

## SpecMAT: An array of gamma-ray detectors around an active gas target

*Tuesday, 19 May 2015 17:15 (25 minutes)*

The ACTAR TPC active target project, which is based at GANIL and supported by an ERC grant, is being developed to investigate exotic nuclei at various laboratories in Europe. A rich research program including direct and resonant reactions, as well as decays, will be addressed with this new instrument.

In many cases, it is highly desirable to collect gamma-ray information concurrently to the particle track information obtained with the ACTAR TPC. The project SpecMAT, funded by a second ERC grant, seeks this objective through either scintillators (LaBr<sub>3</sub>:Ce or CeBr<sub>3</sub>), or Broad Energy high-purity Germanium (BEGe) detectors, around the active gas target. Tests are to be performed with prototype detectors to determine the optimum combination of materials, dimensions and electronics to be used in the final SpecMAT setup, while working within certain mechanical limitations.

This talk will present results of these tests, as well as simulations performed in Geant4 for the final array of detectors.

**Primary author:** Dr SWARTZ, Jacobus (KU Leuven)

**Co-authors:** Dr DE WITTE, Hilde (KU Leuven); Prof. RAABE, Riccardo (KU Leuven)

**Presenter:** Dr SWARTZ, Jacobus (KU Leuven)

**Session Classification:** Session 8

**Track Classification:** Active target detectors and associated electronics