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EARSeL ADVANCES IN REMOTE SENSING

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All members and observers of EARSeL will receive this journal upon payment of the annual association membership fee of FFr.1250,00 or US$.250 (1991 rate). For information on joining EARSeL, apply to the EARSeL Secretariat, address below.

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EDITORIAL

It is a great pleasure and honour to write the first Editorial of EARSeL ADVANCES IN REMOTE SENSING, which represents a further significant effort of the Association to offer a better service to its members and to facilitate the international exchange of information on new developments and applications of remote sensing.

The contents of the journal are based upon papers and discussions held in the context of a series of workshops organised by EARSeL within its multi-year programme, the aim of which is to focus the attention of the international community on a specific theme which seems of particular relevance to the advancement of research and applications in remote sensing.

I hope that the high technical and scientific level of the invited speakers and authors, the specialised audience, the ample discussion and the refereeing procedure will offer a unique opportunity to many scientists to receive an overwiew of existing advanced activities and to identify new areas of research and applications.

I am convinced that the EARSeL Bureau and Council will do their best to render this journal a point of reference for the international remote sensing community.

Nevertheless, you must be fully aware that your proposals for future advanced workshops, your suggestions and participation in the life of the Association will be the only way for this dream to become reality.

Our best wishes accompany the launching of this journal.

Sergio Vetrella
EARSeL Chairman

INTRODUCTION

The session on Imaging Spectroscopy at the 10th EARSeL Symposium in Toulouse, France, June 1990, was convened to emphasize topics in high spectral resolution optical remote sensing of the terrestrial environment.

One year after the European Imaging Spectrometry Airborne Compaign in the summer of 1989, organized and carried out by the Joint Research Centre (JRC) of the Commission of the European Communities, the European Space Agency (ESA), European national agencies and universities, data evaluation strategies and results were presented by different European teams, introduced by an invited paper given by Alexander F.H. Goetz, U.S.A.

The papers presented at the symposium described the high potential of imaging spectrometry for environmental applications (vegetation damage, plant biochemistry, soil contamination analysis, erosion studies, mapping in agriculture, soil sciences and geology, water quality assessment).

The discussions were focused on data quality, data calibration and signal correction techniques for high spectral resolution optical remote sensing and ground truth data (instrument pre-, in-, and post-flight calibration, calibration by use of external calibration sites, atmospheric correction techniques).

Summarizing the discussion, looking forward to future research and application activities including the definition of spaceborne imaging spectrometry sensors, the following recommendations were made as a result of the session:

- Future research should be focused on data correction and evaluation techniques (sensor calibration, atmospheric correction, target multiangle reflection properties);
- Multitemporal airborne experiments including carefully prepared ground truth activities are needed to increase the application potential and economic use of airborne and future spaceborne imaging spectrometry platforms;
- The inter-relation of the physical, chemical or biological parameters of measurement targets and their optical properties should be studied more deeply using laboratory, ground and airborne experiments;
- The interdisciplinary aspect and the economic application of imaging spectrometry can be advanced by providing research and application scientists and institutions with well corrected and calibrated data sets (the standard image processors of most application institutions are not provided with data correction software).

F. Lehmann
Workshop Chairman

EARSeL ADVANCES IN REMOTE SENSING

Aims

EARSeL Advances in Remote Sensing is an international journal serving the worldwide scientific and user community working in the field of remote sensing. Each issue of the journal is focussed on a particular theme, which has been analysed and discussed among international experts within a workshop or other special events organised by EARSeL.

The aims of the journal are:

- to fill the gap between technology and applications
- to enhance international exchange of information on new developments and applications
- to promote new areas of research and applications
- to foster the use of remote sensing and the interest of new scientists.

Language

All articles published in the journal are in English.

Refereeing

All contributions will be submitted to referees. Names of referees will be kept confidential.

Proofs and Offprints

The principal or corresponding author will be sent proofs for checkIng and will receive 30 offprints free of charge. Additional offprints may be ordered on a form which accompanies the proofs.

Format

The large format (27.9 cm x 21 cm) of this journal is in line with all EARSeL publications and enables the inclusion of color and black and white illustrations of good quality.

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