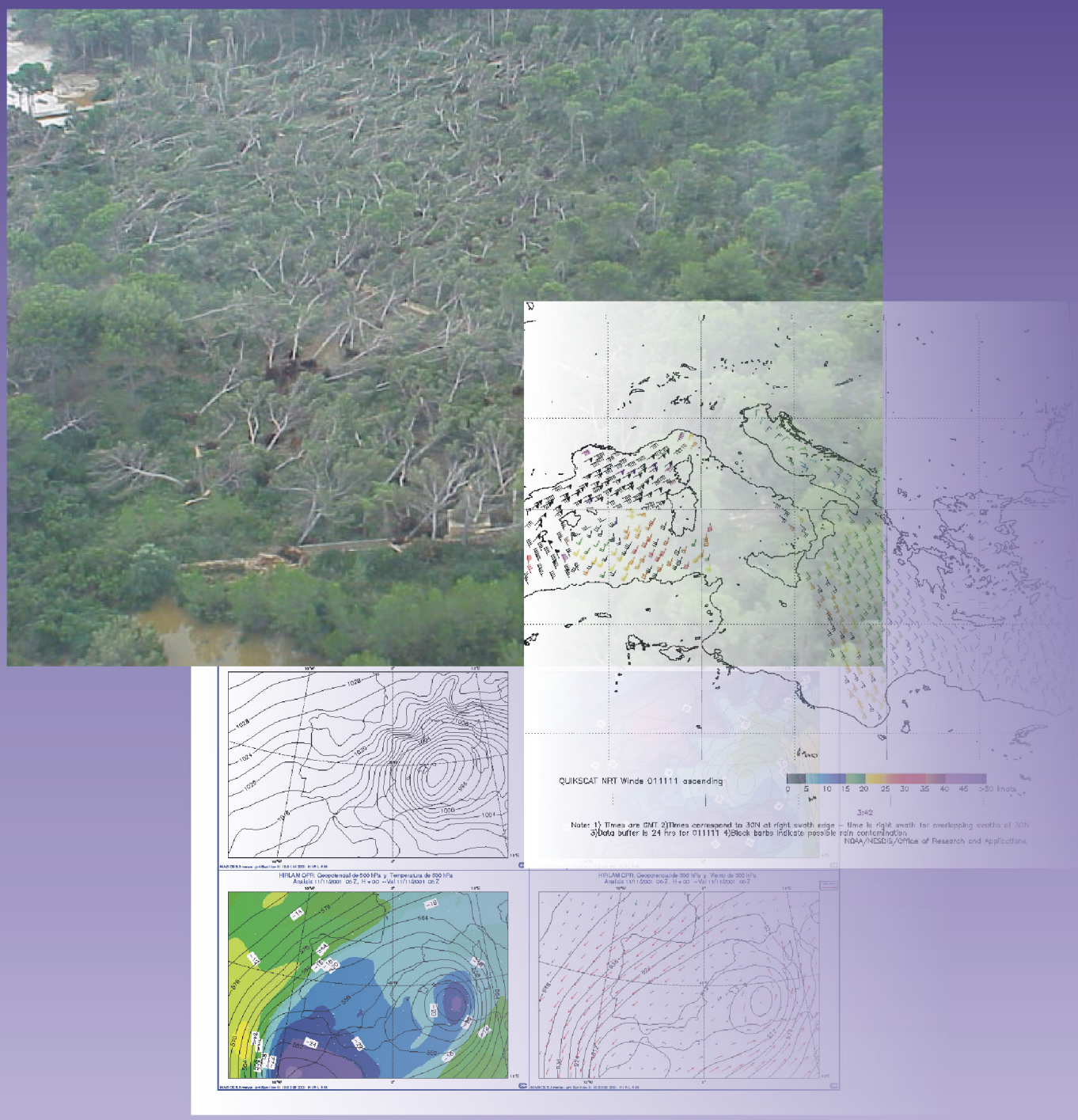
European Geophysical Society

4th Plinius Conference on

Mediterranean Storms



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MEDITERRANEAN STORMS

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Edited by

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PREFACE

Four years ago, the European Geophysical Society (EGS) Interdisciplinary Working Group on Natural Hazards (IWG-NH) began with the experience of organising interdisciplinary topical conferences on a specific problem, the Mediterranean storms, their genesis and monitoring and their consequences. These conferences were called Plinius Conferences. The first three EGS Plinius Conferences on Mediterranean Storms were held in Italy: Maratea (1999), Siena (2000) and Baja Sardinia (2001). The Fourth EGS Plinius Conference left Italy for the first time and it was held in Alcúdia, Mallorca (Spain), from 2 to 4 October 2002.

Nowadays the EGS Plinius Conferences on Mediterranean Storms have already reached the category of a tradition. The topic of these conferences covers a quite wide variety of weather phenomena, moving from isolated convective thunderstorms and mesoscale convective systems to large and well organised cyclones. Common features of all of these disturbances is that they are able to produce high societal impacts and they are Mediterranean, that is, the Mediterranean geographical factors play a role in their genesis and development. To better establish the Mediterranean character of the kind of storms under discussion in the Plinius conferences, some analyses of similarities and differences of non-Mediterranean disturbances are also welcome in that forum.

The first three Plinius conferences had mostly been focused on heavy rain producing storms, being the floods and the landslides the most important effects considered among their objectives. But in the period between the Third and Fourth Plinius Conferences a particularly intense storm occurred in the Western Mediterranean, on 9-13 November 2001, producing not only heavy rain and flooding, but also extreme winds. In the city of Algiers the floods were the most important and were responsible for more than 700 casualties. But in the Balearic Islands, on the other hand, the extremely strong winds uprooted more than 200,000 trees and gave rise to very high sea waves, with important coastal damages. Aware of this event, the organisers of the 4th Plinius Conference encouraged additional contributions dealing with strong wind producing storms and wind effects (waves and coastal impacts).

