

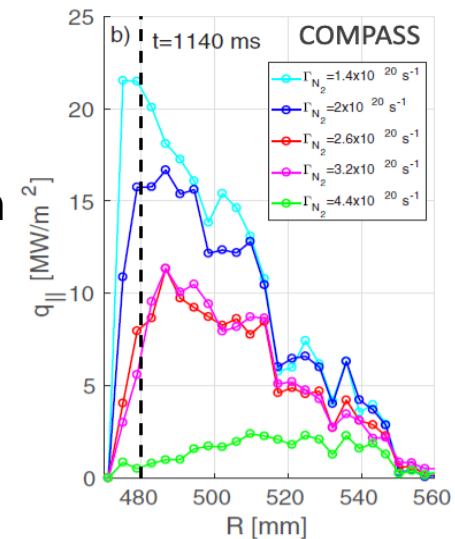
Plans for IPP Prague participation in the WEST Phase 2

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■ Experimental investigation of power loads & power balance

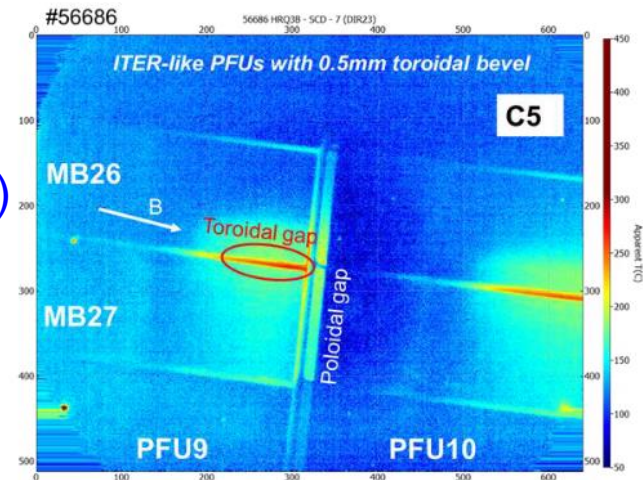
- Data analysis for characterization of divertor heat flux footprints in detached plasmas
 - Verify exponential nature of the buffered heat flux
 - Dependence of newly proposed parameters on radiative fraction
 - Proposal for WPTE RT14 (M. Komm) → relevance for future reactor operation

M. Komm Nucl. Fusion 59 (2019)



■ Operation with damaged/misaligned PFC

- Heat loads on toroidal edges of ITER-like monoblocks (MB)
 - Validation of ion orbit model-based theory → plasma deposition on both sides of toroidal gap between MB due to gyro-motion
 - Effect of Larmor radius & local (non-)ambipolarity
 - Proposal for WPTE RT16 (R. Dejarnac); experiments planned in WEST in 2021
- Active participation in the WEST melting experiment (WPTE)
 - PIC simulations for heat loads profiles around LE + thermionic emission (= input for MEMOS code [KTH])
- PFC shaping: heat loads on beveled ITER-like MB (WPTE)
 - PIC simulations for heat loads profiles



- **RE generation and mitigation**

- **Role of RE energy in the equilibrium of the RE beam and RE-rich plasma**

- RE beam radial position and beta depend on its energy → correction to the Grad-Shafranov equation
 - Controller reaction can be used as an energy diagnostics (or current diagnostics)
 - Study the use of the central solenoid to brake RE
 - Proposal for WPTE RT14 (O. Ficker); Priority P2

- **QH-mode & I-mode assessment in view of ITER/DEMO**

- **I-mode access with the favorable ∇B drift**

- Unfavorable ∇B drift might be prohibitive in DEMO (too high L-I power) and in ITER (not enough counter-NBI power)
 - Attempt I-mode in favorable ∇B drift & try reproduce C-Mod results w/ special plasma shapes [[Hubbard PoP 2011](#)]
 - Take advantage of WEST high magnetic field
 - Proposal for WPTE RT08 (O. Grover); Priority P2