



Planetarium Shows

from

LOCH NESS PRODUCTIONS

Spring 2010

Classic Planetarium Show Packages from Loch Ness Productions



Sky Quest

A young girl's quest to become an astronomer leads her on a journey of exploration through the night sky.

Narrated by Roxann Dawson



The Cowboy Astronomer

A unique take on astronomy from a cowboy who roams the sky while riding the range.

Narrated by Baxter Black



MarsQuest

A tour of the Red Planet and humanity's fascination with it.

Narrated by Patrick Stewart



Light Years from Andromeda

A journey between two galaxies spans human history.

Narrated by Michael Dorn



Oceans In Space

The search for life extends from Earth's oceans to the stars.

Narrated by Avery Brooks



Magellan: Report From Venus

A documentary look at the cloud-shrouded Venus and the Magellan radar mapping mission.



The Voyager Encounters

The discoveries of the Voyager missions to the outer planets.

Narrated by Patrick Stewart



More Than Meets The Eye

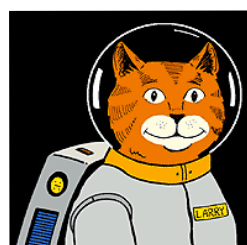
A guide to the night sky for backyard astronomers, including constellation and star-hopping and deep-sky objects.



'Tis The Season

An elegant, sophisticated show for the winter holiday season.

Narrated by Noah Adams



Larry Cat In Space

Take off on a lunar adventure with a curious stowaway cat!

Fito Gato En El Espacio

Larry Cat In Space in Spanish!



HUBBLE Vision 2

A fascinating tour of the cosmos — from Earth orbit.

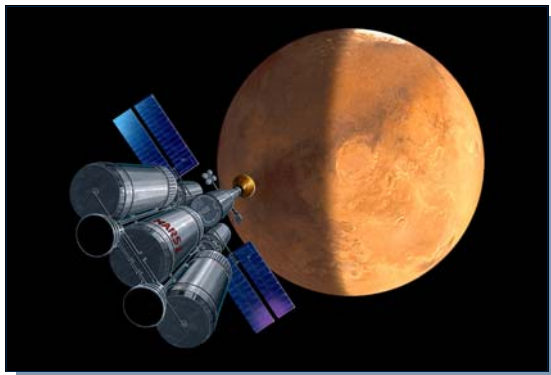




Come along with a young woman on her personal quest to find a special place in the night sky

<p>Running times: 24:30 full length 20:00 special edit (both provided)</p>	<p>Grade level: General Public especially appropriate for elementary grades and family audiences</p>
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Sky Quest is an exploration of the stars, planets, and constellations told from the viewpoint of an astronomer. Share her lifelong fascination with the heavens — from her childhood adventures on Mars (via a cardboard rocket) — to the discovery of her "birthday star" that led her to become an astronomer and build her own mountain-top observatory.



Our astronomer shares her telescope views of solar system objects and talks about manned landings on the Moon, future missions to Mars, Hubble Space Telescope studies of Jupiter, and the glorious rings of Saturn. Along the way she points out her favorite stars, and explains how she learned to find the constellations with simple star-hopping techniques. She encourages everyone to make the time to look up, even if it means stargazing in urban areas with light pollution.

Sky Quest is an entertaining and educational exploration of the night sky that appeals to family members of all ages. Grade-school children may identify most with the main character depicted as an 8-year-old "astronaut" in a charming opening "home movie" style vignette.



Narrated by Roxann Dawson
 Written by Carolyn Collins Petersen
 Produced by Mark C. Petersen
 Original artwork by Tim W. Kuzniar

Sky Quest was produced by Loch Ness Productions for the Albert Einstein Planetarium of the Smithsonian Institution's National Air & Space Museum, Washington, D.C.





Science Education Content

The educational focus of *Sky Quest* is to introduce easily observable objects in the night sky with emphasis on finding them and knowing their characteristics. It also stresses the idea that anyone with an interest can participate in astronomy observations and take astronomy up as a hobby and a career choice. These concepts are woven throughout the program and help relate the information presented in the show to the lives of students, families, and the general public.

The show's content is relevant in these subject areas:

Earth and Space Sciences:

- Objects in the sky: Earth, Mars, Mars satellites, stars
- Positions and motions of objects in the sky: Moon, Mars, Jupiter, Saturn, the stars and constellations

Science in personal and social perspectives:

- Light pollution as a human effect on the environment
- Astronomy as a career

Science as a Human Endeavor/Inquiry:

- Using binoculars, telescopes, and spacecraft instruments to study the sky
- The Apollo missions to the Moon
- The Voyager missions to the outer planets
- The Hubble Space Telescope's astronomical observations

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nses/html/index.html>.

Sky Quest is a complex show, and requires a well-equipped planetarium theater to present:

1. Slide projectors in Left-Center-Right array, with at least 1 pair dissolvers
2. Horizon panorama projector system
3. All-sky projector system
4. Positionable CRT video projector
5. A capable planetarium projector and phasing Moon
6. The ability to point out 30 objects on cue

We also recommend:

7. Zoom-slew
8. Auxiliary or "single-shot" projectors

The images in the *Sky Quest* show package are provided in digital format. Digital planetaria can program shows using these images directly. For those facilities using slides, we can act as your service bureau by supplying masked, glass-mounted slides. Just order them in addition to the basic show package.

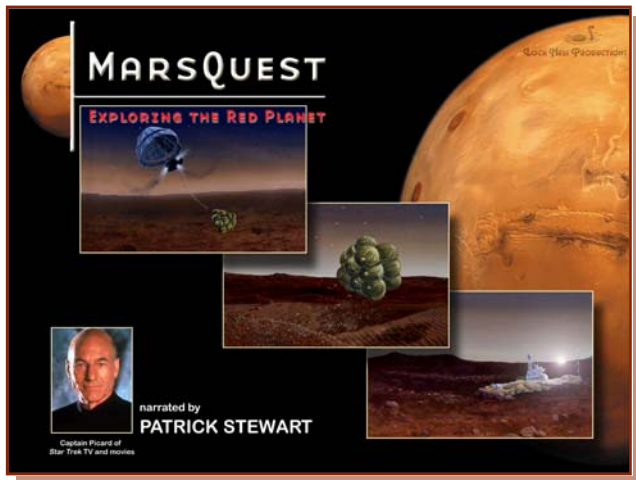
PRODUCT CODE	The <i>Sky Quest</i> show package includes:	PRICE
SQ-D	<ul style="list-style-type: none"> • Performance license • Script/production notes book • Soundtrack, video clips and reference video on DVD-R • Images/masks in TGA form on CD-R (<i>you make your own slides</i>) 	\$995

Sky Quest requires a signed performance license agreement to be sent with your order. You can download it from this show's page on our Web site, along with previews of the program's still and video images, excerpts from the soundtrack, and sample script pages. You can also find more information about optional products such as DigiDome®, narrationless soundtracks, programming cue files, replacement or duplicate copies, alternate formats and more.



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Revised 10 February 2010



***Come along
on a captivating
scientific and
historical exploration
of the planet Mars!***

**Running time: 40:26
Grade level: 4-12 and
general public audiences**

MarsQuest is a chronicle tracing our centuries-long cultural and scientific fascination with the planet Mars. Set in a theatrical style "three-act" form with an epilogue, it weaves a satisfying narrative of what Mars means to humanity.

In the first section, **"Homage,"** we trace Mars through history — from an "incantation" of the various War God forms given by different cultures, to the early observations of Schiaparelli and Lowell, and the infamous "canals" which led to science-fiction stories about Martians. We hear excerpts from H. G. Wells's "War Of The Worlds" and Edgar Rice Burroughs's "Barsoom" novels.



