

NASA Video Catalog

October 2006

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VIDEO



National Aeronautics and
Space Administration
Langley Research Center
**Scientific and Technical
Information Program Office**

NASA STI Program ... in Profile

Since its founding, NASA has been dedicated to the advancement of aeronautics and space science. The NASA scientific and technical information (STI) program plays a key part in helping NASA maintain this important role.

The NASA STI program operates under the auspices of the Agency Chief Information Officer. It collects, organizes, provides for archiving, and disseminates NASA's STI. The NASA STI program provides access to the NASA Aeronautics and Space Database and its public interface, the NASA Technical Report Server, thus providing one of the largest collections of aeronautical and space science STI in the world. Results are published in both non-NASA channels and by NASA in the NASA STI Report Series, which includes the following report types:

- **TECHNICAL PUBLICATION.** Reports of completed research or a major significant phase of research that present the results of NASA Programs and include extensive data or theoretical analysis. Includes compilations of significant scientific and technical data and information deemed to be of continuing reference value. NASA counterpart of peer-reviewed formal professional papers but has less stringent limitations on manuscript length and extent of graphic presentations.
- **TECHNICAL MEMORANDUM.** Scientific and technical findings that are preliminary or of specialized interest, e.g., quick release reports, working papers, and bibliographies that contain minimal annotation. Does not contain extensive analysis.
- **CONTRACTOR REPORT.** Scientific and technical findings by NASA-sponsored contractors and grantees.

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- **SPECIAL PUBLICATION.** Scientific, technical, or historical information from NASA programs, projects, and missions, often concerned with subjects having substantial public interest.
- **TECHNICAL TRANSLATION.** English-language translations of foreign scientific and technical material pertinent to NASA's mission.

Specialized services also include creating custom thesauri, building customized databases, and organizing and publishing research results.

For more information about the NASA STI program, see the following:

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- Fax your question to the NASA STI Help Desk at (301) 621-0134
- Phone the NASA STI Help Desk at (301) 621-0390
- Write to:
NASA STI Help Desk
NASA Center for AeroSpace Information
7115 Standard Drive
Hanover, MD 21076-1320

Introduction

This issue of the *NASA Video Catalog* cites video productions listed in the NASA STI database.

The videos listed have been developed by the NASA centers, covering Shuttle mission press conferences; fly-bys of planets; aircraft design, testing and performance; environmental pollution; lunar and planetary exploration; and many other categories related to manned and unmanned space exploration.

Each entry in the publication consists of a standard bibliographic citation accompanied by an abstract. The Table of Contents shows how the entries are arranged by divisions and categories according to the *NASA Scope and Subject Category Guide*.

For users with specific information, a Title Index is available. A Subject Term Index, based on the *NASA Thesaurus*, is also included.

Guidelines for usage of NASA audio/visual material, ordering information, and order forms are also available.

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All videos are formatted in VHS and Betacam SP. Other formats available include SVHS, Hi8, and PAL for foreign users. Special handling, however, will result in an increased cost to the requester. Please contact the NASA STI Help Desk by phone at (301) 621-0390 for special format requests.

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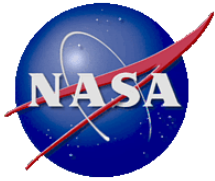
Standard processing means that most video requests are processed within 3 business days, then shipped.

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Standard shipping and handling via UPS is \$2.00 per item for U.S. addresses only.

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NASA Scientific and Technical Information Program



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[**Subject Term Index**](#)

[**Personal Author Index**](#)

NASA VIDEO CATALOG

A Publication of the National Aeronautics and Space Administration

OCTOBER 2006

01 AERONAUTICS (GENERAL)

Includes general research topics related to manned and unmanned aircraft and the problems of flight within the Earth's atmosphere. Also includes manufacturing, maintenance, and repair of aircraft. For specific topics in aeronautics, see *categories 02 through 09*. For information related to space vehicles see *12 Astronautics*.

20060026154 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Post Landing Press Conference

July 17, 2006; In English; 48 min., 38 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

On July 17, 2006 Dean Acosta (NASA Press Secretary), Mike Griffin (Administrator), Bill Gerstenmaier (Associate Administrator of Space Operations), and Mike Leinbach (NASA Launch Director) expressed how proud they were to be a part of the STS-121/ Discovery team. They also explained how flawlessly the mission performed and how it was the best mission ever flown. They proceeded to answer numerous questions from the press.

CASI

Launching; Conferences; Space Transportation System

19950004337 NASA Dryden Flight Research Center, Edwards, CA, USA

NACA/NASA: X-1 through X-31

Apr 4, 1994; In English

Report No(s): NASA-TM-104304; NONP-NASA-VT-94-23649; No Copyright; Avail: CASI; [B02](#), Videotape-Beta; [V02](#), Videotape-VHS

This video presents clips (in-flight, ground crew, pilots, etc.) of almost everything from X-1 through X-31.

DFRC

Research Aircraft; Research Projects

19950004297 NASA Dryden Flight Research Center, Edwards, CA, USA

Dryden and transonic research

May 27, 1992; In English; 20th Anniversary F-8 Digital Fly-By-Wire (DFBW) and Supercritical Wing (SCW) Symposium, 1995

Report No(s): NASA-TM-104281; NONP-NASA-VT-94-23629; No Copyright; Avail: CASI; [B02](#), Videotape-Beta; [V02](#), Videotape-VHS

This video on transonic research is given by Dryden engineer Ed Saltzman as part of the 20th Anniversary F-8 Digital Fly-By-Wire (DFBW) and Supercritical Wing (SCW) Symposium.

DFRC

F-8 Aircraft; Fly By Wire Control; Research; Supercritical Wings; Transonic Flow

02 AERODYNAMICS

Includes aerodynamics of flight vehicles, test bodies, airframe components and combinations, wings, and control surfaces. Also includes aerodynamics of rotors, stators, fans, and other elements of turbomachinery. For related information see also *34 Fluid Mechanics and Thermodynamics*.

19950013580 NASA Dryden Flight Research Center, Edwards, CA, USA

F-16XL interview with Marta Bohn-Meyer

Jul 27, 1992; In English

Report No(s): NASA-TM-110505; NONP-NASA-VT-95-41117; No Copyright; Avail: CASI; [B02](#), Videotape-Beta; [V02](#), Videotape-VHS

Marta Bohn-Meyer discusses the cooperative research between Rockwell Industries and NASA research facilities in their effort to optimize and maintain the supersonic laminar flow on the F-16XL aircraft. Research on the airfoil design, chord optimization, introduction of a suction feature to maintain pressure distribution, and CFD, both theoretical and actual phenomena, are discussed. Bohn-Meyer discusses the difference between supersonic and subsonic laminar flow, cross flow, reasons behind using this particular F-16 aircraft for this research, and the future of this ongoing research, including the data base that investigators are building from wind tunnel data and in-flight validation.

DFRC

Aircraft Design; Airfoils; F-16 Aircraft

05 AIRCRAFT DESIGN, TESTING AND PERFORMANCE

Includes all stages of design of aircraft and aircraft structures and systems. Also includes aircraft testing, performance, and evaluation, and aircraft and flight simulation technology. For related information see also *18 Spacecraft Design, Testing and Performance*; and *39 Structural Mechanics*. For land transportation vehicles see *85 Technology Utilization and Surface Transportation*.

20000033438 NASA Dryden Flight Research Center, Edwards, CA USA

Hyper-X Model Testing with Animation

Mar. 21, 1996; In English; Videotape: 6 min. 25 sec. playing time, in color, with partial sound

Report No(s): NONP-NASA-VT-2000043976; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

Live footage shows the Hyper-X program modeling at NASA Langley Research Center. The Hyper-X craft is shown on top of a Pegasus booster in a 20' Mach 6 Wind Tunnel. Visualization data runs are performed in the wind tunnel. Also seen is a brief interview with Vincent Rausch the Hyper-X Program Manager. Animation includes the flight model of the Hyper-X vehicle.

CASI

Hypersonic Flight; X-43 Vehicle; Pegasus Air-Launched Booster; Air Launching

19950013739 NASA Dryden Flight Research Center, Edwards, CA, USA

Acoustic climb to cruise test

Nov 27, 1991; In English

Report No(s): NASA-TM-110504; NONP-NASA-VT-95-41116; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

Flight test film footage of three different aircraft testing the acoustical noise levels during take-off, climb, maneuvers, and touch and go landings are described. These sound tests were conducted on two fighter aircraft and one cargo aircraft. Results from mobile test vehicle are shown.

DFRC

Acoustics; Aircraft Noise; Climbing Flight; Flight Tests; Noise Intensity

19950013578 NASA Dryden Flight Research Center, Edwards, CA, USA

F-15 resource tape

JAN 1, 1994; In English

Report No(s): NASA-TM-110502; NONP-NASA-VT-95-41114; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

An F-15 fighter aircraft is portrayed in resource video. A flight test is shown with take-off, touch and go landings, some flight maneuvers, and pilot to control tower communication with references to drag vectors.

CASI

Aircraft Landing; Aircraft Maneuvers; Aircraft Performance; F-15 Aircraft; Flight Tests; Takeoff; Touchdown

19950004339 NASA Dryden Flight Research Center, Edwards, CA, USA

X-31 tailless testing

Sep 9, 1994; In English

Report No(s): NASA-TM-104306; NONP-NASA-VT-94-23651; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This video addresses the NASA Dryden and X-31 International Test Organization (ITO) testbed provided for the Pentagon's 'tailless' and quasi-tailless vehicle configuration testing.

DFRC

Aircraft Configurations; Test Ranges; X-31 Aircraft

19950004333 NASA Dryden Flight Research Center, Edwards, CA, USA

X-31 resource tape

Aug 23, 1993; In English

Report No(s): NASA-TM-104300; NONP-NASA-VT-94-23645; No Copyright; Avail: CASI; B04, Videotape-Beta; V04, Videotape-VHS

This video presents raw, unedited material of Dryden's X-31 aircraft.

DFRC

Research Aircraft; X-31 Aircraft

19950004332 NASA Dryden Flight Research Center, Edwards, CA, USA

F-18 high alpha research vehicle resource tape

Aug 11, 1992; In English

Report No(s): NASA-TM-104299; NONP-NASA-VT-94-23644; No Copyright; Avail: CASI; B04, Videotape-Beta; V04, Videotape-VHS

This video presents raw, unedited material of Dryden's F-18 High Alpha Research Vehicle (HARV) aircraft.

DFRC

F-18 Aircraft; Research Vehicles

19950004331 NASA Dryden Flight Research Center, Edwards, CA, USA

F-16XL resource tape

Jan 28, 1993; In English

Report No(s): NASA-TM-104298; NONP-NASA-VT-94-23643; No Copyright; Avail: CASI; B04, Videotape-Beta; V04, Videotape-VHS

This video presents raw, unedited material of Dryden's F-16XL aircraft.

DFRC

F-16 Aircraft; Research Aircraft

19950004330 NASA Dryden Flight Research Center, Edwards, CA, USA

F-15 835 (HIDEC) resource tape

Feb 1, 1993; In English

Report No(s): NASA-TM-104297; NONP-NASA-VT-94-23642; No Copyright; Avail: CASI; [B04](#), Videotape-Beta; [V04](#), Videotape-VHS

This video presents raw, unedited material of Dryden's F-15 Highly Integrated Digital Electronic Control (HIDEC) aircraft.

DFRC

F-15 Aircraft; Flight Control; Research Aircraft

19950004329 NASA Dryden Flight Research Center, Edwards, CA, USA

F-104 resource tape

Oct 9, 1992; In English

Report No(s): NASA-TM-104296; NONP-NASA-VT-94-23641; No Copyright; Avail: CASI; [B03](#), Videotape-Beta; [V03](#), Videotape-VHS

This video presents raw, unedited material of Dryden's F-104 aircraft.

DFRC

F-104 Aircraft; Research Aircraft

19950004328 NASA Dryden Flight Research Center, Edwards, CA, USA

HL-10 dedication ceremony

Apr 3, 1990; In English

Report No(s): NASA-TM-104295; NONP-NASA-VT-94-23640; No Copyright; Avail: CASI; [B03](#), Videotape-Beta; [V03](#), Videotape-VHS

The dedication of NASA's HL-10 lifting body, being put on display at NASA Dryden Flight Research Center, is shown.

DFRC

HL-10 Reentry Vehicle; Lifting Bodies

19950004304 NASA Dryden Flight Research Center, Edwards, CA, USA

NASA and the SR-71: Back to the future

Sep 9, 1991; In English

Report No(s): NASA-TM-104290; NONP-NASA-VT-94-23636; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

Presented is a musical video salute to NASA's delivery of three SR-71 aircraft for use in flight research.

DFRC

Flight Tests; SR-71 Aircraft

19950004303 NASA Dryden Flight Research Center, Edwards, CA, USA

Research excitation system flight testing

Mar 30, 1992; In English

Report No(s): NASA-TM-104289; NONP-NASA-VT-94-23635; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

Excitation system research at Dryden with an F-16XL aircraft is presented.

DFRC

Excitation; F-16 Aircraft; Flight Tests; Research Aircraft

19950004299 NASA Dryden Flight Research Center, Edwards, CA, USA

F-18 HARV presentation for industry

May 1, 1993; In English

Report No(s): NASA-TM-104283; NONP-NASA-VT-94-23631; No Copyright; Avail: CASI; [B02](#), Videotape-Beta; [V02](#), Videotape-VHS

This video provides a look at some work done by Dryden's F-18 High Alpha Research Vehicle (HARV) in cooperation with the USA Navy and industry.

