Introduction of 'PFC Design' session (4 oral + 8 poster)

• DEMO design

- [18, O] Development and testing results of water-cooled divertor target concepts for EU DEMO reactor (VISCA, Eliseo)
- [23, O] New developments in the design of a helium-cooled divertor for the European DEMO (GHIDERSA, Bradut-Eugen)
- [49,P] DEMO Divertor Cassette Design and Integration (MAZZONE, Giuseppe)

• ITER design

- [17,P] Thermal hydraulic modeling and analysis of ITER tungsten divertor monoblock (EL-MORSHEDY, Salah El-Din)
- [63,P] The Impact of Nonambipolar Energy Flow on Plasma Facing Materials Erosion and Forecast for ITER (KHIMCHENKO, Leonid)
- Lessons from present machines
 - [36, O] Damages on tungsten plasma facing components after experimental campaigns in WEST (FIRDAOUSS, Mehdi)

• Manufacture

- [75, O] Additive manufacturing of tungsten by means of laser powder bed fusion for plasma-facing component applications (VON MÜLLER, Alexander)
- [29,P] Flat Tungsten High Heat Flux Components Development Based On Different Technologies (YAO, Damao)

Introduction of 'PFC Design' session (4 oral + 8 poster)

• Other supports

- [73,P] Modelling of cooling performance in single and multi-channel high heat flux structures for fusion applications (SHARP, Samuel)
- [32, P] A Study of the Maintainability of the Lower (Divertor) Port & Divertor Cassette (WILDE, Andrew)
- [22, P] Some implications of recent technology advances on divertor physics performance requirements of DT fusion tokamaks (WISCHMEIER, Marco)
- [5,P] Activity and Decay Heat Estimates for the European DEMO Divertor with Respect to WCLL and HCPB Breeder Blanket Module Integration (TIDIKAS, Andrius)

Discussion outline of 'PFC design' session

- Cassette structure & flat-type structure of PFCs, 3D printing
- Water-cooled W-Cu v.s. helium-cooled W-Cu technologies
- How to minimize the misalignment, structure design & installation?
- W divertor Lessons learned from present tokamaks
- Material comparison: W-CuCrZr, W alloy and liquid metal?
- Material degradation due to neutron irradiation has to be also considered (up to 14 dpa for lifetime).
- Modeling and analysis validation to support the design
- R&D integrated with blanket design