"Mars In Focus" details the Mars of our time — as seen in the night sky, through binoculars and telescopes, and from our Mars explorations. Mission findings from more than a quarter century of spacecraft missions feature reports on Mars weather, climate, and areology. We compare the climate and terrain of Earth and Mars, and present the current thinking about the areologic history of the planet, and a rationale for future exploration.



"Mars in the Future" examines where on Earth we can prepare to live on Mars, what will be needed to get crewed missions to the Red Planet, and what the first landing may be like.

The show ends with **"Rhapsody on a Red Planet,"** a poetically-styled "ode to Mars," this time from a future perspective; an eloquent soliloquy tracing the efforts that led to humanity's first footsteps onto the desolate and dusty Martian surface.

Along with its sister planetary shows **Magellan: Report from Venus** and **The Voyager Encounters**, **MarsQuest** is an excellent way to present the wonders of the solar system to audiences.

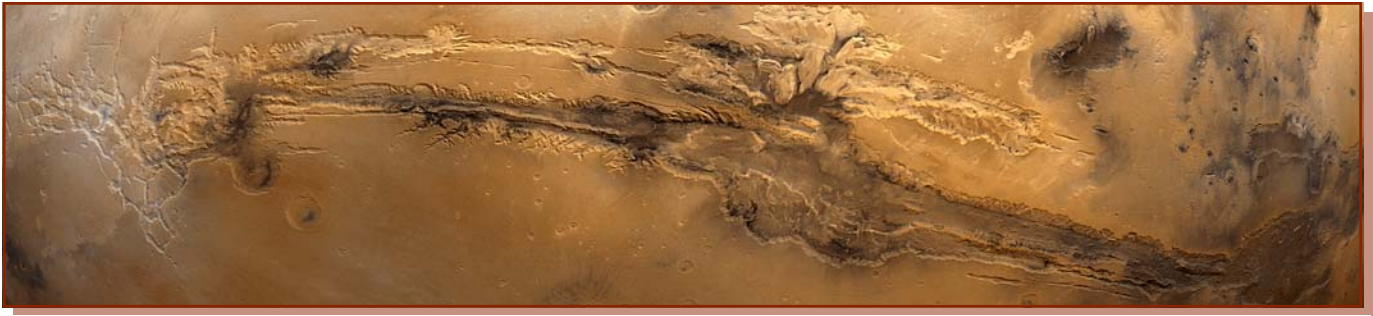


MarsQuest was produced in collaboration
with the Space Science Institute,
with production funding from
the National Science Foundation.

**Narrated by Patrick Stewart
Written by Carolyn Collins Petersen
Produced by Mark C. Petersen
Original artwork by Michael W. Carroll and Tim W. Kuzniar**



Science Education Content



The focus of *MarsQuest* is to present Mars via a set of multidisciplinary themes. These ideas are woven throughout the program and help relate the information presented in the show to the lives of students, families, and the general public.

Show content is relevant in the following subject areas:

Physical Sciences:

- Positions and motions of Earth and Mars
- Mars and Earth orbits, relative positions over time
- Orbital effects on climate, seasons

Earth and Space Sciences:

- Objects in the sky: Earth, Mars, Mars satellites
- Comparative planetology of Earth and Mars
- Mars environment, climate change, evolution, surface

Life Sciences:

- The search for life on Mars and likely environments where it might exist

Science and Technology:

- Mars through binoculars, telescopes
- Exploration of Mars by spacecraft missions
- Technological challenges of future explorations
- Science drivers for Mars exploration
- Remote sensing and spacecraft
- Technological planning for future Mars studies

History of Science/Science as a Human Endeavor:

- The ancient perception of Mars as a war god
- The scientific exploration of the planet
- Mars in science fiction and fantasy
- Future human exploration of the planet

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nses/html/index.html>.

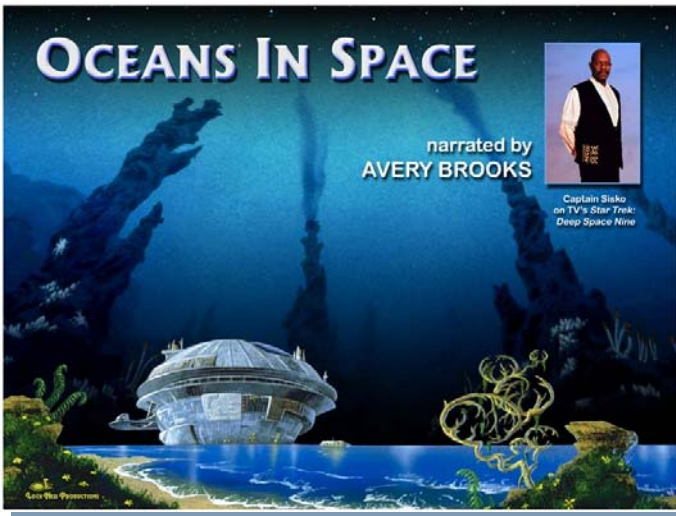
MarsQuest requires a signed performance license agreement to be sent to us with your order. You can download it from this show's page on our Web site, along with previews of all the program's images, excerpts from the soundtrack, and sample script pages. You can also order online and find more information about optional products such as DigiDome®, narrationless soundtracks, programming cue files, replacement or duplicate copies, alternate formats and more.

PRODUCT CODE	The <i>MarsQuest</i> show package includes:	PRICE
MQ-R	<ul style="list-style-type: none"> • Performance license • Script/production notes book • Soundtrack on audio CD • Programming reference video • Images/masks in TGA form on CD-R (<i>you make your own slides</i>) 	\$995



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Revised 10 February 2010



*The search for life
in the universe
begins deep in
Earth's oceans —
and extends out to
the stars!*

Narrated by AVERY BROOKS
Captain Sisko of TV's *Star Trek: Deep Space Nine*

Running time: 30:15
Grade level: 4-12 and general public audiences

Two of the most profound questions humans can ask are "Where do we come from?" and "Are we alone?" It is only natural that we look across the gulfs of space to search for other inhabited worlds.

Oceans In Space is a journey of exploration that seeks out places where conditions are favorable for life to exist. This original and thought-provoking presentation highlights the search for extrasolar planets and an understanding of the conditions necessary to form and sustain life. Inspired in part by the goals of NASA's Origins Program — an effort to answer the enduring questions that spur space exploration — this program introduces audiences to the diversity of life on our home planet even as humans embark on the search for life in the universe.

The story begins on Earth — on the shoreline of a tropical lagoon. The show travels back in time more than five billion years, to trace the origin and evolution of the solar system from a cloud of gas and dust. It then describes the formation of our planet's oceans, and speculates about the places where life could have begun nearly four billion years ago. It presents the three requirements for the nourishment of life on Earth — and most likely anywhere else in the universe: warmth, water, and organic material.



Today life on Earth flourishes in environments ranging from benign to downright alien, and the show examines the variety of life forms that populate our planet: from the creatures of the land to organisms that exist in the extreme conditions around volcanic vents on the ocean floors.

The possibility that life might exist in similar extreme environments elsewhere in the solar system prompts an exploration of two other worlds where the requirements for life might be met: Mars and the icy Jovian moon Europa.

The search for other life-bearing planets moves to starbirth nurseries in the Orion Nebula, and explains one technique today's scientists use to look for extrasolar planets. A science fiction-style ending portrays spaceship crews exploring the shores of an alien ocean far from Earth, in a scene taken from humanity's distant future.

Written by Carolyn Collins Petersen
Produced by Mark C. Petersen
Original artwork by Michael W. Carroll
and Tim W. Kuzniar

Oceans in Space is an original work commissioned in 1997
by the Springfield Library and Museums Association
for the Seymour Planetarium
of Springfield, Massachusetts.





Science Education Content

Oceans in Space provides an educational focus on the search for extrasolar planets and life in the universe via a set of multidisciplinary themes woven throughout the program that help relate the information presented in the show to the lives of students, families, and the general public.

