

To Press

December 10, 2008

National Museum of Emerging Science and Innovation

## **Dome Theater GAIA Introducing the 3D Image System Japan's first All Sky view super high precision 3D image system "Atmos" will be introduced on this occasion. Released on January 10 (Sat.), 2009.**

The National Museum of Emerging Science and Innovation (Miraikan) (Director: Mamoru Mohri, Address: Aomi, Koto-ku, Tokyo) will introduce Japan's first All Sky view super high precision 3D image system "Atmos" at the 6F Dome Theater GAIA. Our newest presentation, "Birthday - What Links Myself and the Universe -," relayed through an unprecedented collaboration between MEGASTAR-II cosmos and Atmos, will be open to the public for viewing.

Now, through the initial implementation of Japan's first All Sky view super high precision 3D image system "Atmos," which can project extraordinarily detailed 3D images through the 4K x 4K (equivalent to eight times Full HD resolution) digital images, visitors will be able to enjoy remarkably crystal clear 3D images. Through this system, which exemplifies Japan's unique professional expertise and cutting-edge technology, the next generation new image experience that simulates reality to the point where viewers can feel the related sensations, such as the wind and warmth, has become an exciting reality.

These vibrant images, projected over a 360-degree field of horizontal vision, are actualized through the use of only two projectors. By cutting back on the linkage of the image to the absolute minimum, the clearest 3D images with amazing depth are projected. Even though the dome 3D image system has already been introduced in domestic museums, the introduction of the All Sky view 4K x 4K high precision 3D image system is only the second example in the world and the first in Japan following the example of the Imliloa Astronomy Center of Hawaii. At Miraikan, in addition to Atmos, we portray additional realistic images of space by using the MEGASTAR-II cosmos that projects 5 million fixed stars, a number noted by the Guinness world record as the greatest number projected by any planetarium in the world.

The first presentation will be "Birthday - What Links Myself and the Universe -."

Based on the simple but yet grand theme of "what is the universe like and how are we linked to it," the Miraikan's Science Communicator will provide detailed and thorough explanations. Two types of programs, the "Live Program" in which the latest topics are explained in a real time format, and the "Auto Program," which focuses on a particular story, will be presented.

### **[Outline]**

Release Date: Starting January 10 (Sat.), 2009

Content: "Birthday - What Links Myself and the Universe -"

Schedule:

Weekdays: 10:45(\*)/11:30(\*)/14:45/15:30

Saturdays, Sundays and Holidays: 10:45/11:30/12:15/14:00/14:45(\*)/15:30(\*)/16:15(\*)

· (\*) indicates a showing of the Live Program, time: times without asterisks indicate airing of the Auto Program.

· Numbered tickets are to be made available starting at 10:00 am.

Venue: 6F Dome Theater GAIA, National Museum of Emerging Science and Innovation

(Address: 2-41, Aomi, Koto-ku, Tokyo)

Run Time: Approx. 20 min.

Opening Hours: 10:00 - 17:00 (Please enter at least 30 minutes before closing time.)

Closed: Every Tuesday (except on holidays, spring, summer and winter vacation)

Year-end and New Year (from December 29 through January 1)

Admission Fees: Adults: 500 yen, 18 years old and under: 200 yen/Group discount available

\* Free admission for those in possession of a Disability Book and one accompanying person

Planning: National Museum of Emerging Science and Innovation

Edited by: Yoshiaki Taniguchi (Director of the Research Center for Space and Cosmic Evolution, Ehime University)

Cooperation: 4D2U of National Astronomical Observatory of Japan (NAOJ)/Japan Aerospace Exploration Agency (JAXA)/GOTO INC, etc.

\* In conjunction with the renovation of Dome Theater GAIA, performances will be suspended until December 8.

The showings of the All Sky movie "Space Elevator" will be presented starting December 10 through January 8.

<b>Inquiries from general visitors:</b>	<b>For information on this release, please contact:</b>
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## Content No.1 "Birthday - What Links Myself and the Universe -"

Unlike the normal planetarium program, the "Universe," which this system perfectly expresses, will be portrayed directly as 3D simulated images based on cutting-edge scientific data provided by the NAOJ 4D2U space project. Movies created by 4D2U are also shown at the VR Theater. As we look at the atmosphere, which nurtures all life here, the Earth and other planets of the solar system and the galaxy, the characteristics and the individuality of each element of universe will be highlighted with the dynamic sensation which can only be expressed with dramatic All Sky 3D images. At the same time, through simulated images related to the formation of the solar system and the galaxy, the common rule that links the universe with us will be unraveled. Furthermore, the theme will shift to the beginning of the universe which is said to have originated 13.7 billion years ago and the existence of "elementary particles," which became the topic of the year and appropriately honored with the 2008 Nobel Prize award in physics, will be approached from the viewpoints of scientific knowledge and human perception.

### [Reference]

#### About "Atmos"

All Sky super high precision 3D image system. Abbreviation of All Sky 3D Movies for Sentients. This name is derived from the word "atmosphere."

Atmosphere: the gaseous envelope surrounding the earth; the air; surrounding condition; environment

Sentient: having the power of perception by the senses

Sentients: people who have the power of perception through their senses

#### Main specification of "Atmos"

##### ■3D projection device

Projector: SXRD method projector x 4 (Front and back separate projection for each left/right eye)

Single light output: 10,000 Lumen

Screen resolution: 4K x 4K (equivalent to 8 times full HD)

Displayed number of pixels: approx. 11.5 million pixels (effective number of pixels)

3D vision method: dispersion method full color 3D vision

Projection lens: specially designed x 4 super wide angle lenses

##### ■3 dimension projection system

Main function:

Digital planetarium function

Fixed stars, galaxy data: approximately 3 million

Fixed stars and planets in the solar system: approximately 50

Display of each coordinate system

Title display in Japanese, English, Korean and Chinese

All Sky movie player function

All Sky movie (3D/non-3D)

Real time display of 3D object

##### ■Development/production: GOTO INC

### [Sample Pictures]



Related press releases and pictures can be downloaded from the Miraikan website.