



**EIXHMYΘ-ITE**

# **ΣΕΜΙΝΑΡΙΟ**

- ΟΜΙΛΗΤΗΣ:** Καθηγητής Σπυρίδων Ραγομανίκης  
Εργαστήριο Ατμοσφαιρικής Ρύπανσης  
& Αντιρυπαντικής Τεχνολογίας  
Τμήμα Μηχανικών Περιβάλλοντος  
Δημοκρίτειο Πανεπιστήμιο Θράκης
- ΘΕΜΑ:** Determination of entrainment velocities of SO<sub>2</sub> from the free troposphere into the boundary layer by measuring their eddy fluxes from aircraft
- ΤΟΠΟΣ:** Αίθουσα Σεμιναρίων EIXHMYΘ-ITE
- ΗΜΕΡΟΜΗΝΙΑ:** Τετάρτη, 29 Νοεμβρίου 2000
- ΩΡΑ:** 19:00

## **ΠΕΡΙΛΗΨΗ**

Pollutants transported via the free troposphere are usually entrained in the boundary layer during its daily evolution and by turbulent transport. The rate by which a preserved pollutant (or scalar) is entrained is very slow and hence difficult to calculate or measure. To date entrainment velocities are usually calculated using bulk fluxes across the free troposphere - boundary layer interface or by using models established for entrainment of common compounds (e.g. water). We made measurements of turbulent eddy fluxes of SO<sub>2</sub> from the free troposphere to the Marine Boundary Layer, for pollution transported from continental Europe over the Atlantic mid latitudes. We used the Lagrangian flights of the British C-130 aircraft during the Aerosol Characterisation Experiment-2 (ACE-2), July 1997 over Tenerife and our laboratory made "Atmospheric Pressure Ionisation Fast Response Mass Spectrometer" which determined SO<sub>2</sub> concentrations down to 5 pptv with a frequency response of 5 Hz. Vertical wind velocities were supplied by the aircraft's inertial navigation system. First ever, measured, entrainment velocities of SO<sub>2</sub> into the marine boundary layer and also into cloud will be presented.