Show content is relevant in these subject areas:

Earth and Space sciences:

- the origin and evolution of the solar system
- characteristics of Earth
- characteristics of Mars; evolution of Mars surface
- comparative planetology between Earth, Mars, and Europa
- Earth's oceans, their formation and effect on life, climate, and geological processes
- Martian meteorite analyses
- characteristics of Europa
- the formation of other stars and planetary systems
- the detection of planetary systems around other stars

Life sciences:

- the evolution of primordial life
- organisms and their environments on Earth
- the search for similar environments elsewhere
- requirements to sustain life (water, warmth, organic material)

Science as a human endeavor:

- exploring the undersea environment with specialized probes
- exploring Mars with telescopes and spacecraft
- exploring Europa with spacecraft
- exploring space with Hubble Space Telescope
- future missions to other planets to search for life

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nses/html/index.html>.

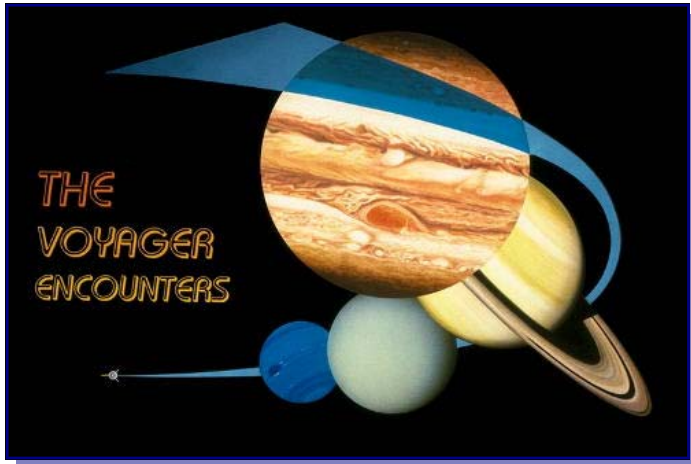
Oceans In Space requires a signed performance license agreement to be sent to us with your order. You can download it from this show's page on our Web site, along with previews of all the program's still and video images, excerpts from the soundtrack, and sample script pages. You can also order online and find more information about optional products such as DigiDome™, narrationless soundtracks, programming cue files, and replacement products.

PRODUCT CODE	The <i>Oceans In Space</i> digital show package includes:	PRICE
OIS-D	<ul style="list-style-type: none"> • Performance license • Script/production notes book • Soundtrack, video, and programming reference video on DVD-R • Images/masks in TIF form on CD-R (<i>you make your own slides</i>) 	\$995



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Revised 10 February 2010

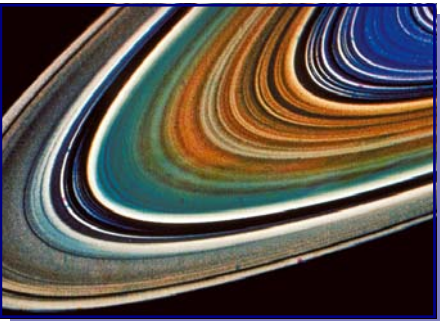


The Voyagers opened a new frontier — the worlds of the outer solar system!

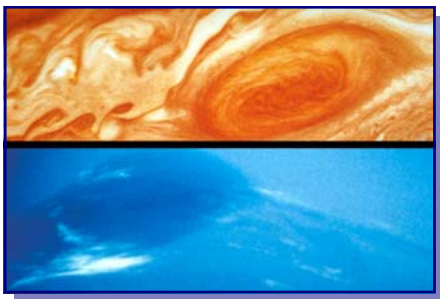
Running time: 42:30
Grade level: 4-12 and
general public audiences



From 1979 to 1989 the Voyager 1 and 2 missions explored the wonders of the outer solar system. *The Voyager Encounters* is the definitive summary of results returned by the two spacecraft. It recaps the flybys of Jupiter, Saturn, Uranus and Neptune in one convenient, thorough documentary.



The show begins with an historical look at Galileo Galilei's observations of the planets Jupiter and Saturn, progressing through three centuries of ground-based studies of the outer planets. The show then introduces the two Voyager spacecraft and describes their trajectories and instrument packages.



Voyager's cameras provided rare and visually stunning views of the worlds of the outer solar system, plus invaluable information about the chemical makeup of each planet's atmosphere, internal structure, magnetic fields, rings, and moons.



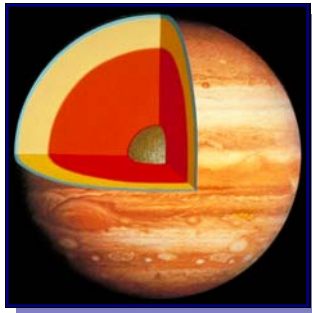
Voyager's planetary odysseys began at Jupiter, an impressionistic study in cloudy turbulence, sporting a Great Red Spot and a collection of moons — among them volcanic Io. Next was Saturn, with its ten thousand glittering rings, cloud-shrouded Titan, and a flock of smaller icy moons. That was followed by bland-looking Uranus, a planet that rolls around the Sun on its side. It boasts a set of dark rings and its own collection of icy worlds. Voyager's close flyby of Neptune showed storms in its upper atmosphere, and revealed the mottled surface of the unusual moon Triton.

The show ends with these hardy space voyagers leaving the solar system — each serving as Earth's ambassador to a far future rendezvous in distant star systems.

Along with its sister planetary shows *Magellan: Report from Venus* and *MarsQuest*, *The Voyager Encounters* is an excellent way to present the wonders of the solar system to audiences.

Narrated by Patrick Stewart
Written by Carolyn Collins Petersen
Produced by Mark C. Petersen
Original artwork by Tim W. Kuzniar





Science Education Content

The educational focus of *The Voyager Encounters* is to present the discoveries made by the Voyager spacecraft at the gas giant planets, their moons, and ring systems. The show uses a set of multi-disciplinary themes in physical sciences, Earth and space sciences, and history of science. These ideas are woven together with images and help relate the information presented in the show to the lives of students, families, and the general public.

Show content is relevant in the following subject areas:

Earth and Space Sciences/Physical Sciences:

- Orbital motions of the outer planets, moons, rings
- Characteristics of Jupiter, Saturn, Uranus, Neptune
- Properties of planetary atmospheres, moons, rings magnetic fields
- Processes of change in the outer solar system

History of Science/Science Inquiry/Technology:

- History of telescopic exploration of the outer planets
- Galileo's 17th-century planetary observations
- Modern ground-based observations
- Orbital trajectories and spacecraft instrumentation for planetary exploration

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nse/html/index.html>.

PRODUCT CODE	<i>The Voyager Encounters</i> show package includes:	PRICE
TVE-R	<ul style="list-style-type: none"> • Script/production notes book • Soundtrack on audio CD • Images/masks in TGA form on CD-R (<i>you make your own slides</i>) 	\$995

Please visit our Web site, where you can preview this program's images, excerpts from the soundtrack, and sample script pages. You can also order online and find more information about optional products such as DigiDome®, narrationless soundtracks, programming cue files, replacement copies, and more.



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Revised 10 February 2010



Light up the cold, dark season with a warm and bright holiday show!

Running time: 35:17

Grade level: General public and family audiences

Narrated by Noah Adams
Written by James Manning
Produced by Mark C. Petersen
Original artwork by Michael W. Carroll and Tim W. Kuzniar

When the December holiday season rolls around each year, planetarians often present special programs that combine astronomy and holiday traditions. One of the most popular programs in the Loch Ness Productions repertory is *'Tis The Season* — an elegant and sophisticated program about the coldest and darkest of seasons — a time which holds some of the warmest and brightest celebrations of the year.

This presentation traces the history and development of many of the world's most endearing holiday customs, all of which involve lighting up the winter season — from the burning Yule log, sparkling Christmas tree lights and candles in windows, to the lighting of luminarias in the American Southwest and the traditional ritual of the Hanukkah Menorah.



