

June/6th (Tue) AM(1)

Session o-1-1 at Room A Program	Session d-1 at Room B Orbital Mechanics	Session b-1 at Room C Microthrusters
Chairperson :M. Koyama (JAXA) M. Zell (ESA)	Chairperson :K. Tsuchiya (Kyoto Univ.) O. Montenbruck (DLR)	Chairperson :M. Nakano (Tokyo Met. College) H. Koizumi (Tokyo Univ.)
09:00-9:30 2006-o-1-01v Potential International Cooperation on Exploration - an ESA Perspective A. Thirkettle (ESA), Netherlands 09:30-10:00 2006-o-1-03v Development in the Canadian Contribution to the ISS Program B. Marcotte (CSA), Canada 10:00-10:30 2006-o-1-04v Japan's Kibo and the Future Vision in Space Exploration Y. Hasegawa (JAXA), Japan 10:30-11:00 2006-o-1-05v HTV Development and the Future Vision H. Sasaki (JAXA), Japan	09:00-9:20 2006-d-01 Perturbation Analysis of Interplanetary Sun-Synchronous Orbit S. Nishimaki, K. Kuroshima (Tokyo Univ.), T. Saiki, J. Kawaguchi (JAXA), Japan 09:20-9:40 2006-d-02 A dynamical systems approach to the design of the science orbit around Europa M. Lara (Real Observatorio de la Armada), G. Gomez (Universitat de Barcelona), R. Russell (JPL, California Institute of Technology), Spain 09:40-10:00 2006-d-03 Computing long lifetime orbits for the Eoropa observation mission M. Lara (Real Observatorio de la Armada), S. Ferrer (Universidad de Murcia), Spain 10:00-10:20 2006-d-04 Simulation and Characterization of Dynamical Evolution of Binary Asteroid Systems E. Gregory Fahnestock, D. J. Scheeres (Univ. of Michigan), USA	09:20-9:40 2006-b-01 Effects of Multi-Nozzle Jets on Thrust-Performance Improvement of Micro-Arcjets K. Onodera, T. Noda, H. Horisawa (Tokai Univ.), I. Kimura (Tokyo Univ.), Japan 09:40-10:00 2006-b-03 Characteristics of DDNP Combustion for MEMS Rocket Application K. Takahashi, T. Okada, T. Ikuta, T. Nishiyama (Kyushu Univ.) et.al., Japan 10:00-10:20 2006-b-04 Fundamental Investigations of Electrically-Augmented Micro Pulse Detonation Engines S. Eto, H. Horisawa, Y. Tomioka (Tokai Univ.), Japan

Session a-1 at Room D Liquid Rocket I(Liquid Propellant Managements A) Chairperson :B. Vieille (CNES) T. Himeno (Tokyo Univ.)	Session u-1 at Room E Practical Ways to Practice Space Education and Outreach Chairperson :G. Pignolet (Science Sainte Rose) M. Onuki (Advocate, Asia Liaison, Space Frontier Foundation)	Session s-1 at Room F Robotics Chairperson :Y. Yoshida (Tohoku Univ.) T. Kubota (JAXA/ISAS)
09:00-9:20 2006-a-01 Dynamic Behavior of Liquid Propellant in Tank on Upper Stage Engine which have the function of the re-ignition Y. Kano, Y. Kano (IA), T. Mochizuki (ISE), H. Otsuka (IA) et.al., Japan 09:20-9:40 2006-a-02 Development and Results of Space Evaluation Test for Vane Type Tank System(VTS) R. Imai (Research Institute, IHI), Y. Takano, K. Yamada (IHI Aerospace), K. Hama (USEF) et.al., Japan 09:40-10:00 2006-a-03 Experimental Investigation of the Dynamic Characteristics of Lateral Sloshing in a Concentric Membrane Tank K. Komatsu, M. Nishimoto (JAXA), Japan 10:00-10:20 2006-a-04 Numerical Analysis of Dynamic Behavior of Free-Surface Flows in Tanks Based on CIP-LSM H. Negishi (JAXA's Engineering Digital Innovation Center, JAXA), T. Himeno (Tokyo Univ.), N. Yamashita (JAXA's Engineering Digital Innovation Center, JAXA), Japan 10:20-10:40 2006-a-05 CFD studies of cryogenic propellant management J. Lacapere (Air Liquide), France	09:00-9:20 2006-u-01 Educational Models for Integrated SSP/WPT Systems and H2 Technologies G. Pignolet (Science Sainte Rose), J. Lan sun luk (Univ. of La Reunion), I. Ingar (Arer, La Reunion), France 09:20-9:40 2006-u-02 Student Small Science Payload Promotions Program for the Rocketplane XP C. John Lauer, C. John Lauer (Rocketplane, Ltd.), M. Onuki (Space Frontier Foundation), USA 09:40-10:00 2006-u-04 Experimental rocket project in Gifu for launching within a campaign organized by French association Planete Sciences in La Courtine M. Sasaki (Gifu Univ.), K. Ogimoto, N. Nakano (Space Club Gifu), A. Ishida (Gifu Univ.) et.al., Japan 10:00-10:20 2006-u-05 Development Status of the Microsatellite KKS-1 by the Tokyo Metropolitan College of Technology T. Ishikawa, M. Nakano, T. Miyano, R. Wakabayashi (Tokyo Metropolitan College of Technology), Japan	09:00-9:20 2006-s-01 Simultaneous Feedback Stabilization of Space Robot Attitude T. Hashimoto (Tokyo Metropolitan Institute of Technology), Japan 09:20-9:40 2006-s-02 Fault Detection in Autonomous Assembly by Space Robot using Semantic Task Model K. Sawayama (Tokyo Univ.), Japan 09:40-10:00 2006-s-03 DEPLOYMENT OF ELECTRODYNAMIC TETHER USING SIMPLE REEL MECHANISM T. Ikeda, Y. Yamagiwa (Shizuoka Univ.), S. Kawamoto, Y. Okawa (Advanced Space Technology Research Group, JAXA/IAT) et.al., Japan 10:00-10:20 2006-s-04 Development of Engineering Test Satellite STARS-1 for Tethered Space Robot T. Yamamoto, T. Yamamoto, H. Yoshihara, A. Andatsu (Kagawa Univ.) et.al., Japan 10:20-10:40 2006-s-05 Orbital Transfer of a Tether System Using Pitch Motion Control through Tether Length Variation N. Shibata (Kyushu Univ.), Japan

Session r-2-1 at Room G Impact Experiment	Session p-1 at Room H Space Medicine (1)
Chairperson :P. Harkness (Cranfield Univ.) J. Ishizawa (JAXA)	Chairperson :T. Maruyama (Tokyo Inst. of Tech.) T. Hagale (Boeing co.)
09:00-9:202006-r-2-01 Properties of Fragments from Low-Velocity Impacts on Micro Satellite Y. Tsuruda, K. Nakashima, T. Hanada (Kyushu Univ.), Japan	09:00-9:202006-p-01 Space Scale: Instrument for Astronaut Mass Measurement Y. Fujii (Gunma Univ.), K. Shimada (JAXA), Japan
09:20-9:402006-r-2-02 Measurement of the Ejector Generated by the Hypervelocity Impact Experiment on Thin Film Materials K. Tanaka (JAXA), Y. Saitoh (Tokyo Univ. of Science), S. Kosyo (Tokai Univ.), S. Sasaki (JAXA), Japan	09:20-9:402006-p-02 Effect of Centrifuge-induced Artificial Gravity and Erogometric Exercise on Cardiovascular Deconditioning, Myatrophy, and Osteoporosis Induced by -6° Head-down Bedrest for 20 Days S. Iwase, H. Takada (Aichi Medical Univ.), Y. Watanabe (Nagoya Univ.), K. Ishida (Research Center for Physical Fitness and Sports) et.al., Japan
09:40-10:002006-r-2-03 Estimation of Debris Cloud Generated by Oblique Impacts M. Higashide, T. Okumura, O. Hayashi, T. Koura (Kyushu Institute of Technology) et.al., Japan	09:40-10:002006-p-03 Countermeasure Development and Optimization Using the Bed Rest Model P. D Jost, O. Angerer, P. Sundblad, D. A. Schmitt (ESA), Netherlands
10:00-10:202006-r-2-04 New Measurement of Velocity of Debris Cloud Using X-ray Radiograph T. Okumura, Y. Akahoshi, K. Watanabe, T. Koura (Kyushu Institute of Technology) et.al., Japan	10:00-10:202006-p-04 Study of the Development of Device to Maintain the Skeletal Muscles in the Space N. Shiba (Kurume Univ.), Y. Tagawa (Kyushu Institute of Technology), Y. Umezu, H. Matsuse (Kurume Univ.) et.al., Japan
	10:20-10:402006-p-05 Vestibular system contributes human blood pressure control upon gravitational changing C. Awazu (Fukui Univ.), K. Tanaka, C. Abe, H. Morita (Gifu Univ.), Japan

June/6th (Tue) AM(2)

Session o-1-2 at Room A Utilization	Session d-2 at Room B Interplanetary Mission Analysis	Session b-2 at Room C Laser Microthruster
Chairperson :N. Fukuda (MHI) B. Marcotte (CSA)	Chairperson :J. Fertig (ESA/ESOC) Y. Kawakatsu (JAXA/ISAS)	Chairperson :K. Takahashi (Kyushu Univ.) H. Shiraishi (Daido Inst. of Tech.)
11:10-11:40 2006-o-1-06v NASA Utilization of the International Space Station and the Vision for Space Exploration J. A Robinson, D. A Thomas (NASA), USA 11:40-12:10 2006-o-1-07v ESA's Life and Physical Science Programme - Achievement and Plans M. Zell (ESA), Netherlands 12:10-12:40 2006-o-1-08v JAXA Utilization and the Future Vision M. Koyama (JAXA), Japan	10:30-10:50 2006-d-05 BepiColombo - Navigation Challenges on the Way to Mercury D. Garcia yarnoz (GMV at ESA/ESOC), R. Jehn (ESA/ESOC), N. Sanchez (Deimos Space), Germany 10:50-11:10 2006-d-06 Control Strategies for the Fly-bys of Asteroids Steins and Lutetia during Rosetta Cruise V. Companys, J. Fertig (ESOC), M. Diaz (GMV at ESOC), Germany 11:10-11:30 2006-d-07 Operational experience during orbit insertion of Venus Express - ESA's second planetary mission V. Companys, M. Lauer (ESOC), Germany 11:30-11:50 2006-d-08 Preliminary Mission Analysis of a Jupiter Entry Probe Mission M. Khan, P. De pascale (ESA-ESOC), Germany 11:50-12:10 2006-d-09 Analysis of operational strategies to achieve long Mars Express mission duration, to provide relay services for future Martian missions V. Companys (ESOC), M. Muller (EDS at ESOC), R. Cramm (ESOC), Germany	10:30-10:50 2006-b-05 A laser ignition microthruster for microspacecraft propulsion M. Nakano (Tokyo Metropolitan College of Aeronautical Engineering), H. Koizumi, T. Inoue (Tokyo Univ.), M. Watanabe (Nichiyu Giken Kogyo Co., LTD.) et.al., Japan 10:50-11:10 2006-b-06 Research and Development of Compact Laser Ablative Thrusters for Small Satellites H. Maesato, S. Matsunami, H. Tahara (Osaka Univ.), Japan 11:10-11:30 2006-b-07 Simple Calculation of Ablation Process and Performance for Laser Ablative Thrusters S. Matsunami, T. Edamitsu, H. Maesato, H. Tahara (Osaka Univ.), Japan 11:30-11:50 2006-b-08 Electromagnetic Acceleration Characteristics of a Laser-Electric Hybrid Thruster Y. Sasaki, K. Sasaki, H. Horisawa (Tokai Univ.), I. Kimura (Tokyo Univ.), Japan

June/6th (Tue) AM(2)

Session a-2 at Room D Liquid Rocket II(Liquid Propellant Managements B)	Session u-2 at Room E Space Education and Outreach Programs for theGeneral Public	Session s-2 at Room F Space Transportation Technology
Chairperson :J. Lacapere (Air-Liquide) K. Komatsu (JAXA)	Chairperson :J. Souchay (Paris Observatory) F. Tanigaki (JAXA)	Chairperson :H. Taguchi (JAXA) H. Nagata (Hokkaido Univ.)
10:50-11:10 2006-a-06 Development of Numerical Methods for Propel- lant Management T. Himeno, T. Watanabe (Tokyo Univ.), Japan	10:50-11:10 2006-u-06 Space Education for Children with Disability in Remote Areas S. Aso (Kyushu Univ.), T. Ebisuzaki (RIKEN), I. Chikami (Okierabu High school), S. Mitsumori (Insti- tute for Future Technology) et.al., Japan	11:10-11:30 2006-s-07 Aerodynamic Characteristics of vertical landing rocket vehicle during turn-over Y. Imamura (Tokyo Univ.), S. Nonaka, H. Ogawa, Y. Inatani (ISAS/JAXA), Japan
11:10-11:30 2006-a-07 Liquid Propellant Management in Launcher Tanks: the COMPERE research program B. Vieille, B. Legrand (CNES), France	11:10-11:30 2006-u-07 Public Astronomical Observatory Network (PAONET) – A Network for Sharing Digital Contents and Human Resources on Education of Astronomy – M. Okyudo (Wakayama Univ.), T. Ono, H. Agata (National Astronomical Observatory of JAPAN), C. Yoshizumi (Tokushima Science Museum) et.al., Japan	11:30-11:50 2006-s-08 Coherent Anti-Stokes Raman Spectroscopic Measurement of radiation behind Hyperveloc- ity Shock Waves K. Arimura, K. Miyazaki, B. Suhe, K. Maeno (Chiba Univ.) et.al., Japan
11:30-11:50 2006-a-08 Cryogenic Propellant Management of H-IIA Upper Stage O. Kitayama, T. Tokunaga, K. Tanimoto (MHI), H. Taniguchi (JAXA), Japan	11:30-11:50 2006-u-08 Outreach Activities of National Astronomical Observatory of Japan (NAOJ) T. Ono, H. Agata, J. Watanabe, T. Fukushima (Na- tional Astronomical Observatory of Japan), Japan	11:50-12:10 2006-s-10 Preliminary Experment of Laser Micro Propul- sion Using Powdered-Propellant S. Yokoyama, H. Horisawa (Tokai Univ.), I. Funaki, H. Kuninaka (JAXA), Japan
11:50-12:10 2006-a-09 BOILING UNDER MICROGRAVITY A. Hoornaert, A. Lakhdar, G. Duhar, C. Colin (IMFT), France	11:50-12:10 2006-u-09 Academic and Non Academic Teaching of As- tronomy in France J. Souchay (Observatoire de Paris), France	
12:10-12:30 2006-a-10 The effects of gravitational acceleration on cryo- genic forced convective boiling O. Kawanami, T. Nishida, I. Honda, Y. Kawashima (Univ. of Hyogo) et.al., Japan	12:10-12:30 2006-u-10 JAXA Education Program related with the ISS F. Tanigaki (JAXA), Japan	

Session r-2-2 at Room G Space Debris and Measurement and Orbital Estimation (1)	Session p-2 at Room H Space Medicine (2)
Chairperson :D. Alwes (DLR) Y. Akahoshi (Kyushu Inst. of Tech.)	Chairperson :P. Jost (ESA) S. Iwase (Aichi Med. Univ.)
10:30-10:502006-r-2-05 Space Debris Surveillance Results in TKSC/JAXA Y. Taromaru, C. Hirose (JAXA), M. Kameyama (Fujitsu Limited), S. Aoki (Japan Space Forum) et.al., Japan	10:50-11:102006-p-06 Radiation Exposure Management for Japanese ISS Crew Members S. Yabe, M. Kyoda, Y. Koike, T. Murai (JAXA) et.al., Japan
10:50-11:102006-r-2-06 Collaboration in Radar Observation and Re-entry Predictions Y. Taromaru, C. Hirose (JAXA), M. Kameyama (Fujitsu Limited), S. Aoki (Japan Space Forum), Japan	11:10-11:302006-p-07 Research and Development of Japanese Resort Curry as a Space Food A. Kuramoro (Housefoods Corporation), Japan
11:10-11:302006-r-2-07 Optical Observations of Space Debris at the Bisei Spaceguard Center: Limiting-Magnitude Evalua- tion and Magnitude Variability S. Okumura, S. Isobe (Japan Spaceguard Association), Japan	11:30-11:502006-p-08 Development of JAXA Space Food T. Nakazawa, S. Tachibana, K. Yanagawa (JAXA), Japan
11:30-11:502006-r-2-08 GEO Space Debris Optical Observation Technolo- gies A. Nakajima (JAXA), H. Kurosaki (JAXA), Japan	11:50-12:102006-p-09 New Methodology Applied to JEM Ad hoc Evaluation to Enhance Mission Success S. Sasaki, T. Nakahara, K. Niitsu (JAXA), Japan

June/6th (Tue) PM(1)

