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SETTING UP AN EARTH MOON GONDOLA FROM THE MOON VILLAGE

Abstract

The expected availability of Carbon Nanotubes in a few decades makes realistic the establishment of a permanent cable car or gondola (EMG for Earth Moon Gondola) linking the Near side of the Moon to the Earth South pole.

This revolutionary infrastructure will not only permit to send cargo and crew to the Moon and any destination in the solar system but also to take back to Earth products from space such as Helium 3 from the Moon or minerals from asteroids.

The gondola tether will be deployed from the Lagrangian L1 area of the Earth-Moon system simultaneously in two directions: towards the Moon and towards the Earth.

Once the lunar extremity has reached the lunar surface, it can be anchored to a place that will ultimately be the Moon terminal.

The Moon Village which, is presently under investigation at ESA and other space agencies and companies, should play a major role in all the operational stages of the EMG endeavour, from the initial attachment of the cable to the lunar surface to its operational exploitation.

In the paper, after introducing the EMG main characteristics as they have been presented at IAC 2018, we will present a first vision of the activities that would have to be supported by the Moon Village settlement. The paper will be based on studies led by ENSTA (Ecole Nationale Supérieure de Techniques Avancées) in collaboration with AGP21 (Association Grands Projets du 21ème siècle) in France.