St. Nicholas, Sinterklaas, Kris Kringle, Father Christmas, and Santa Claus all drop by as well.

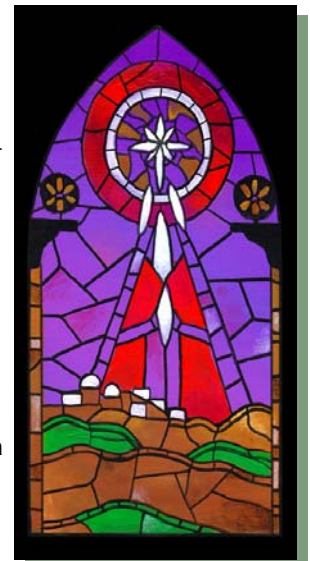
Naturally, there is some astronomy in *'Tis The Season*. Audiences learn a selection of Northern hemisphere winter constellations, and find out why we even have seasons, as we demonstrate the Sun's path across the sky throughout the year, and the Earth's tilt and orbit

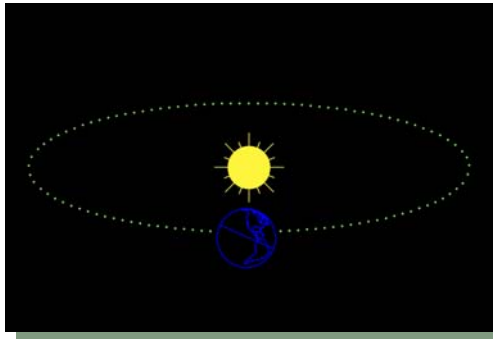


The show also recounts the historical religious and cultural rituals practiced during the time of winter solstice — not only Christian and Jewish, but also Celtic, Nordic, Roman, Irish, Mexican and Hopi. It also takes a look at some of our more light-hearted seasonal traditions: from gift-giving and kissing under the mistletoe to songs about lords a-leaping and ladies dancing; and the custom of decking the halls with greenery and candles.

around the Sun. And of course, the program explores the possible astronomical explanations for a "Star over Bethlehem" in the last quarter of the show: comets, meteors, novae and supernovae, and planetary conjunctions.

Tis The Season is visually rich, culturally inclusive, musically satisfying, and soothing as a warm drink on a cold winter's night — and the perfect program for that end-of-the-year program slot!





Science Education Content

'Tis The Season is a specialty program with an emphasis on astronomical and cultural themes related to the holiday season.

Its educational impact is achieved through a set of multidisciplinary ideas woven throughout the program that help relate different holiday traditions and astronomy to the lives of students, families, and the general public.

Show content is relevant in these subject areas:

Earth and Space Sciences:

- Sky objects: Sun, Moon, Venus, Jupiter
- Constellations: Orion, Canis Major, Canis Minor, Gemini, Taurus, Auriga, Leo
- Comets, stars, novae, supernovae, meteors
- Orbital motions of planets, lunar eclipse
- Change of seasons

Science History/Science as a human endeavor:

- Stargazing as a scientific activity
- Cultural connections between astronomy and holiday traditions
- Ancient use of astrology to predict events
- Ancient and modern perceptions of sky events and objects

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nses/html/index.html>.

PRODUCT CODE	The <i>'Tis The Season</i> show package includes:	PRICE
TTS-R	<ul style="list-style-type: none"> • Script/production notes book • Soundtrack on audio CD • Images/masks in TGA form on CD-R (<i>you make your own slides</i>) 	\$895

Please visit our Web site, where you can preview this program's images, excerpts from the soundtrack, and sample script pages. You can also order online and find more information about optional products such as DigiDome®, narrationless soundtracks, programming cue files, replacement copies, and more.



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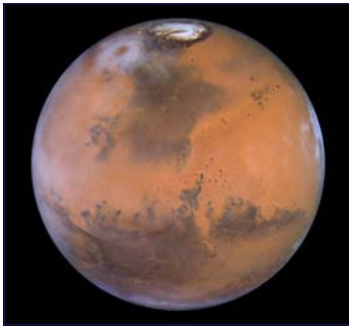
Revised 10 February 2010



A fascinating tour of the cosmos — from Earth orbit.

Written and produced by
Carolyn Collins Petersen and Mark C. Petersen
Narrated by Wren Ross

Running time: 30:00
Grade level: 4-12 and
general public audiences



Since its launch in 1990, the Hubble Space Telescope has provided incredible images in unprecedented detail to astronomers, and made an astonishing array of discoveries — from nearby objects in the solar system to the most distant galaxies at limits of the observable universe.

We've taken the best and most exciting Hubble images and woven them into an engaging story of cosmic exploration, bringing the wonders of the universe to audiences everywhere.

In this all-new production, major themes in current astronomy and cosmology are presented: new views of the planets; peeks into starbirth nurseries; visions of stardeath in its many forms; explorations of star clusters and galaxies; and views of the universe when the earliest galaxies first shone.

We catch glimpses of solar system objects, including the Moon and Venus; clouds on dusty Mars; Comet Shoemaker-Levy 9's crash into Jupiter; storms on Saturn, Uranus, and Neptune; and the faraway worlds of Pluto and Quaoar.

Beyond the solar system, we explore protoplanetary disks in the Orion Nebula, and regions of starbirth across the cosmos. We witness the deaths of stars like our Sun; the cataclysmic aftermath of supernovae in the Crab Nebula; and expanding rings around Supernova 1987a. We see breathtaking views of colliding galaxies; jets shooting from active galactic nuclei, powered by supermassive black holes; the eerie effects of gravitational lenses; and deep-field views of the most distant galaxies ever seen.



The images in ***HUBBLE Vision 2*** began as digital files released by the Space Telescope Science Institute, NASA, the European Southern Observatory, and by scientists working directly with HST data. Then we carefully reframed, resized, cropped and enhanced the images for optimal planetarium display. We've also created original artwork and graphics to supplement and illustrate other points of the show.

Bring the Space Telescope's exciting discoveries to audiences of all ages.

HUBBLE Vision 2 is a factual journey through the universe, as seen through the unblinking eye of one of the world's premier telescopes — a planetarium show done in the professional style you expect from Loch Ness Productions.





Science Education Content

The educational focus of *HUBBLE Vision* is to present the discoveries made by the Hubble Space Telescope, explaining the objects it has observed and the processes that shape the cosmos. This is done via a set of multidisciplinary themes woven throughout the program. These ideas help relate the information presented in the show to the lives of students and their families. The language level is appropriate for students at the middle-school level and above, and the general public

Show content is relevant in the following subject areas:

Earth and Space Sciences:

- Objects in the sky: planets (moons, surface characteristics, atmospheres, magnetic field phenomena), comets
- Extra-solar objects: stars, supernovae, nebulae, clusters, galaxies, and black holes

Science and Technology:

- Hubble Space Telescope and its science instruments
- Optical, infrared, and ultraviolet capability of the Space Telescope
- Hubble Space Telescope servicing missions

Physical Sciences:

- How objects look in different realms of the electromagnetic spectrum
- Processes of starbirth, stardeath (astrophysical processes)
- Deducing the existence of black holes by effects on host galaxies
- Determination of cosmic distances
- Exploring the structure of the universe

Science Inquiry:

- How we use HST to explore the cosmos

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nses/html/index.html>.

The images in the *HUBBLE Vision 2* show package are provided in digital format. Digital planetaria can program shows using these images directly. For those facilities using slides, we can act as your service bureau by supplying masked, glass-mounted slides. Just order them in addition to the basic show package.

Only an Earth chord image needs to be projected on the horizon, so even those theaters with minimal panorama capability should still be able to present this show effectively. We've made two HST visuals into all-skies — and extracted three adjoining single-frame images for theaters without all-sky projector systems to use.

