

Joint EPS/ Astronomy Colloquium
February 3, 2011
4:00pm
141 McCone Hall

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The title: "Unveiling Titan: A World Strange Yet Familiar"

The Cassini mission to Titan has unveiled a world that experiences surface temperatures about 200 degrees colder than Earth's, receives 100 times less sunlight, where hydrocarbon molecules rain from the sky and water ice is as hard as rock. But for all of its strange thermophysical and chemical state, Titan exhibits landforms remarkably familiar to our own: extensive dunes in the dry regions, braided channel networks draining from mountains to large basins, and perhaps most astonishingly, large seas and lakes in the high latitudes filled with liquid methane and ethane. This presentation will review the discoveries of the recent flybys of Titan with focus on what has been learned about its lakes, their seasonal evolution, and the hypothesis that they undergo cyclic changes over tens of thousands of years, analogous to (Croll) Milankovitch climate cycles on Earth.