



«ETTORE MAJORANA» FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE
TO PAY A PERMANENT TRIBUTE TO GALILEO GALILEI, FOUNDER OF MODERN SCIENCE
AND TO ENRICO FERMI, THE "ITALIAN NAVIGATOR", FATHER OF THE WEAK FORCES



HIGHLY SPECIALIZED SEMINARS «EUGENE P. WIGNER»

11th Seminar: *EARTHQUAKES EARLY WARNING FROM SPACE*

ERICE-SICILY: 21 – 24 OCTOBER 2012

Sponsored by the: • Italian Ministry of Education, University and Scientific Research • Sicilian Regional Government

TOPICS AND LECTURERS

The DEMETER micro-satellite: objectives and results
• M. PARROT, LPC2E/CNRS, Orléans, FR

Recent Advances in earthquakes prone areas Monitoring by Satellite TIR surveys
• Valerio TRAMUTOLI, DIFA, University of Basilicata, Potenza, IT

Seismo-ionospheric precursors and disturbances
• Jann-Yenq LIU, NCU, Jhongli City, TW

Ionospheric precursors of earthquakes - existence and lithosphere-ionosphere coupling mechanism
• Valery KOREPANOV, National Space Agency, Lviv., UA

Lithosphere-ionosphere-atmosphere coupling associated with earthquake
• M. KAMOGAWA, Gakugei University, Tokyo, JP

Seismo-magnetospheric connection and prediction of earthquakes from space
• A. GALPER, Mephi, Moscow, RU

Magnetosphere-lithosphere correlations using NOAA electron data
• R. BATTISTON, University of Perugia, IT

Instrumentation and analysis strategies to search for particle precipitation from space
• L. CONTI, Uninettuno, Rome, IT

Earthquake precursor: a model for the stressed rock-earth surface charge-atmosphere-ionosphere coupling
• L. LEE, NCU, Jhongli City, TW

Geosystemics, entropy and focalization of earthquakes
• A. DE SANTIS, INGV, Rome, IT

Application of LAIC model approach in space technologies integration within the framework of IGMASS project
• S. PULINETS, Space Research Institute, Moscow, RU

From multi-parameter observations towards interdisciplinary framework for earthquake early warnings. A sensor Web approach
• D. OUZOUNOV, Chapman University, Orange, CA, US

A review of seismo-electromagnetic satellite missions - recent results and prospects
• T. KODAMA, JAXA, Tokyo, JP

Remote sensing application in earthquake monitoring and earthquake-related space missions in China
• S. XUHUI, CEA, Beijing, CN

Earthquake Anomaly Recognition with DTS Criteria and GEOSS-based Multiple Parameters Referring to LCA coupling
• L. WU, Normal School, Beijing, CN

PURPOSE OF THE SEMINAR

Since the beginning of civilization earthquakes have been challenging the essence of social wealth and organization. Their scattered space and time characteristics make large earthquakes most dangerous and deadly. If it would be possible to monitor and reliably forecast the occurrence of powerful earthquakes at different time scales, from years to months, days or hours, the advantages for the society would be huge.

Forecasting the advent of earthquakes with the goal of mitigating their effects, is an exceptionally difficult task which has produced only very limited results so far. However, remote sensing from space has the huge advantage of continuously sampling the whole planet, performing well calibrated, repeated measurements and collecting large statistical samples. From space even a weak coupling between the lithosphere and the upper layers can be measured developing optimized detection strategies based on satellite observations. The status of these researches is reviewed by a group of leading experts.

APPLICATIONS

Persons wishing to attend the Seminar are requested to write to:

- Professor Roberto BATTISTON
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They should specify:

- i) date and place of birth, together with present nationality, current address, telephone number, and e-mail;
- ii) degree and other academic qualifications;
- iii) present position, place of work, and current research activities.

PLEASE NOTE

Participants should arrive in Erice on October 21, not later than 7 pm.

POETIC TOUCH

According to legend, Erice, son of Venus and Neptune, founded a small town on top of a mountain (750 metres above sea level) more than three thousand years ago. The founder of modern history — i.e. the recording of events in a methodical and chronological sequence as they really happened without reference to mythical causes — the great Thucydides (~500 B.C.), writing about events connected with the conquest of Troy (1183 B.C.) said: «After the fall of Troy some Trojans on their escape from the Achaei arrived in Sicily by boat and as they settled near the border with the Sicilians all together they were named Elymi: their towns were Segesta and Erice.» This inspired Virgil to describe the arrival of the Trojan royal family in Erice and the burial of Anchises, by his son Aeneas, on the coast below Erice. Homer (~1000 B.C.), Theocritus (~300 B.C.), Polybius (~200 B.C.), Virgil (~50 B.C.), Horace (~20 B.C.), and others have celebrated this magnificent spot in Sicily in their poems. During seven centuries (XIII-XIX) the town of Erice was under the leadership of a local oligarchy, whose wisdom assured a long period of cultural development and economic prosperity which in turn gave rise to the many churches, monasteries and private palaces which you see today.

In Erice you can admire the Castle of Venus, the Cyclopean Walls (~800 B.C.) and the Gothic Cathedral (~1300 A.D.). Erice is at present a mixture of ancient and medieval architecture. Other masterpieces of ancient civilization are to be found in the neighbourhood: at Motya (Phoenician), Segesta (Elymian), and Selinunte (Greek). On the Aegadian Islands — theatre of the decisive naval battle of the first Punic War (264-241 B.C.) — suggestive neolithic and paleolithic vestiges are still visible: the grottoes of Favignana, the carvings and murals of Levanzo.

Splendid beaches are to be found at San Vito Lo Capo, Scopello, and Cornino, and a wild and rocky coast around Monte Cofano: all at less than one hour's drive from Erice.

More information about the «Ettore Majorana» Foundation and Centre for Scientific Culture can be found on the WWW at the following address:
<http://www.ccsem.infn.it>