DFRC

Angle of Attack; F-18 Aircraft; Research Aircraft

08

AIRCRAFT STABILITY AND CONTROL

Includes flight dynamics, aircraft handling qualities, piloting, flight controls, and autopilots. For related information see also *05 Aircraft Design, Testing and Performance* and *06 Avionics and Aircraft Instrumentation*.

19950004336 NASA Dryden Flight Research Center, Edwards, CA, USA

F-15 Propulsion Controlled Aircraft (PCA)

Jul 1, 1993; In English

Report No(s): NASA-TM-104303; NONP-NASA-VT-94-23648; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This video presentation is a news release highlighting the F-15 Highly Integrated Digital Electronic Controls (HIDEC) Propulsion Controlled Aircraft (PCA) software through June 1993 at Dryden.

DFRC

Aircraft Control; Computer Programs; F-15 Aircraft; Flight Control

19950004305 NASA Dryden Flight Research Center, Edwards, CA, USA

Radio controlled for research

Jul 1, 1994; In English

Report No(s): NASA-TM-104292; NONP-NASA-VT-94-23637; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This video presents how Dryden engineers use radio-controlled aircraft such as the 1/8-scale model F-18 High Alpha Research Vehicle (HARV) featured to conduct flight research.

DFRC

Aircraft Models; Flight Tests; Radio Control; Research Aircraft; Scale Models

09

RESEARCH AND SUPPORT FACILITIES (AIR)

Includes airports, runways, hangars, and aircraft repair and overhaul facilities; wind tunnels, water tunnels, and shock tubes; flight simulators; and aircraft engine test stands. Also includes airport ground equipment and systems. For airport ground operations see *03 Air Transportation and Safety*. For astronomical facilities see *14 Ground Support Systems and Facilities (Space)*.

19950004335 NASA Dryden Flight Research Center, Edwards, CA, USA

Dryden overview for schools

Feb 3, 1994; In English

Report No(s): NASA-TM-104302; NONP-NASA-VT-94-23647; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This video presentation gives a narrated, quick look at the Dryden Flight Research Center and the Center's various projects. The presentation is directed toward a 6th-grade audience and emphasizes staying in school to learn the vital skills needed to succeed today.

DFRC

Education; Research Facilities

19950004334 NASA Dryden Flight Research Center, Edwards, CA, USA

The Western Aeronautical Test Range

Aug 1, 1988; In English

Report No(s): NASA-TM-104301; NONP-NASA-VT-94-23646; No Copyright; Avail: CASI; [B03](#), Videotape-Beta; [V03](#), Videotape-VHS

An overview of the Western Aeronautical Test Range (WATR) and its connection to NASA Dryden is presented.
DFRC

Test Facilities; Test Ranges

19950004326 NASA Dryden Flight Research Center, Edwards, CA, USA

Building the Integrated Test Facility: A foundation for the future

Oct 1, 1992; In English

Report No(s): NASA-TM-104280; NONP-NASA-VT-94-23628; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

A look at the construction and resources of Dryden's Integrated Test Facility is given.

DFRC

NASA Programs; Test Facilities

19950004302 NASA Dryden Flight Research Center, Edwards, CA, USA

Dryden tour tape, 1994

Feb 1, 1994; In English

Report No(s): NASA-TM-104288; NONP-NASA-VT-94-23634; No Copyright; Avail: CASI; [B02](#), Videotape-Beta; [V02](#), Videotape-VHS

This video provides an overview of NASA's Dryden Flight Research Center. This is the program shown to visitors during the tour at Dryden.

DFRC

General Overviews; NASA Programs; Research Facilities

19950004298 NASA Dryden Flight Research Center, Edwards, CA, USA

Dryden overview for schools

Feb 28, 1992; In English

Report No(s): NASA-TM-104282; NONP-NASA-VT-94-23630; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This video provides educators an overview of Dryden for students from late elementary through high school.

DFRC

Education; General Overviews; NASA Programs; Research Facilities

19940014480 NASA Marshall Space Flight Center, Huntsville, AL, USA

Technology test bed

Aug 1, 1988; In English

Report No(s): MSFC-13306; NASA-TM-109354; NONP-NASA-VT-94-198201; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This video details the renewed use of the massive rocket propulsion test stand at Marshall Space Flight Center, first used to test Saturn 5 rockets during the Apollo Program. The test stand can incorporate over 600 sensors during test firings of the Space Shuttle's main engines, which will result in increased safety and reliability, and reduced production costs.

CASI

Engine Tests; Performance Tests; Propulsion System Performance; Saturn 5 Launch Vehicles; Space Shuttle Main Engine; Spacecraft Propulsion; Test Firing; Test Stands

ASTRONAUTICS (GENERAL)

Includes general research topics related to space flight and manned and unmanned space vehicles, platforms or objects launched into, or assembled in, outer space; and related components and equipment. Also includes manufacturing and maintenance of such vehicles or platforms. For specific topics in astronautics see *categories 13 through 20*. For extraterrestrial exploration see *91 Lunar and Planetary Science and Exploration*.

20060026108 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-1: Columbia Landing and Safing Operations

April 14, 1981; In English; 50 min. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

The flight monitoring operations from ground support systems for Columbia's return from space in preparation for landing in Houston is shown. Views from the chase plane along with the actual landing are shown. The touch down time was 2 days, 6 hours, 22 minutes and 52 seconds. All post landing operations are also shown.

CASI

Space Transportation System; Ground Support Systems; Flight Operations

20010117037 NASA Johnson Space Center, Houston, TX USA

Apollo 11 Facts [Lunar EVA]

Jun. 23, 1994; In English; Videotape: 1 hr. 7 min. 45 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001181406; VJSC-1425M; No Copyright; Avail: CASI; [B04](#), Videotape-Beta; [V04](#), Videotape-VHS

Apollo 11 Commander Neil Armstrong and Lunar Module Pilot Edwin Aldrin, Jr., are seen on the surface of the Moon performing their extravehicular activities (EVAs).

CASI

Extravehicular Activity; Moon; Apollo 11 Flight

19950004306 NASA Dryden Flight Research Center, Edwards, CA, USA

LLRV/Apollo 11 25th anniversary

Jul 1, 1994; In English

Report No(s): NASA-TM-104293; NONP-NASA-VT-94-23638; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This video salutes the 25th anniversary of the Apollo 11's landing on the moon and Dryden's contribution with the Lunar Landing Research Vehicle (LLRV) program.

DFRC

Apollo 11 Flight; General Overviews; Lunar Landing; Lunar Landing Modules

19940029060 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Apollo 11: The Goddard connection

Jul 1, 1989; In English

Report No(s): JSC-T-04; NASA-TM-109815; NONP-NASA-VT-94-12943; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

The history of NASA Goddard Space Flight Center's involvement in the Apollo 11 Mission to the Moon is recounted. Goddard maintained the Manned Space Flight Network, composed of ground tracking stations, and tracking stations aboard ships and airplanes, which maintained communications between the orbiter and Earth.

CASI

Apollo Project; Histories; Manned Space Flight Network; Moon; Spacecraft Communication; Spacecraft Tracking

19940010835 NASA Goddard Space Flight Center, Greenbelt, MD, USA

GAS highlights, 1988

Feb 1, 1989; In English

Report No(s): GSFC-S-29; NASA-TM-109600; NONP-NASA-VT-93-190398; No Copyright; Avail: CASI; **B02**, Videotape-Beta; **V02**, Videotape-VHS

The videotape shows highlights of GSFC's involvement in the Get Away Special program during the 1988 calendar year.
CASI

Get Away Specials (STS); NASA Programs; Space Shuttles; Spaceborne Experiments

14

GROUND SUPPORT SYSTEMS AND FACILITIES (SPACE)

Includes launch complexes, research and production facilities; ground support equipment, e.g., mobile transporters; and test chambers and simulators. Also includes extraterrestrial bases and supporting equipment. For related information see also *09 Research and Support Facilities (Air)*.

19940010800 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Stock footage of Goddard Space Flight Center and Headquarters

Jun 1, 1989; In English

Report No(s): GSFC-S-36; NASA-TM-109589; NONP-NASA-VT-93-190387; No Copyright; Avail: CASI; **B02**, Videotape-Beta; **V02**, Videotape-VHS

Produced for Century Teleproductions in Boston, MA this video is a camera master showing various views, with natural sound, of the space flight center during the late spring. This finished footage is used in an interactive laser disc presentation that is used at Kennedy Space Center Visitor Center.

CASI

NASA Space Programs; Research Facilities

19940010797 NASA Goddard Space Flight Center, Greenbelt, MD, USA

GFSC-TV demo tape

Jan 1, 1989; In English

Report No(s): GSFC-S-32; NASA-TM-109586; NONP-NASA-VT-93-190384; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This demonstration tape produced by and for the Goddard Space Flight Center Television facility shows some of the capabilities of this state of the art facility that are available to projects at Goddard.

CASI

Research Facilities; Test Facilities

15

LAUNCH VEHICLES AND LAUNCH OPERATIONS

Includes all classes of launch vehicles, launch/space vehicle systems, and boosters; and launch operations. For related information see also *18 Spacecraft Design, Testing and Performance*; and *20 Spacecraft Propulsion and Power*.

20060026230 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121/Discovery: Launch Readiness Press Conference

June 29, 2006; In English; 1 hr., 1 min., 48 sec. playing time, in color, with sound; No Copyright; Avail: CASI; **V04**, Videotape-VHS; **B04**, Videotape-Beta

Participants in the briefing included: Bruce Buckingham (NASA Public Affairs), John Shannon (Chairman, Mission Management Team), Mike Suffredini (ISS Program Manager), Mike Leinbach (Shuttle Launch Director), Alan Thirkettle (ISS Program Manager, ESA) and 1st Lt. Kaleb Nordgen (USAF 45th Weather Squadron). There are no constraints to launch except for questionable weather. The crew is ready to go. PROGRESS has provided logistics and is ready to be installed. No cryogenics have been loaded because of a Phase 1 lightning advisory. The shuttle crew is in good shape, just waiting for the

weather to clear. ISS is making preparations for the Columbus Mission and future plans are to increase the crew from 3 to 6 people. The floor was opened to questions from the press.

CASI

Space Transportation System; Spacecraft Launching; Spacecrews; Space Shuttle Orbiters; Cryogenics; Logistics; Lightning

20060026226 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Launch Postponement MMT Briefing

July 02, 2006; In English; 34 min., 18 sec. playing time, in color, with sound; No Copyright; Avail: CASI; **V03**, Videotape-VHS; **B03**, Videotape-Beta

Bruce Buckingham from NASA Public Affairs introduces the panel who consist of: John Shannon, MMT chairman JSC; Mike Leinbach, NASA Launch Director; and 1st Lieutenant Kaleb Nordren, USAF 45th Weather Squadron. An opening statement is given from John Shannon on the postponement of the launch due to thunderstorms. Mike Leinbach also elaborates on the weather and talks about scrubbing two hours early, draining the vehicle, and reloading the hydrogen for the fuel cells for a possible launch attempt on Tuesday morning. Norden gives his weather forecast for Tuesday and Wednesday. Questions from the media on launch attempts, weather, and the cost of the scrub are addressed.

CASI

Space Transportation System; Spacecraft Launching; Discovery (Orbiter); NASA Space Programs

20060026224 NASA Kennedy Space Center, Cocoa Beach, FL, USA

Exploration Update

June 30, 2006; In English; 38 min., 22 sec. playing time, in color, with sound; No Copyright; Avail: CASI; **V03**, Videotape-VHS; **B03**, Videotape-Beta

Delores Beasley, NASA Public Affairs, introduces the panel who consist of: Scott 'Doc' Horowitz, Associate Administrator of Exploration Systems from NASA Headquarters; Jeff Henley, Constellation Program Manager from NASA Johnson Space Flight Center; and Steve Cook, Manager Exploration Launch Office at NASA Marshall Space Flight Center. Scott Horowitz presents a short video entitled, 'Ares Launching the Future'. He further explains how NASA personnel came up with the name of Ares and where the name Ares was derived. Jeff Henley, updates the Constellation program and Steve Cook presents two slide presentations detailing the Ares 1 crew launch vehicle and Ares 5 cargo launch vehicle. A short question and answer period from the news media follows.

CASI

Launch Vehicles; Space Exploration; Cargo Spacecraft; NASA Space Programs

20060026166 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121/Discovery L-3 Countdown Status Briefing

June 28, 2006; In English; 31 min., 43 sec. playing time, in color, with sound; No Copyright; Avail: CASI; **V03**, Videotape-VHS; **B03**, Videotape-Beta

The briefing started with opening remarks from George Diller (NASA Public Affairs). Jeff Spaulding (NASA Test Director) discussed the Shuttle launch status and the return to the International Space Station 12 day mission. Debbie Hahn (STS-121 Payload Manager) discussed the installation of mid-decks on ISS and the 2 tons of cargo (mainly crew supplies and food) and the oxygen regeneration system. Kathy Winters (Shuttle Weather Officer) discussed the weather forecast for the launch. The team also answered questions from the press.

