



**2<sup>nd</sup>** international symposium  
RECENT ADVANCES IN QUANTITATIVE  
REMOTE SENSING

COMITÉ CIENTÍFICO INTERNACIONAL /  
INTERNATIONAL SCIENTIFIC COMMITTEE

**Presidente / Chairperson:**

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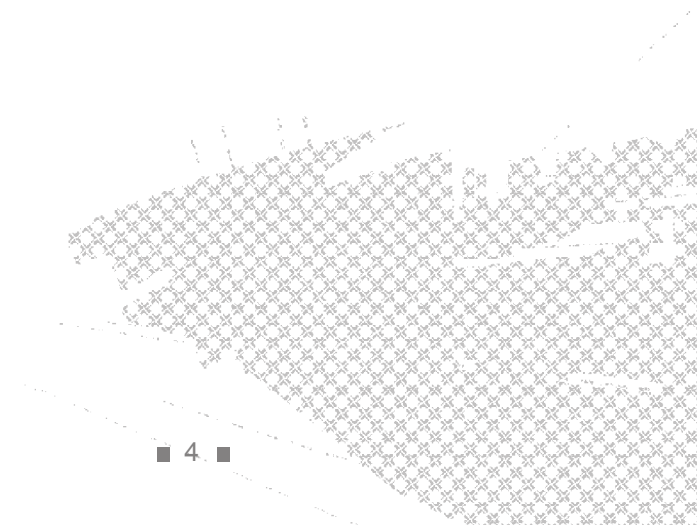
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P. Gómez-González Symposium, Torrent, *Spain*

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J. Cuenca University of Valencia, *Spain*  
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J. C. Jiménez-Muñoz University of Valencia, *Spain*  
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M. M. Zaragoza-Ivorra University of Valencia, *Spain*



## TOPICS

We are pleased to welcome you to the Second International Symposium on Recent Advances in Quantitative Remote Sensing, which will be held in Torrent (Valencia), Spain, on 25-29 September 2006. The symposium addresses the scientific advances in connection with real applications, its main goal being to assess the state of the art of both theory and applications in the analysis of Remote Sensing data. This symposium should greatly contribute to define common research priorities. The symposium will offer a unique framework for socializing and interacting with members of the international remote sensing community, at the same time enjoying a stay in Valencia. Papers deal in general with recent advances and applications of the different techniques and research methods used in remote sensing and in particular cover the following topics:

- Land surface radiation and inversion modelling
- Multispectral Remote Sensing and Imaging Spectroscopy
- Multiangular and Multitemporal measurements
- Scaling, Fusion, reduction and assimilation of data
- Carbon and Water cycle observation and modelling
- Land cover/use and change
- Global change and sustainable development
- Sensor calibration, atmospheric correction, and product validation
- Passive microwaves & SAR data processing/ applications
- Laser active remote sensing and fluorescence
- Earth Observation Missions & Services

## ORGANIZATION

The symposium is organized to encourage and exchange ideas and discussions. It will include oral sessions and poster sessions. The conferences will last 20 min including discussions. These sessions are dedicated to state of the art syntheses, to papers which describe new scientific breakthroughs of interest to a wide audience or which are based on an original approach of one of the scientific topics selected for the symposium. The poster session will present the description of the main results obtained and/or approaches used. Each poster session will comprise of about 54 papers and will last 1:30 h. The symposium will end with a general concluding session, prepared by the chairpersons of each session. The concluding statements will emphasize the key points of the representations and outline trends in the future research programs.

## TORRENT - TIMETABLE September 25-29, 2006

| Time          | Monday<br>25 <sup>th</sup> Sep 2006  | Tuesday<br>26 <sup>th</sup> Sep 2006      | Wednesday<br>27 <sup>th</sup> Sep 2006 | Thursday<br>28 <sup>th</sup> Sep 2006 | Friday<br>29 <sup>th</sup> Sep 2006           |
|---------------|--------------------------------------|---|--|---------------------------------------|---|
| 8:00 - 9:00   | REGISTRATION<br>(8:00 - 9:30)        |   |  |                                       |   |
| 9:00 - 9:30   |                                      |   |  |                                       |   |
| 9:30 - 10:00  | OPENING SESSION                      | ORAL SESSION 4                            | ORAL SESSION 8                         | ORAL SESSION 12                       |   |
| 10:00 - 10:30 | OPENING CONFERENCE                   |   |  |                                       |   |
| 10:30 - 11:00 | Coffee Break                         | Coffee Break                              | Coffee Break                           | Coffee Break                          | SESSION REPORT<br>BY SESSIONS<br>CHAIRPERSONS |
| 11:00 - 11:30 | ORAL SESSION 1                       | ORAL SESSION 5                            | ORAL SESSION 9                         | ORAL SESSION 13                       |   |
| 11:30 - 12:00 |                                      |   |  |                                       |   |
| 12:00 - 12:30 |                                      |   |  |                                       | CLOSING CEREMONY                              |
| 12:30 - 13:00 | POSTER SESSION 1                     | POSTER SESSION 2                          | POSTER SESSION 3                       | POSTER SESSION 4                      | Refreshment & Snacks                          |
| 13:00 - 13:30 |                                      |   |  |                                       |   |
| 13:30 - 14:00 |                                      |   |  |                                       |   |
| 14:00 - 14:30 | Lunch Break                          | Lunch Break                               | Lunch Break                            | Lunch Break                           |   |
| 14:30 - 15:00 |                                      |   |  |                                       |   |
| 15:00 - 15:30 |                                      |   |  |                                       |   |
| 15:30 - 16:00 | ORAL SESSION 2                       | ORAL SESSION 6                            | ORAL SESSION 10                        | ORAL SESSION 14                       |   |
| 16:00 - 16:30 |                                      |   |  |                                       |   |
| 16:30 - 17:00 |                                      |   |  | CLOSING CONFERENCE                    |   |
| 17:00 - 17:30 | Coffee Break                         | Coffee Break                              | Coffee Break                           |                                       |   |
| 17:30 - 18:00 | ORAL SESSION 3                       |   |  |                                       |   |
| 18:00 - 18:30 |                                      | ORAL SESSION 7                            | ORAL SESSION 11                        |                                       |   |
| 18:30 - 19:00 | INVITED CONFERENCE                   |   |  |                                       |   |
| 19:00 - 19:30 |                                      |   | PUBLIC CONFERENCE                      |                                       |   |
| 19:30 - 20:00 | WELCOME RECEPTION<br>(19:00 - 21:00) | DINNER / MUSICAL EVENT<br>(19:00 - 23:00) |  |                                       |   |
| 20:00 - 20:30 |                                      |   |  |                                       |   |
| 20:30 - 21:00 |                                      |   |  |                                       |   |
| 21:00 - 22:00 |                                      |   |  | GALA DINNER<br>(20:30 - 24:00)        |   |
| 22:00 - 23:00 |                                      |   |  |                                       |   |
| 23:00 - 24:00 |                                      |   |  |                                       |   |

PROGRAMA RESUMIDO / PROGRAMME OVERVIEW

LUNES 25 SEPTIEMBRE 2006 MONDAY 25<sup>th</sup> SEPTEMBER 2006

8:00-9:30

Inscripción y entrega de documentación / Welcome and registration.  
AUDITORI de Torrent. C/ Vicent Pallardó nº 25, 46900 TORRENT (Valencia).

9:30-10:00

Acto de apertura / Opening session.

10:00-10:30

Conferencia de Apertura / Opening Conference.

10:30-11:00

Pausa café / Coffee break.

11:00-12:00

Sesión Oral / Oral session.

**SESSION 1:** - Land Surface Radiation and Inversion Modelling  
Presidentes / Chairpersons: S. BRIGGS, J. MORENO

12:00-13:30

Sesión Poster / Poster session

**SESSION 1:** - Land Surface Radiation and Inversion Modelling  
- Multispectral Remote Sensing and Imaging Spectroscopy.  
- Multiangular and Multitemporal Measurement

13:30-15:00

Pausa comida / Lunch break

15:00-17:00

Sesión oral / Oral session

**SESSION 2:** - Land Surface Radiation and Inversion Modelling  
Presidentes / Chairpersons: A. GILLESPIE, F. PRATA

17:00-17:30

Pausa café / Coffee break

17:30-18:30

Sesión Oral / Oral session

**SESSION 3:** - Land Surface Radiation and Inversion Modelling.  
- Earth Observation Missions & Services.  
Presidentes / Chairpersons: S. LIANG, P. ZARCO-TEJADA.

18:30-19:00

Conferencia Invitada / Invited Conference

19:00

Acto Social / Welcome Reception

MARTES 26 SEPTIEMBRE 2006 - TUESDAY 26<sup>th</sup> SEPTEMBER 2006

9:00-10:30

Sesión Oral / Oral session

**SESSION 4:** - Multispectral Remote Sensing and Imaging Spectroscopy  
- Multiangular and Multitemporal Measurement  
Presidentes / Chairpersons: F. BARET, R. O. GREEN

10:30-11:00

Pausa café / Coffee Break

11:00-12:00

Sesión Oral / Oral session

**SESSION 5:** - Multiangular and Multitemporal Measurement  
Presidentes / Chairperson: J. L. PRIVETTE, F. NERRY

12:00-13:30

Sesión Poster / Poster session

**SESSION 2:** - Multiangular and Multitemporal Measurement  
- Scaling, Fusion, reduction and assimilation of data  
- Carbon and Water cycle observation and modelling

13:30-15:00

Pausa Comida / Lunch break

15:00-17:00

Sesión Oral / Oral session

**SESSION 6:** - Carbon and Water Cycle Observation and Modelling  
Presidentes / Chairperson: G. CHEHBOUNI, A. OLIOSO

17:00-17:30

Pausa café / Coffee break

17:30-19:00

Sesión Oral / Oral session

**SESSION 7:** - Carbon and Water Cycle Observation and Modelling  
- Earth Observation Missions & Services  
Presidentes / Chairperson: F. BARET, Z. SU

20:00

Cena y evento musical / Dinner and Musical Event.

