



Contribution ID: 116

Type: oral

ANAIS: Status and prospects

Tuesday, September 30, 2014 2:40 PM (20 minutes)

ANAIS (Annual modulation with NAI Scintillators) experiment will look for dark matter annual modulation with 250 kg of ultra-pure NaI(Tl) scintillators at the Canfranc Underground Laboratory (LSC), aiming to confirm the DAMA/LIBRA positive signal in a model-independent way. The detector will consist of 20 modules, each of them coupled to two photomultiplier tubes (PMTs). Two 12.5 kg each NaI(Tl) crystals provided by Alfa Spectra are currently taking data at the LSC. ANAIS crystal radiopurity goals are fulfilled for ^{40}K and ^{232}Th and ^{238}U chains, but a ^{210}Pb contamination out-of-equilibrium has been identified, whose origin has been determined and is being solved. The high light collection efficiency obtained with these prototypes allows us to anticipate an energy threshold of the order of 1 keVee. Finally, high quantum efficiency Hamamatsu PMT test and muon veto characterization are presented.

Primary authors: Mr ORTIZ DE SOLÓRZANO, Alfonso (Universidad de Zaragoza); Dr GINESTRA, Carlos (Universidad de Zaragoza); Dr POBES, Carlos (Universidad de Zaragoza); Dr CUESTA, Clara (University of Washington); Prof. GARCÍA, Eduardo (Universidad de Zaragoza); Prof. PUIMEDÓN, Jorge (Universidad de Zaragoza); Prof. VILLAR, José Ángel (Universidad de Zaragoza); Prof. AMARÉ, Julio (Universidad de Zaragoza); Prof. SARSA, María Luisa (Universidad de Zaragoza); Dr MARTÍNEZ, María (Universidad de Zaragoza); Mr OLIVÁN, Miguel Ángel (Universidad de Zaragoza); VILLAR, Patricia (Universidad de Zaragoza); Prof. CEBRIÁN, Susana (Universidad de Zaragoza); Dr ORTIGOZA, Ysrael (Universidad de Zaragoza)

Presenter: Mr OLIVÁN, Miguel Ángel (Universidad de Zaragoza)

Session Classification: Parallel Session B