

## **Science highlights from the Cassini magnetometer and focus for the end of mission orbits**

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### **Abstract**

Cassini magnetometer measurements have led to several important discoveries about the Saturnian system, including the southern plume at Enceladus, northern and southern magnetospheric near-planetary period oscillations and have confirmed the extreme axisymmetry of the internal field. The unique geometry of the end of mission proximal orbits provides an unprecedented opportunity to measure Saturn's intrinsic magnetic field at close distances to the planet, never before encountered. We hope to uncover the true nature of the internal magnetic field of Saturn, and in particular, to quantify the degree of asymmetry and to thus directly determine the true planetary rotation period. From magnetic field models based on measurements made during the proximal orbits, we hope to understand key aspects of Saturn's interior structure, such as the depth to the dynamo region.