

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object NASA Group Achievement Award to the Navigation and Trajectory Design Team, 2010
Object Description May 2010 NASA Group Achievement Award for the Lunar Crater Observation and Sensing Satellite (LCROSS) Navigation and Trajectory Design Team for its work providing navigation and trajectory design support to the mission. Signed by Charles Bolden. Paper certificate bears a foil seal. It is framed and mounted on a wooden plaque. (Plaque is pressboard covered with a simulated wood grain veneer material that appears to be made of plastic or vinyl).

Artifact No. 001

Image



Additional images in photographs directory.

Caption

No. of Pieces 1
Dimensions 18"w x 15"h x .75"d
 Dimensions Include Frame.
Condition Excellent
Date of Object 201005
Type of Object Award
Creator NASA
Creator ID Corporate body
Commissioning Org. NASA

NASA Catalog No.
NASA Property No.
Where Made
Materials Wood, plastic, paper, ink, foil

Key Words NASA Group Achievement Award, LCROSS

Provenance Office of the Director of Programs and Projects, Project Management Division (Code PX)
Acquisition No. 009-2011
Storage Location **Box No.**
Date Entered 3/23/2011
Preservation/Conservation Issues

Additional Notes Artifact label was painted on the back of the frame in March 2011. The clear lacquer used as a base and overcoat is Acrylic gloss medium in water. The white paint is golden white fluid acrylics, a rutile titanium dioxide-based paint without dyes. Acetone will remove it.

Originally processed as ART1387.621

Lauda Model No.
Country of Markings
Temp. Box No.

Loan status Item on loan **Tracking Id.** ARC2011001

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object National Space Society 2010 Space Pioneer Award for Science and Engineering
Object Description Award presented to the LCROSS mission team from the National Space Society. The object consists of a cast metal (nickel or aluminum?) representation of Earth's moon held by three brass prongs atop a wood and marble base. The following citation is printed in black letters on a brass plaque screwed onto the wooden base:
 "2010 Space Pioneer Award
 For Science & Engineering
 Presented by
 The National Space Society to the
 Ames LCROSS Mission Team
 at the 29th International
 Space Development Conference
 Chicago, Illinois, May 27-31, 2010"

Artifact No. 002
Image



Additional images in photographs directory.

Caption

No. of Pieces 2
Dimensions 5.5"w x 5.5"d x 10.5"h
 Dimensions Include Frame.
Condition
Date of Object 2010
Type of Object
Creator Michael Hall's Studio Foundry
Creator ID
Commissioning Org. National Space Society

NASA Catalog No. ACD11-0072-005
NASA Property No.
Where Made Driftwood, Texas
Materials Wood, brass, aluminum or nickel?, marble, rubber

Key Words LCROSS, National Space Society, International Space Development Conference

Provenance Office of the Director of Programs and Projects, Project Management Division (Code PX)
Acquisition No. 010-2011
Storage Location **Box No.**
Date Entered 5/11/2011
Preservation/Conservation Issues

Additional Notes The surface of the moon model is scratched in several places.

Artifact label was painted on the underside of the base in May 2011. The clear lacquer used as a base and overcoat is Acryloid B-72 in acetone. The white paint is golden white fluid acrylics, a rutile titanium dioxide-based paint without dyes. Acetone will remove it.

Description of the award from the National Space Society Web site, accessed at http://www.nss.org/awards/space_pioneer_awards.html on May 12, 2011
 "The annual Space Pioneer awards recognize those individuals and teams whose accomplishments have helped to open the space frontier. The awards are divided into thirteen categories. The intent is to recognize those who have made significant contributions in different fields of endeavor to "develop a spacefaring civilization that will establish communities beyond the Earth."

The usual number of Space Pioneer awards per year is three, so not every category is awarded each year. The 13 Space Pioneer Award categories are:

- * Business/Corporate
- * Business/Entrepreneur
- * Compelling Art
- * Educator/Education
- * Government Service (Non-legislative)
- * Government Service (Legislative)
- * Mass Media
- * Public Awareness
- * Scientist/Engineer
- * Service to the Space Community
- * Space Development
- * Special Merit
- * Wide Media."

