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SPACE EXPLORATION SYMPOSIUM (A3)
Interactive Presentations (IP)

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UNMANNED MISSION TO THE OORT CLOUD

Abstract

Unmanned Mission To The Oort ClouD Abstract: For thousands of years astronomers and scientists have been watching comets traveling close to earth and light up the night sky. In time, these observations lead to a number of paradoxes. But the question is where were these all comets coming from? And if their surface material vaporizes as they approach different stars then they must be formed very far away, where they would have existed for most of their lifespans. Starting from the sun we have planetary region and then we have Kuiper belt and then comes a spherical cloud of icy objects named Oort cloud. This giant cloud is believed to surround the sun at around 50,000 astronomical units (AU). Mission is to reach this icy cloud. Being farther than Kuiper Belt the region remains unexplored and largely undocumented. Various space probes like Voyager-1, Voyager-2, Pioneer 1011 and New Horizons are yet to reach the area of Oort cloud. Voyager-1 will reach the Oort cloud in 300 years and will take 30,000years to pass through it. However by 2025 the probe's radioisotope thermoelectric generators will not get power supply and will not function. Incredible distance from earth is the major difficulty of exploring the Oort cloud. The possibility of this mission will open new horizons extending our grasp on the understanding and workings of our universe.