Contribution ID: **11** Type: **Invited**

Nuclear Probes in Multiferroics

Tuesday, 24 November 2020 17:05 (20 minutes)

Nuclear probes that have been used to sense magnetic ordering have mostly been the ^{57}Fe Mössbauer probe and a few nuclear magnetic resonance nuclei. For the latter, high external magnetic fields have to be applied in order to obtain high resolution data. If one tries to become more versatile in probes and field range, $\gamma\gamma$-angular correlations can by now be applied on a large number of probe nuclei. Many of these can be produced at ISOLDE.
This presentation will focus on what physics aspects from multiferroics can be addressed using such probes. The different types of intrinsic multiferroics are presented and classified. Data are shown on known and more recent data in multiferroics without external fields applied. The next set-up soon to be installed at ISOLDE allowing for multiple field applications to multiferroics is presented. Long term perspectives on interface physics in magnetic to ferroelectric interfaces are sketched.

Primary authors: Prof. LUPASCU, Doru C. (University of Duisburg-Essen); Dr SCHELL, Juliana (ISOLDE, CERN); Mr SCHMUCK, Merlin (University of Duisburg-Essen); Mr DANG, Thien Thanh (University of Duisburg-Essen); Prof. SHVARTSMAN, Vladimir (University of Duisburg-Essen); Dr ESCOBAR, Marianela (University of Duisburg-Essen); Ms KRÖLL, Eva (University of Duisburg-Essen); Mr MARSCHICK, Georg (Vienna University of Technology)

Presenter: Prof. LUPASCU, Doru C. (University of Duisburg-Essen)

Session Classification: New Physics Applications at ISOLDE