Contribution ID: **258** Type: **Oral**

Quests in nuclear astrophysics

Tuesday, 1 September 2015 10:00 (30 minutes)

Nuclear physics is essential to understand the life cycle, energy release and nucleosynthesis processes in stars. There are reactions in different burning phases, which are involved in the energy production, evolution and nucleosynthesis of stars where our knowledge is limited: the cross sections of these key reactions at astrophysically relevant energies are not known with the precision needed. Improved data are required from nuclear physics to solve these problems and provide the next milestones for the understanding of our present picture of the universe. In order to achieve those aims several networks have been created recently to combine the astrophysical and nuclear fields. Among others, two examples will be presented, the LUNA underground facility, where the inherent low background allows to determine low cross sections for various astrophysical scenarios. Another example to be presented is the current status of the astrophysical p-process, relevant for the production of certain proton rich isotopes in explosive scenarios.

Primary author: FÜLÖP, Zsolt (Atomki)

Presenter: FÜLÖP, Zsolt (Atomki)

Session Classification: Plenary III