**MIERCOLES 27 SEPTIEMBRE 2006 - WEDNESDAY 27<sup>th</sup> SEPTEMBER 2006**

**9:00-10:30**

Sesión Oral / Oral session

**SESSION 8:** - **Carbon and Water Cycle Observation and Modelling**  
- **Land Cover / Use and Change**  
Presidentes / *Chairpersons*: Z. SU, Z. L. LI

**10:30-11:00**

Pausa café / Coffee Break

**11:00-12:00**

Sesión Oral / Oral session

**SESSION 9:** - **Land Cover / Use and Change**  
- **Global Change and Sustainable Development**  
Presidentes / *Chairpersons*: S. LIANG, A. HUETE

**12:00-13:30**

Sesión Poster / Poster session

**SESSION 3:** - **Carbon and Water Cycle Observation and Modelling**  
- **Land Cover/Use and Change**  
- **Sensor Calibration, Atmospheric Correction and Product Validation**

**13:30-15:00**

Pausa Comida /Lunch break

**15:00-17:00**

Sesión Oral / Oral session

**SESSION 10:** - **Sensor Calibration, Atmospheric Correction and Product Validation**  
Presidentes / *Chairpersons*: S. LEROY, Z. WAN

**17:00-17:30**

Pausa café / Coffee break

**17:30-19:00**

Sesión Oral / Oral session

**SESSION 11:** - **Laser Active Remote Sensing and Fluorescent**  
- **Earth Observation Missions & Services**  
Presidentes / *Chairpersons*: M. RAST, P. J. ZARCO-TEJADA

**19:00-20:00**

Conferencia Pública / Public Conference

**JUEVES 28 SEPTIEMBRE 2006 - THURSDAY 28<sup>th</sup> SEPTEMBER 2006**

**9:00-10:30**

Sesión Oral / Oral session

**SESSION 12:** - **Passive Microwaves & SAR Data Processing / Applications**  
Presidente / *Chairperson*: S. QUEGAN, J. SHI

**10:30-11:00**

Pausa café / Coffee Break

**11:00-12:00**

Sesión Oral / Oral session

**SESSION 13:** - **Passive Microwaves & SAR Data Processing / Applications**  
Presidentes / *Chairpersons*: J. P. WIGNERON, M. BERGER

**12:00-13:30**

Sesión Poster / Poster session

**SESSION 4:** - **Sensor Calibration, Atmospheric Correction and Product Validation**  
- **Laser Active Remote Sensing and Fluorescence**  
- **Passive Microwaves & SAR Data Processing / Applications**  
- **Earth Observation Missions & Services**

**13:30-15:00**

Pausa Comida /Lunch break

**15:00-16:30**

Sesión Oral/Oral session

**SESSION 14:** - **Passive Microwaves & SAR Data Processing / Applications**  
- **Earth Observation Missions & Services**  
Presidentes / *Chairpersons*: A. ROYER, J. MORENO

**16:40-17:10**

Conferencia de Clausura / Closing Conference.

**20:30**

Cena oficial del congreso / Gala Dinner.

**VIERNES 29 SEPTIEMBRE 2006 - FRIDAY 29<sup>th</sup> SEPTEMBER 2006**

**10:00-12:00**

Conclusiones de sesiones por los presidentes / Session report by sessions chairpersons.

**12:00-12:30**

Acto de clausura / Closing ceremony.

**12:30-13:00**

Refrigerio / Refreshments & Snacks.

|               |   |
|---------------|---|
| 8:00 – 9:30   | <b>Inscripción y entrega de documentación / Registration</b>  |
| 9:30 – 10:00  | <b>Acto de apertura / Opening session</b>   |
| 10:00 – 10:30 | <b>Conferencia/ Opening Conference</b>  |
|               | <i>The Progress of ESA's Earth Observing System</i><br>S. Briggs, ESA Headquarters  |
| 10:30 – 11:00 | <b>Pausa café / Coffee break</b>  |
| 11:00 – 12:00 | <b>Sesión Oral / Oral session</b><br>SESSION 1: Land Surface Radiation and Inversion Modelling<br>Presidentes / <i>Chairpersons</i> : S. Briggs, J. Moreno  |
| S1.1          | <i>Estimation of surface radiation budget from MODIS data</i><br>S. Liang, University of Maryland, USA<br>T. Zheng, W. Wang, H. Kim, D. Wang, H. Fang   |
| S1.2          | <i>MERIS land surface albedo/BRDF retrieval</i><br>J. Fischer, Freie Universität Berlin, Germany<br>R. Preusker, J. P. Muller, T. Schroeder, C. Brockmann, M. Zühlke, N. Formfer, P. Regner                     |
| S1.3          | <i>Optical-Thermal canopy radiance directionality modelling by unified 4SAIL model</i><br>W. Verhoef, National Aerospace Laboratory NLR, The Netherlands.<br>L. Jia, Z. Su                                      |
| 12:00 – 13:30 | <b>Sesión Poster / Poster session</b><br>SESSION 1: - Land Surface Radiation and Inversion Modelling<br>- Multispectral Remote Sensing and Imaging Spectroscopy<br>- Multiangular and Multitemporal Measurement |
| P1.01         | <i>Modelling of soil surface albedo variation in its season and latitude context</i><br>J. Ciemiewski, Adam Mickiewicz University, Poland<br>T. Gdala   |

|       |   |
|-------|---|
| P1.02 | <i>Roughness effects on sub-pixel radiative temperature dispersion in a kinetically isothermal surface</i><br>I. Danilina, University of Washington, USA<br>A. Mushkin, A. R. Gillespie, M. A. O'Neal, E. A. Abbott, L. S. Pietro, L. K. Balick |
| P1.03 | <i>Development of broadband BRDFs from TOA CERES radiances corresponding to large footprints at a global scale</i><br>C. Domenech, University of Valencia, Spain<br>E. López-Baeza  |
| P1.04 | <i>Stochastic transport theory for investigating the three-dimensional canopy structure from space measurements</i><br>Y. Knyazikhin, Boston University, USA<br>D. Huang, N. Shabanov, R. B. Mynemi   |
| P1.05 | <i>Radiosity-Graphics combined model for TIR Emission directionality of Crop-Soil system based on 3D realistic scene</i><br>Q. Liu, Laboratory of Remote Sensing Science, China<br>H. Huang, K. Fu, W. Qin, Q. Liu, X. Li                       |
| P1.06 | <i>The effect of woody elements on the reflectance of Norway spruce stand</i><br>E. Martin, CESBIO, France<br>J. P. Gastellu-Etchegorry, Z. Malenovsky, L. Homolova   |
| P1.07 | <i>Study of the Soil moisture effect on the emissivity in the Thermal Infrared region</i><br>M. Mira, University of Valencia, Spain<br>E. Valor, R. Boluda, V. Caselles   |
| P1.08 | <i>Photon recollision probability calculations for a vegetation canopy</i><br>M. Möttöus, Tartu Observatory, Estonia<br>P. Stenberg, M. Rautiainen  |
| P1.09 | <i>Estimation of canopy parameters from multi-angle data using partial least square regression</i><br>X. Mu, Remote Sensing and GIS Research Center/BNU,<br>G. Yan, Y. Wang, Z. L. Li   |



- P1.10** Monitoring root zone soil moisture using a 1D-SVAT model calibrated with METEOSAT8 thermal infrared data and forced with RADAR precipitation data  
C. Ottlé, CETP/IPSL, France  
B. Coudert, B. Boudevillain, B. de Solan, D. Boisgontier, O. Deudon, J. Testud, E. Moreau, E. Lebouar, R. Ney, H. Poulima
- P1.11** Assessment of time-dependent biases in the MODIS land surface temperature (MODIS11\_L2) product  
N. Pacheco, New University of Lisbon, Portugal  
J. Privette, A. Pinheiro, Y. Yu, J. Seixas
- P1.12** Relationship between the observed land surface temperature and hemispherical thermal emission  
A. J. Rocha, New University of Lisbon, Portugal  
A. Pinheiro, J. Privette, Y. Yu, J. Seixas
- P1.13** The relations between satellite-derived albedo and surface changes over the past 20 years for a selection of sites in the Sahel: contribution to the Amma Project  
O. Samain, CESBIO, France  
L. Kergoat, P. Hiernaux
- P1.14** A Physics-based algorithm for retrieving land surface bi-directional reflectivity in mid-infrared channels from MODIS data  
B. Tang, Chinese Academy of Sciences, China  
Z. L. Li
- P1.15** A priori knowledge construction strategy in BRDF model based LAI inversion  
G. Yan, Beijing Normal University, China  
X. Mu, Z. L. Li

- P1.16** An improved correction of atmospheric absorption by split window surface temperature algorithms  
Y. Yu, NASA's Goddard Space Flight Center and Earth Systems and Geoinformation Sciences,  
J. L. Privette, A. C. Pinheiro
- P1.17** A neural network inversion of the DART model to retrieve Norway Spruce LAI at a very high spatial resolution  
R. Zurita-Milla, Wageningen University, The Netherlands  
Z. Malenovsky, L. Homolova, M. E. Schaepman, M. Martín, J. P. Castellu-Etchegorry, J. G. P. W. Clevers, P. Cudlin
- P1.18** Cloud masking in remotely sensed hyperspectral images using linear and nonlinear spectral mixture analysis  
J. Amorós-López, University of Valencia, Spain  
L. Gómez-Chova, A. Plaza, J. Plaza, J. Calpe, L. Alonso, J. Moreno
- P1.19** Wheat crop chlorophyll content extraction using Hyperion EO-1 hyperspectral data in precision agriculture  
A. Bannari, University of Ottawa, Canada  
K. S. Khurshid, K. Staenz, J. Schwarz
- P1.20** Multispectral and multiangular measurement and modeling of leaf Reflectance and Transmittance  
L. Bousquet, Université Paris 7 et Institut de Physique du Globe de Paris, France  
S. Jacquemoud, T. Deroin, I. Moya
- P1.21** Irrigated Maize Yield Estimation Using fAPAR Index, frame area and field data in Northern of Sinaloa, Mexico  
V. M. Rodríguez Moreno. Laboratorio Nacional de modelaje y Sensores Remotos, México  
J. Macias Cervantes
- P1.22** Estimation of errors in biophysical parameters maps derived from remote sensing data: The SPARC experiment  
G. Fernandez, University of Valencia, Spain  
J. Moreno



- P1.23** Towards multitemporal vegetation monitoring from geostationary Meteosat Second Generation (MSG) SEVIR data  
R. Fensholt, University of Copenhagen, Denmark  
Sandholt, S. Stisen, A. Norgaard
- P1.24** Retrieval of water quality of lakes with low chlorophyll content  
D. Floricioiu, Institute of Meteorology and Geophysics, Austria  
H. Rott, E. Rott
- P1.25** Mapping late-season weed patches through high spatial resolution remote sensing  
L. García-Torres, CSIC-Institute for Sustainable Agriculture, Córdoba, Spain  
F. López-Granados, M. Jurado-Expósito, M. Gómez-Casero, J. M. Peña-Barragán, A. Gelan-Begna
- P1.26** Multitemporal validation of an unmixing-based MERIS cloud screening algorithm  
L. Gómez-Chova, University of Valencia, Spain  
R. Zurita-Milla, G. Camps-Valls, L. Guanter, J. Clevers, J. Calpe, M. E. Schaepman, J. Moreno
- P1.27** Comparison of fire severity and fire intensity using remote sensing images  
F. González-Alonso, Remote Sensing Laboratory-Forest Research Centre (CIFOR-INIA), Spain  
A. Calle, A. Roldán-Zamarrón
- P1.28** Use of information content of hyperspectral imagery for retrieval of biophysical vegetation parameters indicating drought stress of durum wheat  
K. Huber, University of Natural Resources and Applied Life Sciences, Austria  
P. Rischbeck, J. Eitzinger, W. Schneider, F. Suppan, P. Weihs
- P1.29** Land surface temperature and emissivity retrieval from ASTER data over agriculturas areas: Standard products and alternative methods  
J. C. Jiménez-Muñoz, University of Valencia, Spain  
J. A. Sobrino, A. Gillespie, D. Sabol, W. T. Gustafson, L. Balick, J. J. Pasapera



