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Observation of runaway plateaus in EAST disruptions triggered by MGI

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Runaway plateaus have been formed in EAST disruptions via massive argon injection into low-density ohmic discharges, which are carried out with circular plasma and limiter configuration in full-metal wall condition. REs are detailly described in the following three phases:
Formation: Formation of runaway plateau is found strongly depends on pre-disruption density and amounts of injected gases. A typical scenario to a reproducible RE plateau is with density of 0.3-0.5(10^19 m-3), injected gases of ~400-500 Pa.L and finally post-disruption density lower than 3. Predisruption REs are also observed and confirmed to
play a key role in plateau formation due to increasing RE plateau with lower pre-disruption ohmic component.
Runaway plateau: At most 90% plasma current can be converted to RE plateau of 270kA and last for almost 400 ms in EAST tokamak. On the phase of RE plateau, they are found to shrink and move outwards and strikes the LFS limiter as observed in SXR array and infrared camera directly.
Termination: A secondary D2 injection during RE plateau phase leads to an earlier termination and increasing density of core, which eventually reduced energy of REs via higher collisionality. At the same time, there appears multiple magnetic fluctuations with higher amplitude accompanied with RE loss events, which is confirmed to convert more magnetic energy to kinetic energy of REs.

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