

PRELIMINARY PROGRAMME

Second European CubeSat Workshop

20 – 22 January 2009

Room: Newton 1+2, ESA/ESTEC, Noordwijk, The Netherlands

Tuesday, 20 January 2009

Plenary event

Chair: F. Emma

- 09.30 – 09.45 Welcome, organisational details
- 09.45 – 10.00 Overview of ESA Education Office activities (F. Emma)
- 10.00 – 10.40 The evolution of CubeSats in education (R. Twiggs) –Keynote speaker
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- 10.40 – 11.00 Coffee break
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Session 1: CubeSats on the Vega Maiden Flight (invited papers)

Chair: B. Geoffroy (ESA)

- 11.00 – 11.20 The CubeSat flight opportunity on the Vega Maiden Flight (P. Gallego Sanmiguel)
- 11.20 – 11.40 The CubeSat flight configuration on the Vega maiden flight (P. Galeone)
- 11.40 – 12.00 Status of ‘SwissCube’ from the École Polytechnique Fédérale de Lausanne (EPFL) (M. Noca)
- 12.00 – 12.20 Status of ‘Xatcobeo’ from the University of Vigo/INTA (F. Aguado)
- 12.20 – 12.40 Status of ‘UniCubeSat’ from University of Rome ‘La Sapienza’ (F. Graziani/F. Santoni) (tbc)
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- 12.40 – 14.00 Lunch break
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Session 2: CubeSats on the Vega Maiden Flight continued (invited papers)

Chair: P. Galeone (ESA)

- 14.00 – 14.20 Status of ‘Robusta’ from the University of Montpellier (L. Dusseau)
- 14.20 – 14.40 Status of ‘AtmoCube’ from the University of Trieste (A. Gregorio)
- 14.40 – 15.00 Status of ‘e-st@r’ from the Politecnico di Torino (S. Chiesa/S. Corpino)
- 15.00 – 15.20 Status of ‘OUFTI-1’ from the University of Liège (P. Rochus/A. Denis)
- 15.20 – 15.40 Status of ‘Goliath’ from University of Bucharest (M. Balan)
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- 15.40 – 16.00 Coffee break
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Session 3: CubeSats on the Vega Maiden Flight continued (invited papers)

Chair: P. Gallego (ESA)

16.00 – 16.20 Status of ‘PW-Sat’ from Warsaw University of Technology (A. Kotarski)

16.20 – 16.40 Status of ‘HiNCube’ from University College of Narvik (F. Vedal)

16.40 – 17.00 Status of ‘UWE-3’ from University of Würzburg (S. Busch)

Session 4: Future Flight Opportunities for CubeSats

Chair: B. Geffroy (ESA)

17:00 – 17:20 VERTA-1 flight opportunity – B. Geffroy (ESA)

17:20 – 19:00 Poster session / Optional tours of ESTEC Satellite Testing Facilities

19.00 – 21:30 Buffet dinner in the ESTEC restaurant

Wednesday, 21 January 2009

Session 5: CubeSat Development & Flight Experiences

Chair: K. Schilling (University of Würzburg)

- 09:00 – 09:20 The AAUSat series of CubeSats – J. Dalsgaard (Aalborg University)
- 09:20 – 09:40 CubeSat activities of the University of Würzburg – K. Schilling (University of Würzburg)
- 09:40 – 10:00 Canadian Advanced Nanospace Experiment 2: On-orbit experiences with a triple-CubeSat – M. Greene (University of Toronto)
- 10:00 – 10:20 The First-MOVE satellite, design for reliability of single-unit CubeSats by innovative concepts – M. Czech (Technische Universität München)
- 10:20 – 10:40 Xatcobeo engineering process – R. Tubío (University of Vigo/INTA)

10:40 – 11:00 Coffee break

- 11:00 – 11:20 OBDH for Xatcobeo – D. Hermida Cabaleiro (University of Vigo/INTA)
- 11:20 – 11:40 Project management in student CubeSat project – M. Dumke (ERIG e.V.)
- 11:40 – 12:00 LLEMSat-1: Payload contest for a fully-student CubeSat – H. Salvador (LEEM)
- 12:00 – 12:20 Verification platforms for amateur CubeSats – D. Holas (czCube, o.s.)

