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Overview of recent results from MAST SIMON PINCHES, Euratom/UKAEA Fusion Association, MAST TEAM — The MAST programme continues to address key issues for ITER and beyond, whilst undertaking research and development to establish the physics basis for a CTF based upon a spherical tokamak. The programme is benefiting from a range of technical enhancements which include: two long-pulse neutral beam PINIs; a twelve coil array of internal coils for ELM control; a multi-chord MSE diagnostic with 35 channels, 2.5 cm spatial resolution and down to 0.5ms time resolution, a new long pulse 28 GHz gyrotron (on loan from ORNL) allowing EBW start-up studies at higher power; an upgraded Thompson scattering system (240Hz, 120 core channels) together with a "smart" triggering system; a divertor science facility; and a disruption mitigation valve (on loan from FZJ). Recent studies include: ELM control using RMPs; transport and confinement including the effects of collisionality; off-axis current drive including the impact of fast particle instabilities; a campaign of counter injected neutral beam; and NTV studies in collaboration with the NSTX team. This presentation will provide an overview of recent results and future plans. Funded by EPSRC and EURATOM.

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