



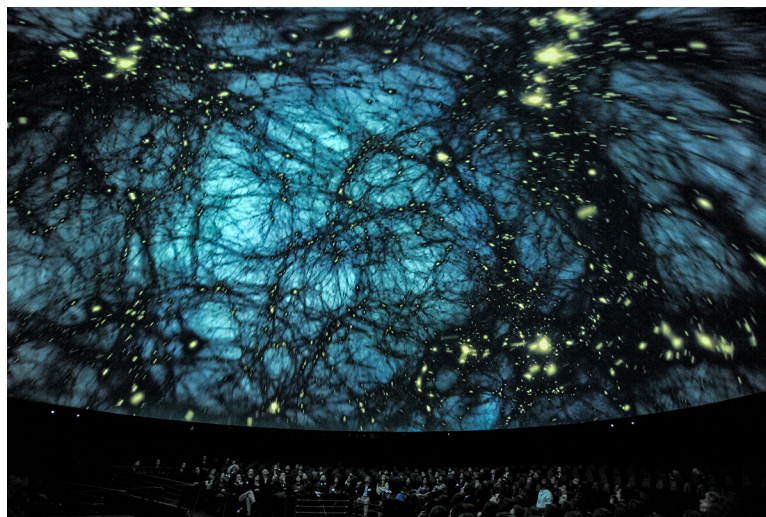
AMERICAN MUSEUM OF NATURAL HISTORY

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**DARK UNIVERSE—NEW HAYDEN PLANETARIUM SPACE SHOW—OPENS
NOVEMBER 2 AT THE AMERICAN MUSEUM OF NATURAL HISTORY**

**NARRATED BY NEIL DEGRASSE TYSON, VISUALLY STUNNING SHOW TAKES AUDIENCES THROUGH
PIVOTAL DISCOVERIES AND CAPTIVATING MYSTERIES OF THE COSMOS**



Featuring exquisite renderings of cosmic phenomena, seminal scientific instruments, and spectacular scenes in deep space, the new Hayden Planetarium Space Show [*Dark Universe*](#) celebrates the pivotal discoveries that have led us to greater knowledge of the structure and history of the universe and our place in it—and to new frontiers for exploration. *Dark Universe* whisks audiences out of the Milky Way galaxy, drops them alongside a parachute descending through Jupiter’s atmosphere, and brings them all the way to the afterglow of the Big Bang while revealing the breakthroughs that have led astronomers to confront two great cosmic mysteries: dark matter and dark energy.

“The American Museum of Natural History is grounded in the idea of educating the public about the natural world, and in the same way that our historic dioramas open a

window into wildlife, the Hayden Planetarium opens a visually spectacular window into space,” said Museum President Ellen Futter. “Our newest Space Show *Dark Universe* offers visitors of all ages front-row seats to the beauty and mystique of our universe with scientifically accurate, and stunning visualizations.”

Created by an award-winning team that includes Museum astrophysicists, educators, and science visualization experts, *Dark Universe* is an immersive theater experience based on authentic data from NASA and European Space Agency missions, ground-based telescopes, supercomputer simulations, and research conducted at institutions around the globe. It begins with a scene millions of light years away from Earth. After flying to our own Milky Way galaxy, viewers arrive at California’s Mount Wilson Observatory, where Edwin Hubble’s discovery that the universe is expanding first pointed to the Big Bang. That initial discovery, and ever more powerful instruments on the ground and in space, led to other breakthroughs that have given astronomers an increasingly detailed and precise picture of how our universe formed and evolved.

But these revelations have also uncovered intriguing new mysteries. What is the so-called dark energy accelerating cosmic expansion? What is the invisible [dark matter](#) holding together galaxies? What is [dark energy](#), which accounts for about 70 percent of the universe’s total energy and mass? What lies beyond our cosmic horizon? *Dark Universe* explores this new age of cosmic discovery (For more information, please see the accompanying release *About the Dark Universe*).