Lauda Model No.
Country of Markings
Temp. Box No.

Loan status **Item on loan** **Tracking Id.** ARC2011003

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object Space Foundation 2010 John L. "Jack" Swigert Jr. Award for Space Exploration
Object Description Award presented to the LCROSS mission team from the Space Foundation. The object consists of a small statue of astronaut John L. Swigert Jr. cast in bronze with enamel on a bronze square decorated with the infinity symbol holding the moon and earth and signed by Mark Lundeen and G. W. Lundeen. The wooden base bears a plaque with the Space Foundation logo and the following inscription:
 "2010 John L. "Jack" Swigert Jr.
 Award for Space Exploration
 LCROSS Mission Team
 NASA Ames, Northrop Grumman,
 United Launch Alliance"

Artifact No. 003
Image



 **Additional images in photographs directory.**

No. of Pieces 1
Dimensions 6"w x 6"d x 12.5"h
 Dimensions Include Frame.
Condition
Date of Object 2010
Type of Object
Creator Mark Lundeen and George W. Lundeen
Creator ID
Commissioning Org. Space Foundation

NASA Catalog No. ACD11-0072-001
NASA Property No.
Where Made
Materials Bronze, brass, wood, aluminum, felt

Key Words LCROSS, John L. "Jack" Swigert Jr., Space Foundation, Northrop Grumman, United Launch Alliance

Provenance Office of the Director of Programs and Projects, Project Management Division (Code PX)
Acquisition No. 010-2011
Storage Location **Box No.**
Date Entered 5/11/2011
Preservation/Conservation Issues Plaque with inscription appears to be glued. When the adhesive becomes dessicated, it will probably fall off.

Caption

Additional Notes Artifact label was painted on the underside of the base in May 2011. The clear lacquer used as a base and overcoat is Acryloid B-72 in acetone. The black paint is golden black fluid acrylics, a carbon-based paint without dyes. Acetone will remove it.

Description of the award from the National Space Symposium Web site, accessed at <http://2011.nationalspacesymposium.org/about/awards/john-l-jack-swigert-jr-award-space-exploration> on May 12, 2011
 "The Space Foundation was founded in 1983, in part to honor the memory and accomplishments of astronaut John L. 'Jack' Swigert, Jr. A Colorado native, Swigert served with retired U.S. Navy Captain James A. Lovell, Jr., and Fred Haise on the legendary Apollo 13 lunar mission, which was aborted after the perilous rupture of an oxygen tank en route to the moon. People around the world watched as NASA overcame tremendous odds to return the crew safely to Earth. The Space Foundation created the Jack Swigert Award for Space Exploration in 2004 in tribute to his enduring legacy of space exploration. The Jack Swigert Award is presented annually at the National Space Symposium."

Lauda Model No.
Country of Markings
Temp. Box No.

Loan status  **Item on loan** **Tracking Id.** ARC2011003

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object Popular Mechanics Breakthrough Awards 2010

Artifact No. 004
Image



Additional images in photographs directory.

Object Description Breakthrough innovator award presented to Ames and Northrop Grumman from Popular Mechanics magazine for the LCROSS mission. The brushed aluminum pillar bears the following inscription in grey, red, and black lettering:
"Popular Mechanics
Breakthrough
Awards 2010
Daniel Andrews
Anthony Colaprete
NASA's Ames Research Center
Stephen L. Carman
Craig Elder
Northrop Grumman"

No. of Pieces 1
Dimensions 3.5"w x 1.5"d x 12"h

Dimensions Include Frame.

Condition Excellent

Date of Object 2010

Type of Object Award

Creator Visions Awards

Creator ID Corporate body

Commissioning Org. Popular Mechanics magazine

NASA Catalog No. ACD11-0072-002

NASA Property No.

