

Values and New Models for Space Exploration (10)

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THE “MOON VILLAGE” CONCEPT

Abstract

Space exploration is anchored in the International Space Station and in the current and future planetary automatic and robotic missions that pave the way for long-term exploration objectives. The Moon represents a prime choice for scientific, operational and programmatic reasons and a settlement on its surface could be the enterprise that federates all interested Nations. In addition to be an object of scientific exploration the Moon lends itself to be the platform to permanently extend human technical and economic activities on another celestial body's surface. On these considerations ESA is currently elaborating the concept of a Moon Village as an ensemble where multiple users can carry out multiple activities. The Moon Village has the ambition to serve a number of objectives that have proven to be of interest (including astronomy, fundamental research, resources management, moon science, etc.) to the space community and should be the catalyst of new alliances between public and private entities including non-space industries. Additionally the Moon Village should provide a strong inspirational and education tool for the younger generations . The Moon Village will rely both on automatic, robotic and human-tendered structures to achieve sustainable moon surface operations serving multiple purposes on an open-architecture basis. This Europe-inspired initiative aims at rallying all communities (across scientific disciplines, nations, industries) and make it to the top of the political agendas as a scientific and technological undertaking but also political and inspirational endeavour of the XXI century. The current reflections are of course based on the current activities and plans on board the ISS and the discussion held in international fora such as the ISECG. The paper will present the status of these reflections, and will give an overview of the on-going activities being carried out to enable the vision of a Moon Village.