

**Observation of Suprathermal Electrons During Magnetic Reconnection at  
the Sawtooth Instability in DIII-D Tokamak**

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**Abstract.** Intense bursts of x-ray and electron cyclotron emission are observed during sawtooth instabilities in high-temperature plasmas in the DIII-D tokamak. The bursts are initiated around the X-point of the  $m = 1$ ,  $n = 1$  magnetic island at the beginning of the sawtooth crash and are displaced to larger radii later during the temperature collapse. Reconstruction of the magnetic configuration using motional Stark effect (MSE) data and numerical simulations indicates that the bursts can be connected with suprathermal electrons ( $E_r \sim 30\text{--}40$  keV) generated during reconnection of the magnetic field around the  $q = 1$  surface.