NASA: Next-to-last shuttle launch set for May 16

May 9 2011, By MARCIA DUNN , AP Aerospace Writer

(AP) -- NASA will try again next Monday to launch Endeavour on the next-to-last space shuttle flight, after replacing a switch box and plugging in new electrical wiring

It will be the second attempt to send Endeavour on its final voyage with the astronaut husband of wounded Rep. Gabrielle Giffords.

On April 29, a string of heaters failed to turn on during the final hours of the countdown, and the launch was called off. The trouble was traced to a switch box in Endeavour's engine compartment; a blown fuse was discovered inside.

A fresh box was installed last week, along with about 20 feet of new wiring that bypasses the original circuitry, just in case that's where the problem began. Engineers still are uncertain what caused the switch box to fail. But in weekend testing, all the heaters worked, NASA officials said Monday.

"We've kind of end-to-end checked and wrung out the whole system ... and now have extremely high confidence that the problem is no longer in the ship or in any of the electronics," said Mike Moses, chairman of the mission management team.

Commander Mark Kelly will lead the six-man shuttle crew to the International Space Station. He's married to the Arizona congresswoman who was critically wounded at a political event in Tucson in January.

Giffords' staff said she will return for the next launch attempt; she's been undergoing rehab in Houston, Kelly's home base.

President Barack Obama and his family also came for the initial launch attempt. He toured Kennedy Space Center instead and met with Giffords and the Endeavour crew.

Kelly and his crew will return to Florida on Thursday, a day ahead of the start of the countdown. Launch time on Monday is 8:56 a.m.

Launch director Mike Leinbach said local authorities do not expect nearly the crush of people that descended on Cape Canaveral for the first attempt on a Friday afternoon. Surrounding communities had braced for as many as 700,000 spectators.

But the crowd on Monday morning still should be bigger than the 400,000 that attended Discovery's final liftoff in February, Leinbach said. The 30-year shuttle program is ending this summer.

"Monday morning at 9 a.m. is not as attractive as Friday afternoon at 4:30," he said. "So that will keep some of the crowds down. It's still going to be quite full."

Endeavour is loaded with a $2 billion particle physics experiment for the space station.

The new launch time essentially puts the shuttle astronauts on the graveyard shift in orbit, in conflict with the space station crew's work schedule. Three of the six station astronauts actually will depart in their Soyuz capsule while Endeavour is there - on May 23 - and return to Earth.

It will be the first time ever that a Soyuz heads home while a shuttle is

present.

Managers have extended the mission by two days - to 16 days - to compensate for the lost time because of the Soyuz undocking. There will be just nine astronauts on board to accomplish everything, once the Soyuz departs.

If Endeavour isn't flying by late May, the mission will have to wait until the third week of June because of the arrival of three new space station residents and unfavorable sun angles.

Endeavour's two-week-plus delay already has pushed back NASA's last shuttle flight by at least a week or two. Atlantis had been scheduled to blast off June 28. That launch will now occur sometime after July 4; a firm date will not be set until Endeavour is in orbit.

More information: NASA: http://www.nasa.gov/shuttle