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TITANIA, LUNA OF URANUS: A PROPOSAL FOR DETECTING A POTENTIAL SURFACE OCEAN

**Abstract**

From time immemorial, the possibility of exploring new bodies in the solar system with the intention of finding forms resembling our planet or simply discovering new bodies where life potentially existed has been contemplated. In our study, we present a proposal applied to Titania, one of Uranus' moons, which exhibits impressive characteristics suitable for investigation. Titania shows viable features for hosting a subsurface ocean. To confirm this, a future mission could detect certain perturbations in the magnetic field caused by electrically conducting fluids, similar to what happened with the moon Europa in the Galileo mission.