

Appendix A-SSP Historic Photos

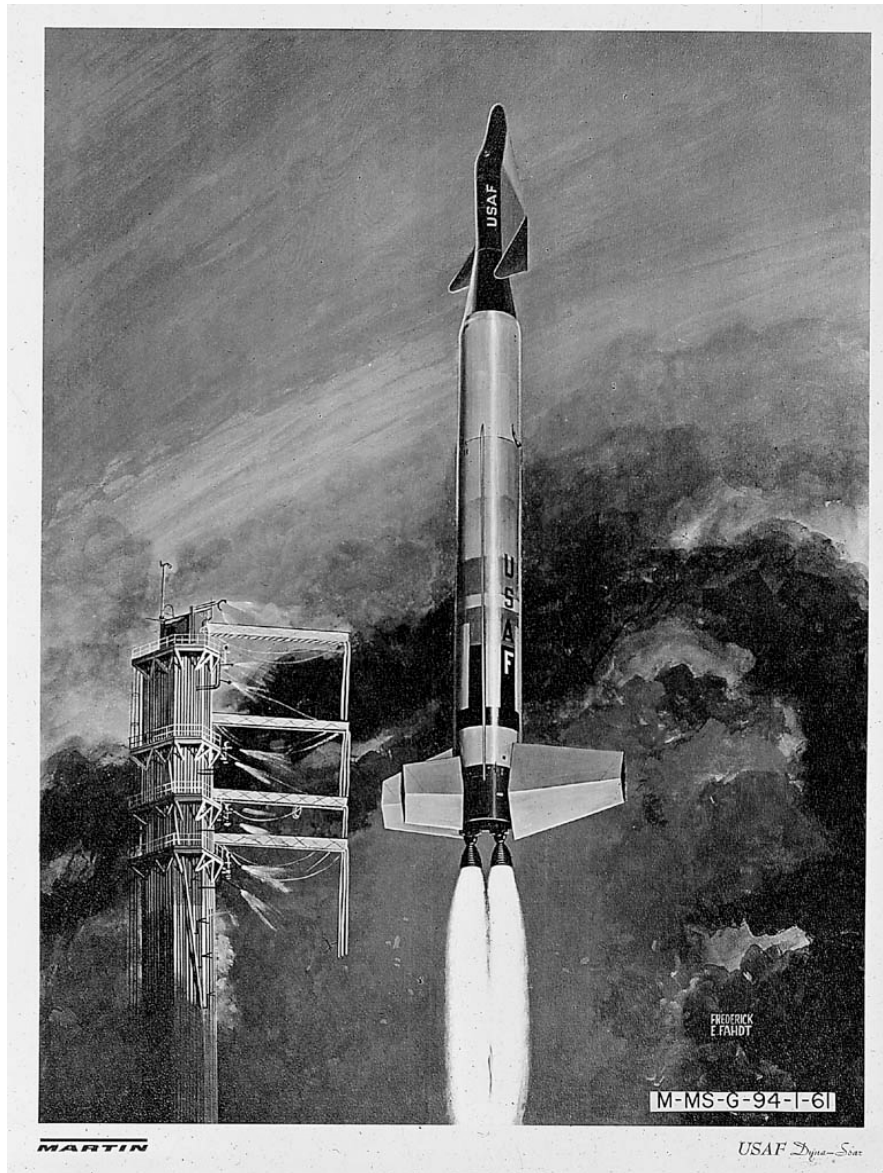


Figure No. A-1. Artist's concept of a Dyna-Soar launch, January 1, 1961.
Source: NASA Marshall Space Flight Center, MSFC-9902548, accessed May 2012, at
<http://mix.msfc.nasa.gov/IMAGES/MEDIUM/9902548.jpg>.

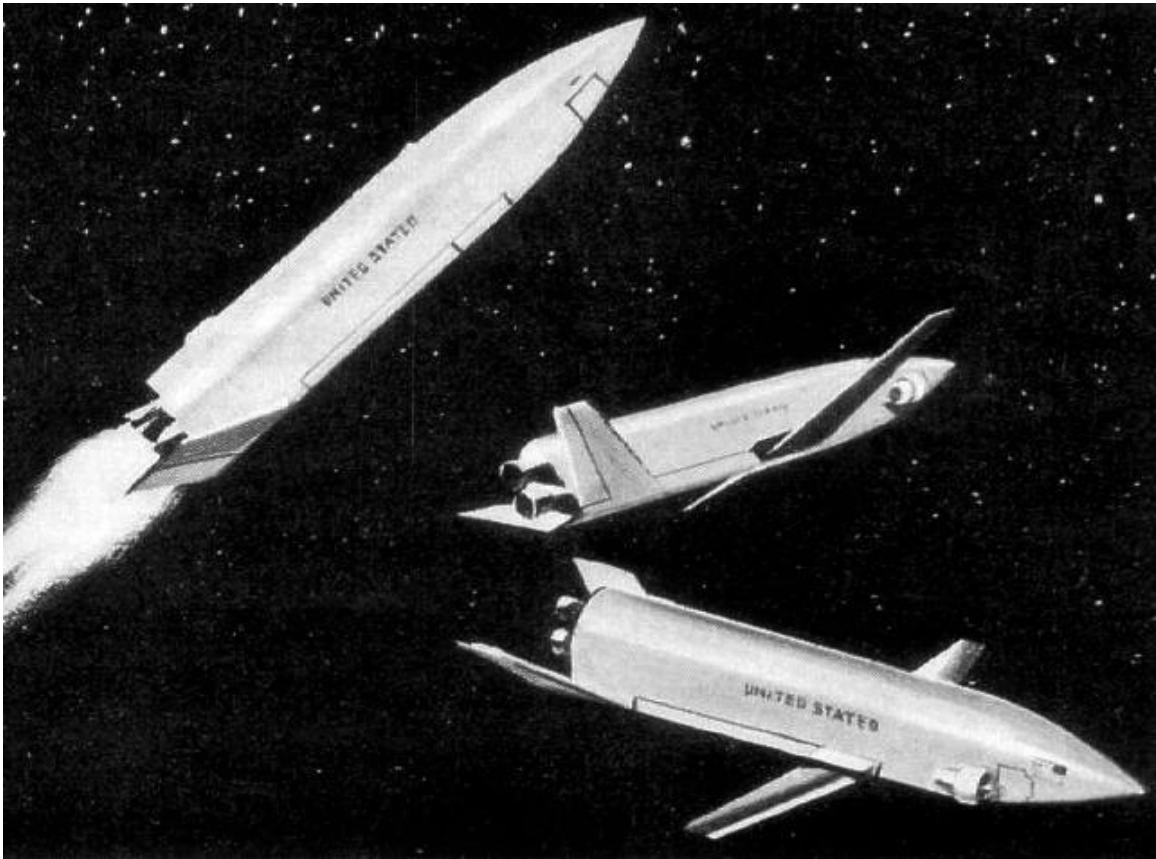


Figure No. A-2. Convair's Triamese.

Source: NASA, accessed May 2012, at <http://www.astronautix.com/lvs/triamese.htm>.



