

8th Japan-Korea Joint Seminar on Space Environment Utilization Research



<http://spaceflight.nasa.gov/gallery/images/station/assembly/hires/s133e010447.jpg>

October 6th and 7th 2011

Yonsei University,
Industry-University Research Center, Seminar Room 310

The workshop is supported by contributions from

- 1) Korea Aerospace Research Institute
- 2) The Korean Microgravity Society
- 3) Yonsei Institute of Space Bioscience, Yonsei University
- 4) Space Optics Laboratory, Department of Astronomy, Yonsei University

Agenda of the 8th Japan-Korea Joint Seminar on Space Environment Utilization Research

October 6 – 7, 2011

Yonsei University

(120-749) 50 Yonsei-Ro, Seodaemun-Gu, Seoul, Korea
Industry-University Research Center, Seminar Room 310

Seminar Coordination

Prof. Chi-Hwan LEE, Prof. Makoto ASASHIMA

Prof. Sug-Whan KIM

October 6

08:30-09:00

■ **Registration**

09:00-09:10

■ **Opening Remarks and Welcome**

Welcoming Remarks

Dr. Eun-Sup SIM, KARI

Prof. Chi-Hwan LEE, Inha University

09:10-09:50

■ **Seminar Perspectives**

09:10-09:25

Seminar Objectives : Perspective of Korea

Prof. Chi-Hwan LEE, Inha University

09:25-09:40

Seminar Objectives : Perspective of Japan

Utilization Strategy of ISS “Kibo” Module

Prof. Makoto ASHSHIMA, University of Tokyo

09:40-10:40

■ **Space Program Introduction**

09:40-10:00

Space Development Plan in Korea

Dr. Eun-Sup SIM, KARI

10:00-10:20

Kibo Utilization status 2011

Mr. Nobuyoshi FUJIMOTO, JAXA

10:20-10:40

Physical Science under Microgravity in JAPAN

Prof. Satoshi MATSUMOTO, JAXA

10:40-11:00

Coffee Break

11:00-12:00

■ **Combustion / Fluid Physics**

11:00-11:20

Flammability limit of electric wire insulation in microgravity

Prof. Osamu FUJITA, Hokkaido University

11:20-11:40

Comparison between Lewis-number-induced and Buoyancy-induced self-excitations in Laminar Lifted Jet Flames”

Prof. Jeong PARK, Sung Hwan YOON, Jong Kyu HAN, Pukyong University

11:40-12:00

Synthesis of carbon nanomaterials in counterflow diffusion flames

Prof. Jae Hyuk CHOI, Woo-Jung SHIN, Hiroyuki ITO, Osamu FUJITA, Joo-hee LEE, Seol-Hyun PARK, Korea Maritime University

12:00-14:20

Lunch Break

14:20-15:00

■ **Material Science / Chemistry**

14:20-14:40

Thermophysical properties measurement by levitation technique under microgravity conditions

Prof. Masahito WATANABE, Gakushuin University

14:40-14:00

Relation of structure and interfacial energy of liquid metals

Dr. Geun Woo LEE, KRISS

15:00-16:00

■ **Life Science, Molecular Biology & Biomedical Engineering (I)**

15:00-15:20

Dome Gene Experiment done in JEM in ISS

Prof. Makoto ASASHIMA, AIST

15:20-15:40

Our skeletal muscle research on the basis of collaboration with JAXA and Yonsei University

Prof. Takeshi NIKAWA, The University of Tokushima Graduate School

15:40-16:00

Studies on an anti-atrophic effect of a HSP inducer in muscle cell: the outcomes from Korea-Japan collaborative research

Mr. Taesik GWAG and Prof. Inho CHOI, Yonsei University

16:00-16:20

Coffee Break

16:20-17:20

■ **Life Science, Molecular Biology & Biomedical Engineering (II)**

16:20-16:40

Growth of high quality protein crystals in microgravity for industrial uses and drug design

Prof. Masaru TANOKURA, University of Tokyo

16:40-17:00

Envisioning Space Biology Projects at KRIBB

Dr. Sunghyun KANG, Dr. Dae Gwin JEONG, Dr. Tae-Sung YOON, KIRBB

17:00-17:20

Evaluation of the countermeasure for bone loss in microgravity ; partial vibration therapy

Dr. PARK, J.H., D.H. SEO, Y.J. JUNG, C.Y. KO, H.S. KIM, Yonsei University

18:00-20:30

Workshop Dinner

October 7, 2011

08:30-09:10

■ **Space radiobiology and Technology**

08:30-08:50

Radioadaptation in Space: A possibility of detection at cellular level

Dr. Fumio YATAGAI and Dr. Toshikazu EBISUZAKI, RIKEN

08:50-09:10

Current status on space biology using copy system of space environment in gamma phytotron facility in Korea

