

3rd Japan-Korea Joint Seminar on Space Environment Utilization Research

University of Tokyo, Komaba Campus

Building #16, Conference Room #107

October 28, 2006 Saturday

10:00-10:15

Opening Remark and Welcome Prof.Makoto Asashima

Objective of the Seminar: Perspective of Japan

Prof. Makoto ASASHIMA, University of Tokyo

Objective of the Seminar: Perspective of Korea

Prof. Suk Ho CHUNG, Seoul National University

Explanation on Agenda and Logistics Dr.Yoshinori Fujimori

10:15-10:45

**ISS/JEM Utilization Program in JAXA Mr.Tetsuo TANAKA, the Director of
Space Environment Utilization Center JAXA**

1. Life Science

10:45-11:10

Microarray analysis of gene expressions of kidney cells under microgravity

**Prof.Makoto Asashima, Masayuki Ikuzawa, Junko Kitamoto, Tatsuo Michiue
and Akimasa Fukui, University of Tokyo**

11:10-11:35

**Hibernation and muscle disuse: A model system for a long term space
journey**

Prof.Inho CHOI, Yonsei University

2. Molecular Biochemistry

11:35-12:00

Structural & systemic proteomics of microgravity: made & living in space

Dr. Tae-Sung Yoon, Korea Research Institute of Bioscience and

Biotechnology

12:00-12:25

Protein crystallization in microgravity and structural analysis

Prof.Masaru TANOKURA, University of Tokyo

Lunch

2. Combustion and Energy

13:30-13:55

Microgravity Experiment on Propagation of premixtures with electric fields

Prof. Suk Ho CHUNG, Seoul National University

13:55-14:20

Impact of microgravity utilization on combustion fundamental researches

Prof.Osamu FUJITA, Hokkaido University

3. Crystal Growth and Fluid Physics

14:20-14:50

Growth Mechanisms and Defect Generation in Protein Crystal Growth

Dr. Peter Dold, Visiting Scholar of Tohoku University

14:50-15:15

Mechanism of Marangoni Flow Instability in the Half-Zone Bridge:

Centrifugal and Elliptical Mechanisms

Prof. Taketoshi HIBIYA, Department of Aerospace Engineering,

Tokyo Metropolitan University

15:15-15:40

Formation of Metastable Phases in $\text{Lu}_2\text{O}_3 - \text{Fe}_2\text{O}_3$ System by Containerless Processing using Gas Jet Levitation

Mr.Vijaya KUMAR, Department of Aerospace Engineering,

Tokyo Metropolitan University

Break

16:00-16:30

Space Program Introduction-Korea Manned Space Program and Others

Dr. Gi Hyuk CHOI, Head, Space Science Division, KARI

16:30-16:55

Time-dependent gravity-driven convection of a fluid in an enclosure

Prof. Jae Min HYUN, KAIST and H.S.Kwak, Kumoh Univ., Korea

16:55-17:20

Numerical simulation of liquid metal free-surface flows in the presence of a uniform static magnetic field

Prof.Toshio TAGAWA, Department of Aerospace Engineering,

Tokyo Metropolitan University

4. Fundamental Physics/Chemistry

17:20-17:45

Chemistry under Microgravity

Prof. Masamichi ISHIKAWA, Tokyo Institute of Technology

18:00-20:00

Reception

October 29, 2006 Sunday

10:00

5. Life Science(continued)

10:00-10:25

Medical monitoring project for 1st Korean astronaut

Dr. Ki Young Chung, Aerospace Medical Center

6. Materials Science

10:25-10:50

Application of Zeolites as Advanced Materials

Prof.Kyung Byung Yoon, Sogang University

7. Engineering and Others

10:50-11:15

Noise Problems inside the ISS

Prof. Duck-Joo Lee and Wonju Jeon KAIST

11:15-11:30

Brochure on "Guidance to Space Experiment Research Planning"

Prof.Hiroo Inokuchi and Dr.Yoshinori

Fujimori

11:30-12:30

Possible Future Road Map of Collaborations

Prof.Suk Ho CHUNG

Prof.Makoto ASASHIMA

Lunch

14:00 Adjourn

October 30, 2006 Monday

Technical Tour or individual discussions on specifics.