Figure No. A-3. Maxime Faget's straight wing design.
Source: NASA, as printed in T. A. Heppenheimer's, *The Space Shuttle Decision*, 208.



Figure No. A-4. First landing of a HL-10 lifting body, 1966.
Source: NASA Dryden Flight Research Center, E-16207, accessed May 2012, at
<http://www.dfr.nasa.gov/gallery/photo/HL-10/Small/E-16207.jpg>.



Figure No. A-5. Aerial of Kennedy Space Center, Florida, with VAB area in foreground, LC 39A in background. April 13, 2005.

Source: NASA Kennedy Space Center, KSC-05PD-1108, accessed May 2012, at <http://mediaarchive.ksc.nasa.gov>.

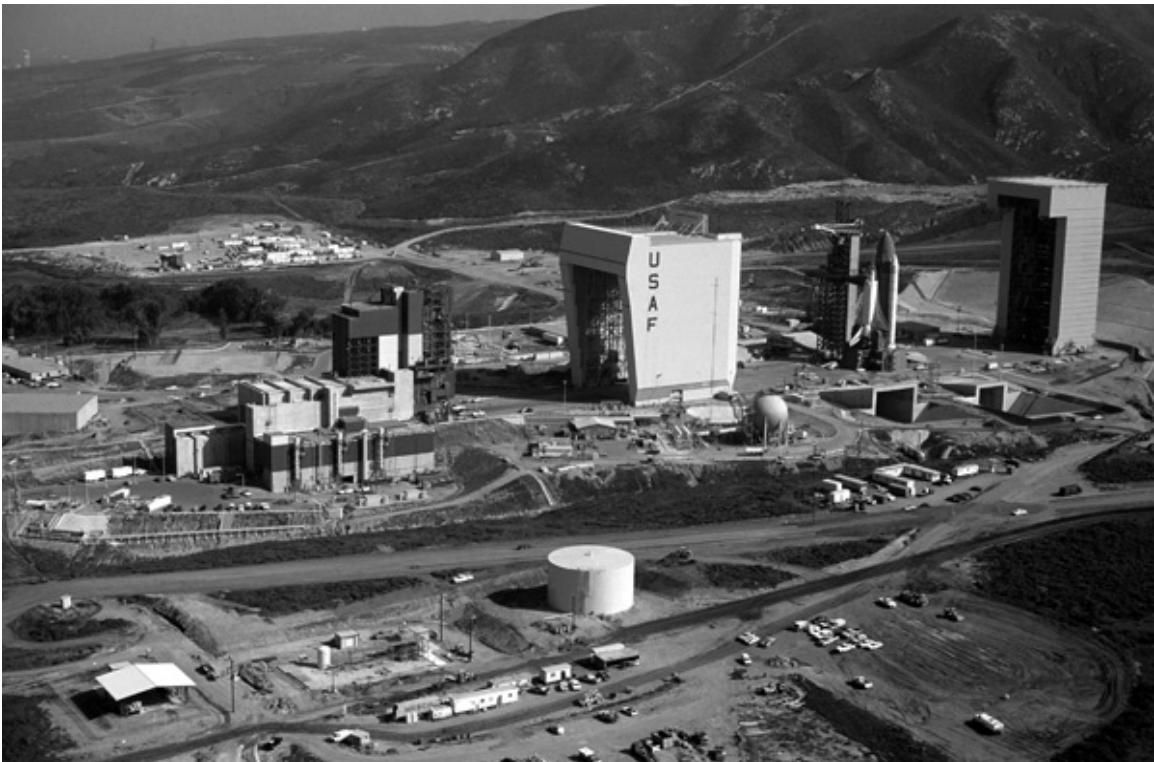


Figure No. A-6. Vandenberg Air Force Base, California.
Source: U.S. Air Force, accessed May 2012, at <http://spaceflightnow.com/delta/d352/slc6shuttle>.



Figure No. A-7. *Enterprise* en route overland between Palmdale and Dryden, 1977.
Source: NASA Dryden Flight Research Center Photo Archives, ECN 6679.



Figure No. A-8. X-24B lifting body in flight above dry lakebed at Edwards AFB, 1975.
Source: NASA Dryden Flight Research Center, EC75-4643, accessed May 2012, at
<http://www.dfrc.nasa.gov/gallery/photo/X-24/Small/EC75-4643.jpg>.



Figure No. A-9. *Enterprise* and SCA N905NA during the second free flight of the ALT program, September 13, 1977.

Source: NASA Dryden Flight Research Center, ECN77-8608, accessed May 2012, at <http://www.dfrc.nasa.gov/gallery/photo/ALT/Small/ECN77-8608.jpg>.