Session o-1-3 at Room A Technologies	Session d-3 at Room B HAYABUSA Flight Results	Session b-3 at Room C Laser and Microwave Propulsion
Chairperson :Y. Hasegawa (JAXA) J.A. Robinson (NASA)	Chairperson :L.A. Cangahuala (NASA/JPL) K. Tsuchiya (Kyoto Univ.)	Chairperson :H. Takegahara (Tokyo Met. Univ.) K. Komurasaki (Tokyo Univ.)
14:30-15:00 2006-o-1-09v Human Engineering for Manned Space Systems C. Harada (JAXA), Japan	14:30-14:50 2006-d-10 Overview of HAYABUSA Astrodynamics Experiments -Asteroid ITOKAWA Transfer ans Landing- J. Kawaguchi (JAXA), Japan	14:40-15:00 2006-b-09 A Multi Pulse Flight Experiment of a Microwave-Beaming Thruster Y. Oda, K. Komurasaki (Tokyo Univ.), K. Takahashi, A. Kasugai (Naka Fusion Institute, Japan Atomic Energy Agency) et.al., Japan
15:00-15:30 2006-o-1-10v Achievements from the Kibo Program and the future efforts N. Fukuda, H. Yamaguchi (MHI), Japan	14:50-15:10 2006-d-11 HAYABUSA TRAJECTORY SYNTHESIS AND RESULTS - ION ENGINE CRUISE TO ITOKAWA M. Matsuoka, T. Kominato (NEC Aerospace Systems,Co.Ltd), J. Kawaguchi (ISAS/JAXA), Japan	15:00-15:20 2006-b-10 Induction Phenomena in a Laser-Augmented Scramjet J. Yonehara, S. Isimoto, H. Horisawa (Tokai Univ.), I. Kimura (Tokyo Univ.), Japan
15:30-16:00 2006-o-1-11v Future Plans for JEM Exposed System Applications M. Akiyama (IHI Aerospace Co.,Ltd), Japan	15:10-15:30 2006-d-12 HAYABUSA Orbit Determination just before the Rendezvous with Itokawa T. Ohnishi (Fujitsu Ltd.), M. Yoshikawa, T. Kato, T. Ichikawa (JAXA), Japan	15:20-15:40 2006-b-11 Numerical Analysis on Ignition and Formation of Laser-Supported Detonation Wave in Axisymmetric Nozzle Using Thermal Non-equilibrium Model H. Shiraishi (Daido Institute of Technology), Japan
16:00-16:30 2006-o-1-12v Future Space Robotics Based on JEMRMS Development F. Kuwao (NEC Toshiba Space Systems, Ltd), Japan	15:30-15:50 2006-d-13 OPTICAL HYBRID NAVIGATION AND GUIDANCE IN HAYABUSA - APPROACH, STATION KEEPING & HOVERING T. Kominato, M. Matsuoka (NEC Aerospace Systems, Ltd.), M. Uo (NEC/Toshiba Space Systems, Ltd.), J. Kawaguchi (JAXA/ISAS.) et.al., Japan	15:40-16:00 2006-b-12 Numarical analysis of energy conversion process in the one dimensional laser supported detonation wave driven by a linearly focused laser beam K. Kawamura, M. Ushio, H. Katsurayama, K. Komurasaki (Tokyo Univ.) et.al., Japan
16:30-17:00 2006-o-1-13v Conceptual Study on an Orbital Hotel Attached to the ISS T. Yoshida (Shimizu Corporation), H. Lorenzo (Msc-Industrial Designer), Japan	15:50-16:10 2006-d-14 HAYABUSA NAVIGATION PRIOR TO FINAL DESCENT WITH LANDMARK TRACKING K. Shirakawa, H. Morita (NEC Aerospace Systems, Ltd.), M. Uo (NEC TOSHIBA Space Systems, Ltd.), T. Hasimoto (ISAS/JAXA) et.al., Japan	
	16:10-16:30 2006-d-15 HAYABUSA GUIDANCE AND NAVIGATION FOR AUTONOMOUS FINAL DESCENT AND TOUCHDOWN M. Uo (NEC TOSHIBA Space Systems, Ltd.), K. Shirakawa (NEC Aerospace Systems, Ltd.), T. Hasimoto, T. Kubota (ISAS/JAXA) et.al., Japan	

June/6th (Tue) PM(1)

Session a-3 at Room D Liquid Rocket III (Injector, Combustion) Chairperson :M. Nosaka (JAXA) M. Atsumi (MHI)	Session u-3 at Room E Unique Examples of Space Education and Outreach Chairperson :M. Yoshikawa (JAXA) L. Scatteia (CIRA)	Session s-3 at Room F Small Satellite Chairperson :S. Aso (Kyushu Univ.) M. Miyazaki (Nihon Univ.)
14:30-14:50 2006-a-11 Characteristics of Fuel Mixers of Liquid Rocket Engines Under Supercritical Pressure Conditions T. Onodera, M. Takahashi, M. Sasaki, H. Sakamoto (JAXA) et.al., Japan 14:50-15:10 2006-a-12 LE-7A Sub Scale Combustion tests to Clarify Causes of Severe Side-loads in the Nozzle T. Tomita, M. Sasaki, M. Takahashi, H. Sakamoto (JAXA) et.al., Japan 15:10-15:30 2006-a-13 Characteristics of Flows and Discharge Coefficients in Coaxial Injectors with Cold Flow Tests Y. Nunome, H. Sakamoto, T. Onodera, H. Tamura (JAXA) et.al., Japan 15:30-15:50 2006-a-14 Mechanisms of Soot Emission Control of Hydrocarbon Diffusion Flames by Low-Power Corona Discharges N. Tujimura, H. Horisawa (Tokai Univ.), I. Kimura (Tokyo Univ.), Japan 15:50-16:10 2006-a-15 MB-XX Cryogenic Upper Stage Engine Development Progress and Demonstrator Engine Hot-Fire Testing M. Atsumi, A. Ogawara, H. Nakanishi (MHI), W. F. Sack (Pratt & Whitney) et.al., Japan	14:30-14:50 2006-u-11 On The Use of Serious Videogames To Promote Space and Educate on Space Sciences L. Scatteia (CIRA - Italian Aerospace Research Centre), Italy 14:50-15:10 2006-u-12 STUDIO PROGRAM OF SPACE ARCHITECTURE ON UNIVERSITY Y. Ikeda (Keio Univ.), Japan 15:10-15:30 2006-u-13 Orbital Motion by Computer Graphics for Educational Use M. Yoshikawa (JAXA), K. Nishiyama (Japan Spaceguard Association), D. Kuroda (National Astronomical Observatory), Japan 15:30-15:50 2006-u-14 Web-based education activity in space development field J. Terazono, J. Terazono (JAXA), N. Wakabayashi, H. Kurose (Tokyo Univ. of Technology) et.al., Japan 15:50-16:10 2006-u-15 SPACE EDUCATION IN THE INTERNATIONAL SPACE UNIV T. Ito (JAXA), Japan	14:30-14:50 2006-s-11 Development of Micro Satellite in Kyushu University I. Kim, H. Hirayama, T. Hanada, T. Yasaka (Kyushu Univ.), Japan 14:50-15:10 2006-s-12 Analysis of the plasma environment in polar earth orbit using data of Defense Meteorological Satellite T. Hamanaga, S. Hatta, M. Cho (Kyushu Institute of Technology), Japan 15:10-15:30 2006-s-13 Demonstration satellite of aerobrake around Earth for aerocapture around Jupiter K. Yotsumoto, H. Hirayama, T. Hanada (Kyushu Univ.), T. Yasaka (Institute for Q-shu Pioneers of Space), Japan 15:30-15:50 2006-s-14 The Design of the Attitude Determination System for the Hokkaido Satellite D. Igarashi (Hokkaido Univ.), Japan 15:50-16:10 2006-s-15 APPLYING A SIMPLE CONTOL LAW TO DEPLOY SPACE TETHER ON A MICRO TETHERED SATELLITE T. Imazu, Y. Tanaka, H. Hirayama, T. Hanada (Kyushu Univ.), Japan 16:10-16:30 2006-s-16 Design of Deep Space Explorer Propelled by Magnetoplasma Sail T. Kimura (Tokai Univ.), I. Funaki, H. Yamakawa (JAXA), H. Horisawa (Tokai Univ.), Japan

June/6th (Tue) PM(1)

Session r-2-3 at Room G Space Debris and Measurement and Orbital Estimation (2)	Session p-3 at Room H Human Space Tehonology
Chairperson :S. Mirmina (NASA) T. Hanada (Kyushu Univ.)	Chairperson :S. Tachibana (JAXA) S.Murase (Shinshu Univ.)
14:50-15:102006-r-2-09 Destruction and Microwave Emission due to Hypervelocity Impacts onto External Wall of Spacecraft E. Soma, K. Ishii (Tokyo Univ. of Science), H. Ohnishi, S. Chiba (Tokyo Univ.) et.al., Japan 15:10-15:302006-r-2-10 LONG-TERM EVOLUTION OF GEOSYNCHRONOUS ORBITAL DEBRIS WITH HIGH AREA-TO-MASS RATIOS L. Anselmo, C. Pardini (ISTI/CNR), Italy 15:30-15:502006-r-2-11 Current Status of Low Earth Orbital Debris Modeling in Japan T. Narumi (Kyushu Univ.), T. Hanada (Space Environment Research Center, Kyushu Univ.), S. Kawamoto, S. Kibe (JAXA), Japan 15:50-16:102006-r-2-12 LEO debris motion estimation H. Kurosaki, A. Nakajima (JAXA), T. Kuribayashi (Nippon Institute of Technology), Japan 16:10-16:302006-r-2-13 Trends in Reorbiting of Geostationary Satellites R. Jehn, H. Klinkrad (ESA/ESOC), Germany 16:30-16:502006-r-2-14 A new method of danger debris filter for collision risk assessment S. Hu, G. Tang, C. Li (Beijing Aerospace Flight Control Center), China	14:30-14:502006-p-10 Telemedicine in Japan and to Space S. Murase, N. Sakata (Shinshu Univ.), H. Ohshima, A. Kozaki (JAXA) et.al., Japan 14:50-15:102006-p-11 Telemedicine in Space and its Advancement Utilizing Commercial Devices C. Mukai, N. Inoue (JAXA), Japan 15:10-15:302006-p-12 IVA Verification Using Human Modeling Analysis T. J. Hagale (The Boeing Company), USA 15:30-15:502006-p-13 Design of a New Space Suit A. V. Gubarevich, T. Maruyama, O. Odawara (Tokyo Institute of Technology), Japan 15:50-16:102006-p-14 Future Space Suit Development M. Mohri, K. Yanagawa, T. Yamaguchi, K. Yamagata (JAXA), Japan 16:10-16:302006-p-15 Physiological Effects of Mechanical Counter Pressure Glove and Sleeve for Extravehicular Activity. K. Tanaka, C. Abe, C. Awazu, H. Morita (Gifu Univ.) et.al., Japan 16:30-16:502006-p-16 WETS EVA Underwater Demonstration Y. Sone, Y. Saito, S. Ishida, K. Yamagata (JAXA) et.al., Japan

Session d-4 at Room B Space Robotics	Session b-4 at Room C Pulsed Plasma Thrusters	Session a-4 at Room D Liquid Rocket IV (Turbopump, Nozzle)
Chairperson :K. Yoshida (Tohoku Univ.) S. Nakasuka (Tokyo Univ.)	Chairperson :H. Nakashima (Kyushu Univ.) H. Horisawa (Tokai Univ.)	Chairperson :W.F. Sack (PWR) M. Atsumi (MHI)
16:40-17:00 2006-d-16 An Effective Modeling Method of Contact Dynamics for Satellite Capturing N. Inaba, H. Sawada (JAXA), Y. Funaki (Tokyo Institute of Technology), S. Ueda (JAXA), Japan	16:10-16:30 2006-b-13 Research and Development of High-Impulse Electrothermal Pulsed Plasma Thrusters T. Edamitsu, H. Tahara (Osaka Univ.), Japan	16:20-16:40 2006-a-16 Thermodynamic Effect of Cavitating Inducer in a Hydrogen Rocket Turbopump K. Kinefuchi, M. Uchiumi, H. Yamada (JAXA), Japan
17:00-17:20 2006-d-17 Angular Velocity Control of an Asymmetrical Rigid Spacecraft Using Two Constant Torque H. Kojima (Tokyo Metropolitan Univ.), Japan	16:30-16:50 2006-b-14 R&D on Pulsed Plasma Thruster with Wide Thrust Performance Y. Kamishima, J. Iio, J. Uezu, M. Mukai (Tokyo Metropolitan Univ.) et.al., Japan	16:40-17:00 2006-a-17 Evaluation of Durability of Hybrid Ceramic Ball Bearings in Liquid Hydrogen at 3 Million DN(120,000 rpm) M. Nosaka, S. Takada, M. Kikuchi, T. Sudo (JAXA) et.al., Japan
17:20-17:40 2006-d-18 Analysis and Design of Dynamics and Control to Recover from Incomplete Grasping of Docking Mechanism for Nanosatellite K. Ui (JAXA), S. Matunaga (Tokyo Institute of Technology), Japan	16:50-17:10 2006-b-15 Effects of Nozzle and Cavity Configuration on an Electrothermal Pulsed Plasma Thruster W. Matsuura, T. Edamitsu, H. Tahara (Osaka Univ.), Japan	17:00-17:20 2006-a-18 Performance evaluations of the methane fueled rocket nozzles under high altitude conditions T. Ito, A. Kumakawa, K. Hasegawa, M. Sato (JAXA) et.al., Japan
17:40-18:00 2006-d-19 Robust Skills for Assembly Task Found by Autonomous Learning Space Robot K. Senda, S. Fujii (Kanazawa Univ.), Japan	17:10-17:30 2006-b-16 Use of Solid Chemical Propellants for Coaxial Pulsed Plasma Thrusters H. Mashidori, T. Tachibana (Kyushu Institute of Technology), Japan	17:20-17:40 2006-a-19 Effect of Nozzle Deployment Position on Dynamic Characteristics of an Extendible Nozzle M. Sato, S. Moriya, M. Tadano, M. Sato (JAXA) et.al., Japan
18:00-18:20 2006-d-20 Tethered Recovery and Its Behavior of Tethered Sampling for Deep Space Minorbody Exploration S. Matunaga (Tokyo Institute of Technology), O. Mori, K. Nakaya (ISAS/JAXA), S. Masumoto (Tokyo Institute of Technology) et.al., Japan	17:30-17:50 2006-b-17 Performance Characteristics of an Electrothermal Pulsed Plasma Thruster with Teflon-Alternative Propellants H. Asakura, T. Edamitsu, H. Tahara (Osaka Univ.), Japan	17:40-18:00 2006-a-20 FLOW SEPARATION AND THE ASSOCIATED SIDE-LOAD ORIGIN IN A THRUST OPTIMIZED PARABOLIC NOZZLE S. Bhushan Verma (NAL Bangalore), O. Haidn (DLR Lampoldshausen, Germany), India
18:20-18:40 2006-d-21 System configuration of tethered spinning solar sail for orbital experiment Numerical simulation and ground experiment S. Masumoto, K. Omagari, T. Yamanaka, S. Matunaga (Tokyo Institute of Technology), Japan	17:50-18:10 2006-b-18 Performance Characteristics of an Electrothermal Pulsed Plasma Thruster with an Insulator-Rod-Arranged Cavity H. Sugihara, T. Edamitsu, H. Tahara (Osaka Univ.), Japan 18:10-18:30 2006-b-19 A Preliminary Study on an Active-controlled Thrust Stand for Thrust Variation Measurement A. Kakami (National Institute of Advanced Industrial Science and Technology), R. Hiyamizu, S. Masaki, T. Tachibana (Kyushu Institute of Technology), Japan	18:00-18:20 2006-a-21 Volvo Aero Technologies for Advanced Rocket Nozzles R. Ryden (Volvo Aero Corporation), Sweden

June/6th (Tue) PM(2)

Session s-4 at Room F Ground Testing	Session r-2-4 at Room G Space Debris Mitigation
Chairperson :P.M. Bainum (Howard Univ.) K. Suzuki (Tokyo Univ.)	Chairperson :S. Aoki (Keio Univ.) R. Jehn (ESOC)
16:40-17:002006-s-17 ESD Tests on Cu(In,Ga)Se₂ thin-film solar cell in simulated LEO Plasma Environment T. Okumura, S. Hosoda, J. Kim, K. Toyoda (Kyushu Institute of Technology) et.al., Japan	17:00-17:202006-r-2-15 ISO STANDARDS: THE NEXT STEP FOR ORBITAL DEBRIS MITIGATION J. R Davey (BNSC), E. A. Taylor (Consultant to BNSC), Y. Kitazawa (IHI), T. Goka (JAXA), UK
17:00-17:202006-s-18 Environmental Effects on Electron Emission Characteristics of Carbon Nanotube Cathodes Y. Nakamura, Y. Yamagiwa (Shizuoka Univ.), Y. Okawa, S. Kawamoto (JAXA) et.al., Japan	17:20-17:402006-r-2-16 Drag Sail Optimisation for the Safe and Rapid Disposal of Spacecraft from Low Earth Orbit P. G Harkness, P. C e Roberts (Cranfield Univ.), UK
17:20-17:402006-s-19 Development of an electron beam source for spacecraft charging study K. Odahara, S. Hosoda, K. Toyoda, M. Cho (Kyushu Institute of Technology), Japan	17:40-18:002006-r-2-17 DEBRIS MITIGATION WITH SELF BALANCED ELECTRODYNAMIC TETHERS J. Pelaez, M. Sanjurjo (Technical Univ. of Madrid (UPM)), Spain
17:40-18:002006-s-20 Simulation of Plasma Environment around a Bare Tether K. Kashihara, D. Qu, T. Muranaka, M. Cho (Kyushu Institute of Technology) et.al., Japan	18:00-18:202006-r-2-18 Survivability of Electrodynamic Tether until Atmospheric Reentry H. Hirayama, A. Oishi, T. Hanada (Kyushu Univ.), Japan
18:00-18:202006-s-21 Emission spectroscopy of arc plasma on solar array in GEO environment T. Ose, Y. Sanmaru, T. Kitamura, T. Kawasaki (Kyushu Institute of Technology) et.al., Japan	18:20-18:402006-r-2-19 Dynamic of a Crawler Mass of Space Tether System H. A. Fujii, T. Watanabe, T. Kusagaya, M. Ohta (TMU) et.al., Japan
18:20-18:402006-s-22 Plasma measurements for code validation of Multi-Utility Spacecraft Charging Analysis Tool N. Kurahara, T. Muranaka, S. Hatta, J. Kim (Kyushu Institute of Technology) et.al., Japan	

Session o-2-1 at Room A Investigations of the Teritory	Session d-5 at Room B Reentry and Landing	Session b-5 at Room C Ion Thrusters (1)
Chairperson :J. Kawaguchi (JAXA/ISAS) G. Schwehm (ESA/ESTEC)	Chairperson :F. Terui (JAXA/IAT) N. M. Ivanov (RMCC)	Chairperson :M. Cho (Kyushu Inst. of Tech.) Y. Yamagiwa (Shizuoka Univ.)
09:00-9:30 2006-o-2-01v Two Mars Years of Science Operations: Results from the Mars Odyssey Mission D. A Senske, J. J. Plaut (JPL), USA 09:30-10:00 2006-o-2-02v Phoenix :The First Mars Scout Mission (A Mid-Term Report) B. G Goldstein (JPL), USA 10:00-10:30 2006-o-2-03v The ExoMars mission and the European Space Exploration Programme "Aurora" P. Messina, B. Gardini (ESA), France 10:30-11:00 2006-o-2-04v The Venus Express Mission H. Svedhem, O. Witasse, G. Schwehm (ESA/ESTEC), D. Titov (Max Planck Institute for Solar System Research), Netherlands 11:00-11:30 2006-o-2-05v PLANET-C: Venus Climate Orbiter mission of Japan T. Imamura, M. Nakamura, T. Abe, N. Ishii (JAXA) et.al., Japan 11:30-12:00 2006-o-2-06v AN OVERVIEW OF THE JUNO MISSION TO JUPITER R. Grammier (JPL), USA	09:00-9:20 2006-d-22 Analytical Solution of Guidance Law for Vertical Landing Vehicles with Input Constraint K. Uchiyama, Y. Shimada (Nihon Univ.), Japan 09:20-9:40 2006-d-23 A Perturbation Approach in Determination of Closed-Loop Optimal-Fuzzy Control Policy for Lunar Lander S. H. Pourtakdoust, A. B. Novonzadeh (Sharif Univ. of Technology), Iran 09:40-10:00 2006-d-24 Rosetta mission: Simulation of landing on a rubble pile model of comet 67 P/Churyumov Gerasimenko R. Garmier, T. Ceolin (CS), France 10:00-10:20 2006-d-25 Three-Dimensional Entry Guidance Using Exact Linearization A. Abe, Y. Shimada, K. Uchiyama (Nihon Univ.), Japan 10:20-10:40 2006-d-26 Flight Test Result and Dynamic Motion of Gliding Parachute Recovery Demonstrator Vehicle (GPRDV) H. Ohtsuka, H. Ohtsuka, N. Sano (IHI Aerospace), Y. Tsuda (JAXA) et.al., Japan	09:00-9:20 2006-b-20 HAYABUSA Explorer Ion-Driven in Deep Space H. Kuninaka, K. Nishiyama, I. Funaki, T. Yamada (ISAS/JAXA) et.al., Japan 09:20-9:40 2006-b-21 Result of 16,000 hours Endurance Test on 20mN class Xenon Ion Thruster for ETS-VIII T. Ozaki, Y. Inanaga, Y. Kasai, T. Nakagawa (MELCO) et.al., Japan 09:40-10:00 2006-b-22 Overview and research status of the JAXA 150-mN Ion Engine Y. Ohkawa, Y. Hayakawa, H. Yoshida, K. Miyazaki (JAXA) et.al., Japan 10:00-10:20 2006-b-23 Geospace Environment Simulator and the Application to the Analysis of Plasma Emission from Ion Propulsion Engine H. Usui (Kyoto Univ.), M. Okada (Nationa Institute for Polar Research), Y. Omura (Kyoto Univ.), T. Murata (Ehime Univ.) et.al., Japan 10:20-10:40 2006-b-24 Effects of Environmental Conditions to Discharge Characteristics of Hollow Cathode T. Katayama (Tokyo Metropolitan Univ.), J. Matsuyama, T. Naka (Tokyo Metropolitan Institute of Technology), H. Ishikawa (Tokyo Metropolitan Univ.) et.al., Japan

