The ITER Project

BEYOND
Expert Circle Meeting
2020

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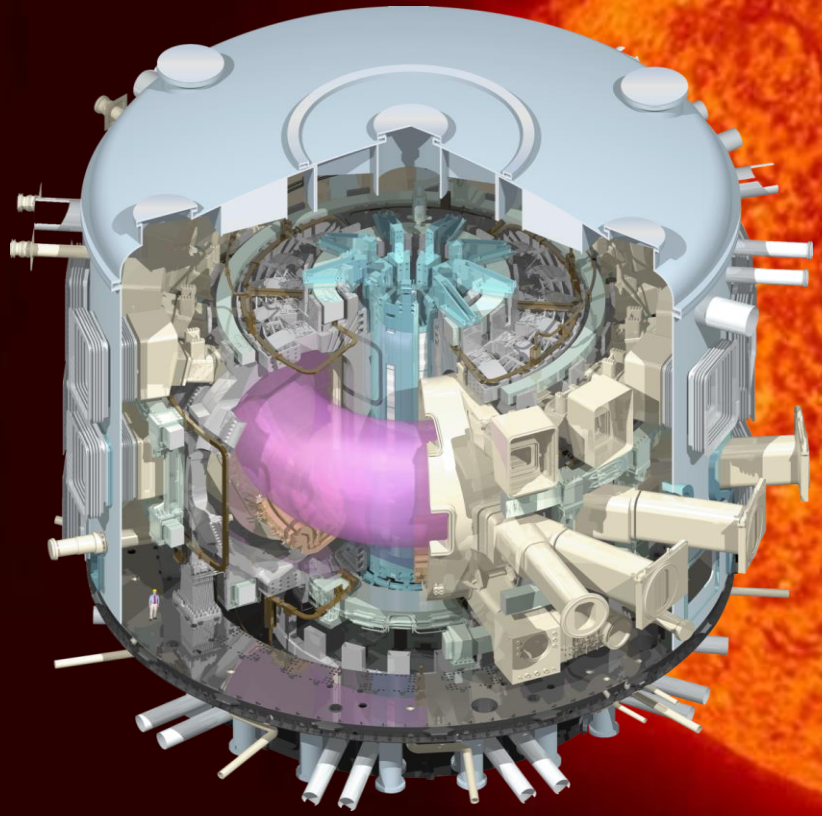
ITER Organization

The ITER mission



To demonstrate the scientific and technological feasibility of fusion power for peaceful purposes

To produce a burning plasma (150 million degrees)

To achieve Q ≥ 10 (thermal output of 500 MW for 50 MW of heating input)