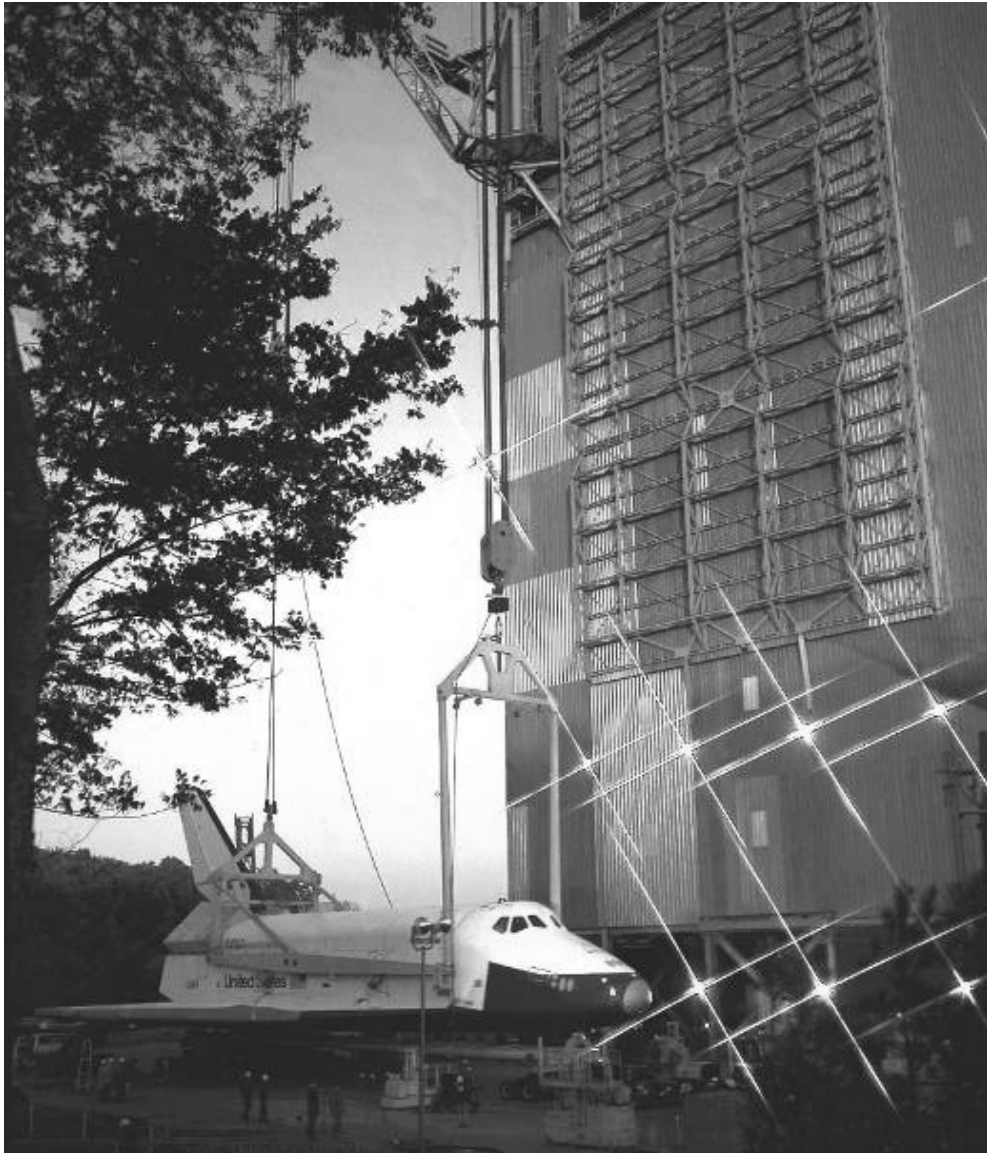


Figure No. A-10. Orbiter *Enterprise* on strongback, outside Building 4550 at MSFC, 1978.
Source: NASA Marshall Space Flight Center, MSFC-7889025, accessed May 2012, at
<http://mix.msfc.nasa.gov/IMAGES/MEDIUM/7889025.jpg>.

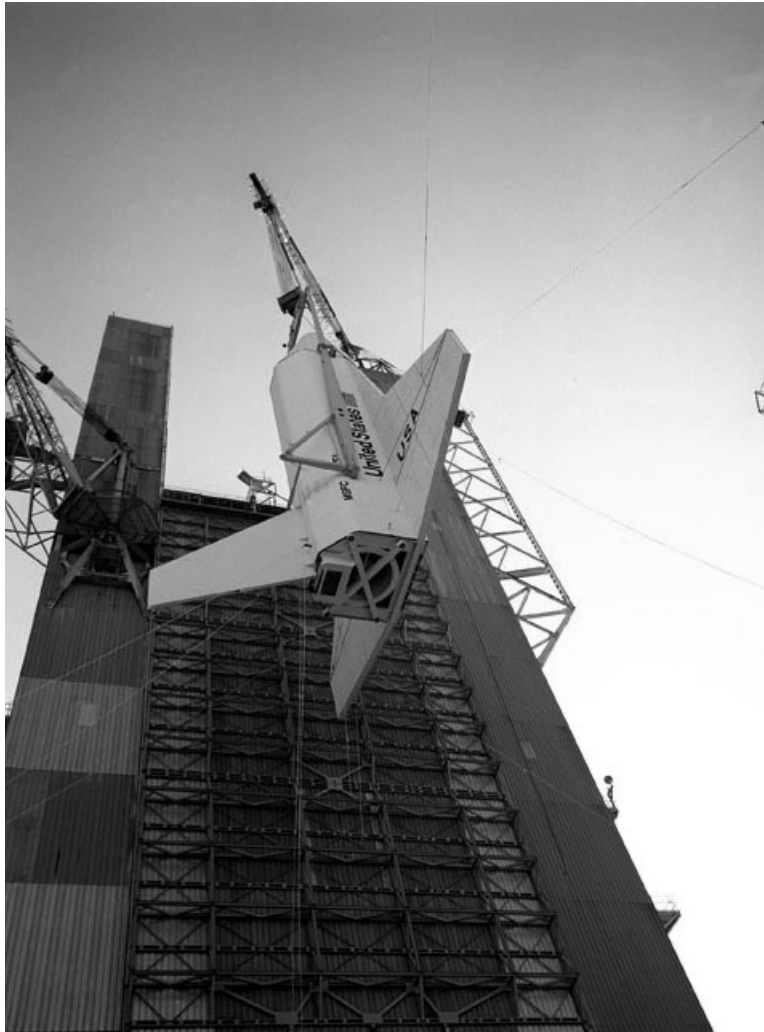


Figure No. A-11. *Pathfinder* Simulator is hoisted into MSFC Dynamic Test Stand, 1977.
(Source: NASA Marshall Space Flight Center, MSFC-7885689, accessed May 2012, at <http://mix.msfc.nasa.gov/IMAGES/MEDIUM/7885689.jpg>.)



Figure No. A-12. The April 12, 1981, launch of STS-1, *Columbia*.
Source: NASA Headquarters, GPN-2000-000650, accessed at
<http://grin.hq.nasa.gov/IMAGES/SMALL/GPN-2000-000650.jpg>.



Figure No. A-13. *Columbia* touches down on the Northrup Strip at White Sands following STS-3, March 31, 1982.

Source: NASA Johnson Space Center, S82-28838, accessed at
<http://images.jsc.nasa.gov/lores/S82-28838.jpg>.

