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Moon Exploration – Part 3 (2C)Author: Mr. Lucas Fonseca
Brazil, lucas.fonseca@airvantis.com.brDr. Douglas Galante
IAG/USP, Brazil, douglas@astro.iag.usp.br

ASSESSMENT OF THE RADIATION LEVEL IN THE POINT L2 (E-M) USING A LUNARCUBE

Abstract

Considering the imminent return of manned missions to the Moon, it is of interest that possible harmful aspects should be investigated in order to protect astronauts from the harsh space environment. The Lagrangian point "L2 Earth-Moon" is a good candidate to receive a permanent manned station to fulfill the necessity of the backup to the far-side-of-the-moon exploration. Therefore, it is desirable to have a preliminary assessment of the radiation level in this region and also to understand the impact over life forms. For this purpose, the brazilian astrobiology group in partnership with universities and private companies is proposing the injection of a Cubesat (6u) embedded with; 1. radiation sensors and 2. an experiment to grow a bacterial colony as payload. The possibility to use Cubesats, hereinafter referred as LunarCubes, might decrease substantially costs, time and complexity of the mission. The mission proposed covers the development of the payload and bus; contributing in i. educational, ii. technical and iii. scientific development within Brazil and possible partners.