

From Robotic to Human Exploration of the Moon: ILEWG Roadmap

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We shall discuss the rationale and roadmap of ongoing Moon missions, and how they can prepare for future human exploration. Various fundamental scientific investigations can be performed with robots and humans: clues on the formation and evolution of rocky planets, accretion and bombardment in the inner solar system, comparative planetology processes (tectonic, volcanic, impact cratering, volatile delivery), records astrobiology, survival of organics; past, present and future life. The roadmap includes also enabling technologies that prepare for the best synergies between robots and humans: Remote sensing miniaturised instruments; Surface geophysical and geochemistry package; Instrument deployment and robotic arm, nano-rover, sampling, drilling; Sample finder and collector, Support equipment for astronaut sorties; life science precursors for life support systems;

We shall address requirements for Robotic precursor programme, global robotic village, technology development, resource utilisation, human aspects, science and exploration from lunar sorties, transition towards permanent settlements and lunar bases.