Where Made China

Materials Brushed aluminum and felt

Key Words LCROSS, Popular Mechanics magazine, Daniel Andrews, Anthony Colaprete, Stephen L. Carman, Craig Elder, Northrop Grumman

Provenance Office of the Director of Programs and Projects, Project Management Division (Code PX)

Acquisition No. 2011-010

Storage Location Box No.

Date Entered 5/11/2011

Preservation/Conservation Issues

Caption

Additional Notes Excerpt from Popular Mechanics Web site accessed at <http://www.popularmechanics.com/science/space/moon-mars/nasas-explosive-findings-on-moon> on May 12, 2011.

"It's hard to decide what's more impressive: the confirmation of water ice on the moon, or the scrappy way that a team of scientists and engineers pulled off the mission--by slamming 2 tons of equipment otherwise destined to become space junk into the moon's south pole and then analyzing the dust plume it kicked up.

Yet the Lunar Crater Observation and Sensing Satellite, or LCROSS, mission began as an afterthought. When the leaders of NASA's \$491 million Lunar Reconnaissance Orbiter (LRO) found themselves with an extra 1000 kilograms of payload capacity, they sent out a call for shoestring proposals for a companion mission. Led by principal investigator Anthony Colaprete, a team from NASA's Ames Research Center proposed using the Atlas V launch rocket's empty upper fuel stage to impact the moon. Northrop Grumman would turn the rocket's hot-tub-size payload ring into a makeshift spacecraft that would trail in the stage's path, gathering data via instruments bolted to its six satellite ports.

The team came in under its \$80 million budget—and the mission was a headline-screaming success. Essentially, says Colaprete, "we reached out and touched the water." The spacecraft calculated a 4 percent moisture concentration in the plume, double that of the Sahara. "We take that for granted here on Earth, but 1 to 2 percent water on the moon or an asteroid is potentially a lifeline," he says. "From an exploration standpoint, we realize there are a wealth of resources that we can take advantage of. Suddenly, the moon is a more interesting and active place."

Loan status Item on loan Tracking Id. ARC2011003

Lauda Model No.

Country of Markings

Temp. Box No.

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object NASA Systems Engineering Excellence Award, 2010
Object Description NASA Systems Engineering Excellence Award, conferred February 2010.

Official citation (does not appear on the award):
National Aeronautics and Space Administration
Presents the
NASA Systems Engineering Excellence Award to
"name of individual on list"
In recognition of your outstanding contributions to
Systems Engineering.
Signed by the NASA Chief Engineer, Mike
Ryschkewitsch, Office of the Chief Engineer

Artifact No. 005

Image



Additional images in photographs directory.

Caption

No. of Pieces 4
Dimensions 4" diam.
 Dimensions Include Frame.
Condition
Date of Object 2010
Type of Object
Creator unidentified
Creator ID
Commissioning Org. NASA

NASA Catalog No. ACD11-0082-003 and ACD11-0082-004
NASA Property No.
Where Made unidentified
Materials Wood, nickel? enamel, brass, felt

Key Words LCROSS, Systems Engineering

Provenance Office of the Director of Engineering, Engineering Systems Division (Code RE)
Acquisition No. 013-2011
Storage Location RR-C1 **Box No.** LCROSS ART-1
Date Entered 9/27/2011
Preservation/Conservation Issues

Additional Notes LCROSS systems engineers nominated for the OCE Systems Engineering Award:
LCROSS ARC SE's:
Robert Barber
Darin Foreman
Leonid Osetinsky
Mark Shirley
Matt D'Ortenzio
James Strong
Jason Otoshi
LCROSS Northrop Grumman SE's:
Jose Cabanillas
Eric Drucker
Craig Elder
Leo Matuszak
James Munger
Emory Stagmer
James Wehner
Howard Eller

Pieces include medallion, wooden medallion holder, wooden case, and felt bag

Dimensions are of the medallion.

Lauda Model No.
Country of Markings
Temp. Box No.

Loan status **Item on loan** **Tracking Id.**

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object Craterade LCROSS Impact Ale

Artifact No. 006
Image



Additional images in photographs directory.