Session 6: CubeSat Kits & Deployment Systems

Chair: J. Dalsgaard (Aalborg University) (tbc)

- 12:20 – 12:40 P-POD deployer and CubeSat design specifications – J. Puig-Suari (CalPoly)
- 12:40 – 13:00 ISIS CubeSat kit and deployer – A. Bonnema (ISIS)

13:00 – 14:00 Lunch break

- 14:00 – 14:20 High Performance, COTS and High Reliability Power Systems, Batteries and Solar Arrays for CubeSats – C. Clark (Clyde Space Ltd)
- 14:20 – 14:40 FlyMate: The Next Generation of Picosatellite Deployers – S. Balinov (INSA de Lyon)
- 14:40 – 15:00 CzCube: Czech Amateur CubeSat – A. Holub (czCube, o.s.)

Session 7: Scientific Missions & Instruments

Chair: A. Glover (ESA)

- 15:00 – 15:20 Magnetometer field measurements aboard CubeSats – P. Brown (Imperial College London)
- 15:20 – 15:40 RDS for Xatcobeo – D. Hermida Cabaleiro (University of Vigo/INTA)

15.40 – 16.00 Coffee break

16:00 – 16:20 The PLUME Nanometeoroid Detector – L. Evans (University of Leicester)

16:20 – 16:40 Space debris detection on CubeSats – T. Rad (ERIG e.V.)

16:40 – 17:00 AGAD: Applied Geomagnetism for Attitude Determination Experiment – S. Ernst (Freiberg University of Mining and Technology)

17:00 – 17:20 Sensor Verification on CubeSats – V. Braun (ERIG e.V.)

17:20 – 17:40 HeidelSat – A. Gottscheber (University of Heidelberg)

17:40 – 18:00 YuSend: Tork University Space Engineering Nanosatellite Demonstration Program - H. Chesser (York University)

Thursday, 22 January 2009

Session 8: Technology Demonstration using CubeSats

Chair: ESA TBC

- 09:00 – 09:20 ESA MNT strategy – L. Marchand (ESA)
- 09:20 – 09:40 An overview of the microsystem-based nanospacecraft NEOMEx strawman theme within the TRP activities 2008-2010 – J. Kohler (ESA)
- 09:40 – 10:00 Technology developments related to nano-sats within ESA – N. Murdoch (ESA)
- 10:00 – 10:20 Reconfigurable Communication Systems for CubeSats – G. Gonzalez (University of Vigo/INTA)
- 10:20 – 10:40 Software Defined Radio used for the CubeSat SOMP – M. Laabs (Technical University of Dresden)

10.40 – 11.00 Coffee break

- 11:00 – 11:20 CubeSat Technology Demonstration Mission – T. Vladimirova (Surrey Space Centre)
- 11:20 – 11:40 A system approach for a double CubeSat – A. Bolstad (Norwegian University of Science and Technology)
- 11:40 – 12:00 SotonSat – A. Tatnall (University of Southampton)
- 12:00 – 12:20 Novel electric propulsion technology demonstration on EstCube-1 mission – U. Kvell (University of Tartu)

Session 9: CubeSat Ground Segment & Operations

Chair: H. Page (ESA)

- 12:20 – 12:40 GENSO – H. Page (ESA)
- 12:40 – 13:00 A ground station link quality measurement satellite – B. Preindl (Vienna Technical University)

13.00 – 14.00 Lunch break

- 14:00 – 14:20 AMSAT-UK – G. Shirville (AMSAT-UK)
- 14:20 – 14:40 AMSAT-DL telemetry links: past, present and future – A. Vollhardt (AMSAT-DL)
- 14:40 – 15:00 Oslo Ground Station – E. Vikan (University of Oslo)

Session 10: CubeSat Networks

Chair: R. Walker (ESA)

- 15:00 – 15:20 Space Weather CubeSat Constellation – A. Glover (ESA)

15:20 – 15:40 S-Cube: A Real Distributed Satellite System – C. Bridges (Surrey Space Centre)

15.40 – 16.00 Coffee break

16:00 – 16:20 CIMON - Canadian Magnetrometric Observation Nanosatellites – R. Francis (Royal Military College Kingston)

16:20 – 16:40 SSETI-Swarm: a student multi-spacecraft autonomous formation of pico-satellites – K. Kanawka (SSETI)

16:40 – 17:00 Analysing multi-mission capability in CubeSat design: a case study using SCOTSAT - S. Greenland (ASCL / Clyde Space)