FP7 "Marie Curie Initial Training Networks"
ENTERVISION
Research Training in 3D Digital Imaging for Cancer Radiation Therapy
Job Vacancy:

Nuclear fragmentation studies

Within the ENTERVISION project, we will focus on experimental studies to investigate the characteristic features of secondary charged particles produced along the penetration path of the primary ion beam and emerging from thick tissue-equivalent absorbers. The experimental program to be undertaken consists in preparing and completing measurements of differential cross sections for the production and transport of light particles in conditions relevant for ion therapy. The experiments will be performed with high-energy light-ion beams from the heavy-ion synchrotron SIS-18 at GSI. These measurements will be compared with Monte Carlo simulations in connection with the corresponding ENVISION work package. The experiments described are intended to be complementary to large-scale physics projects such as the FIRST experiment approved in 2009 by the GSI Program Advisory Committee.

- The ER at GSI will work on:
  - Evaluation of existing experimental data on fragmentation of light-ion beams in tissue-equivalent material.
  - Test and selection of suitable detector systems to be used for fragment identification.
  - Performance of experiments with light-ion beams delivered by the synchrotron SIS18 in the energy range of 50 – 500 MeV/u relevant to radiotherapy applications. Aim of the experiments is to obtain energy distributions by time-of-flight measurements, angular distributions and yields of secondary fragments (identified by nuclear charge).

Requested Profile
- Ph.D. in Physics
- Experience in nuclear physics and radiation detector technology
- English fluent

How to apply
Verify that you fulfill the FP7 Marie Curie ITN Eligibility conditions

Send the application including a CV to:

Prof. Marco Durante, Ph.D.

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CONTRACT DURATION: 12 Months
APPLICATION DEADLINE: September 1, 2011