- P1.30** An experimental study of radiometric temperature variation in the thermal infrared  
J. Cuenca, University of Valencia, Spain  
J. A. Sobrino
- P1.31** An adaptation of DST and DSMT to design supervised multispectral classifiers  
R. Khedam, University of Science and Technology Houari Boumediene (USTHB), Algiers, Algeria  
A. Bouakache, G. Mercier, A. Belhadj-Aissa
- P1.32** Evaluation of the relevance of spectral remote sensing to assess physiological, nutritional and sanitary status of oil palm plantations  
C. Lelong, CIRAD/UMR TETIS, France  
M. Lanore, J. P. Caliman
- P1.33** Field average SPECTRA deriving from 250m MODIS data  
J. Li, State Key Laboratory of Remote Sensing Science, China  
Q. Liu, Q. Liu
- P1.34** Vineyard LAI mapping from empirical relations between vegetation indices derived from quickbird imagery and field measurements  
R. López-Lozano, Centro de Investigación y Tecnología Agroalimentaria de Aragón (CITA), Spain  
M. A. Casterad
- P1.35** Hyperspectral data acquisition and analysis for the discrimination of Grassweeds in winter cereal crops  
P. Martín, Instituto de Economía y Geografía (IEG), CSIC, Spain  
L. Barreto, C. Fernández-Quintanilla
- P1.36** Atmospheric correction algorithm applied to CASI multiheight hyperspectral imagery  
L. Martinez, Institut Cartogràfic de Catalunya (ICC), Spain  
A. Tardà, V. Palà, R. Arbiol



- P1.37** Automated Mangrove stand delineation and species composition estimation in Gazi Bay (Kenya) with Quickbird satellite imagery  
G. Neukermans, Laboratory of General Botany and Nature Management, Belgium  
N. Koedam, J. G. Kairo, F. Dahdouh-Guebas
- P1.38** Assessment of vertical variation of Chlorophyll using hyperspectral, multiangular imagery  
N. Oppelt, Ludwig-Maximilians University Munich, Germany  
T. Hank, W. Mauser
- P1.39** A quality control algorithm for satellite chlorophyll products  
Y. J. Park, MUMM/Royal Belgian Institute for Natural Sciences, Belgium  
B. Nechad, B. Van Mol, K. Ruddick
- P1.40** Using ground spectral measurements and multivariate data analysis for monitoring stresses in dryland agriculture  
A. Pimstein, Ben Gurion University of the Negev, Israel  
A. Karnieli, D. J. Bonfil
- P1.41** Satellite estimation of biophysical parameters for ecological models: a sensitivity study over the boreal forest  
A. Prieto-Blanco, University of Wales Swansea, UK  
P. R. J. North, N. Fox, M. J. Barnsley
- P1.42** An overview on the spectral signature of Boreal forest  
M. Rautiainen, University of Helsinki, Finland  
P. Stenberg, M. Mõttus
- P1.43** Differential thermal inertia of geological surfaces  
D. E. Sabol, University of Washington, USA  
A. R. Gillespie, I. Danilina, E. McDonald
- P1.44** Low cost pushbroom hyperspectral sensor calibration system  
D. Valencia, Universidad de Extremadura, Spain  
R. Paniagua, C. Cantero, P. Martínez

- P1.45** Studying on spectral characteristics of winter wheat with different soil moisture condition  
J. Zhang, Chinese Academy of Meteorological Sciences, China  
W. Guo
- P1.46** Vegetation spectral reflectance inversion considering the temporal variation of biophysical parameters  
A. J. Berjón, Universidad de Valladolid, Spain  
V. E. Cachorro, P. J. Zarco-Tejada, A. M. Frutos, C. Toledano
- P1.47** Automatic temporal analysis software package for satellite remote sensing ATA-SRS  
N. Ben Achhab, Abdelmalek Essaadi University, Morocco  
N. Raissouni, J. A. Sobrino, A. Azyat, M. Lahraoua, A. Chahboun, M. Atitar
- P1.48** Hyperspectral Remote Sensing of Wetland Vegetation: A viable tool for detecting estuarine nutrient enrichment.  
Daria Siciliano, Naval Postgraduate School, Monterey, CA, USA  
K. Wasson, D. C. Potts, R. C. Olsen
- P1.49** Reproduction of surface temperature of individual components in a semi-arid orchard: the Saasa2/SudMed experiment  
G. Boulet, CESBIO, France  
S. Khabba, B. Duchemin, A. Chehbouni
- P1.50** Ad-Hoc deployment wireless network for land surface temperature in-situ measurements  
A. Chahboun, Abdelmalek Essaadi University, Morocco  
N. Raissouni, J. A. Sobrino, N. Ben Achhab, A. Azyat, M. Lahraoua
- P1.51** Characterization of the atmosphere during SEN2FLEX 2005 campaign  
V. Estelles, University of Valencia, Spain  
F. Molero, J. L. Gomez-Amo, J. C. Fortea, R. Pedrós, M. P. Utrillas, M. Pujadas, J. A. Martinez-Lozano



P1.52

Column aerosol characterization in a semiarid area around Marrakech during WATERMED 2003 campaign

J. L. Gómez-Amo, University of Valencia, Spain  
V. Estellés, R. Pedrós, M. P. Utrillas, J. A. Martínez-Lozano

13:30 - 15:00

**Pausa Comida / Lunch break**

15:00 - 17:00

**Sesión Oral / Oral session**

SESSION 2: Land Surface Radiation and Inversion Modelling  
Presidentes/ Chairpersons: A. GILLESPIE, F. PRATA

S2.1

Error analysis for a temperature and emissivity retrieval algorithm for hyperspectral imaging data

C. Borel, Ball Aerospace & Technologies Corp., USA

S2.2

Forward modelling of linear mixing in thermal IR temperature retrieval

L. K. Balick, Los Alamos National Laboratory, USA  
A. R. Gillespie, M. F. McCabe, A. Mushkin

S2.3

Modelling land surface emissivity spectra using combined leaf and plant canopy radiative transfer models.

A. Olioso, INRA/CSE, France  
F. Baret, S. Jacquemoud, J. A. Sobrino, G. Soria, M. Chelle, B. Duchemin, F. Jacob

S2.4

Emissivity estimates in the atmospheric window from ASTER and MODIS data

T. Schmugge, New Mexico State University, USA  
K Ogawa

S2.5

Thermal infrared cavity radiation compensation using sub-pixel roughness estimates from ASTER stereo images

A. Mushkin, University of Washington, USA  
A. R. Gillespie, M. A. O'Neal, I. Danilina, E. A. Abbott, L. S. Pietro, L. K. Balick

S2.6

Emissivity retrieval from combined mid-infrared and thermal infrared data of MSG-SEVIRI. Study of seasonal variations.

F. Nerry, LSIT, France  
G.-M. Jiang, Z.-L. Li

17:00 - 17:30

**Pausa café / Coffee break**

17:30 - 18:30

**Sesión Oral / Oral session**

SESSION 3: - Land Surface Radiation and Inversion Modelling  
- Earth Observation Missions & Services  
Presidentes/ Chairpersons: S. LIANG, P. ZARCO-TEJADA

S3.1

Retrieval of Leaf Area Index from remote sensing data: How much do you pay for what you get?

F. Vuolo, University of Naples "Federico II", Italy  
L. Dini, G. D'Urso

S3.2

Seasonal reflectance course of some forest types in Estonia as determined from a series of LANDSAT TM and SPOT images and via simulation

T. Nilson, Tartu Observatory, Estonia  
S. Suviste, T. Lökk, A. Eenmäe

S3.3

Physically-based modelling of photosynthetic processes

T. Hank, Ludwig-Maximilians University Munich, Germany  
N. Oppelt, W. Mauser

18:30 - 19:00

**Conferencia invitada/invited Conference**

Satellites for Meteorology and Climate at ESA

E. Oriol-Pibernat, European Space Agency, Italy

19:00-21:00

Acto Social / Welcome Reception

9:00 - 10:30

**Sesión Oral / Oral session**

SESSION 4: - Multispectral Remote Sensing and Imaging Spectroscopy  
- Multiangular and Multitemporal Measurement  
Presidentes/Chairpersons: F. BARET, R. O. GREEN

S4.1

Imaging spectroscopy: an approach for quantitative remote measurements via the interaction of light with matter  
R. O. Green, Jet Propulsion Laboratory, USA

S4.2

Application of the canopy reflectance model SLC for parameter retrieval of wheat based on CHRIS and AVIS data  
H. Bach, VISTA Geowissenschaftliche Fernerkundung GmbH, Germany  
S. Begiebing, W. Verhoef

S4.3

Wetland feature extraction and change detection study of a Playa Lake environment in NE Spain using hyperspectral and multispectral images  
M. Koch, Boston University, USA  
T. Schmid, J. Gumuzzio, P. M. Mather

S4.4

Stress detection in orchards using hyperspectral remote sensing  
P. Kempeneers, VITO, University of Antwerp,  
S. De Backer, P. Zarco-Tejada, S. Delalieux, J. van Aardt, G. Sepulcre-Cantó,  
F. Morales Iribas, P. Scheunders

10:30 - 11:00

**Pausa café / Coffee break**

11:00 - 12:00

**Sesión Oral / Oral session**

SESSION 5: - Multiangular and Multitemporal Measurement  
Presidentes / Chairpersons: F. NERRY, J. L. PRIVETTE

S5.1

Developing a multi-decadal climate data record of land surface temperature: A research agenda  
J. L. Privette, NASA's Goddard Space Flight Center (GSFC), USA  
A. C. Pinheiro, Y. Yu

S5.2

Analysis of inter annual variations of the vegetation phenological state from AVHRR time series. Comparison with modelling results  
F. Maignan, Laboratoire des Sciences du Climat et de l'Environnement, France  
C. Bacour, F. M. Breon

S5.3

Experimental Characterization of Directional anisotropy of Thermal infrared measurements over a Urban area in nighttime conditions  
J. P. Lagouarde, INRA Unité EPHYSE, France  
M. Irvine

12:00 - 13:30

**Sesión Poster / Poster session**

SESSION 2: - Multiangular and Multitemporal Measurement  
- Scaling, Fusion, reduction and assimilation of data  
- Carbon and Water cycle observation and modelling

P2.01

Biophysical parameters retrieval in Barrax using multitemporal MERIS and LANDSAT data  
M. C. González, CESBIO, France  
T. Le Toan, J. Moreno, L. Guanter

P2.02

Validation of PoIDER surface BRDF and albedo products based on a review of other satellites, ground and climate databases  
O. Hauteceur, CNRM/Météo-France, France  
J. L. Roujean

P2.03

Crop leaf orientation distribution identification by bidirectional canopy reflectance  
W. Huang, Chinese Academy of Sciences and Beijing Normal University, China  
Zhengniu, J. Wang, J. Wang, L. Liu, Z. Wang

P2.04

Canopy biochemistry retrieval using spectro-directional information of CHRIS data  
S. Huber, University of Zurich, Switzerland  
M. Kneubuehler, B. Koetz, N. E. Zimmermann, K. I. Itten

P2.05

Modelling directional anisotropy of thermal infrared measurements over a Pine Forest canopy  
B. Kurz, INRA Unité EPHYSE, France  
J. P. Lagouarde, P. Moreau, D. Guyon, I. Champion

P2.06

Analysis of the urban heat island from TIR airborne data: First results obtained during the Capitoul experiment over the city of Toulouse  
J. P. Lagouarde, INRA Unité EPHYSE, France  
M. Irvine, G. Pigeon, V. Masson, F. Jacob

