



CEOI-ST Technology Conference

April 2015

Agenda – Tuesday AM



Session 1: Welcome and Introductions

10:00	Welcome from the CEOI-ST Director	Mick Johnson	CEOI-ST
10:10	CEOI Technology Review	Chris Brownsword	CEOI-ST

Session 2: Recent CEOI Projects

10:20	LOCUS: A Low Cost Upper Atmosphere Terahertz Sounder For In-Orbit Demonstration	Edmund Linfield & Brian Ellison	University Of Leeds/RAL Space
10:40	Heavy Ion Radiation Testing of the Large Format Near Infrared Detector	Peter Knowles	SELEX ES
11:00	Mechanised Alignment for Component Positioning and Joining	Dave Robertson	University Of Glasgow
11:20	Coffee & Tea Break		
11:50	183 GHz Frequency Selective Surface (FSS)	Raymond Dickie	Queens University Belfast
12:10	Contactless Power and Data Transfer for an Instrument Scan Mechanism	Andrew Bacon	Thales Alenia Space (UK) Ltd
12:30	WIVERN: A Conically Scanning Dopplerised 94ghz Cloud Radar Mission To Measure Global In-Cloud Winds	Alessandro Battaglia	University Of Leicester
12:50	Spectroscopic Measurements with the SHIRM	Olivier Auriacombe	RAL Space & The Open University
13:10	Lunch		

Agenda – Tuesday PM



Session 3: Recent Projects Continued

14:10	TRUTHS Progress	Nigel Fox	National Physical Laboratory
14:30	Wavemill	Meric Srokosz	National Oceanography Centre
14:50	MISRLite	Richard Cole	UCL MSSL
15:10	Photon Counting Techniques from Space Science	Jon Lapington	University Of Leicester
15:30	SGR-ReSI Latest Results from TDS-1	Martin Unwin	Surrey Satellite Technology Limited
15:50	Discussion & Coffee & Tea Break		

Session 4: New Projects Poster Sessions (Inc EO NSTP Projects)

16:20	Demonstration and Assessment of Laser Heterodyne Radiometry for CO₂ Sounding	Alex Hoffmann	RAL Space
16:25	Understanding NovaSAR-S	Sam Lavender	Pixalytics
16:30	Real Time Demonstration of SAR Image Focussing on an FPGA	Alex Wishart	Airbus Defence & Space
16:35	CMOS Image Sensors with High Quantum Efficiency	Konstantin Stefanov	Open University
16:40	L-Band One-per-Element	David Hall	Airbus Defence & Space
16:45	Next Generation Radar Electronics	Mike Gibbons	Airbus Defence & Space
16:50	Enabling High Rate Telemetry from EO Missions With HF Comms	Spiros Ventouras	RAL Space
To 17:30	Discussion, Posters & Close of Day 1		
19:30	Dinner at Cosener's House		

Agenda - Wednesday

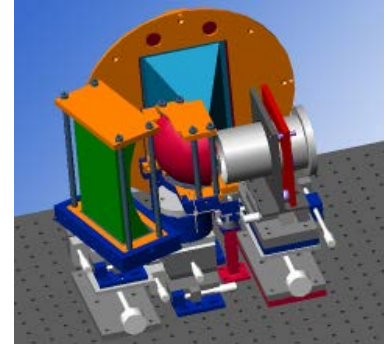


09:00	Welcome - Day 2	Rob Scott	CEOI-ST/RAL Space
Session 5: Convoy and Constellation Missions			
09:10	ESA Convoy Missions & Technology Needs	Amanda Regan	ESA ESTEC
09:40	The NASA Cyclone Global Navigation Satellite System (CYGNSS) Mission	Marie-Paola Clarizia	University of Michigan/National Oceanographic Centre
10:10	The Compact Infrared Imager and Radiometer - Earth System Science from a 6U Cubesat	Neil Bowles	University of Oxford
10:30	Discussion with Coffee & Tea Break		
Session 6: Emerging Technologies			
11:10	TRUTHS Imager Design	Dan Lobb	SSTL
11:30	Graphene as an Enabler for EO	Jamie Williams	University of Leicester
11:50	New Developments in Large Format IR Detectors	Keith Barnes/Peter Knowles	SELEX ES
12:10	Cold Atom Technologies at ESA	Bruno Leone	ESA ECSAT
12:30	Gravity Measurements with Cold Atoms	Tristan Valenzuela-Salazar	RAL Space
13:00	Lunch		
Session 7: Future Bilaterals - National and ESA			
14:00	The EOMAG Activity and National Ambitions for EO Bilaterals	Mick Johnson	CEOI-ST
14:30	Bilateral Carbon Mission	Hugh Kelliher	(Leics/Edinb+)
14:50	UTLS Activities at RAL (SHIRM, STEAMR, ALiSS, MARSCHALS, StratoClim, Micro-FTS	Daniel Gerber	RAL Space
15:10	ICEMuSIC - A New THz instrument concept for Climatology and Meteorology Applications	Peter Hargrave	University of Cardiff
15:30	Progress on CompaQS	Claire Parfitt	University of Leicester
15:50	Discussion		
16:15	Coffee and posters		
17:00	Summing up - Close of Conference		