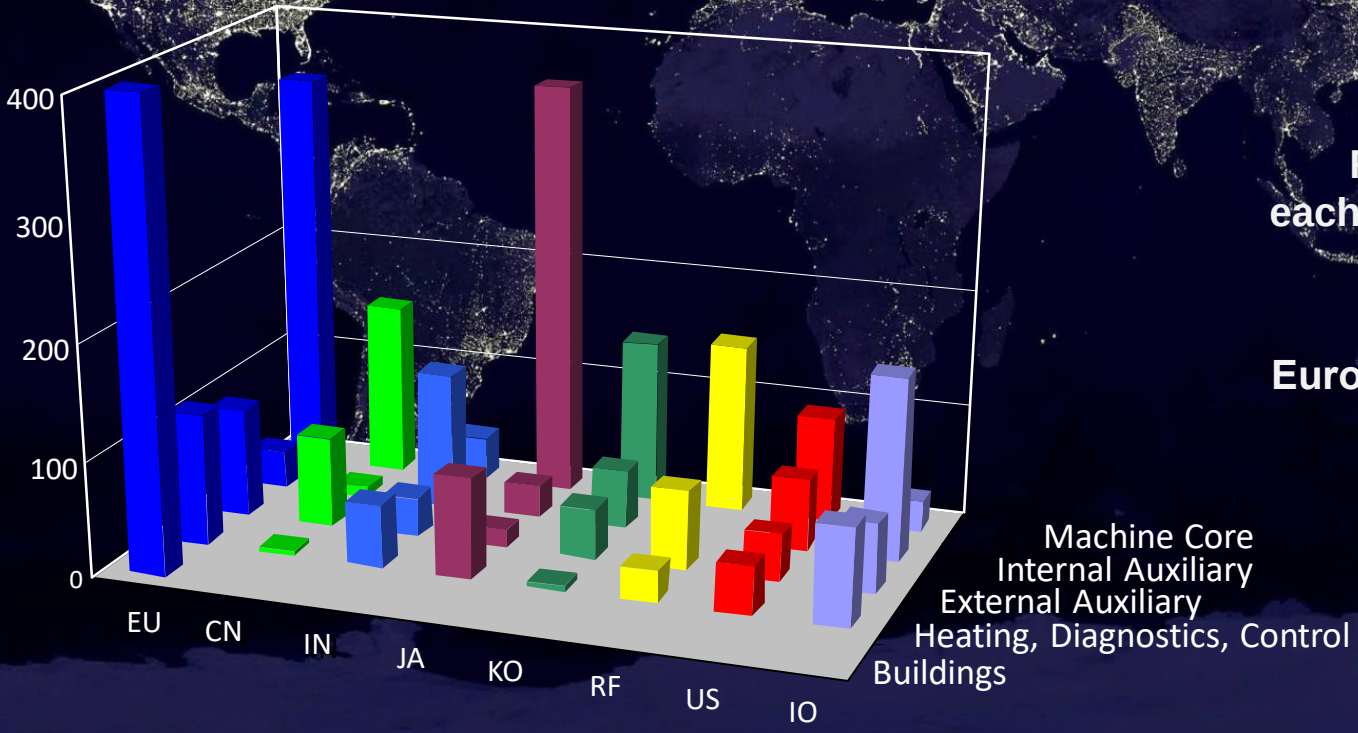
A global challenge - a global response

A multinational scientific collaboration without equivalent in history

China EU India Japan Korea Russia USA

A unique formula

ITER is being built through the in-kind contributions of the seven Members of the ITER Organization.