June/7th (Wed) AM(1)

Session a-5 at Room D Solid Rocket I(Failures, Performance, Aluminum Combustion) with AIAA SRTC Chairperson :W.A. Dick (Univ. of Illinois) K. Horii (JAXA)	Session c-1 at Room E Mechanical Design Chairperson :H. Furuya (Tokyo Inst. of Tech) S. Ozawa (JAXA)	Session n-1 at Room F Data Processing Chairperson :W. Takeuchi (Tokyo Univ.) M. Tokunaga (Kanazawa Inst. of Tech.)
09:00-9:20 2006-a-22 Survey of U.S. Small Launch Vehicle Failures E. J. Tomei, I. Chang (The Aeroapace Corporation), USA 09:20-9:40 2006-a-23 Survey of Non-U.S. Small Launch Vehicle Failures I. Chang, E. Joe Tomei (The Aerospace Corporation), USA 09:40-10:00 2006-a-24 Performance Reconstruction and Prediction Method for Space-Ignited Solid Rocket Motors A. J. Posada (United States Air Force), S. A. Frolik (The Aerospace Corporation), USA 10:00-10:20 2006-a-25 A Summary of Aluminum Combustion M. W. Beckstead (Brigham Young Univ.), USA 10:20-10:40 2006-a-26 Recent Progress in Modeling Solid Propellant Ingredients Using Detailed Kinetics M. W. Beckstead, K. Pudappakkam (Brigham Young Univ.), USA	09:00-9:20 2006-c-01 Development of Rotor Mechanism Assembly for Centrifuge Rotor M. Tabata (NEC TOSHIBA Space Systems, Ltd.), N. Sato, T. Nakano (JAXA), T. Murata (NEC TOSHIBA Space Systems, Ltd.) et.al., Japan 09:20-9:40 2006-c-02 Bearing Failure Mode Test for Centrifuge Rotor T. Takegai (NEC TOSHIBA Space Systems, Ltd.), N. Sato, T. Nakano (JAXA), O. Kawamoto (NEC TOSHIBA Space Systems, Ltd.) et.al., Japan 09:40-10:00 2006-c-03 Experimental study of an etching method as a fabrication technique of cooling passages for combined cycle engine wall structure T. Saito, S. Ueda (JAXA), T. Yamamura (Tohoku Univ.), Japan 10:00-10:20 2006-c-04 Fundamental Study on Cooling Structures of C/C Composite Material with a Metallic Tube M. Takegoshi, S. Ueda (JAXA), Japan	09:00-9:20 2006-n-01 Geometric Correction for Satellite Images Using Mutual Information M. Motohashi, A. Iwasaki (Tokyo Univ.), Japan 09:20-9:40 2006-n-02 Extraction of Flood Area for Arsenic Soil Contamination Analysis S. Masuda, M. Tokunaga (Kanazawa Institute of Technology), Japan 09:40-10:00 2006-n-03 Correction of Terra Spacecraft Attitude Fluctuation using ASTER Image Y. Teshima, A. Iwasaki (Tokyo Univ.), Japan 10:00-10:20 2006-n-04 A digital mosaic processing for CORONA/KH-4 imageries T. Sugimura, S. Tanaka (RESTEC), S. Yamaguchi, Y. Nakayama (Nihon Univ.), Japan 10:20-10:40 2006-n-05 Destriping MODIS Data by Facet Model and Histogram Matching P. Rakwatin, W. Takeuchi, Y. Yasuoka (Tokyo Univ.), Japan

June/7th (Wed) AM(1)

Session s-5 at Room G Spacecraft Equipment	Session h-1 at Room H Space Crafts and Microgravity Experiments
Chairperson :K. Tahara (Osaka Univ.) H. Akahoshi (Kyushu Inst. of Tech.)	Chairperson :T. Nakamura (JAXA) O. Norberg (Swedish Space Corporation)
09:00-9:20 2006-s-23 The dependence of degradation on ultraviolet light source for ground test of space materials D. Kumagai, M. Iwata, M. Cho (Kyushu institute of technology), S. Kawakita (JAXA), Japan	09:00-9:20 2006-h-01 International Space Station applied research center promotion program S. Sano, N. Kosihikawa, M. Sato, T. Kobayashi (JAXA), Japan
09:20-9:40 2006-s-24 Physical properties evaluation of spacecraft glass materials and surface modification Y. Haraguchi, S. Hosoda, M. Iwata, K. Toyoda (Kyushu Institute of Technology) et.al., Japan	09:20-9:40 2006-h-02 JAXA's Space Utilization Experiments Onboard the Service Module of ISS C. Saito, M. Kato, K. Arakane, T. Nakamura (JAXA), Japan
09:40-10:00 2006-s-25 Analysis of the reaction wheel disturbance with Air Floating Disturbance Detector Y. Hatsutori (Tokyo Univ.), S. Taniwaki (Keio Univ.), Y. Ohkami (JAXA), Japan	09:40-10:00 2006-h-03 STUDY OF POSSIBILITY TO USE THE PROGRESS VEHICLE FOR MICROGRAVITY RESEARCH DURING ITS AUTONOMOUS FLIGHT M. Yu. Beliaev, E. V. Babkin, N. A. Bruykanov, T. V. Matveeva (RSC ENERGIA) et.al., Russia
10:00-10:20 2006-s-26 The Basic study of rolling mechanism for liquid wheel using Lorentz force A. Iwakura (Tokai Univ.), Japan	10:00-10:20 2006-h-04 Micro-gravity test system using free-fall capsule from high altitude balloon T. Hashimoto, S. Sawai, Y. Saito, H. Inatomi (JAXA) et.al., Japan
	10:20-10:40 2006-h-05 Parameters Optimization of Attitude Determination System of Micro-core J. Sun, W. Zhao Sun, Y. Zhao (Harbin Institute of Technology), China
	10:40-11:00 2006-h-06 The MASER Microgravity Missions and Sounding Rocket Operations at Esrange O. Norberg, S. Kemi, C. Lockowandt, K. Loth (Swedish Space Corporation) et.al., Sweden

Session d-6 at Room B Mission Analysis Chairperson :K. Yoshida (Tohoku Univ.) J. Foliard (CNES)	Session b-6 at Room C Spacecraft and Plasma Interactions Chairperson :H. Usui (Kyoto Univ.) Y. Takao (Oita National College of Tech.)	Session a-6 at Room D Solid Rocket II(Simulation, Gas Generator, Micro Thruster) with AIAA SRTC Chairperson :I-Shih Chang (Aerospace Corp.) H. Nagata (Hokkaido Univ.)
10:50-11:10 2006-d-27 FORMATION FLYING OF MICROSATEL- LITES INTO A GTO ORBIT F. Bonaventure, F. Raballand, L. Boulogne (EADS ASTRIUM), France 11:10-11:30 2006-d-28 MSG-2 MISSION AND FLIGHT DYNAMICS OPERATIONS R. Mugellesi dow, A. Schuetz, D. Hocken (ESOC/ESA), J. De juana gamo (SES ASTRA) et.al., Germany 11:30-11:50 2006-d-29 HALO GEO Collocation Method Analysis M. Molina, A. Perez, D. Cano (GMV SA), Spain 11:50-12:10 2006-d-30 EUROSTAR 3000 : INCLINED ORBIT MIS- SION : LIFETIME OPTIMISATION AND PLASMIC PROPULSION IN FLIGHT EXPE- RIENCE F. Raballand, T. Ha, A. Gicquel, F. Bonaventure (EADS ASTRIUM), France 12:10-12:30 2006-d-31 Lunar Transfer Orbit for SELENE S. Matsumoto, Y. Takizawa, H. Konishi, M. Yamamoto (JAXA) et.al., Japan	11:10-11:30 2006-b-26 Effect of substrate on sustained arc between electrodes K. Toyoda (Chiba Univ.), L. Levy (ONERA), Japan 11:30-11:50 2006-b-27 GROUND-BASED EXPERIMENT OF HIGH- VOLTAGE ELECTRIC BREAKDOWN OF SPACECRAFT INSULATOR SURFACE IN AMBIENT PLASMA ENVIRONMENT K. Horikawa, H. Tahara (Osaka Univ.), Japan 11:50-12:10 2006-b-28 Application of NuSPACE to the Spacecraft En- vironment Analysis M. Okada (National Institute of Polar Research), H. Usui, Y. Omura (Kyoto Univ.), H. O. Ueda (JAXA) et.al., Japan	10:50-11:10 2006-a-27 High-fidelity Simulation of Solid Propellant Rockets W. A. Dick, M. T. Heath, R. A Fiedler (Univ. of Illi- nois), USA 11:10-11:30 2006-a-28 SP Rocket Simulations at CSAR W. A. Dick, M. T. Heath (Univ. of Illinois), USA 11:30-11:50 2006-a-29 University-Industry-Government Partnerships in Solid Propellant Rocket Research W. A. Dick (Univ. of Illinois), USA 11:50-12:10 2006-a-30 Development of a Variable Flow Solid Propel- lant Gas Generator using 3D Carbon/Carbon Composite Cylindrical Valve I. Yamaguchi, Y. Suzuki, S. Kanaizumi, M. Sugimine (IHI Aerospace Co.,Ltd) et.al., Japan 12:10-12:30 2006-a-31 Ignition and combustion characteristics of Mi- cro Solid Rocket Array Thruster in Vacuum H. Habu, S. Tokudome, K. Hori (JAXA), K. Kondo (Tohoku Univ.) et.al., Japan

June/7th (Wed) AM(2)

Session c-2 at Room E Control & Identification	Session n-2 at Room F Disaster	Session h-2 at Room H Facilities and Apparatus for Microgravity Experiments
Chairperson :T. Iwata (AIST) H. Fukunaga (Tohoku Univ.)	Chairperson :S. Takeuchi (Hiroshima Inst. of Tech.) M. Tokunaga (Kanazawa Inst. of Tech.)	Chairperson :T. Numazawa (National Institute for Material Science) I. Yoshizaki (JAXA)
10:30-10:502006-c-05 Sound Attenuation to Minimize Transmission into Rocket Faring K. Makihara (ISAS/JAXA), T. Miyakawa (Tokyo Univ.), J. Onoda (ISAS/JAXA), Japan 10:50-11:102006-c-06 The Control of a Large Planar Structure Suspended by Multi-Tethers K. Ishimura (Hokkaido Univ.), Japan 11:10-11:302006-c-07 Vibration analysis and vibratory control of Space Solar Power Satellite M. Tanemura, H. A Fujii, Y. Koga, T. Watanabe (Tokyo Metropolitan Univ.), Japan 11:30-11:502006-c-08 Thermal Model Identification of Multibeam Antenna System on WINDS Communication Satellite S. Ozawa (JAXA), T. Kasuya, A. Kobayashi (NEC TOSHIBA Space Systems, Ltd.), T. Maeda (JAXA) et.al., Japan 11:50-12:102006-c-09 Adaptive Noise Filtering with Variable Structural Parameters for Flexible Structures A. Senba, H. Furuya (Tokyo Institute of Technology), Japan	10:50-11:102006-n-06 Feature Extraction of Volcanic Eruption Based on Microwave Radiometer (AMSR-E) Observation T. Maeda (Tokyo Univ.), T. Takano (ISAS/JAXA), K. Imaoka (EORC, JAXA), Japan 11:10-11:302006-n-07 A conceptual study of small satellite constellation system for disaster and risk management A. Noda, M. Utashima, A. Tsuiki, A. Ogawa (JAXA), Japan 11:30-11:502006-n-08 JAXA Disaster/Crisis management program T. Fukuda (JAXA), Japan 11:50-12:102006-n-09 Space-based Disaster Management Y. Koizumi, S. Obi (NEC), K. Hiraishi (NEC Aerospace Systems, Ltd), Japan	11:10-11:302006-h-07 JAXA Life science experiment system for ISS S. Yano, M. Masukawa, A. Nagamatsu, W. Nishikawa (JAXA) et.al., Japan 11:30-11:502006-h-08 JAXA Ryutai rack for material science researches on Kibo M. Kunihiro, M. Keiji, K. Takuya, N. Tai (JAXA), Japan 11:50-12:102006-h-09 Development of continuous ADR system for weak gravity missions T. Numazawa, K. Kamiya (National Institute for Materials Science), P. Shirron, M. Dipirro (NASA Goddard Space Flight Center) et.al., Japan 12:10-12:302006-h-10 High Definition Television Real-time Downlink System from International Space Station with Consumer Camcorder J. Yoshikawa, M. Keiji, M. Kunihiro, N. Tai (JAXA) et.al., Japan

Session o-2-2 at Room A Explorations of the Fronteer	Session d-7 at Room B Attitude Determination	Session b-7 at Room C Ion Thrusters (2)
Chairperson :D. Senske (NASA/JPL) H. Yano (JAXA/ISAS)	Chairperson :J. O'Donnel (NASA/GSFC) T. Hashimoto (JAXA/ISAS)	Chairperson :A. Ando (Tohoku Univ.) T. Ozaki (Mitsubishi Electric co.)
14:30-15:00 2006-o-2-07v HAYABUSA - A New Solar System Cruiser - J. Kawaguchi (JAXA), Japan 15:00-15:30 2006-o-2-08v Rosetta Mission G. Schwehm (ESA/ESTEC), Netherlands 15:30-16:00 2006-o-2-09v MESSENGER OPERATIONS AND CRITICAL EVENTS J. C Leary (Johns Hopkins Univ. Applied Physics Laboratory), R. W. Farquhar, M. E. Holdridge, R. E. Gold (Johns Hopkins Univ. Applied Physics Laboratory) et.al., USA 16:00-16:30 2006-o-2-10v BepiColombo - The Mercury Challenge J. Van casteren, J. Benkhoff, R. Carli, B. Gramkow (ESA/ESTEC) et.al., Netherlands 16:30-17:00 2006-o-2-11v New Horizons, the first mission to the third zone of the Solar System G. Fountain (Johns Hopkins Univ. Applied Physics Laboratory), USA	14:30-14:50 2006-d-32 Ground-Based Precision Attitude Determination for the Advanced Land Observing Satellite (ALOS) T. Iwata, T. Iwata (JAXA), M. Uo, T. Kawahara (NTSpace) et.al., Japan 14:50-15:10 2006-d-33 Orbit/Attitude Determination for MTSAT through automated Landmark and Earth Edge Detection M. D Milnes (LogicaCMG), UK 15:10-15:30 2006-d-34 Pleiades HR: On-ground attitude estimation J. Montel (CNES), France 15:30-15:50 2006-d-35 TRMM On-Orbit Performance Reassessed After Control Change S. Bilanow (SAIC), S. Slojkowski (a.i. solutions, Inc), USA 15:50-16:10 2006-d-36 Calibration of Gimbaled Platforms: The Solar Dynamics Observatory High Gain Antennas J. A Hashmall (a.i.solutions, Inc.), USA 16:10-16:30 2006-d-37 Attitude Change Rate Estimation from Star Sensor Images in Frequency Domain K. Nishiguchi, S. Yoshikawa (Mitsubishi Electric Corporation), Japan	14:40-15:00 2006-b-29 Effects of magnetic field and antenna configurations on thrust performance of microwave discharge ion engines with multi mono-pole antenna system N. Munesada, K. Shinyashiki, M. Miyoshi, T. Miyamoto (Kyushu Univ.) et.al., Japan 15:00-15:20 2006-b-30 Magnetic Field Configuration Effects on Thruster Performance of Miniature Microwave Discharge Ion Engine T. Chikaoka, S. Kondou, N. Yamamoto, H. Nakashima (Kyushu Univ.), Japan 15:20-15:40 2006-b-31 Numerical Analysis of Microwave Discharge Plasma Source using Antennas for Propulsion T. Kasa, T. Kanagawa, K. Izumi, H. Masui (Kyushu Univ.) et.al., Japan 15:40-16:00 2006-b-32 Performance Improvement of the Microwave Discharge Ion Thruster $\mu 20$ T. Nakai (Tokyo Univ.), K. Nishiyama, H. Kulinaka (JAXA), Japan 16:00-16:20 2006-b-33 Experimental Demonstration of Microwave Discharge Ion Engine with 10,000sec Isp H. Hayashi, M. Cho (Kyushu Institute of Technology), H. Kulinaka (ISAS/JAXA), Japan

