

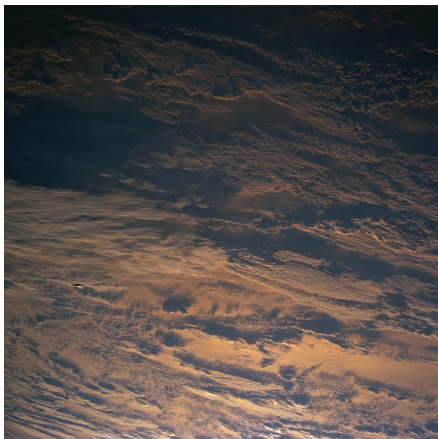
# NASA Images

- [NASA Shuttle Mission STS-088](#)

# NASA Shuttle Mission STS-088

“These 5 photos showing an unidentified object in near earth orbit, were taken by an astronaut on shuttle mission STS-088 in December 1998. As of November 26, 2021 they were still viewable on NASA's Johnson Space Center website.

They are known in the UFO community as the "Black Knight" images.



Below is the official NASA mission summary for STS-088. No mention of the unidentified object; although there is a brief mention of some equipment that was lost in space during the mission.

Mission: First International Space Station Flight

Space Shuttle: Endeavour

Launch Pad: 39A

Launched: December 4, 1998, 3:35:34.075 a.m. EST

Landing Site: Kennedy Space Center, Florida

Landing: December 15, 1998, 10:53:29 p.m. EST

Runway: 15

Rollout Distance: 8,343 feet

Rollout Time: 44 seconds

Revolution: 186

Mission Duration: 11 days, 19 hours, 18 minutes

Orbit Altitude: 173 nautical miles

Orbit Inclination: 51.6 degrees

Miles Traveled: 4.7 million

The originally scheduled launch of Endeavour on Dec. 3 was postponed for 24 hours when time ran out on the launch window. About T-4 minutes in the launch countdown, after the orbiter hydraulic systems were powered on, a master alarm associated with hydraulic system number 1 in the crew cabin was noted. The countdown was held at T-31 seconds to further assess the situation. Shuttle system engineers attempted to quickly complete an assessment of the suspect hydraulic system and eventually gave an initial "go" to resume the countdown. With only seconds to respond, launch controllers were unable to resume the countdown in time to launch within the allotted remaining window. The launch was completed on time on Dec. 4.

## Mission Highlights

During the 12-day mission to begin assembly of the International Space Station (ISS), all objectives were met. On Dec. 5, the 12.8-ton Unity connecting module was first connected to Endeavour's docking system; on Dec. 6, using the 50-foot-long robot arm, the Zarya control module was

captured from orbit and mated to Unity; and astronauts Ross and Newman conducted three space walks to attach cables, connectors and hand rails. The two modules were powered up after the astronauts' entry.

Other EVA objectives were met as Ross and Newman tested a Simplified Aid for EVA Rescue (SAFER) unit, a self-rescue device should a space walker become separated from the spacecraft during an EVA; nudged two undeployed antennas on Zarya into position; removed launch restraint pins on Unity's four hatchways for mating future additions of station modules and truss structures; installed a sunshade over Unity's two data relay boxes to protect them against harsh sunlight; stowed a tool bag on Unity and disconnected umbilicals used for the mating procedure with Zarya; installed a handrail on Zarya; and made a detailed photographic survey of the station.

Astronauts completed assembly of an early S-band communications system that allows flight controllers in Houston to send commands to Unity's systems and keep tabs on the health of the station, plus conducted a successful test of the videoconferencing capability of the early communications system which the first permanent crew will use. Krikalev and Currie also replaced a faulty unit in Zarya.

A new spacewalk record was established as Ross completed his seventh walk, totaling 44 hours, nine minutes. Newman moved into third place with four walks totaling 28 hours, 27 minutes.

Significant dates and times of the mission: Unity and Zarya were successfully engaged at 9:48 p.m., Dec. 6, and Unity came to life at 10:49 p.m., Dec. 7. At 2:54 p.m., Dec. 10, Cabana and Russian cosmonaut Sergei Krikalev floated into the new station together, followed by the rest of the crew; at 4:12 p.m., Cabana and Krikalev opened the hatch to Zarya and entered; at 5:41 p.m., Dec. 11, Cabana and Krikalev closed the hatch to Zarya, and at 7:26 p.m., they closed the door to Unity. ISS flew free at 3:25 p.m., Dec. 13, as Pilot Rick Sturckow separated Endeavour from the station.

Secondary objectives that were met were the successful deployment of the shuttle's KU-band antenna and the Hitchhiker payload, including the MightySat and SAC-A satellites.

Problem areas/unexpected events: When the Unity-Zarya fittings would not align properly, it was necessary for the robot arm to ungrapple Zarya. In addition, several construction items (slidewire carrier, worksite interface socket, retractable tether, trunnion pin cover) floated away from the orbiter; some floodlights failed during EVA; an incompatible connection was found between the activated carbon ion exchange and the hose assembly, but repaired; a camera on the Orbiter Space Vision System experienced binding during fast-rate operation, but could be used for slow-rate; and uncertainties surfaced about the unexpected depletion of the SAFER propellant, gaseous nitrogen.

## UPDATE

**01-30-2023**

*Based on new information I found on this shuttle mission, it is my theory these are images of either the insulation blanket or worksite interface that were lost during the mission. I'm leaning toward the insulation blanket as it appears the shape of the object changes from one image to another, indicating to my mind, a flexible material.*

*Since I am not certain my theory is correct and have no official proof the images are of lost items from the mission, only supposition, I am leaving the photos on the Wiki until such time as the object is verifiably identified.*

*Attached is the NASA document that was released in 2006 that released further details on the lost items during the STS-088 mission. The mission was used as an example for a new jettison policy and this document along with the original mission summary was my basis for the edit.*

NASA Jettison Policy 2006