

IAA/IAF SPACE LIFE SCIENCES SYMPOSIUM (A1)
Interactive Presentations (IP)

Author: Prof. Armando Rodríguez-López
Mexico, psiyque701@hotmail.com

Ms. Olga Lidia Juárez-Patiño
Mexico, secmedaero.dn11@sedena.gob.mx

Dr. Mario Rodríguez-Camacho
Universidad Nacional Autónoma de México (UNAM), Mexico, psiyque701@hotmail.com

Prof. Genaro Eduardo Aja Von-Putlitz
Mexico, geaja18@yahoo.com.mx

Prof. Vicente Lozada-Balderrama
IPN, Mexico, lozadabv@hotmail.com

IMPORTANCE OF PSYCHOLOGICAL EVALUATION IN AEROSPACE SAFETY. (30 YEARS EXPERIENCE, SECRETARIAT OF NATIONAL DEFENSE (SEDENA) -SECRETARIAT OF MARINE NAVY OF MÉXICO (SEMAR).

Abstract

Multiple studies have linked the physiology, cognitive performance, personality and motivation of aerospace crews with the generation of aerospace incidents and accidents and the etiology of pathognomonic medical and psychological disorders. The main purpose of psychological assessment is the safety of aerospace operations through medical-psychological appraisal, selection, supervision, transition, training of human factor and its withdrawal from operations, based on strict statistical criteria, designing psychometric, neuropsychological, electrophysiological and specific operational studies, including flight simulators. Results from 30 years' experience, of psychological assessment of military pilot applicants, military aircrews and aeronaval militaries are described, identified differences between experts and novices pilots, projecting towards spatial pilotage implementation. Importance of speed and accuracy of perceptual-motor, attentional, rote, visual-motor processes and multitasking for situational awareness, decision making and coping with stress during sudden changes in workload and in-flight emergencies is highlighted, identifying various personality and attitude operational profiles, as well as security risk. Projection of the psychological assessment of personnel space crews, who face conditions of outer space as the micro and zero gravity, changes in circadian rhythms, perceptual alterations, somatosensory, and resistance to inherent psychological stress of long duration space missions is set, inducing meaningful changes in their motivation and aerospace adaptation. The importance of psychological assessment for the benefit of the safety and success of aerospace operations is highlighted.