



Contribution ID: 3

Type: **Invited**

Theory, astrophysics and small accelerators for ENSAR2

Tuesday, 6 December 2016 13:40 (25 minutes)

Nuclear reactions can be understood as exposing nuclei to external fields, Coulomb or nuclear. ENSAR-2 exotic beam facilities (ISOLDE, GANIL and GSI-FAIR) provide different time scales for the external fields, associated to the collision time. The complementarity of these measurements will be discussed. Astrophysically relevant reaction rates in stellar environments imply averages over Maxwellian energy distributions, which are governed by the temperature of the stars. On the other hand, Coulomb-dominated inclusive break-up cross sections imply energy averages, which are governed by the collision time. This opens the possibility of relating experimentally measured inclusive break-up cross sections, with the proper collision time, with astrophysical reaction rates, at the proper temperature. Recent instrumentation developments carried out at the small facilities within ENSAR-2, relevant to the large exotic beam facilities, will be presented.

Primary author: GOMEZ CAMACHO, Joaquin (Universidad de Sevilla)

Presenter: GOMEZ CAMACHO, Joaquin (Universidad de Sevilla)

Session Classification: Session 1