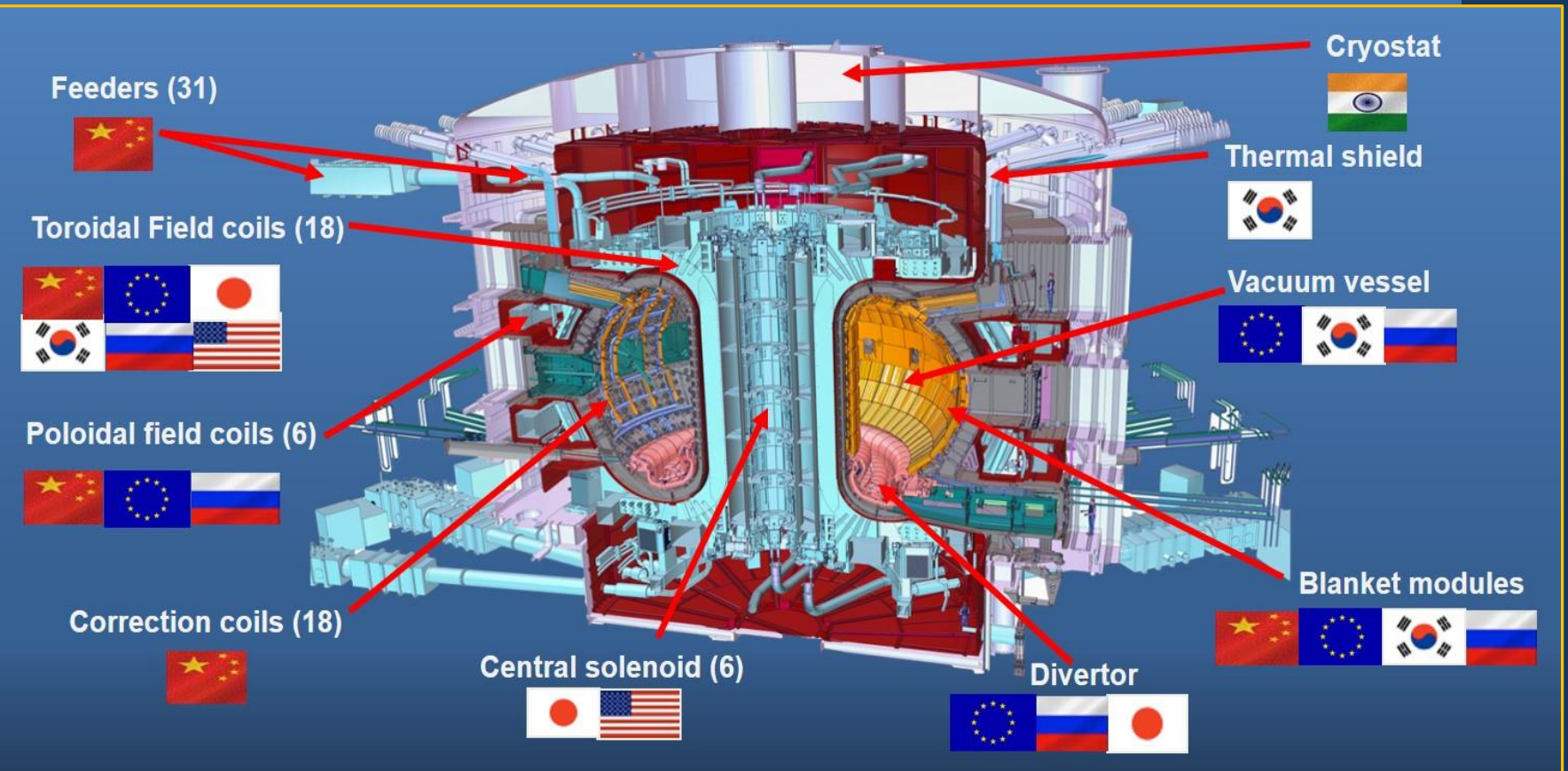


China, India, Japan, Korea, Russia and the United States each have responsibility for ~ 9% of procurement packages.

Europe's share, as Host Member, is ~ 45% (construction and manufacturing).

Who manufactures what?

The ITER Members share all intellectual property



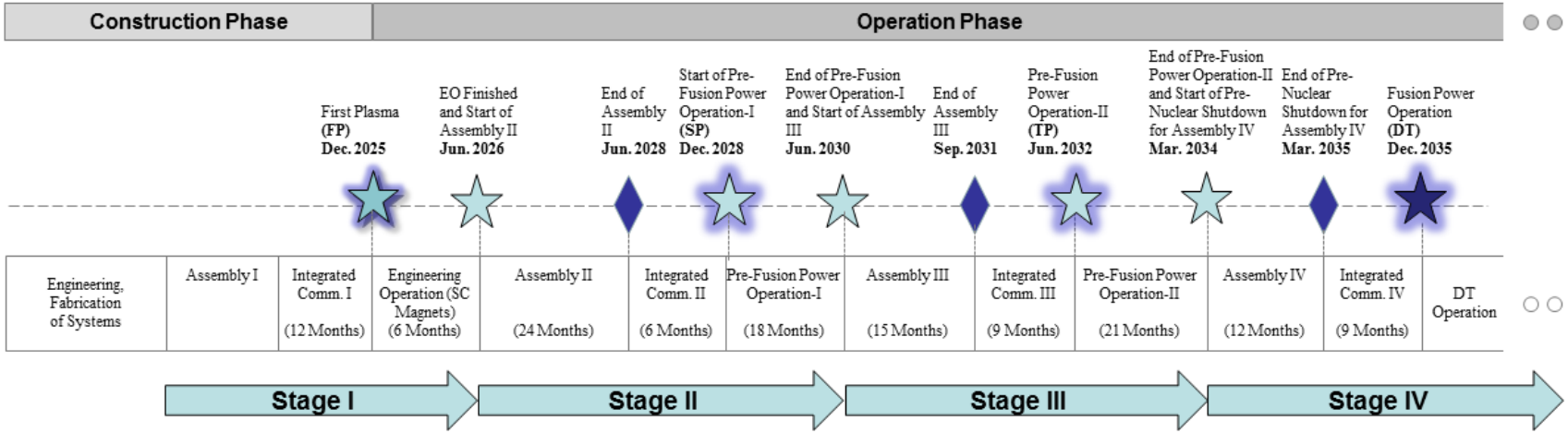
ITER Project Progress

Total construction through First Plasma is now over 70% complete.

