Oberon

Science and space exploration have been a part of my life, so I don't use to think about a justification for those activities. But when such a question is raised, the right answer, I think, lies in science itself - fueling curiosity - and an opportunity for innovations - bringing direct applications of engineering into everyday life.

On those two argumentation lines, I would like to share my choice of **Oberon** as an object with the highest potential for future exploration.

Despite all the moons sharing similarities, it appears to me that Oberon shows the biggest geodiversity. Out of Oberon, Titania and Ariel, the first-mentioned shows the most densely cratered surface and scientists expect the existence of an 11km high peak. To be said at least, Oberon is also the biggest of the aforementioned.

The very little known about Uranus' moons came from one single flyby of Voyager 2 in 1986. However, even from this scarce data, a theory about the asteroid origin of so-called large moons have been formulated. Research of this particular moon could contribute to the verification of the hypothesis.

All of the reasonings for scientific significance can be easily applied while looking for engineering challenges. Oberon certainly conceals opportunities for non-invasive research methods such as spectroscopy, and mainly optical imagery. This field has undergone massive progress since the '80s to date - at that time, the resolution has been about 6km² per pixel. Increased capability of optical observation brings up interesting data transmission challenges, as navigation in deep space does.

A future probe can utilize a modularity approach to construction, which decreases overall risk and maintains flexibility over technical improvements, and benefit from radioisotopes power system - as in that dark, cold and distant world, this is the only reliable source of power to explore.

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