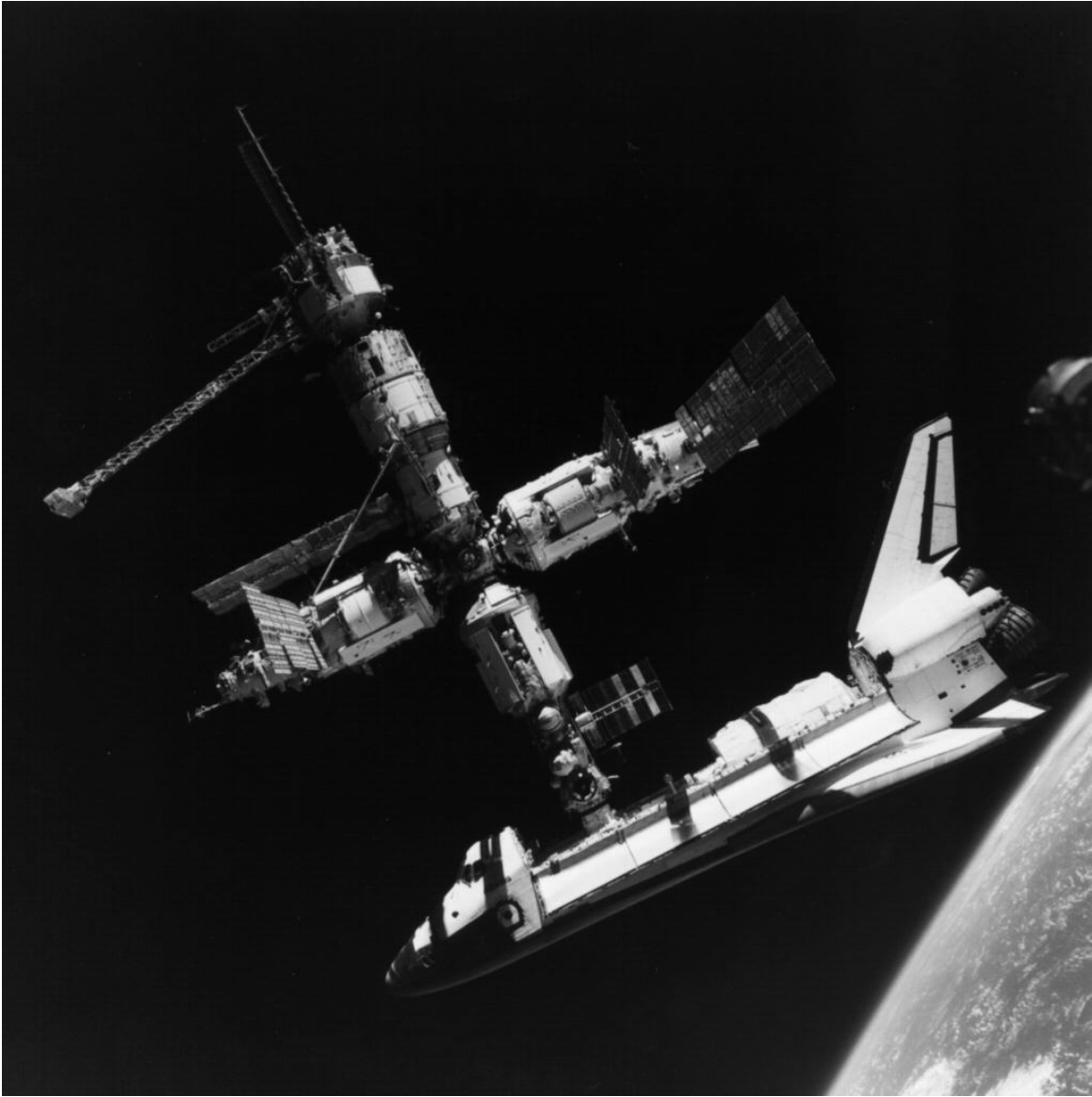


Figure No. A-14. *Atlantis* docked to *Mir* during STS-71, July 4, 1995.
Source: NASA, accessed May 2012, at
<http://spaceflight.nasa.gov/history/shuttle-mir/multimedia/m-photo.htm>.



Figure No. A-15. View of the ISS with the *Zarya* module (left) connected to the *Unity* module (right), December 1998.

Source: NASA Marshall Space Flight Center, MSFC-9900389, accessed May 2012, at <http://mix.msfc.nasa.gov/IMAGES/MEDIUM/9900389.jpg>.

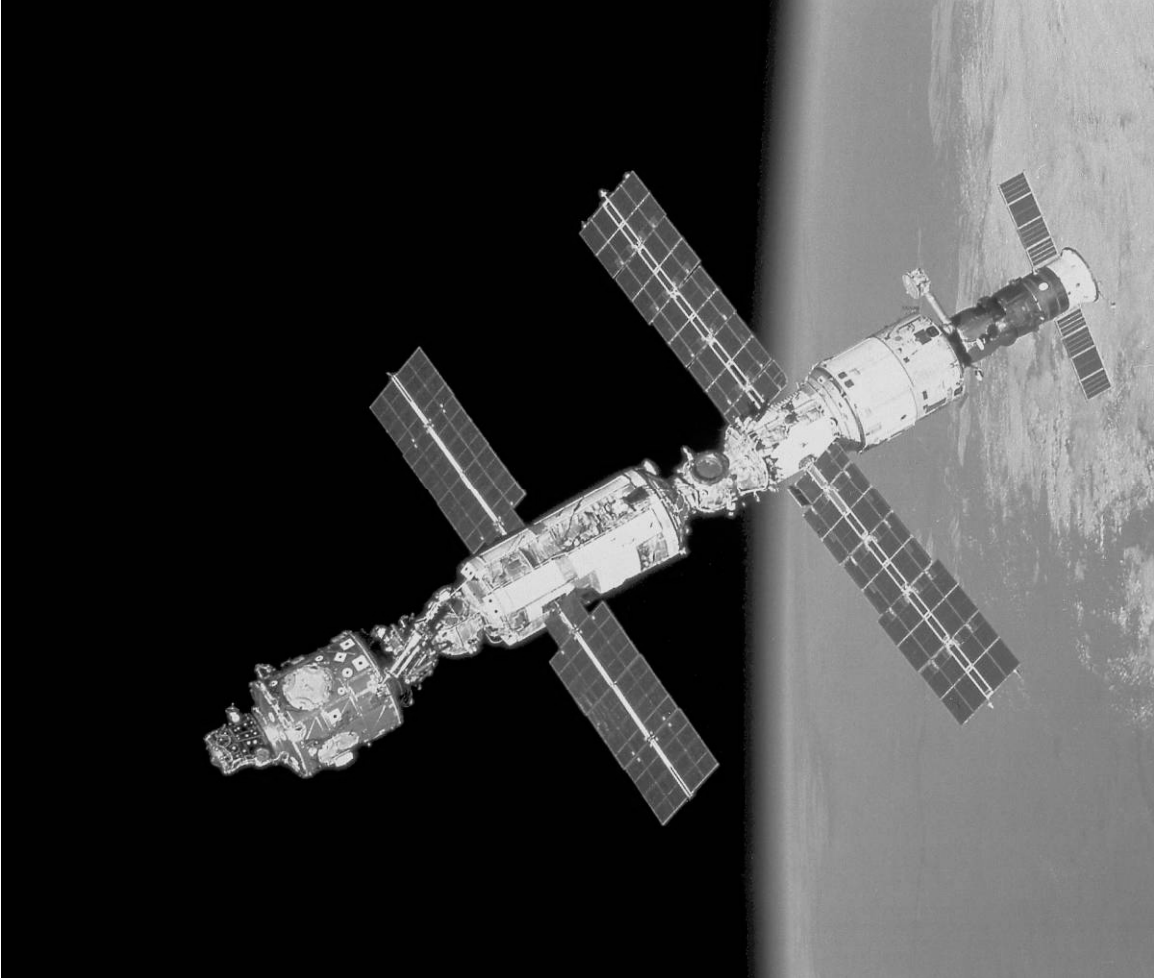


Figure No. A-16. View of the ISS with, from bottom left to top right, a Soyuz spacecraft, the *Zvezda* service module, the *Unity* module, and the *Zarya* module, December 1, 2000.
Source: NASA Marshall Space Flight Center, MSFC-0100334, accessed May 2012, at <http://mix.msfc.nasa.gov/IMAGES/MEDIUM/0100334.jpg>.