- P2.07** Using 21 years of AVHRR data to assess the impact of the North Atlantic oscillation on European vegetation dynamics  
R. Libonati, Centro de Geofísica da Universidade de Lisboa, Portugal  
L. Peres, C. Gouveia, R. M. Trigo, C. C. Da Camara
- P2.08** A simple parametrization to determine Sea surface emissivity. Implementation in Sea surface temperature algorithms.  
R. Niclós, University of Valencia, Spain  
V. Caselles, E. Valor, C. Coll, J. M. Sánchez, J. M. Galve, M. Mira
- P2.09** Exploitation of the daily cycle data from SEVIRI sensor  
M. Romaguera, University of Valencia, Spain  
J. A. Sobrino
- P2.10** Aerosol characterization by Star-photometry at Granada, Spain  
B. Ruiz, Grupo de Física de la Atmósfera (GFAT),  
J. Aceituno, F. J. Olmo, L. Alados-Arboledas
- P2.11** Fusion of MERIS, vegetations, PoIDER and AVHRR datasets for the determination of surface BRDF and albedo  
O. Samain, CESBIO, France  
B. Geiger, J. L. Roujean
- P2.12** Monitoring water stress as an indicator of fruit quality in olive and peach orchards using thermal remote sensing imagery  
G. Sepulcre-Cantó, CSIC-Instituto de Agricultura Sostenible, Spain  
P. J. Zarco-Tejada, J. C. Jiménez-Muñoz, J. A. Sobrino, V. Vega, M. Pastor, M. A. Soriano, E. Fereres
- P2.13** Exploitation of angular effects in land surface observations from satellites-EAGLE  
J. A. Sobrino, University of Valencia, Spain  
M. M. Zaragoza-Ivorra, Y. Julien, J. C. Jiménez-Muñoz, M. Gómez, M. Romaguera, J. Cuenca, J. El Kharraz, M. Atitar, G. Sòria, B. Su, A. Gieske, L. Jia, Z. L. Li, F. Nerry, W. Verhoef

- P2.14** Using vegetation temperature condition index for time series drought occurrence monitoring  
W. Sun, China Agricultural University, China  
P. X. Wang
- P2.15** The comparison of directional canopy temperatures to canopy component temperatures over a vineyard using multi-source models  
J. Timmermans, International Institute for Geo-information Sciences and Earth Observation (ITC), The Netherlands  
A. Gieske, W. Timmermans R. v.d. Velde, Z. Su
- P2.16** Multi-layer perceptrons (MLP) neural network (NN) based algorithm for estimating component temperatures from AATSR measurements  
W. M. Wang, TRIO/LSIIT (CNRS UMR 7005), France  
Z. L. Li
- P2.17** Aportaciones del algoritmo de Análisis de Componentes Principales Robusto a la fusión de imágenes multiespectrales  
E. Castillo, Universidad de Cantabria, Spain  
V. Bayarri, R. Ferrer
- P2.18** Modelling air temperature through the combination of remote sensing and GIS data  
J. Cristóbal, University of Barcelona, Spain  
M. Ninyerola, X. Pons, M. Pla
- P2.19** Spatialization of sowing date and nitrogen supplies by combining remote sensed leaf area index and a crop simulation model. The case of durum wheat in the Alpilles test area (South-east of France)  
R. Hadria, INRA, France  
A. Olioso, B. Duchemin, F. Ruget, M. Weiss, V. Rivalland, M. Guérif, A. Lahrouni, A. Chehbouni
- P2.20** Comparison of sensitivity analysis methods for data assimilation in a sugar cane model  
V. Houlès, Maison de la Télédétection, CIRAD, France  
J. F. Martiné, A. Bégué



- P2.21** Spatial-spectral unmixing of MODIS data based on higher resolution multispectral data and/or GIS data  
G. Kaiser, BOKU-University of Natural Resources and Applied Life Sciences, Austria  
F. Suppan
- P2.22** Improved estimates of vegetation biophysical variables from MERIS TOA images by using spatial and temporal constraints  
C. Lauvernet, INRA, France  
F. Baret, S. Buis
- P2.23** Estimation of the increase of agricultural area in Qingtongxia irrigation district in Yellos Riber basin of China using AVHRR combined with ETM+  
M. Matsuoka, Research Institute for Humanity and Nature, Japan  
Y. Fukushima, T. Hayasaka, Y. Honda, T. Oki
- P2.24** Parsing Shade  
M. A. O'Neal, University of Delaware, USA  
A. R. Gillespie
- P2.25** Determining the required accuracy of LST products for estimating surface energy fluxes  
A. C. T. Pinheiro, NASA GSFC, USA  
S. Kumar, R. Reichle, K. Arsenault, Y. Yu, J. L. Privette
- P2.26** Integration of multiple feature extraction and object oriented classification of aerial images for map updating  
J. A. Recio, Universidad Politécnica de Valencia, Spain  
L. A. Ruiz, A. Fernández-Sarría, T. Hermosilla
- P2.27** Spatial heterogeneity characterization for scaling non linear processes  
S. Garrigues, University of Maryland and NASA's GSFC, USA  
D. Allard, F. Baret, J. Morisette
- P2.28** Multiresolution monitoring of evapotranspiration in the Midi-Pyrénées region  
P. Maisongrande, CESBIO, France  
A. Lobo, L. Coret, B. Duchemin, P. Gouaux, A. Boon, G. Dedieu

- P2.29** The national airborne field experiment: towards 1 km- resolution soil moisture  
O. Merlin, University of Melbourne, Australia  
J. P. Walker, R. Panciera, J. D. Kalma, E. J. Kim, J. M. Hacker
- P2.30** High resolution soil moisture mapping using AMSR-E brightness temperatures over two contrasting sites of the AMMA project  
T. Pellarin, LTHE/CNRS, France  
J. M. Cohardand, J. P. Laurent
- P2.31** Geostatistical downscaling of METEOSAT Second generation SEVIRI data  
I. Sandholt, University of Copenhagen, Denmark  
P. Frykman, A. Norgaard
- P2.32** Investigation of scaling effects on image texture in urban areas  
C. Thiel, Friedrich-Schiller-University Jena, Earth Observation, Germany  
T. Riedel, C. Schmuilius
- P2.33** Development and application of an aid decision tool for the optimisation of the compositing parameters  
C. Vancutsem, Université Catholique de Louvain, Belgium  
P. Defourny
- P2.34** Up-Scaling and its error transferring for surface parameters in quantitative remote sensing  
R. H. Zhang, Chinese Academy of Sciences, China  
J. Tian, Z. L. Li, X. M. Sun, Z. L. Zhu
- P2.35** Mapping of daily actual evapotranspiration in Algerian semiarid environment with satellite ASTER data  
M. Benslimane, Centre universitaire de Mascara, Algérie  
A. Hamimed, A. Khaldi
- P2.36** Assessing second-stage evaporation using time series of observed to unstressed surface temperature difference  
G. Boulet, CESBIO, France  
A. Chehbouni, J. Ezzahar, S. Er-raki, J. Rodriguez, B. Duchemin

- P2.37** Carbon fluxes modelling in the Iberian Peninsula: a comprehensive comparison between MERIS and MODIS results  
N. Carvalhais, New University of Lisbon, Portugal  
C. Nunes, A. Rocha, R. Pacheco, J. Seixas
- P2.38** MODIS-derived daily PAR simulation from cloud-free image and its test: a case study in East China  
L. Chen, Chinese Academy of Sciences, China  
L. Yang, Y. Gao, Q. Liu, X. Gu, S. Chen
- P2.39** Multiobjective calibration of the SETHyS SVAT model based on diurnal cycle radiative surface temperature measurements  
B. Coudert, CETP/IPSL, France  
C. Ottlé
- P2.40** The ORCHIDEE terrestrial biosphere model: Validation and assimilation strategies using remotely sensed products  
J. Demarty, LSCE, France  
A. D. Friend, F. Chevallier, N. Viovy, C. Bacour, P. Ciais
- P2.41** Driven FAO-56 dual crop coefficient approach with remotely-sensed data for estimating water consumptions of wheat crops in a semi-arid region  
S. Er-Raki, FSSM-Faculté des Sciences Semlalia Marrakech, Morocco  
A. Chehbouni, N. Guemouria, B. Duchemin, J. Ezzahar, R. Hadria, I. BenHadj
- P2.42** The use of the Scintillation Technique for estimating evapotranspiration ET over several agricultural fields  
J. Ezzahar, Faculty of Sciences Semlalia, Morocco  
A. Chehbouni, J. C. B. Hoedjes, S. Er-Raki, Ah. Chehbouni, G. Boulet, B. Duchemin, A. Olioso, J. A. Sobrino
- P2.43** Water content estimation in vegetation and soil with AHS and CHRIS-PROBA data and modelling techniques: the SEN2FLEX experiment  
G. Fernandez, University of Valencia, Spain  
M. Palladino, J. Moreno

- P2.44** Accuracy assessment of remote sensing evapotranspiration models based on water balance equation  
Y. Gao, Chinese Academy of Sciences, P. R. China  
Z. L. Li
- P2.45** Validation of Global leaf area index simulated by the ISBA-GS model through comparison with satellite products  
A. L. Gibelin, CNRM-GAME, France  
J. C. Calvet, J. L. Roujean, L. Jarlan, S. Los
- P2.46** ISBA-CC new land surface model simulating the terrestrial carbon cycle  
A. L. Gibelin, CNRM-GAME, France  
J. C. Calvet, N. Viovy
- P2.47** Daily evapotranspiration retrieval from AHS and ASTER data  
M. Gómez, University of Valencia, Spain  
J. A. Sobrino, J. C. Jiménez-Muñoz, A. Olioso
- P2.48** Monitoring and mapping the phenology of the maritime pine forest of south-western France from VEGETATION time-series  
D. Guyon, INRA, France  
H. Cardot, O. Hagolle
- P2.49** Relationship of reflectance spectra with light use efficiency and canopy CO<sub>2</sub> flux at canopy scale  
Y. Inoue, National Institute for Agro-Environmental Sciences, Japan  
J. Peñuelas, A. Miyata, M. Mano
- P2.50** Using satellite retrievals to validate natural carbon fluxes and stocks from global models  
C. M. J. Jacobs, Alterra, The Netherlands  
A. J. W. De Wit, L. Jia, E. J. Moors
- P2.51** A simplified 2DVAR assimilation scheme to analyse above-ground biomass from satellite LAI products into the ISBA-A-GS model. Application to the south western France.  
L. Jarlan, European Center for Medium Range Weather forecast, UK  
J. C. Calvet, P. Lemoigne, S. Lafont, G. Balsamo, A. Bejaars, A. L. Gibelin, A. Brut, J. Muñoz, F. Bouysse



