Boeing Dedicates New, High-Tech Facility For NASA Human Space Flight Mission Support

While no one is likely to confuse it with its better-known NASA counterpart in Houston, a $3 million, state-of-the-art Engineering/Mission Support Room (EMSR) dedicated today at the Boeing Huntington Beach facility nevertheless will play a vital, if unheralded, role in ensuring the safety and success of NASA's human space flight missions.

At a ribbon-cutting dedication this morning was attended by officials from Boeing, NASA, Shuttle prime contractor United Space Alliance (USA) and key vendors as well as local, state and federal government representatives. Stan Albrecht, Boeing Reusable Space Systems (RSS) vice president and program director, Space Shuttle and International Space Station Sustaining Engineering, told the crowd the new, modern facility will substantially benefit assembly and operations of the new International Space Station (ISS).

"This new engineering and mission support facility represents a significant investment by Boeing in America's human space flight program future," he said. "By co-locating our Shuttle and ISS engineers in one, state-of-the-art facility, we have created a single focal point for providing rapid and cost-effective mission support to NASA and USA. This will be particularly beneficial in coming years as Shuttle continues ISS assembly and operations support. The inherent synergies will result in safer and more reliable, cost-effective and successful missions for both ISS and other future human space flight endeavors."

Boeing EMSR engineers participate in NASA's formal go/no-go decision process for each launch. Working hand-in-hand with their NASA and USA counterparts at the Johnson Space Center (JSC) in Houston and Kennedy Space Center (KSC) in Florida, Boeing personnel monitor real-time telemetry data on all systems of the Boeing-built Shuttle orbiters, ranging from main engines and hydraulics to instrumentation. Following launch, EMSR personnel continue to monitor orbiter data and assist in resolving any technical issues that arise in flight. The facility also provides mission turnaround assistance.

The EMSR will monitor key Huntington Beach-built ISS hardware, including the ISS's pre-integrated truss structure, pressurized mating adapters and mobile transporter. Among ISS functions performed are monitoring of communications and tracking; structures and mechanical systems; guidance, navigation and control; and support to ISS spacewalks.

The new EMSR features a state-of-the-art data and communications system that is substantially more capable and reliable than its predecessor and is capable of growth to meet emerging or expanded mission requirements. The main room features 70 console seats: 55 for Shuttle and 15 for ISS. Real-time Shuttle telemetry is received via T-1 lines and processed through dually redundant Sun 450 servers to 27 Sun workstations. ISS data is processed at JSC and delivered via web server to the EMSR and four other Boeing support facilities in Canoga Park, Calif.; Huntsville, Ala.; and NASA JSC and KSC. The communications system provides 10 channels to all Shuttle consoles and 24 channels to 2 ISS consoles. Adjoining conference rooms provide areas for visitors, winds aloft analysis, debris team activities and anomaly resolution.

Key Boeing EMSR subcontractors include Sun Microsystems, Inc., Palo Alto, Calif. (data processor and workstations); Silicon Graphics, Mountain View, Calif. (workstations); Compunetix, Inc., Monroeville, Penn. (communications system); Evans Console, Calgary, Alberta, Canada (consoles and furniture); and Hoffman Video Systems, Glendale, Calif. (audio/video system).

The 6,774-square foot facility, in development for a year, replaces a 5,693-square-foot Shuttle facility in Downey, Calif. and a 900-square-foot ISS facility in Huntington Beach. The upgrade was spurred, in part, by the previously announced relocation of the Boeing RSS Downey headquarters to Huntington Beach, a move currently under way and expected to be completed in January 2000. The Downey facility will operate in a backup capacity for Shuttle mission STS-103, a Hubble Space Telescope servicing mission targeted for December.

Boeing has operated a Mission Support Room supporting NASA's human space flight missions since the beginning of the Apollo program. The Downey facility has played vital roles in preventing launch scrubs and in assisting in resolution of issues ranging from minor hardware problems to the dramatic rescue of the Apollo 13 crew on the way to the moon.

As the major subcontractor to USA, Boeing integrates Shuttle system elements and payloads, provides operations support services and ongoing engineering support, conducts orbiter maintenance and modifications and is developing upgrades that will enable the world's most capable and only operational reusable and human-rated launch vehicles to fly beyond 2012. Boeing also builds, tests and performs flight processing for the Space Shuttle Main Engines--the world's only reusable liquid-fueled large rocket engines--and prepares all Shuttle payloads for installation into the orbiters.

With a "space footprint" the size of almost two football fields, ISS is the largest international space venture ever undertaken. As prime contractor, Boeing directs a national industry team comprising most major U.S. aerospace companies and hundreds of smaller subcontractors, as well as the work of participants from 16 nations.

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For further information:

Boeing Communications Expendable Launch Systems
(714) 896-1301

Boeing Launch Hotline
(714) 896-4770