We created a stellar formation animation video, and included it on the DVD. If you don't have video projection capability, you can use the still image sequence we've extracted from the video instead.

HUBBLE Vision 2 requires a signed performance license agreement to be sent to us with your order. You can download it from this show's page on our Web site, along with previews of all the program's images, excerpts from the soundtrack, and sample script pages. You can also order online and find further information about optional products such as DigiDome®, narrationless soundtracks, programming cue files, replacement or duplicate copies, alternate formats and more.

PRODUCT CODE	The <i>HUBBLE Vision 2</i> show package contains:	PRICE
HV2-D	<ul style="list-style-type: none"> • Performance license • Printed book: Script/production notes • DVD: Soundtrack, programmer's reference demo, optional video clip • Data CD: Images/masks in Targa form (<i>you make your own slides</i>) 	\$595



LOCH NESS PRODUCTIONS P. O. BOX 924 NEDERLAND, COLORADO 80466 USA
 Phone: +1 303 642 7250 Fax: +1 303 642 7249 Toll-free: 1-888-4-NESSIE
 Email: info@lochnessproductions.com Web site: www.lochnessproductions.com

Revised 10 February 2010



*Explore the stars
from a cowboy's
point of view!*

Running time: 37:00
Grade level: 4-12 and
general public audiences



The Cowboy Astronomer is a skillfully woven tapestry of star tales and Native American legends, combined with constellation identification, star-hopping, and astronomy tidbits — all told from the unique viewpoint of a cowboy astronomer who has traveled the world plying his trade and learning the sky along the way.

The show begins with the cowboy's reminiscences of boyhood experiences on a cattle ranch. There he learned about Polaris, the North Star from a wily old ranch hand. He also learns the story of how the seven Indian maidens became the Pleiades — running from the grizzliest bear they'd ever seen — and how Devil's Tower got created in the process.



We hear the voice of a Native American storyteller recounting the legend of how Fisher — also known as the Big Dipper — got into the sky. The cowboy regales the audience with a wide range of other star tales, explaining along the way the processes of star birth and star death, and how stars' temperatures and colors are related. Throughout the show, he uses examples from many different cultures to identify familiar celestial objects and constellations, and demonstrate how humans have studied the sky throughout time.



The show closes with a touching tribute to a husband and wife team of astronomers who both studied the night sky and hoped to find their place among the stars. In the last scene, the cowboy astronomer invites everyone to enjoy the sublime beauty of the night sky and find their own place in the universe.

There's never been a program like *The Cowboy Astronomer*. It's a fresh new perspective in the planetarium medium; a unique, different, and thoroughly entertaining show unlike anything you've seen or heard before. It'll make your audiences laugh, it'll tug at their heart strings — all the while teaching about the universe and humanity's relationship with the stars.



Narrated by Baxter Black
Written by Carolyn Collins Petersen
Produced by Mark C. Petersen
Original artwork by Tim W. Kuzniar

The Cowboy Astronomer is an original work
commissioned in 1993 by the Campbell County School District
for the Sage Valley Junior High School Planetarium
of Gillette, Wyoming.





Science Education Content

The educational focus of the show is to present basic sky lore and astronomy information to a general audience from a unique viewpoint. A set of multicultural and multidisciplinary themes are woven throughout the program. These ideas help relate the information presented in the show to the lives of students, families, and the general public.

Show content is relevant in the following subject areas:

Earth and Space Sciences:

- Objects in the sky: stars, constellations, the Orion Nebula, the Andromeda Galaxy, the Pleiades star cluster, the Crab Nebula supernova, the explosion of Supernova 1987a, the Cygnus X-1 black hole, the highly variable Eta Carinae
- Changes in the sky: diurnal motion of the stars; seasonal changes in the sky
- The Orion Nebula, Betelgeuse, the Crab Nebula supernova, Supernova 1987a, Eta Carinae

Physical Science:

- Properties of stars

History of Science/Science Inquiry:

- Historical and cultural perspectives on astronomy: star legends of different cultures and countries, including Native American, Germany, ancient Arabic, Polynesian, and Greek tales, mainstream American, British poetry related to astronomy
- Astronomy as an enjoyable hobby or profession

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nses/html/index.html>.

The Cowboy Astronomer is not the most visually complex show we offer, but it still requires a well-equipped planetarium theater to present:

1. Slide projectors in Left-Center-Right array, with at least 1 pair dissolvers
2. Horizon panorama projector system, 2-deep in some screens (over half the show's images are horizon scenes)
3. A capable planetarium star projector with Sun and Moon
4. The ability to point out objects on cue

We also recommend:

5. Zoom-slew
6. Auxiliary or "single-shot" projectors

The images in *The Cowboy Astronomer* show package are provided in digital format. Digital planetaria can program shows using these images directly. For those facilities using slides, we can act as your service bureau by supplying masked, glass-mounted slides. Just order them in addition to the basic show package.

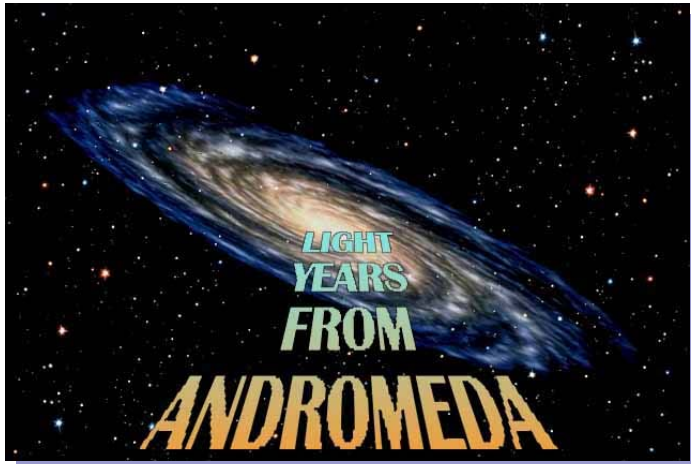
PRODUCT CODE	<i>The Cowboy Astronomer</i> show package includes:	PRICE
TCA-R	<ul style="list-style-type: none"> • Performance license • Script/production notes book • Soundtrack on audio CD • Images/masks in TGA form on CD-R (<i>you make your own slides</i>) 	\$995

This show requires a signed performance license agreement to be sent with your order. You can download it from this show's page on our Web site, along with previews of the program's still and video images, excerpts from the soundtrack, and sample script pages. You can also find more information about optional products: DigiDome®, narrationless soundtracks, programming cue files, replacement or duplicate copies, alternate formats and more.



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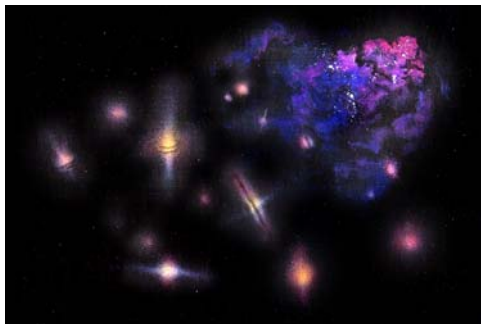
A journey between two galaxies spans human history — and reveals the secrets of the cosmos!

Running time: 30:00
Grade level: 4-12 and
general public audiences

Narrated by Michael Dorn
Written by Carolyn Collins Petersen
Produced by Mark C. Petersen
Original artwork by Tim W. Kuzniar and Michael W. Carroll

A beam of light leaves a star in the Andromeda Galaxy and travels across the void of intergalactic space. For much of its journey it traverses the nearly-empty realm between galaxies. In the meantime, on a planet located in a neighboring galaxy, intelligent life evolves.

As the light speeds across the light years over the course of many centuries, the primitives on the planet form cultures and civilizations — and begin to wonder about the universe surrounding them. Their awareness of the night sky increases as the beam of light draws nearer to their planet.