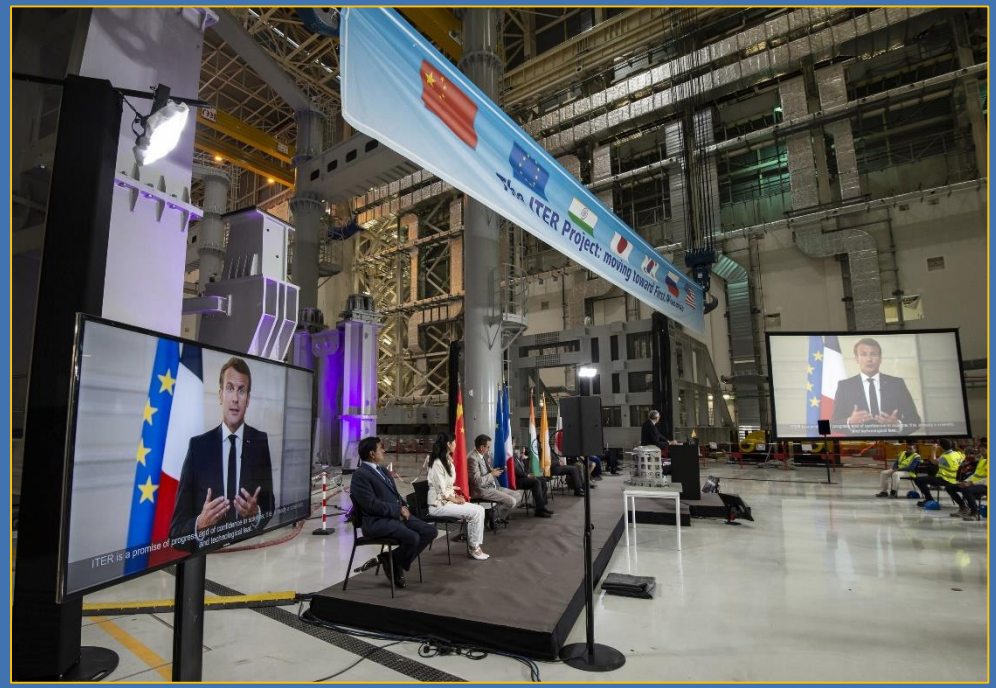
We have largely been able to maintain critical activities during the Covid-19 pandemic to try to preserve the OPS.

A staged approach to DT plasma

- Schedule and resource estimates through First Plasma (2025) consistent with Members' budget constraints
- Proposed use of 4-stage approach through Deuterium-Tritium (2035) consistent with Members' financial and technical constraints
- Final COVID-19 impact yet to be determined.

