



IAA Symposium

Technical Program

Session 1: Programmatics ***4, 2011, 10:40 - 12:20***

Monday, April***Chair: J.-M. Contant, IAA
Germany******Rapporteur: H.-P. Röser, University of Stuttgart,
Germany*****NASA Earth Science and Small Satellites**

IAA-B8-0101

Neeck, S. P., Volz, S. M., NASA Headquarters, USA

Prospects of Next-Generation Earth Observation Missions

IAA-B8-0102

te Hennepe, F., Tobehn, C., Penné, B., Ziegler, B., Sun, W., OHB-System AG, Germany

The second generation NanoSat-2 programme at INTA

IAA-B8-0103

Angulo, M., Seoane, L., Gimeno, A., Prieto, M., Rodriguez, O., Esteban, S., INTA, Spain

From Education to Practical Use of Nano-satellites - Japanese

IAA-B8-0104

University Challenge towards Low Cost Space Utilization -

Nakasuka, S., University of Tokyo, Japan

Session 2: Hyperspectral & SAR Missions Monday, April ***4, 2011, 13:30 - 15:00***

***Chair: S. Neeck, NASA/HQ, USA
Italy******Rapporteur: M. D'Errico, Univ. of Naples,
Italy*****Status of the Advanced German Hyperspectral Imaging Satellite (EnMAP)**

IAA-B8-0201

Stuffer, T., Kayser Threde GmbH, Germany

IAA-

The PROBA-V Mission

IAA-B8-0202

Mellab, K., Galano, D., Santandrea, S., Teston, F., ESA/ESTEC, The Netherlands

An Affordable Small Satellite SAR Mission

IAA-B8-0203

Whittaker, P., SSTL, UK; Cohen, M., Hall, D., Astrium Ltd. UK; Gomes, L., SSTL, UK

IAA-

Switched CW SAR – A Novel and Low Cost SAR Solution for Microsatellites

IAA-B8-0204

Ahmed, N., Underwood, C. I., Surrey Space Centre, UK

IAA-

Session 3: New Missions I ***2011, 15:20 - 16:40***

Monday, April 4,***Chair: L. Maresi, ESA/ESTEC
USA******Rapporteur: L. Paxton, JHU/APL,
USA*****New Small Satellites Join the International Earth Observing Constellation (A-Train)**

IAA-B8-0301

Kelly, A. C., Case, W. F., NASA/GSFC, USA

IAA-

Earth Observation Low-Sized Satellite “Soyuz-Sat-O” for Multifunctional Space System

IAA-B8-0302

Menshikov, V., Pushkarskiy, S., Lysyy, S., Ivanov, N., Blinov, V., Abalihin, O., Vasiliev, N.,

IAA-

Dubovitskaya, N., Khrunichev Space Center, Russia

Present and Future Picosatellite Missions at TU Berlin

B8-0303

Briess, K., Baumann, F., Trowitzsch, S., TU Berlin, Germany

IAA-

Autonomous Assembly of a Reconfigurable Space Telescope (AAReST) for Astronomy

B8-0304

and Earth Observation

Underwood, C. I., Surrey Space Centre, UK; Pellegrino, S., CalTech, USA

IAA-

Panel Discussion:

***Small Satellites as building blocks for new applications
and emerging space nations Monday, April 4, 2011,
16:40 - 17:40***

Chair: Heinz Stoewer, SAC, Germany

Panelists:

N.N.

Shinichi Nakasuka, University of Tokyo, Japan

Sias Mostert, SCS, South Africa

Sir Martin Sweeting, SSTL, UK

Steve Neeck, NASA-HQ, USA

***Session 4: Constellations
2011, 09:00 - 10:30***

Tuesday, April 5,

*Chair: M. D'Errico, Univ. of Naples, Italy
Russia*

Rapporteur: S. Lysyy, MSSRI,

The DMC-3 1m Small Satellite Constellation

IAA-B8-0401

Cawthorne, A., Carter, P., Sills, L., da Silva Curiel, A., SSTL, UK

Research on mini-satellite formation applied to Earthquake forecast

IAA-B8-0402

Sun, J., SAST, China; Wang, X., CAST, China

Precision Formation Control for Inner-Formation Gravity Field Measurement Application

