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A multi-instrument view of tail reconnection at Saturn

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We present a study of magnetic reconnection events in Saturn's magnetotail region, expanding on the previous work of Jackman et al. [2007]. The Cassini data from Saturn's magnetotail reveal several instances of rapid field dipolarizations near midnight and approximately 50 R_S downtail. The variability of the magnetic field components during these dipolarizations also indicates corresponding changes in the angular momentum of the magnetotail plasma. These events are akin to those resembling jovian "substorms" in the corresponding region of the jovian tail, but with some features specific to the kronian system. We combine the relevant magnetometer dataset with simultaneous ion and electron information, energetic particle data, and measurements of Saturn's radio emissions, in order to build up a more detailed picture of the magnetospheric reconfiguration and dynamics taking place during these events.