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 Lu$_2$O$_3$ – Fe$_2$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.