

STS-124 Pre-Mission Summary



[Discovery](#) is currently scheduled to launch from [Kennedy Space Center's Launch Pad 39A](#) on May 31, 2008 at 5:01 P.M. EDT (2101 UTC). Landing is scheduled for June 13, 2008 at 12:08 P.M. EDT (1608 UTC) at KSC. The alternate end-of-mission landing sites are Edwards Air Force Base in California and White Sands Space Harbor in New Mexico.

Weather climatology for a May late afternoon launch attempt from KSC indicates a 70% chance for acceptable weather for launch with the primary concerns being thunderstorms and crosswinds. The prime [Transoceanic Abort Landing](#) (TAL) site for this mission will be Zaragoza, Spain, with Moron, Spain and Istres, France as alternates. Most Space Shuttle launches require that at least one of the TAL sites have acceptable weather for an emergency landing in case of launch problems. Without at least one acceptable weather site, the launch will be rescheduled for another day. Climate data for May at Zaragoza indicates a 70% chance of acceptable weather conditions for a nighttime TAL landing. Istres has a 75% chance of acceptable weather conditions for landing while Moron has a 90% chance of acceptable landing weather conditions. Headwind and crosswind restrictions would be the main factors in causing weather flight rules violations at all three TAL sites.

Navy Cmdr. Mark E. Kelly will command the STS-124 shuttle mission to deliver the Pressurized Module and robotic arm of the [Japanese Experiment Module](#), known as "Kibo" (hope), to the [International Space Station](#). Navy Cmdr. Kenneth T. Ham will serve as the pilot. Mission specialists will include NASA astronauts Karen L. Nyberg; Gregory E. Chamitoff; Air Force Col. Ronald J. Garan Jr.; and Air Force Reserve Col. Michael E. Fossum. [Japan Aerospace Exploration Agency](#) (JAXA) astronaut Akihiko Hoshide also will serve as a mission specialist.

The STS-124 mission is the 26th shuttle mission to the International Space Station and is the second of three flights that will launch components to complete the Kibo laboratory. The mission will include two spacewalks to install the new lab and its remote manipulator system. The lab's logistics module, which was installed in a temporary location during STS-123, will be attached to the new lab.

SMG's ascent/entry team consists of meteorologists Mark Wiley, Richard Lafosse, Kurt Van Speybroeck, and Doris Hood. Mark Wiley will be the Mission Lead Forecaster, mentored by Richard Lafosse. Kurt Van Speybroeck will be Assistant Lead/TAL Forecaster. Doris Hood will be the SMG upper winds coordinator and also oversee weather-computing systems as the Techniques Development Unit Meteorologist.

Submitted by: Mark Wiley, Richard Lafosse