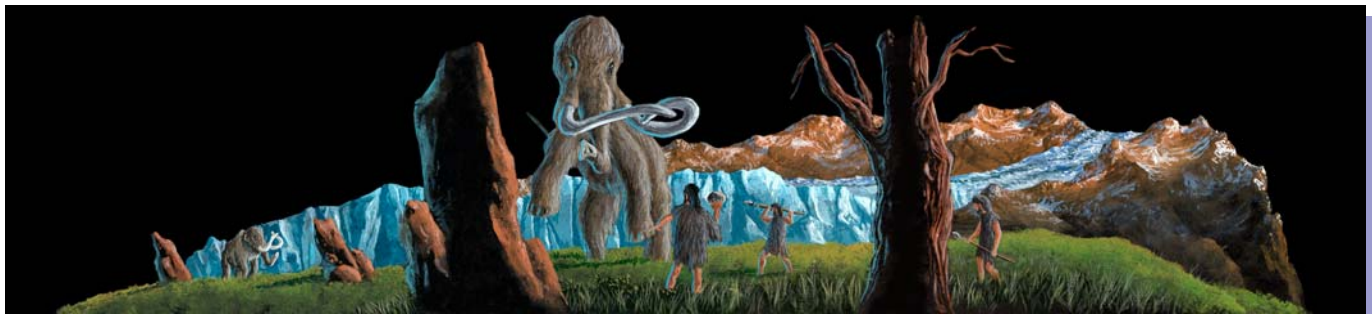


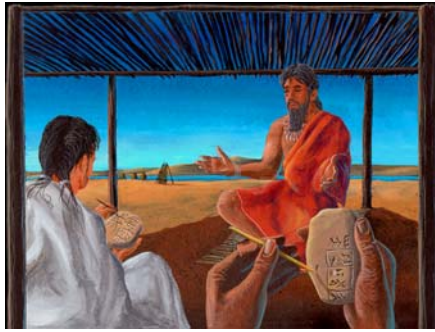
When the light reaches the Earth, some of the descendants of the early hunters have just escaped the bonds of their world's gravity, and visited the Moon. In modern times, scientific study of space helps the planet's current inhabitants use light to explore the galaxy from which it came — and beyond.



Light Years From Andromeda

teaches the concepts of light speed, and the light year and how astronomers use them to measure distances to some familiar celestial objects— the Moon, the Sun, the planets, nearby stars, and galaxies. The show briefly touches on the properties of light that help determine a star's age and temperature, and gives a fascinating look at how light and distance allow us to “look back” further in time as we gaze farther into space.





Science Education Content

Light Years from Andromeda focuses on light, with light, the concept of light speed, and the distance measurement unit of the light-year all as tools of astronomical exploration. These concepts are woven together along with historical and cultural perceptions of the sky and help relate the information presented in the show to the lives of students, families, and the general public.

Show content is relevant in the following subject areas:

Earth and Space Sciences:

- objects in the sky: Sun, Moon, stars, planets, galaxies, quasars, interstellar medium
- properties of stars
- creation of the universe (the Big Bang)

Physical Science:

- light, light speed, light-year as a measurement unit

Science as a human endeavor:

- early maps of the sky
- rise of scientific exploration of the universe
- missions to the Moon, solar system probes
- development of the modern science of astronomy
- early human history, cultures, and perceptions of the sky

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nses/html/index.html>.

Metric or English?

In some Loch Ness Productions shows, we've used English measurement units: 4-inch telescopes, 93 million miles, etc. People told us, "Why are you using English measurements? Don't you know that metric is the language of science?" In other shows, we've used metric measurements. People told us, "Why are you using metric measurements? My students don't think in kilometers." *Light Years From Andromeda* defines and discusses speeds -- of light and sound, and distances -- around the Earth, from the Earth to the Moon, Sun, etc. Naturally we have to use *some* form of measurements. So for this show, we provide both versions of the accompanying text/graphics images; and there are two soundtracks on the CD: one that uses miles, the other kilometers. This way you can choose whichever is most appropriate for your audiences.

PRODUCT CODE	The <i>Light Years From Andromeda</i> show package includes:	PRICE
LYA-R	<ul style="list-style-type: none"> • Script/production notes book • Soundtrack on audio CD • Images/masks in TGA form on CD-R (<i>you make your own slides</i>) 	\$995

Please visit our Web site, where you can preview all the program's images, excerpts from the soundtrack, and sample script pages. You can also order online and find more information about optional products such as DigiDome®, narrationless soundtracks, programming cue files, replacement copies, alternate formats and more.



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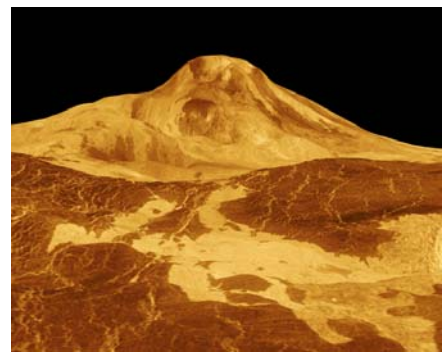
Explore Venus — Earth's mysterious next-door neighbor in space!

Running time: 29:00
Grade level: 4-12 and
general public audiences

MAGELLAN: Report from Venus recaps the accomplishments of this radar-mapping mission and takes audiences on a tour of Earth's "sister planet."



Because Venus's clouds keep us from seeing the surface directly, scientists used radar imaging techniques to map the planet's broken and jumbled terrain.



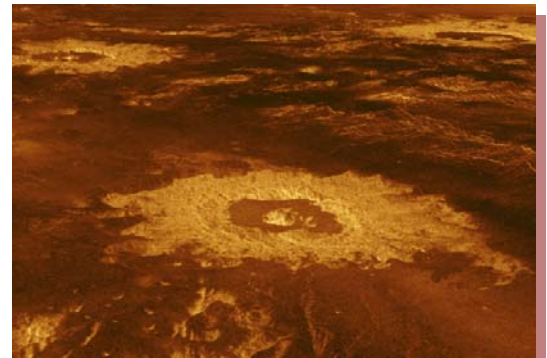
We follow Magellan's progress from its launch through the most significant discoveries. Included are spectacular images of Venus volcanoes, showing the wide variety of forms that volcanic action takes on this desolate world. Impact craters caused by incoming space debris are scattered across the Venerian surface. Landslides also carve the terrain of Venus, proving that tectonism helps to shape the planet's surface. These three processes are familiar to us

here on Earth; finding them at work on Venus allows opportunities to compare Venus with our home planet.



The Magellan mission to Venus was one of the most successful missions ever sent to explore this world. The spacecraft returned more data than all the previous NASA planetary missions combined.

Along with its sister planetary shows *The Voyager Encounters* and *MarsQuest*, **Magellan: Report from Venus** is an excellent way to present the wonders of the solar system to audiences.



Written by Carolyn Collins Petersen
Produced by Mark C. Petersen
Narrated by Roger Thompson
Original artwork by Tim W. Kuzniar





Science Education Content

The educational focus of *MAGELLAN: Report From Venus* is to present the mapping and exploration of the planet Venus by the Magellan spacecraft, while emphasizing the understanding of processes that shape the planet via a set of multidisciplinary themes woven throughout the program. These ideas help relate the information presented in the show to the lives of students, families, and the general public.

Show content is relevant in the following subject areas:

Earth and Space Sciences:

- Objects in the sky: Venus
- Venus surface geology: volcanism, cratering, tectonism, atmospheric characteristics
- Venus rotation period, orbit
- Comparative planetology of Earth and Venus
- Appearance from Earth

Physical Science:

- The electromagnetic spectrum: radar

History of Science/Science Inquiry:

- History of Venus exploration
- Use of radar mapping tools for planetary exploration

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nses/html/index.html>.