In the comfortable frame of the “Pollentia” tourist resort, in the beautiful Bay of Pollentia (north of the island of Mallorca) around eighty scientists from eleven countries met to participate at the 4th Plinius Conference. About seventy contributions were presented, one half in oral form and the other half as poster. The contributions were organised in three sessions:

Session 1 - Physical Processes, Monitoring and Forecasting of Heavy Rain and/or Strong Wind Producing Storms

Session 2 - Hydrology and Hydrometeorology of High Intensity Storms

Session 3 - Landslides and other Inland and Coastal Effects and Strategies for Disaster Mitigation

Session 1, the meteorological one, accumulated more than half of the total contributions. Nevertheless, sufficient and relevant contributions to Session 2 and 3 guaranteed the interdisciplinary character of the conference, that is one of the fundamental features of the Plinius conferences. It is really positive for the meteorologists to know the point of view of the hydrologists, geologists, oceanographers and so on, and the same is true for the other groups of specialists.

Four brilliant invited lectures, by Dr J. Caughey, Dr. V. Levizzani, Prof. F. Siccardi and Prof. F. Guzzetti, enriched the three sessions, on the other hand full of varied and high level studies, some of them general in character, some of them referred to particular and important events. It is worthy to note that eight of the contributions were related with the big storm of November 2001.

The present volume collects not all, but most of the contributions that were presented at the 4th EGS Plinius Conference. The editors thank the authors for the effort they made in preparing their papers.

We want also to give thanks to the institutions that partially sponsored the Conference and made it possible: the *Spanish National Institute of Meteorology*, the *University of the Balearic Islands*, the *Spanish Department of Science and Technology* and the *Municipality of Alcúdia* (Mallorca).

We also acknowledge the members of the scientific and organising committees for their contribution to the success of the Conference, as well as the good work done by the local secretariat, Emilia Michini and Mari Luz Escolar, the staff of the Meteorological Centre in the Balearics of the Spanish National Institute of Meteorology (mainly Purificación Martín and Francisco Acacio), our computer engineer Joan Miquel Torres, from the University of the Balearic Islands, and the personnel of the Pollentia Club Resort, especially Maria Cerdà.

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