

HISTORIC AMERICAN ENGINEERING RECORD

INDEX TO PHOTOGRAPHS

SPACE TRANSPORTATION SYSTEM, ORBITER ATLANTIS
(OV-104)
Johnson Space Center, 2101 NASA Parkway
Houston
Harris County
Texas

HAER TX-116-B

INDEX TO BLACK AND WHITE PHOTOGRAPHS

Photographic Operations Group - Johnson Space Center, photographer, 2012

- TX-116-B-1 General view of the top of Orbiter Atlantis as it is being hoisted to a vertical position in the transfer aisle of the Vertical Assembly Building (VAB) at the Kennedy Space Center. This hoisting was to maneuver the Orbiter to and mate with the awaiting External Tank/Solid Rocket Booster assembly on the Mobile Launch Platform in an assembly bay of the VAB.
- TX-116-B-2 View in front of the Orbiter Atlantis looking aft as it sits atop the Orbiter Transporter during its roll over from the Orbiter Processing Facility to the Vehicle Assembly Building at the Kennedy Space Center.
- TX-116-B-3 Oblique view looking at the forward and port side of the Orbiter Atlantis looking aft as it sits atop the Orbiter Transporter during its roll over from the Orbiter Processing Facility to the Vehicle Assembly Building at the Kennedy Space Center.
- TX-116-B-4 Port side view of the Orbiter Atlantis as it sits atop the Orbiter Transporter during its roll over from the Orbiter Processing Facility to the Vehicle Assembly Building at the Kennedy Space Center. Note the Vehicle Assembly Building's roll-up bay doors in the background of the image.

SPACE TRANSPORTATION SYSTEM, ORBITER ATLANTIS
HAER TX-116-B
INDEX TO PHOTOGRAPHS

- TX-116-B-5 Aft view of the Orbiter Atlantis looking forward as it sits atop the Orbiter Transporter during its roll over from the Orbiter Processing Facility to the Vehicle Assembly Building at the Kennedy Space Center. Note the Vehicle Assembly Building in the right portion of the image. Also note the ground support covers over the expansion nozzles of the Space Shuttle Main Engines and the Orbiter Maneuvering System engines.
- TX-116-B-6 Starboard side view of the Orbiter Atlantis as it sits atop the Orbiter Transporter during its roll over from the Orbiter Processing Facility to the Vehicle Assembly Building. Note the tower from a Mobile Launch Platform that had been modified for launches of the Ares Rockets.
- TX-116-B-7 Oblique view looking at the forward and starboard side of the Orbiter Atlantis looking aft as it sits atop the Orbiter Transporter during its roll over from the Orbiter Processing Facility to the Vehicle Assembly Building at the Kennedy Space Center.
- TX-116-B-8 General view of the bottom of Orbiter Atlantis as it is being hoisted to a vertical position in the transfer aisle of the Vertical Assembly Building (VAB) at the Kennedy Space Center. This hoisting was to maneuver the Orbiter to and mate with the awaiting External Tank/Solid Rocket Booster assembly on the Mobile Launch Platform in an assembly bay of the VAB.
- TX-116-B-9 Close-up view of the reinforced carbon-carbon nose piece on the Orbiter Atlantis as it sits in the transfer aisle of the Vehicle Assembly Building at Kennedy Space Center being prepared to be hoisted.
- TX-116-B-10 Close-up view of the crew hatch on the port side of the Orbiter Atlantis. Note the close up view of some of the components of the thermal protection system, the black High-temperature Reusable Surface Insulation tiles and the Advanced Flexible Reusable Surface Insulation is the quilt-like white material.