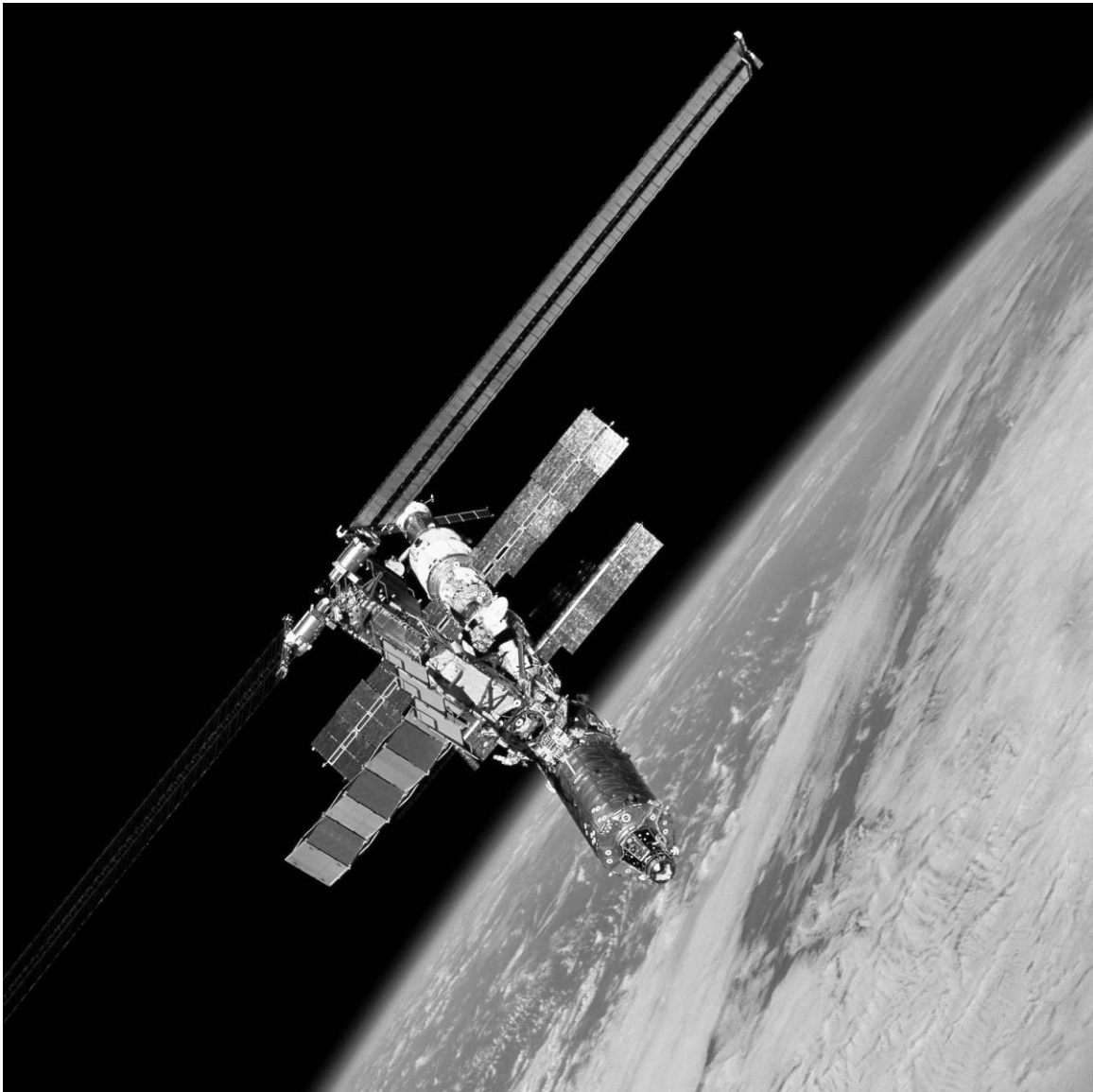


Figure No. A-17. View of the ISS after installation of the *Destiny* laboratory module (bottom right), February 16, 2001.

Source: NASA Marshall Space Flight Center, MSFC-0102501, accessed May 2012, at <http://mix.msfc.nasa.gov/IMAGES/MEDIUM/0102501.jpg>.



Figure No. A-18. View of the ISS after installation of the S1 truss (center), October 16, 2002.
Source: NASA Marshall Space Flight Center, MSFC-0203031, accessed May 2012, at
<http://mix.msfc.nasa.gov/IMAGES/MEDIUM/0203031.jpg>.

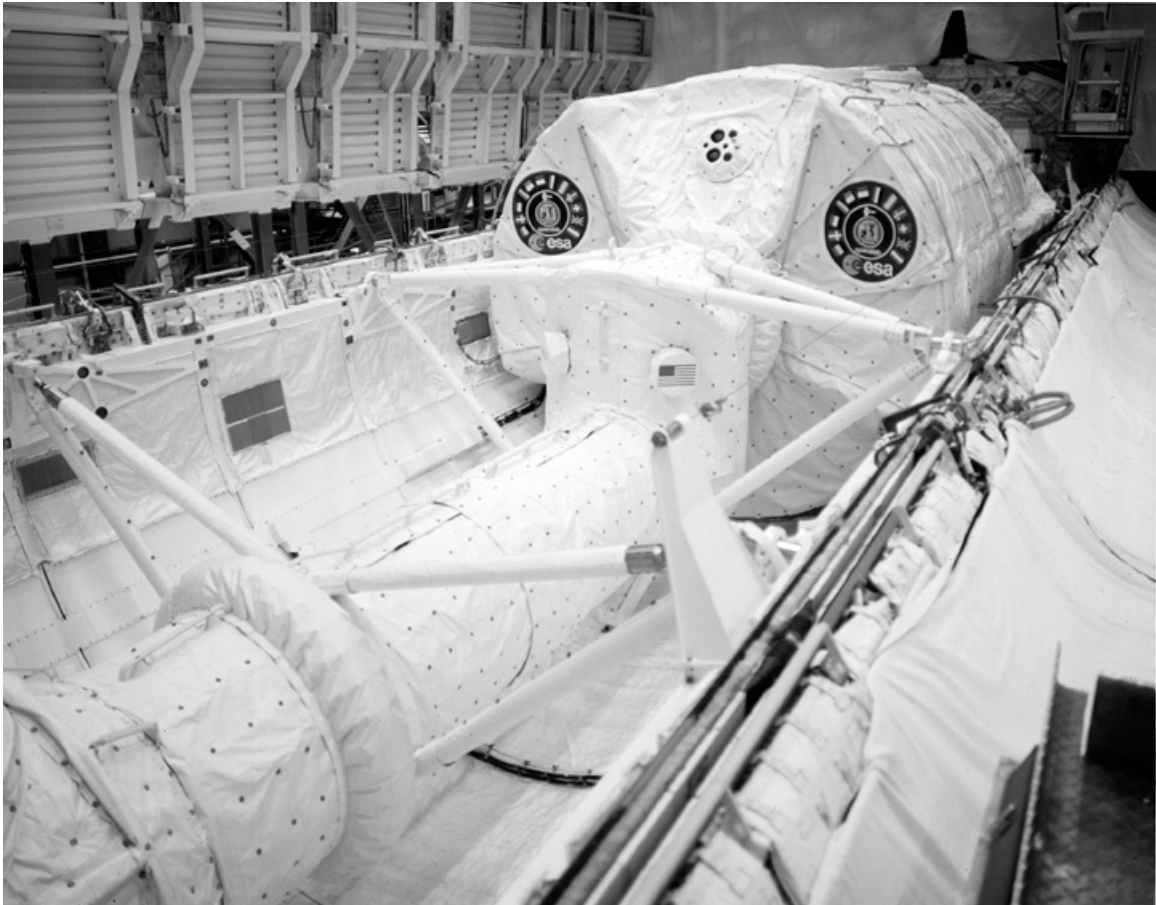


Figure No. A-19. View of Spacelab being installed inside of *Columbia's* payload bay for the STS-9 mission, November 28, 1983.