CASI

Spacecraft Launching; Space Transportation System; Countdown; Cargo; Oxygen Supply Equipment; Payloads; International Space Station

19950011735 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Meteor 3/TOMS launch of 15 August 1991 in Plesetsk, USSR

Aug 3, 1994; In English

Report No(s): NASA-TM-110115; NONP-NASA-VT-95-37004; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

The TOMS launch of August 15, 1991, was a joint effort between the U.S.S.R. and the USA. The pre-launch briefing, a tour of the TOMS storage site, it's delivery and setup at the launch site, and the actual launch were viewed in this video, along

with a post-launch conference and a dinner. The launch occurred in Plesetsk, U.S.S.R., with the TOMS payload being launched on a Soviet Meteor. Officials from NASA were present for the launch.

CASI

Atmospheric Circulation; International Cooperation; Liftoff (Launching); Meteorological Satellites; Ozone Depletion; Payloads; Total Ozone Mapping Spectrometer

19950007287 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Delta, America's space ambassador

Oct 1, 1994; In English

Report No(s): NASA-TM-110046; NONP-NASA-VT-94-29868; No Copyright; Avail: CASI; B02, Videotape-Beta; V02, Videotape-VHS

This video presentation features the major satellites launched by the Delta rocket in a celebration of this dependable launch vehicle's past.

GSFC

Delta Launch Vehicle; Space Programs

16

SPACE TRANSPORTATION AND SAFETY

Includes passenger and cargo space transportation, e.g., shuttle operations; and space rescue techniques. For related information see also *03 Air Transportation and Safety; 15 Launch Vehicles and Launch Operations; and 18 Spacecraft Design, Testing and Performance*. For space suits see *54 Man/System Technology and Life Support*.

20060027905 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Space Shuttle Safety Improvements Briefing

June 08, 2006; In English; 1 hr., 26 min., 1 sec. playing time, in color, with sound; No Copyright; Avail: CASI; V04, Videotape-VHS; B04, Videotape-Beta

Steve Poulos, Space Shuttle Orbiter Projects Office Manager, and John Chapman, Space Shuttle External Tank Project Manager is shown in this STS-121 Space Shuttle Discovery safety improvements briefing. A graphic presentation of the gap filler installation is shown. The graphics include: 1) Protruding gap fillers during STS-114 mission; 2) STS-114 gap fillers removed on orbiter; 3) Gap filler installation prior to STS-114; 4) Post-STS-114 installation techniques; 5) Gap filler installation post STS-114; 6) Gap filler priority areas; 7) Discovery gap filler installation table and status for STS-121; 8) Damaged blanket on STS-114; 9) On-orbit photography and post-landing photography on STS-114; and 10) STS-114 insulation tiles. Poulos presents imagery that was obtained on STS-114. The imagery includes: 1) The Enhanced Launch Vehicle Imaging System (ELVIS); 2) Liquid oxygen external tank view; 3) Hand-held imagery of the external tank falling into the ocean; 4) ELVIS on STS-121, short, medium and long range camera configurations; 5) Radar capability on the ground at Kennedy Space Center, and 6) STS-121 aft external tank door tiles. Poulos says that STS-121 will have even more imagery than STS-114. John Chapman presents video animation of the external tank where modifications were made along with the ice frost ramps with extensions. Chapman explains these areas using an external tank model. Questions are then answered from the media.

CASI

Flight Safety; Space Shuttle Missions; NASA Space Programs; Discovery (Orbiter); Spacecraft Maintenance

20060027904 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Mission Overview Briefing

June 08, 2006; In English; 1 hr., 7 min., 29 sec. playing time, in color, with sound; No Copyright; Avail: CASI; V04, Videotape-VHS; B04, Videotape-Beta

Tony Ceccacci, Lead STS-121 Space Shuttle Flight director, and Rick LaBrode, Lead STS-121 ULF 1.1 International Space Station Flight Director, are shown in this STS-121 Discovery mission overview. Ceccacci begins with an overview of the mission and gives the mission goals. He also presents various slides of the STS-121 payload that includes: 1) Orbiter Docking System; 2) Integrated Cargo Carrier (ICC); 3) Multipurpose Logistics Module (MPLM); 4) TPS Sample Box Assembly; 5) Shuttle Remote Manipulator System (SRMS); and 6) Orbiter Boom Sensor System (OBSS). He shows a video presentation on the various processes involved in the inspections of the Orbiter that include: 1) Unberthing OBSS; 2) Starboard

wing leading edge survey; 3) Wing leading edge passes; 4) Nose cap surveys; 5) Port side surveys; and 6) Docking with the International Space Station. Ceccacci ends his presentation with discussing the work performed from flight day 1 to flight day 14. Rick LaBrose begins with discussing the on-orbit status of the Expedition 13 crew. He then presents a video of the MPLM installation, forward hatch of MPLM, resupply stowage platform, resupply stowage racks, and Oxygen Generator System (OGS) rack. Questions are answered from the media.

CASI

Space Shuttle Missions; General Overviews; NASA Space Programs; Space Shuttle Payloads

20060027799 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery L-2 Countdown Status Briefing

June 29, 2006; In English; 23 min., 57 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V02](#), Videotape-VHS; [B02](#), Videotape-Beta

Bruce Buckingham from NASA Public Affairs introduces Pete Nicolenko, NASA Test Director, and Kathy Winters, Shuttle Weather Officer. During this STS-121 two days before launch countdown briefing, Pete Nicolenko says that there are no issues of concern and that they are on schedule for launch. He then presents and discusses an Orbiter Processing Facility (OPF) video. The OPF topics of discussion include: 1) Wheel and tire installation; 2) Gap filler installation; 3) Booster build-up; 4) Transport of External Tank (ET) 119; 5) ET to Shuttle Rocket Booster (SRB) Mate operation; 6) Roll-over of Discovery out of OPF to the Vehicle Assembly Building (VAB); and 7) Roll-out to the pad. Kathy Winters gives her weather forecast for the STS-121 launch. The video ends with a question and answer period from the media.

CASI

Countdown; Discovery (Orbiter); Space Transportation System; NASA Space Programs

20060027371 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Entry Flight Director Post Landing Press Conference

July 17, 2006; In English; 33 min., 10 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

Steve Stich, STS-121 Entry Flight Director, and Wayne Hale, Space Shuttle Program is shown in this post landing press conference. Steve Stich begins with discussing the following topics: 1) Weather at Kennedy Space Center; 2) Gap filler protrusion; 3) De-orbit burn; 4) Space Shuttle Landing; 5) Global Position Satellite System (GPSS) performance; and 6) Post-landing rain showers. Wayne Hale discusses external tank observations at launch and the goals that were obtained by this flight, which are to deliver 4000 pounds of scientific equipment, increase the crew members to three on the International Space Station (ISS), and repair the ISS. Questions from the press on lessons learned from the Auxiliary Power Unit (APU) leak, and flight readiness reviews are addressed.

CASI

International Space Station; Space Transportation System; Spacecraft Landing; Discovery (Orbiter)

20060027370 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Post Launch Press Briefing

July 04, 2006; In English; 36 min., 43 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

The briefing begins with Dean Acosta (NASA Press Secretary) introducing Michael Griffin (NASA Administrator), Bill Gerstenmaier (Associate Administrator for Space Operations) Wayne Hale (Space Shuttle Program Manager), John Shannon (Chairman, Mission Management Team, JSC), and Mike Leinbach (NASA Launch Director). The teams effort and dedication paid off in the form of a perfect launch and the weather cooperated. The Mission Management Team no problems during inspection. Debris assessment at 2 min. 47 sec. and 4 min. 50 sec. will be discussed when that information becomes available. The floor was then open for questions from the press.

CASI

Space Transportation System; Space Shuttles; Launching; Inspection; Debris

20060027369 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Pre-Launch Mission Management Team Press Briefing

July 03, 2006; In English; 27 min., 54 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V02](#), Videotape-VHS; [B02](#), Videotape-Beta

The briefing began with Allard Buetel (NASA Public Affairs) introducing Bill Gerstenmaier (Associate Administrator for Space Operations) who provided an update of the Mission Management team meeting. The 3 criteria reviewed by the team were: a) ascent heating; b) ice formation and c) remaining foam still intact. The ascent heating had a safety factor of 5 and posed no concern. Ice formation was not a concern. In order to insure there was no damage to the remaining foam, an 8ft. pipe with a camera attached was used to provide pictures. The boroscope pictures showed there was no damage to the brackets or foam. The inspection went very well and the foam was acceptable and ready to fly. Then the floor was open to questions from the press.

CASI

Aerodynamic Heating; Space Transportation System; Safety Factors; Ice Formation; Inspection; Foams; Damage; Atmospheric Entry

20060027368 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Spacewalk Overview Briefing

June 08, 2006; In English; 51 min., 57 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

The briefing began with the introduction of Tomas Gonzalez-Torres (Lead Extra Vehicular Activity Officer). The spacewalk team included Pierce Sellers (EV-1), Mike Fossum (EV-2) and Mark Kelly (coordinator and pilot). Three new EMU's (space suits) were provided with hardware upgrades (warning systems). The 1st EVA would take place on flight day 5 and would include the exchange of the 3 EMU's. The 1st task was the installation of the blade locker, a device used to prevent severing of cables. The team will also install the Interface Umbilical System (IUS) which is an extension cord for the mobile transporter. EVA-2 task will be to replace the old Trailing Umbilical System (TUS) with a new one.

CASI

Extravehicular Activity; Space Suits; Space Transportation System; Installing

20060027256 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Mission Management Team Briefing

July 03, 2006; In English; 48 min., 41 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

The briefing opened with Bruce Buckingham (NASA Public Affairs) introducing John Shannon (Chairman, Mission Management Team, JSC), John Chapman (External Tank Project Manager), Mike Leinbach (Shuttle Launch Director), and 1st Lt. Kaleb Nordgren (USAF 45th Weather Squadron). John Shannon reported that the team for hydrogen loading was proceeding well and the external tank detanking was completed. During detanking the inspection team cracked foam caused by condensation and ice formation as the tank expanded and contracted. Aerothermal analysis and analysis for ice formation will be completed before launch. John Chapman explained the mechanics of the external tank design, the foam cracking, bracket design, etc. Mike Leinbach discussed the inspection teams and their inspection final inspection for ice formation before and after external tank filling. The inspection team of eight very experienced personnel also use telescopes with cameras to find any problems before launch. Kaleb Nordgren discussed weather and said there was a 40% chance of weather prohibiting launch. The floor was the opened for questions from the press.

CASI

Space Shuttle Missions; Spacecraft Launching; Thermal Analysis; Ice Formation; Foams; External Tanks

20060027254 NASA Kennedy Space Center, Cocoa Beach, FL, USA

NASA Agency Overview Briefing

June 30, 2006; In English; 1 hr., 11 min., 9 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V04](#), Videotape-VHS; [B04](#), Videotape-Beta

The briefing opened with Dean Acosta (NASA Press Secretary) introducing Michael Griffin (NASA Administrator) and Bill Gerstenmaier (Associate Administrator for Space Operations). Bill Griffin stated that they would resume the Shuttle Flight to Return process, that the vehicle was remarkably clean and if the weather was good, the Shuttle would be ready to launch

as scheduled. Bill Gerstenmaier stated that the preparations and processing of the vehicle went extremely well and they are looking forward to increasing the crew size to three. Then the floor was open to questions from the press.

CASI

Space Shuttles; Launch Vehicles; Launching; Crew Size; Space Transportation System

20060027245 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery L-1 Countdown Status Briefing

June 30, 2006; In English; 29 min., 21 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V02](#), Videotape-VHS; [B02](#), Videotape-Beta

Bruce Buckingham, NASA Public Affairs, introduces Jeff Spaulding, NASA Test Director; Debbie Hahn, STS-121 Payload Manager; and Kathy Winters, Shuttle Weather Officer. Spaulding gives his opening statement on this one day prior to the launching of the Space Shuttle Discovery. He discusses the following topics: 1) Launch of the Space Shuttle Discovery; 2) Weather; 3) Load over of onboard reactants; 4) Hold time for liquid hydrogen; 5) Stowage of Mid-deck completion; 6) Check-out of onboard and ground network systems; 7) Launch windows; 8) Mission duration; 9) Extravehicular (EVA) plans; 10) Space Shuttle landing day; and 11) Scrub turn-around plans. Hahn presents and discusses a short video of the STS-121 payload flow. Kathy Winters gives her weather forecast for launch. She then presents a slide presentation on the following weather conditions for the Space Shuttle Discovery: 1) STS-121 Tanking Forecast; 2) Launch Forecast; 3) SRB Recovery; 4) CONUS Launch; 5) TAL Launch; 6) 24 Hour Delay; 7) CONUS 24 Hour; 8) TAL 24 Hour; 9) 48 Hour Launch; 10) CONUS 48 Hour; and 11) TAL 48 Hour. The briefing ends with a question and answer period from the media.

CASI

Countdown; Discovery (Orbiter); Space Transportation System; Spacecraft Launching

20060026410 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Pre-Flight Crew News Briefing

June 08, 2006; In English; 44 min., 41 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

The STS-121 crew is shown during this pre-flight news briefing. Steve Lindsey, Commander, begins with saying that they are only a few weeks from flight and the vehicle is in good shape. Mark Kelly, Pilot, is introduced by Lindsey and he discusses Kelly's main objective which is to direct the three spacewalks scheduled. Kelly introduces Mike Fossum, Mission Specialist. Kelly says that Fossum will be involved in three spacewalks. Fossum introduces Lisa Nowak, Mission Specialist, who is involved in robotics. Also Stephanie Wilson, Mission Specialist, will be involved in robotics. Piers Sellers, Mission Specialist, is introduced by Wilson, who is the lead spacewalker for this mission. Sellers then introduce Thomas Reiter, Mission Specialist, who is involved in spacewalks. The educational background of each crew member is given. Questions from the news media on the subjects of long term flights on the International Space Station, Ice frost ramp replacement, Orbiter Boom Sensor System (OBSS) stability, foam loss during STS-114 flight, duration of the mission, and mental preparation for test flights are addressed.

