

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)  
Commercial Human Spaceflight Programs (2)

Author: Mr. Daniel Adams  
United Launch Alliance LLC (ULA), United States, daniel.d.adams@ulalaunch.com

PREPARING FOR AMERICA'S RETURN TO HUMAN SPACEFLIGHT

**Abstract**

Astronauts have not launched into space from the United States since the retirement of Space Shuttle in 2011. That is about to change. United Launch Alliance (ULA) is proudly preparing for return to human spaceflight from the United States.

Beginning in late 2018 (very near to IAC 2018), ULA will launch the Boeing Starliner crew capsule aboard its Atlas V rocket. In preparation for this critical mission, ULA has invested in key safety systems, infrastructure, and rocket design updates. The presentation will discuss these preparations with specific emphasis on design for astronaut safety.

ULA designed and installed a 50+ meter tall Crew Access Tower on its launch pad at Cape Canaveral in Florida. In addition to providing access to the Starliner capsule, the tower includes an emergency egress system. The emergency egress system provides means of rapid escape from an emergency while the rocket is on the launch pad. The presentation will discuss complex process of installing the crew access tower and egress system amidst ongoing space launch activities.

Integrating the advanced Starliner capsule onto Atlas V required ULA to design new hardware, while completing human rating certification for the existing vehicle designs. The new hardware included an aeroskirt, providing aerodynamic stability for the crew capsule. The presentation will discuss the process for human rating, with emphasis on design of new hardware.