Caption

Object Description Bottle and cap of the beer brewed by LCROSS team member Jeff Brown. The bottle label features an artist's rendering of the spacecraft and Centaur separation above the moon, with the title "Craterade LCROSS Impact Ale," date, maker, and slogan "It's the water..."

Beer label designed by Jeff Brown.

No. of Pieces 2

Dimensions 11"h x 9.25"circ.

Dimensions Include Frame.

Condition Good

Date of Object 20091009

Type of Object Ephemera/Memorabilia

Creator Brown, Jeffrey S., Mountain Mutt Brewery

Creator ID Person

Commissioning Org.

Additional Notes The Impact ale was the second batch of LCROSS beer made by Brown. The first batch was called a Launch Ale.

Label printed on an ink jet printer.

NASA Catalog No. ACD11-0082-001

NASA Property No.

Where Made Dublin, Calif.

Materials Glass, paper, aluminum?

Key Words LCROSS, Ale, Beer

Provenance Office of the Director of Programs and Projects,
Project Management Division (Code PX)

Acquisition No. 010-2011

Storage Location RR-C1

Box No. LCROSS

Date Entered 9/27/2011

ART-1

Preservation/
Conservation Issues

Lauda Model No.

Country of Markings

Temp. Box No.

Loan status Item on loan Tracking Id.

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object NASA Ames Honor Award to the LCROSS Project Team, 2009

Artifact No. 007

Image



Additional images in photographs directory.

Object Description Framed paper NASA Ames Honor Award certificate presented to the LCROSS Project Team for excellence in the category of Group/Team. Signed by Ames Center Director S. Pete Worden. Dated October 14, 2009. An Ames Honor Awards program is included.

Caption

No. of Pieces 2

Dimensions 18"w x 15"h

Dimensions Include Frame.

Condition

Date of Object 20091014

Type of Object

Creator NASA Ames Research Center

Creator ID

Commissioning Org. NASA Ames Research Center

Additional Notes Framed award and program each counted as one piece.

NASA Catalog No.

NASA Property No.

Where Made

Materials Wood, plastic, paper, ink

Key Words Ames Honor Award, LCROSS

Provenance Office of the Director of Programs and Projects,
Project Management Division (Code PX)

Acquisition No. 011-2011

Storage Location HB-2C

Box No. LCROSS

Date Entered 9/27/2011

ART-2

Preservation/
Conservation Issues

Lauda Model No.

Country of Markings

Temp. Box No.

Loan status Item on loan Tracking Id.

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object NASA Group Achievement Award to the LCROSS Project Team, 2009
Object Description Framed paper NASA Group Achievement Award certificate conferred on the LCROSS Project Team for successful implementation of the pathfinder Ames Class D flight mission. Signed by acting NASA administrator Christopher J. Scolese. Dated April 16, 2009. A sheet of paper with award details is included.

Artifact No. 008

Image



Additional images in photographs directory.

Caption

No. of Pieces 2
Dimensions 18"w x 15"h
 Dimensions Include Frame.
Condition Good
Date of Object 20090416
Type of Object Award
Creator NASA
Creator ID Corporate body
Commissioning Org. NASA

Additional Notes Framed award and paper with award details are each counted as one piece.

NASA Catalog No.
NASA Property No.
Where Made
Materials Wood, plastic, paper, ink
Key Words NASA Group Achievement Award, LCROSS

Provenance Office of the Director of Programs and Projects, Project Management Division (Code PX)
Acquisition No. 011-2011
Storage Location
Date Entered 9/27/2011
Preservation/Conservation Issues
Box No. LCROSS ART-3

Lauda Model No.
Country of Markings
Temp. Box No.

Loan status Item on loan **Tracking Id.**

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object Git-R-Done Baseball Cap

Artifact No. 009
Image



Additional images in photographs directory.

Caption

Object Description Baseball cap. Black canvas with "Git-R-Done" in white embroidered lettering. White piping along the brim.

