HEALTH PHYSICS AND DISSEMINATION OF SCIENTIFIC CULTURE AT MILANO UNIVERSITY AND INFN, ITALY: RADIOLAB SUMMER SCHOOL

F. Groppi[a]*, A. Bazzocchi[a,b], F. Bianchi[a], G. Harki[a,c], E. Sabbioni[a], S. Manenti[a]

[a] *UNIMI & INFN, L.A.S.A. Laboratory: via F.lli Cervi, 201, Segrate (MI), I-20090, Italy;*
[b] *ITIS Mattei, San Donato Milanese, MI, Italy;* [c] *Salahadin University, Erbil, Iraq*

**Corresponding author: flavia.groppi@mi.infn.it*

Introduction

At the Physics Department of the University of Milano in the Master Degree is foreseen didactic line in Health Physics. The students are trained in order to apply to Specialization School in Medical Physics; this school allows them to be inserted inside the Hospital System as Medical Physics and to acquire the skills to become Qualified Expert in Radioprotection, according to the new European legislation that must also be implemented by Italy. The object of the Health Physics course is to provide education, including practical training, in radiation science which is relevant to health physics required for medical and biological applications of natural and man-made ionizing radiation. In this contest in Italy since 2004, INFN funded a project devoted to the students of High Schools to bring them more confident with the items of radioactivity, by presenting and discussing good reasons to acquire and conserve expertise and knowledge in the nuclear field as important contribution to society.

Description of the Work or Project

The students are involved in the in the experimental measurements of the radon-222 concentration by CR-39 solid state nuclear track dosimeters (SSNTD) inside different places such as their school, home or other indoor sites of their interest. One item of the project is the organization of a summer school devoted to the students involved in the project. In 2028 there was the first edition helded in a hutte at 2050 m.a.s.l. at the basis of the mountain Monte Rosa wall. For one week the students had the opportunity to have a deepen knowledge of natural radioactivity measurements with field measurements, realizing that a LAB is not just a physical place but a METHOD of "KNOW" through the "KNOW-HOW".

Conclusions

The summer school initiative produced some important results for the involved students that made an experience conducted in "unusual" living conditions, with a great aggregation. They had always a proactive interaction with university professors, learned, having fun and they, when came back, were a point of dissemination of experience and subject also to other students of their own school and families. This experience has also brought important results for the teachers giving them the possibility to exchange experiences, to highlight students' ability to organize themselves, manage time, relate to each other and with teachers. Cohabitation represented a unique opportunity for the exchange of experiences, the development of new ideas, mutual help for the solution of the problems encountered during the project, defining a unique format for all the phases of the project to be adopted in the various locations in order to facilitate the comparison of the final results.

Keywords: Health Physics, Education, radon measurements, CR-39, alpha particles, radioprotection.