Dr. Jong-Il CHOI, Ju-Woon LEE and Inho CHOI, KAERI and Yonsei University

09:10-10:30

■ **Observation Sciences**

09:10-09:30

JEM-EUSO mission

Dr. Toshikazu EBISUZAKI, RIKEN

09:30-09:50

Ultra Fabrication Technologies of Nanoprecision Optics for Space

Dr. Hitoshi OHMORI, RIKEN

09:50-10:10

BRDF models for Earth and Moon

Ms. Jinhee Yu and Prof. Sug-Whan KIM, Yonsei University

10:10-10:30

UFFO Pathfinder

Prof. Jik LEE, Ewha University

10:30-10:50

Coffee Break

10:50-12:30

■ **A View of Japan-Korea Microgravity Science Joint Seminar**

10:50-11:30

- Introduction: KARI-JAXA's Future hosting plan of the seminar

11:30-12:30

- Review and update the Purpose and Scope of the seminar
 - Purpose
 - Scope
 - membership (open, semi-open, close?)
 - Publication (including outreach though web site)
 - Shall we make a charter of the seminar ?

12:30

■ **Adjournment**

Closing comments

Prof. Chi-Hwan Lee, Inha University

12:30-15:00

Lunch Break

15:00-

Free discussions among members



Yonsei University map(Blue point(10) is Industry-University Research Center)

■ Information

- (1) How to reach Seoul(Incheon international airport or Gimpo airport to Yonsei Univ.)
 - i) When arrive at Incheon international airport, we'll be there to greet you.
(If you need this support, you have to arrive at Incheon at pm 4:00 ~ pm 5:00)
 - ii) You can use airport limousine(<http://www.airportlimousine.co.kr/route/routee04.htm>), (number:6002, pay:10,000\, arrival-point: Yonsei Univ.) airport railroad(<http://english.arex.or.kr/jsp/eng/index.jsp>) (pay:3,600\, arrival-point: Hongik Univ(You have to move Hongik Univ. to Yonsei Univ.)), or taxi.

If you take a regular taxi (Il-Bahn-Taxi, 일반택시) that is not black, it will cost approximately 60,000 KRW to go directly from the airport to Yonsei University. If you take a deluxe taxi (Mo-Boem-Taxi, 모범택시), which is black in color, as well as more spacious and comfortable, it will cost about 75,000 KRW. The taxi fare may vary depending on traffic. Before you arrive, please verify the location of International House or your destination on the map available at the following website (<http://www.yonsei.kr/eng/about/visitors/maps/>). Print a copy of the map to show the taxi driver.

- (2) How to reach Hotel Ditto
Reserved hotel Ditto is very close to Yonsei Univ. You can reach to Ditto just with walking.
If you use taxi, you can use this map and address.





Call: 82-2-393-6161

Address: 110-35 Daehyundong Seodaemungu Seoul, Korea

- (3) Reserved date and rate: 10/5,10/6: 75,000\, 10/7: 95,000\
- (4) Exact place of meeting: Seminar room 310, Inderstry-University research center, Yonsei University
(you can see the point of this building at upper map)
- (5) contact (phone number etc.) in case of trouble:
 - Jinhee Yu, 010-3068-7706(at Korea) 82-10-3068-7706(at Japan)
 - Sug-Whan Kim, 010-3819-4247(at Korea) 82-10-3819-4247(at Japan)

**Summary of the
8th Korea-Japan Space Environment Utilization Research Seminar**

October 7, 2011
at Yonsei University, Seoul

1. Dr. Eun-Sup SIM from KARI presented Welcoming remarks and encourage the activity of this seminar. Participants appreciate KARI's contribution to hosting this seminar.
2. Two Chairs (Pro. Chi-Hwan Lee, Prof. Makoto Asashima) presented recent situation of space environment utilization of each country's science community and expressed the hope of realization of the joint space experiment.
3. Importance of information exchange on each country's strategy was expressed. For the first step, JAXA will submit the new scenario of Space Environment Utilization of Japan to KARI when it complete.
4. KARI and JAXA presented current status of each agency and encouraged science and research activity of Space Environment utilization.
5. Scientists of Korea and Japan reported their current status on research and joint space experiment planning. Exchanged views and opinions toward future expansion. Science communities are pleased to hear the substantial progress, of each discipline. Discussion had made very actively.
6. Participants reviewed and discussed of the purpose and Scope of this seminar for the future and agree to manage this seminar not only to keep information exchange among researchers and between agency and research community but also using this opportunity for realization of Space Experiment.
7. The next Seminar will be held in Japan in 2012 hosted by JAXA. The exact place and date will be coordinated later. This Seminar will play a leading role to exchange scientific views as well as planning of joint researches in space.



Chair of Korea
Prof. Chi-Hwan Lee
Inha University

Chair of Japan
Prof. Makoto Asashima
University of Tokyo, Fellow and Director
of Advanced Institute of Science and Technology

Appendix

1. List of Participants.

2. Proceedings of 8th Korea-Japan Joint seminar of Space Environment Utilization Research.