

Summary of RAMI & LPO Session – X. Gong

- This contribution (presentation) discussed the development of long-pulse, fully non-inductive high-confinement plasma with a tungsten limiter/divertor on EAST. The following points were presented: An approximately 100-second EAST long-pulse fully non-inductive high- β_p discharge was achieved by RF-only methods, **considering the extension to a high-density regime with good confinement, the synergistic effect of ECCD with LHCD, core MHD ($m/n=1/1$), alpha stabilization, off-axis ECCD, impurity control by EC, and heat flux control by the H/D ratio**. Also, EAST demonstrated long-pulse H-mode plasma with a full tungsten limiter and tungsten divertor, supporting ITER's NRP.

Summary of RAMI & LPO Session – D.B. King

- This contribution (presentation) discussed **“the technical and engineering challenges”** of long-pulse operation in JET-ILW. This reviewed the following issues to successfully perform a 60-second pulse in JET-ILW: **Toroidal Field, Flux Consumption, H&CD (NBI, ICRF) Availability and Limitations, Heat Load Management on Divertor, Pulse Development, Control Systems/CODAS, Diagnostics, Approval-Processes-Sequence**.
- This contribution on the long-pulse approach in JET-ILW is expected to provide **guidance on the detailed review and approval process of checklists** that include technical and engineering considerations that must be examined before conducting shots, especially for extending pulse lengths in a large device like ITER.
- If possible, it may be needed **to compare and review the long-pulse operating procedures of other devices**. Additionally, it seems important to consider how to structure checklists from a plasma physics perspective in the long-pulse operating procedures.