Source: NASA Marshall Space Flight Center, MSFC-8438476, accessed May 2012, at <http://mix.msfc.nasa.gov/IMAGES/MEDIUM/8438476.jpg>.



Figure No. A-20. Deployment of the Hubble Space Telescope during STS-31, April 29, 1990.
Source: NASA Johnson Space Center, STS031-03-009, accessed May 2012, at
<http://images.jsc.nasa.gov/lores/STS031-03-009.jpg>.

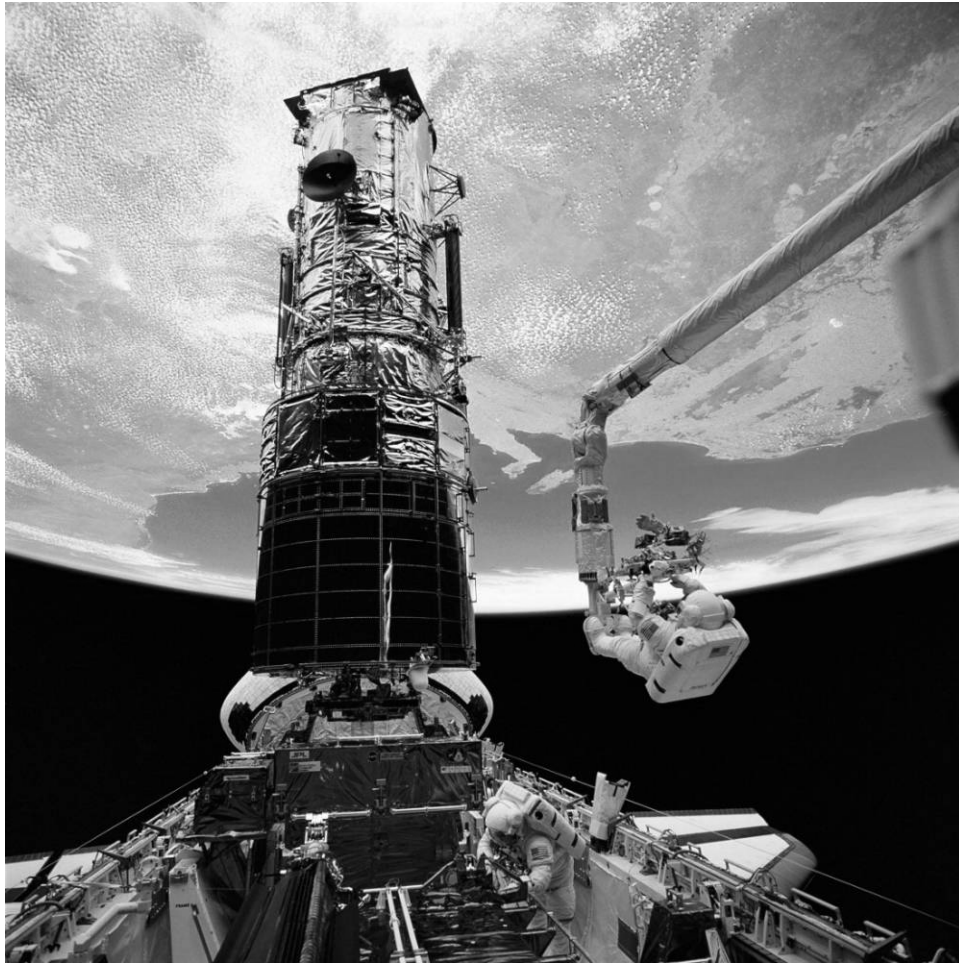


Figure No. A-21. Hubble Space Telescope Upgrade, December 9, 1993.
Astronaut F. Story Musgrave, anchored on the end of the RMS arm, prepares to be elevated to the top of the HST to install protective covers on the magnetometers.

Source: NASA, accessed May 2012, at
http://www.nasa.gov/images/content/439550main_sts061-98-050-full_full.jpg.



Figure No. A-22. View of *Discovery* without her FRCS module and OMS pods, which were sent to the White Sands Test Facility in New Mexico for deservicing and cleaning as part of the shuttle transition and retirement efforts, July 13, 2011.

Source: NASA Kennedy Space Center, KSC-2011-5572, accessed May 2012, at <http://mediaarchive.ksc.nasa.gov>.



Figure No. A-23. Installation of the shuttle orbiter repackaged galley into *Discovery's* middeck. The galley was removed following *Discovery's* last mission, and sent to Houston, where it was cleaned and deserviced by USA as part of the shuttle transition and retirement efforts, November 15, 2011.

Source: NASA Kennedy Space Center, KSC-2011-7774, accessed May 2012, at <http://mediaarchive.ksc.nasa.gov>.

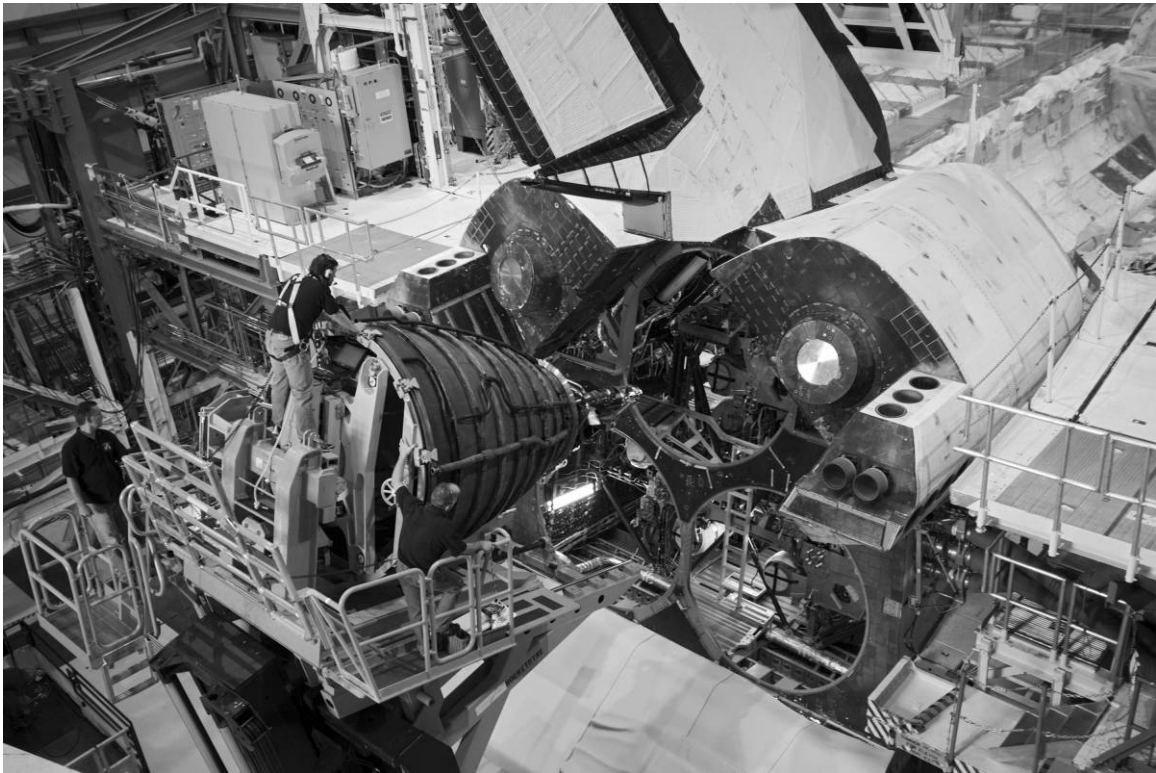


Figure No. A-24. Installation of a replica shuttle main engine into *Discovery's* aft fuselage. Three replica engines were installed as part of the shuttle transition and retirement efforts, December 5, 2011.