PRODUCT CODE	The <i>MAGELLAN: Report From Venus</i> show package includes:	PRICE
MRV-R	<ul style="list-style-type: none"> • Script/production notes book • Soundtrack on audio CD • Images/masks in TGA form on CD-R (<i>you make your own slides</i>) 	\$595

Please visit our Web site, where you can preview this program's images, excerpts from the soundtrack, and sample script pages. You can also order online and find more information about optional products such as DigiDome®, narrationless soundtracks, programming cue files, replacement or duplicate copies, alternate formats and more.



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There's something special in the night sky for everyone to find — all you have to do is look up!

Running time: 30:26
Grade level: 4-12 and general public audiences

Written by Carolyn Collins Petersen
Produced by Mark C. Petersen
Narrated by Roger Thompson
Original artwork by Tim W. Kuzniar



Most planetarium programs show excellent images of planets and galaxies, taken from spacecraft or big observatories. Then, when people look at the real thing through a telescope or binoculars, they're understandably dismayed that what they see "isn't like in the planetarium." Yet photographs taken through low-power instruments still look like photographs, not like what someone actually sees with the naked eye.

More Than Meets The Eye solves that problem with a perfect under-the-dome star party. Original and scientifically-accurate space artwork depicts the planets and deep-sky objects as people can *actually expect* to see them with and without various instruments. Throughout the program, audiences experience the joys of night-sky observing using the naked eye, binoculars and small telescopes. The show also compares the views from the back yard (or planetarium parking lot) with observatory astrophotos and spacecraft images.



This program combines star-hopping and constellation identification with exploration of deep-sky objects. It briefly discusses the effects of atmospheric turbulence; that stars have different colors; and how only time exposures produce the brilliant colors that we often see in photographs of planets, stars, galaxies, and nebulae. Finally, the audience learns that although we don't see celestial objects in glorious color from our back yard, the fact that we know the faint smudge in Andromeda is really a stellar city or a faint wisp of light in the constellation Orion is really a place where stars are born can spark the imagination and make the search worthwhile.



More Than Meets The Eye includes winter, spring, and summer night-sky scenes, so something mentioned in the show will be prominent in the sky no matter when it is shown. This program has been a perennial favorite for planetarium facilities around the world, and a work-horse for both school and public facilities.

Featured celestial objects		
Moon	Alcor/Mizar	M6/M7
Venus	Orion Nebula	Albireo
Mars	Ring Nebula	Milky Way
Jupiter	Crab Nebula	Epsilon Lyrae
Saturn	Lagoon/Trifid Nebula	Hercules Cluster
Pleiades		Andromeda Galaxy





Science Education Content

The educational focus of this show is to discuss objects in the night sky and teach stargazing techniques. These ideas are woven throughout the program, and help relate the information presented in the show to the lives of students, families, and the general public.

Show content is relevant in the following subject areas:

Earth and Space sciences

- Sky objects: the Moon, planets, stars, constellations, star clusters, nebulae, and galaxies

Physical Sciences

- Star colors and temperatures
- Atmospheric effects on light from celestial objects

History of Science/Science as a human endeavor

- Astronomy as an enjoyable backyard hobby
- Astronomy as an approachable science
- Astronomical research and discoveries
- Missions to the Moon
- Spacecraft probes of the outer planets
- Observatory studies of stars, nebulae, galaxies

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. For more details, visit the NAS Standards Web site at: <http://books.nap.edu/html/nses/html/index.html>.

Please visit our Web site, where you can preview this program's images, excerpts from the soundtrack, and sample script pages. You can also order online and find more information about optional products such as DigiDome®, narrationless soundtracks, programming cue files, replacement copies, and more.

PRODUCT CODE	The <i>More Than Meets The Eye</i> show package includes:	PRICE
MME-R	<ul style="list-style-type: none"> • Script/production notes book • Soundtrack on audio CD • Images/masks in TGA form on CD-R (<i>you make your own slides</i>) 	\$595

In 1987, we originally produced this show as **NESS VIGNETTE #2**, a 17-minute mini-program with 32 slides. In 1993, we expanded on the concept and created the 31-minute show, based on and including all the material from the old. We simply look at more objects (the ones in red in our list overleaf) in the longer version. On the **More Than Meets The Eye** CD, we provide both soundtracks, so you can program either one *or both*, whichever fits your schedule.



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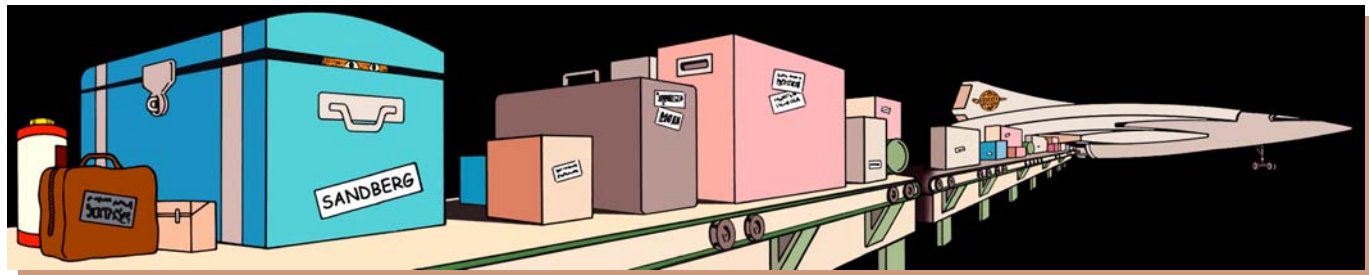
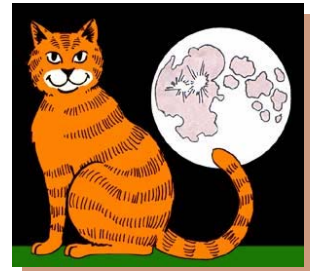
Take off on a lunar adventure with a curious stowaway cat!

Running time: 29:40
Grade level: K-3 and family audiences of all ages

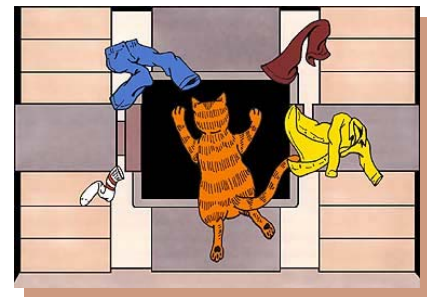
Also available in Spanish!
FITO GATO EN EL ESPACIO

Larry Cat In Space is a playful, imaginative cartoon presentation about an inquisitive cat who takes a trip to the Moon.

Through Larry's eyes, we observe his human family — a group of very enthusiastic skywatchers who spend much of their leisure time at the eyepiece of their backyard telescope. One of his family members is Diana, who goes to work on the Moon as a lunar geologist. She sadly leaves Larry behind. When her parents pack a trunk of clothes to send up to her, Larry figures out a way to smuggle himself inside.

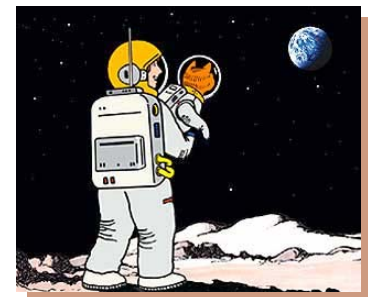


The trunk and Larry are loaded onto the Space Plane, which takes him to space station Freedom. From there, he is transferred to the Lunar Shuttle. During weightlessness, the trunk opens. Larry floats out into the cabin, and looks out the window.



When Larry gets to the Moon, he leaps to greet Diana, but sails over her head, since he only weighs two pounds in lunar gravity. Then he meets the rest of Imbrium Village's inhabitants, including the evil Commander Stone, who orders Diana to return Larry to Earth. The Moon base crew petitions to keep Larry, and the Commander relents. He even makes Larry a cat space suit. When Larry ventures out to explore the lunar surface, he spots the Earth, looking a lot like the Moon did from the porch at home.