SPACE TRANSPORTATION SYSTEM, ORBITER ATLANTIS
HAER TX-116-B
INDEX TO PHOTOGRAPHS

- TX-116-B-11 Close-up view of the titanium Yolk Fitting mounted on the Orbiter Atlantis. This Yolk fitting mates with the bipod assembly on the External Tank to form the forward External Tank/Orbiter attach point structure.
- TX-116-B-12 General view of the flight deck of the Orbiter Atlantis looking forward from behind the commander's seat looking towards the pilot's station. Note the numerous Velcro pads located throughout the crew compartment, used to secure frequently used items when in zero gravity. This image was taken at Kennedy Space Center.
- TX-116-B-13 General view of the flight deck of the Orbiter Atlantis looking forward along the approximate centerline of the orbiter at the center console. The Multifunction Electronic Display System (MEDS) is evident in the mid-ground center of this image, this system was a major upgrade from the previous analog display system. The commander's station is on the port side or left in this view and the pilot's station is on the starboard side or right in this view. Note the grab bar in the upper center of the image which was primarily used for commander and pilot ingress with the orbiter in a vertical position on the launch pad. Also note that the forward observation windows have protective covers over them. This image was taken at the Kennedy Space Center.
- TX-116-B-14 General view of the flight deck of the Orbiter Atlantis looking forward and overhead at the overhead instrumentation and control panels. This view was taken at the Kennedy Space Center.

SPACE TRANSPORTATION SYSTEM, ORBITER ATLANTIS
HAER TX-116-B
INDEX TO PHOTOGRAPHS

- TX-116-B-15 Close-up view of the center console on the flight deck of the Orbiter Atlantis, showing the console's instrumentation and controls. The commander's station is located to the left in this view and the pilot's station is to the right in the view. The handle and lever located on the right side of the console and towards the front is one of a pair, the commander has one on the left of the seat in their station, of Speed Brake/Thrust Controllers. They are dual purpose controllers. During ascent the controller can be used to throttle the main engines and during entry the controllers can be used to control the aerodynamic drag by opening or closing the orbiter's speed brake.
- TX-116-B-16 Detail view of the flight deck of the Orbiter Atlantis looking aft. The aft viewing windows are uncovered in this view and look out towards the payload bay. The overhead viewing windows have exterior covers in place in this view. The aft flight deck contains displays and controls for executing maneuvers for rendezvous, docking, payload deployment and retrieval, payload monitoring and the remote manipulator arm controls. Payload bay doors are also operated from this location. This photograph was taken in the Orbiter Processing Facility at the Kennedy Space Center.
- TX-116-B-17 General view of the forward and port sides of the Orbiter Atlantis looking aft in the transfer aisle of the Vehicle Assembly Building at the Kennedy Space Center. This image was taken during the operations to attach the orbiter's hoisting rig prior to hoisting, moving and mating the orbiter to the External Tank/Solid Rocket Booster Assembly affixed to the Mobile Launch Platform in an assembly bay.
- TX-116-B-18 General view of the aft and port sides of the Orbiter Atlantis looking forward in the transfer aisle of the Vehicle Assembly Building at the Kennedy Space Center. This image was taken during the operations to attach the orbiter's hoisting rig prior to hoisting, moving and mating the orbiter to the External Tank/Solid Rocket Booster Assembly affixed to the Mobile Launch Platform in an assembly bay.

SPACE TRANSPORTATION SYSTEM, ORBITER ATLANTIS
HAER TX-116-B
INDEX TO PHOTOGRAPHS

- TX-116-B-19 General view from the Rotating Service Structure looking at the Fixed Service Structure and the Orbiter Atlantis at the launch pad at the Kennedy Space Center as preparations are being made for launch.
- TX-116-B-20 Close-up view of the starboard side of the Orbiter Atlantis looking up from the Mobile Launch Platform at the stack assembly. Note the Liquid Oxygen (LOX) Tail Service Mast (TSM) prominent in the foreground and partially obscuring the view of the orbiter. This photo was taken at the Launch Complex at the Kennedy Space Center.
- TX-116-B-21 General view of the Launch Complex at the Kennedy Space Center looking at the Rotating Service Structure, Fixed Service Structure and the Mobile Launch Platform with the Shuttle Stack Assembly atop and being prepared for launch.
- TX-116-B-22 General view of the Orbiter Atlantis just seconds after it has cleared the launch tower at the Kennedy Space Center as it is being launched into orbit.
- TX-116-B-23 General view on runway 33 at Kennedy Space Center looking at the forward and port side of the Orbiter Atlantis as it is undergoing post flight processing and preparations for towing back to the Orbiter Processing Facility.
- TX-116-B-24 General view on runway 33 at Kennedy Space Center looking at the aft and port side of the Orbiter Atlantis as it is undergoing post flight processing and preparations for towing back to the Orbiter Processing Facility.