Source: NASA Kennedy Space Center, KSC-2011-8168, accessed May 2012, at <http://mediaarchive.ksc.nasa.gov>.



Figure No. A-25. One of *Discovery*'s fuel cells being reinstalled following drain and purge operations conducted as part of the shuttle transition and retirement efforts, December 9, 2011.
Source: NASA Kennedy Space Center, KSC-2011-8202, accessed May 2012, at <http://mediaarchive.ksc.nasa.gov>.

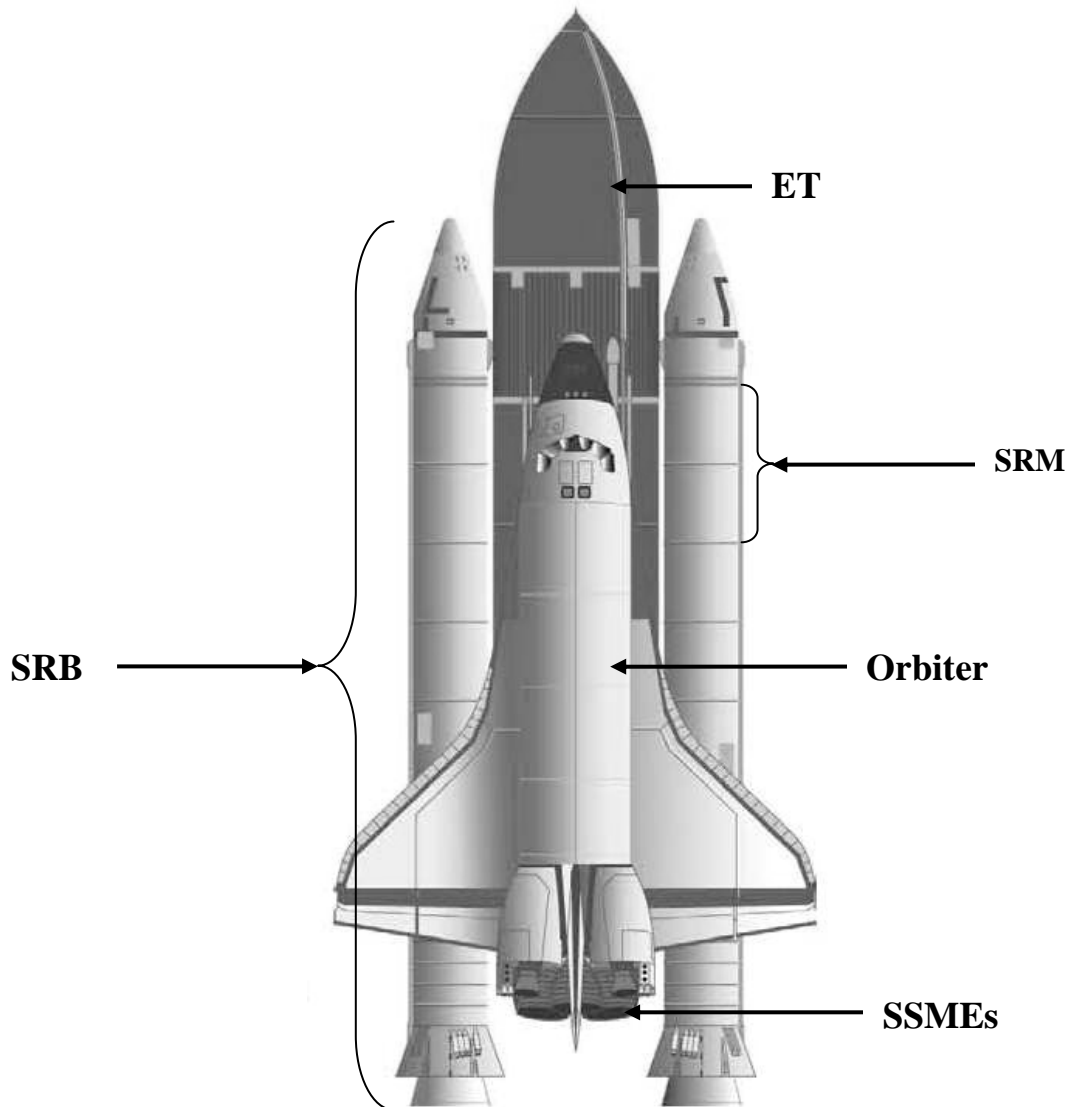


Figure No. A-26. The Space Transportation System.
Source: NASA, *Space Shuttle Era Facts*, page 1, with additions by ACI.