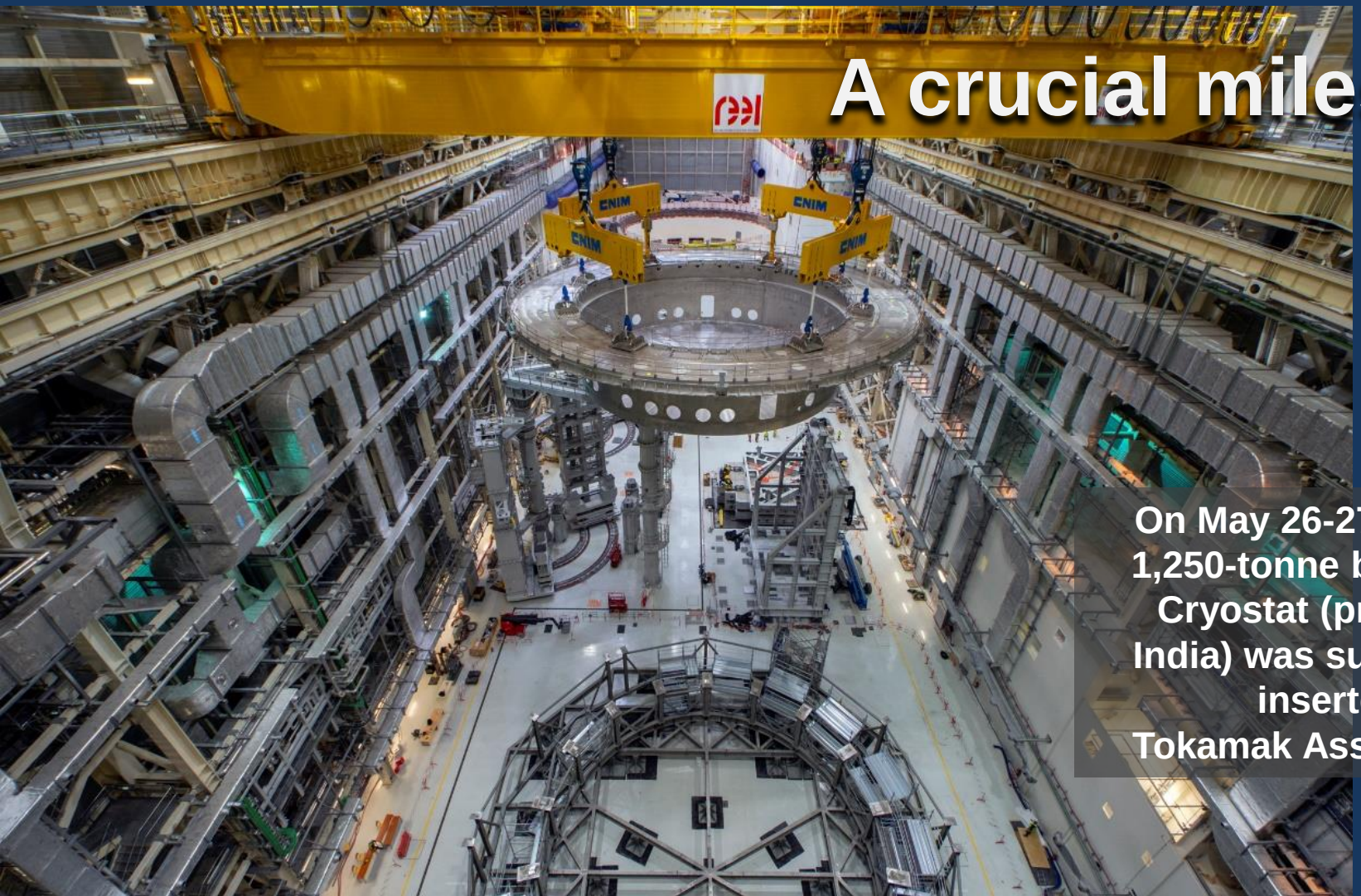


Celebrating Start of Machine Assembly



On 28 July, ITER celebrated the Start of Machine Assembly with a virtual ceremony, hosted by French President Emmanuel Macron, with contributions from 7 ITER Heads of State and multiple ministers

