

TCP on Spherical Tori (ST TCP)

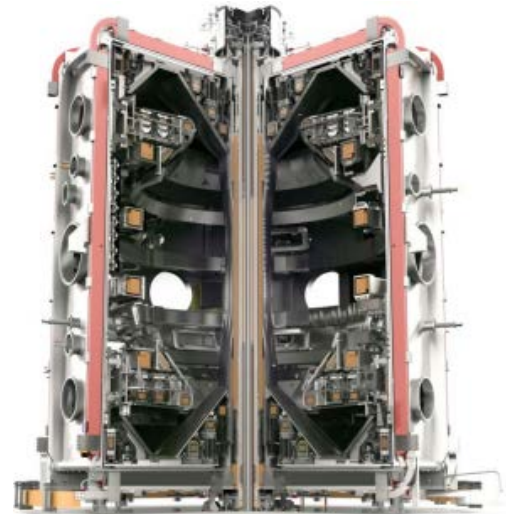
Created in 2007, the ST TCP aims to enhance the effectiveness and productivity of fusion energy science and technology by strengthening co-operation among spherical torus research programmes and facilities; contributing to and extending the scientific and technology database of toroidal confinement concepts to the spherical torus physics regime; and providing a scientific and technological basis for the successful development of fusion power using the spherical torus.

Main areas of work

- [Co-operation on spherical tori science R&D](#)
- [Co-operation on the physics and technology of future spherical torus devices](#)
- [Co-operation on steady state operation of fusion devices](#)

Key activities and accomplishments (2017-2018)

- Ten new projects funded for collaborative research on upgrade of the Mega Amp Spherical Tokamak Upgrade (MAST-U)
- Construction of the MAST-U completed
- Proto-Sphera produced its first confined toroidal plasma
- NSTX-U recovery project completed major technical milestones
- LTX-beta device made plasmas with plasma currents of about 40kA
- Understanding of non-inductive ST plasma start-up



Mega Amp Spherical Tokamak Upgrade (MAST-U).
<http://www.ccf.ac.uk/assets/documents/other/M>

Priorities and projects (2019 – 2020)

- Continue and extend bilateral and multilateral collaborations including exchange of equipment and personnel
- Continue and extend collaborative research on the physics and technology of future fusion devices
- Address physics and technology challenges related to steady state operation
- Continue organisation of international workshops and meetings

Multilateral collaborations

- There is a growing spherical tori community worldwide and a number of productive collaborations, many involving exchange of equipment and personnel
- China has been invited to join the ST TCP

Membership



Japan



Korea



United States



European
Commission

Why should your organisation become a member of the ST TCP?

The ST TCP contributes to the development of conventional tokamak devices (e.g. ITER) and alternate approaches such as the innovative ST concept, by strengthening co-operation among ST research programmes and facilities. The ST TCP helps to avoid unnecessary duplication of effort and helps to ensure complementarity between the research programmes through co-ordinated exchange of personnel and equipment among its members.

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