CASI

Discovery (Orbiter); Flight Crews; Flight Tests; Space Transportation System Flights

20060026409 NASA Kennedy Space Center, Cocoa Beach, FL, USA

Space Shuttle Program Update

May 31, 2006; In English; 1 hr., 1 min., 30 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V04](#), Videotape-VHS; [B04](#), Videotape-Beta

Bruce Buckingham, from NASA Public Affairs, introduces Wayne Hale, Space Shuttle Program Manager, and Mike Leinbach, NASA launch Director. Wayne Hale begins discussing the Flight Readiness Review (FRR) that has just occurred to see if they were ready to fly. He points out that the review was a debris verification review (DVR). This review was done to ascertain how well they have done to eliminate the potential for debris to come off of the External Tank (ET), or any other part of the launch vehicle. He expresses that they have made significant improvements to the ET. He gives a description of the ET that is presently on the launch pad. Mike Leinbach discusses hardware processing and the condition of the launch vehicle. Questions from the news media about possible modifications to the ice frost ramp, Solid Rocket Booster (SRB)

electrical problems, ET foam loss, amount of debris loss expectation during ascent, and return to flight costs are all addressed. CASI

External Tanks; NASA Space Programs; Launch Vehicles; Space Shuttle Boosters; Discovery (Orbiter)

20060026276 NASA Kennedy Space Center, Cocoa Beach, FL, USA

Space Shuttle Program Update News Conference with Wayne Hale

February 28, 2006; In English; 1 hr., 1 min., 32 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V04](#), Videotape-VHS; [B04](#), Videotape-Beta

Jessica Rye from NASA Public Affairs introduces: Wayne Hale, Space Shuttle Deputy Program Manager; Mike Leinbach, NASA Launch Director; and Tim Wilson, from the NASA Engineering and Safety Center. Hale begins the discussion with a video showing the following processes: 1) Changing of gap fillers at Orbiter Processing Facility; 2) The Orbiter Boom Sensor System (OBSS) being loaded into Discovery payload bay; 3) Engine installation; 4) Spacecrew at Michoud Assembly observing the area where the PAL ramps were removed; 5) Test being performed to mitigate liquid air forming underneath foam; and 6) Roll out of ET119 from New Orleans. Hale also presents a slide of the ET debris Mitigation Activities and ET Ice/Frost Ramps. Mike Leinbach says that Kennedy Space Center is ready to receive the tank and that he is ready to get on with the mission. Tim Wilson heads the team to resolve foam loss issues which is his primary goal before this flight. A question and answer period follows.

CASI

Space Shuttles; Space Transportation System; NASA Space Programs; External Tanks; Discovery (Orbiter)

20060026228 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121/Discovery: Mission Status Briefing

July 05, 2006; In English; 24 min., 10 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V02](#), Videotape-VHS; [B02](#), Videotape-Beta

Tony Ceccacci (Space Shuttle Flight Director) discussed the following activities: starboard survey, two space rendezvous, nose cap survey, timelines. Rick LaBrode (International Space Station Flight Director) discussed the following activities: preparation for Shuttle Docking, leak checks, pressurization checks, final configuration for cameras, setting up the internal wireless information system, accelerometers, etc. Then the floor was open to questions from the press.

CASI

International Space Station; Space Transportation System Flights; Space Shuttle Missions; Space Rendezvous; Cameras; Docking; Information Systems; Space Shuttles

20060026227 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121/Discovery: Imagery Quick-Look Briefing

July 04, 2006; In English; 43 min., 29 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

Kyle Herring (NASA Public Affairs) introduced Wayne Hale (Space Shuttle Program Manager) who stated that the imagery for the Space shuttle external tank showed the tank performed very well. Image analysis showed small pieces of foam falling off the rocket booster and external tank. There was no risk involved in these minor incidents. Statistical models were built to assist in risk analysis. The orbiter performed excellently. Wayne also provided some close-up pictures of small pieces of foam separating from the external tank during launching. He said the crew will also perform a 100% inspection of the heat shield. This flight showed great improvement over previous flights.

CASI

Space Transportation System; External Tanks; Foams; Heat Shielding; Image Analysis; Risk

20060026225 NASA Kennedy Space Center, Cocoa Beach, FL, USA

Space Shuttle Status News Conference

October 14, 2005; In English; 55 min. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

Richard Gilbech, External Tank 'Tiger Team' Lead, begins this space shuttle news conference with detailing the two major objectives of the team. The objectives include: 1) Finding the root cause of the foam loss on STS-114; and 2) Near and long term improvements for the external tank. Wayne Hale, Space Shuttle Program Manager, presents a chart to explain the external

tank foam loss during STS-114. He gives a possible launch date for STS-121 after there has been a repair to the foam on the External Tank. He further discusses the changes that need to be made to the surrounding areas of the plant in New Orleans, due to Hurricane Katrina. Bill Gerstemaier, NASA Associate Administrator for Space Operations, elaborates on the testing of the external tank foam loss. The discussion ends with questions from the news media about a fix for the foam, replacement of the tiles, foam loss avoidance, the root cause of foam loss and a possible date for a new external tank to be shipped to NASA Kennedy Space Center.

CASI

External Tanks; Space Shuttles; Space Transportation System; NASA Space Programs

20060026165 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121/Discovery Preflight Briefing Program Overview

June 08, 2006; In English; 1 hr., 8 min., 11 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V04](#), Videotape-VHS; [B04](#), Videotape-Beta

Wayne Hale (Space Shuttle Program Manager) opens with a short video of the external tank operation and the Shuttle roll out to the launch pad. Kirk Shireman (International Space Station Program Deputy Manager) shows a video of International Space Station activities which included replacement of the remote power switch, unloading of cargo, Earth observation (over 23,000 photos taken), exercises, and replacement of the Camera during a spacewalk.

CASI

International Space Station; Space Transportation System; Space Shuttles; Earth Observations (From Space); Cargo; Extravehicular Activity; External Tanks

20060026155 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Crew Activities

2006; In English; 38 min., 38 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

STS-121/Discovery Flight Crew; Steve Lindsey(Commander), Mark Kelley(pilot), Mike Fossum, Lisa Nowak, Stephanie Nowak, Pierce Sellers, and Thomas Ryder performed the following activities: 1) Crew equipment interface test at SSPF; 2) Crew equipment interface test at Kennedy Space Center; and Payload Crew equipment interface test in SSPF.

CASI

Spacecrews; Space Transportation System; Discovery (Orbiter); Space Transportation System Flights

20060026153 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery End of Mission Crew Briefing

July 17, 2006; In English; 39 min., 11 sec. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

The crew of the STS-121 Discovery mission is shown during this end of mission briefing. The crewmembers consist of: Stephanie Wilson, mission specialist; Steve Lindsey, commander; Lisa Nowak, mission specialist; Piers Sellers, mission specialist; Mike Fossum, mission specialist; and Mark Kelly, pilot. The briefing opens with Commander Lindsey describing the two major objectives of this mission, which are to accomplish the rest of the return to flight objectives started by STS-114, and to increase the ISS crew to three. He expresses that these objectives were fulfilled. A question and answer period from the news media follows. Lisa Nowak talks about robotics and her experiences during her first flight. Stephanie Wilson also discusses robotics and gives her thoughts about spaceflight. Steve Lindsey discusses the flying qualities of STS-121, spacecraft landing, and weather conditions while in space. Mark Kelly was responsible for the undocking of the Shuttle from the International Space Station, and he elaborates on this process. Spacewalkers Piers Sellers and Mike Fossum discuss testing of the Orbiter Boom Sensor System (OBSS). This system will be used as a platform to make repairs to the Space Shuttle.

CASI

International Space Station; Space Shuttle Missions; Spacecrews; Discovery (Orbiter); Space Transportation System

20060026151 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: TCDT (Terminal Countdown Demonstration Test) Compilation

June 16, 2006; In English; No Copyright; Avail: CASI; [V04](#), Videotape-VHS; [B04](#), Videotape-Beta

STS-121/Discovery Flight Crew; Steve Lindsey(Commander), Mark Kelley(pilot), Mike Fossum, Lisa Nowak, Stephanie

Nowak, Pierce Sellers, and Thomas Ryder completed the TCDT. The activities consisted of 1) Crew Arrival; 2) Pad 39B Media Event; 3) STA Flights at SLF; 4) Pad Walkdown and Slidewire; 5) Breakfast, Suiting, Walkout; 6) Crew Ingress in Orbiter; 7) Crew Egress and Slidewire; 8) M-113 Training; 9) Crew Payload Inspection; and 10) Crew Departure from the SLF.

CASI

Countdown; Discovery (Orbiter); Space Transportation System Flights; Spacecrews; Space Transportation System

20060026134 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-1: Columbia Briefings

[2006]; In English; 1 hr., 24 min. playing time, in color, with sound; No Copyright; Avail: CASI; [V04](#), Videotape-VHS; [B04](#), Videotape-Beta

A video presentation on an update of the STS-1 Columbia Shuttle is shown. Hugh Harris is the moderator. He introduces Don Phillips, Chief STS Test OPS, who presents the status of the vehicle. Terry William, Chief of Mechanical Systems, discusses the debonding of the panels. A question and answer period from the news media is shown. The various topics of discussion from the news media include: 1) Repair of thermal tiles; 2) Launch dates; and 3) Landing and launch sites and 4) Low pressure/high pressure tanking tests. An audio presentation is given of questions from NASA Marshall Space Flight Center and NASA Washington. On March 12, 1981, another STS-1 Columbia update is shown. Bob Schick, Shuttle Test Director, and Bob Sieck, Flight Project Engineer answers questions about the actual repair time of the panels and a very detailed description of the three areas of debonding is presented. A brief launch date statement from Dr. Allen Lovelace, Acting NASA Administrator is given and John Lardley, Shuttle Associate Director, discusses the flight readiness review.

CASI

Space Transportation System 1 Flight; Columbia (Orbiter); Space Shuttles; NASA Space Programs; Spacecraft Launching

20060026107 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-1: Columbia Pre-Launch Press Conference with Young/Crippin

April 14, 1981; In English; 48 min. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

Commander John Young and pilot Bob Crippin show a short film about the 2 and 1/2 day space mission which encompasses 170 flight objectives. Following the film, they answer questions from the press which cover topics ranging from ejection systems to solid rocket fuels.

CASI

Space Transportation System; Solid Rocket Propellants; Space Missions; Ejection

20060026104 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-1: Columbia Complete Mission

April 1981; In English; 40 min. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

A video presentation of the STS-1 Columbia Mission is shown. The video begins with footage of the STS-1 Columbia arriving at Kennedy Space Center on March 24, 1979. The various milestones that were shown include: 1) STS-1 Columbia Shuttle Rocket Booster (SRB) stacking; 2) External Tank (ET) lift and mating; 3) Move to VAB and Mating; 4) Rollout to pad 39A; 5) Flight Readiness Firing (FRF) on February 19, 1981; 6) Launch day; and 7) Return to Kennedy Space Center. John W. Young, Commander and Robert L. Crippen, Pilot are shown having a traditional breakfast before the suit up and drive out to the launch pad. Footage of the lift-off along with Shuttle Rocket Booster (SRB) separation is shown. After lift-off, there is a shot of the crew in the mid-deck and also a view of thunderstorms over the Amazon Basin. The video ends with a view of Columbia returning to Kennedy Space Center on April 25, 1981.

CASI

Booster Rocket Engines; Space Transportation System 1 Flight; Space Missions; NASA Space Programs; Columbia (Orbiter)

20060026103 NASA Kennedy Space Center, Cocoa Beach, FL, USA

STS-121: Discovery Post Flight Readiness Review Briefing

June 17, 2006; In English; 50 min. playing time, in color, with sound; No Copyright; Avail: CASI; [V03](#), Videotape-VHS; [B03](#), Videotape-Beta

This post Flight Readiness Review (FRR) briefing begins with NASA Press Secretary Dean Acosta, introducing the panel

who consist of: NASA Administrator, Dr. Michael Griffin; Associate Administrator for Space Operations, Bill Gerstenmaier; Space Shuttle Program Manager, Wayne Hale; and NASA Launch director, Mike Leinbach. The discussion begins with Dr. Michael Griffin, who expresses his gladness to be a part of the FRR. Bill Gerstenmaier talks about how they were very thorough about the subjects reviewed and that they wanted to make sure that they were ready to fly. He discusses and presents two slides. The first slide is a description of the LO2 intertank and LH2 ice/frost ramps staging location and the second are the top ten LH2 Ice/Frost Ramp Foam Loss events. Wayne Hale gives his thoughts on the human element that came into play during the FRRs. He talks about the willingness of everyone to speak their mind, instead of giving short comments. He expressed that this element is a huge step forward for NASA. Mike Leinbach reports on the processing of the vehicle and expresses that everything is going well and there is nothing to prohibit the launch. He also gives a good report on Atlantis, in case there is a need to use the vehicle. This FRR briefing ends with a short question and answer period from the press on topics such as debris, foam loss, ice/frost ramp redesign, crew risks, and launch date.

