

HELEN GRANT REPORT (STT)

The short-term training (STT) took place from July the 26th until September the 4th 2006 at the Universidad Nacional Autónoma de México (UNAM). Its aim was to start a new research line devoted to the study of the detectability of neutrinos with ultra-high energies which may constitute part of the cosmic radiation.

Once I arrived in the University, I discussed with Dr. Lukas Nellen what my aim and working plan would be. The aim was to start to develop a module for the Offline software (for the simulation and reconstruction of cosmic ray signals in the AUGER experiment) which would allow us to identify cosmic rays produced by neutrinos. In order to do that, I started working together with a student from Universidad de Santiago de Compostela (USC) who was also visiting the UNAM. This collaboration has been tremendously successful, since it has allowed me to connect this training, and the work I've performed during it, with my future collaboration with the USC.

In addition to this, we should remark the fact that at the UNAM, the shower simulation programme AIRES is used (as well as at USC), while my group in Valencia and the Naples collaboration work with the simulation programme CORSIKA. This has allowed us to make a comparison of the results, from which we have obtained interesting conclusions that I will continue to study during my visit to the USC.

All the work performed at the UNAM, under Dr. Nellen's supervision, has allowed me to improve my knowledge of the Offline software. At the same time it has allowed me to understand the behaviour and fundamental characteristics of inclined showers. Personally, I consider my STT as a tremendously beneficial experience, since it has given me the tools in order to continue the development of the work initially proposed.

Teguayco Pinto Cejas