Dark Universe is curated by Dr. **Mordecai-Mark Mac Low**, a curator in the Museum’s Department of Astrophysics and Division of Physical Sciences who studies the formation and evolution of planets, stars, and galaxies.

“This Space Show is not just about what we know about the universe is but how we know it so well,” said Mac Low. “The major accomplishment of the last decade in cosmology has been going from rather general knowledge about the universe to knowing its properties to within a few percent. The astonishing result is that the universe has turned out to be a very odd place, like nothing anybody ever expected.”

The director of *Dark Universe* is **Carter Emmart**, the Museum’s director of astrovisualization and one of the original team members of the NASA-funded Digital Galaxy Project, now known as the Digital Universe, which helped redefine how

planetarium theaters present science to the public through immersive data visualization.

“The vastness of the universe is truly mind-numbing and spans time beyond our comprehension,” said Emmart. “The Digital Universe, the most complete and accurate 3-D atlas of our universe and the basic starting block for all of our Space Shows, is an effective tool in showing visitors just how awe-inspiring our cosmos can be.”

Dark Universe is produced by **Vivian Trakinski**, who directs the Museum’s Science Bulletins media program. Dr. **Rosamond Kinzler**, senior director of science education and co-curator of the Museum’s David S. and Ruth L. Gottesman Hall of Planet Earth, is the executive producer.

Narrating the new Space Show is Dr. **Neil deGrasse Tyson**, astrophysicist, prolific science communicator, and the Frederick P. Rose Director of the Hayden Planetarium. Dr. Tyson is working on a 21st-century version of Carl Sagan’s landmark television series *COMOS*, set to air on FOX in spring 2014. Best-selling science writer **Timothy Ferris** wrote the script, and the score is by **Robert Miller**, a New York City composer who wrote the music for two previous Space Shows, *Journey to the Stars* and *Cosmic Collisions*.

Dark Universe was created by the American Museum of Natural History, the Frederick Phineas and Sandra Priest Rose Center for Earth and Space, and the Hayden Planetarium

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Dark Universe was developed by the American Museum of Natural History, New York (www.amnh.org), in collaboration with the California Academy of Sciences, San Francisco,

and GOTO Inc., Tokyo, Japan.

Dark matter visualizations developed by the Kavli Institute for Particle Astrophysics & Cosmology at Stanford University and SLAC National Accelerator Laboratory.

“Accenture has a long history of partnership with the American Museum of Natural History and shares in its passion for science and technology,” said Laila Worrell, managing director of Accenture’s New York Metro location. “*Dark Universe* leverages the power of digital technology to make scientific data understandable and accessible to diverse audiences around the world. We are delighted to support an effort that will inspire our clients, employees and the community at large with the wealth of information we have about our universe and the innovative technologies that have helped discover it.”

AMERICAN MUSEUM OF NATURAL HISTORY (AMNH.ORG)

The American Museum of Natural History, founded in 1869, is one of the world’s preeminent scientific, educational, and cultural institutions. The Museum encompasses 45 permanent exhibition halls, including the Rose Center for Earth and Space and the Hayden Planetarium, as well as galleries for temporary exhibitions. It is home to the Theodore Roosevelt Memorial, New York State’s official memorial to its 33rd governor and the nation’s 26th president, and a tribute to Roosevelt’s enduring legacy of conservation. The Museum’s five active research divisions and three cross-disciplinary centers support approximately 200 scientists, whose work draws on a world-class permanent collection of more than 32 million specimens and artifacts, as well as specialized collections for frozen tissue and genomic and astrophysical data, and one of the largest natural history libraries in the world. Through its Richard Gilder Graduate School, it is the only American museum authorized to grant the Ph.D. degree, and in 2012, began offering a pilot Master of Arts in Teaching program with a specialization in Earth science. Approximately 5 million visitors from around the world came to the Museum last year, and its exhibitions and Space Shows can be seen in venues on five continents. The Museum’s website and collection of apps for mobile devices extend its collections, exhibitions, and educational programs to millions more beyond its walls. Visit amnh.org for more information.