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|---------------|---|
| P2.52         | <p><a href="#">Intercomparison of LAI products from Cyclopes and Globalcarbon projects</a><br/>R. Lacaze, Médias-France, CNES, France<br/>M. Weiss</p>  |
| P2.53         | <p><a href="#">Comparison of CTESSEL CO2 fluxes with satellite-derived CO2 fluxes</a><br/>S. Lafont, ECMWF, USA<br/>A. Beljaars, M. Voogt, L. Jarlan, P. Viterbo, B. van Hurk, J. C. Calvet</p>   |
| 13:30 - 15:00 | <b>Pausa Comida / Lunch break</b>   |
| 15:00 - 17:00 | <p><b>Sesión Oral / Oral session</b><br/>SESSION 6: - Carbon and Water Cycle Observation and Modelling<br/>Presidentes/Chairpersons: G. CHEHBOUNI, A. OLIOSO</p>  |
| S6.1          | <p><a href="#">The use of remotely sensed data for integrated hydrological modeling in arid and semi-arid regions, current status and future challenges</a><br/>A. Chehbouni, CESBIO CNES-CNRS-UPS-IRD, France<br/>O. Merlin, A. Chaponnière, G. Boulet, B. Duchemin, G. Dedieu, R. Escadafal, A. Oliosio, F. Jacob, J. A. Sobrino</p>  |
| S6.2          | <p><a href="#">Land-Atmosphere exchanges of water, energy and carbon dioxide in space and time over the heterogeneous Barrax site during SPARC 2004 and SEN2FLEX 2005</a><br/>Z. Su, International Institute for Geo-information Sciences and Earth Observation (ITC), The Netherlands<br/>A. Gieske, W. Timmermans, J. Timmermans, R. van der Velde, L. Jia, J. Elbers, X. Jin, H. van der Kwast, A. Oliosio, J. A. Sobrino, J. Moreno, F. Nerry, D. Sabol, R. Bianchi</p> |
| S6.3          | <p><a href="#">Using EO Observations to Improve Terrestrial Carbon Cycle Estimates</a><br/>S. Quegan, Sheffield Centre for Earth Observation Sciences, UK</p>   |
| S6.4          | <p><a href="#">Estimating Boreal forest biomass from fusion of optical and microwave remote sensing data</a><br/>S. Saatchi, JPL/California Institute of Technology, USA<br/>R. Myneni, Y. Yu, A. Baccini, D. Huang, L. Heath, Y. Knyazikhin</p>  |



|               |  |
|---------------|--|
| S6.5          | <p><a href="#">Tropical rainforest phenology observations with MODIS EVI and flux tower data</a><br/>A. R. Huete, University of Arizona, USA<br/>S. Saleska, K. Didan, P. Ratana, R. Nemani</p>  |
| S6.6          | <p><a href="#">Remote Sensing of photosynthetic processes by the photochemical reflectance index (PRI) at the San Rossore CHRIS-PROBA test site</a><br/>S. Raddi, University of Firenze, Italy<br/>S. Cortes, I. Pippi, P. Marcoionni, F. Magnani</p>  |
| 17:00 - 17:30 | <b>Pausa café / Coffee break</b>   |
| 17:30 - 19:00 | <p><b>Sesión Oral / Oral session</b><br/>SESSION 7: - Carbon and Water Cycle Observation and Modelling<br/>- Earth Observation Missions &amp; Services<br/>Presidentes/Chairpersons: F. BARET, B. SU</p>   |
| S7.1          | <p><a href="#">Towards near-operational global and regional monitoring of carbon fluxes over land using EO data</a><br/>J. C. Calvet, Météo-France/CNRM, France<br/>A. L. Gibelin, J. Muñoz-Sabater, C. Rüdiger, A. Brut, A. Beljaars, S. Lafont, L. Jarlan, A. Friend, B. van den Hurk, E. J. Moors</p> |
| S7.2          | <p><a href="#">Ability of EO products to validate and constrain and terrestrial biosphere model</a><br/>J. Demarty, LSCE, France<br/>A. D. Friend, F. Chevallier, N. Viovy, C. Bacour, P. Ciais, J. C. Calvet, A. Beljaars, B. van den Hurk, E. J. Moors</p>   |
| S7.3          | <p><a href="#">The ESA EarthCARE Mission. Development of 3 along-track views angular dependence models for improved radiance to flux conversion</a><br/>E. López-Baeza, University of Valencia, Spain<br/>C. Domenech, H. W. Barker, M. Bouvet, D. Donovan, A. Velázquez</p>                             |
| S7.4          | <p><a href="#">VENUS: A joint Israel-French Earth Observation scientific mission with High spatial and temporal resolution capabilities</a><br/>G. Dedieu, CESBIO, France<br/>A. Karnieli, O. Hagolle, H. Jeanjean, F. Cabot, P. Ferrier, Y. Yaniv</p>   |
| 19:00 - 22:00 | <b>Cena y evento Musical / Dinner and Musical event</b>  |

9:00 - 10:30

**Sesión Oral / Oral session**

SESSION 8: - Carbon and Water Cycle Observation and Modelling  
- Land Cover/Use and Change  
Presidentes / Chairpersons: B. SU, Z.-L. LI

S8.1

Relating canopy hyperspectral reflectance and fluorescence indices to carbon related parameters  
E. M. Middleton, NASA/Goddard Space Flight Center, USA  
L. A. Corp, P. K. E. Campbell, C. S. T. Daughtry

S8.2

Estimation of Carbon and Heat Fluxes in Tokai Region, Central Japan, by using ASTER and MODIS data  
Y. Yamaguchi, Nagoya University, Japan  
T. Sasai, S. Kato, K. Murakami, K. Okamoto, T. Tamura, T. Akaike, K. Higashijima

S8.3

Do vegetation indices reliably assess vegetation state and dynamics?  
A. Karnieli, Ben Gurion University of the Negev, Israel

S8.4

Searching for trends of change through exploratory data analysis of time series of remotely-sensed images of SW Europe  
A. Lobo, Institut de Ciències de la Terra "Jaume Almera", Spain

10:30 - 11:00

**Pausa café / Coffee break**

11:00 - 12:00

**Sesión Oral / Oral session**

SESSION 9: - Land Cover/Use and Change  
- Global Change and Sustainable Development  
Presidentes / Chairpersons: A. HUETE, S. LIANG

S9.1

Globcover: A 300 m global land cover product for 2005 using ENVISAT MERIS time series  
M. Leroy, Medias-France, France  
P. Bicheron, C. Brockmann, U. Krämer, B. Miras, M. Huc, F. Ninô, P. Defourny, C. Vancutsem, D. Petit, V. Amberg, B. Berthelot

S9.2

The climatological record of clear-sky longwave radiation at the Earth's surface-evidence for water vapour feedback?  
F. Prata, Norwegian Institute for Air Research, Norway

S9.3

Developing a photosynthetic prediction model for rice yield using remotely sensed and meteorological data  
D. Kaneko, Matsue National College of Technology, Japan

12:00 - 13:30

**Sesión Poster / Poster session**

SESSION 3: - Carbon and Water Cycle Observation and Modelling  
- Land Cover/Use and Change  
- Sensor Calibration, Atmospheric Correction and Product Validation

P3.01

Aplicación de Técnicas de Teledetección y modelos de balance de agua para la estimación de necesidades hídricas de los cultivos  
I. J. Lorite, IFAPA, Spain  
R. G. Allen, M. Tasumi, P. Gavilán, C. Santos, E. Fereres

P3.02

Combining LANDSAT-7 ETM data with field observations for regional land surface heat fluxes over heterogeneous landscape  
Y. Ma, Chinese Academy of Sciences, China  
M. Menenti, R. A. Feddes, Z. Su, L. Jia, H. Ishikawa

P3.03

Assimilation of remote sensing data in a SVAT model with a simplified 1D-VAR Scheme  
J. Muñoz-Sabater, Météo-France/CNRM, France  
J. C. Calvet

P3.04

Large seasonal swings in leaf area of Amazon rainforests  
R. B. Myneni, Boston University, USA  
W. Yang, A. R. Huete, R. R. Nemani, Y. Knyazikhin

P3.05

Carbon consequences of regional North American land cover disturbances  
C. S. R. Neigh, NASA Goddard Space Flight Center, USA  
C. J. Tucker, J. R. G. Townshend, G. J. Collatz

P3.06

Neural net techniques used to estimate temporal and high resolution canopy biophysical variables from multiple remote sensing data sources. SVAT application and sensibility analysis on Alpilles/ReSeDA campaign (South-East of France)  
V. Rivalland, CESBIO, France  
A. Olioso, M. Claverie, M. Weiss, F. Baret, K. Pavaiseau



- P3.07** Use of evaporative fraction to estimate daily evapotranspiration for several irrigated crops in northwest Mexico  
J. C. Rodríguez, CEDES,  
C. J. Watts, A. Chehbouni, J. Grageda, J. Garatuza
- P3.08** Seasonal adaptation of leaf photosynthesis in *Pinus pinaster*  
E. Rubio, Instituto de Desarrollo Regional, Spain  
F. R. López-Serrano, M. A. Fernández-Toledo, M. Andrés, A. Calera, A. del Cerro,  
A. García-de-Vicuña, J. González-Piqueras, C. Martínez-Beltran, J. F. Mateo-  
Fernández, F. A. García-Morote, E. A. Torres
- P3.09** Monitoring daily evapotranspiration at different spatial resolutions. Effects on fluxes variability of land uses in the Basilicata Italian Region  
J. M. Sánchez, University of Valencia, Spain  
V. Caselles, E. Valor, C. Coll, R. Niclós, J. M. Galve, M. Mira
- P3.10** Effects of contrasting leaf structure on reflectance estimates of chlorophyll content  
L. Serrano, Universitat Politècnica de Catalunya, Spain
- P3.11** Samir, a tool for irrigation monitoring using remote sensing for landcover mapping and evapotranspiration estimation  
V. Simonneaux, CESBIO, France  
D. Helson, J. Metral, H. Kharrou, M. Cherkaoui, B. Duchemin, G. Chehbouni
- P3.12** Temperature retrieval from METEOSAT Second Generation SEVIRI data for application in SVAT modelling  
S. Stisen, University of Copenhagen, Denmark  
I. Sandholt, A. Norgaard, R. Fensholt
- P3.13** Accounting for surface variability on flux estimation using remote sensing data  
W. J. Timmermans, International Institute for Geo-information Sciences and Earth  
Observation (ITC), The Netherlands  
J. D. Albertson, G. Bertoldi, A. Olioso, Z. Su, A. S. M. Gieske
- P3.14** A photosynthesis-based canopy resistance in the ECMWF land surface scheme  
M. Voogt, KNMI, The Netherlands  
A. van Loon, B. vd Hurk, J. C. Calvet

- P3.15** Use of MODIS products in the estimation of surface fluxes for tropical vegetation in NW Mexico  
C. J. Watts, University of Sonora, Mexico  
J. C. Rodríguez, J. Garatuza-Payán
- P3.16** Determination of the CO<sub>2</sub> Fluxes by means NOAA/AVHRR-1 Km imagery in the natural park of La Albufera  
M. M. Zaragoza-Ivorra, University of Valencia, Spain  
J. A. Sobrino, M. J. Sanz, J. V. Chordá
- P3.17** The modification and application of basin evapotranspiration simulation method in AVSWAT2000 distributed hydrological model  
W. Zhang, Chinese Academy of Sciences, China  
D. Zhang, L. Wu, C. Fu
- P3.18** Soil line extraction and vegetation indices fusion for monitoring vegetation coverage with SPOT data  
A. Kallel, CETP, COSTEL,  
S. Le Hégarat, C. Ottlé, L. Hubert-Moy, S. Corgne
- P3.19** Validation of the Parasol land products LAI, fAPAR: comparison with MODIS and ground measurements  
F. Baret, INRA-CSE Avignon, France  
K. Pavageau, P. Rossello, M. Weiss, R. Lacaze
- P3.20** Monitoring Vegetation using QuickBrid data with a vegetation index through Radiative Transfer Simulation  
A. J. Berjón, Universidad de Valladolid, Spain  
V. E. Cachorro, P. J. Zarco-Tejada, A. M. Frutos, S. Mogo
- P3.21** Land-use in semi-arid areas derived from NDVI images at high and low spatial resolutions  
I. Benhadj, CESBIO, France  
B. Duchemin, S. Khabba, H. Cardot, P. Maisongrande, V. Simonneaux
- P3.22** Analysis of the MSG-SEVIRI sensor for the obtaining of fire parameters  
A. Calle, University of Valladolid, Spain  
J. L. Casanova, A. Romo

