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Author: Mr. AO JIANG  
University of Leeds, United Kingdom, aojohn928@gmail.com

Dr. Yao Xiang  
China, aojiang@vip.126.com  
Prof. Bernard Foing  
ILEWG "EuroMoonMars", The Netherlands, foing@strw.leidenuniv.nl

HABITAT HUMAN NEEDS EXPLORATION BASED ON THE INTERNATIONAL LUNAR  
RESEARCH STATION DEVELOPMENT MISSION**Abstract**

The Moon is mankind's preferred target for space exploration and exploitation of space. Lunar scientific research plays an important role in promoting the development of space science. In 2021, China and Russia jointly launched the International Lunar Research Station (ILRS) mission. This study proposes a human factors requirement concept for the manned habitat for the ILRS mission. Based on the three major mission functions of the habitat, namely human survival, resource acquisition and cosmic exploration outpost, the habitat is proposed to include four major components, namely the integrated basic module, survival module, resource acquisition module and cosmic exploration outpost module, and the corresponding human factors requirements. Among them, the integrated basic module needs to consider the safety and reliability of the energy station, communication station and scientific and technical support institutions in the process of interaction with people. The Survival Module is designed to meet the needs of human survival and includes housing areas, sports centres, medical institutions, plant sheds, breeding bases, sewage purification and treatment systems, air purification and recycling systems, waste disposal and security and emergency response institutions. guaranteeing human survival. The extracted water ice is divided into two parts, one of which is melted at high temperatures, treated and injected into the water recycling system, while the other continues to be stored in the form of water ice for emergency purposes. The cosmic exploration outpost module considers the exploration of unknown resources, energy resupply for space stations and space exploration. The ideas in this paper provide human factors considerations for the construction and modular design of a lunar research workstation, offering new insights in achieving the human survival of the habitat and the habitat habitability element of the habitat.