Hours

The Museum is open daily, 10 am–5:45 pm. The Museum is closed on Thanksgiving and Christmas.

Admission

Museum admission is free to all New York City school and camp groups.

Suggested general admission, which supports the Museum’s scientific and educational endeavors and offers access to the Museum’s 45 halls including the Rose Center for Earth and Space, is \$22 (adults) suggested, \$17 (students/seniors) suggested, \$12.50 (children) suggested. All prices are subject to change.

The Museum offers discounted combination ticket prices that include suggested general admission plus special exhibitions, IMAX films, and Space Shows.

- Museum Plus One includes one special exhibition, IMAX film, or Space Show: \$27 (adults), \$22 (students/seniors), \$16 (children)
- Museum Supersaver includes all special exhibitions, IMAX film, and Space Show: \$35 (adults), \$28 (students/seniors), \$22 (children)

Visitors who wish to pay less than the suggested Museum admission and also purchase a ticket to attend a special exhibition, IMAX film, or Space Show may do so on-site at the Museum. To the amount they wish to pay for general admission, they add \$25 (adults), \$20.50 (students/seniors), or \$13.50 (children) for a Space Show, special exhibition, or IMAX film.

Public Information

For additional information, the public may call 212-769-5100 or visit the Museum’s website at amnh.org.

Prepare for your Museum visit by downloading the new **American Museum of Natural History Explorer App**, a groundbreaking enhanced navigation tool available for free from the App Store on iPhone and iPod touch or at www.iTunes.com/appstore/. The Explorer pinpoints your location within the Museum and offers turn-by-turn directions and customized tours, a fossil treasure hunt, and social media links for posting to Facebook and Twitter.

Follow

Become a fan of the Museum on Facebook at facebook.com/naturalhistory, or visit twitter.com/AMNH to follow us on Twitter.

GOTO INC

GOTO INC is the world's largest provider of planetarium systems, program software, and maintenance services. With headquarters outside Tokyo, Japan, the company has been manufacturing telescopes and planetarium projectors since 1926. GOTO introduced the world's first real time-rendering, color, all-dome video system, VIRTUARIUM, in 1996. Today, GOTO continues to set the standard in technological innovation with VIRTUARIUM II video systems, custom-designed optics for state-of-the-art video projectors, and GOTO HYBRID planetarium systems that combine the best of digital and optical projection technologies. Also, for the content production, GOTO produces and delivers the computer graphic images and fulldome movies to a large number of planetarium theaters in Japan. GOTO covers a very wide variety of content, from entertainment content to educational content that is collaborated with NAOJ and JAXA. GOTO has been a leader in creating the best possible dome environment available by using the best of digital and optical projection technologies and the combination of hardware and software such as Theater 360, one-of-a-kind spherical projection system, at the National Museum of Nature and Science in Tokyo, Japan.

California Academy of Sciences

The California Academy of Sciences is a renowned scientific and educational institution dedicated to exploring and explaining the natural world and addressing the challenge of sustainability. Based in San Francisco, it is home to an aquarium, planetarium and natural history museum as well as innovative scientific research and education programs – all under one living roof. This unique combination allows visitors to explore the depths of a Philippine coral reef, climb into the canopy of a Costa Rican rainforest, and fly to the outer reaches of the Universe in a single day. Along the way, thousands of charismatic live animals and a team of fascinating scientists and presenters bring the Academy's exhibits and shows to life and make each visit unique. The Academy is also home to more than 28 million scientific specimens from around the world – essential tools for comparative studies on the history and future of life on Earth. The California Academy of Sciences will premiere *Dark Universe* in its Morrison Planetarium on Friday, January 31, 2014. For more information, visit www.calacademy.org or call (415) 379-8000.

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