- P3.23** [Estimación con imágenes espaciales de alta resolución de parámetros físicos del olivo en la campiña alta cordobesa](#)  
I. L. Castillejo-González, Universidad de Córdoba, Spain  
A. García-Ferrer Porras, M. Sánchez de la Orden, F. López-Granados, M. Jurado-Expósito, L. García-Torres
- P3.24** [Agrometeorological study of semi-arid areas: an experiment for analysing the potential of FORMOSAT-2 time series of images in the Marrakech plain](#)  
B. Duchemin, CESBIO, France  
V. Simonneaux, B. Mougnot, S. Khabba, R. Hadria, I. Benhadj, J. Ezzahar, J. Hoedges, O. Hagolle, H. Tromp, S. Er-Raki, M. H. Kharrou, A. Chehbouni, N. Guemouria, L. Hanich, A. Lahrouni, G. Dedieu G. Boulet, P. Maisongrande, R. Escadafal, L. Ouzine, A. G. Chehbouni
- P3.25** [Image feature from the experimental semivariogram and its application to texture classification](#)  
M. Durrieu, Universidad Politécnica de Valencia, Spain  
L. A. Ruiz, A. Balaguer
- P3.26** [Estimation of the normalized temperature to follow the degradation of semi-arid zones in Algeria](#)  
A. Faid, University of Béjaia, Algeria  
Y. Smara, V. Caselles
- P3.27** [Neural network estimation of the cover fraction from SPOT-HRV observations. Development of the algorithm, evaluation and comparison with the CYCLOPES products over South-West France.](#)  
E. Fillol, INRA CSE, France  
F. Baret, M. Weiss, K. Pavageau, G. Dedieu, P. Gouaux, D. Ducrot
- P3.28** [Developing a land degradation indicator for regional analysis based on the relation between MODIS LAI and surface temperature](#)  
M. Garcia, Estación Experimental de Zonas Áridas-CSIC, Spain  
J. Puigdefábregas, A. Palacios-Orueta, M. T. Moreno, G. del Barrio, T. Holt
- P3.29** [Dynamics of snow in watersheds of the Moroccan High Atlas by remote sensing](#)  
L. Hanich, Faculté des Sciences et Techniques de Marrakech.  
B. Duchemin, P. Maisongrande, A. G. Boulet, V. Simonneaux and G. Chehbouni

- P3.30** [Evaluation of multi-temporal methods for crop classification using ASTER images](#)  
B. Hoyos, Universidad Politécnica de Valencia, Spain  
M. Hidalgo, A. Vidal-Pantaleoni
- P3.31** [A new approach to estimate tropical deforestation by object-oriented unsupervised classifications of Landsat imagery](#)  
G. Duveiller-Bogdan, Université Catholique de Louvain, Belgium  
P. Defourny, B. Desclee, P. Mayaux
- P3.32** [Diseño de un seguro ganadero en pastizales a escala de país usando el sensor AVHRR](#)  
F. Paz, Campus Montecillo, México  
E. Palacios, M. Bolaños, A. Cano, A. Zarco, F. Pascual, L. A. Palacios, M. Martínez
- P3.33** [NCAVEO: a network for the calibration and validation of Earth observation data](#)  
E. J. Milton, University of Southampton, UK
- P3.34** [Accuracy assessment of methods for estimating FVC at high resolution scale over a cropland landscape](#)  
A. Verger, University of Valencia, Spain  
B. Martínez, F. Camacho-de-Coca, J. García-Haro
- P3.35** [Analyzing the vegetation cover variation of China from AVHRR-NDVI data](#)  
J. Xiaoguang, Chinese Academy of Sciences, China  
W. Dan, T. Lingli, H. Jiani, X. Xiaohuan
- P3.36** [MODIS-based remote sensing monitoring upon the grass production in China](#)  
B. Xu, Institute of Agricultural Resources and Regional Planning, China  
Y. Xiuchun, T. Weiguo, Q. Zhihao, L. Haiqi, M. Jianming, B. Yuyun
- P3.37** [Vegetation growth monitoring in the grassland of China using MODIS remote sensing data](#)  
B. Xu, Institute of Agricultural Resources and Regional Planning, China  
T. Weiguo, Y. Xiuchun, Q. Zhihao, L. Haiqi, M. Jianming, B. Yuyun
- P3.38** [Remote Sensing monitoring of climatic changes effects on forested areas](#)  
M. Zoran, University Politechnica Bucharest, Bucharest  
L. F. Zoran, A. Dida

- P3.39** [Multiresolution analysis of the land surface temperature estimated from satellite data over Romania](#)  
C. Alecu, National Meteorological Administration, Romania  
G. Stancalie, A. Diamandi
- P3.40** [Reference remote sensing data bases: temporal series of calibrated and orthorectified satellite images for scientific use](#)  
H. de Boissezon, CNES, France  
A. Sand
- P3.41** [An autonomous method for atmospheric correction based on the spectral and spatial variations of the signal. Development and evaluation for the MERIS/ENVISAT sensor](#)  
D. Béal, INRA, Unité CSE, Equipe Télédétection, France  
F. Baret, C. Bacour, X. F. Gu
- P3.42** [Development of an optimal estimation method for calibration of infrared radiometers](#)  
G. Brogniez, Laboratoire d-Optique Atmosphérique USTL, France  
B. Bonnel, B. Damiri, M. Legrand, J. P. Buis, N. Buis
- P3.43** [Prototyping fCover product over Africa based on existing cyclopes and JRC products for VGT4Africa](#)  
F. Camacho-de Coca, EOLAB, Spain  
B. Martínez, P. Bicheron, R. Lacaze, M. Leroy
- P3.44** [Development of an all-sky imager for cloud classification](#)  
A. Cazorla, Universidad de Granada, Spain  
F. J. Olmo, L. Alados-Arboledas
- P3.45** [Validation of ASTER Thermal infrared data in the Valencia test site](#)  
C. Coll, University of Valencia, Spain  
V. Caselles, E. Valor, R. Niclós, J. M. Sánchez, J. M. Galve, M. Mira
- P3.46** [Estimation of fraction of green vegetation cover in the context of Sen2Flex campaign: Comparison of methodologies and validation](#)  
M. A. Fernández, Instituto de Desarrollo Regional (UCLM), Spain  
E. Rubio, L. González, A. Calera, M. Belmonte

- P3.47** [Ground Truth for MSG land-surface temperature](#)  
E. Gajewska, Forschungszentrum Karlsruhe für Meteorologie und Klimaforschung, Germany  
F. Prata, F. Olesen
- P3.48** [Simulation and validation of land surface temperature algorithms for MODIS and AATSR data](#)  
J. M. Galve, University of Valencia, Spain  
C. Coll, V. Caselles, E. Valor, R. Niclós, J. M. Sánchez, M. Mira
- P3.49** [Algorithm development and current status the SEVIRI/MSG LAI and FVC products](#)  
F. J. García-Haro, University of Valencia, Spain  
F. Camacho-de-Coca, J. Meliá
- P3.50** [Validation and inter-comparison of global leaf area index products](#)  
S. Garrigues, University of Maryland and NASA's GSFC, USA  
J. Morissette, J. Nickeson, J. Privette, S. Devadiga, F. Baret
- P3.51** [Operational derivation of surface albedo and down-welling short-wave radiation in the Satellite application for land surface analysis](#)  
B. Geiger, Météo-France/CNRM, France  
D. Carrer, C. Meurey, J. L. Roujean
- P3.52** [Revisions to the ASTER temperature/emissivity separation algorithm](#)  
W. T. Gustafson, University of Washington, USA  
A. R. Gillespie, G. Yamada
- P3.53** [Atmospheric correction of multi-temporal mono-directional images: Venus level 2 algorithms applied to FORMOSAT-2 images](#)  
O. Hagolle, CNES, France  
H. Tromp, G. Dedieu, B. Mougenot, V. Simonneaux, B. Duchemin, I. Benhadj
- P3.54** [Land surface temperature retrieval from MSG-SEVIRI and AATSR data and comparisons with the MODIS land surface temperature products over the Barrax site in Spain](#)  
G. Jiang, TRIO/LSIT/ENSPS, France  
Z. L. Li

13:30 - 15:00

**Pausa Comida / Lunch Break**

15:00 - 17:00

**Sesión Oral / Oral session**

SESSION 10: -Sensor Calibration, Atmospheric Correction and Product Validation  
 Presidentes / Chairpersons: M. LEROY, Z. WAN

S10.1

[The CYCLOPES LAI, fAPAR, fCOVER land products version 3 derived from vegetation: principles and evaluation using ground measurements and intercomparison with other products](#)

F. Baret, INRA-CSE Avignon, France  
 M. Weiss, K. Pavageau, P. Rossello, P. Bicheron, O. Hagolle, R. Lacaze, M. Leroy,  
 J. L. Roujean, B. Geiger, O. Samain, F. Nino, M. Huc, B. Miras

S10.2

[Assessment of the consistency among SEVIRI \(Land-SAF\), MODIS and PARASOL vegetation products](#)

F. Camacho-de-Coca, EOLAB, Spain  
 F. J. García-Haro, B. Geiger, R. Lacaze, M. Leroy, B. Martínez, J. Meliá, J. L. Roujean,  
 A. Verger

S10.3

[Cross validation of thermal infrared remotely sensed data in-flight using an automated validation site-Lake Tahoe CA/NV, USA](#)

S. J. Hook, Jet Propulsion Laboratory California, USA  
 F. Prata, A. Abtahi, G. Vaughan, D. G. Schladow

S10.4

[On-orbit calibration and inter-comparison of TERRA and AQUA MODIS surface temperature spectral bands](#)

J. Xiong, NASA/GSFC, USA  
 A. Wu, C. Cao

S10.5

[Local-scale monitoring of land degradation processes in Mediterranean rangelands](#)

A. Röder, University of Trier, Germany  
 J. Hill, B. Duguy, R. Vallejo, G. del Barrio, G. Tsiourlis, V. Papanastasis

S10.6

[INTA experiences with an Airborne Hyperspectral System](#)

Á. Fernández-Renau, INTA, Spain  
 E. de Miguel, Ó. Gutiérrez de la Cámara, J. A. Gómez-Sánchez.

