

SPACE LIFE SCIENCES SYMPOSIUM (A1)
Behaviour, Performance and Psychosocial Issues in Space (1)

Author: Mr. Yue Wang

China Astronaut Research and Training Center, China, dennyo.wang@gmail.com

Mr. xiaolu jing

China Astronaut Research and Training Center, China, xl_jing@yahoo.com.cn

Prof. Yanqiang Bai

Astronaut Center of China, China, baiyq@263.net

Mrs. huang weifen

China Astronaut Research and Training Center, China, wubinacc@sina.com

Mrs. Li He

China Astronaut Research and Training Center, China, sfaacc@163.com

Prof. Bin Wu

China Astronaut Research and Training Center, China, wubinacc@sina.com

Mr. Chen Shanguang

China Astronaut Research and Training Center, China, chenshg@163.com

Prof. Yuejia Luo

Beijing Normal University, China, luoyj@bnu.edu.cn

THE RESEARCH ON CHARACTERISTICS OF MOOD STATE DURING 520 DAYS ISOLATION AND
CONFINEMENT (MARS500)

Abstract

The success of human space exploration will depend on the ability of spacefarers to remain confined and isolated from Earth much longer than previous missions or simulations, while maintaining the optimal mental state to cope with multi-stresses. Mars500 which was completed by an international crew of six during 520 days was a ground simulation, which mimicked the interplanetary spaceflight between Earth and Mars, and cooperated by multinational. Mars500 offered a valuable opportunity to research on the mood state and behavior performance under extreme environment. This research based on the experimental data and crew's diary during isolation, and the interview record before and after isolation. By data analysis, this study concluded the characteristics of mood state for the crew in isolation, the general stable tendency and frequent negative emotional appearance as time extended. Present article also talked about the stressors which might induce the change of mood state including environmental conditions, work schedule, cultural difference, interpersonal relationship internal and external of the crew. These stressors could cause low work efficiency, decline of communication, sleep disorder and team collision.