No. of Pieces 1

Dimensions 8"w x 5.5"h x 12"l

Dimensions Include Frame.

Condition Good

Date of Object 200604

Type of Object Ephemera/Memorabilia

Creator City Hunter

Creator ID Corporate body

Commissioning Org.

NASA Catalog No.

NASA Property No.

Where Made China

Materials Cotton, Polyester

Key Words LCROSS, Baseball cap, hat, Git R Done

Provenance Office of the Director of Programs and Projects,
Project Management Division (Code PX)

Acquisition No. 011-2011

Storage Location RR-C1

Box No. LCROSS

Date Entered 9/27/2011

ART-1

Preservation/
Conservation Issues

Additional Notes According to LCROSS Project Manager Dan Andrews, the team was given the cap from "a contractor representing 'how we roll' on LCROSS. We just get in there and 'git R done'!"

Lauda Model No.

Country of Markings

Temp. Box No.

Loan status Item on loan Tracking Id.

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object Rocket Pinata

Artifact No. 010
Image



Additional images in photographs directory.

Caption

Object Description Pinata shaped like a rocket. Consists of a cardboard tube covered with red, white, and blue tissue paper with a band of yellow construction paper bearing the name LCROSS handwritten in black marker. A NASA decal is affixed to the nose and a United States flag decal is affixed to the tail. A plastic loop is threaded through the nose.

No. of Pieces 1

Dimensions 20" circ. x 31"l

Dimensions Include Frame.

Condition Fair

Date of Object 200707

Type of Object Ephemera/Memorabilia

Creator unidentified

Creator ID

Commissioning Org.

Additional Notes Item reshaped and supported with acid-free tissue.

Item was broken open at a party held at the home of LCROSS Project Manager Dan Andrews in July 2007. His wife purchased it and he made the LCROSS label.

NASA Catalog No.

NASA Property No.

Where Made unidentified

Materials tissue paper, construction paper, cardboard, decals, plastic

Key Words pinata, piñata, rocket, LCROSS

Provenance Office of the Director of Programs and Projects,
Project Management Division (Code PX)

Acquisition No. 011-2011

Storage Location RR-D1

Box No. LCROSS

Date Entered 9/27/2011

ART-4

Preservation/
Conservation Issues

Lauda Model No.

Country of Markings

Temp. Box No.

Loan status Item on loan Tracking Id.

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object LCROSS Spacecraft Model

Artifact No. 011

Image



Additional images in photographs directory.

Caption

Additional Notes

Object Description Rough wooden model of the LCROSS spacecraft perched on a plastic post above a wooden base with the raised letters LCROSS. Spacecraft painted silver, gold, and black. Base painted black.

No. of Pieces 3

Dimensions 4" diam. x 4.5" h

Dimensions Include Frame.

Condition Good

Date of Object 2009~

Type of Object Model

Creator unidentified

Creator ID

Commissioning Org.

NASA Catalog No.

NASA Property No.

Where Made unidentified

Materials wood, plastic

Key Words LCROSS, spacecraft

Provenance Office of the Director of Programs and Projects,
Project Management Division (Code PX)

Acquisition No. 011-2011

Storage Location RR-C1

Box No. LCROSS

Date Entered 9/27/2011

ART-1

Preservation/
Conservation Issues

Lauda Model No.

Country of Markings

Temp. Box No.

Loan status Item on loan Tracking Id.

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object LCROSS/Northrop Grumman Beverage Bottle Insulator
Object Description Foam beverage bottle insulator. Pictured on the item is a gold spacecraft against the background of a dark, starry sky. The letters LCROSS are in blue over the spacecraft. The Northrop Grumman logo is in blue and "Lunar Crater Observation and Sensing Satellite" is in white lettering.

Artifact No. 012

Image



Additional images in photographs directory.

Caption

No. of Pieces 1
Dimensions 2.75" diam. x 4"h
 Dimensions Include Frame.
Condition
Date of Object 2009~
Type of Object
Creator unidentified
Creator ID

Additional Notes

Commissioning Org.