CASI

Discovery (Orbiter); Space Transportation System; Postflight Analysis; Space Shuttles; NASA Space Programs

20000033861 NASA Dryden Flight Research Center, Edwards, CA USA

X-33, X-34, X-37 Press Conference (Tape 2)

Aug. 24, 1999; In English; Videotape: 34 min. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2000043974; No Copyright; Avail: CASI; [B03](#), Videotape-Beta; [V03](#), Videotape-VHS

Live footage shows Project Managers Susan Turner, MSFC and David Manley, Boeing Co. participating in the X-37 Briefing. NASA's Public Affairs June Malone introduced these panelists who went on to discuss the vehicle and its secondary payload. Manley mentions the X-37 capabilities, main propulsion system, its lithium iron batteries, hot control surfaces, and its fly by wire system. Turner mentions the on-board operations, the deployment of the solar arrays, and the autonomous navigation and landing system. Also included is an animation of the X-37 vehicle during flight and the secondary payload release into orbit.

CASI

X-37 Vehicle; Reusable Launch Vehicles; Recoverable Launch Vehicles; Conferences

20000033833 NASA Dryden Flight Research Center, Edwards, CA USA

X-43 Composite Tape

Dec. 16, 1999; In English; Videotape: 7 min. 26 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2000045251; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

Live footage shows Project Manager Joel Sitz participating in an interview about the X-43 project. Sitz mentions several tests that will be performed on the X-43. He also mentions that the main objective of this project is to validate the design code for hypersonic air breathing vehicles. He discusses the projected data collection to prove that the predictions that were made in the laboratories and wind tunnels are correct. Scenes include the roll of the X-43 and an animation of the flight.

CASI

X-43 Vehicle; Hypersonic Flight; Air Breathing Boosters; Air Breathing Engines; Airframes

20000033440 NASA Dryden Flight Research Center, Edwards, CA USA

X-38 Phase 3 Drops V-132 FF#3

Mar. 30, 2000; In English; Videotape: 43 min. playing time, in color, without sound

Report No(s): NONP-NASA-VT-2000043892; No Copyright; Avail: CASI; [B03](#), Videotape-Beta; [V03](#), Videotape-VHS

Live footage shows the drop of the X-38 vehicle. Also shown are parachute deployments from various cameras.

CASI

X-38 Crew Return Vehicle; Research Vehicles; Research and Development

20000033439 NASA Dryden Flight Research Center, Edwards, CA USA

X-34 Captive Carry & Seunghee Lee Interview

Jun. 29, 1999; In English; Videotape: 5 min. 42 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2000043975; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

Live footage shows the rollout of the aircraft carrying the X-34. Also shown are the taxiing of the aircraft and takeoff. The NASA Dryden X-34 Project Manager is also shown during an interview.

CASI

X-34 Reusable Launch Vehicle; Air Launching; Pegasus Air-Launched Booster; Research Vehicles; Research and Development

19940029282 NASA, Washington, DC, USA

Shuttle 51L: Challenger

JAN 1, 1994; In English

Report No(s): NASA-TM-109835; NONP-NASA-VT-94-12963; No Copyright; Avail: CASI; **B03**, Videotape-Beta; **V03**, Videotape-VHS

This video follows the pre-launch and launch of the Space Shuttle Challenger preceding the accident. It then details the accident investigation report.

CASI

Accident Investigation; Challenger (Orbiter); Space Shuttle Mission 51-L; Spacecraft Launching

19940014598 NASA Marshall Space Flight Center, Huntsville, AL, USA

Pathfinder: Shuttle exhibit

Aug 1, 1988; In English

Report No(s): MSFC-13239; NASA-TM-109357; NONP-NASA-VT-94-198204; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video introduces the Pathfinder Shuttle Exhibit, a joint project between the Marshall Space Flight Center and the State of Alabama's Space and Rocket Center in Huntsville. The exhibit features a never flown Shuttle vehicle, Pathfinder, that was used in early ground tests in the Shuttle Program, as well as an actual external fuel tank and set of booster rockets. The video includes footage of actual launches, the Pathfinder Shuttle Exhibit, and shots of the Space Camp at Alabama's Space and Rocket Center.

CASI

Museums; Space Shuttle Orbiters

19940014481 NASA Marshall Space Flight Center, Huntsville, AL, USA

Shuttle-C, the future is now

Feb 1, 1989; In English

Report No(s): MSFC-14261; NASA-TM-109355; NONP-NASA-VT-94-198202; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video details plans for Shuttle-C, an unmanned heavy launch vehicle to carry payloads into orbit. Computer animations depict the Shuttle-C, which uses the same recoverable external boosters, external fuel tank and main orbiter engines as the existing Space Shuttles, through liftoff and entry into orbit, where it progressively jettisons the cargo shroud, external fuel tank, and nose shroud. The video also shows computer simulations of a remotely controlled orbital maneuvering vehicle positioning preassembled components of a Space Station and delivering planetary probes and lunar exploration materials to orbit.

CASI

Computer Animation; Heavy Lift Launch Vehicles; Orbital Assembly; Orbital Maneuvering Vehicles; Shuttle Derived Vehicles; Space Exploration; Space Stations; Spacecraft Design

SPACE COMMUNICATIONS, SPACECRAFT COMMUNICATIONS, COMMAND AND TRACKING

Includes space systems telemetry; space communications networks; astronavigation and guidance; and spacecraft radio blackout. For related information see also *04 Aircraft Communications and Navigation*; and *32 Communications and Radar*.

20040040094 NASA Goddard Space Flight Center, Greenbelt, MD, USA

TDRS-1 Going Strong at 20

April 03, 2003; In English; 10 mins., 19 sec. playing time, in color, with sound

Report No(s): G03-029; No Copyright; Avail: CASI; **V01**, Videotape-VHS; **B01**, Videotape-Beta

This video presents an overview of the first Tracking and Data Relay Satellite (TDRS-1) in the form of text, computer animations, footage, and an interview with its program manager. Launched by the Space Shuttle Challenger in 1983, TDRS-1 was the first of a network of satellites used for relaying data to and from scientific spacecraft. Most of this short video is silent, and consists of footage and animation of the deployment of TDRS-1, written and animated explanations of what TDRS satellites do, and samples of the astronomical and Earth science data they transmit. The program manager explains in the final segment of the video the improvement TDRS satellites brought to communication with manned space missions, including alleviation of blackout during reentry, and also the role TDRS-1 played in providing telemedicine for a breast cancer patient in Antarctica.

CASI

TDR Satellites; Satellite Transmission; Deployment; Satellite Networks; Spacecraft Communication

SPACECRAFT DESIGN, TESTING AND PERFORMANCE

Includes satellites; space platforms; space stations; spacecraft systems and components such as thermal and environmental controls; and spacecraft control and stability characteristics. For life support systems see *54 Man/System Technology and Life Support*. For related information see also *05 Aircraft Design, Testing and Performance*; *39 Structural Mechanics*; and *16 Space Transportation and Safety*.

20010116514 NASA Johnson Space Center, Houston, TX USA

Apollo Presentation

Jan. 01, 2001; In English; Videotape: 7 min. 2 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001174288; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video is a compilation of scenes from the Apollo 11 mission, from the speech President Kennedy gave declaring America's intention to go to the Moon through the Lunar Module liftoff from the Moon's surface, including footage from the Apollo 11 spacecraft launch, astronaut activities on the lunar surface, the placing of the American flag on the surface on the Moon, and an astronaut on the Lunar Rover.

CASI

Astronauts; Lunar Surface; Moon; Apollo 11 Flight

20000064717 NASA Marshall Space Flight Center, Huntsville, AL USA

Starfire I/ Consort III Launch

May 16, 1990; In English; Videotape: 28 min. 11 sec. playing time, in color. with sound

Report No(s): NONP-NASA-VT-2000081529; No Copyright; Avail: CASI; **B02**, Videotape-Beta; **V02**, Videotape-VHS

The Consort 3 is a commercial suborbital rocket that carried 12 microgravity experiments. It was launched on a Starfire rocket on May 16, 1990, from the Naval Ordnance Missile Test Station facilities at the U.S. Army's White Sands Missile Range (WSMR), NM. The videotape opens with approximately 2 minutes of a man speaking into a microphone but there is no sound. This is followed by a brief summary of the payload, and the expected trajectory, a view of the launch vehicle, the countdown and the launch. The videotape then shows a film clip from the University of Alabama, with Dr. Francis Wessling, project manager for the Consort 3 project, speaking about the mission goals in the materials sciences experimentation. The video shows footage of the payload being assembled. The next section is a discussion by Dr. Roy Hammstedt, of Pennsylvania State University, who reviews the Penn State Bio Module, and the goal of learning about the effects of gravity on physiology. This is followed by George Maybee, from McDonald Douglas, who spoke about the payload integration process while the video shows some of the construction. The last section of the videotape shows a press conference at the

launch site. Ana Villamil answers questions from the press about the flight.

CASI

Launching; Microgravity; Payloads; Low Gravity Manufacturing; Gravitational Physiology; Physiological Effects

19940029053 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Cosmic Background Radiation Explorer (COBE)

Oct 1, 1989; In English

Report No(s): GSFC-T-23; NASA-TM-109801; NONP-NASA-VT-94-12929; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video explains the mission of the Cosmic Background Radiation Explorer (COBE) prior to its November 1989 launch. It also includes animated footage on the Big Bang theory.

CASI

Background Radiation; Big Bang Cosmology; Cosmic Background Explorer Satellite; Spaceborne Astronomy

19940014492 NASA Goddard Space Flight Center, Greenbelt, MD, USA

TDRS press release

Oct 1, 1988; In English

Report No(s): GSFC-R-37; NASA-TM-109373; NONP-NASA-VT-94-198220; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This material is released to both local and national broadcast media showing the Tracking and Data Relay Satellite (TDRS). The tape has split audio to facilitate ease of customizing for individual broadcast formats.

CASI

Functional Design Specifications; TDR Satellites

19940010805 NASA Marshall Space Flight Center, Huntsville, AL, USA

Inertial Upper Stage

Feb 1, 1989; In English

Report No(s): MSFC-14308; NASA-TM-109654; NONP-NASA-VT-93-190452; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video tape details the importance of the Inertial Upper Stage in projecting various satellites from the Shuttle's cargo bay.

CASI

Inertial Upper Stage; Orbit Insertion; Payload Delivery (STS)

19940010801 NASA Marshall Space Flight Center, Huntsville, AL, USA

Space Station: The link to America's future

Feb 1, 1989; In English

Report No(s): MSFC-14261; NASA-TM-109653; NONP-NASA-VT-93-190451; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video tape documents the planned design and development of the Space Station.

CASI

NASA Space Programs; Space Station Freedom

19940010796 NASA Goddard Space Flight Center, Greenbelt, MD, USA

TDRS video clip

Jan 1, 1989; In English

Report No(s): GSFC-S-09; NASA-TM-109585; NONP-NASA-VT-93-190383; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video presents Tracking and Data Relay Satellite and Goddard Space Flight Center involvement.

CASI

Satellite Communication; TDR Satellites

19940010794 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Orbiting solar operations

Jul 1, 1988; In English

Report No(s): GSFC-R-20; NASA-TM-109583; NONP-NASA-VT-93-190381; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

A short video presentation about the capabilities, accomplishments, and limitations of the Orbiting Solar Operations is presented.

CASI

Solar Activity; Solar Observatories

19940010754 NASA Marshall Space Flight Center, Huntsville, AL, USA

Long Duration Exposure Facility is coming home

Nov 1, 1989; In English

Report No(s): MSFC-16005; NASA-TM-109656; NONP-NASA-VT-93-190454; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video tape describes how the Long Duration Exposure Facility will provide knowledge of the effects of space on various materials over a long period of time.

CASI

Long Duration Exposure Facility; Spaceborne Experiments

19

SPACECRAFT INSTRUMENTATION AND ASTRIONICS

Includes the design, manufacture, or use of devices for the purpose of measuring, detecting, controlling, computing, recording, or processing data related to the operation of space vehicles or platforms. For related information see also *06 Avionics and Aircraft Instrumentation*; for spaceborne instruments not integral to the vehicle itself see *35 Instrumentation and Photography*; for spaceborne telescopes and other astronomical instruments see *89 Astronomy*.

19940014483 NASA Marshall Space Flight Center, Huntsville, AL, USA

ASTRO-1 to explore invisible universe

Nov 1, 1989; In English

Report No(s): MSFC-16527; NASA-TM-109360; NONP-NASA-VT-94-198207; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video explains the ASTRO 1 observatory and its ten day mission aboard SpaceLab on NASA's Space Shuttle, which Marshall Space Flight Center (MSFC) and Goddard Space Flight Center (GSFC) astronomers will use to study distant stars, supernovae, and black holes. The observatory contains ultraviolet and x ray telescopes that will capture images earth-bound observatories can't, due to interference from the earth's atmosphere. The video contains footage of the instrument being loaded on the shuttle, animations of anticipated images to be captured, and scenes of the SpaceLab Control Center at MSFC.

CASI

Astro Missions (STS); Ground Stations; Loading Operations; Spaceborne Astronomy; Spaceborne Telescopes

20

SPACECRAFT PROPULSION AND POWER

Includes main propulsion systems and components, e.g., rocket engines; and spacecraft auxiliary power sources. For related information see also *07 Aircraft Propulsion and Power*, *28 Propellants and Fuels*, *15 Launch Vehicles and Launch Operations*, and *44 Energy Production and Conversion*.