IAA-B8-0403

Wang, Z., Zhang, Y., Tsinghua University Beijing, China

The QB50 Project

IAA-B8-0404

Reinhard, R., Muylaert, J., Asma, C. O., VKI, Belgium

***Session 5: Special Aspects I
2011, 10:50 - 12:10***

Tuesday, April 5,

*Chair: P. Patterson, USU/SDL, USA
UK*

Rapporteur: C. Underwood, SSTL,

Meeting the Future Launch Demand for Earth Observation Missions

B8-0501

Freeborn, P., Viertel, Y., Zorina, A., EUROCKOT, Germany

IAA-

Legal and regulatory context for small satellites

B8-0502

Smith, L. J., Leuphana University Lüneburg, Germany

IAA-

Single-Input Control in Formation of Small Satellites Aligned with Geomagnetic Field

B8-1302

IAA-

Induction Vector

Ovchinnikov, M. Yu., Zaramenskikh, I. E.; Trofimov, S. P., KIAM/RAS, Russia

A Passive De-orbiting Strategy for High Altitude CubeSat Missions through a Deployable IAA-B8-0504**Reflective Balloon**

Lücking, C. M., Colombo, C., McInnes, C. R., University of Strathclyde, UK

Session 6: (Special) Student Conference Tuesday, April 5, 2011, 13:30 - 15:00**Chair: L. Paxton, JHU/APL, USA****Rapporteur: H. Jahn, DLR, Germany****ITASAT-1: Brazilian university microsatellite for payload test** IAA-B8-0601

Shibuya, L. H., Saotome, O., ITA, Brazil; Timm, C., TUB, Germany; Fernandes, D., ITA, Brazil; Yamaguti, W., INPE, Brazil

FoX – A German-Brazilian Formation Flying Mission

IAA-B8-0602

Timm, C., Pacholke, F., Shibuya, L. H., Weise, J., Kornemann, G., TUB, Germany

Orbit Optimization for a Small Satellite Constellation for Observation at mid Latitudes IAA-B8-0603

Karatas, Y., İnce, F., TAFA, Turkey

Attitude control system of micro satellite RISING-2

IAA-B8-0604

Fukuda, K., Nakano, T., Sakamoto, Y., Kuwahara, T., Yoshida, K., Tohoku University, Japan; Takahashi, Y., Hokkaido University, Japan

Fault Tolerant Architecture on On-Board Computer for ITASAT University Satellite IAA-B8-0605

Vinci, E., Passaro, P. C. A. P., Saotome, O., ITA, Brazil

The MURB Deorbitation System for Small Satellites and Rocket Upper Stages IAA-B8-0606

Urbanowicz, M., Warsaw University of Technology, Poland

Session 7: Instruments
2011, 15:20 - 16:40**Tuesday, April 5,****Chair: C. Underwood, SSTL, UK****Rapporteur: R. Laufer, Baylor Univ. Waco, USA****Remote Sensing using GPS signals – The SGR-RESI instrument**

IAA-B8-0701

Unwin, M., de Vos Van Steenwijk, R., Da Silva Curiel, A., Cutter, M., SSTL, UK;

Gommenginger, C., National Oceanographic Centre, UK; Mitchell, C., University of Bath, UK;

Gao, S., Surrey Space Centre, UK

Development of the accelerometer sensor heads for the

IAA-B8-0702

GOCE satellite: Assessment of the critical items and qualification

Bodovillé, G., Lebat, V., ONERA, France

Instruments ELMAVAN and REPIN for the RESONANCE Mission

IAA-B8-0703

Hruska, F., Kolmasova, I., Chum, J., Santolik, O., Truhlik, V., ASCR, Czech Republic;

Verigin, M. I., RAS, Russia

Compact Hyperspectral Imager Breadboard

IAA-B8-0704

Moreau, V., AMOS, Belgium ; Grabarnik, S., Maresi, L., ESA/ESTEC ; Delalieux, S., de Vos, L.,

Delauré, B., De Clercq, C., AMOS, Belgium; Dierckx, W., Knaeps, E., Michiels, B.,

VITO, Belgium

Poster Session I
2011, 16:40 - 17:40

Tuesday, April 5,

EIAST's UAE Space Programme

IAA-B8-0305P

Al Marri, S., EIAST, Dubai, UAE

Small satellite constellations in multi-sunsynchronous orbits for the observation of tropical regions

IAA-

B8-0306P

C., Bunkheila, F., Percacciolo, S., Sapienza University of Rome, Italy

Application of Microsatellites for Monitoring Natural Disaster Results in Siberia and for Educational Purposes