While *Larry Cat In Space* is primarily targeted at primary grade students, everyone enjoys a fun-filled cartoon adventure. Adults and children alike will be charmed by Larry's adventurous nature, and they'll learn something about the Moon, too!



Written by Carolyn Collins Petersen
Produced by Mark C. Petersen
Original artwork by Bob Davis and Tim W. Kuzniar





Science Education Content

The educational focus of *Larry Cat In Space* is the Moon and its relationship to Earth. The first-person narrative style allows audience members to identify with the main character and share in his adventures. His experiences teach important facts about the Moon and Earth. Multidisciplinary themes in lunar geography, earth/space sciences, physical science, and science as a human endeavor are woven throughout the program, and help relate the information presented in the show to the lives of students, families, and the general public.

Show content is relevant in the following subject areas:

Physical, Earth and Space Sciences

- objects in the sky: Moon, Sun, stars
- the moon's changing appearance
- lunar gravity, surface terrain, surface temperature
- motions and forces: lunar gravity, weightlessness

Science as a human endeavor

- science as a career choice
- transportation from Earth's to low-earth orbit
- future modes of transportation to the Moon
- future science bases on the lunar surface

This show adheres to principles put forth in the National Academy of Sciences' Education Standards published in 1996. (For more details, please visit the NAS Standards website at: <http://books.nap.edu/html/nses/html.index.html>).

Please visit our Web site, where you can preview this program's images, excerpts from the soundtrack, and sample script pages. You can also order online and find more information about optional products such as DigiDome®, programming cue files, replacement or duplicate copies, alternate formats and more.

PRODUCT CODE	The <i>Larry Cat In Space</i> show package includes:	PRICE
LCS-R	<ul style="list-style-type: none"> • Performance License • Printed book with script, installation and production notes, images list, bibliography, teacher's introduction, coloring book activity sheets, background information. • Audio CD with soundtrack • Data CD with 160 single frame images and masks in TGA form ready to make into slides, script book in PDF form, and promotional graphics. 	\$595

FITO GATO EN EL ESPACIO — (*Larry Cat In Space* in Spanish)

This show package contains the script, soundtrack voiced by actors in "broadcast Spanish", and 14 images with Spanish text, which "swap out" with their English-text counterparts in the show.

PRODUCT CODE	The <i>Fito Gato En El Espacio</i> show package includes:	PRICE
FGE-R	<ul style="list-style-type: none"> • Performance License • Printed book with script, installation and production notes, images list, bibliography, teacher's introduction, coloring book activity sheets, background information. • Audio CD with soundtrack • Data CD with 160 single frame images and masks in TGA form ready to make into slides, script book in PDF form, and promotional graphics. 	\$595

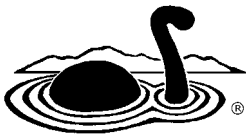
Want both *Larry* and *Fito*?

Order one at full price, and add **\$195** for the additional license and materials.



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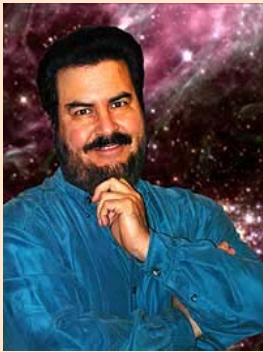


WHO WE ARE

Loch Ness Productions is an innovative company run by two of the planetarium community's "stellar attractions": **Mark and Carolyn Collins Petersen**.

The company was formed in 1977 by Mark, then the Composer-in-Residence at Boulder's Fiske Planetarium. Many pleased planetarium patrons came up after the shows, asking where they could get the music they had heard. Since it was original music composed just for the shows, Mark noted the most-requested selections, and released the first of the GEODESIUM series of albums. Today Mark has eight albums available with more in production. Tens of thousands of his albums have been sold around the world, receiving airplay on syndicated radio programs such as "Music From The Hearts of Space", "Musical Starstreams" and "Echoes".

Mark and Carolyn were profiled in David Levy's "Star Trails" column in the March, 2002 issue of *Sky & Telescope* magazine. In January 1995, *CNN's "Showbiz Today"* featured Mark in a segment on planetarium space music. Over the years, Loch Ness Productions has added other planetarium production materials to the catalog. Nearly 900 planetarium and full-dome theaters in the U.S. and 50 other countries have purchased programs, images, and/or music from Loch Ness Productions — an unsurpassed and ongoing record for an independent planetarium production company. More than a million planetarium patrons have experienced Loch Ness Productions planetarium programs.



Mark C. Petersen, president

Mark loves the choreography of production — whether it is for a planetarium show or a music album. His degree is in Music Education from the University of Colorado. In 1975, he became the Composer-in-Residence at Boulder's Fiske Planetarium and has been composing space music ever since. He has also created original music and custom soundtracks for major planetaria, Sky-Skan, Inc., Evans & Sutherland, NASA News Net's programs, and "ViewSpace" video releases from the Space Telescope Science Institute. For Caedmon Records, he produced a 20-minute "Comet Halley" soundtrack for worldwide distribution.

Currently he is working on soundtracks and video production for several vodcasts created for MIT's Haystack Observatory.

Mark has also worked with advertising agencies, film, video, and multi-image producers on radio and TV commercials, jingles and other projects. In 1985, 1987, and 1988, he took his keyboards on the road, performing in live planetarium concerts in the U.S. and the U.K. Mark produced the video program "*HUBBLE: Report From Orbit*," which was awarded First Prize in the Casa de las Ciencias (La Coruña, Spain) Sixth Contest for Science Publications in 1993.

A Fellow of the International Planetarium Society, he served as Treasurer and Membership Chairman from 1985 to 1990, and undertook the development and annual publication of the IPS Directory of Planetaria and Planetarians. Mark served as President as well as Secretary/Treasurer of the Rocky Mountain Planetarium Association (1983-87), and instituted the publication of its quarterly journal, the *High Altitude Observer*.



Carolyn Collins Petersen, vice president

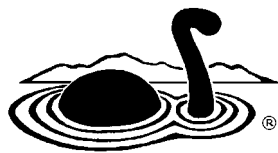
Carolyn is an award-winning science writer with many projects to her credit: more than two dozen Loch Ness Productions shows; exhibits for Griffith Observatory, the California Academy of Sciences, and the Acton (MA) Children's Museum; animated astronomy software tours; full-dome software documentation; and many articles and books. She has taught science writing workshops, and has lectured on astronomy around the U.S. and Canada, and as a cruise ship astronomer.

Carolyn also works with Gemini, Subaru, and MIT's Haystack Observatories to help shape their public outreach products. Currently she is writing and narrating a series of vodcasts for Haystack. She has also served on Education and Public Outreach advisory boards for several spacecraft missions.

Carolyn is the lead author of "*Visions of the Cosmos*," and "*Hubble Vision*," (both co-written with Dr. John C. Brandt and published by Cambridge University Press), and was co-editor (with J. Kelly Beatty and Andrew Chaikin) of "*The New Solar System*," 4th Edition, (Sky Publishing Corporation; Cambridge University Press). From 1997 to 2001 Carolyn was Editor of Books and Products at Sky Publishing Corporation, Editor of *SkyWatch* magazine, and Associate Editor of *Sky & Telescope* magazine.

She holds a bachelor's degree in education and a masters' degree in journalism from the University of Colorado, where she was also a Professional Research Associate with the Hubble Space Telescope's Goddard High Resolution Spectrograph team at the Laboratory for Atmospheric and Space Physics. She also served as observation coordinator for the Ulysses Comet Watch.

A member of the International Planetarium Society since 1978, Carolyn is an IPS Fellow. She served as IPS Publications Chair (1985-1990), and is a former President of the Rocky Mountain Planetarium Association (1987-1989). Carolyn is also a member of the American Astronomical Society as well as the AAS Division of Planetary Sciences.



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