19940010756 NASA Marshall Space Flight Center, Huntsville, AL, USA

Advanced Solid Rocket Motor

Mar 1, 1989; In English

Report No(s): MSFC-14565; NASA-TM-109658; NONP-NASA-VT-93-190456; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video tape describes the redesign and construction of the Advanced Solid Rocket Motor.

CASI

Advanced Solid Rocket Motor (STS); Solid Propellant Rocket Engines

26

METALS AND METALLIC MATERIALS

Includes physical, chemical, and mechanical properties of metals and metallic materials; and metallurgy.

19940009143 NASA Marshall Space Flight Center, Huntsville, AL, USA

Mid-deck experiments, STS-26

Sep 1, 1988; In English

Report No(s): MSFC-13384; NASA-TM-109308; NONP-NASA-VT-93-185326; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

Phase partitioning, ISO electric focusing, automated directional solidification furnace, mesoscale experiment, and others are explained.

Author (revised)

Space Shuttle Payloads; Spaceborne Experiments

32

COMMUNICATIONS AND RADAR

Includes radar; radio, wire, and optical communications; land and global communications; communications theory. For related information see also *04 Aircraft Communications and Navigation*; and *17 Space Communications, Spacecraft Communications, Command and Tracking*; for search and rescue, see *03 Air Transportation and Safety*, and *16 Space Transportation and Safety*.

19940010819 NASA Goddard Space Flight Center, Greenbelt, MD, USA

COBE video news

Oct 1, 1989; In English

Report No(s): GSFC-S-20; NASA-TM-109598; NONP-NASA-VT-93-190396; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This videotape was produced for hand-out to both local and national broadcast media as a prelude to the launch of the Cosmic Background Explorer. The tape consists of short clips with multi-channel sound to facilitate news media editing.

CASI

Cosmic Background Explorer Satellite; News Media; Spacecraft Launching

INSTRUMENTATION AND PHOTOGRAPHY

Includes remote sensors; measuring instruments and gages; detectors; cameras and photographic supplies; and holography. For aerial photography see *43 Earth Resources and Remote Sensing*. For related information see also *06 Avionics and Aircraft Instrumentation*; and *19 Spacecraft Instrumentation and Astrionics*.

19970035033 NASA Lewis Research Center, Cleveland, OH USA

Improved Optical Techniques for Studying Sonic and Supersonic Injection into Mach 3 Flow

Buggele, Alvin E.; Seasholtz, Richard G.; Sep. 1997; 21 pp.; In English; 42nd International Society for Optical Engineering Conference, 27 Jul. - 1 Aug. 1997, San Diego, CA, USA; Original contains color illustrations

Contract(s)/Grant(s): RTOP 953-74-40

Report No(s): NASA-TM-107533; NAS 1.15:107533; E-10853; NONP-NASA-VT-1997067113; No Copyright; ONLINE: <http://hdl.handle.net/2060/19970035033>; Avail: CASI; A03, Hardcopy; V01, Videotape-VHS; B01, Videotape-Beta

Filtered Rayleigh Scattering and shadowgraph flow visualization were used to characterize the penetration of helium or moist air injected transversely at several pressures into a Mach 3 flow in the NASA Lewis 3.81 inch by 10 inch continuous flow supersonic wind tunnel. This work is in support of the LOX (liquid oxygen) Augmented Nuclear Thermal Rocket program. The present study used an injection-seeded, frequency doubled ND:YAG pulsed laser to illuminate a transverse section of the injectant plume. Rayleigh scattered light was passed through an iodine absorption cell to suppress stray laser light and was imaged onto a cooled CCD camera. The scattering was based on condensation of water vapor in the injectant flow. Results are presented for various configurations of sonic and supersonic injector designs mounted primarily in the floor of the tunnel. Injectors studied include a single 0.25 inch diameter hole, five 0.112 inch diameter holes on 0.177 inch spacing, and a 7 deg. half angle wedge. High speed shadowgraph flow visualization images were obtained with several video camera systems. Roof and floor static pressure data are presented several ways for the three configurations of injection designs with and without helium and/or air injection into Mach 3 flow. A 12 min. video supplement is also included.

Author

Rayleigh Scattering; Shadowgraph Photography; Flow Visualization; Fluid Injection; Helium; Injectors; Fuel Injection; Supersonic Flow; Wind Tunnel Tests; Water Vapor; Continuum Flow; Pulsed Lasers

MECHANICAL ENGINEERING

Includes mechanical devices and equipment; machine elements and processes. For cases where the application of a device or the host vehicle is emphasized see also the specific category where the application or vehicle is treated. For robotics see *63 Cybernetics, Artificial Intelligence, and Robotics*; and *54 Man/System Technology and Life Support*.

19940029611 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Robotics Demo Peer Group review

JAN 1, 1994; In English

Report No(s): NASA-TM-109849; NONP-NASA-VT-94-13714; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This animated color video shows the Shuttle robot arm performing construction on the Spacelab.

CASI

Remote Manipulator System; Robot Arms; Telerobotics

19940010799 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Robotics for Space Station, tape 1

Aug 1, 1989; In English

Report No(s): GSFC-T-16; NASA-TM-109588; NONP-NASA-VT-93-190386; No Copyright; Avail: CASI; B02, Videotape-Beta; V02, Videotape-VHS

Shot on location at the Goddard Robotics Laboratory, this video uses state of the art Wavefront animation to take the viewer on a tour of the robotics that may, someday, be a part of Space Station Freedom.

CASI

Robotics; Space Station Freedom

19940010795 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Robotics in space

Nov 1, 1988; In English

Report No(s): GSFC-S-05; NASA-TM-109584; NONP-NASA-VT-93-190382; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

Produced for the AIAA symposium, this fast paced video shows robotics and telerobotics in the exploration of space.
CASI

Robotics; Space Exploration

19940010790 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Robotics for Space Station tape 2

Sep 1, 1989; In English

Report No(s): NASA-TM-109578; NONP-NASA-VT-93-190376; No Copyright; Avail: CASI; **B02**, Videotape-Beta; **V02**, Videotape-VHS

This video shows robotics for the Space Station.

CASI

Robotics; Space Stations

19940009131 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Goddard Space Flight Center robotics demo

Nov 1, 1988; In English

Report No(s): GSFC-S-06; NASA-TM-109302; NONP-NASA-VT-93-185317; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

Documentary footage of a fascinating look at Goddard Space Flight Center's Robotic Capability during a demonstration by Goddard robotics engineers is presented.

Author

Documentation; NASA Programs; Robot Control; Robotics; Tests

38

QUALITY ASSURANCE AND RELIABILITY

Includes approaches to, and methods for reliability analysis and control, quality control, inspection, maintainability, and standardization.

19940029215 NASA Marshall Space Flight Center, Huntsville, AL, USA

Activities of the NASA centers

Nov 1, 1989; In English

Report No(s): MSFC-682; NASA-TM-109836; NONP-NASA-VT-94-12964; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video highlights the NASA centers and their activities. Additionally, the commitment of the NASA centers to quality assurance is presented.

CASI

NASA Programs; Quality Control; Research Facilities

EARTH RESOURCES AND REMOTE SENSING

Includes remote sensing of earth features, phenomena and resources by aircraft, balloon, rocket, and spacecraft; analysis of remote sensing data and imagery; development of remote sensing products; photogrammetry; and aerial photography. For related instrumentation see *35 Instrumentation and Photography*.

19970041021 North Dakota Univ., Grand Forks, ND USA

What is the Value of Space Exploration? - A Prairie Perspective

1995; 48 pp.; In English; What is the Value of Space Exploration?- A Prairie Perspective, 1-2 Nov. 1995, Grand Forks, ND
Contract(s)/Grant(s): NAGw-4524

Report No(s): NASA/CR-97-205930; NONP-NASA-VT-1997082334; NAS 1.26:205930; No Copyright; ONLINE:
<http://hdl.handle.net/2060/19970041021>; Avail: CASI; A03, Hardcopy; V02, Videotape-VHS

The symposium addresses different topics within Space Exploration. The symposium was held, using satellite downlinks, to several communities in North Dakota, the first such symposium of its type ever held. The specific topics presented by different community members within the state of North Dakota were: the economic, cultural, scientific and technical, political, educational and social value of Space Exploration. Included is a 22 minute VHS video cassette highlighting the symposium.
CASI

Conferences; North Dakota; Space Exploration; Education

19970020396 NASA Goddard Space Flight Center, Greenbelt, MD USA

Glacier Bay, Alaska, from the Ground, Air, and Space

Hall, Dorothy K.; Feb. 23, 1997; In English; Videotape: 13 min. 13 sec. playing time, in color, with sound

Report No(s): NASA-TM-112631; NONP-NASA-VT-1997032489; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This tape uses a combination of video, three-dimensional computer imaging, and still photographs to provide a descriptive overview of the life-cycle and environmental effects of glaciers. An historical perspective of researchers and the contribution that they have made to the understanding of glaciers and Glacier Bay is presented. The data collected from these scientists have been documented and used by means of scientific visualization in the hope of learning how glacial activity relates to climate changes.
CASI

Glaciers; Environment Effects; Scientific Visualization; Climate Change; Glacial Drift; Satellite Imagery; Imaging Techniques

ENVIRONMENT POLLUTION

Includes atmospheric, water, soil, noise, and thermal pollution.

19950011633 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Evolution of the Southern Hemisphere ozone hole as seen by TOMS from August 1979 to December 1991

Aug 3, 1994; In English

Report No(s): NASA-TM-110116; NONP-NASA-VT-95-37003; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

The computerized color images of the Total Ozone Mapping Spectrometer (TOMS) showed the ozone distribution and levels in the Earth's southern hemisphere from August 1979 to December 1991 in this video. The annual variations were presented in a monthly format and the ozone levels were measured in Dobson units.
CASI

Annual Variations; Atmospheric Circulation; Computer Graphics; Earth Atmosphere; Ozone Depletion; Southern Hemisphere; Total Ozone Mapping Spectrometer

19950004307 NASA Dryden Flight Research Center, Edwards, CA, USA, Department of the Air Force, Edwards AFB, CA, USA

The desert tortoise: A delicate balance

Aug 1, 1992; In English

Report No(s): NASA-TM-104294; NONP-NASA-VT-94-23639; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This award winning program looks at the efforts to preserve the desert tortoise in and around the Edwards Air Force Base, CA area. It also explains what people should do if they come in contact with a tortoise. This video was produced in cooperation with Edwards Air Force Base.

DFRC

Endangered Species; Environment Protection; Mojave Desert (CA); Turtles

19940014494 NASA Goddard Space Flight Center, Greenbelt, MD, USA

October 1979-1989 Southern Hemisphere total ozone as seen by TOMS

Nov 1, 1989; In English

Report No(s): GSFC-T-25; NASA-TM-109375; NONP-NASA-VT-94-198222; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This is raw video from space taken by the Total Ozone Mapping Satellite (TOMS).

CASI

Ozone; Total Ozone Mapping Spectrometer

19940010856 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Atlas of TOMS ozone, 1978-1988

Feb 1, 1989; In English

Report No(s): GSFC-S-15; NASA-TM-109456; NONP-NASA-VT-93-190253; No Copyright; Avail: CASI; B03, Videotape-Beta; V03, Videotape-VHS

This video contains very graphic images of the seasonal accumulation and depletion of the world's ozone layer, as depicted by the Total Ozone Mapping Satellite (TOMS).

CASI

Annual Variations; Ozone; Ozone Depletion; Ozonosphere; Total Ozone Mapping Spectrometer

19940010817 NASA Goddard Space Flight Center, Greenbelt, MD, USA

TOMS computer graphics

Nov 1, 1988; In English

Report No(s): GSFC-S-16; NASA-TM-109597; NONP-NASA-VT-93-190395; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This videotape explains how NASA participated in controlling the devastating forest fires that consumed parts of Yellowstone National Park.

CASI

Computer Graphics; Forest Fires; Total Ozone Mapping Spectrometer; Yellowstone National Park (ID-MT-WY)

19940009129 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Arctic ozone expedition

Feb 1, 1989; In English

Report No(s): GSFC-S-14; NASA-TM-109301; NONP-NASA-VT-93-185316; No Copyright; Avail: CASI; B02, Videotape-Beta; V02, Videotape-VHS

Documenting the expedition of scientists to the uppermost reaches of the North Pole, this tape shows what is involved in collecting this valuable climatic data.

Author

Arctic Regions; Data Acquisition; Ozone; Polar Meteorology

46

GEOPHYSICS

Includes Earth structure and dynamics, aeronomy; upper and lower atmosphere studies; ionospheric and magnetospheric physics; and geomagnetism. For related information see *47 Meteorology and Climatology*; and *93 Space Radiation*.

19940010809 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Southern and Northern Hemisphere total ozone as seen by TOMS

Mar 1, 1989; In English

Report No(s): GSFC-S-31; NASA-TM-109591; NONP-NASA-VT-93-190389; No Copyright; Avail: CASI; **B02**, Videotape-Beta; **V02**, Videotape-VHS

This videotape contains raw footage of this planet's upper atmosphere for use in the preparation of environmental and Earth monitoring presentation.