IAA-

B8-0307P

Galochkin, S., Yakovlev, A., Valov, M., JSC "ISS", Russia;
 Okhotkin, K., Kartsan, I., Shangina, E., SibSAU, Russia

The UNESCO International Satellite for Science Education and Basic Sciences (UNESCOsat)

IAA-

B8-0308P

Fortov, V. E., Commission of the Russian Federation for UNESCO, Russia;
 Khamzaev, A. D., Russian Committee for UNESCO IBSP, Russia;
 Ordjonikidze, G. E., Commission of the Russian Federation for UNESCO, Russia

Verification challenges on the RSI payload development

IAA-B8-0309P

Weng, S.-W., Lian, Y.-Y., NSPO, Taiwan, China

Taiwan Experimental Microsatellite Project - CKUTEX

IAA-B8-0310P

Juang, J.-C., Tsai, Y.-F., Tsai, C.-T., Jenq, S.-T., National Cheng Kung University, Taiwan, China; Tsai, J.-R., Pan, H.-P., NSPO, Taiwan, China

Outline and Progress of ASNARO (Advanced Satellite with New System Architecture for Observation) Satellite System

IAA-

B8-0311P

Ogawa, T., Kobayashi, Y., NEC Corporation, Japan; Mihara, S., Ijichi, K., USEF, Japan; Hamada, H., NEDO, Japan

Fine scale radar altimetry constellation for future oceanography using a generic small satellite platform

IAA-

B8-0312P

Strauß, S., te Hennepe, F., OHB-System AG, Germany

Operational Service for global Greenhouse Gas Observation – CarbonSat Constellation

IAA-

B8-0313P

Ernst, R., Tobehn, C., Shamsavar, A., Sun, W., OHB-System AG, Germany;
 Bovensmann, H., Buchwitz, M., Burrows, J.-P., Notholt, J., IUP Bremen, Germany

MRES: A Medium Resolution Mapping Satellite System for the Republic of Kazakhstan

IAA-

B8-0314P

Murzakulov, G. T., Ten, V., Nurguzhin, M. R., Murushkin, S. A., Albazarov, B., KGS, Kazakhstan;
 Taylor, M., Praine, I., da Silva Curiel, A., SSTL, UK;
 Carrin, G., Laffaye, G., Pages, C., Astrium, France

BST Training Program - A new paradigm for successful technology transfer

IAA-

B8-0315P

Buhl, M., Danziger, B., Segert, T., Berlin Space Technologies GmbH, Germany

Design and development of the Earth and astronomical observation technology demonstration satellite "TSUBAME"

IAA-

B8-0316P

Ishizaka, K., Matunaga, S., Tokyo Institute of Technology, Japan;
 The TSUBAME development team

A Series of 50kg-Class Micro-Satellites for Advanced Science Missions

IAA-

B8-0317P

Kazuya Yoshida, Yuji Sakamoto, and Toshinori Kuwahara, Tohoku University, Japan

First satellite of Small Demonstration Satellite Program of JAXA

IAA-

B8-0318P

Hirako, K., Nakamura, Y., Kawara, H., Kawashima, K., Yamamoto, K., JAXA, Japan

Automated Remote Ground Station For Austrian Lightning Nanosatellite (LiNSAT)

IAA-

B8-0509P

Jaffer, G., Koudelka, O., Graz University of Technology, Austria

Optimized separation system for small satellites missions IAA-
B8-0510P
Corbelli, A., Bruzzi, D., ALMASpace S.r.l., Italy; Tortora, P., University of Bologna, Italy

Satellite autonomous orbit determination using synthetic aperture radar IAA-
B8-0511P
Zhang, Y., Li, X., Geng, Y., Harbin Institute of Technology, P. R. China

Micro-PrioraNet, creation of a global ground network service for small spacecraft IAA-
B8-0512P
Hyvönen, P., Krynitz, M., SSC, Sweden

Operation Concept of the Precise Autonomous Orbit Keeping Experiment on the PRISMA Mission IAA-
B8-0513P
De Florio, S., University of Glasgow, UK; D'Amico, S., DLR, Germany;
Radice, G., University of Glasgow, UK

Sun-Synchronous Orbit Design Methodology to Satisfy Required Frequency of Observation in Space Remote Sensing Satellite Systems IAA-
B8-0515P
Mirshams, M., Vafa, A. R., Toosi University of Technology, Tehran, Iran

