

SPACE OPERATIONS SYMPOSIUM (B6)
Training Relevant for Operations, including Human Spaceflight (3)

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TRAINING FOR INCREASED AUTOMATION IN THE OPERATIONS ENVIRONMENT?

Abstract

Mission success relies on a dedicated team of people that work to ensure all operations go smoothly. The frontline of this group are the flight control team who cover a 24/7 shift pattern ready to react to all scenarios. Naturally the level of ease with which actions are executed is dependant on the training provided helping to ensure a guaranteed level of competence. Various forms of training exist from simulators, EGSE, EM, industry, nominal and contingency operations. However, a further aspect to consider is the human factor; how a person will react to emergencies and to other people. Furthermore from the early days of space exploration where a more manual approach was required for space operations we are already experiencing the shift towards a greater level of autonomy both on-board the spacecraft and in ground systems. We can already see an evolution towards this approach in control team training methodology. A greater overview of the system is provided requiring more overall knowledge and hence an increased training package is required. The availability to monitor systems from home, or via mobile device, is beginning to lessen the requirement for 24/7 manned positions. A change in operational and training philosophies is gradually occurring to adapt for future space operations where the concept of a wholly automated operations environment must be considered as a realistic proposal. This paper will provide an overview of current operational and training techniques and “lessons learned” as well as proposals for the future.