CASI

Northern Hemisphere; Ozone; Southern Hemisphere; Total Ozone Mapping Spectrometer; Upper Atmosphere

19940009147 NASA Marshall Space Flight Center, Huntsville, AL, USA

CRRES to blaze new trails in orbit

Jul 1, 1990; In English

Report No(s): MSFC-17817; NASA-TM-109314; NONP-NASA-VT-93-185329; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

The purpose of the Combined Release Radiation Effects Satellite in re-mapping and planning protection for future spacecraft is described.

Author (revised)

CRRES (Satellite); Radiation Protection; Spacecraft Shielding

47

METEOROLOGY AND CLIMATOLOGY

Includes weather observation forecasting and modification.

19940010753 NASA Marshall Space Flight Center, Huntsville, AL, USA

Mesoscale lightning

Apr 1, 1989; In English

Report No(s): MSFC-14733; NASA-TM-109655; NONP-NASA-VT-93-190453; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video tape addresses ongoing lightning research and how data is valuable to upcoming projects.

CASI

Lightning; Mesoscale Phenomena

48

OCEANOGRAPHY

Includes the physical, chemical and biological aspects of oceans and seas; ocean dynamics; and marine resources. For related information see also *43 Earth Resources and Remote Sensing*.

19940010808 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Coastal zone color scanner: Nimbus 7

May 1, 1989; In English

Report No(s): GSFC-S-34; NASA-TM-109590; NONP-NASA-VT-93-190388; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This videotape is a soundless presentation showing the global ocean color for scientific purposes. The tape makes excellent B-roll for use in editing.

CASI

Coastal Zone Color Scanner; Nimbus 7 Satellite; Oceans; Water Color

52

AEROSPACE MEDICINE

Includes the biological and physiological effects of atmospheric and space flight (weightlessness, space radiation, acceleration, and altitude stress) on the human being; and the prevention of adverse effects on those environments. For psychological and behavioral effects of aerospace environments, see *53 Behavioral Sciences*. For the effects of space on animals and plants see *51 Life Sciences*.

19940010798 NASA Goddard Space Flight Center, Greenbelt, MD, USA

GSFC Fun Run

Oct 1, 1988; In English

Report No(s): GSFC-P-20; NASA-TM-109587; NONP-NASA-VT-93-190385; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video shows Goddard's commitment to its employees physical well-being by highlighting the Spring 1988 Goddard Fun Run.

CASI

Physical Exercise; Recreation

60

COMPUTER OPERATIONS AND HARDWARE

Includes hardware for computer graphics, firmware and data processing. For components see *33 Electronics and Electrical Engineering*. For computer vision see *63 Cybernetics, Artificial Intelligence and Robotics*.

19940010755 NASA Marshall Space Flight Center, Huntsville, AL, USA

NASA Spacelink computer

May 1, 1989; In English

Report No(s): NASA-TM-109657; NONP-NASA-VT-93-190455; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video tape introduces Spacelink, a computer resource that educators and students can access. The purpose of Spacelink is to stimulate interest in math and science.

CASI

Computers; Education; Information Systems

70

PHYSICS (GENERAL)

Includes general research topics related to mechanics, kinetics, magnetism, and electrodynamics. For specific areas of physics see *categories 71 through 77*. For related instrumentation see *35 Instrumentation and Photography*; for geophysics, astrophysics, or solar physics see *46 Geophysics, 90 Astrophysics, or 92 Solar Physics*.

19940010760 NASA Marshall Space Flight Center, Huntsville, AL, USA

Automated directional solidification furnace

Aug 1, 1989; In English

Report No(s): MSFC-13233; NASA-TM-109662; NONP-NASA-VT-93-190460; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This video presentation addresses space research supporting the development of longer lasting, lighter weight, and more powerful magnets.

CASI

Directional Solidification (Crystals); Furnaces; Magnets

SOCIAL AND INFORMATION SCIENCES (GENERAL)

Includes general research topics related to sociology; educational programs and curricula. For specific topics in these areas see *categories 81 through 85*.

19950023802 NASA Marshall Space Flight Center, Huntsville, AL, USA

International Space University

Kassler, Maggie, editor; Aug 9, 1993; In English

Report No(s): NASA-TM-110646; NONP-NASA-VT-95-57868; No Copyright; Avail: CASI; B02, Videotape-Beta; V02, Videotape-VHS

The International Space University (ISU) is described in this video, hosted by Marina Sirtis from the 'Star Trek' television show's Starship Enterprise. A complete explanation of what ISU is, how the university functions, and the benefits that the university provides are described. Included are brief comments from former ISU graduates.

CASI

Space Programs; Universities; University Program

19940014509 NASA Marshall Space Flight Center, Huntsville, AL, USA

National Boy Scout Jamboree

Aug 1, 1989; In English

Report No(s): MSFC-16553; NASA-TM-109367; NONP-NASA-VT-94-198214; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This video looks at a NASA sponsored exhibit at the National Boy Scout Jamboree in Fredricksburg, VA. Boy Scouts are shown interacting with NASA researchers and astronauts and touring mockups of Space Station Freedom and Apollo 11. NASA's program to encourage the researchers of tomorrow is detailed.

CASI

Astronauts; NASA Programs; Students

19940010759 NASA Marshall Space Flight Center, Huntsville, AL, USA

Space classroom

Nov 1, 1990; In English

Report No(s): MSFC-17816; NASA-TM-109661; NONP-NASA-VT-93-190459; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This video presentation provides information on the first classroom taught from space to encourage student interest in astronomy and space exploration.

CASI

Education; NASA Programs

19940010757 NASA Marshall Space Flight Center, Huntsville, AL, USA

SHARP

Jan 1, 1989; In English

Report No(s): MSFC-14171; NASA-TM-109659; NONP-NASA-VT-93-190457; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This video tape describes the benefits of NASA's Summer High School Apprenticeship Research Program to participating students.

CASI

Education; NASA Programs

ADMINISTRATION AND MANAGEMENT

Includes management planning and research.

19940010846 NASA Marshall Space Flight Center, Huntsville, AL, USA

Return to flight 3, the journey continues

Feb 1, 1989; In English

Report No(s): MSFC-14858; NASA-TM-109651; NONP-NASA-VT-93-190449; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This videotape presents a dynamic overview of the hard work and tireless efforts of NASA employees and contractors. CASI

NASA Programs; Personnel

19940010820 NASA Goddard Space Flight Center, Greenbelt, MD, USA

PET team

Mar 1, 1989; In English

Report No(s): MSFC-13056; NASA-TM-109599; NONP-NASA-VT-93-190397; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This videotape shows the Productivity Enhancement Team's (PET) presentation to management regarding ways to make the workforce more responsive to overall corporate goals.

CASI

Organizations; Personnel Development; Productivity

19940010761 NASA Marshall Space Flight Center, Huntsville, AL, USA

Return to flight 1

Sep 1, 1987; In English

Report No(s): MSFC-14245; NASA-TM-109663; NONP-NASA-VT-93-190461; No Copyright; Avail: CASI; [B02](#), Videotape-Beta; [V02](#), Videotape-VHS

This video tape presents a dynamic overview of the hard work and tireless efforts of NASA employees and contractors. CASI

NASA Programs; Research and Development

19940009156 NASA Goddard Space Flight Center, Greenbelt, MD, USA

NASA experiences in the Goddard MMS

Jan 1, 1989; In English

Report No(s): GSFC-S-24; NASA-TM-109290; NONP-NASA-VT-93-185305; No Copyright; Avail: CASI; [B03](#), Videotape-Beta; [V03](#), Videotape-VHS

The GSFC connection in the multi-mission spacecraft management field is explored.

Author (revised)

Multimission Modular Spacecraft; NASA Programs

DOCUMENTATION AND INFORMATION SCIENCE

Includes information management; information storage and retrieval technology; technical writing; graphic arts; and micrography. For computer program documentation see *61 Computer Programming and Software*.

19940010758 NASA Marshall Space Flight Center, Huntsville, AL, USA

University Joint Venture: JOVE

Mar 1, 1989; In English

Report No(s): MSFC-14546; NASA-TM-109660; NONP-NASA-VT-93-190458; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This video presentation explains how NASA shares its several trillion bits of raw science and engineering data with universities who help NASA analyze and distribute that data.

CASI

NASA Programs; University Program

89

ASTRONOMY

Includes observations of celestial bodies; astronomical instruments and techniques; radio, gamma-ray, x-ray, ultraviolet, and infrared astronomy; and astrometry.

20010067427 Space Telescope Science Inst., Baltimore, MD USA

Hubble's Panoramic Portrait of a Vast Star-Forming Region

Jul. 26, 2001; In English; Videotape: 4 min. 13 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001110130; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

A computerized animation zooms into the 30 Doradus region. Dr. Nolan Walborn explains how the Hubble images of 30 Doradus and its central cluster are changing our understanding of similar star forming regions and what is happening in the gas pillars.

Derived from text

Magellanic Clouds; Nebulae

20010059304 NASA Goddard Space Flight Center, Greenbelt, MD USA

Microlensing: Globular Cluster M22 Video File

[2001]; In English; Videotape: 6 min. 55 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001092796; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

A computerized animation begins outside a globular cluster similar to M22, with the center of the Milky Way in the distance. The camera flies through the center of the cluster and rests with a dark object in the distance. This object, a suspected brown star, passes in front of a star in the galactic bulge, bending its light gravitationally. This bending, or lensing, causes a momentary brightening of the background star. Another sequence begins with a ground-based view of the center of our galaxy in the upper right. We zoom in to reveal a ground-based view of the region surrounding the cluster and continue zooming to reveal the Hubble Space Telescope view of M22. In an interview with Kailash Sahu, Astronomer, he describes the Hubble results, explains why the objects in M22 can't be planets, and explains Hubble's role in the observations of M22. The last image was taken with Hubble's Wide Field and Planetary Camera 2 and pierces the heart of a globular cluster with its needle-sharp vision and uncovers tantalizing clues to what could potentially be a strange and unexpected population of wandering, planet-sized objects.

Author

Globular Clusters; Gravitational Lenses; Milky Way Galaxy

20010036664 Space Telescope Science Inst., Baltimore, MD USA

Farthest Supernova Bolsters Proof for a Mysterious Form of Energy Pervading the Universe

[2001]; In English; Videotape: 16 min. 42 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001047824; No Copyright; Avail: CASI; [B02](#), Videotape-Beta; [V02](#), Videotape-VHS

Computerized animations show the following: (1) the acceleration and deceleration of the universe; (2) an image subtraction of the 1995 and 1997 images of the Hubble Deep Field to reveal a supernova in the 1997 image; (3) a pie-chart of the mass composition of the universe; (4) the universe's expansion after the Big Bang; (5) a supernova detonating; and (6) the lightbulb test (to determine distance by comparing light intensity). Zoom shots show the Hubble Deep Field (from ground-based observations to the Hubble Space Telescope (HST) image) and the Hubble Deep Field with a supernova (from an artist's conception animation to a ground-based view). Dr. Ron Gilliland explains that he looked for a supernova in the Hubble Deep Field and how supernova are useful as standard candles. Dr. Adam Riess describes how astronomers used supernovae to discover that the universe is expanding and why it might be expanding.

CASI

Luminous Intensity; Supernovae; Expansion; Cosmology

20010021608 Space Telescope Science Inst., Baltimore, MD USA

Hubble Spies Huge Cluster of Stars Formed by Ancient Encounter

Mar. 01, 2001; In English; Videotape: 6 min. 20 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001030025; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This release marks the beginning of a new outlet for the Space Telescope Science Institute, the 'Hubble Minute'. Hubble Minute is an edited vignette suitable for use in newscasts, magazine shows, and as an interstitial program. The Minute explains how scientists are determining when M82 and M81 collided, and how dating the crash may result in a better understanding of how our own galaxy formed.

Author

Crashes; Galaxies; Star Clusters; Time Measurement

19950004133 NASA Goddard Space Flight Center, Greenbelt, MD, USA

BBXRT clip: The Broad Band X-ray Telescope

May 1, 1990; In English

Report No(s): GSFC-NL-13; NASA-TM-109875; NONP-NASA-VT-94-23137; No Copyright; Avail: CASI; [B02](#), Videotape-Beta; [V02](#), Videotape-VHS

This video recording explains the science mission of the Broad Band X ray Telescope on board the Space Shuttle Columbia, December 1990. This tape was produced before launch.

GSFC

Broadband; Space Shuttle Missions; X Ray Telescopes

19940010949 NASA Goddard Space Flight Center, Greenbelt, MD, USA

NASA's Hubble Space Telescope: The challenge and complexity of operations

Jun 1, 1989; In English

Report No(s): GSFC-T-24; NASA-TM-109577; NONP-NASA-VT-93-190375; No Copyright; Avail: CASI; [B02](#), Videotape-Beta; [V02](#), Videotape-VHS

This video presentation touches on the truly fast complexity of the first of NASA's great observatories, the Hubble Space Telescope.

CASI

Hubble Space Telescope; NASA Space Programs

90

ASTROPHYSICS

Includes cosmology; celestial mechanics; space plasmas; and interstellar and interplanetary gases and dust.

20010067455 Space Telescope Science Inst., Baltimore, MD USA

Galaxy Group Stephan's Quintet Video File HubbleMinute: Battle Royale in Stephan's Quintet

Jul. 19, 2001; In English; Videotape: 12 min. 40 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001107899; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

The Hubble Space Telescope's closeup view of Stephan's Quintet, a group of five galaxies, reveals a string of brighter star clusters that separate like a diamond necklace. Astronomers studying the compact galaxy group Stephan's Quintet have seen creative destruction in the many collisions taking place among its galaxies. This HubbleMinute discusses what astronomers are learning and hope to learn from exploring the quintet.