Session a-7 at Room D Thruster	Session c-3 at Room E Membrane Structures	Session n-3 at Room F GPS, Fusion
Chairperson :E.J. Tomei (Aerospace Corp.) S. Tomioka (JAXA)	Chairperson :Y. Miyazaki (Nihon Univ.) K. Ishimura (Hokkaido Univ.)	Chairperson :M. Nagai (Tokyo Univ.) M. Tokunaga (Kanazawa Inst. of Tech.)
14:30-14:50 2006-a-32 Propulsion System on Hydrogen Peroxide Mono-Propellant for Panel ExTension SATellite (PETSAT) H. Sahara, S. Nakasuka, Y. Sugawara (Tokyo Univ.), C. Kobayashi (SOHLA), Japan	14:30-14:50 2006-c-10 Construction of Solar Power Satellites Using Small Satellites and Large-scale Deployable Structures T. Iwata, H. Murakami (AIST), Japan	14:30-14:50 2006-n-10 Universal Map by Collaboration of Remote Sensing, GPS and GIS M. Shikada, S. Shimano (Kanazawa Institute of Technology), A. Okuno (Kokusai Kogyo Co.,LTD.), Japan
14:50-15:10 2006-a-33 Experimental Results of Precision Thrust Controlled Supersonic Cold-Gas and Warm-Gas Microthruster G. Manzoni (Microspace), S. Heisig, S. Matsumoto, R. Maeda (AIST - MEMS Group), Italy	14:50-15:10 2006-c-11 Particle System Approximation for Dynamic Behavior of Membranes M. Natori (ISAS/JAXA), F. Nakamura (Tokyo Univ.), N. Okuizumi (ISAS/JAXA), Japan	14:50-15:10 2006-n-11 Improvements on Ionospheric Parameters Optimized by Regional Limitation M. Sato (Space Engineering Development Co.,Ltd.), M. Sawabe, I. Kawano, S. Kogure (JAXA) et.al., Japan
15:10-15:30 2006-a-34 Flow Simulation Of Film-Cooled Bipropellant Thruster K. Ohminami (Sokendai Univ. / ISAS), K. T Uesugi, H. Ogawa (ISAS/JAXA), Japan	15:10-15:30 2006-c-12 Development of Inflatable Truss Structure for Space Solar Power System K. Anma, T. Kozasa, A. Tukahara, F. Takeda (MHI) et.al., Japan	15:10-15:30 2006-n-12 Robust Trajectory Tracking by Combining GPS/IMU and Continual CCD Images M. Nagai, R. Shibasaki (Tokyo Univ.), Japan
15:30-15:50 2006-a-35 DESIGN, DEVELOPMENT AND MANUFACTURING OF A HIGH PERFORMANCE GREEN PROPELLANT THRUSTER USING ADN N. Boman, R. Nedar, U. Palmnas (Volvo Aero Corporation/ECAPS), K. Anflo (Swedish Space Corporation/ECAPS,) et.al., Sweden	15:30-15:50 2006-c-13 Deployment Analysis on Membrane Structures Combined with Inflatable Tubes N. Kishimoto (ISAS/JAXA), M. Hashimoto (Tokyo Univ.), Y. Miyazaki (Nihon Univ.), M. Natori (ISAS/JAXA), Japan	15:30-15:50 2006-n-13 Analysis on Topographical Aspect in Urban Growth by Combining Satellite Remote Sensing Images with DEM S. Takeuchi, Y. Oguro (Hiroshima Institute of Technology(HIT)), Japan
15:50-16:10 2006-a-36 Evaluation on Hydrogen Peroxide Decomposition with Discharge Plasma J. Aoyagi, Y. Kotake (Tokyo Metropolitan Institute of Technology), H. Takegahara, K. Kuriki (Tokyo Metropolitan Univ.), Japan	15:50-16:10 2006-c-14 Wrinkling and Reflection Characteristics of Membrane Solar Reflectors of REIMEI Spacecraft N. Okuizumi, H. Saito, K. Tanaka, K. Higuchi (ISAS/JAXA), Japan	
16:10-16:30 2006-a-37 COMBUSTION CHARACTERISTICS OF HAN-BASED LIQUID MONOPROPELLANT T. Katsumi (Tokai Univ.), H. Shibamoto (Hosoya Kako. CO. LTD.), K. Hori (ISAS/JAXA), Japan	16:10-16:30 2006-c-15 A Concept of Retractable Inflatable Tubes H. Furuya, M. Nakahara (Tokyo Institute of Technology), Japan	

June/7th (Wed) PM(1)

Session r-2-5 at Room G Space Environment Simulation	Session h-3 at Room H Fluid and Bubble Dynamics
Chairperson :Y. Kimoto (JAXA) M. Akioka (NICT)	Chairperson :M. Watanabe (Gakushuin Univ.) S. Matsumoto (JAXA)
14:30-14:50 2006-r-2-20 Development of MUSCAT (Multi-Utility Spacecraft Charging Analysis Tool): Part of GUI Spacecraft Modeling K. Jeong Ho, K. Jeong Ho, S. Hatta, T. Muranaka (Kyushu Institute of Technology) et.al., Japan	14:30-14:50 2006-h-11 Large-amplitude Oscillation of Droplet Levi- tated by Electrostatic Force S. Awazu (Univ. of Tsukuba), S. Matsumoto, T. Ishikawa, S. Yoda (JAXA) et.al., Japan
14:50-15:10 2006-r-2-21 Midterm Development Report of Multi-Utility Spacecraft Charging Analysis Tool (MUSCAT) T. Muranaka, S. Hosoda, J. Kim, S. Hatta ((La- SEINE), Kyushu Institute of Technol) et.al., Japan	14:50-15:10 2006-h-27 Synergistic Effect of Hyperthermal Atomic Oxygen Beam and Vacuum Ultraviolet Radia- tion Exposures on the Mechanical Degradation of High-Modulus Aramid Fibers L. Ghosh, H. Kinoshita, N. Ohmae (Kobe Univ.), Japan
15:10-15:30 2006-r-2-22 Toward the Radiation Belt Forecast in Japan T. Obara (NICT), K. Koga, T. Goka (JAXA), Japan	15:10-15:30 2006-h-13 Multiple bubble oscillation under ultrasonic vi- bration T. Kojo, I. Ueno (Tokyo Univ. of Science), Japan
15:30-15:50 2006-r-2-23 Experimental Demonstration on Remote Sens- ing of Atomic Oxygen in the Upper Atmosphere using Artificial Ion Beam Y. Sakamoto (Tokyo Univ.), H. Kuninaka (JAXA), Japan	15:30-15:50 2006-h-14 Existing length of precursor film ahead advanc- ing droplet on solid substrate T. Watanabe, I. Ueno (Tokyo Univ. of Science), Japan

Session d-8 at Room B Formation Flight	Session b-8 at Room C Hall Thrusters	Session a-8 at Room D New Propulsion System (Hybrid Propulsion System, Propellant)
Chairperson :T. Iwata (JAXA/IAT) T. Hashimoto (JAXA/ISAS)	Chairperson :K. Nishiyama (JAXA) N. Yamamoto (Kyushu Univ.)	Chairperson :S.A. Frolik (Aerospace Corp.) H. Taguchi (JAXA)
16:40-17:00 2006-d-38 CONFIGURATION, ORBIT DESIGN OF INTER-FEROMETRIC SAR FORMATION BASED ON MEAN ELEMENTS X. Cao, J. Zhang, F. Wang (Harbin Institute of Technology), China 17:00-17:20 2006-d-39 An Optimal Formation Design Method for dual-Satellite Formation X. Cao, B. Wu, D. He, F. Liu (Harbin institute of technology), China 17:20-17:40 2006-d-40 Numerical Approach for Designing and Deploying Satellite Formations P. Williams, P. Trivailo (RMIT Univ.), Australia 17:40-18:00 2006-d-41 On Elliptic Formation Control of Spinning Tethered Formation Flying K. Nakaya (JAXA/ISAS), S. Matunaga (Tokyo Institute of Technology), Japan 18:00-18:20 2006-d-42 Satellite Formation Keeping Using Robust Constrained MPC in Elliptical Orbits B. Wu (Harbin institute of technology), X. Cao (Harbin institute of technology), G. Wu (Harbin institute of technology), China 18:20-18:40 2006-d-43 Proximity Maneuver and Obstacle Avoidance Control Using Potential Function Guidance Method Y. Shimada, K. Uchiyama, Y. Yokota (Nihon Univ.), G. Radice (Univ. of Glasgow,) et.al., Japan	16:30-16:50 2006-b-34 Development Status of High Power Xenon Hall Thruster of MELCO T. Ozaki, Y. Inanaga, T. Nakagawa, Y. Kasai (MELCO), Japan 16:50-17:10 2006-b-35 Thrust Performance of a 1-kW class SPT-type Hall thruster Y. Saeki, S. Yuge, H. Tahara (Osaka University), Japan 17:10-17:30 2006-b-36 Influence of magnetic field topography and discharge channel structure on performance of an anode-layer Hall thruster S. Yuge, H. Tahara (Osaka Univ.), Japan 17:30-17:50 2006-b-37 The Fluctuation of Electron Density Distribution Inside a Hollow Anode in an Anode-layer Hall Thruster S. Yokota, K. Komurasaki, Y. Arakawa (Tokyo Univ.), Japan 17:50-18:10 2006-b-38 Effect of Magnetic Field Configuration in Hall Thrusters with Circular Cross-sectional Discharge Chambers A. Shirasaki, H. Tahara (Osaka Univ.), Japan	16:40-17:00 2006-a-38 LiH as Fuel for Aerospace Propulsion D. Simone, C. Bruno (Univ. of Rome "La Sapienza"), Italy 17:00-17:20 2006-a-39 Rocket Engine with Film/Trimming V. Leudiere, P. Fortunier (CNES), France 17:20-17:40 2006-a-40 Development of CEES Rocket using Liquid Nitrogen and Water T. Hiejima, K. Maruyama, H. Azuma (Osaka Prefecture Univ.), O. Kawanami (Univ. of Hyogo), Japan 17:40-18:00 2006-a-41 COMBUSTION MECHANISM OF TETRA-OL Glycidyl Azide Polymer Y. Wada (Tokai Univ.), M. Nishioka (Univ. of Tsukuba), K. Hori (ISAS/JAXA), Japan

Session c-4 at Room E Analysis & Simulation	Session n-4 at Room F Sensor, Observation System	Session r-2-6 at Room G Space Environment Effect on Space Material
Chairperson :N. Hu (Tohoku Univ.) N. Okuizumi (JAXA)	Chairperson :M. Shikada (Kanazawa Inst. of Tech) M. Tokunaga (Kanazawa Inst. of Tech)	Chairperson :E.A. Taylor (ISO/TC20/SC14/ODCWG) T. Goka (JAXA)
16:40-17:00 2006-c-16 Study on 3-dimensional finite element analysis for the insulation tile considering heat radiation and conduction coupling M. Takagaki (Institute of Industrial Science, Tokyo Univ.), Y. Sato, T. Nakamura, T. Kai (JAXA), Japan 17:00-17:20 2006-c-17 P-finite elements and an analysis system for a simple numerical model of thermal structures K. Takasaki, T. Kai (JAXA), S. Arashi (JST), Japan 17:20-17:40 2006-c-18 A Novel Non-equilibrium Molecular Dynamics Simulation of the Thermal Conductivity of Crystals Ar Film B. Shao, Z. Sun, G. Wu (the Research Institute of Satellite Technology, Harbin Institute of Technology), China 17:40-18:00 2006-c-19 Molecular Dynamics Simulation on The out-of Plane Thermal Conductivity of Single-Crystal Carbon Thin Films G. Wu, X. Kong, Z. Sun, D. Zhao (Harbin Institute Technology Research Center of Satellite Technology), China	16:00-16:20 2006-n-14 Satellite-borne Small Compound Camera Configuration for High-Resolution Earth Images and its Data Processing A. Enokuchi, S. Nakasuka (Tokyo Univ.), Japan 16:20-16:40 2006-n-15 Camera Pointing Mechanism for a Two-dimensional Spectroscopic Observation of the Vapor Transfer with an S-520 Sounding Rocket Y. Shoji, K. Yoshida, H. Nakanishi, J. Shimasaki (Tohoku Univ.) et.al., Japan 16:40-17:00 2006-n-16 New development of infrared detectors for space activity at Sofradir P. Chorier, M. Vuillermet, P. Tribolet (Sofradir), France 17:00-17:20 2006-n-17 ASSIMILATION of IMAGES for GEOPHYSICAL FLUIDS F. L. Le dimet (Universite Joseph Fourier and INRIA), France	16:00-16:20 2006-r-2-24 Damage Evaluation of Solar Panel Impacted by Debris Y. Machida, Y. Akahoshi, S. Fukushima (Kyushu Institute of Technology), T. Hanada (Kyushu Univ.) et.al., Japan 16:20-16:40 2006-r-2-25 Hypervelocity Impact Test to Solar Array for Evaluation of Possibility of Sustained Arc S. Fukushima, Y. Akahoshi, K. Watanabe, T. Harano (Kyushu Institute of Technology) et.al., Japan 16:40-17:00 2006-r-2-26 SPACE ENVIRONMENT EFFECT OF MPAC & SEED MISSION IN ISS Y. Kimoto, T. Inoue, K. Yano, J. Ishizawa (JAXA) et.al., Japan 17:00-17:20 2006-r-2-27 Passive Measurement of Dust Particles on the ISS (MPAC): Third Report on Aerogel Dust Collectors Y. Kitazawa (IHI), M. J. Neish (AES), T. Noguchi (Ibaraki Univ.), I. Yamagata (JAXA) et.al., Japan 17:20-17:40 2006-r-2-28 Evaluation and Analysis of the Second-Retrieved Unit of the Space Environment Exposure Device (SM/MPAC&SEED) J. Ishizawa, I. Yamagata, K. Yugo, N. Baba (JAXA) et.al., Japan 17:40-18:00 2006-r-2-29 Characterization of lubricative coating after exposure test in orbit M. Tosa, A. Kasahara, M. Goto (NIMS), T. Inoue (JAXA) et.al., Japan

June/7th (Wed) PM(2)

Session h-4 at Room H

Marangoni Convection

Chairperson :I. Ueno (Tokyo Univ. of Science)
K. Kinoshita (JAXA)

16:00-16:20 2006-h-15

Development of Flow Visualization System by Ultrasonic wave for Thermocapillary Convection of Low Prandtl Number Fluid

H. Sasaki (Chiba Institute of Technology), S. Matsumoto, T. Mashiko, H. Ohira (JAXA) et.al., Japan

16:20-16:40 2006-h-16

Initial Results from a Ground Experiment for Elucidating Marangoni Convection

T. Mashiko, S. Matsumoto, H. Ohira (JAXA), Y. Kamotani (Case Western Reserve Univ.) et.al., Japan

16:40-17:00 2006-h-17

Numerical analysis of thermocapillary flows in a cylindrical container

H. Ohira, S. Matsumoto, T. Mashiko, S. Yoda (JAXA) et.al., Japan

17:00-17:20 2006-h-18

Reconstruction of relative particle behavior in formation and collapse processes of particle accumulation structure (PAS) in half-zone liquid bridge by 3-D PTV

I. Ueno, Y. Abe, K. Noguchi, S. Tanaka (Tokyo Univ. of Science) et.al., Japan

Session n-5 at Room F Satellite System	Session h-5 at Room H Levitation Techniques and their Applications
Chairperson :M. Tokunaga (Kanazawa Inst. of Tech.) W. Takeuchi (Kanazawa Inst. of Tech.)	Chairperson :T. Ishikawa (JAXA) P-F. Paradis (JAXA)
17:30-17:502006-n-18 SIDUSS: SAR Interferometry Dual Satellite System T. Kodama (JAXA), Japan	17:30-17:502006-h-19 Electrostatic Levitation for Space and Ground-based Research: JAXA's Innovations P. Paradis, T. Ishikawa (JAXA), Japan
17:50-18:102006-n-19 ELMOS: Electric and Magnetic field Observation Satellite T. Kodama (JAXA), Japan	17:50-18:102006-h-20 Development of non-contact electrical resistivity measurement technique in an electrostatic levitator T. Ishikawa (JAXA), N. Koike (Chiba Institute of Technology), A. Ishikura (Gakushuin Univ.), P. Paradis (JAXA), Japan
18:10-18:302006-n-20 High Resolution Extensible Telescope for University of Tokyo's Remote Sensing Nano-Satellite N. Miyamura, T. Eishima, Y. Nakamura, R. Funase (Tokyo Univ.) et.al., Japan	18:10-18:302006-h-21 Thermophysical property measurement of liquid platinum with an electrostatic levitator N. Koike (Chiba Institute of Technology), T. Ishikawa (JAXA), A. Ishikura (Gakushuin Univ.), P. Francois Paradis (JAXA) et.al., Japan
	18:30-18:502006-h-22 Precise density measurement for electromagnetically levitated liquid combined with the surface oscillation analysis M. Adachi, Y. Miura, K. Higuchi, A. Mizuno (Gakushuin Univ.) et.al., Japan

Session d-9 at Room B Interplanetary Trajectory Design Chairperson :J. Fertig (ESA/ESOC) J. Kawaguchi (JAXA/ISAS)	Session b-9 at Room C MPD Thrusters and Electromagnetic Plasma Accelerators Chairperson :H. Kuninaka (JAXA) Y. Ohkawa (JAXA)	Session a-9 at Room D Air Breathing Engine I (Turbojet, Cycle, Combustion, Fluid Dynamics) Chairperson :TBD S. Tomioka (JAXA)
09:00-9:20 2006-d-44 Study on Optimal Transfer Trajectories of the Solar Polar Region Explorers Using Electric Propulsion. R. Maruyama, S. Ueno (Yokohama National Univ.), Japan 09:20-9:40 2006-d-45 Advances in Global Optimisation for space trajectory design D. Izzo (ESA), Netherlands 09:40-10:00 2006-d-46 Low-Thrust Gravity Assist Interplanetary Trajectory Optimization Using Evolutionary Neurocontrollers I. Carnelli (ESA), B. Dachwald (DLR), Netherlands 10:00-10:20 2006-d-48 Study on the Lunar Approach Strategies Tolerant of Lunar Orbit Injection Failure Y. Kawakatsu (JAXA/ISAS), M. Yamamoto (JAXA/ISTA), J. Kawaguchi (JAXA/ISAS), Japan	09:00-9:20 2006-b-39 Performance Characterization for Various Electrode Geometries in an Magneto-Plasma-Dynamic Thruster D. Nakata (Tokyo Univ.), K. Toki (Tokyo Univ. of Agriculture and Technology), I. Funaki, Y. Shimizu (JAXA/ISAS) et.al., Japan 09:20-9:40 2006-b-40 Plasma Acceleration by Applying a Magnetic Nozzle in a Quasi-Steady MPD Arcjet Y. Kagaya, H. Tahara, S. Kawano (Osaka Univ.), Japan 09:40-10:00 2006-b-41 Performance of an MPD Thruster with a Laval-type Magnetic Nozzle K. Hattori, T. Komagome, A. Ando, M. Inutake (Tohoku Univ.), Japan 10:00-10:20 2006-b-42 Magnetic Nozzle Acceleration in a Fast-flowing Plasma for the VASIMR Thruster A. Ando, M. Shibata, Y. Kasashima, K. Hattori (Tohoku Univ.) et.al., Japan 10:20-10:40 2006-b-43 A Performance Study of MHD Accelerator with Chemical Nonequilibrium Air Plasma T. Hardianto, N. Sakamoto, J. Kondo, N. Harada (Nagaoka Univ. of Technology), Japan 10:40-11:00 2006-b-44 Efficiency Analysis of a Diagonal MHD Accelerator M. Anwari (Univ. of Tanjungpura), N. Harada (Nagaoka Univ. of Technology), Indonesia 11:00-11:20 2006-b-45 Study of Electrodeless Plasma Production and Electromagnetic Acceleration K. Toki (Tokyo Univ. of Agriculture and Technology), S. Shinohara (Kyushu Univ.), T. Tanikawa (Tokai Univ.), T. Hada (Kyushu Univ.) et.al., Japan	09:00-9:20 2006-a-42 Combustion Tests in a Small Hydrogen-Fueled Reversed-Flow Combustor for Hypersonic Flight Experiments K. Okai, K. Shimodaira, Y. Kurosawa, H. Taguchi (JAXA) et.al., Japan 09:20-9:40 2006-a-43 Design Study on Pre-Cooled Turbojet Engines for Hypersonic Airplanes H. Taguchi, T. Kojima, K. Fujita, H. Kobayashi (JAXA) et.al., Japan 09:40-10:00 2006-a-44 A Comparison of Precooled Expander Cycle Jet Engines for Space Planes T. Sato, H. Kobayashi (JAXA), M. Hemsell (Univ. of Bristol), Japan 10:00-10:20 2006-a-45 Evaluate of Boundary Layer Introduced Streamwise Vortices in Scramjet Combustor Using Quantitative Schlieren Method S. Sakaue, T. Arai, T. Morisaki (Osaka Prefecture Univ.), T. Sunami (JAXA) et.al., Japan

