



UNIVERSITÀ DEGLI STUDI DI FERRARA

Dipartimento di Fisica e Scienze della Terra
- Dottorato in Fisica -

IUSS COPERNICUS VISITING SCIENTIST 2016

Brian MINTY

Minty Geophysics – Weston Creek – Australia

Lunedì 10 ottobre ore 15.00

IUSS Ferrara 1391 – Via delle Scienze 41b – Ferrara

Terrà un seminario su:

The airborne gamma-ray spectrometric method for mineral exploration and environmental mapping

All rocks and soil contain radioactive elements, and the decay of these elements gives rise to a natural gamma-ray flux. Almost all gamma radiation detected near or at the earth's surface derives from the natural radioactive decay of just 3 elements – potassium (K), uranium (U) and thorium (Th). Gamma rays can penetrate some 35 cm of rock and several hundred metres of air. They can thus be used for the remote sensing of terrestrial radioelement concentrations. The airborne gamma-ray spectrometric method was originally developed as a uranium exploration tool. However, the method is now widely used for geological and environmental mapping.

This presentation will give a brief review of the airborne gamma-ray spectrometric method. The talk will cover natural radioactivity, the propagation and detection of gamma rays, and the corrections that need to be applied to observed airborne gamma-ray spectra to convert them to estimates of the concentrations of the radioelements on the ground. Other topics covered are survey design, and data enhancement and interpretation methodologies. The talk will conclude with a few examples of the application of the method.

Studenti, dottorandi dell'area SCI-TEC, docenti e tutti gli interessati sono invitati a partecipare.

La partecipazione consente l'acquisizione di 1 credito per attività disciplinari
(<http://iuss.unife.it/scuole/attivita-disciplinari-2016>).

Per informazioni, si prega di contattare il Prof. Fabio Mantovani (fabio.mantovani@unife.it)

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