Paper ID: 65787
student

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Interactive Presentations - IAF HUMAN SPACEFLIGHT SYMPOSIUM (IP)

Author: Ms. Nicole Chase
SEDS, United States, nicolechase13@gmail.com

AN EXAMINATION OF WEARABLES AND THEIR MATERIALS: HOW CAN WEARABLES BE MADE TO BETTER PROTECT ASTRONAUTS IN SPACE

Abstract

Wearables are a very common thing here on Earth. They monitor biometric activity and they remind us to do certain tasks. But, what if wearables could be applied to being off Earth in order to monitor astronauts' vital signs and be able to "predict" when a medical emergency was going to happen? This study is a fusion of a literature review and a proposal. The literature review aspect will be done looking at published research about wearables, in general and potential wearables that have been proposed for use in space. The literature review will also examine how certain materials behave in zero gravity, and how they behave over time in zero gravity. The proposal aspect will be based upon the findings from the literature review and it will propose new and hypothetical wearables made up from different materials that could measure a variety of biometric data such as vital signs and potentially be used as a life saving device in the event of an emergency. These proposed new and hypothetical wearables will be displayed using mock-ups done in CAD. The goal of this study is to not only showcase what information about wearables is already out there, but to engage and educate the public about the importance for new technologies especially as, after all, the human body is a machine and it will take a very sophisticated human-engineered machine in order to properly observe and forecast when the human body machine's check engine light is illuminated, or flashing.