

NASA TO SEND MISSION TO TITAN'S SEAS

Washington: In a bid to study the Earth's past more closely, NASA is reportedly planning a future mission to Saturn's moon Titan.

Studying Titan is thought to be looking back in time at an embryonic Earth as Titan is the only moon in the solar system to have a significant atmosphere and this atmosphere is known to possess its own methane cycle, like Earth's water cycle.

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NASA's Cassini spacecraft has extensively studied several seas during multiple flybys, some of which average a few metres deep,

whereas others have depths of over 200 metres - the maximum depth at which Cassini's radar instrument can penetrate.

So, if scientists are to properly explore Titan, they must find a way to dive into these seas to reveal their secrets.

At this year's Innovative Advanced Concepts (NIAC) Symposium, a Titan submarine concept was showcased by NASA Glenn's COMPASS Team and researchers from the Applied Research Lab.

"Measurement of the trace organic components of the sea, that may exhibit

pre-biotic chemical evolution, will be an important objective," the scientists wrote.

Envisaged as a possible mission to Titan's largest sea, Kracken Mare, the autonomous submersible would be designed to make a 90-day, 2,000-kilometre voyage exploring the depths of this vast and very alien marine environment.

Communicating with Earth would not be possible when the vehicle is submerged, so it would need to make regular ascents to the surface to transmit science data. IANS