17:00 - 17:30

**Pausa Café / Coffee break**

17:30 - 19:00

**Sesión Oral / Oral session**

SESSION 11: - Laser Active Remote Sensing and Fluorescent  
 - Earth Observation Missions & Services  
 Presidentes / Chairpersons: M. RAST, P. J. ZARCO-TEJADA

S11.1

[Range resolved measurements of CO2 within the planetary boundary layer](#)

J. Burris, NASA/Goddard Space Flight Center, USA  
 A. Andrews, H. Riris, M. Krainak, J. Abshire, X. Sun, W. Heaps

S11.2

[First airborne multiwavelength passive chlorophyll fluorescence measurements over La Mancha \(Spain\) Fields](#)

I. Moya, Laboratoire de Meteorologie Dynamique (LMD-CNRS), France  
 A. Ounis, N. Moise, Y. Goulas

S11.3

[Estimation of vegetation fluorescence from remote sensing data](#)

L. Guanter, University of Valencia, Spain  
 J. Moreno

S11.4

[Fluorescence Explorer \(FLEX\): mapping vegetation photosynthesis from space](#)

J. F. Moreno, University of Valencia, Sapin  
 Flex proposal team

19:00 - 20:00

**Conferencia Pública / Public Conference**

9:00 - 10:30

**Sesión Oral / Oral session**

SESSION 12: - Passive Microwaves & SAR Data Processing / Applications  
 Presidente / Chairperson: S. QUEGAN, J. SHI

S12.1

**Monitoring of surface soil moisture based on ARSAR/ENVISAT RADAR data over KORI Diantandou site (Niger)**

M. Zribi, CETP/CNRS, France  
 C. André, S. Saux-Picard, L. Descroix, C. Otlé

S12.2

**Effects of vegetation structure on wetlands flood monitoring using SAR instruments**

H. Karszenbaum, IAFE, Argentina  
 F. Grings, M. Salvia, P. Kandus, J. Jacobo Berles, P. Ferrazzoli

S12.3

**SAR wind mapping**

C. B. Hasager, Riso National Laboratory, Denmark  
 M. B. Christiansen, M. Nielsen

S12.4

**A P-Band SAR Mission for Biomass Monitoring (BIOMASS)**

T. Le Toan, CESBIO, France  
 S. Quegan

10:30 - 11:00

**Pausa café / Coffee break**

11:00 - 12:00

**Sesión Oral / Oral session**

SESSION 13: - Passive Microwaves & SAR Data Processing/Applications  
 Presidentes / Chairpersons: M. BERGER, J. P. WIGNERON

S13.1

**SMOS' soil moisture retrieval algorithm**

Y. H. Kerr, CESBIO, France  
 P. Waldteufel, P. Richaume, J. P. Wigneron, P. Ferrazzoli, M. J. Escorihuela, L. Coret, P. de Rosnay, R. Gurney

S13.2

**An algorithm to retrieve Sea surface salinity from SMOS L-Band radiometric measurements**

J. Font, Institut de Ciències del Mar, CSIC, Spain  
 J. Boutin, N. Reul, P. Waldteufel, C. Gabarró, S. Zine, J. Tenerelli, J. Petitcolin, J. L. Vergely

S13.3

**Recent advances in modelling the land surface emission at L-band**

J. P. Wigneron, INRA, EPHYSE, France  
 Y. Kerr, P. Waldteufel, P. Ferrazzoli, P. Richaume, K. Saleh, J. C. Calvet, A. Chanzy, P. de Rosnay, M. J. Escorihuela, J. Fenollar, J. P. Grant, E. López-Baeza, C. Mätzler, T. Pellarin, M. Schwank, A. van de Griend, A. Mahmoodi, S. Delwart

12:00 - 13:30

**Sesión Poster / Poster session**

SESSION 4:- Sensor Calibration, Atmospheric Correction and Product Validation  
 - Laser Active Remote Sensing and Fluorescence  
 - Passive Microwaves & SAR Data Processing / Applications  
 - Earth Observation Missions & Services

P4.01

**A new method for NOAA-AVHRR land surface temperature correction of orbital drift effect**

Y. Julien, University of Valencia, Spain  
 J. A. Sobrino

P4.02

**Atmospheric Sounding COmpilation ASCO: A new radiosonde database for South America**

L. Morales, Universidad Tecnológica Metropolitana, Chile  
 C. Mattar, R. Orrego

P4.03

**A comparison between satellite retrievals of land surface temperature from AATSR, SEVIRI and MODIS**

E. Noyes, University of Leicester, UK  
 G. Corlett, X. Kong, J. Remedios, D. Llewellyn-Jones

P4.04

**Técnicas de correcciones atmosféricas absolutas y relativas usando patrones espectrales invariantes**

L. A. Palacios, Campus Montecillo, México  
 F. Paz

P4.05

**Selection of the Best combination of Thermal infrared channels for split-window atmospheric correction**

O. Pancrati, Centre d'Applications et de Recherches en Télédétection (CARTEL), Canada  
 A. Royer

- P4.06** Validation of a temperature emissivity separation hybrid method from airborne hyperspectral scanner data and ground measurements in the SEN2FLEX field campaigns  
L. F. Peres, Centro de Geofísica da Universidade de Lisboa (CGUL), Portugal  
J. A. Sobrino, R. Libonati, J. C. Jiménez-Muñoz, M. Romaguera, C. C. Da Camara
- P4.07** Estimación empírica del vapor de agua para Asturias (Norte de España) a partir de datos MODIS  
C. Recondo, Universidad de Oviedo, Spain  
S. Moreno
- P4.08** Production of 250m resolution LAI map over Canada  
N. Rochdi, Canada Center for Remote Sensing, Canada  
R. Fernandes, A. Khlopenkov, Y. Luo
- P4.09** Thermal remote sensing in the framework of the SEN2FLEX Project: Field measurements, airborne data and applications  
J. A. Sobrino, University of Valencia, Spain  
J. Cuenca, G. Sòria, J. C. Jiménez-Muñoz, M. Gómez, M. M. Zaragoza-Ivorra, M. Romaguera, Y. Julien, Q. Shen, G. Sepulcre, L. Morales, A. Gillespie, L. Balick, L. Peres, R. Libonati, F. Nerry, M. Fortier
- P4.10** Comparison of retrieved AATSR land surface temperature and operational products over a heterogeneous site  
G. Sòria, University of Valencia, Spain  
J. A. Sobrino
- P4.11** Use of CERES dedicated observations to assess the Valencia Anchor Station capabilities for the validation of low-spatial resolution remote sensing data  
A. Velázquez-Blázquez, University of Valencia, Spain  
S. Alonso, C. Domenech, J. Gimeno, J. Jorge-Sánchez, A. Labajo, N. G. Loeb, D. Pino, T. Rius, A. Sanchis, G. L. Smith, Z. P. Szewczyk, R. Tarruella, J. Torrobella, E. López-Baeza
- P4.12** Inter-comparison of algorithms for retrieving operationally vegetation parameters at global scale: Assessment over Europe using vegetation data  
A. Verger, University of Valencia, Spain  
F. Camacho-de-Coca, J. Meliá

- P4.13** Radiance-based validation of the V5 MODIS land-surface temperature Product  
Z. Wan, ICESS, University of California, USA  
Y. Zhang, Z. L. Li
- P4.14** Effective versus measured correlation length for radar based surface soil moisture retrieval  
J. Álvarez-Mozos, Public University of Navarre, Spain  
M. González-Audicana, J. Casali
- P4.15** Direct and inverse models applied to crop parameter estimation by polarimetric SAR interferometry  
J. D. Ballester-Berman, University of Alicante, Spain  
J. M. Lopez-Sanchez
- P4.16** First tests of a 4.3 GHz microwave radiometer to measure surface soil water  
J. M. Cohard, LTHE/CNRS, France  
B. Mercier, J. P. Laurent, T. Pellarin
- P4.17** Long term feature of effective temperature for L-Band radiometry  
P. de Rosnay, CESBIO, France  
J. P. Wigneron, M. J. Escorihuela, T. Holmes, Y. Kerr, J. C. Calvet
- P4.18** A large scale approach to estimate L band emission from forest covered surfaces  
A. Della Vecchia, Tor Vergata University, Italy  
P. Ferrazzoli, F. Giorgio, L. Guerriero
- P4.19** Modelling forest emission and comparisons with ground-based radiometric measurements  
A. Della Vecchia, Tor Vergata University, Italy  
P. Ferrazzoli, J. P. Grant, M. Guglielmetti, M. Schwank, J. P. Wigneron
- P4.20** Diurnal variations of the radiometric signal of a natural fallow at L-band  
M. J. Escorihuela, CESBIO, France  
P. de Rosnay, K. Saleh, Y. Kerr, R. de Jeu, J. P. Wigneron, J. C. Calvet

- P4.21** L-band radiometric behaviour of pine forests for a variety of surface moisture conditions  
 J. P. Grant, Vrije Universiteit Amsterdam, The Netherlands  
 J. P. Wigneron, A. van de Griend, F. Demontoux, G. Ruffié, A. Della Vecchia, N. Skou, B. Le Crom
- P4.22** Microwave radiometry experiments on a deciduous forest site  
 M. Guglielmetti, Institute of Terrestrial Ecology, Switzerland  
 M. Schwank, C. Mätzler, A. Della Vecchia, P. Ferrazzoli, C. Oberdörster, H. Flühler
- P4.23** A linear relationship between the surface emissivities in 18GHZ and 23 GHZ over land surfaces  
 Y. Jia, Institute of Geographical Sciences and Natural Resources Research, China  
 Z. L. Li
- P4.24** The estimation of snow water equivalence using the Polarimetric scanning radiometer from the cold land processes experiments (CLPX02-03)  
 L. Jiang, Center for Remote Sensing and GIS,  
 J. Shi
- P4.25** Leaf level detection of steady state fluorescence and PRI for early ozone injury assessments  
 M. Meroni, University of Milan-Bicocca, Italy  
 S. Cogliati, V. Picchi, M. Rossini, C. Panigada, C. Nali, G. Lorenzini, C. M. Marino, R. Colombo
- P4.26** Contextual partition approach for oil detection and characterization in SAR images  
 B. Lounis, Houari Boumediene, Algiers-Algeria  
 A. B. Aissa
- P4.27** Assimilation of optical and RADAR data in a simple land surface model over Sahel with a multi-criterion evolution strategies algorithm  
 S. Mangiarotti, CESBIO, France  
 L. Jarlan, E. Mougin, P. Mazzega, F. Baup

- P4.28** Field experiments to improve the soil emission models at L-Band: contribution of the UPC to the ESA SMOS Mission  
 A. Monerris, Universitat Politecnica de Catalunya (UPC), Spain  
 M. Vall-Ilosera, A. Camps, R. Sabia, A. Martínez-Vázquez, I. Ledesma M. Piles
- P4.29** Filtering of optimised polarimetric interferograms tested on forested area  
 M. Ouarzeddine, Laboratory of image processing and radiation:LTIR, Algiers, Algeria  
 A. Belhadj-Aissa, B. Souissi
- P4.30** Multi-sensor Observations of land surface processes in Siberia  
 T. Le Toan, CESBIO, France  
 M. Grippa, N. Delbart, L. Kergoat, N. Mognard
- P4.31** Estudio de las posibilidades de las imágenes SAR en la obtención de un modelo de rugosidad superficial en zonas montañosas húmedas (Asturias, España)  
 C. Recondo, Universidad de Oviedo, Spain  
 E. Wozniak, R. Menéndez-Duarte, J. Marquínez
- P4.32** Automatic derivation of broad land cover classes using multitemporal C-Band SAR data  
 T. Riedel, Friedrich-Schiller-University Jena, Germany  
 C. Thiel, C. Schmuilius
- P4.33** Application of the dryness temperature-vegetation difference index (TVDI) to the Valencia and Alacant Anchor Station in the context of SMOS mission  
 C. Ruiz-Calaforra, University of Valencia, Spain  
 C. Domenech, A. Velázquez, A. Lidon, E. López-Baeza
- P4.34** Estimation of Forest height from SRTM data over North America  
 S. Saatchi, JPL/California Institute of Technology, USA  
 Y. Yu, M. Werner
- P4.35** The sensitivity of the land use classification accuracy on the parameters of ENVISAT image acquisition  
 K. Stankiewicz, Institute of Geodesy and Cartography, Poland  
 E. Wisniewska