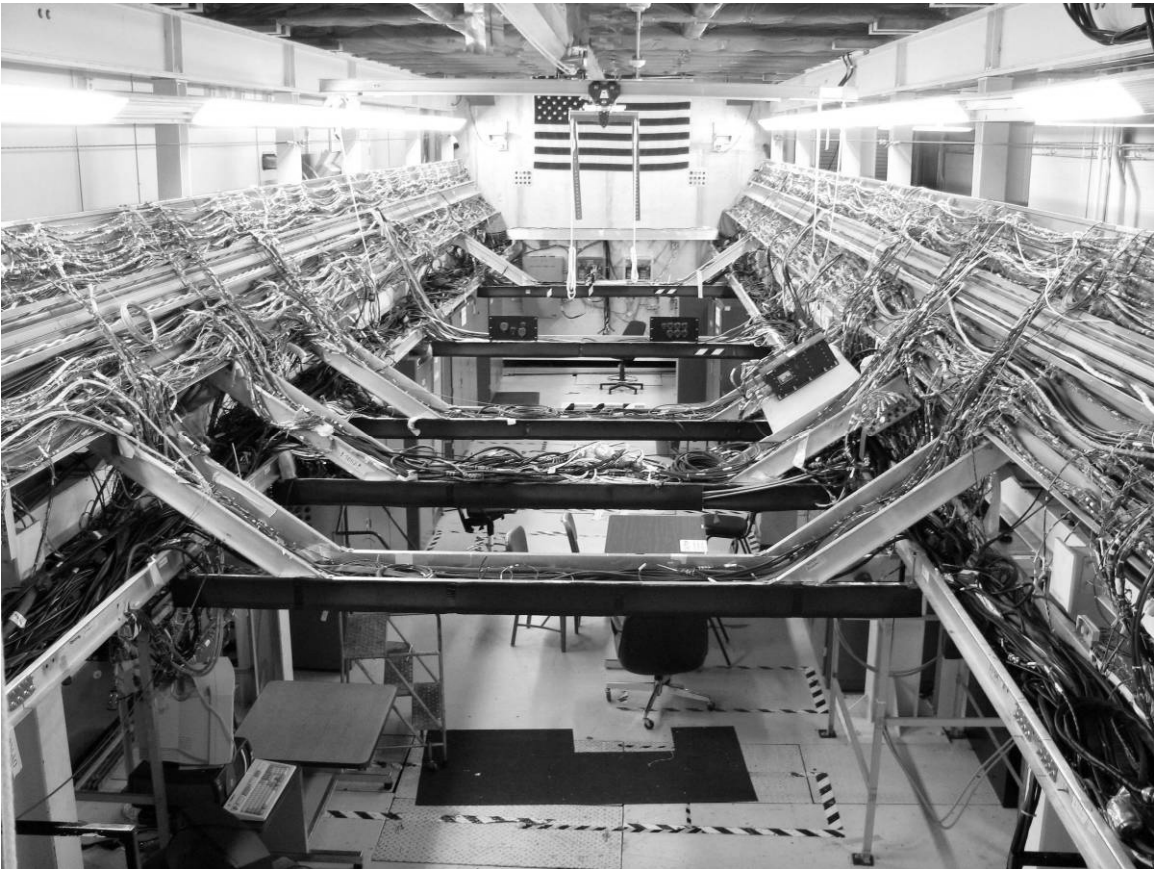


Figure No. A-27. "Big Rig" orbiter forward bay in Building 16 at the JSC, looking north.
Source: Archaeological Consultants, Inc., 2009.



Figure No. A-28. STA-099 at Lockheed Martin for testing, February 17, 1978.
Source: NASA, Johnson Space Center Image Repository, JSC2010-02304.



Figure No. A-29. Rollout of *Columbia* from High Bay 2, AFP 42, for transport to DFRC, March 8, 1979.

Source: NASA, Johnson Space Center/Boeing, Huntington Beach, California, A790308P-3C.



Figure No. A-30. View of *Challenger* at liftoff for her maiden voyage, April 4, 1983.
Source: NASA Kennedy Space Center, KSC-83PC-0137, accessed May 2012, at <http://mediaarchive.ksc.nasa.gov>.



Figure No. A-31. *Atlantis* landing at Edwards AFB following her second mission, December 3, 1985.

Source: NASA Johnson Space Center, STS61B(S)070, accessed May 2012, at <http://images.jsc.nasa.gov/lores/STS61B%28S%29070.jpg>.



Figure No. A-32. *Endeavour* (OV-105) roll-out at Palmdale, California, May 6, 1991.
Source: NASA, Johnson Space Center, S91-36157, accessed May 2012, at
<http://images.jsc.nasa.gov/lores/S91-36157.jpg>.

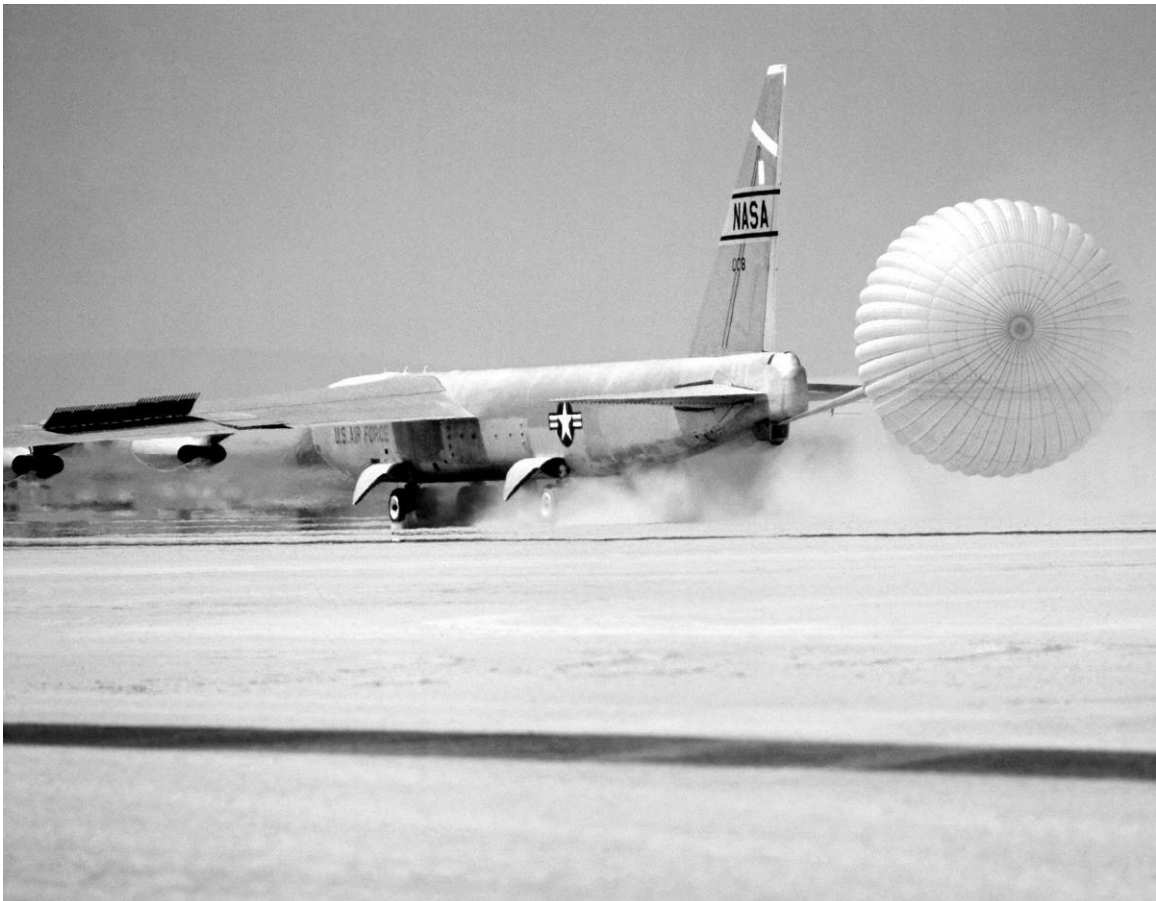


Figure No. A-33. A B-52 testing the Developmental Space Shuttle drag chute, 1990.
Source: NASA Dryden Flight Research Center, EC90-225-30, accessed May 2012, at
<http://www.dfrn.nasa.gov/gallery/photo/B-52/Small/EC90-225-30.jpg>.



Figure No. A-34. SCA N911NA, looking northeast, Dryden Flight Research Center.
Source: Archaeological Consultants, Inc. 2006.



Figure No. A-35. SCA N905NA, interior, Dryden Flight Research Center.
Source: Archaeological Consultants, Inc. 2006.