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TEN YEARS OF COMPASS TOKAMAK OPERATION

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The COMPASS tokamak, originally constructed and operated at UKAEA in UK, has been reinstalled at the Institute of Plasma Physics of the CAS in 2009 and experienced a fruitful decade of scientific exploration. In this contribution, we will summarize the main achievements, which have contributed to the physics understanding of tokamak plasmas and development of nuclear fusion related technologies. These include: (i) investigation of the power decay lengths in limited plasmas, which directly impacted the design of the ITER inner wall plasma-facing components, (ii) error field (EF) experiments using the unique set of the tokamak high-field-side error field coils, (iii) power exhaust studies, (iv) runaway electron characterization and mitigation programme, and others.

COMPASS tokamak will be shut down before the end of 2020 to make space for a completely new machine: COMPASS Upgrade. Characteristics of this challenging device will be presented.

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