**MEGASTAR-II cosmos**

**A New Program, "A Planet by Chance"**

Open to the general public starting February 24 (Sat.), 2007

The National Museum of Emerging Science and Innovation (Miraikan, Director: Mamoru Mohri, Address: Aomi, Koto-ku, Tokyo) will feature an entirely new program spotlighting the MEGASTAR-II cosmos, in "A Planet by Chance" opening on February 24 (Sat.), 2007.

In the summer of 2006, the elimination of Pluto from the widely accepted list of planets actually became a controversial social "issue." In this new program we examine the latest scientific knowledge, and contemplate exactly what constitutes the definition of a "planet." Furthermore, we will introduce a new viewpoint in order to understand "life" as we know it as it exists here on earth, while we consider the existence of the "earth" itself.

Additionally, among planet-studying scientists it is argued that in the universe, there may be other planets with life forms that exist much as organisms do here on earth. To start this discourse, let's consider just what planets are, and just how special the earth is as a planet. This program will provide answers to these complex thoughts from the perspective of cutting-edge science.

When we scientifically examine the earth's "unique characteristics," such as the process of its formation, its distance from the sun, and the very existence of the atmosphere and the ocean, a new story emerges. Maybe the earth is just an ordinary planet, not a "miracle planet," that came about merely because of overlapping coincidental events. This program can be enjoyed by visitors of all ages and introduces this new story of the earth all while encompassed under a sky of 5 million stars, complete with "coincidental music" and "coincidental images".

About the MEGASTAR-II cosmos:
The MEGASTAR-II cosmos, which has earned recognition by the Guinness Book of World Records, has been exhibited permanently from July 2004 as a cutting-edge planetarium that projects 5 million fixed stars, the most in the world. You can get an actual sense of the universe along with the ultimate view described as being the "starry sky seen from the space shuttle" by director Mamoru Mohri.

[http://www.miraikan.jst.go.jp/megastar2cosmos/](http://www.miraikan.jst.go.jp/megastar2cosmos/)

[Outline]

- **Opening date:** February 24 (Sat.), 2007
- **Schedule:** Presented at 10:30 and 14:00
  * Numbered tickets will be available from 10:00 am.
  * "Colors of the Dark" will be shown at 16:00 (until March 31)
  * The program will be shown 3 times a day (at 10:30, 14:00 and 16:00) from April 1.
- **Venue:** 6F Dome Theater GAIA (Address: 2-41 Aomi, Koto-ku, Tokyo)
- **Running time:** Approx. 30 minutes
- **Planning:** National Museum of Emerging Science and Innovation
- **Edited by:** Shigeru Ida (Professor, Department of Earth and Planetary Sciences, Faculty of Science, Tokyo Institute of Technology)
- **Music/Narration:** Tomo Yamaguchi (Chairman of the Japan Recycled Items Percussion Society)
- **Recording/Sound design:** Yoshihiro Kawasaki (NADI)

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"Coincidental Music"
What you will be hearing as you view the starry sky is a most mysterious sound and rhythm. The secret behind these sounds is that they were created on original instruments made from discarded items familiar to our daily lives. This is music that will be played only once, live, and performed without any musical scores, by the percussionist who gives life to "junk," Mr. Tomo Yamaguchi, which will be featured along with the brilliant stars. Please ponder the immense wonders of the universe along with the mysterious sounds that were "coincidentally" created.

Profile of Tomo Yamaguchi
Mr. Yamaguchi is a percussionist who breathes life into discarded junk items. His grandfather Yasuharu Yamaguchi was a composer who wrote Japan's well-known children's songs "The Cute Fish Market" ("Kawaii Sakanaya-san") and "Secret, Secret" ("Naisho, Naisho"). After working as a freelance percussionist, the opportunity to work on the musical drama "The Night of the Ginga Railroad" in 1995 became an opportunity to create original instruments from recycled items. He also made regular appearances under the nickname of "Tomo-Tomo" for the "Do-re-mi Television" broadcast by NHK educational channel from April 2003 to March 2006.

"Coincidental Images"
During the program, images of sophisticated and beautiful movements, which are destined to be seen only once, will appear. These fleeting and unexpected scenes can be enjoyed as the colors and shapes change each time using the computer program entitled "Double Pendulum" which depicts a pendulum with another pendulum attached to its swinging end.

<Main Specifications of the "MEGASTAR-II cosmos">
Main Specifications
Fixed Star Projector (body)
Size: Height 70 cm × Width 58 cm × Depth 42 cm
Weight: Approx. 50 kg
Method of projection: Projection of lens cut into 32
Projecting number of fixed stars: 5 million
Fixed star data: Star charts, etc., based on the observatory data of Hipparcos Satellite (ESA)
The date range of reproduction: AD2000 ± 100 years
Main function: Diurnal motion, latitude changes, annual motion, light control of the fixed star, coloration of the star of the first magnitude/twinkling function
Supporting Projector
Planetary projector (Mercury, Venus, Mars, Jupiter, Saturn), Sun Projector, etc.
Development/Production: Takayuki Ohira, Takashi Wada, Scientific-Tsukuba Co., Ltd.

The press release and the images related to this program can be downloaded and used from Miraikan's website.
URL: http://www.miraikan.jst.go.jp/e/press/index.html