Nuclear and astrophysics aspects for the rapid neutron capture process in the era of multimessenger observations



Contribution ID: 10 Type: not specified

## The solar r-process residual distribution

Thursday, 4 July 2019 15:05 (35 minutes)

Theoretical r-process models still suffer for severe uncertainties, regarding in particular the physical conditions characterizing the hosting site and the adopted nuclear inputs.

For this reason, the contribution of the r-process to the solar distribution is commonly derived by subtracting the contribution coming from the slow neutron capture process (s-process), as r=1-s.

This curve provides, together with low metallicity stars heavy element distributions, the point of reference for r-process nucleosynthesis calculations. I will show the r-process residuals distribution we recently derived with a Galactic Chemical Evolution model including recent Asymptotic Giant Branch stars and rotating massive stars yields.

Primary author: Dr CRISTALLO, Sergio (INAF - Osservatorio Astronomico d'Abruzzo)

**Co-authors:** Prof. PRANTZOS, Nikos (Institut d'Astrophysique de Paris); Prof. ABIA, Carlos (Universidad de Granada); Dr LIMONGI, Marco (INAF - Osservatorio Astronomico di Roma); CHIEFFI, Alessandro (INAF - Istituto di Astrofisica e Planetologia Spaziali)

**Presenter:** Dr CRISTALLO, Sergio (INAF - Osservatorio Astronomico d'Abruzzo)

Session Classification: Session