

Army Astronaut kicks ISS up a notch ... **BAM!**



Orbiting at 220 miles above the Earth's surface in a 404,069 pound, 15,000 cubic foot environment is the Army's first active duty Soldier to serve on the International Space Station. COL Jeffrey N. Williams, head of the Army's NASA Astronaut Detachment, is fast completing his six-month tour of duty onboard the craft. Williams has been keeping busy as the station's primary flight engineer and science officer as part of Expedition 13, since his arrival back in March of this year.

The native of Winter, Wis., has been kept busy as part of a two-man crew with Russian Cosmonaut Pavel Vinogradov, commander of Expedition 13, on board the ISS. Now with German astronaut Thomas Reiter, second flight engineer, brought on board during July's Shuttle Discovery mission, the ISS is back up to its normal three-person crew.

During these past five months, Williams has been kept busy on board the ISS with major accomplishments that have included two space walks.

The first occurred with Vinogradov on June 1 as they repaired a station's oxygen-producing Elektron unit and retrieved a number of scientific experiments during a six-hour and 31-minute spacewalk – just 13 minutes shy of Williams' first space walk during the STS 101 mission back in May 2000.

The second extravehicular activity (EVA) came on Aug. 3 when he and Reiter performed a number of tasks outside the space station, again focusing on repairs and retrieval of scientific experiments.

The procedures were so successful that Mission Control came up with more tasks for Williams and Reiter to perform during their five-hour and 54-minute venture. This marked the third EVA for both astronauts.

But EVAs are only part of the mission for Williams.

An ordinary day on board for this Soldier is scripted at best. Take for example Aug. 17.

The day began with the morning inspection, then breakfast followed by a work preparation assessment. Next was a set up of video equipment for a scheduled Dust and

Aerosol Measurement Feasibility Test session. However a broken HEPA filter was discovered and the DAFT operations for the day were cancelled.

Williams then moved on to some troubleshooting of the Anomalous Long-Term Effects on Astronaut experiment and a noise level measurement prior to installation of new noise suppression equipment before performing one of two physical exercise routines for the day totaling two and a half hours.

After transferring the data from the crew's exercise sessions Williams took part in a live interactive televised event with students from Wright Middle School for the Boys & Girls Clubs of Middle Tennessee, Nashville, Tenn.

Following this the crew had lunch and Williams restored the onboard video configuration in the Lab before moving on to performing a scheduled lens change on the Earth Knowledge Acquired by Middle School Students (EarthKAM) system at the Lab science window.

Oh, forgot to mention, there was the replacement of three hoses on a water processing system performed by Williams. This was followed by a questionnaire and journal entry on behavioral issues associated with isolation and confinement then onto the afternoon physical exercise session. With evening coming on it was show time again but this time for the entire crew of Williams, Reiter and Vinogradov as they offered their salute and best wishes on the 60th anniversary of the S.P. Korolev Rocket & Space Corporation Energia via a live televised broadcast followed by dinner, pre-sleep, and of course sleep.

As Williams put it in an early side journal after arriving on board, "There is little routine about the daily 'routine' on ISS.

"Every day is different with different challenges. The planners have estimated that it takes almost three people just to run and maintain the station. I now believe it."

There have been memorable moments to include his arrival to the station and spending several days with fellow astronaut retired Army COL Bill McArthur, commander



European Space Agency (ESA) Astronaut Thomas Reiter (left), Expedition 13 flight engineer; Cosmonaut Pavel V. Vinogradov, commander representing Russia's Federal Space Agency; and Astronaut Jeffrey N. Williams, NASA space station science officer and flight engineer, join Chef Emeril Lagasse for a special call in the Destiny laboratory of the International Space Station. Earlier the crew tasted several of his gourmet creations, delivered to the station by the Space Shuttle Discovery in July.

for Expedition 12, back in early April and their scheduled video teleconference with the Army's Chief of Staff, GEN Peter Schoomaker. This event was the first time the Army, in conjunction with NASA, had provided a live-stream video broadcast world-wide over its Army's Media Player from the ISS much less Space.

Other memorable moments included a Memorial Day Message from Williams and his participation in the Army's "Call to Duty – Boots on the Ground" campaign during the Army's 231st Birthday celebration on June 14 where he said, "I am honored to be called a Soldier and to serve our country with you. Your professionalism and competence has made our Army the best yet since my dog tags were issued nearly 30 years ago."

Fun times have also included "BAM!" gourmet cuisine tasting opportunity during a recent down-link session with the renowned Chef Emeril Lagasse as the crew sampled several gourmet creations sent up on the shuttle Discovery.

Williams told Lagasse, "We sampled the food and especially enjoyed the jambalaya and the kicked up mashed potatoes ... in particular, the extra spiciness."

One of the many ISS onboard duties Williams has enjoyed is the photography portion or what he calls "Earth observation."

"You can never tire of looking at the part of God's creation we call Earth. Traveling around the globe every 90 minutes provides lots of opportunity to view the geography, oceans, cloud formations, sunrises and sunsets, thunderstorms, city lights and many other things in vivid detail."

Images, which now exceed 248,000 to include those from past ISS missions, are provided by the Crew Earth Observations experiment and the Image Science and Analysis Group at the Johnson Space Center (JSC) in Houston. The International Space Station Program supports the laboratory to help astronauts take pictures that will be of the greatest

value to scientists and the public, and to make those images freely available on the Internet. Additional images taken by astronauts and cosmonauts can be viewed at the NASA/JSC Gateway to Astronaut Photography of Earth.

Williams and the crew hold the record for the greatest number of Earth images taken by any station mission.

The focus now for Williams and crew is the arrival of STS-115. The crew of the Atlantis will deliver the new P3/P4 Truss for installation onto the ISS. He will assist astronaut Steve MacLean with the assembly operation of this important piece for the station.

As the time approaches for the end of Expedition 13 with a return back to Earth on Sept. 24, Williams can look back on a successful mission to the ISS. He even had the honor of announcing America's next generation of human Spacecraft — Orion.

During a pre-flight interview back in February Williams was asked how he came to the decision of becoming an astronaut.

"It wasn't until later on, after high school when I went to the military academy at West Point, and I got introduced to Army aviation and read Tom Wolfe's book, "The Right Stuff," that I realized it could be possible and set it as a goal."

After West Point and his first operational assignment he began putting his applications together.

"It was 1985, when I wrote the first application. I interviewed in 1987; but wasn't selected. I kept applying, and interviewed again in '92. I wasn't selected; kept applying, and finally, interviewed again in '96 and I finally wore 'em down."

His advice to those in the Army wanting to become astronauts or having any goal in mind is to be persistent.

"In fact, any major goal that somebody has in life — I encourage them to be persistent. Don't give up; take the disappointments, learn from them, drive on and continue working toward that goal."



Clockwise from top left, Astronaut Jeffrey N. Williams, Expedition 13 NASA space station science officer and flight engineer, uses a camera to photograph the topography of a point on Earth from the nadir window in the Destiny laboratory of the International Space Station; Williams is photographed during an individualized portion of a productive 5-hour, 54-minute excursion, which he shared with European Space Agency Astronaut Thomas Reiter (out of frame). For part of the spacewalk, the pair worked closely in tandem, and then worked separately, getting ahead of their timeline, thus enabling the two to tack on extra tasks; Williams watches a tomato float freely in the Destiny laboratory of the International Space Station; A close up of Williams, during the 5-hour, 54-minute spacewalk.