

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

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A GLIMPSE FROM THE INSIDE OF A SPACE SUIT:
WHAT IS IT REALLY LIKE TO TRAIN FOR AN EVA?

Abstract

The beauty of the view from the office of a spacewalking astronaut gives the impression of simplicity, but few beyond the astronauts, and those who train them, know what it really takes to get there. Extravehicular Activity (EVA) training is an intense process that utilizes NASA's Neutral Buoyancy Laboratory (NBL) to develop a very specific skill set needed to safely construct and maintain the orbiting International Space Station. To qualify for flight assignments, astronauts must demonstrate the ability to work safely and efficiently in the physically demanding environment of the spacesuit, possess an acute ability to resolve unforeseen problems, and implement proper tool protocols to ensure no tools will be lost in space. Through the insights and the lessons learned by actual EVA astronauts and EVA instructors, this paper will take you on a journey through an astronaut's earliest experiences working in a spacesuit in the underwater training environment of the NBL. This work details an actual Suit Qualification NBL training event, outlines the numerous challenges the astronauts face throughout their initial training, and the various ways they adapt their own abilities to overcome them. The goal of this paper is to give everyone a small glimpse into what it is really like to work in a spacesuit. Copyright © 2009 by United Space Alliance, LLC.