A crucial milestone

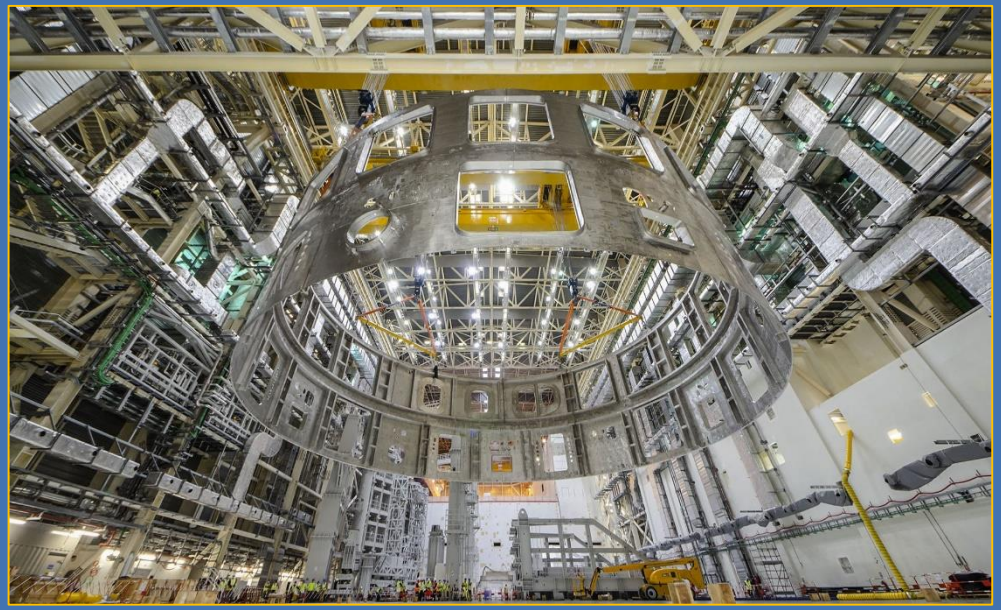


On May 26-27 2020, the 1,250-tonne base of the Cryostat (procured by India) was successfully inserted into the Tokamak Assembly Pit.

A crucial milestone

The Cryostat Base, 30 metres in diameter, was positioned with a final tolerance under 3 mm at all metrology points

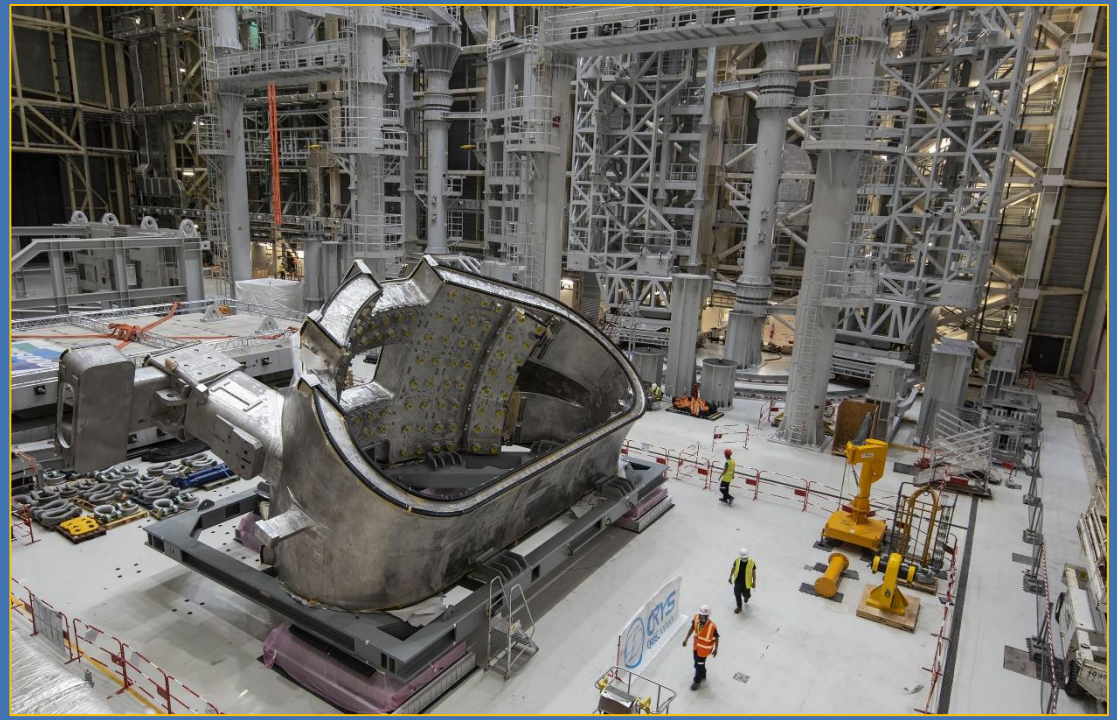
Recent progress: Tokamak Complex



Cryostat Lower Cylinder lift,
31 August 2020

Inserting the Cryostat Lower Cylinder into the Tokamak Pit,
31 August 2020

Ready for first pre-assembly



Following delivery of thermal shield sections from Korea, two toroidal field coils from Japan, and Vacuum Vessel Sector 6 from Korea, the first pre-assembly can begin.

Onward toward First Plasma!

Thank you for your attention