



PRESS INFORMATION

FOR IMMEDIATE RELEASE

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STS-126 Launches With New Software That Enhances Astronaut Safety

KENNEDY SPACE CENTER, FL (Nov. 14) -- As Endeavour lifted off today on the 124th Space Shuttle flight, a new software upgrade aimed at improving mission safety was also on board.

The upgrade, provided by United Space Alliance, improves crew situational awareness, long-term system maintainability and robustness, and enhances vehicle performance in the unlikely event of an abort.

The updates, collectively known as Operational Increment 33 software, or OI-33, have been made to the Primary Avionics Software System (PASS) that flies the Space Shuttle, the Backup Flight System (BFS) software that could take over from PASS if needed, and the display software used in the Multifunction Electronic Display Subsystem (MEDS) computers.

The astronauts have two new displays that give them real-time data to help select the safest landing site in the unlikely event the Shuttle cannot reach orbit or in the event of an emergency reentry.

"This marks a significant safety improvement for the Space Shuttle, and shows how we continue to invest our experience and expertise in the system," said Loren Shriver, United Space Alliance's Chief Technology Officer.

The Ascent Bearing Display, designed for use during launch, includes multiple maps that change as the Orbiter position moves. Shuttle General Purpose Computers compute constantly updated estimates of the distance that the orbiter can glide. This information is presented to the flight crew through the Bearing Display maps, which include location markers for the available Shuttle nominal and abort landing sites within that estimated distance.

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The Entry Bearing Display, designed for use during an abort landing, shows a plot of the estimated distance, or range, to three crew-selected landing sites. The Display includes the range and any maneuvers required to reach a landing site as well as an estimation of whether the orbiter has enough energy to reach the three displayed landing sites.

The upgrade also enhances software governing the External Tank separation during the unlikely event of a Return to Launch site (RTL) abort landing. This improvement will enable a faster increase in the distance between the Orbiter and the ET immediately following separation, reducing the chance of contact to near zero.

For more information on this upgrade, including a fact sheet, visit <http://www.unitedspacealliance.com/news> and click the Current Mission page.

About United Space Alliance:

United Space Alliance is a world leader in space operations with extensive experience in all aspects of the field. Headquartered in Houston, USA has 10,000 employees working in Texas, Florida and Alabama. Currently, USA is applying its broad range of capabilities to NASA's Space Shuttle, International Space Station and Constellation programs as well as to space operations customers in the commercial and international space industry sectors.

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