

CREW HEALTH AND PERFORMANCE INTEGRATED DATA ARCHITECTURE PROJECT UPDATES

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Future Human Exploration missions will face new constraints as crews move further from terrestrial communication, resupply, and the real-time support enjoyed by Low Earth Orbit missions today. Exploration crews will need to be more self-reliant and able to respond to emergencies without immediate support from ground-based personnel. A new generation of technologies, employing advanced analytical and predictive modeling techniques, is needed to assist the crew's work, help maintain their health, and inform the decisions they make on these future Exploration missions. The Crew Health and Performance Integrated Data Architecture (CHP-IDA) project is laying a foundation for these future technologies by integrating sources of data generated by and around the crew and then providing them through common data models and Application Programming Interfaces to external systems. The combined data model makes comprehensive Crew Health and Performance data accessible and more meaningful to the decision-making process. This presentation will describe the currently ongoing effort to develop and evaluate a path-to-flight concept of the CHP-IDA software, current integrations, updates to the architecture, and examples of exploration scenarios in which CHP-IDA would be used.