- P4.36** Soil moisture retrieval application over the Tibetan Plateau using medium resolution advanced synthetic aperture Radar (ASAR) observations  
R. van der Velde, International Institute for Geo-information Sciences and Earth Observation (ITC), The Netherlands  
Z. Su, T. Rientjes, M. D. van Helvoirt, J. Timmermans, Y. Ma, A. T. Joseph
- P4.37** A multi-fractional tool for METEOSAT: METLook next step and an implementation example devoted to the AMMA experiment for aerosol analysis and interpretation  
L. Gonzalez, Laboratoire d'Optique Atmosphérique, CNRS-USTL, France  
F. Thieuleux, C. Deroo, J. Pelon, I. Chiapello, M. Legrand
- P4.38** Studying flooded grassland in the Waza-Logone Region of Northern Cameroon using ENVISAT ASAR Alternating Polarization images  
T. Westra, University of Ghent, Belgium  
R. R. De Wulf
- P4.39** Dual polarized SAR applying to snow wetness inversion  
Q. Yu, Chinese Academy of Sciences, China  
J. Shi
- P4.40** Issues about retrieving sea surface salinity in coastal areas from SMOS data  
S. Zine, Institut Pierre-Simon Laplace, France  
J. L. Vergely, J. Boutin, P. Waldteufel, P. Lazure
- P4.41** Vegetation's fluorescence spectrum and kautsky effect measurements under natural solar illumination  
L. Alonso, University of Valencia, Spain  
L. Gómez-Chova, J. Amorós, J. Vila, J. Calpe, S. del Valle, J. Moreno
- P4.42** Raman-LIDAR measurements at the Andalusian Center for Environmental Studies (CEAMA)  
J. L. Guerrero-Rascado, Centro Andaluz de Medio Ambiente (CEAMA), Universidad de Granada, Spain  
B. Ruiz, G. Chourdakis, G. Georgoussis, L. Alados-Arboledas
- P4.43** Review and validation of CREPAD products  
A. Fernández-Renau, Inta, Spain  
C. Robles

- P4.44** LIDAR application in forest hydrology and fluvial management  
S. Merino, Polytechnic University of Madrid, Spain  
R. Martínez, F. Magdaleno
- P4.45** Radiative transfer modelling of open-canopy tree crops using hyperspectral imagery and LIDAR  
I. Moorthy, Centre for Research in Earth and Space Science (CRESS), Canada  
J. R. Miller, J. A. Jiménez-Berni, B. Hu, P. J. Zarco-Tejada
- P4.46** Training LANDSAT images with LIDAR data to estimate forest canopy height  
C. Pascual, Universidad Rey Juan Carlos, Spain  
S. Martín-Fernández, A. García-Abril, L. G. García-Montero, W. B. Cohen
- P4.47** Determination of the aerosol extinction-to-backscatter ratio using spectroradiometric measurements  
R. Pedrós, University of Valencia, Spain  
M. P. Utrillas, J. A. Martínez-Lozano, J. L. Gómez-Amo, V. Estellés
- P4.48** RIX: SAR aerotransportado en banda X  
B. Gómez-Miguel, Instituto Nacional de Técnica Aeroespacial (INTA), Spain  
J. M. Cuerda-Muñoz, M. J. González-Bonilla
- P4.49** Overview of the SMOS mission  
Y. H. Kerr, CESBIO, France  
P. Waldteufel, J. P. Wigneron, J. Font, F. Cabot, A. Hahne, M. Berger
- P4.50** The POSTEL land surface thematic center  
M. Leroy, Medias-France, France
- P4.51** Ecological water quality in Mediterranean reservoirs using MERIS and CHRIS imagery  
R. Peña-Martínez, Centre for Hydrographic Studies of CEDEX, Spain  
J. A. Domínguez-Gómez
- P4.52** The atmosphere-space interactions monitor (ASIM)  
J. M. Rodrigo, University of Valencia, Spain  
A. Russu, P. H. Connell, V. Reglero



P4.53

**VENuS Level 1 products: Radiometric and Geometric Processing**

H. Vadon, CNES, France  
A. Meygret

13:30 - 15:00

**Comida / Lunch**

15:00 - 17:00

**Sesión Oral / Oral session**

SESSION 14: - Passive Microwaves & SAR Data Processing / Applications  
- Earth Observation Missions & Services  
Presidentes / Chairpersons: J. MORENO, A. ROYER

S14.1

**Estimation of soil moisture with dual-frequency radiometer-Pals**

J. Shi, University of California, USA  
E. G. Njoku, T. Jackson, K. S. Chen, P. O'Neill

S14.2

**L-Band Radiometer observation of a deciduous forest under extreme ground conditions**

M. Schwank, Institute of Terrestrial Ecology ETH Zürich, Switzerland  
C. Mätzler, M. Guglielmetti, H. Flüher

S14.3

**A new method to derive daily surface temperature time series for summer periods from SSM/I brightness temperature**

A. Royer, Université de Sherbrooke, Canada  
A. Mialon, M. Fily, G. Picard

S14.4

**Error characterization of infrared and microwaves sea surface temperature products for merging and analysis**

S. L. Castro, University of Colorado at Boulder, USA  
G. A. Wick, D. L. Jackson, W. J. Emery

S14.5

**Imaging of new optical phenomena and gamma-ray flashes in the upper atmosphere from the ISS**

P. H. Connell, University of Valencia, Spain  
J. M. Rodrigo, A. Russu, V. Reglero

16:40 - 17:10

**Conferencia de clausura / Closing Conference**

**RAQRS in the context of GEOSS**  
M. Rast, GEO, CH

20:30

**Cena oficial del Congreso / Gala Dinner**



VIERNES 29 SEPTIEMBRE 2006 – FRIDAY 29<sup>th</sup> SEPTEMBER 2006

10:30 - 12:00

**Conclusiones de sesiones por los presidentes/  
Session report by sessions chairpersons**

12:00 - 12:30

**Acto de clausura / Closing ceremony**

12:30 - 13:00

**Refrigerio / Refreshments & Snacks**

**Lugar de celebración:**

El congreso tendrá lugar en el Auditori de Torrent, c/ Vicent Pallardo nº 25, 46900 TORRENT (Valencia).  
Tel: [+34] 961 581 077 (<http://www.auditoritorrent.com>).

**Fechas:**

Lunes 25 al viernes 29 de septiembre 2006

**Idiomas de trabajo:**

CASTELLANO E INGLÉS.

**Inscripción:**

Lunes 25 de septiembre 8:00-9:30.

**Cuota de inscripción:**

**Congresistas:**

Antes del 15 de Junio: 490 €, después del 15 de Junio: 590 €

Pago mediante transferencia a la cuenta: IBAN ES69 2077 0400 293101221048

SWIFT CVALESXXX.

La cuota de inscripción incluye: documentación, acceso libre a la sala de conferencias, pausas café, cocktail de bienvenida (lunes 25), 4 comidas (lunes, martes, miércoles, jueves), paella gigante (martes 26), actividad musical (martes 26), cena de gala (jueves 28) y libro de actas.

**Inscripción acompañantes:**

Antes del 1 de Junio: 200 €, después del 1 de Junio: 230 €

La cuota de inscripción incluye: cocktail de bienvenida (lunes 25), paella gigante (martes 26), actividad musical (martes 26), cena de gala (jueves 28).

**Alojamiento:**

Los hoteles seleccionados (a 15 km de distancia del Auditori) se muestran en la página web del congreso. Los autobuses gratuitos hasta el lugar del Congreso solo operarán desde estos hoteles.

**Publicaciones:**

El libro de resúmenes del congreso será entregado a cada participante el día 25 de septiembre. Serán publicados en el libro de actas todos los trabajos recibidos antes del 6 de octubre de 2006. Las instrucciones para escribir los trabajos se encuentran en la página web del congreso.

**Modo de acceso** (ver mapa en la última página):

**Por avión:** Torrent (<http://www.atorrent.es>) está situada aproximadamente a 10 km del aeropuerto de Manises-Valencia (<http://www.iberia.com/>). Existen vuelos directos hacia y desde Valencia en varios aeropuertos internacionales: Bruselas-Frankfurt-Lisboa-Londres-Milán-París-Zurich. El puente aéreo entre Madrid y Barcelona asegura una fácil conexión a cualquier otro destino del mundo.

Por tren: Conexión con la red internacional de trenes vía Francia. Conexiones diarias con todas las ciudades importantes de España. (Madrid-Valencia 3:30 horas, Barcelona -Valencia 3 horas) (<http://www.renfe.es>).

Metro: Las líneas 1 y 5 conectan a Torrent por metro con Valencia (<http://www.metrovalencia.com/metroval/htmleng/home/home.asp>).

**Por carretera:** La autopista A7 del Mediterráneo conecta directamente con la red europea de carreteras. Conexiones con las carreteras nacionales: N-III, N-340, N-234, N-332. Autovía A-3 Madrid-Valencia.

## GENERAL INFORMATION

### Venue:

The symposium will take place at the Auditori of Torrent, Street: Vicent Pallardo nº 25, 46900 TORRENT (Valencia - Spain). Tel: [+34] 961 581 0 77 (<http://www.auditoritorrent.com>)

### Dates:

Monday 25th to Friday 29th September 2006

### Working Language:

ENGLISH and SPANISH.

### Registration:

Welcome and registration will take place on Monday 25th September from 8:00-9:30 am.

### Registration fees:

#### Congress participants:

Before 1 June 2006: 490 €, after 1 June 2006: 590 €

Payment by bank transfer to the following account Number: IBAN ES69 2077 0400 293101221048 SWIFT CVALESXXX.

Registrations fees will include documentation, access to the conference room, simultaneous translation, refreshment breaks, welcome cocktail (Monday 25th), gigantic paella and musical event (Tuesday 26th), 4 lunches (Monday, Tuesday, Wednesday and Thursday), a Gala Dinner (Thursday 28th), and proceedings.

#### Accompanying persons:

Before 1 June 2006: 200 €, after 1 June 2006: 230 €

Registrations fees includes: welcome cocktail (monday 25th), gigantic paella in the street and Musical activity (Tuesday 26th), Gala Dinner (Thursday 28th).

### Accommodation:

The three hotels (15 km away from the Auditori) used in the Symposium are shown on the website. The free buses to the Congress hall will operate from these hotels only.

### Publications:

The symposium abstract book will be given to each participant on the opening day. The proceedings book will be sent to participants by the end of 2006. The author guidelines can be consulted on the website. All texts received before 6th October 2006 will be published.

### Transport facilities (see map on last page):

**By air:** Torrent (<http://www.atorrent.es>) is less than 10 km from the airport of Manises-Valencia (<http://www.iberia.com>). Direct flights to and from Valencia, international airport: Brussels-Frankfurt-Lisbon-London-Milan-Paris-Zurich. An air shuttle to Madrid and Barcelona ensures easy connection to all other destinations around the world.

**By rail:** Connection with the European railway networks daily via France. Daily connections with all the major Spanish cities. (Madrid-Valencia 3:30 hours, Barcelona-Valencia 3 hours) (<http://www.renfe.es>).

Metro: metro lines 1 and 5 connect Torrent with Valencia

(<http://www.metrovalencia.com/metroval/htmleng/home/home.asp>).

**By road:** A7 Mediterranean Motorway: conection with the European expressway network.

Highways: conections with national highways N-III, N-340, N-234, N-332.

Autovia A-3 Madrid-Valencia.

Para obtener información adicional:  
Further information may be obtained from:

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