Synchronization Strategy and Overlap Ratio of Beam Footprint for Formation flying InSAR Satellite IAA-
B8-0516P
Zhang, J., Lan, S., Zhang, Z., Sun, Z., Harbin Institute of Technology, P. R. China

Numerically efficient Time-Optimal Spacecraft Reorientation IAA-
B8-0518P
Romano, M., Boyarko, G., Yakimenko, O., Naval Postgraduate School, CA, USA

Design and Ground Testing of Compact and Versatile Hyperspectral sensor HSC IAA-
B8-0705P
Aoyanagi, Y., Ueyama, Y., Satori, S., Hokkaido Institute of Technology, Japan;
Totani, T., Hokkaido University, Japan; Nakamura, A., AIDMA, Inc., Japan;
Takeyama, N., Genesis, Inc., Japan

Miniature Sensors for Cubesats Scientific Missions IAA-
B8-0706P
Belyayev, S., Pronenko, V., Lviv Centre of Institute for Space Research, Ukraine;
Ivchenko, N., Royal Institute of Technology, Sweden;
Zakharchuk, Y., Korepanov, V., Lviv Centre of Institute for Space Research, Ukraine

CIMBOL: uncooled infrared imager for space applications
IAA-B8-0707P
Beaume, M., Guinde, G., Colmon, A., EADS Sodern, France

Compact Spatial Heterodyne Fourier Transform Spectrometer for an Atmospheric CO₂ Monitoring Micro-Satellite Constellation IAA-
B8-0708P
Ikpaya, I., Underwood, C., Surrey Space Centre, UK

Earth Observation R&D payloads on board INTA μ SAT-1
IAA-B8-0709P
Angulo, M., Seoane, L., INTA, Spain; Prieto, M., SRG-UAH, Spain; Esteban, S., UCM, Spain;
Cornara, S., DEIMOS-SPACE, Spain

Session 8: New Land & Maritime Missions

Wednesday, April 6, 2011, 09:00 - 10:30

***Chair: S. Mostert, SCS, South Africa
ESA/ESTEC***

Rapporteur: F. Teston,

Preliminary Concept of Shinshu University Microsatellite for Forest Monitoring
IAA-B8-0801
Okamoto, K., Masuda, H., Kamemura, M., Wakayama, Y., Nakajima, A.,
Shinshu University, Japan

Boosting Small Satellite Missions for Earth Observation at Regional Level:

IAA-B8-0802

Main Drivers and Experiences

Corbera, J., Villafranca, A.G., PCOT, Spain; Luri, X., Universitat de Barcelona, Spain;
Canalias, E., Universitat de Girona, Spain; Delgado, A., CTAE, Spain

Preliminary Assessment of an Integrated AIS/Imaging Spaceborne System

IAA-B8-0803

D'Errico, M., Graziano, M. D., Razzano,

E., Seconda Università di Napoli, Italy

SMRS: A Small Satellite Mission dedicated to Maritime Security

IAA-B8-0804

te Hennepe, F., OHB-System AG, Germany; Strauch, K., Marliani, F., ESA Noordwijk,
The Netherlands; Tobehn, C., Evans, L., OHB-System AG, Germany;
Eriksen, T., FFI, Norway; Storesund, F., Kongsberg Seatex, Norway; Ruy, G., Ries, P.,
LuxSpace Sarl, Luxembourg; Föckersperger, S., Kayser-Threde GmbH, Germany

Session 9: Subsystems ***2011, 10:50 - 12:10***

Wednesday, April 6,

Chair: K. Brieß, TU Berlin, Germany
USA

Rapporteur: J. Torley, Univ. of Colorado,

SEPTA[®] 41 EV – A Solar Array Drive Assembly for Small Satellites
B8-0901

IAA-

Rabin, J, Wiesmann, E., RUAG Space AG, Switzerland

**Adaptive Computers in Space – In-flight HW-reconfigurable processors using
high density FPGAs**

IAA-B8-0902

Michalik, H., Fichna, T., Fiethe, B., Bubenhausen, F., Michel, H., IDA TU Braunschweig,
Germany; Osterloh, B., DSI Informationstechnik GmbH, Germany

