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THE NEW MARS OUTPOST AND RESEARCH AT THE D-MARS ANALOG SITE

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Abstract: The analog space missions performed at the Desert Mars Analog Ramon Station (D-MARS) are a method to develop and test dual-use technologies, to study scientific methods, and to acquire knowledge for human space exploration, taking advantage of the Israeli start-up ecosystem and the Mars-like geology and morphology of the Makhtesh Ramon crater in the Negev desert, Israel.

The environment in the habitat's vicinity is used for simulated Extra-Vehicular Activities (EVA), where simulated analog fieldwork is being conducted. Various international technologies in agriculture, data handling, communication, robotics, medicine, and more are used within and around the D-MARS facility.

An advanced Mars outpost analog, that will host the international analog Mars mission AMADEE-20 during October-November 2021, is being established at the D-MARS analog site. The central habitat unit in this complex is the D-MARS Hab02 prototype, that is designed to include unique feature; positive pressure as countermeasure for the dust problem, clean room environment for sterile handling of samples, and in the near future we intend to test and demonstrate technology for using local soil layer as a radiation protection.

This paper presents the new habitat, technology, and research that are being carried out these days and in the near future at the D-MARS space simulations center.

Presentation link: https://www.youtube.com/watch?v=nbLZZQS2otU