Derived from text

Galactic Clusters; Galaxies; Collisions

20010036753 Space Telescope Science Inst., Baltimore, MD USA

The Trifid Nebula: Stellar Sibling Rivalry

[2001]; In English; Videotape: 3 min. 55 sec. playing time, in color, no sound

Report No(s): NONP-NASA-VT-2001026552; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

A zoom into the Trifid Nebula starts with ground-based observations and ends with a Hubble Space Telescope (HST)

image. Another HST image shows star formation in the nebula and the video concludes with a ground-based image of the Trifid Nebula.

CASI

Nebulae; Star Formation

20010036752 Space Telescope Science Inst., Baltimore, MD USA

Spinning Stardust into Planets

[2001]; In English; Videotape: 6 min. 19 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001026554; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

A computerized animation simulates the formation of a stellar disk and planets. Ten images from the Hubble Space Telescope (HST) show young stellar disks (taken with the Near-Infrared Camera Multi-Object Spectrometer (NICMOS)) and stellar disks around young stars (taken with the Wide-Field Planetary Camera 2 (WFPC2)). Dr. Deborah Padgett describes what astronomers see in the images of young stellar disks and Dr. Karl Stapelfeldt explains HST's role in helping astronomers to examine young stars in order to understand how solar systems like our own may form.

CASI

Planetary Evolution; Planets; Stellar Models; Computerized Simulation; Protoplanetary Disks

20010036751 Space Telescope Science Inst., Baltimore, MD USA

Quasar Host Galaxies/Neptune Rotation/Galaxy Building Blocks/Hubble Deep Field/Saturn Storm

[2001]; In English; Videotape: 13 min. 57 sec. playing time, in color, no sound

Report No(s): NONP-NASA-VT-2001026556; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

Computerized animations simulate a quasar erupting in the core of a normal spiral galaxy, the collision of two interacting galaxies, and the evolution of the universe. Hubble Space Telescope (HST) images show six quasars' host galaxies (including spirals, ellipticals, and colliding galaxies) and six clumps of galaxies approximately 11 billion light years away. A false color time lapse movie of Neptune displays the planet's 16-hour rotation, and the evolution of a storm on Saturn is seen through a video of the planet's rotation. A zoom sequence starts with a ground-based image of the constellation Ursa major and ends with the Hubble Deep Field through progressively narrower and deeper views.

CASI

Computerized Simulation; Galactic Evolution; Galaxies; Interacting Galaxies; Neptune (Planet); Quasars; Saturn (Planet)

20010019896 Space Telescope Science Inst., USA

Astronomers Ponder Lack of Planets in Globular Cluster

[2000]; In English; Videotape: 7 min. 58 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001026553; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This videotape has seven segments, discussing and showing the evidence for the proposition that the galactic clusters do not have many planets. Specifically the segments show: (1) Dr. Ron Gilliland discussing the process of looking for 'Hot Jupiters' (i.e., planets about the size of Jupiter, which are hotter than Jupiter) in the globular clusters, (2) a zoom into 47 Tucanae globular cluster, (3) an animation of a planet passing between the host star and the earth with a brightness graph, (4) the same animation as before without the graph, (5) Ron Gilliland of the Space Telescope Science Institute (STScI) discussing possible interpretations of his findings in the 47 Tucanae globular cluster, (6) Ron Gilliland examining the images of 47 Tucanae, and (7) images of 47 Tucanae watching for variations in brightness.

CASI

Galactic Clusters; Star Clusters; Extrasolar Planets; Gas Giant Planets

20010019697 Space Telescope Science Inst., Baltimore, MD USA

Giant Star Clusters Near Galactic Core

Feb. 01, 2001; In English; Videotape: 4 min. 11 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001026545; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

A video sequence of still images goes deep into the Milky Way galaxy to the Arches Cluster. Hubble, penetrating through dust and clouds, peers into the core where two giant clusters shine more brightly than any other clusters in the galaxy. Footage shows the following still images: (1) wide view of Sagittarius constellation; (2) the Palomar Observatory's 2 micron all-sky survey; and (3) an image of the Arches Cluster taken with the Hubble Space Telescope NICMOS instrument. Dr. Don Figer

of the Space Telescope Science Institute discusses the significance of the observations and relates his first reaction to the images.

Author (revised)

Galactic Nuclei; Star Clusters; Giant Stars; Sagittarius Constellation

20010019696 Space Telescope Science Inst., Baltimore, MD USA

The Secret Lives of Galaxies

Feb. 01, 2001; In English; Videotape: 3 min. 53 sec. playing time, in color, no sound

Report No(s): NONP-NASA-VT-2001026546; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

The ground-based image in visible light locates the hub imaged with the Hubble Space Telescope. This barred galaxy feeds material into its hub, igniting star birth. The Hubble NICMOS instrument penetrates beneath the dust to reveal clusters of young stars. Footage shows ground-based, WFPC2, and NICMOS images of NGS 1365. An animation of a large spiral galaxy zooms from the edge to the galactic bulge.

Author (revised)

Barred Galaxies; Galactic Bulge; Spiral Galaxies; Star Clusters

20010019695 Space Telescope Science Inst., Baltimore, MD USA

Orion Nebula Movie

Feb. 01, 2001; In English; Videotape: 5 min. 11 sec. playing time, in color, no sound

Report No(s): NONP-NASA-VT-2001026555; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

Footage shows the following simulations derived from Hubble Space Telescope images: (1) the tiling of the Orion mosaic; (2) Orion mosaic fly-through; and (3) a close-up of the Orion mosaic.

CASI

Orion Nebula; Simulation

20010019529 Space Telescope Science Inst., USA

Hubble Identifies Source of Ultraviolet Light in an Old Galaxy

[2000]; In English; Videotape : 3 min. 47 sec. playing time, in color, no sound

Report No(s): NONP-NASA-VT-2001026548; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This videotape is comprised of four segments: (1) a Video zoom in on galaxy M32 using ground images, (2) Hubble images of galaxy M32, (3) Ground base color image of galaxies M31 and M32, and (4) Black and white ground based images of galaxy M32.

Author

Ultraviolet Radiation; Andromeda Galaxy; Elliptical Galaxies

20010019528 Space Telescope Science Inst., USA

Black Holes Shed Light on Galaxy Formation

[2000]; In English; Videotape: 13 min. 10 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001026551; No Copyright; Avail: CASI; **B01**, Videotape-Beta; **V01**, Videotape-VHS

This videotape is comprised of several segments of animations on black holes and galaxy formation, and several segments of an interview with Dr. John Kormendy. The animation segments are: (1) a super massive black hole, (2) Centarus A active black hole found in a collision, (3) galaxy NGC-4261 (active black hole and jet model), (4) galaxy M-32 (orbits of stars are effected by the gravity of the black hole), (5) galaxy M-37 (motion of stars increases as mass of black hole increases), (6) Birth of active galactic nuclei, (7) the collision of two galaxy leads to merger of the black holes, (8) Centarus A and simulation of the collision of 2 galaxies. There are also several segments of an interview with John Kormendy. In these segments he discusses the two most important aspects of his recent black hole work: (1) the correlations between galaxies speed and the mass of the black holes, and (2) the existence of black holes and galactic formation. He also discusses the importance of the Hubble Space Telescope and the Space Telescope Imaging Spectrograph to the study of black holes. He also shows the methodology of processing images from the spectrograph in his office.

CASI

Hubble Space Telescope; Black Holes (Astronomy); Collisions; Galaxies; Simulation; Galactic Structure

LUNAR AND PLANETARY SCIENCE AND EXPLORATION

Includes planetology; selenology; meteorites; comets; and manned and unmanned planetary and lunar flights. For spacecraft design or space stations see *18 Spacecraft Design, Testing and Performance*.

20040052834 NASA Goddard Space Flight Center, Greenbelt, MD, USA

Plentiful Water Detected in Mars Northern Hemisphere

June 26, 2003; In English; 6 min., 56 sec. playing time, in color, with sound

Report No(s): G03-043; No Copyright; Avail: CASI; [V01](#), Videotape-VHS; [B01](#), Videotape-Beta

NASA's Mars Odyssey Spacecraft is revealing new details about a changeable array of frozen layers on Northern Mars. Odyssey's neutron and gamma-ray sensors have tracked seasonal changes as layers of 'dry ice' carbon dioxide frost or snow accumulated during northern Mars' winter and then dissipate in the spring to expose a permafrost soil layer rich in water ice. The research is presented in a paper in the June 27, 2003 issue of the *Journal Science*. This video contains a slide show interspersed with computer generated graphics of seasonal ice distribution and thickness on Mars. The graphics utilize Viking and Mars Orbiter Laser Altimeter (MOLA) data as well as Odyssey data.

Author (revised)

2001 Mars Odyssey; Mars Surface; Northern Hemisphere; Ice

20010021609 Space Telescope Science Inst., Baltimore, MD USA

Worlds Smaller than Saturn

Mar. 01, 2001; In English; Videotape: 64 min. 7 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001030026; No Copyright; Avail: CASI; [B04](#), Videotape-Beta; [V04](#), Videotape-VHS

Computerized animations show the following: (1) an artist's conception of a Saturn-like extrasolar planet; (2) star and planet motion; and (3) young stellar disk and planet formation. Footage shows the outside of the Mauna Kea Observatories in Hawaii and Geoff Marcy and Paul Butler inside while they are processing information. Then a press conference, 'Worlds Smaller than Saturn', is seen. Anne Kinney, Origins Science Director, NASA Headquarters, introduces Geoff Marcy, Paul Butler, Alan Boss, and Heidi Hammel. They discuss the discovery of the two new Saturn-sized extrasolar planets that are orbiting the stars HD46375 and 79 Seti, giving details on the search technique and size distribution. They then answer questions from the press.

CASI

Extrasolar Planets; Planetary Evolution

SOLAR PHYSICS

Includes solar activity, solar flares, solar radiation and sunspots. For related information see *93 Space Radiation*.

20010036754 Space Telescope Science Inst., Baltimore, MD USA

Final Blaze of Glory

[2001]; In English; Videotape: 14 min. 57 sec. playing time, in color, with sound

Report No(s): NONP-NASA-VT-2001026549; No Copyright; Avail: CASI; [B01](#), Videotape-Beta; [V01](#), Videotape-VHS

This video gives an overview of planetary nebulae through a computerized animation, images from the Hubble Space Telescope (HST), and interviews with Space Telescope Science Institute Theorist Dr. Mario Livio. A computerized animation simulates a giant star as it swallows its smaller companion. HST images display various planetary nebulae, such as M2-9 Twinjet Nebula, NGC 3568, NGC 3918, NGC 5307, NGC 6826, NGC 7009, and Hubble 5. An artists conception shows what our solar system might look like in a billion years when the Sun has burned out and cast off its outer layers in a shell of glowing gas. Dr. Livio describes the shapes of the planetary nebulae, gives three reasons to study planetary nebulae, and what the observations made by HST have meant to him. A succession of 17 HST images of planetary nebulae are accompanied by music by John Serrie.

CASI

Giant Stars; Planetary Nebulae

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GENERAL

Includes aeronautical, astronautical, and space science related histories, biographies, and pertinent reports too broad for categorization; histories or broad overviews of NASA programs such as Apollo, Gemini, and Mercury spacecraft, Earth Resources Technology Satellite (ERTS), and Skylab; NASA appropriations hearings.

19950004338 NASA Dryden Flight Research Center, Edwards, CA, USA

Dryden summer 1994 update

Jul 8, 1994; In English

Report No(s): NASA-TM-104305; NONP-NASA-VT-94-23650; No Copyright; Avail: CASI; B02, Videotape-Beta; V02, Videotape-VHS

This video presents a complete, technically detailed report on all Dryden projects, achievements, and employee activities for 1994.

DFRC

Aeronautical Engineering; Research and Development; Research Projects

19950004301 NASA Dryden Flight Research Center, Edwards, CA, USA

NACA/NASA history at Dryden, part 1 and 2

May 4, 1990; In English

Report No(s): NASA-TM-104287; NONP-NASA-VT-94-23633; No Copyright; Avail: CASI; B03, Videotape-Beta; V03, Videotape-VHS

Two video tapes of raw material show examples of research activity at the center from the 1950's to the 1980's.

DFRC

Histories; NASA Programs; Research Facilities

19950004300 NASA Dryden Flight Research Center, Edwards, CA, USA

Dryden year in review: 1992

Jan 1, 1993; In English

Report No(s): NASA-TM-104285; NONP-NASA-VT-94-23632; No Copyright; Avail: CASI; B01, Videotape-Beta; V01, Videotape-VHS

This video reviews the research work done at Dryden for the year 1992.

DFRC

General Overviews; NASA Programs; Research Facilities

19940009160 NASA Dryden Flight Research Facility, Edwards, CA, USA

Flight operations highlights, tapes 1 and 2

Apr 1, 1990; In English

Report No(s): NASA-TM-109293; NONP-NASA-VT-93-185308; No Copyright; Avail: CASI; B04, Videotape-Beta; V04, Videotape-VHS

Historical film footage of the X-series aircraft (including Yeager's X-1 flight), lifting bodies, and early Apollo landing tests is presented.

Author (revised)

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