The "New Permanent Exhibits" will open starting March 9!

National Museum of Emerging Science and Innovation (Miraikan) (Director: Mamoru Mohri, Address: Aomi, Koto-ku, Tokyo) has developed the current noteworthy 2 themes as the permanent exhibits. Starting March 9, (Thu.) "System of the Earth Revealed by Deep Sea Drilling" and "Study of Elementary Particles and the Universe with a Particle Accelerator" will be open to the public from 10:00 am.

We are in an age where Japan has taken an internationally leading role in deep-sea drilling and new developments in further research are anticipated. The Earth is one giant intricate system where various elements from the interior of Earth to the edges of the atmosphere link with each other. Through deep sea drilling acquisition, core information details the processes of evolution and can predict the future of the earth. From this data we can learn how the our home, the earth, "works". In "System of the Earth Revealed by Deep Sea Drilling " we will convey the excitement and adventure of this spectacular research.

What is matter made of? We have continuously asked this simple question through the history of mankind. Today, finally, scientists are about to answer that question. In the exhibit "Study of Elementary Particles and the Universe with a Particle Accelerator ", we will examine the mysteries of elementary particles closely related to the formation of the universe. Scientists are trying to understand all phenomena happening throughout the world by using an accelerator, which is the largest experimental device created in history. This exhibit allows you to experience amazing innovations in research, the immense challenges, and intrepid researchers face.

In addition, Miraikan will hold an interactive event "Let's Meet a Scientist! - Discovering the Mysteries of the Earth with the CHIKYU". You have the opportunity to directly communicate with researchers on the frontiers of this research. Go to the permanent exhibit area on March 18 (Sat), from 15:00 - 16:30.

Address  2-41 Aomi, Koto-ku, Tokyo 135-0064 Japan
Tel   +81-3-3570-9151 (Main)
FAX   +81-3-3570-9150
Opening Hours  10:00 - 17:00 (Final entry: Until 4:30 pm)
Admission Fee  Adults: 500 yen, 18 years old and under: 200 yen
*Free admission for 18 year olds and under on Saturdays for both individuals and groups.
Closed   Every Tuesday
*Except holidays and during spring / summer / winter vacations
Access  Tokyo Waterfront New Transit Yurikamome (Shimbashi - Ariake)
Approximately 5 minutes walk from "Funeno-Kagakukan station"
Approximately 4 minutes walk from "Telecom Center station"
Tokyo Waterfront Area Rapid Transit Rinkai Line (Shin-kiba - Ohsaki)
Approximately 15 minutes walk from "Tokyo Teleport station"
For information on this release, contact the following:

Public Relations Group, National Museum of Emerging Science and Innovation (Miraikan)
2-41, Aomi, Koto-ku, Tokyo 135-0064
TEL +81-3-3570-9192   FAX +81-3-3570-9160
E-mail: press@miraikan.jst.go.jp

Reference for each of the new exhibits
Venue 5F Earth Environment and Frontiers, Miraikan
Release date March 9 (Thu.) From 10:00 am

Name of exhibit "System of the Earth Revealed by Deep Sea Drilling"
The deep sea drilling vessel "CHIKYU," which has the ability to drill 7,000 m below the seafloor, is working to
directly explore the Earth's deep interior. Core samples acquired by CHIKYU hold great promise for progress in
Earth and Life Sciences research, particularly in the areas of giant earthquakes, and in unraveling the mysteries of
the origin of life. In this exhibition, the content of their amazing research will be presented in 3 parts.

1. New Development of Deep sea Drilling Research
Data derived from drilled core samples provide a basis
for an overview of both the research activities, as well as
indications of the earth's complex systems.

2. Deep sea Drilling Vessel "CHIKYU"
The characteristics of CHIKYU as a drilling vessel will be
introduced. You will be able to hear messages from a wide
variety of crewmembers including the captain, the
researchers, engineers, etc.

3. The Leading Edge of Research
The origin of life, earthquakes, and understanding the earth's
mantle will be addressed as examples of anticipated research
aboard the CHIKYU. An actual borehole seismometer,
and peridotite will be exhibited.

Edited by Asahiko Taira (Director General of the Center for Deep Earth Exploration of Japan Agency for Marine-Earth
Science and Technology)
Supported by Shinichi Kuramoto (Group leader of the Science Service Group of the Center for Deep Earth Exploration of
Japan Agency for Marine-Earth Science and Technology)
Yoshiyuki Tatsumi (Program director of the Research Program for Geochemical Evolution of the Institute for
Research on Earth Evolution (IFREE) of Japan Agency for Marine-Earth Science and Technology)
Masataka Kinoshita (Group leader of the Institute for Research on Earth Evolution (IFREE) of Japan Agency
for Marine-Earth Science and Technology)
Ken Takai (Program director of the Deep Subsurface Extremophiles Research Program of the Extremobiosphere Research Center of Japan Agency for Marine-Earth Science and Technology)
Natsue Abe (Researcher of the Research Program for Mantle-Core Dynamics of the Institute for Research on
Earth Evolution (IFREE) of Japan Agency for Marine-Earth Science and Technology)
An accelerator, accelerating particles such as electrons or nuclei almost to the speed of light, manufactures collisions between particles. Japan’s ring-shaped accelerator is an underground tunnel designed to detect elementary particles, and is considered one of the world’s greatest experimental devices.

1. Accelerator experiment live
   The experiment data generated by the accelerator will be distributed from the High Energy Accelerator Research Organization at Tsukuba city in real time.

2. Exhibition of the actual experimental equipment
   The actual silicon vertex detector used in the actual experiment will be exhibited.

3. Accelerator Simulator
   You can experience the collision experiment responsible for accelerating the elementary particles. It is a hands-on exhibit, which offers the experience of getting a glimpse of the world of elementary particles through the accelerator.

Edited by Masanori Yamauchi (Professor of High Energy Accelerator Research Organization)
Supported by Masashi Hazumi (Associate Professor of High Energy Accelerator Research Organization)
Takeo Higuchi (Assistant of High Energy Accelerator Research Organization)
Katsunobu Oide (Professor of High Energy Accelerator Research Organization)
Akio Morita (Assistant of High Energy Accelerator Research Organization)
Youhei Morita (Associate Professor of High Energy Accelerator Research Organization)
Tetsuya Shiromizu (Associate Professor, at the Graduate School of Science and Engineering at Tokyo Institute of Technology)

For further details, please check out the website of the National Museum of Emerging Science and Innovation.
http://www.miraikan.jst.go.jp

The accelerator experiment facility will be introduced in animation.