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TURBULENCE AND PREDICTABILITY IN GEOPHYSICAL FLUID DYNAMICS AND CLIMATE DYNAMICS

14-24 June 1983, Varenna, Italy

The International School of Physics "Enrico Fermi" has designated "Turbulence and Predictability in Geophysical Fluid Dynamics and Climate Dynamics" as its First Course in 1983. The course will be held 14–24 June at the School's Villa Monastero in Varenna on Lake Como, Italy. It is sponsored by the Italian Physics Society (IPS), the Italian Ministry of Public Instruction, the Consiglio Nazionale delle Richerche (CNR), the U.S. National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), and the American Meteorological Society.

The course addresses itself to advanced graduate students and junior postdoctoral scientists, studying or active in the atmospheric and oceanographic sciences, and in related disciplines. Its purpose is to review and advance knowledge in this rapidly expanding area of research, and to bring recent theoretical results to bear on practical problems, such as extended-range weather prediction and seasonal or inter-annual climate prediction.

Topics will include experimental, numerical, observational and theoretical results about fully-developed turbulence, its onset and its predictability characteristics. Quasi-geostrophic, planetary, mesoscale and microscale turbulence in the atmosphere and in the ocean will be emphasized. The dynamics of climate and predictability on various timescales will be discussed in the same context.

Twenty lecturers will present this material, and all participants will have the opportunity to discuss it in a workshop atmosphere. The lecturers are T. L. Bell, W. S. Childress, U. Frisch, M. Ghil, R. Hide, G. Jona-Lasinio, E. Kalnay, C. E. Leith, A. Libchaber, D. K. Lilly, E. N. Lorenz, T. Maxworthy, S. A. Orszag, P. Rhines, G. D. Robinson, D. Ruelle, A. Sutera, H. Tennekes, D. Tritton and C. W. Van Atta. The total number of participants is restricted by the facilities to seventy.

Lecture notes will be available in photocopied form at the course and they will be published in final, typeset form by North-Holland Publishing Co. within a year of the course. This volume will be edited by M. Ghil, director of the course, and two scientific secretaries, R. Benzi and G. Parisi. The six-person organizing committee of the course also includes W. S. Childress, C. E. Leith, its chairman, and A. Sutera.

Prospective participants are requested to write to Dr R. Benzi, Scientific Secretary of the Course, at Centro Scientifico IBM, Via del Giorgione 129, 00147 Roma, Italy. For junior candidates, a vita and two letters of recommendation should accompany the application. Some limited travel support will be available for junior participants with no other source of travel funds.

A very small number of senior observers can be accommodated. Senior candidates are also requested to write to Dr Benzi, including if they wish Vita and List of Publications. Additional information and application forms will be distributed by IPS in January. Applications should be mailed by March 15.