Hardware Design of the Telecommand Receiver for the Small Satellite
B8-0903

IAA-

Flying Laptop

Beyermann, U., Röser, H.-P., Spetzler, M., Baumgärtner, J., IRS, Univ. of Stuttgart, Germany

RIT- μ X - A New Advanced Miniaturized Ion Thruster System for Small Satellites
B8-0904

IAA-

Leiter, H., Ellerbrock, H., Astrium GmbH Space Transportation, Germany;
Feili, D., Lotz, B., University of Gießen, Germany

Session 10: Bus Systems ***2011, 13:30 - 15:00***

Wednesday, April 6,

Chair: S. Nakasuka, Univ. of Tokyo, Japan

Rapporteur: K. Brieß, TU Berlin,

Germany

The TET Satellite Bus – A high reliability bus for LEO missions
B8-1001

IAA-

Roemer, S., Eckert, S., Astro- und Feinwerktechnik Adlershof GmbH, Germany

Constellation of Distributed NanoSats for Real Time Earth Observation
IAA-B8-1002

Andrews, J. , Andrews Space, Inc., USA

Answering New Needs with Existing Solutions

IAA-B8-1003

de Groot, Z., Sills, L., Hawkins, O., Gomes, L., Surrey Satellite Technology Ltd., UK

JAXA SDS-4 Spacecraft System Design and Test Results
B8-1004

IAA-

Ohtani, T., Nakamura, Y., Takahashi, Y., Inoue, K., Hirako, K., JAXA, Japan

Session 11: Special Aspects II ***2011, 15:20 - 16:40***

Wednesday, April 6,

Chair: J. Torley, Univ. of Colorado, USA
Spain

Rapporteur: M. Angulo, INTA,

Software Component Model and its Monitoring Tool

IAA-B8-1101

Dannemann, F., DLR-RY, Germany; Montenegro, S., University of Würzburg, Germany

An open-source system simulation framework for small-satellite development based on

B8-1102

OpenSimKit, QEMU and System C

Ziemke, C., Fritz, M., IRS, Univ. of Stuttgart, Germany; Kossev, I., Brandt, A., Eickhoff, J., Privat, Germany; Röser, H.-P., IRS, Univ. of Stuttgart, Germany

Design and development of a GNSS spaceborne receiver for Earth Observation satellites

B8-1103

orbit determination

Avanzi, A., Tortora, P., University of Bologna, Italy

Ship Detection Service

IAA-B8-1104

Schwarz, E., Maass, H., Lehner, S., Bruschi, S., DLR, Germany

Poster Session II ***2011, 16:40 - 17:40***

Wednesday, April 6,

Small Satellite Solar Generator Development. An Example of International Fair

B8-0905P

Cooperation

Ferrando, E., Grassi, M., Romani, R., Zanella, P., SELEX Galileo, Italy;

Lee, H., Satrec Initiative, Korea; Al Marri, S., EIAST, Dubai, UAE

A novel on-board computer and IP design based on FPGA

IAA-B8-0906P

Lan, S., Pan, R., Li, J., Zhang, X., Yu, W., Ma, Y., Harbin Institute of Technology, China

A Novel Wireless Protocol for Intra-satellite Network

B8-0907P

Pan, R., Harbin Institute of Technology, China; Fan, G., CALT, China;

Lan, S., Li, J., Xu, G., Harbin Institute of Technology, China

Development of Antenna Pointing Mechanisms for Small Satellite

B8-0908P

Masuda, H., Okamoto, K., Nakajima, A., Shinshu University, Japan;

Itoh, M., Arai, H. Tamagawa seiki., Japan

High throughput S-band transmitter for Earth observation applications

B8-0909P

Cinarelli, D., Tortora, P., Università di Bologna, Italy

EGSE-Lite - A Light Weight EGSE/Simulation environment for LEON based

B8-0911P

Satellite Subsystem & Payload Equipment

Cordero, F., Mendes, J., Kuppusamy, B., Dathe, T., Irvine, M., Williams, A.,

VEGA Deutschland, Germany

ALMASat-EO Microsatellite Power System

B8-0912P

Antonini, F., Università di Bologna, Italy, Tambini, A., ALMA Space S.r.l., Italy;

Tortora, P., Università di Bologna, Italy

Development Chain for the Thermal Subsystem of Small University Earth Observation

B8-0913P

Satellites

Steinmetz, F., Fritz, M., Lengowski, M., Röser, H.-P., University of Stuttgart, Germany