June/8th (Thu) AM(1)

Session c-5 at Room E Environment Test	Session f-1 at Room F Small Satellite (1)	Session r-3-1 at Room G Space Law and Policy
Chairperson :T. Ogasawara (JAXA) T. Yokozeki (JAXA)	Chairperson :K. Ui (JAXA/ISAS) S. Hagino (NEC TOSHIBA Space Systems)	Chairperson :T. Kosuge (DHW) M. Sato (JAXA)
09:00-9:20 2006-c-20 IN ORBIT TEST RESULT OF SMART RADI- ATION DEVICE Y. Nakamura, A. Okamoto (NEC TOSHIBA Space Systems, Ltd.), S. Tachikawa, A. Ohnishi (ISAS/JAXA) et.al., Japan 09:20-9:40 2006-c-21 Bearing Test for Mirror Support Mechanism of Space Infrared Telescope - Evaluation of Hy- brid Ball Bearing Characteristics in Cryogenic Environment - M. Haruna, M. Tabata, T. Oshima (MITSUBISHI ELECTRIC CORPORATION), T. Onaka (Tokyo Univ.) et.al., Japan 09:40-10:00 2006-c-22 SM/SEED FLIGHT EXPERIMENTAL RE- SULTS ON MOLYBDENUM DISULFIDE- BASED SOLID LUBRICANTS M. Tagawa, M. Tagawa, H. Asada, K. Yokota (Kobe Univ.) et.al., Japan 10:00-10:20 2006-c-23 Comparative Study of Polyimide and FEP on the Simultaneous Exposure Effects of Atomic Oxygen and Ultraviolet K. Yokota, K. Yokota (Kobe Univ.), A. Okamoto (Technology Research Institute of Osaka Prefecture), M. Tagawa (Kobe Univ.), Japan	09:00-9:20 2006-f-01 On-orbit Performance of the REIMEI Satellite with Integrated Computer System and Intro- duction to Its Flexible Operation S. Fukuda, T. Mizuno, S. Sakai, Y. Fukushima (ISAS/JAXA) et.al., Japan 09:20-9:40 2006-f-02 Development and On-Orbit Results of Minia- ture Space GPS Receiver by means of Automobile-Navigation Technology H. Saito, T. Mizuno, K. Kawahara, K. Shinkai (ISAS/JAXA) et.al., Japan 09:40-10:00 2006-f-03 Development and On-Orbit Results of Solar Concentrated Paddles with Thin Film Reflec- tor H. Saito, N. Okuizumi, K. Tanaka, M. Mita (ISAS/JAXA) et.al., Japan 10:00-10:20 2006-f-04 The Flight and Ground Test Data of the Lithium-Ion Secondary Battery of 'REIMEI' Y. Sone, M. Uno (JAXA), Y. Takeda (Advanced En- gineering Services), K. Tanaka (JAXA) et.al., Japan 10:20-10:40 2006-f-05 Magnetic Moment Measurement and Demagne- tization of Piggyback Satellite H. Shirasawa, H. Takahashi, F. Tohyama (Tokai Univ.), T. Mizuno (JAXA) et.al., Japan	10:50-11:10 2006-r-3-01 Study on Legal Implication of JAXAs Long Term Vision (JAXA 2005) S. Morikawa (JAXA), Japan 11:10-11:30 2006-r-3-02 Survey on Patent Applications for Medical Treatment on Space Engineering Field Y. Tomioka, A. Naoki, K. Takehi (Office Tomioka), I. Nakajima (Tokai Univ. School of Medicine) et.al., Japan 11:30-11:50 2006-r-3-03 GNSS AND SPACE SECURITY Y. Takaya-umehara (IDEST, Paris XI Univ.), Japan

Session k-1 at Room H	
Lunar & Martian Exploration (1)	
Chairperson :H. akiyama (Akita Univ.) A. Toigo (Kobe Univ.)	
09:00-9:20	2006-k-01
Low energy charged particle measurement by Japanese lunar orbiter SELENE	
Y. Saito, S. Yokota, K. Asamura, T. Mukai (ISAS/JAXA), Japan	
09:20-9:40	2006-k-02
Gamma-Ray Observation to Globally Map Chemical Composition of the Lunar Surface by SELENE	
O. Okudaira, N. Hasebe, T. Miyachi, N. Yamashita (Waseda Univ.) et.al., Japan	
09:40-10:00	2006-k-03
Simulation toward Development of a New Gamma-ray Imaging Spectrometer	
M. Mimura, M. Mimura, N. Hasebe, T. Hosojima (Waseda Univ.) et.al., Japan	
10:00-10:20	2006-k-04
Improvement of the Lunar Gravity Field Map using Three Orbiter of SELENE	
T. Iwata (JAXA), N. Namiki (Kyushu Univ.), H. Noda, H. Hanada (National Astronomical Observatory) et.al., Japan	
10:20-10:40	2006-k-05
Same-Beam Differential VLBI Using Two Satellites of SELENE	
Q. Liu, Q. Liu, F. Kikuchi, K. Matsumoto (National Astronomical Observatory of Japan) et.al., Japan	

June/8th (Thu) AM(2)

Session d-10 at Room B Deep Space Navigation	Session b-10 at Room C Magneto Plasma Sails and Electrodynamic Tethers	Session a-10 at Room D Air Breathing Engine II(Scramjet)
Chairperson :L.A. Changahuala (NASA/JPL) M. Horii (JAXA/OSFO)	Chairperson :K. Toki (Tokyo Univ. of Agriculture and Tech.) M. Okada (National Inst. of Polar Research)	Chairperson :C. Bruno (Univ. of Rome) T. Sato (JAXA)
10:50-11:10 2006-d-49 A Global Approach to Delta Differential One-way Range J. S Border (JPL), USA	11:30-11:50 2006-b-46 Innovative Interplanetary Transportation System Using Electrodynamic Tether and Magnetic Coil (Mag-Tether) Y. Yamagiwa, S. Watanabe, K. Katanagi, H. Otsu (Shizuoka Univ.), Japan	10:30-10:50 2006-a-46 Transition of Combustion Modes in a Scramjet Engine T. Kouchi, T. Mitani, S. Tomioka, S. Ueda (JAXA), Japan
11:10-11:30 2006-d-50 Use of Very Long Baseline Array Interferometric Data for Spacecraft Navigation T. J Martin-mur, P. Antreasian, J. Border (JPL, California Institute of Technology), J. Benson (National Radio Astronomy Observatory) et.al., USA	11:50-12:10 2006-b-47 MHD Analysis of Magnetosphere around Magneto Plasma Sail H. Nishida (Tokyo Univ.), H. Ogawa, I. Funaki, Y. Inatani (ISAS/JAXA), Japan	10:50-11:10 2006-a-47 Scramjet Characteristics at Hypervelocity Condition over Mach 10 Flight - Application of a Diverging Combustor M. Takahashi, T. Komuro, K. Sato, M. Kodera (JAXA Kakuda Space Center) et.al., Japan
11:30-11:50 2006-d-51 Nonlinear Consider Covariance Techniques for Interplanetary Aeromaneuver Navigation, Using a Sigma-point Filter Formulation M. E Lisano (JPL, California Institute of Technology), USA	12:10-12:30 2006-b-48 Numerical Simulation of Magneto Plasma Sail by Using Three-Dimensional Hybrid Code Y. Kajimura, Y. Kajimura, D. Shinohara, K. Noda (Kyushu Univ.) et.al., Japan	11:10-11:30 2006-a-48 Performance Comparison of Combined Fuel Injection Methods in a Staged-Combustion Scramjet Engine S. Ueda, S. Tomioka, T. Kouchi, K. Kobayashi (JAXA) et.al., Japan
11:50-12:10 2006-d-52 Rosetta navigation at its first Earth swing-by T. A Morley, F. Budnik (ESA/ESOC), Germany	12:30-12:50 2006-b-49 Simulation of Magnetic Field Inflation by Injected Plasma in Magneto Plasma Sail by Using Three-Dimensional Hybrid Code K. Noda, Y. Kajimura, D. Shinohara, H. Nakashima (Kyushu Univ.), Japan	11:30-11:50 2006-a-49 Numerical Simulation of Scramjet Engine at Hypervelocity Conditions M. Kodera, M. Takahashi, K. Itoh (JAXA), Japan
12:10-12:30 2006-d-53 Stardust and Genesis: Interplanetary Sample Return Missions and Flight Experience K. Williams, G. Carlisle (JPL/Caltech), USA		

June/8th (Thu) AM(2)

Session c-6 at Room E Composites	Session f-2 at Room F Small Satellite (2)	Session k-2 at Room H Lunar & Martian Exploration (2)
Chairperson :L. Scatteia (CIRA) Y. Okabe (Tokyo Univ.)	Chairperson :H. Sato (JAXA) T. Mizuno (JAXA)	Chairperson :T. Iwata (JAXA) R.K. Fisackerty (ESA)
10:30-10:50 2006-c-24 Application of Composite Sandwich Structure to Payload Fairing C. Kong, J. Lee, Y. Jang, Y. Yi (Korea Aerospace Research Institute) et.al., Republic of Korea 10:50-11:10 2006-c-25 Boss Design of Aluminum Liner for Filament-Wound Composite Pressure Vessel Considering Weight Reduction J. Hoon Yoon, J. Sung Park, Y. Soon Jang, Y. Moo Yi (KARI), Republic of Korea 11:10-11:30 2006-c-26 Characterization of Mechanical Properties of Polymer Films for Cryogenic Composite Tank Application T. Yokozeki (IAT/JAXA), T. Yamagata (Aoyama Gakuin Univ.), T. Ogasawara (Institute of Aerospace Technology, JAXA), Japan 11:30-11:50 2006-c-27 Numerical Simulations of Delamination Propagation in CFRP Structures N. Hu, Y. Zemba, H. Fukunaga (Tohoku Univ.), Japan	10:50-11:10 2006-f-06 Micro-platform of spacecraft-GC G. Xiao-chun Gong, X. Guo-dong Xu, W. Feng Wang, W. Guo-qiang Wu (Harbin Institute of Technology), China 11:10-11:30 2006-f-07 Technology Demonstration Results on University of Tokyo's Pico-Satellite R. Funase, Y. Nakamura, M. Nagai, N. Sako (Tokyo Univ.) et.al., Japan 11:30-11:50 2006-f-08 Development and Flight Report of Pico-Satellite Cute-1.7 + APD N. Miyashita, N. Miyashita, K. Konoue, K. Omagari (Tokyo Institute of Technology) et.al., Japan 11:50-12:10 2006-f-09 About Nano-satellite for Infrared Astrometry (Nano-JASMINE) Project N. Sako, Y. Hatsutori, T. Tanaka, S. Nakasuka (Tokyo Univ.), Japan 12:10-12:30 2006-f-10 Intelligent Thermal Control and Design of Nano-Satellites T. Tanaka (Tokyo Univ.), Japan	10:50-11:10 2006-k-06 Design and Test of Altitude Measurement for Planetary Landing Radar T. Sakai, S. Fukuda (JAXA), T. Sato (Tokyo Univ. of Science), H. Tomita (HIM Technology) et.al., Japan 11:10-11:30 2006-k-07 Present status of the development of the LUNAR-A penetrator S. Tanaka, H. Shiraishi, A. Fujimura, K. Uesugi (ISAS/JAXA), Japan 11:30-11:50 2006-k-08 Characteristics of the seismometer onboard LUNAR-A penetrator R. Yamada (ISAS/JAXA), I. Yamada (Nagoya Univ.), H. Shiraishi, S. Tanaka (ISAS/JAXA) et.al., Japan 11:50-12:10 2006-k-09 Terramechanics-Based Analysis on Slope Traversability for a Planetary Exploration Rover G. Ishigami, A. Miwa, K. Nagatani, K. Yoshida (Tohoku Univ.), Japan 12:10-12:30 2006-k-10 Design and Mobility Evaluation of a Lunar Vehicle using Mesh Crawler S. Wakabayashi, K. Matsumoto (IAT/JAXA), Japan

Session o-3-1 at Room A Small Satellite Applications to Observation Chairperson :H. Okubo (Osaka Pref. Univ.) F. Terui (JAXA/IAT)	Session d-11 at Room B Satellite Orbit Determination Chairperson :J. Foliard (CNES) M. Horii (JAXA/OSFO)	Session k-3 at Room C Lunar & Martian Exploration (3) Chairperson :T. Iwata (JAXA) H. Akiyama (Akita Univ.)
13:30-14:00 2006-o-3-01v VHF Broadband Digital Interferometer on a Small Satellite Z. Kawasaki, T. Morimoto, T. Ushio (Osaka Univ.), Japan 14:00-14:30 2006-o-3-02v A small satellite for global imaging observation of the ionosphere-thermosphere-mesosphere-plasmasphere A. Saito (Kyoto Univ.), M. Working group (MTI satellite working group), Japan 14:30-15:00 2006-o-3-03v Monitoring Earth's environments with GPS receiving system and micro accelerometer on low Earth orbiting satellites T. Tsuda, Y. Fukuda (Kyoto Univ.), A. Araya (Univ. Tokyo), A. Saito (Kyoto Univ.) et.al., Japan 15:00-15:30 2006-o-3-04v Advanced Remote Sensing Concept by Small Satellites Constellation N. Miyamura (Tokyo Univ.), Japan	13:30-13:50 2006-d-54 Precise Orbit Determination for ADEOS-II S. Nakamura, N. Kudo (JAXA), Y. Yamamoto (Fujitsu Ltd), O. Montenbruck (DLR, GSOC), Japan 13:50-14:10 2006-d-55 Precise Orbit Determination for GRACE-B N. Kudo, S. Nakamura (JAXA), S. Katagiri (Fujitsu Limited), Japan 14:10-14:30 2006-d-56 Evaluating Interferometric Baseline Performances in a Close Formation Flight by Using Relative GRACE GPS Navigation Solutions A. O Kohlhasse (DLR), R. Kroes (TU Delft), S. Damico (DLR), Germany 14:30-14:50 2006-d-57 Precise Maneuver Calibration for Remote Sensing Satellites Y. T Yoon, O. Montenbruck, M. Kirschner (DLR/GSOC), Germany 14:50-15:10 2006-d-58 Precise Orbit Determination for the TerraSAR-X Mission O. Montenbruck, Y. Yoon, E. Gill, M. Garcia-fernandez (DLR/GSOC), Germany 15:10-15:30 2006-d-59 Overview of Orbit Determination Experiments using Satellite-to-Satellite Tracking Data via the DRTS M. Ogawa, S. Taniguchi, M. Saitoh (JAXA), S. Kawazoe (FUJITSU Ltd) et.al., Japan	13:30-13:50 2006-k-11 Investigations of ILOM Project - In situ Lunar Orientation Measurement by PZT telescope on the Moon H. Araki, H. Hanada, H. Noda, K. Matumoto (NAO) et.al., Japan 13:50-14:10 2006-k-12 Energy for the moon explorations M. Oda (IAT/JAXA), Japan 14:10-14:30 2006-k-13 Extensions of NASAs Exploration Architecture: Performance Capabilities and Market Economics of a Lunar Propellant Production Facility A. Charania (SEI), H. Kanamori (Shimizu Corporation), USA 14:30-14:50 2006-k-14 Research Issues on Mars Exploring Micro Plane Using Energy Transmisson K. Yonemoto (Kyushu Institute of Technology), Japan 14:50-15:10 2006-k-15 The Mars Water Experiment A. Toigo (Kobe Univ.), M. Richardson, I. Mcewan (California Institute of Technology), D. Banfield (Cornell Univ.), Japan

