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## Geophysics of icy Saturnian satellites

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Since beginning its mission at Saturn in July, 2004, the Cassini/Huygens mission has provided a wealth of new geophysical data about the icy satellites of Saturn, including Titan. This presentation will address the current state of knowledge about these bodies and the inferences that can be drawn about the origin and history of the satellite system. Areas covered include: 1. Accurate shape and mass determinations leading to derived density values which constrain the bulk composition of the satellites, 2. Evidence from the dynamical state of Iapetus for early formation of the Saturnian system, resulting in the incorporation of short lived radioactive isotopes (*e.g.*  $^{26}\text{Al}$ ) in the satellites, 3. Dramatic evidence for current heating and geyser activity in the south polar region of Enceladus and implications for early heating and differentiation of this small satellite, and 4. Implications for the history of other icy satellites including Titan.

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