VHF – UHF Linear Transponder Design for TURKSAT – 3USAT

B8-0914P

Ceylan, O., Ata, R., Bellikli, H., Canbey, H. H., Kapicioglu, S., Yagci, H. B., Aslan, R.,

Istanbul Technical University, Turkey

MORE – Radiation measurement of NAND flash devices on TET-1 IAA-
B8-0915P
Fichna, T., Michalik, H., Gliem, F., Bubenhausen, F.; IDA TU Braunschweig, Germany

High-efficient, Redundant, Long-life EPS for CubeSats
IAA-B8-0916P
Umit, M. E., Aslan, A. R., Istanbul Technical University, Turkey

Temperature effects on satellite power systems performance IAA-
B8-0917P
Bekhti, M., Baba Hamed, D. E., Sweeting, M. N.

PicoProt – A Communication Protocol for Pico Satellites IAA-
B8-0918P
Behrendt, O., Gottscheber, A., SRH University of Applied Sciences Heidelberg, Germany

**Mechanical and thermal development status of the accelerometers for the
MICROSCOPE satellite** IAA-
B8-0920P
Bodovillé, G., Lebat, V., ONERA, France

Clavis – Development of a Standardized Nano-satellite Platform IAA-
B8-1005P
Nohka, F., Bauer, W., Drobczyk, M., Heidecker, A., Sprowitz, T., DLR, Germany

A Generic Satellite Platform for High Performance LEO Missions – LEOBUS-1000 IAA-
B8-1006P
Shahsavari, A., Strauß, S., Tobehn, C., Wieser, M., OHB-System AG, Germany

EnMAP Satellite Bus – Status and Future Evolution
IAA-B8-1007P
Penné, B., Kassebom, M., Froehner, P., Aßmann, K., OHB-System AG, Germany;
Hofer, S., Förster, K. P., Stuffer, T., Kayser-Threde GmbH, Germany

Deterministic and Recursive Approach in Attitude Determination for Small Size Satellite IAA-
B8-1305P
Fadly, M., Said, M.A.M., Sidek, O., Universiti Sains, Malaysia;
Djojodihardjo, H., Universiti Putra, Malaysia

Adaptive Tracking Control for Staring-mode Observation Spacecraft IAA-
B8-1308P
Ye, D., Sun, Z., Harbin Institute of Technology, China

Support of ACS development and test by dynamic simulation models IAA-
B8-1309P
Großekathöfer, K., Raschke, C., Astro- und Feinwerktechnik Adlershof GmbH, Germany

**A Matlab/Simulink based approach to attitude control algorithm
development and verification for Earth observing small satellites**
IAA-B8-1310P
Zeile, O., Dittmar, M., University of Stuttgart, Germany; Grillmayer, G., EADS Astrium, Germany;
Fritz, M., Winter, S., Röser, H.-P., University of Stuttgart, Germany

Robust sliding mode control for attitude control of small satellite IAA-
B8-1311P
Lu, W., Geng, Y., Zhang, F., Harbin Institute of Technology, China

Poster Session 2 (cont.)

**A Low-Cost Modular Attitude Control System Applied to Small Satellites –
Preliminary Concepts** IAA-
B8-1314P
Granziera Jr, F., National Institute for Space Research, Brazil;
Tosin, M. C., State University of Londrina, Brazil

BIRD 9 years microsatellite mission – the experience of passive thermal control in space IAA-
B8-1503P
Lura, F., Biering, B., Lötze, H. G., DLR, Germany; Studemund, H., Astro- und
Feinwerktechnik Adlershof GmbH, Germany; Baturkin, V., National Technical University
of Ukraine, Kyiv, Ukraine

Session 12: Star Sensors & Wheels ***Thursday, April 7, 2011, 09:00 - 10:30***

Chair: T. Terzibaschian, DLR, Germany
Russia

Rapporteur: M. Ovchinnikov, KIAM,

STELLA - A New Small Star Tracker for Pico and Nano Satellites

IAA-B8-1201

Balagurin, O., Wojtkowiak, H., Kayal, H., University of Würzburg, Germany

Software Reuse of the BIRD ACS for the TET Satellite Bus

IAA-B8-1306

Maibaum, O., Terzibaschian, T., DLR, Germany; Raschke, C., Astro- und Feinwerktechnik Adlershof GmbH, Germany; Gerndt, A., DLR, Germany