Session a-11 at Room D Combined Cycle Engine	Session c-7 at Room E High Temperature Materials	Session f-3 at Room F Spacecraft and Space Station (1)
Chairperson :H. Nagata (Hokkaido Univ.) T. Arai (Osaka Pref. Univ.)	Chairperson :M. Tagawa (Kobe Univ.) S. Sugimoto (JAXA)	Chairperson :M. Lauer (ESA/ESOC/OPS/-GFI) K. Kimura (NICT)
13:30-13:50 2006-a-50 Numerical Investigation of Flow Structures in Constant Area Mixers for Ejector-jets E. Kitamura, G. Masuya (Tohoku Univ.), Japan	13:30-13:50 2006-c-28 Current Status of The Development of Hot Structures Based on Ultra High Temperature Ceramic Materials Within The PRORA-USV SHS Project L. Scatteia, A. Del vecchio, G. Marino (CIRA - Italian Aerospace Research Centre), R. Savino (Department of Space Science and Engineering (DISIS) Univ. of Naples "Federico II", ITALY), Italy	13:30-13:50 2006-f-11 Engineering Research for New Tethered Solar Power Satellite S. Sasaki, K. Tanaka, K. Higuchi, N. Okuizumi (JAXA) et.al., Japan
13:50-14:10 2006-a-51 Aerodynamic Performance of the Combined-Cycle Engine Inlet in a Supersonic Region K. Tani, T. Kanda, K. Kato, N. Sakuranaka (JAXA) et.al., Japan	13:50-14:10 2006-c-29 Effects of Microstructural Characteristics on Tensile Properties of Unidirectional SiC/SiC Composites M. Kotani, T. Ogasawara, T. Ishikawa, H. Hatta (JAXA), Japan	13:50-14:10 2006-f-12 Ground Control of Remote Synchronization System for Onboard Crystal Oscillators of Quasi-Zenith Satellites T. Iwata (AIST), N. Takasaki (Tokyo Univ.), M. Imae (AIST), A. Iwasaki (Tokyo Univ.) et.al., Japan
14:10-14:30 2006-a-52 Computational Analysis of the Ejector-jet-Mode of RBCC Engine S. Hasegawa, K. Tani (JAXA), Japan	14:10-14:30 2006-c-30 Gas Leakage Properties of Two Dimensional Carbon/Carbon Composites Processed by Leakage Suppression Treatment F. Ono, S. Ueda, M. Takegoshi (JAXA), Japan	14:10-14:30 2006-f-13 Quasi-real-time Signal Delay Estimation of Remote Synchronization System for Onboard Crystal Oscillators N. Takasaki, A. Iwasaki (Tokyo Univ.), T. Iwata, M. Imae (AIST) et.al., Japan
14:30-14:50 2006-a-53 Preliminary Tests of Downstream Combustion Ramjet-mode in a Combined Cycle Engine Combustor K. Kato, T. Kanda, K. Kobayashi, K. Kudo (JAXA) et.al., Japan	14:30-14:50 2006-c-31 Processing and properties of high temperature composites using superior polyimide "Tri-A PI" T. Ogasawara, Y. Ishida, R. Yokota (JAXA), T. Watanabe (Kawasaki Heavy Industries) et.al., Japan	14:30-14:50 2006-f-14 Development of Inter-Satellite Communication System for Formation Flight SCOPE Mission T. Toda, Y. Saito, Y. Tsuda, I. Shinohara (ISAS/JAXA) et.al., Japan
14:50-15:10 2006-a-54 Progress of Scramjet and Combined-Cycle Engine Research at JAXA T. Kanda (JAXA), Japan	14:50-15:10 2006-c-32 On the challenges in the analysis of structures of functionally graded materials for space applications R. P. Shimpi (I.I.T. Bombay, India), India	14:50-15:10 2006-f-15 The worst case is studied for the projective advanced M. Yukizane, H. Fujii, H. Takikawa, T. Watanabe (Tokyo Metropolitan Univ.), Japan

June/8th (Thu) PM(1)

Session r-1-1 at Room G Solar Power System	Session h-6 at Room H Combustion and Synthesis
Chairperson :F. Little (Texas A&M) H. Brandhorst (Arburn Univ.)	Chairperson :M. Tsue (Tokyo Univ.) H. Nomura (Nihon Univ.)
13:30-13:50 2006-r-1-01 The Concept of Solar Power Satellites: Past, Present and Future J. C Mankins (Artemis Innovation Management Solutions LLC), USA	13:30-13:50 2006-h-23 Microgravity Experiments of Flame Spread Behavior Along a Fuel Droplet Array in Fuel Vapor-Air Mixture Y. Suganuma, H. Nomura, Y. Ujiie (Nihon Univ.), M. Mikami (Yamaguchi Univ.), Japan
13:50-14:10 2006-r-1-02 European steps towards solar power satellites L. Summerer, T. Reunes (ESA), Netherlands	13:50-14:10 2006-h-24 A Study on Flame Spread in Two-dimensional Droplet Clouds considering Local Flame-spread Limit H. Shigeno, H. Shigeno, H. Oyagi, M. Mikami (Yamaguchi Univ.) et.al., Japan
14:10-14:30 2006-r-1-03 Summary of Studies on Space Solar Power Systems of Japan Aerospace Exploration Agency(JAXA) M. Masahiro, F. Tatsuhito, S. Yuka (JAXA), Japan	14:10-14:30 2006-h-25 Ignition of Solid Fuels at Low Pressure Y. Nakamura, A. Aoki (Hokkaido Univ.), Japan
14:30-14:50 2006-r-1-04 Roadmap for SSPS Technology R&D H. Nagayama (Mitsubishi Research Institute, Inc.), T. Fujita, Y. Saito, M. Mori (JAXA), Japan	14:30-14:50 2006-h-26 Effects of DC Electric Fields on Combustion Behavior of Droplet Pairs under Microgravity K. Yamashita, O. Imamura, I. Kume, J. Osaka (Tokyo Univ.) et.al., Japan
14:50-15:10 2006-r-1-05 International Rocket Experiment on the Retrodirective Antenna for Microwave Power Transmission with Furoshiki Deployment N. Kaya, N. Kaya, M. Iwashita (Kobe Univ.), S. Nakasuka (Tokyo Univ.) et.al., Japan	14:50-15:10 2006-h-12 Study on characteristics of thermo-acoustic streaming by microgravity experiment and numerical simulation Y. Yamauchi, T. Kuwahara, M. Tanabe (Nihon Univ.), Japan
15:10-15:30 2006-r-1-06 High-Voltage High-Energy Stretched Lens Array Square-Rigger (SLASR) for Direct-Drive Solar Electric Propulsion J. Howell (NASA), M. J. O'neill (ENTECH, Inc.), J. C. Mankins (Artemis Innovation Management Solutions, LLC), USA	

Session o-3-2 at Room A Small Satellite Uses and Evolution	Session d-12 at Room B Attitude Dynamics and Control	Session k-4 at Room C Atomospheric & Plasma Exploration
Chairperson :T. Tsuda (Kyoto Univ.) S Nishida (JAXA/IAT)	Chairperson :F. Terui (JAXA/IAT) J. Fertig (ESA/ESOC)	Chairperson :M. Hirahara (Rikkyo Univ.) Y. Takahashi (Tohoku Univ.)
15:40-16:10 2006-o-3-05v Possibility of small satellite in on-orbit servicing and demonstration experiments on SmartSat-1 S. Kimura, S. Kimura, Y. Nagai, H. Yamamoto (NICT) et.al., Japan	15:40-16:00 2006-d-60 On Attitude Dynamics of Spin-stabilized satellite Y. V Kim (CSA), Canada	15:40-16:00 2006-k-17 Orbital Characteristics of Venues Exploring Mission, PLANET-C N. Ishii, H. Yamakawa (JAXA), M. Kimura (NEC Toshiba Space Systems, Ltd), M. Nakamura (JAXA) et.al., Japan
16:10-16:40 2006-o-3-06v Activities of Small Spacecraft Systems Research Center and on-going Projects H. Okubo, H. Azuma (Osaka Prefecture Univ.), Japan	16:00-16:20 2006-d-61 Nonlinear Adaptive Control for Stabilizing Spacecraft System at Capturing Phase T. Kida, A. Ito, Y. Ikeda, T. Nagashio (Univ. of Electro-Communications), Japan	16:00-16:20 2006-k-18 Space telescope in Earth orbit for planetary science: TOPS mission Y. Takahashi, Y. Takahashi, T. Sakanoi, A. Yamazaki (Tohoku Univ.) et.al., Japan
16:40-17:10 2006-o-3-07v A Small Satellite Platform for Technology Demonstration M. Kato, M. Kato, S. Okada, H. Imamura (JAXA) et.al., Japan	16:20-16:40 2006-d-62 Robust Gain-Scheduling Attitude Control of Time Varying Flexible Spacecraft - A Case Study of ETS-VIII T. Ohtani, Y. Hamada (JAXA), T. Nagashio, T. Kida (Univ. of Electro-Communications), Japan	16:20-16:40 2006-k-19 SCOPE : FUTURE FORMATION-FLYING MAGNETOSPHERIC SATELLITE MISSION Y. Saito, T. Takashima, K. Maezawa (ISAS/JAXA), M. Fujimoto (Tokyo Institute of Technology) et.al., Japan
17:10-17:40 2006-o-3-08v Space Debris Removal by A Small Satellite S. Nishida, S. Kawamoto, Y. Ohkawa, F. Terui (JAXA) et.al., Japan	16:40-17:00 2006-d-63 Optimization for Reaction-Wheel Configuration T. Nishiyama, S. Yoshikawa (Mitsubishi Electric Corporation), K. Yamada (Nagoya Univ.), Japan	16:40-17:00 2006-k-20 BepiColombo Mission and Mercury Magnetospheric Orbiter H. Hayakawa, H. Yamakawa, H. Ogawa, Y. Sone (JAXA) et.al., Japan
	17:00-17:20 2006-d-64 Spacecraft Attitude Control Using a Double Gimbal Control Moment Gyro K. Yamada (Nagoya Univ.), T. Shima (Mitsubishi Electric Corporation), Japan	17:00-17:20 2006-k-21 BepiColombo Project to Mercury: Its Payload and Technologies Y. Kasaba, T. Takashima, H. Hayakawa, T. Mukai (ISAS/JAXA) et.al., Japan
	17:20-17:40 2006-d-65 Routine and Contingency Attitude Manoeuvr Planning for the PLANCK Mission A. J c Mcdonald (LogicaCMG), G. Gienger (ESA), Germany	17:20-17:40 2006-k-22 Wide range temperature characteristics of Fluxgate Magnetometer Sensor for Bepi-Colombo MMO Y. Nishio, U. Mizuo, M. Tanaka, F. Tohyama (Tokai Univ.) et.al., Japan

June/8th (Thu) PM(2)

Session e-1 at Room D Jets and Shock Waves	Session c-8 at Room E Health Monitoring & NDE	Session f-4 at Room F Spacecraft and Space Station (2)
Chairperson :K. Suzuki (Tokyo Univ.) T. H. Moulden (Univ. of Tennessee Space Inst.)	Chairperson :S. Ueda (JAXA) C-W. Kong (KARI)	Chairperson :S. Fukuda (JAXA) K. Tanaka (JAXA)
15:20-15:402006-e-01 Numerical Simulation of Shock-Induced Motion of Solid Bodies using a Cartesian Cut Cell Method Y. Sakamura, Y. Umebayashi, K. Nakayama, T. Suzuki (Toyama Pref. Univ.), Japan	15:20-15:402006-c-33 Smart Honeycomb Sandwich Panels with Damage Detection and Shape Recovery Functions Y. Okabe (Tokyo Univ.), S. Minakuchi, N. Shiraishi, N. Takeda (Graduate School of Frontier Sciences, Tokyo Univ.), Japan	15:20-15:402006-f-16 The ATV JULES VERNE mission overview L. Francillout, T. Martin, D. Carbonne, P. Labourdette (CNES) et.al., France
15:40-16:002006-e-02 Performance of straight and slanted entry nozzles R. Ethirajan (IIT Kanpur), S.C. Kumar, S. Elangovan, A.J. Stanley (MIT Chennai) et.al., India	15:40-16:002006-c-34 Monitoring of Crack Progress in Composite Adhesive Joints using FBG Sensors S. Takeda, T. Yokozeki, T. Ogasawara (JAXA), Japan	15:40-16:002006-f-17 THE ATV opportunities and CAM demo computation S. Kerambrun (AtosOrigin), T. Martin, L. Francillout (CNES), E. De pasquale (ESA) et.al., France
16:00-16:202006-e-04 Utilization of swirling effect to improve the performance of supersonic nozzle for micro-particle delivery Y. Liu, G. Costigan (Univ. of Oxford), UK	16:00-16:202006-c-35 Development of Air-Coupled Ultrasonic Scanner for Nozzle and Tank Shape Composites S. Sugimoto, T. Ishikawa (JAXA), Y. Shinagawa, T. Ogiwara (Gnes Corporation), Japan	16:00-16:202006-f-18 Omnidirectional Vision System for Spacecraft On-Orbit Monitoring A. Takeya, K. Yamada, S. Matsuoka (Mitsubishi Electric Corporation), K. Ijichi (Institute for Unmanned Space Experiment Free Flyer) et.al., Japan
	16:20-16:402006-c-36 Development of Spherical Ti-6Al-4V Tank by Superplastic Blow Forming and Diffusion Bonding Y. Yi, J. Yoon, H. Lee (KARI), Republic of Korea	16:20-16:402006-f-19 Contact Dynamics Analysis of a Spacecraft in Micro Gravity with an Air-floating Test Bed H. Nakanishi, D. Tanaka, K. Yoshida (Tohoku Univ.), Japan
	16:40-17:002006-c-37 Experimental Impact Force Identification of CFRP Structures Using Strain Sensors H. Fukunaga, H. Miyazawa, N. Hu (Tohoku Univ.), Japan	16:40-17:002006-f-20 Vibration Propagation Suppression of Spacecraft using Piezoelectric Sensors and Actuators Y. Il Yun, S. Nakasuka (Tokyo Univ.), Japan
		17:00-17:202006-f-21 Hierarchical Self-Assembly Planning of Modular Structure Systems K. Ukegawa, M. Natori (ISAS/JAXA), Japan

Session r-1-2 at Room G ISS and Space Exploration	Session h-7 at Room H Materials Processing and Crystal Growth
Chairperson :L. Summerer (ESTEC) J. Howell (NASA)	Chairperson :G. Sazaki (Tohoku Univ.) Y. Jianding (JAXA)
16:00-16:20 2006-r-1-24 A Wireless Power Based Space Transportation System F. E Little (Texas A&M Univ.), USA	15:40-16:00 2006-h-29 Fabrication of Ferroelectric Oxide Glass using Containerless J. Yu, Y. Arai, S. Yoda (JAXA), Japan
16:20-16:40 2006-r-1-08 Observation of High Energy Electrons and Gamma-rays with CALET at the JEM/ISS T. Tamura (Kanagawa Univ.), S. Torii (Waseda Univ.), J. Nishimura, T. Yamagami (ISAS/JAXA) et.al., Japan	16:00-16:20 2006-h-30 Growth of Ferroelectric Oxide Crystal using Containerless Processing H. Masukuni, T. Motegi (Chiba Institute of Technology), J. Yu, Y. Arai (JAXA) et.al., Japan
16:40-17:00 2006-r-1-09 ORGANIZATION AND FUNCTION OF INTERNATIONAL SPACE STATION (ISS) MULTILATERAL MEDICAL OPERATIONS J. Michael Duncan (NASA Lyndon B. Johnson Space Center), A. E. Sargsyan (Wyle Laboratories, Life Sciences Group), T. A. Taddeo (NASA Lyndon B. Johnson Space Center), P. Vernon McDonald (Wyle Laboratories, Life Sciences Group) et.al., USA	16:20-16:40 2006-h-31 Utilization of chemical fixation and fluorescence labeling techniques on protein crystal growth studies I. Yoshizaki (JAXA), Y. Iimura, S. Fukuyama (Advanced Engineering Services Co., Ltd.), L. Rong (JAXA) et.al., Japan
17:00-17:20 2006-r-1-10 Polar Region Exploration for International Lunar Base K. Matsumoto, M. Oda, S. Wakabayashi, S. Kawamoto (IAT/JAXA) et.al., Japan	16:40-17:00 2006-h-32 Molecular level in situ observations of the impurity effects on the growth of protein crystals by advanced optical microscopy G. Sazaki (Institute for Materials Research, Tohoku Univ.), A. Vandrissche (Laboratorio de Estudios Cristalograficos, Instituto Andaluz de Ciencias de la Tierra), G. Dai (National Microgravity Laboratory, Chinese Academy of Sciences), I. Yoshizaki (ISS science project office, JAXA) et.al., Japan
17:20-17:40 2006-r-1-11 Planetary Defense Using Extensions of NASAs Exploration Architecture A. Charania, J. Wallace (SpaceWorks Engineering, Inc. (SEI)), USA	17:00-17:20 2006-h-33 JAXA-GCF Project — High-quality Protein Crystals Grown under Microgravity Environment for Better Understanding of Protein Structure M. Motohara, M. Sato (JAXA), H. Tanaka (Japan Space Forum), K. Inaka (Maruwa Food Industries, Inc) et.al., Japan
17:40-18:00 2006-r-1-23 Update for the Stretched Lens Array SquareRigger (SLASR) for Space H. W. Brandhorst (Auburn Univ.), M. J. O'neill (ENTECH, Inc.), USA	17:20-17:40 2006-h-34 PLATE-SHAPED In_{0.3}Ga_{0.7}As CRYSTALS GROWN BY THE TRAVELING LIQUIDUS ZONE METHOD WITH REDUCED CONVECTION IN A MELT K. Kinoshita, Y. Ogata (JAXA ISS Science Project Office), S. Adachi (Advanced Engineering Services Co. Ltd.), S. Yoda (JAXA ISS Science Project Office) et.al., Japan

June/9th (Fri) AM(1)

Session d-13 at Room B Trajectory Design around Lagrange Point	Session k-5 at Room C Minor Bodies & Deep Space Exploration (1)	Session e-2 at Room D Low Speed Aerodynamics and Turbulence
Chairperson :J. Kawaguchi (JAXA/ISAS) L.A. Canghualala (NASA/JPL)	Chairperson :O. Mori (JAXA) D. Izzo (ESA/ESTEC)	Chairperson :Y. Sakamura (Toyama Pref. Univ.) H. Kihara (Kyushu Univ.)
09:00-9:20 2006-d-66 Optimization of Trajectories from Earth to L2 S. Aida (Tokyo Univ.), Y. Kawakatsu, J. Kawaguchi (JAXA), Japan 09:20-9:40 2006-d-67 Fuel optimal transfer to small amplitude Lisajous orbits around the L2 Libration point J. Schoenmaekers (ESA/ESOC), M. Lorenzo-barreiro (SSL), J. Pulido-cobo (GMV), Germany 09:40-10:00 2006-d-68 Preliminary Analysis of Low Energy Interplanetary Transfer with Multi-impulse Escape M. Nakamiya (Sokendai Univ.), H. Yamakawa (JAXA), Japan 10:00-10:20 2006-d-69 On the Interplanetary Flight from the Sun-Earth L2 Point M. Matsumoto (Tokyo Univ.), J. Kawaguchi (ISAS/JAXA), Japan 10:20-10:40 2006-d-70 Stable Periodic Orbits with Low Thrust Acceleration in the Restricted Three Body Problem M. Morimoto (National Astronomical Observatory), H. Yamakawa, K. Uesugi (JAXA), Japan	09:00-9:20 2006-k-23 Scientific Results on Asteroid 25143Itokawa Observed by Hayabusa Spacecraft A. Fujiwara, J. Kawaguchi (JAXA), D. K. Yeomans (JPL/NASA), M. Abe (JAXA) et.al., Japan 09:20-9:40 2006-k-24 LIDAR for Asteroid Explore HAYABUSA - Development and On Orbit Evaluation - T. Mizuno (ISAS/JAXA), K. Tsuno, E. Okumura (NEC Toshiba Space Systems), M. Nakayama (Toshiba), Japan 09:40-10:00 2006-k-25 The Minor Body Sample Return Mission in the Post-Hayabusa Era M. Abe, H. Yano, T. Iwata, Y. Kawakatsu (ISAS/JAXA) et.al., Japan 10:00-10:20 2006-k-26 ESAs Don Quijote NEO mission: An opportunity for the investigation of an artificial impact crater on an asteroid A. Galvez (ESA), France 10:20-10:40 2006-k-27 Surface Science Package on rovers for micro-gravity target H. Demura (Univ. of Aizu), H. Naraoka (Okayama Univ.), H. Yano, T. Yoshimitsu (ISAS/JAXA) et.al., Japan	09:00-9:20 2006-e-05 Aerodynamic Characteristics of Non slender Flexible Delta Wing in Pitching Motion S. Kato, H. Kawazoe, M. Okano (Tottori Univ.), Japan 09:20-9:40 2006-e-06 CFD Design Study of Subsonic Landing Phase Aerodynamics for The Lifting Body Re-Entry Y. Yamamoto (JAXA), Japan 09:40-10:00 2006-e-07 Steady-state evaluation of two dimensional RANS equations in turbulence flow for NACA 4412 in ground effect with fixed and moving ground conditions A. Firooz (Internet), M. A Gadami (Internet), Iran 10:00-10:20 2006-e-08 Structure of the k-e Turbulence Model T. H Moulden (UTSI), USA

