

Contents

Welcome Address

I. Zournas

Opening Address

I. Sfendonis

Preface

G. Kaiser

Monitoring and Modelling in the Mesoscale

N. Moussiopoulos

SECTION 1: THESSALONIKI AND ITS ENVIRONMENT

Some Thoughts on Air Pollution 3

G.S. Vasilikiotis

Distribution of Heavy Metals in the Area of Thessaloniki 7

Th. Kouimtzis

Brewer Spectrophotometer Measurements in the Industrial Area 23
of Thessaloniki

A.G. Kelessis, N.M. Zoumakis

The Air Pollution Abatement Programme of Thessaloniki 31

K. Stamelos

SECTION 2: THESSALONIKI '91 FIELD MEASUREMENT CAMPAIGN

Thessaloniki '91 Field Measurement Campaign Organization 41

N. Moussiopoulos

Campaign of Photo-Oxidant-Measurement in Greater Thessaloniki: 47
Preliminary Results

H. Güsten, G. Heinrich, E. Mönnich, J. Weppner

A Combined Meteorological and Air Pollution Experiment over 65
Thessaloniki

D.N. Asimakopoulos, M. Petrakis, C. G. Helmis, M. Tombrou, C. Varotsos, A. T. Soilemes

The University of Athens Profiler System 79

A. T. Soilemes, P. G. Papageorgas, C. G. Helmis, D.N. Asimakopoulos

Digital Interpretation of Sodar Observations 89

C.G. Helmig, P.G. Papageorgas, A.T. Soilemes, D.N. Asimakopoulos

On the Accuracy and Precision of the Electrochemical Ozonesondes in 95
the Lower Troposphere

C. Varotsos

SECTION 3: ATMOSPHERIC DISPERSION MODELLING

Modelling Atmospheric Pollution in the Mediterranean -Possible 101
Contributions from EURAD

A. Ebel, M. Memmesheimer, Ch. Holzapfel

Pollutant Dispersion over the Coastal Zone of Northern Germany 117

D.P. Eppel, D. Jacobs, H. Kapitza

Some Remarks on the k,E Turbulence Model Applied to Sea Breeze 135

Simulation: Buoyancy Effect on the E-Equation and Horizontal Eddy Diffusivity

T. Kitada, H. Takagi

Modelling of Atmospheric Dispersion Following Accidental Releases 147

from Nuclear Power Plants -An Intercomparison of Revised French and German Model Concepts

K. Maßmeyer, B. Crabol, R. Martens, K. Nester, E. Romeo, H. Schnadt

Influence of Horizontal Grid Resolution on Simulated Wind and 155

Pollution Concentration Field in the Greater Athens Area

Th. Flassak, M. Wortmann, N. Moussiopoulos

SECTION 4: EMISSION CALCULATIONS AND IMMISSION PREDICTIONS FOR THESSALONIKI

Industrial Emissions of Air Pollutants in Thessaloniki 167

N. Moussiopoulos, P. Pistikopoulos, P. Ageladarakis

Traffic Conditions in the Urban Area of Thessaloniki 175

as Input to Emission Models

N. Kyriakis

Road Traffic Emissions in Thessaloniki 185

Z. Samaras

Preliminary Results of Mesoscale Model Simulations for 195

Thessaloniki

Th. Flassak, N. Moussiopoulos, A. Proyou, Ch. Winkler

Multibox Model Simulations of Photochemical Smog Formation 203

in Thessaloniki

N. Moussiopoulos, A. Proyou