

Individualized Behavioral Health Monitoring Tool

Detects warning signs of disorders and conditions

Behavioral health risks during long-duration space exploration missions are among the most difficult to predict, detect, and mitigate. Given the anticipated extended duration of future missions and their isolated, extreme, and confined environments, there is the possibility that behavior conditions and mental disorders will develop among astronaut crew.

Pulsar Informatics, Inc., has developed a health monitoring tool that provides a means to detect and address behavioral disorders and mental conditions at an early stage. The tool integrates all available behavioral measures collected during a mission to identify possible health indicator warning signs within the context of quantitatively tracked mission stressors. It is unobtrusive and requires minimal crew time and effort to train and utilize. The monitoring tool can be deployed in space analog environments for validation testing and ultimate deployment in long-duration space exploration missions.

Applications

NASA

- ▶ Long-duration space exploration missions
- ▶ Astronaut training
- ▶ Training of medical personnel to recognize signs of behavioral distress

Commercial

- ▶ Tracking behavioral health in occupations associated with high stress, high workload, and high danger factors:
 - Military personnel
 - Law enforcement
 - Emergency responders



Phase II Objectives

- ▶ Achieve an individualized behavioral health monitor software interface
- ▶ Develop a data integration system
- ▶ Construct a trend-and-change detection algorithm
- ▶ Complete a countermeasure selection aid

Benefits

- ▶ Detects behavioral disorders and mental conditions at an early stage when they can more easily be addressed
- ▶ Is unobtrusive
- ▶ Requires minimal time to learn and utilize

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