Session g-1 at Room E Mission and Design	Session r-1-3 at Room F Hokkaido Satellite Project	Session f-5 at Room G Ground Support System
Chairperson :D.A. Smith (Boeing co.) K. Mizobata (Muroran Inst. of Tech.)	Chairperson :N. Kamimori (JAXA) R. Suzuki (NICT)	Chairperson :T. Kato (JAXA) N. Nishigori (Fujitsu)
09:00-9:20 2006-g-01 A HYBRID LAUNCH SYSTEM FOR MICROSATELLITE PAYLOADS USING CAMUI HYBRID UPPERSTAGES WITH THE ROCKETPLANE XP	09:00-9:20 2006-r-1-12 Hokkaido satellite project: Business Model S. Satori (Hokkaido Institute of Technology), K. Ishimura, T. Totani (Hokkaido Univ.), S. Era (ATF Corporation) et.al., Japan	09:00-9:20 2006-f-22 Interoperability reduces cost and risk at Svalbard Satellite Station A. Jose Jensen (Kongsberg Satellite Services), R. Skatteboe, B. Pedersen (Kongsberg Satellite Services), Norway
09:20-9:40 2006-g-02 MANEUVER COMPUTATION AT ATV-CC J. Goester, J. Goester, J. Berges, D. Carbonne (CNES) et.al., France	09:20-9:40 2006-r-1-13 Hokkaido Satellite Project : System Design of a Engineering Test CubeSat K. Ishimura, T. Totani (Hokkaido Univ.), S. Era (ATF), A. Nakamura (AIDMA) et.al., Japan	09:20-9:40 2006-f-23 ON-GROUND SUPPORT TO THE MARS EXPRESS AND ROSETTA AOCs DURING SPECIAL OPERATIONS M. Lauer (ESA/ESOC/OPS-GFI), Germany
09:40-10:00 2006-g-03 Study of Space Transportation for Space Solar Power Systems S. Kitamura, Y. Ohkawa, H. Aoki (JAXA), Japan	09:40-10:00 2006-r-1-14 Hokkaido Satellite Project: Structural and Thermal Design of Engineering Test CubeSat T. Totani, T. Sakakibara (Hokkaido Univ.), T. Yasunaka (Uematsu Electric Co., Ltd.), K. Ishimura (Hokkaido Univ.) et.al., Japan	09:40-10:00 2006-f-24 Cortex - Experience With The Tracking Data System At ESOC/ESA G. Ziegler (EDS at ESOC/ESA), I. Munoz (GMV at ESOC/ESA), Germany
10:00-10:20 2006-g-04 Robust Optimal Design Method for Future Space Transportation Vehicle S. Imamura, T. Tsuchiya (Tokyo Univ.), Japan	10:00-10:20 2006-r-1-15 Hokkaido Satellite Project:Development of Magnetic Torquer for Engineering Test CubeSat Y. Aoyanagi, T. Iwamoto (Hokkaido Institute of Technology), K. Ishimura, T. Totani (Hokkaido Univ.) et.al., Japan	10:00-10:20 2006-f-25 Automatic Monitoring and Diagnostic System for Infrared Imaging Surveyor ASTRO-F R. Takaki, M. Hashimoto, H. Honda, A. Choki (JAXA) et.al., Japan
10:20-10:40 2006-g-05 Use of a Modular Multi-Disciplinary Optimization Tool to Design Space Exploration Vehicles S. Geoffrey Moon (UTIAS), Canada	10:20-10:40 2006-r-1-16 Hokkaido Satellite Project: Communication System T. Sato, R. Mitsunashi, S. Satori (Hokkaido Institute Of Technology), K. Ishimura (Hokkaido Univ) et.al., Japan	10:20-10:40 2006-f-26 Engineering Database for ISAS Spacecraft Operation Needs (EDISON) for Low Earth Orbit Satellites H. Honda, R. Takaki, M. Hashimoto, A. Choki (ISAS/JAXA) et.al., Japan
10:40-11:00 2006-g-06 Multidisciplinary Design Optimization for Hypersonic Experimental Vehicle T. Tsuchiya, Y. Takenaka (Tokyo Univ.), H. Taguchi (JAXA), Japan	10:40-11:00 2006-r-1-17 Hokkaido Satellite Project: Development of Hyperspectral Camera S. Ueno, S. Satori, R. Mitsunashi, R. Miura (Hokkaido Institute of Technology) et.al., Japan	

Session j-1 at Room H

Non-GEO Satellote (1)

Chairperson :T. Ikegami (Meiji Univ.)
R. Suzuki (NICT)

09:00-9:20 2006-j-01
**ELEMENTAL TECHNOLOGIES FOR REAL-
IZATION OF PANEL EXTENSION SATEL-
LITE (PETSAT)**

Y. Sugawara, S. Nakasuka, T. Eishima, H. Sahara
(Tokyo Univ.) et.al., Japan

09:20-9:40 2006-j-02
**THERMAL CONTROL OF PANEL EXTEN-
SION SATELLITE (PETSAT)**

K. Higashi (DaVinci Co.Ltd), S. Nakasuka, Y. Sug-
awara, H. Sahara (Tokyo Univ.) et.al., Japan

09:40-10:00 2006-j-03
**Optimization Study of Constellation Parame-
ters for LEO Satellite Communication System**

R. Suzuki (NICT), Y. Yasuda (Waseda Univ.), Japan

10:00-10:20 2006-j-05
**Research of Volatile Code Rate Inter-satellite
Communication System for Micro-satellite
Formation-flying Constellation**

G. Wu (Harbin Institute Technology Research Cen-
ter of Satellite Technology), Z. Sun, D. Zhao, Z. Liu
(Harbin Institute Technology Research Center of Satel-
lite Technology), China

Session d-14 at Room B Orbit Transfer	Session k-6 at Room C Minor Bodies & Deep Space Exploration (2)	Session e-3 at Room D High Speed and High Enthalpy Wind Tunnel Testing
Chairperson :N.M. Ivanov (RMCC) Y. Kawakatsu (JAXA/ISAS)	Chairperson :O. Mori (JAXA) D. Izzo (ESA/ESTEC)	Chairperson :K. Komurasaki (Tokyo Univ.) T. Yamada (JAXA/ISAS)
10:50-11:10 2006-d-71 An Approach for Computing Fixed-Time, Very Low-Thrust Orbit Transfers in Presence of J2 and Shadow Effects Y. Gao, X. Li (Academy of Opto-Electronics, Chinese Academy of Sciences), China 11:10-11:30 2006-d-72 Hybrid optimization algorithm for multi-revolution low-thrust transfers J. Gil, M. Molina, L. Tarabini, M. Graziano (GMV SA), Spain 11:30-11:50 2006-d-73 Optimal Low Thrust Rendezvous Trajectories Between Halo Orbits M. J Volle (a.i. solutions, Inc.), USA 11:50-12:10 2006-d-74 Considerations on Orbital Control of a Rigid Satellite System under Nonholonomic Constraint K. Fujita, S. Hokamoto (Kyushu Univ.), Japan 12:10-12:30 2006-d-75 Preliminary Trajectory Design of Laser-Propelled Space Vehicles H. Yamakawa, I. Funaki (JAXA), Japan	10:50-11:10 2006-k-28 Development of the Sampling Device for Undifferentiated Asteroid Surface and Sub-Surface Materials H. Yano (ISAS/JAXA), T. Noguchi (Ibaraki Univ.), S. Matsunaga (Tokyo Institute of Technology), O. Mori (ISAS/JAXA) et.al., Japan 11:10-11:30 2006-k-29 Concept and System Consideration of Tethered Sampling for Minorboddy Exploration in Deep Space S. Matunaga (Tokyo Institute of Technology), O. Mori, K. Nakaya (ISAS/JAXA), S. Masumoto (Tokyo Institute of Technology) et.al., Japan 11:30-11:50 2006-k-30 Study of sampling method by the use of a rigid sampler connected by tether H. Takikawa, H. A Fujii, M. Yukizane, T. Watanabe (Tokyo Metropolitan Univ.), Japan	10:30-10:50 2006-e-09 Force/Heat Flux Measurements in the JAXA 1.27 m Hypersonic Wind-Tunnel for HB-2 Type Ballistic Model: A Summary S. Kuchi-ishi, S. Watanabe, S. Nagai, T. Koyama (JAXA) et.al., Japan 10:50-11:10 2006-e-10 Numerical and experimental investigations of the HSFD 2 transonic aerodynamics M. D Leplat, P. Champigny, P. Thorigny (ONERA), J. Oswald (CNES) et.al., France 11:10-11:30 2006-e-11 Laser absorption spectroscopy of oxygen molecule in free piston shock tunnel H. Tanno, T. Komuro, K. Sato, K. Itoh (JAXA-KSPC), Japan 11:30-11:50 2006-e-12 Numerical Studies on Non-Uniformity in Freestream of Shock Tunnel with Conical Nozzle T. Yamada (Tokyo Univ.), K. Suzuki (Graduate School of Frontier Sciences, Tokyo Univ.), Japan

Session g-2 at Room E Concept	Session r-1-4 at Room F International Collaboration in Space Communications	Session m-1 at Room G Geophysics
Chairperson :H. Nagata (Hokkaido Univ.) T. Tsuchiya (Tokyo Univ.)	Chairperson :U. Sastrokusumo (Inst. Tech. Bandung) K. Kondo (National Institute of Multimedia Education)	Chairperson :Y. Takahashi (Tohoku Univ.) Y. Saito (JAXA/ISAS)
11:10-11:30 2006-g-07 The study of feasibility and characteristic of Space Elevator M. Ohta, H. A. Fujii, T. Watanabe (Tokyo Metropolitan Univ.), T. Ogasawara (Tokyo Metropolitan Institute of Technology), Japan 11:30-11:50 2006-g-08 Color Design Considerations for Commercial Space Tourism Vehicles M. Onuki, M. Onuki (Space Frontier Foundation), C. John Lauer (Rocketplane Ltd.), P. Smith (Astronautical Designer, Artist) et.al., USA 11:50-12:10 2006-g-09 Open Architecture Approaches to Enhance Human Exploration Sustainability D. A. Smith (Boeing), USA	11:10-11:30 2006-r-1-18 INTERNATIONAL COOPERATION USING COMMUNICATIONS SATELLITE IN THE AFTERMATH OF DISASTERS K. Nagami, I. Nakajima, H. Juzoji (Tokai Univ. school of Medicine), K. Igarashi (NICT) et.al., Japan 11:30-11:50 2006-r-1-19 TELEMEDICINE PACKAGE FOR DISASTERS K. Nagami, I. Nakajima, H. Juzoji (Tokai Univ. School of Medicine), K. Igarashi (NICT) et.al., Japan 11:50-12:10 2006-r-1-20 International Satellite Collaboration Experiments in NIME K. Kondo, K. Kondo, K. Asai, N. Osawa (National Institute of Multimedia Education), Japan 12:10-12:30 2006-r-1-21 Contribution for Post-Tsunami Syndrome: Multimedia Application in Medical Teleeducation and Telemedicine using New Post Partners Network U. Sastrokusumo, A. Bayu Suksmono, M. Ridwan Efendi, A. Adesena (ITB) et.al., Indonesia 12:30-12:50 2006-r-1-22 Secure Satellite TCP/IP Connection and Secure Satellite Client Authentication: Experiments in the New Post-Partner Project K. Umeno (NICT), H. Terai (ChaosWare, Inc.), Japan	10:50-11:10 2006-m-01 Observation of Auroral Phenomena by Formation Flight of Polar Patrol Balloons - Instrumentation and Observational Results from Circum-Antarctica Balloon Experiment in 2002/2003- H. Yamagishi, A. Kadokura, Y. Ebihara (National Institute of Polar Research), T. Yamagami (JAXA) et.al., Japan 11:10-11:30 2006-m-02 Sounding rocket observations of neutral temperature and density in the polar lower thermosphere during the DELTA campaign J. Kurihara, T. Abe, K. Oyama (ISAS/JAXA), N. Iwagami (Tokyo Univ.) et.al., Japan 11:30-11:50 2006-m-03 Development of a Measurement Technique for Medium-Energy Electrons: Observation of Energetic Electrons During the DELTA Campaign K. Ogasawara, K. Asamura, T. Takashima, T. Mukai (JAXA) et.al., Japan 11:50-12:10 2006-m-04 Electron density measurement under the effects of electron beam injection during the DELTA campaign M. Wakabayashi, T. Ono (Tohoku Univ.), M. Yamamoto (Kochi Univ. of Technology), Japan

Session j-2 at Room H

Non-GEO Satellote (2)

Chairperson :R. Suzuki (NICT)
N. Fuke (KDDI)

10:50-11:10 2006-j-06

Launch of Kirari(OICETS) from Baikonur

T. Yamawaki, N. Takahashi, K. Arai (JAXA), I. Mase (NTspace) et.al., Japan

11:10-11:30 2006-j-07

Functional demonstrations of the Laser Utilizing Communication Equipment on OICETS

T. Jono, Y. Takayama, N. Kura, K. Ohinata (JAXA) et.al., Japan

11:30-11:50 2006-j-08

The way how 920 fire departments expect a reliable circuit to support telemedicine en rout ; An investigation on a nationwide satellite broadband communication system via HEO;

S. Inoguchi, H. Juzoji, K. Nagami, I. Nakajima (Tokai Univ.) et.al., Japan

11:50-12:10 2006-j-09

Strict Temporal Synchronization of Distribute Satellite System

G. Xiao-chun Gong, X. Gong-dong Xu, W. Guo-qiang Wu, W. Bao-lin Wu (Harbin Institute of Technology), China

Session o-4-1 at Room A Disaster Monitoring	Session d-15 at Room B Orbit Control	Session k-7 at Room C Minor Bodies & Deep Space Exploration (3)
Chairperson :H. Une (Geographical Survey Inst.) M. Hara (VTI Research Inst.)	Chairperson :O. Montenbruck (DLR) S. Nakasuka (Tokyo Univ.)	Chairperson :H. Yano (JAXA) A. Galvez (ESA)
14:30-15:00 2006-o-4-01v Earthquake Damage Detection by Satellite SAR Intensity Imagery M. Matsuoka, K. Horie (Earthquake Disaster Mitigation Research Center, NIED), H. Ohkura (National Research Institute for Earth Science and Disaster Prevention (NIED)), F. Yamazaki (Chiba Univ.), Japan 15:00-15:30 2006-o-4-02v Monitoring Active Volcano with ASTER M. Urai (Geological Survey of Japan, AIST), Japan 15:30-16:00 2006-o-4-03v ALOS follow-on type satellites program concept for JAXA Disaster/Crisis management program M. Kojima, Y. Osawa, M. Shimada, Y. Iida (Office of Space Application, JAXA) et.al., Japan	14:50-15:10 2006-d-76 CALIPSO INSERTION AND MAINTENANCE IN THE AQUA TRAIN FORMATION C. Salcedo (CNES), France 15:10-15:30 2006-d-77 EXPERIMENT OF AUTONOMOUS ORBIT CONTROL ON DEMETER : IN-FLIGHT RESULTS A. Lamy, M. Charneau, R. Bertrand, D. Laurichesse (CNES), France 15:30-15:50 2006-d-78 Coupled Inclination and Eccentricity Control for MetOp O. Luengo (EUMETSAT (under GMV consultancy)), P. Righetti (EUMETSAT), Spain 15:50-16:10 2006-d-79 The orbit control of Integral using momentum dumping manoeuvres aiming for an optimal ground station coverage M. Rosengren (European Space Operation Centre), Germany 16:10-16:30 2006-d-80 Autonomous Regulation of Spacecraft Motion About Unstable Periodic Orbits Using Impulsive maneuvers H. Fukuzawa (ESTECH CORP.), Japan	14:40-15:00 2006-k-31 Integrated Guidance and Navigation Strategy for Flyby and Gas-Liquid Equilibrium Thruster for Small Satellite O. Mori (JAXA), K. Tarao (Tokyo Univ.), T. Yamamoto, J. Kawaguchi (JAXA), Japan 15:00-15:20 2006-k-32 Development of gas-liquid equilibrium thruster for the small satellite T. Yamamoto, O. Mori, M. Shida (JAXA/ISAS), Japan 15:20-15:40 2006-k-33 Periodic Orbits in Binary Asteroids Systems Utilizing Low Thrust Propulsion M. Morimoto (National Astronomical Observatory), H. Yamakawa (JAXA), Japan 15:40-16:00 2006-k-34 Search the Optimal Launch Opportunities for Interplanetary Multiple Encounter Mission Using the Genetic Algorithm D. Qiao, P. Cui, H. Cui (Deep Space Exploration Research Center, Harbin Institute of Technology), China 16:00-16:20 2006-k-35 MISSIONS TO THE EDGE OF THE SOLAR SYSTEM USING A NEW ADVANCED DUAL-STAGE GRIDDED ION THRUSTER WITH VERY HIGH SPECIFIC IMPULSE R. Walker, D. Izzo (ESA/ESTEC), D. Fearn (EP Solutions), R. Walker (ESA/ESTEC), Netherlands