Current development of the Facet Nano star tracker

IAA-B8-1203

Ho, A., van Breukelen, E., Rotteveel, J.; ISIS, The Netherlands

RW 90, a smart reaction wheel – Progress from BIRD to TET-1

IAA-B8-1204

Stoltz, S., Raschke, C., Courtois, K., Astro- und Feinwerktechnik Adlershof GmbH, Germany

Session 13: Attitude Control Systems ***Thursday, April 7, 2011, 10:50 - 12:10***

Chair: M. Ovchinnikov, KIAM, Russia
Germany

Rapporteur: H. Kayal, Univ. of Würzburg,

The PACE Nanosatellite Platform for Attitude Control Experiments

IAA-B8-1301

Artur Scholz, A., Miao, J. J., Juang, J.-C., National Cheng Kung University, Taiwan, China

Magnetic attitude control of small satellites: A Survey of applications and

IAA-B8-1312

a domestic example

Sofyali, A., Aslan, A.R., Istanbul Technical University, Turkey

An Attitude Determination System Implementation to Low Orbit Small Satellite

IAA-B8-1303

with Fault-Tolerant Techniques

Duarte, R. O., Torres, F. E., Gomes, T. H., Universidade Federal de Minas Gerais, Brazil; Martins-Filho, L. S., Universidade Federal do ABC, Brazil; Kuga, H. K., Instituto Nacional de Pesquisas Espaciais, Brazil

Low Cost Space Experimental Attitude Determination Systems (SEADS) For InnoSAT

IAA-B8-1304

Said, M.A.M., Universiti Sains, Malaysia; Djojodihardjo, H., Universiti Putra, Malaysia; Fadly, M., Keui, A.A.M.P., Jamil, I., Sidek, O., Universiti Sains, Malaysia

Session 14: New Missions II ***Thursday, April 7, 2011, 13:30 - 15:20***

Chair: R. Laufer, Baylor Univ. Waco, USA
Ukraine

Rapporteur: V. Baturkin, KPI, Kiev,

The Nemo Bus: Nanosatellite for Earth Monitoring and Observation

IAA-B8-1401

Pranajaya, F. M., Zee, R. E., University of Toronto, Canada

Constellation and Spacecraft Design for GNSS Radio Occultation Mission with Selective

IAA-B8-1402

Resolution for Severe Weather Forecasting

Juang, J.-C., Tsai, Y.-F., National Cheng Kung University, Taiwan, China; Chu, C.-H., National Space Organization, Taiwan, China

MeTERS: a fresh look at meteors from orbit

IAA-B8-1403

Brosch, N., TAU; Oberst, J., Flohrer, J., Carsenty, U., DLR; Vaubaillon, J., IMCEE; Pariente, M., Spacecialist; and the MeTERS team^[1]

- Mission and System of the Earth Observation Microsatellite RISING-2** IAA-
B8-1404
Kuwahara, T., Sakamoto, Y., Yoshida, K., Tohoku University, Japan;
Takahashi, Y., Fukuhara, T., Kurihara, J., Hokkaido University, Japan
- PEEP-HOLE : a constellation of small Earth Observation satellites aiming at new** IAA-
B8-0405
applications and customers
Hernandez, D., Devil-Hop, France; Pavlin, O., ISAE

Session 15: Results & Lessons Learned Thursday, April 7, 2011, 15:40 - 16:40

Chair: M. Angulo, INTA, Spain
UK

Rapporteur: P. Davies, SSTL,

- First on-orbit results from NigeriaSat-2** IAA-B8-
1502
Chizea, F., NASRDA, Nigeria; Cawthorne, A., Gomes, L., Davies, P., SSTL, UK
- Challenges and Lessons Learned in Manufacturing the first Stellite Structure** IAA-B8-
1505
Entezari, M. H., Bitarafan, A. A., Emami, H, Fayyazi, M., IROST, Iran
- 2 years of operating the RapidEye Constellation – an evolving mission concept** IAA-B8-
1504
and lessons learned
Stoll, E., D'Souza, B., Konstanski, H., Oxfort, M., RapidEye AG, Germany

Symposium Summary

Thursday, April 7,

2011, 16:40-17:40

Chair: R. Sandau, DLR, Germany
Netherlands

Chief Rapporteur: E. Gill, TU Delft, The

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Best Paper Presentation Award

Best Poster Presentation Award

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