

# ViTO experiment at ISOLDE-CERN

*Tuesday, 9 June 2015 11:50 (30 minutes)*

## ViTO experiment at ISOLDE-CERN

Versatile Ion polarized Techniques Online (ViTO) is a dedicated beamline for producing nuclear-polarized beams and for conducting experiments on a wide range of sample environments at ISOLDE-CERN. ViTO experiment is a modification of the formerly existing UHV beamline hosting the ASPIC apparatus and once fully operational it will open a wide range of possibilities for carrying out versatile and multidisciplinary experiments in the areas of nuclear and solid-state physics, fundamental interaction physics and biophysics. After the intended upgrade ViTO will provide three end stations: ASPIC, the  $\beta$ -asymmetry end station where highly-polarized ions will be available, and an open station for travelling experiments requiring rare polarized atoms (or ions). The latter station, if not occupied, will be used for monitoring spin-polarization during  $\beta$ -NMR or  $\beta$ -asymmetry experiments on the  $\beta$ -asymmetry beamline. The UHV and low temperature ASPIC station will remain for PAC studies on sensitive surfaces and interfaces and shall later be extended for  $\beta$ -NMR spectroscopy. Finally, the bio- $\beta$ -NMR station will be equipped with a strong differential pumping system allowing for online  $\beta$ -NMR on liquid and online PAC spectroscopy in volatile matter, such as biochemically relevant aqueous solution. Furthermore, after chamber exchange, the station will allow for other, non-biological experiments. A short overview of future experiments will be presented during the talk.

**Primary author:** Dr STACHURA, Monika (TRIUMF/CERN)

**Co-authors:** Prof. NEYENS, Gerda (IKS Leuven, Belgium); Dr JOHNSTON, Karl (ISOLDE-CERN); Prof. HEMMINGSEN, Lars (University of Copenhagen); Prof. DEICHER, Manfred (University of Saarland, Germany)

**Presenter:** Dr STACHURA, Monika (TRIUMF/CERN)

**Session Classification:** Application of nuclear physics to other fields

**Track Classification:** Application of nuclear physics to other fields