Session e-4 at Room D Plasma Flow Diagnostics	Session g-3 at Room E Entry	Session t-1 at Room F System Engineering and Information Technology (1)
Chairperson :H. Kawazoe (Tottori Univ.) H. Ogawa (JAXA/ISAS)	Chairperson :M. Yoshida (JAXA) S.Ishimoto (JAXA)	Chairperson :K. Tachi (JAXA) O.L de Weck (MIT)
14:30-14:50 2006-e-13 Spectroscopic temperature measurements in the plenum region of a Huels type arc heated wind tunnel K. Kitagawa, Y. Miyagawa, K. Inaba (Aichi Institute of Technology), N. Yoshikawa (Nagoya Univ.) et.al., Japan 14:50-15:10 2006-e-14 Diagnostics of Arc-heater Plumes by Cavity Enhanced Absorption spectroscopy H. Takayanagi, M. Matsui, K. Komurasaki, Y. Arakawa (Tokyo Univ.), Japan 15:10-15:30 2006-e-15 Radiative Characteristics of Arc-discharged Micro-air Plasma-jets at Low Pressures K. Kubota, M. Funatsu, H. Shirai, F. Takakusagi (Gunma Univ.), Japan 15:30-15:50 2006-e-16 Radiative Characteristics of N2 Second Positive Bands of Microwave-discharged Plasmas K. Shibusawa, K. Shibusawa, M. Funatsu, H. Shirai (Gunma Univ.) et.al., Japan	14:30-14:50 2006-g-11 Conceptual Study of Hybrid Re-Entry Vehicle for Future Manned Space Flight Y. Yamamoto (JAXA), Japan 14:50-15:10 2006-g-12 Drop Test for Recovery System with a Membrane Aeroshell Using a Large Scientific Balloon T. Hirotsu, K. Yamada (JAXA), A. Sakurai (Kyushu Univ.), K. Suzuki (Tokyo Univ.) et.al., Japan 15:10-15:30 2006-g-13 The automatic-flight experiment of small-size Parafoil from a balloon K. Hiraki, Y. Saito, Y. Mizuta, M. Inoue (Kyusyu Institute of Technology), Japan 15:30-15:50 2006-g-14 JAXA/CNES/ONERA Cooperation on the Research for HSFD2 Guidance and Control T. Tsukamoto, H. Suzuki, T. Ninomiya (JAXA), F. Jouhaud (ONERA) et.al., Japan	14:40-15:00 2006-t-01 Knowledge Management by using IT in JAXA S. Sobue, T. Sano, Y. Tanaka (JAXA), Japan 15:00-15:20 2006-t-02 Using Space Engineering Evaluation from Imagery Technologies (USEEIT) to Support Exploration and Discovery J. C Casas (NASA), R. Merrell (Medical Informatics and Technology Applications Consortium, Virginia Commonwealth Univ.), D. Boyle (SpaceCraft Technology Center, Texas A&M Univ.), G. May (ProVision Technologies) et.al., USA 15:20-15:40 2006-t-11 Detecting Failure of Spacecraft Using Separated States in Particle Filters T. Murakami (Tokyo Institute of Technology), Y. Kawahara (Tokyo Univ.), K. Takadama (Tokyo Institute of Technology), Japan 15:40-16:00 2006-t-04 INFORMATION ARCHITECTURE TECHNOLOGIES OF PANEL EXTENSION SATELLITE T. Okada (SOHLA), S. Nakasuka, Y. Nakamura, Y. Sugawara (Tokyo Univ.) et.al., Japan 16:00-16:20 2006-t-05 Safety design of Centrifuge Rotor for excessive rotor motion T. Takegai (NEC TOSHIBA Space Systems, Ltd.), N. Sato, T. Nakano (JAXA), R. Okamura (NEC TOSHIBA Space Systems, Ltd.) et.al., Japan

Session m-2 at Room G Astrophysics	Session j-3 at Room H GEO Satellite Communication and Broadcasting
Chairperson :S. Torii (Waseda Univ.) K. Yoshimura (High Energy Accelerator Research Organization)	Chairperson :T. Ikegami (Meiji Univ.) R. Suzuki (NICT)
14:30-14:50 2006-m-05 The Observation Results of High Energy Cosmic Rays Obtained by the RUNJOB Long-duration Balloons M. Hareyama (Waseda Univ.), Japan	14:30-14:50 2006-j-10 Study of Integrating Ku-band Satellite Network with Terrestrial GSM Cellular Network for Implementing the Enhanced Location-Based Services J. Suryana, S. Hartono (STEI ITB), S. Hassan (USM Malaysia), K. Igarashi (NICT Japan) et.al., Indonesia
14:50-15:10 2006-m-06 The first BESS-Polar flight over Antarctica K. Yoshimura, A. Yamamoto, S. Haino, M. Hasegawa (High Energy Accelerator Research Organization (KEK)) et.al., Japan	14:50-15:10 2006-j-11 Characteristics of Satellite System with Wideband Spreading Signals overlaid on FDMA Signals within the Same FSS Network N. Fuke, K. Sugiyama (KDDI R&D Laboratories), N. Kawai (KDDI), Japan
15:10-15:30 2006-m-07 Cosmic-Ray Electron Energy Spectrum above 100 GeV by Polar Patrol Balloon in Antarctica K. Yoshida (Shibaura Institute of Technology), S. Torii (Waseda Univ.), T. Yamagami (JAXA), T. Tamura (Kana-gawa Univ.) et.al., Japan	15:10-15:30 2006-j-12 S-Band Digital Multimedia Satellite Broadcasting Services (Moba-HO!) for Personal & Mobile Users in Japan Y. Yamaguchi (MBCO), Japan
15:30-15:50 2006-m-08 An overview and initial results of the X-ray Astronomy Satellite T. Dotani (JAXA), Japan	15:30-15:50 2006-j-13 Improvement in Power Efficiency of Miniature TWT for 21-GHz-band Onboard Phased Array Antenna K. Yamagata, K. Yamagata, S. Tanaka, K. Imai (Japan Broadcasting Corporation), Japan
15:50-16:10 2006-m-09 Development Status of Monitor of All-sky X-ray Image (MAXI) on "KIBO" K. Kawasaki, M. Matsuoka, S. Ueno, H. Tomida (JAXA) et.al., Japan	15:50-16:10 2006-j-14 A proposed method for applying a Ku-band device to the S-band ;Aiming to track ETS-VIII satellite to transmit vital data from life vest on sea surface ; I. Nakajima, H. Juzoji, K. Nagami (Tokai Univ. School of Medicine), N. Hamamoto (NICT) et.al., Japan
16:10-16:30 2006-m-10 Infrared Astronomical Satellite: ASTRO-F H. Shibai (Nagoya Univ.), Japan	16:10-16:30 2006-j-15 Automatic Satellite Tracking Dish Antenna System for Broadband IP based Ambulance Telemedicine J. Suryana, S. Hartono (Institut Teknologi Bandung), S. Hassan (USM Malaysia), K. Tanaka (NICT) et.al., Indonesia

Session o-4-2 at Room A Disaster Information	Session d-16 at Room B Attitude and Orbit Control System	Session k-8 at Room C Minor Bodies & Deep Space Exploration (4)
Chairperson :M. Kawamura (Toyohashi Univ. of Tech.) A. Takeda (Tohoku Bunka Gakuen)	Chairperson :J. O'Donnell (NASA/GSFC) T. Iwata (JAXA/IAT)	Chairperson :H. Yano (JAXA) A. Galvez (ESA)
16:10-16:40 2006-o-4-04v Detection of Crustal Deformation of the Northern Pakistan Earthquake by Satellite Data U. Hiroshi, S. Fujiwara, M. Tobita, S. Ozawa (Geographical Survey Institute) et.al., Japan 16:40-17:10 2006-o-4-05v Development of Centralized Multimedia Information and Data Sharing System for Mid-disaster Evacuation Process M. Hara, H. Yagi, K. Lwin (VTI), Japan	16:40-17:00 2006-d-81 Development and 3D Motion Experiments of Small Spin Axis Controller T. Saiki, Y. Tsuda (ISAS/JAXA), M. Matsumoto, K. Tarao (Tokyo Univ.) et.al., Japan 17:00-17:20 2006-d-82 GNC for an automatic ISS survey vehicle (ASVIS) L. Strippoli, D. Modrego, P. Colmenarejo (GMV), J. Manuel Del cura (SENER) et.al., Spain 17:20-17:40 2006-d-83 The Space Technology-7 Disturbance Reduction System Precision Control Flight Validation Experiment Control System Design J. R O'donnell, O. C Hsu, P. G Maghami, F. Landis Markley (NASA Goddard Space Flight Center), USA 17:40-18:00 2006-d-84 Design and On-orbit Evaluation of Attitude Control System for Small Scientific Satellite "REIMEI" S. Sakai, Y. Fukushima, H. Saito (JAXA), Japan 18:00-18:20 2006-d-85 Spacecraft Attitude and Body Rate Estimation with Star Sensors and Their On-Orbit Verification Results S. Yoshikawa, H. Shimoji, K. Miyatake, H. Kawano (Mitsubishi Electric Corporation) et.al., Japan 18:20-18:40 2006-d-86 Automated Transfer Vehicle (ATV) Flight Dynamics System M. Molina, J. Lozano, L. Alvarez (GMV SA), P. Desmazeaux (CNES) et.al., Spain	16:30-16:50 2006-k-36 A Solar Power Sail Mission for A Jovian Orbiter and Trojan Asteroid Flybys J. Kawaguchi (JAXA), Japan 16:50-17:10 2006-k-39 SMALL JOVIAN ORBITER FOR MAGNETOSPHERIC AND AURORAL STUDIES Y. Kasaba, T. Takashima (ISAS/JAXA), H. Misawa (Planetary Plasma and Atmospheric Research Center, Tohoku Univ.), J. Kawaguchi (ISAS/JAXA) et.al., Japan 17:10-17:30 2006-k-44 Solar sail-based interplanetary communication network L. Hartman (Canadian Space Agency), Canada 17:30-17:50 2006-k-37 MICROSATELLITE-CLASS SOLARSAIL DEMONSTRATOR —MISSION DESIGN AND DEVELOPMENT STATUS Y. Tsuda, K. Nakaya, T. Saiki, O. Mori (ISAS/JAXA) et.al., Japan 17:50-18:10 2006-k-38 Spinning Solar Sail With Rotationally Skew Fold Membrane For Solar System Exploration H. Furuya, Y. Inoue (Tokyo Institute of Technology), Japan

Session e-5 at Room D Plasma Flow Facilities	Session g-4 at Room E Reusable Rocket	Session t-2 at Room F System Engineering and Information Technology (2)
Chairperson :K. Hiraki (Kyushu Inst. of Tech.) K. Suzuki (Tokyo Univ.)	Chairperson :T. Mori (MHI) H. Ogawa (JAXA)	Chairperson :K. Takadama (Univ. of Electro-Communications) G. Motet (National Inst. in Applied Science)
16:00-16:20 2006-e-17 Performance of Zirconium Cathode Arc-heater as Atomic Oxygen Generator M. Matsui, T. Ikemoto, H. Takayanagi, K. Komurasaki (Tokyo Univ.) et.al., Japan	16:00-16:20 2006-g-15 Aerodynamic Studies on Vertical Landing of Reusable Rocket Vehicle S. Nonaka, T. Suzuki, K. Watanabe, H. Ogawa (ISAS/JAXA) et.al., Japan	
16:20-16:40 2006-e-18 Spectroscopic study of a laser-sustained plasma supersonic jet T. Inoue, T. Hirasawa, Y. Arakawa, K. Komurasaki (Tokyo Univ.), Japan	16:20-16:40 2006-g-16 Evaluation of Engine Cycles for Small Engineering Test Rocket Engine M. Sato, R. Nakatani, T. Kimura, T. Hashimoto (JAXA) et.al., Japan	16:30-16:50 2006-t-06 Independent Verification and Validation for space program Y. Miyamoto, Y. Miyamoto, M. Katahira (JAXA), H. Nakao (JAMSS), Japan
16:40-17:00 2006-e-19 Performance Characteristics of the Inductively-Coupled High Enthalpy Flow Generator with CO₂ Gas T. Yamada (ISAS/JAXA), K. Fujita (ISTA/JAXA), S. Nonaka, N. Ishii (ISAS/JAXA), Japan	16:40-17:00 2006-g-17 Current Status of Development of A Small Engineering Test Rocket Engine M. Yoshida, H. Aoki, H. Hukuzoe, Y. Naruo (JAXA) et.al., Japan	16:50-17:10 2006-t-07 IV&V activities for H-II Transfer Vehicle's Avionics Safety Design S. Shirasaka (Mitsubishi Electric Corporation), K. Nakamura (JAXA), Japan
17:00-17:20 2006-e-20 Heat-resistance Experiments of SiC-based Ceramics in High-temperature Air Plasma-jets M. Funatsu, M. Funatsu, K. Ito, H. Shirai (Gunma Univ.) et.al., Japan	17:00-17:20 2006-g-18 Performance Evaluation Tests of Small Turbopump S. Takada, M. Yoshida, M. Kikuchi, T. Sudo (JAXA) et.al., Japan	17:10-17:30 2006-t-08 H-II Transfer Vehicle's End-To-End Test Concept K. Kiritani (JAXA), S. Shirasaka (Mitsubishi Electric Corporation), Japan
	17:20-17:40 2006-g-19 Application of Highly Reliable Design Methodology to Liquid Rocket Engine Conceptual Design N. Kuratani, H. Aoki, R. Nakatani (JAXA), Y. Kawamata (MHI) et.al., Japan	17:30-17:50 2006-t-09 ESOC Flight Dynamics Precise Emulators for the Cryosat, Herschel and Planck Missions: Development and Applications S. Matteo Pessina, L. Tucci (Terma GmbH c/o ESA/ESOC, OPS GFT), S. Kasten-coors (ESA/ESOC, OPS GFT), Germany 17:50-18:10 2006-t-10 Study of Integrated Verification Environment for Spacecraft Onboard Software System H. O. Ueda, S. Ikeda, T. Takahashi (JEDI Center, JAXA), T. Kobori (Mitsubishi Space Software Co., Ltd), Japan

June/9th (Fri) PM(2)

Session m-3 at Room G Space and Balloon Technology	Session j-4 at Room H WINDS Satellite
Chairperson :S. Matsunaga (Tokyo Inst. of Tech.) M. Natori (JAXA/ISAS)	Chairperson :S. Tanaka (NHK) T. Ikegami (Meiji Univ.)
16:40-17:00 2006-m-11 Experimental Study on folding and deployment of tape tether for a Sounding Rocket Experiment S. Nakafushi, H. A Fujii, T. Watanabe, T. Kikuchi (Tokyo Metropolitan Univ.) et.al., Japan	16:40-17:00 2006-j-16 Development of High-speed Network for WINDS Y. Hashimoto, T. Takahashi, N. Yoshimura, R. Suzuki (NICT) et.al., Japan
17:00-17:20 2006-m-12 Measurement of the Deployment Drag for Designing of the Foldaway Tape Tether Deployer T. Watanabe, H. A Fujii, T. Kikuchi, S. Nakafushi (Tokyo Metropolitan Univ.) et.al., Japan	17:00-17:20 2006-j-17 Active Phased Array Antenna for WINDS M. Yajima, T. Kuroda, T. Maeda, M. Shimada (JAXA) et.al., Japan
17:20-17:40 2006-m-13 Short to Long Duration Balloon Flights from ES-RANGE S. Kemi, O. Norberg (Swedish Space Corporation), Sweden	17:20-17:40 2006-j-18 Ka band High Power Multi-port Amplifier (MPA) for WINDS Satellite T. Kuroda, M. Yajima, M. Shimada (JAXA), M. Kitahara (C-TECH) et.al., Japan
	17:40-18:00 2006-j-19 Study of Secured and Reliable Wideband IP-based Videoconference over Ka-band WINDS Satellite Link between Bandung-Tokyo J. Suryana, S. Hartono (Institut Teknologi Bandung), K. Umeno, K. Igarashi (NICT) et.al., Indonesia
	18:00-18:20 2006-j-20 Spatial Temporal Rainfall Model for Evaluating the Performance of Ka-band Satellite Links with Site Diversity J. Suryana, S. Hartono (Institut Teknologi Bandung), K. Tanaka, K. Igarashi (NICT) et.al., Indonesia
	18:20-18:40 2006-j-21 Study of Ka-band Satellite Link Performance at High Intense Rain Cities in Indonesia using WINDS J. Suryana, S. Hartono (Institut Teknologi Bandung), K. Tanaka, K. Igarashi (NICT) et.al., Indonesia

June/9th (Fri) PM(3)

Session o-4-3 at Room A Data Arcive & Application	Session e-6 at Room D Atomospheric Flight Vehicle Concepts	Session g-5 at Room E Demo Flight
Chairperson :M. Arakida (Asian Disaster Reduction Center) M. Matsuoka (Earthquake Disaster Mitigation Research Center)	Chairperson :M. Funatsu (Gunma Univ.) H. Tanno (JAXA/ISAS)	Chairperson :Y. Yamamoto (JAXA) T. Tsukamoto (JAXA)
17:20-17:50 2006-o-4-06v Development of Sediment Disaster Mitigation GIS by Using High Resolution Satellite Imagery and Forest Database M. Kawamura (Toyohashi Univ. of Technology), K. Tsujino (Fukui National Coleege of Technology), Y. Ohtsuji (Toyohashi Univ. of Technology), Japan 17:50-18:20 2006-o-4-07v Applications of Long TermSatellite Data Archives on Retrieval of the Time Serial Spatial Information such as Past Disaster Events T. Atsushi (Tohoku Bunka Gakuen Univ.), Japan	17:30-17:50 2006-e-21 Experimental Study on Shock-Shock Interaction Wave-rider T. Kurokawa, H. Kawazoe (Tottori Univ.), . Fujii, T. Irikado (JAXA), Japan 17:50-18:10 2006-e-22 Experimental Investigation of the Interaction between Applied Magnetic Field and Weakly Ionized Plasma M. Kawamura (Tokyo Univ.), K. Wakatsuki (Tokai Univ.), A. Matsuda (JAXA), Y. Takizawa (Tokyo Univ.) et.al., Japan 18:10-18:30 2006-e-23 Aerothermodynamic Studies on Low-Ballistic-Coefficient Jovian Entry Probe with Membrane Aeroshell K. Suzuki (Tokyo Univ.), Japan 18:30-18:50 2006-e-24 A Study on Water-Impact Shock of Reentry Capsule K. Hiraki, K. Ideno, E. Ide, M. Inoue (Kyushu Institute of Technology), Japan	17:50-18:10 2006-g-20 Development Plan of a Small-scale Supersonic Flight Experiment Vehicle in Cooperation between Universities K. Mizobata, R. Minato, N. Tanatsugu, H. Kimura (Muroran Institute of Technology) et.al., Japan 18:10-18:30 2006-g-21 Flight Trajectory Analysis of a Small-scale Supersonic Flight Experiment Vehicle H. Kimura, S. Hada, K. Mizobata, R. Minato (Muroran Institute of Technology) et.al., Japan 18:30-18:50 2006-g-22 Preliminary Design of a Small-scale Turbojet Engine for a Supersonic Flight Experiment Vehicle R. Minato, I. Tokura, N. Tanatsugu (Muroran Institute of Technology), T. Himeno (Univ. of Tokto) et.al., Japan 18:50-19:10 2006-g-23 Flight Demonstration of Subscale Precooled Turbojet Engine Onboard Balloon-based Operation Vehicle K. Fujita (IAT/JAXA), S. Sawai (ISAS/JAXA), H. Kobayashi, H. Taguchi (IAT/JAXA) et.al., Japan