Five facts about NASA's ISS-RapidScat

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NASA's ISS-RapidScat mission will observe ocean wind speed and direction over most of the globe, bringing a new eye on tropical storms, hurricanes and typhoons. Here are five fast facts about the mission.

1. The space station looks homeward. ISS-RapidScat is the first scientific Earth-observing instrument specifically designed and developed to mount on the exterior of the International Space Station.

2. Microwaves in space. The ISS-RapidScat scatterometer is a type of radar that uses the same low-energy microwaves you use to warm up food. It bounces the microwaves off the ocean surface and analyzes the strength of the return signal to calculate wind speed and direction over the ocean.

3. Great sightlines, tight deadlines. The entire mission was built in a mere 18 months to catch a free ride on a scheduled International Space Station cargo resupply mission and take advantage of an available mounting location on the station. Most free-flying satellite missions require many years in development before launch.

4. Reduce, reuse, recycle. The ISS-RapidScat team adapted and reused hardware from the 1990s that was built to test the preceding NASA scatterometer instrument, QuikScat. Despite their advanced age, the components offer all the capacity the mission needs and passed every test. Using these components significantly reduced the mission's overall cost.

5. A view that changes daily. Two other satellite instruments record ocean winds, but they are in sun-synchronous orbit, meaning that they cross the equator at the same times each day. The space station's orbit will take ISS-RapidScat across almost the entire globe between the Arctic and Antarctic circles at different times of the day. This will give scientists data they need to study how ocean winds grow and change throughout the day.

More information: For more information about ISS-RapidScat, please visit: winds.jpl.nasa.gov/missions/RapidScat/

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