

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
New Worlds - Innovative Space Education And Outreach (5)

Author: Mr. Philip Harris

National Aeronautics and Space Administration (NASA), Johnson Space Center, United States

Mrs. Jennifer Price

National Aeronautics and Space Administration (NASA), Johnson Space Center, United States

Mr. Mark Severance

National Aeronautics and Space Administration (NASA), Johnson Space Center, United States

Dr. Regina Blue

National Aeronautics and Space Administration (NASA), Johnson Space Center, United States

Mr. Ahmed Khan

National Aeronautics and Space Administration (NASA), Johnson Space Center, United States

Dr. Matthew Healy

United Space Alliance, United States

Mr. Jesse Ehlinger

United Space Alliance, United States

ISSLIVE! - BRINGING THE INTERNATIONAL SPACE STATION TO EVERY GENERATION

Abstract

Just 175 miles above us, the International Space Station (ISS) is orbiting. Each day, the astronauts on board perform a variety of activities from exercise, science experiments, and maintenance. Yet, many on the ground do not know about these daily activities. The National Aeronautics and Space Administration Johnson Space Center (NASA/JSC) innovation creation ISSLive! - an education project - is working to bridge this knowledge gap with traditional education channels such as schools, but also non-traditional channels with the non-technical everyday public. ISSLive! provides a website that seamlessly integrates planning and telemetry data, video feeds, 3D models, and iOS and android applications. Through the site, users are able to view astronauts' daily schedules, in plain English alongside the original data. As an example, when an astronaut is working with a science experiment, a user will be able to read about the activity and for more detailed activities follow provided links to view more information - all integrated into the same site. Live telemetry data from a predefined set can also be provided alongside the activities. For users to learn more, 3D models of the external and internal parts of the ISS are available, allowing users to explore the station and even select sensors, such as temperature, and view a real-time chart of the data. Even ground operations are modeled with a 3D mission control center, providing users information on the various flight control disciplines and showing live data that they would be monitoring. Some unique activities are also highlighted and have dedicated spaces to explore in more detail.

Education is the focus of ISSLive!, even from the beginning when university students participated in the development process as part of their master's projects. Focus groups at a Houston school showed interest in the project and excitement towards including ISSLive! in their classroom. Through this inclusion, students' knowledge can be assessed with projects, oral presentations, and other assignments.

For the public citizens outside of the traditional education system, ISSLive! provides a single, interactive, and engaging experience to learn about the ISS and its role in space exploration, international collaboration, and science. While traditional students are using ISSLive! in the classroom, their parents, grandparents, and friends are using it at home. ISSLive! truly brings the daily operations of the ISS into the daily lives of the public from every generation.