NASA Catalog No.

NASA Property No.

Where Made unidentified

Materials

Key Words LCROSS, Northrop Grumman

Provenance Office of the Director of Programs and Projects,
Project Management Division (Code PX)

Acquisition No. 011-2011

Storage Location RR-C1

Box No. LCROSS

Date Entered 9/27/2011

ART-1

**Preservation/
Conservation Issues**

Lauda Model No.

Country of Markings

Temp. Box No.

Loan status Item on loan **Tracking Id.**

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object LCROSS/Northrop Grumman Water Bottle

Artifact No. 013
Image



Additional images in photographs directory.

Caption

Object Description Plastic water bottle with cap. The LCROSS logo, Northrop Grumman logo, image of the spacecraft and lunar impact, and the slogan "Got Water?" are pictured on the bottle label.

No. of Pieces 2
Dimensions 8" circ. x 8.5"h

Dimensions Include Frame.

Condition
Date of Object 2009~
Type of Object
Creator IWantMyH20.com
Creator ID

Commissioning Org.

Additional Notes Water emptied from bottle.

NASA Catalog No.

NASA Property No.

Where Made unidentified

Materials plastic

Key Words LCROSS, got water? Northrop Grumman

Provenance Office of the Director of Programs and Projects,
Project Management Division (Code PX)

Acquisition No. 011-2011

Storage Location RR-C1

Box No. LCROSS

Date Entered 9/27/2011

ART-1

Preservation/
Conservation Issues

Lauda Model No.

Country of Markings

Temp. Box No.

Loan status Item on loan Tracking Id.

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object LCROSS and LRO Mission Patches and Pins

Artifact No. 014
Image

Object Description NASA Atlas LRO LCROSS mission patch
LRO LCROSS "Crash Course in Hydrology" ULA,
45SW, NASA mission patch
NASA Ames Research Center Northrop Grumman
LCROSS 2009 mission patch (2 copies)

NASA Atlas LRO LCROSS mission pin attached to
informational card about the spacecraft (2 copies)
LCROSS mission pin (2 copies)
LCROSS Got Water? mission pin (2 copies)



Additional images in photographs directory.

No. of Pieces 12

Dimensions

Dimensions Include Frame.

Condition Excellent

Date of Object 2009~

Type of Object Ephemera/Memorabilia

Creator unidentified

Creator ID Corporate body

Commissioning Org.

Caption

Additional Notes

NASA Catalog No.

NASA Property No.

Where Made China

Materials fabric, metal

Key Words LCROSS, LRO, Atlas, Northrop Grumman,
patch, pin

Provenance Office of the Director of Programs and Projects,
Project Management Division (Code PX)

Acquisition No. 011-2011

Storage Location RR-C1

Box No. LCROSS

Date Entered 9/27/2011

ART-1

Preservation/
Conservation Issues

Lauda Model No.

Country of Markings

Temp. Box No.

Loan status Item on loan Tracking Id.

Collection Name LCROSS Collection
Collection No. AFS80005_LCROSS
Object LCROSS/LRO Bracelet

Artifact No. 015
Image

Object Description Purple plastic or rubber bracelet with the following embossed on the exterior:
LCROSS/LRO
Space Settlement



Additional images in photographs directory.

No. of Pieces 1
Dimensions

Dimensions Include Frame.

Condition

Date of Object

Type of Object

Creator

Creator ID

Commissioning Org.

Caption

Additional Notes

NASA Catalog No.

NASA Property No.

Where Made China

Materials plastic? rubber?

Key Words LCROSS, space settlement, bracelet

Provenance Office of the Director of Programs and Projects,
Project Management Division (Code PX)

Acquisition No. 011-2011

Storage Location RR-C1

Box No. LCROSS

Date Entered 9/27/2011

ART-1

Preservation/
Conservation Issues

Lauda Model No.

Country of Markings

Temp. Box No.

Loan status Item on loan Tracking Id.