Introduction to the CEOI-ST



- UK Space Agency initiative to boost UK capability and remain at the forefront of EO technology for space
 - Launched in 2007
 - Parallel industry investment, total approx £1-3M pa
- Programme focus on:
 - development of new EO instrumentation and technologies
 - Taking EO technologies to higher TRL
 - CEOI-ST covers all space technologies
 - horizon scanning and knowledge exchange
 - building highly capable academia/industry partnerships
 - training for next generation scientists and technologists
- Partnership led by Airbus with QinetiQ, STFC/RAL and University of Leicester



CEOI-ST Meetings and Workshops



Date	Event	Venue	Objective
31-Mar-15	Challenge Workshop: Future Science for EO - Needs and Missions	Leicester	To identify technology needs for ESA Earth Explorer 9 and other science-driven EO missions
21/22 Apr 15	CEOI Technology Conference	Cosener's House	2 day residential conference to show case current and emerging EO instrument technologies, and the needs of future EO missions
07-May-15	Industrial Consultation Workshop	London	By invitation. A networking opportunity to investigate microwave / millimetre wave & terahertz instrumentation.
04-Jun-15	Training Workshop - What makes a good proposal for an EO space mission?	Sheffield	Aimed at potential Principal Investigators and teams for next ESA Earth Explorer Call
8 th to 11 th Sep 15	National EO Conference	Southampton	Joint national EO conference with RSPSoc and NCEO, title 'Earth Observation in the Sentinel Era'
07-Oct-15	Challenge Workshop -Airborne Demonstrators	Edinburgh	To investigate the potential offered by airborne demonstrators as a step to space qualification and to learn from the practical experience of others
Oct/Nov 2015	SME Event	Cardiff	Joint workshop with Welsh Government to promote space instrumentation opportunities to space industry and academia

National EO Conference

8-11 September 2015



- Joint Conference with RSPSoc and NCEO
- Sessions to include (titles to be confirmed):
 - Earth systems science
 - Photogrammetry & elevation
 - New sensors
 - Vegetation
 - Land cover
 - Urban environments & hazards
 - Oceans and Marine
- Six Keynote speakers invited

Key Dates

- Abstract submission deadline : 1st May
- Notification of abstract acceptance : 1st June
- Submission of full paper (maximum 4 pages) : 1st September
- Early bird registration deadline : 1st July
- Final registration deadline : 3rd September
- Workshop proposal deadline : 1st May



NSTP2 Flagship Call

- Targets high business/growth impact ‘Flagship’ space technology research and development projects
- Projects must align with the National Space Technology Strategy and the related technology roadmaps
- Budget is £2M
 - Agency preference is to fund two £1M projects
- Projects to start ~Sept 2014, 24 months max. duration
- Call closes 2nd June 2015
 - Intention to Bid by 27th April 2015
- Full details on www.ceoi.ac.uk

NSTP2 GFEI Calls

- Grants for Exploratory Ideas are mini studies of up to £10K value and up to 6 months duration
- Aimed at space technology activities such as: early TRL innovation; technology proof of concept; small technology developments; establishing new industrial research collaborations; market studies; or studies into spin in or out of technologies for space.

Closing date for the 4th Round: 2nd June 2015

See www.ceoi.ac.uk for further details

Further information



- Opportunities for Engagement
 - CEOI-ST workshops and projects
 - NSTP “Grants for Exploratory Ideas”
 - Future EO and NSTP Technology Calls
- Further information:
 - Talks to the CEOI-ST partners today
 - www.ceoi.ac.uk
 - mick.johnson@astrium.eads.net

