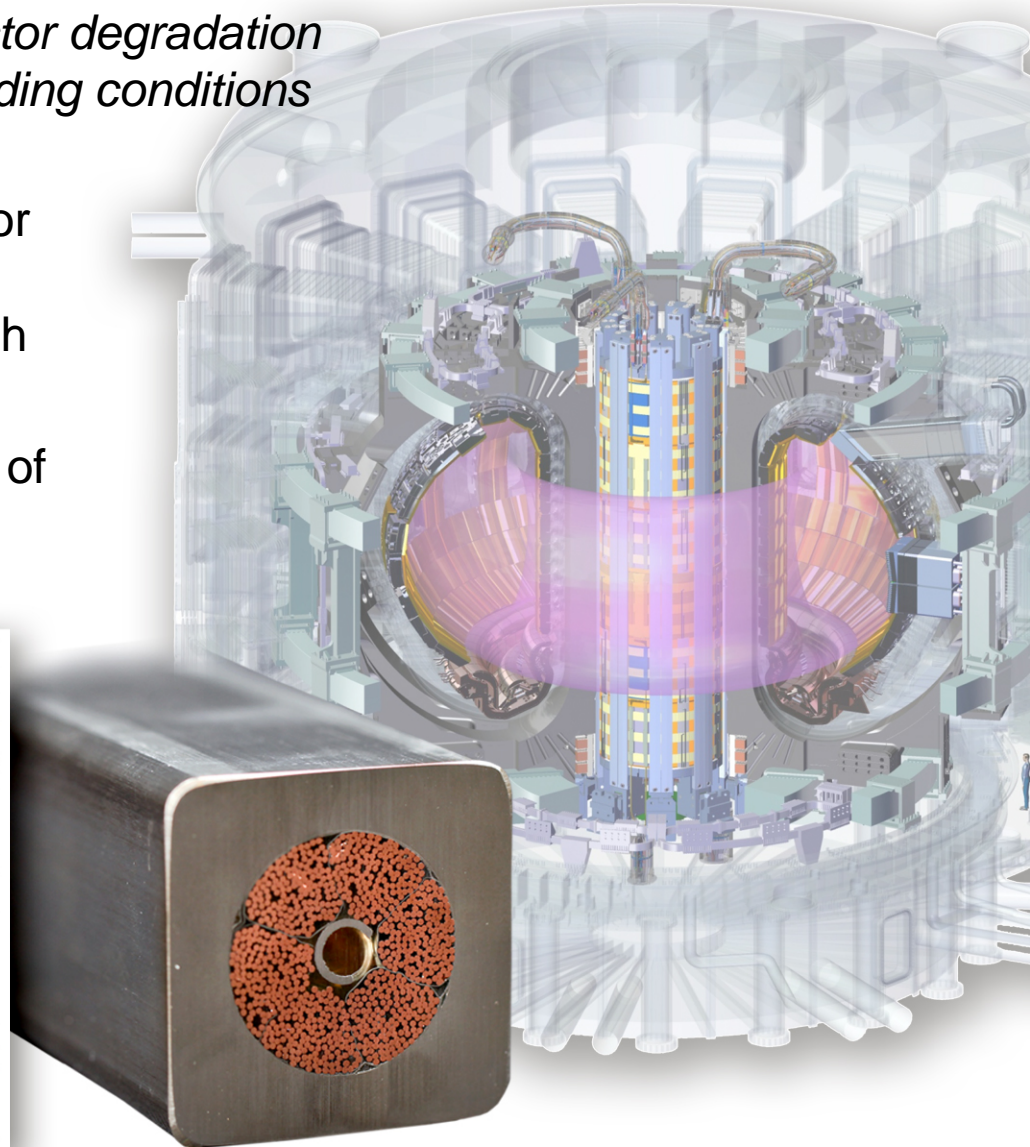
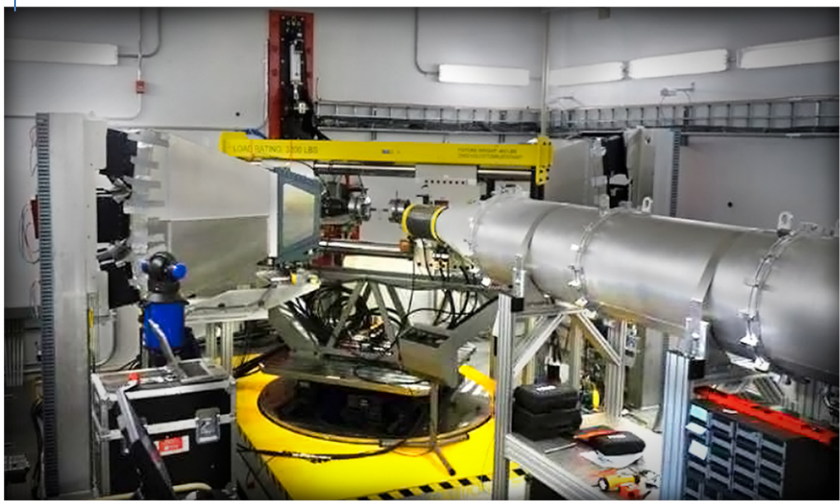
At ORNL Spallation Neutron Source (DOE/SC/BES)

Issue:

Past testing showed significant conductor degradation under cyclic electromagnetic (E-M) loading conditions

SNS VULCAN tests will:

- Measure strain state of a CS conductor sample after high cyclic loads and compare regions that experienced high E-M loads and low E-M loads
- Enhance understanding of the impact of strain on performance
- Provide insight for improving design



Take Away Message: Serious Oversight Continues

- The project continues to be periodically benchmarked by DOE Office Science Office of Project Assessment, i.e., a Lehman Review (November 2011, February 2012 and again this May 2012).
- Global results indicate that the U.S. ITER Project Office has a functioning project team that is capable of executing the project and meeting the U.S. ITER commitments and that is ready for project baselining, CD-2.
- Current focus is preparation for an Independent Cost Evaluation (ICE) to take place integrally with the May 2012 Lehman Review. A team of subject matter experts will support this preparation with an independent assessment of the project cost estimate and risk assessment.

Bottom Line

- **Construction of the major on-site buildings is underway; one is completed.**
- **The ITER Members are now in rapid transition from design and R&D to fabrication of their commitments for delivery to the ITER site.**
- **U.S. ITER Project preparing for CD-2 project baseline.**