

## Falling satellite slows down, Earth strike delayed

September 23 2011, By MARCIA DUNN, AP Aerospace Writer



In this file image provided by NASA this is the STS-48 onboard photo of the Upper Atmosphere Research Satellite (UARS) in the grasp of the RMS (Remote Manipulator System) during deployment, from the shuttle in September 1991. NASA's old research satellite is expected to come crashing down through the atmosphere Friday afternoon, Sept. 23, 2011 Eastern Time. The spacecraft will not be passing over North America then, the space agency said in a statement Wednesday evening. (AP Photo/NASA)

A dead 6-ton satellite baffled NASA experts Friday by slowing its descent toward Earth and delaying its ultimate crash until the early part of the weekend.



The space agency is now predicting the <u>satellite</u> will crash down to Earth late Friday or early Saturday, Eastern Time. Increased <u>solar activity</u> had been causing the atmosphere to expand and the satellite to fall more quickly, but that's no longer such a major factor, experts said. What's more, the orientation of the satellite apparently has changed in orbit, and that's slowing its fatal plunge.

Friday morning, <u>NASA</u> cautioned there is now a slim chance any surviving debris will land in the United States. Earlier this week, NASA said North America would be in the clear and that the satellite would strike somewhere Friday afternoon.

"It is still too early to predict the time and location of re-entry with any certainty," NASA said in a statement.

The Aerospace Corp., based in California, is estimating the strike sometime between about 6 p.m. and 4 a.m. EDT, which would make a huge difference in where the debris might wind up. Those late-night, early-morning passes show the satellite flying over parts of the United States.

Any surviving wreckage is expected to be limited to a 500-mile swath.

The Upper Atmosphere Research Satellite, or UARS, will be the biggest <u>NASA spacecraft</u> to crash back to Earth, uncontrolled, since the post-Apollo 75-ton Skylab <u>space station</u> and the more than 10-ton Pegasus 2 satellite, both in 1979.

Russia's 135-ton Mir space station slammed through the atmosphere in 2001, but it was a controlled dive into the Pacific.

Most of the UARS satellite will disintegrate, but 26 pieces - representing 1,200 pounds of heavy metal - are expected to rain down somewhere.



The biggest surviving chunk should be no more than 300 pounds.

Chances are the wreckage will slam into the ocean; nearly three-quarter of the Earth is covered in water.

In any event, no one has ever been hurt by falling space junk to anyone's knowledge, and there has been no serious property damage. NASA put the chances that somebody somewhere on Earth will get hurt at 1-in-3,200. But any one person's odds of being struck have been estimated at 1-in-22 trillion, given there are 7 billion people on the planet.

UARS was launched in 1991 from space shuttle Discovery to study the atmosphere and the ozone layer. NASA shut it down in 2005 after lowering its orbit to hurry its demise. With a satellite-retrieval mission ruled out following the 2003 Columbia disaster, NASA did not want the satellite hanging around orbit posing a debris hazard.

Space junk is a growing problem in low-Earth orbit. More than 20,000 pieces of debris, at least 4 inches in diameter, are being tracked on a daily basis. These objects pose a serious threat to the International Space Station.

More information: Satellite updates: <u>http://www.nasa.gov/uars</u>

Aerospace Corp: http://reentrynews.aero.org/1991063b.html

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