



**DOTTORATO DI RICERCA
in Fisica e Tecnologie Fisiche
Anno Accademico 2011-2012
Università degli Studi di Perugia**



AVVISO DI SEMINARIO

Giovedì 5 Luglio 2012, ore 15:00

Aula “E”, 3°p. del Dipart. Fisica

**“THE ABUNDANCE OF LITHIUM IN THE GALACTIC
BULGE AND THE PROBLEMS OF LITHIUM
PRODUCTION/DESTRUCTION IN THE UNIVERSE”**

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Abstract: *The light element lithium (Li , $Z=3$) is very temperature-sensitive, which fact makes it an interesting indicator for mixing processes in stars. Standard stellar evolutionary models predict that Li should be destroyed throughout most of the lifetime of low-mass stars. This is in general confirmed by observations. However, a rare number of evolved giants show Li abundances considerably enhanced over what is expected from evolutionary models. This so-called Li -rich K-giant phenomenon has been explained in the literature by fast mixing processes connected to the red giant branch bump (RGB luminosity bump) phase of evolution. In order to reassess this explanation, we conducted a spectroscopic survey of ~ 400 low-mass red giant branch stars towards the Galactic bulge. We find three Li -rich K-giants in our survey sample that are, however, not connected to the RGB luminosity bump, contradicting these previous findings. In the talk we shall highlight the results of the survey as well as present further observational constraints on the Li -rich K-giant phenomenon. Furthermore, we will also present what we can learn from Li about the evolutionary phase after the RGB, i.e. the Asymptotic Giant Branch, which marks the end of the evolution of moderately massive stars.*

IL COORDINATORE
Prof. Maurizio Busso

N.B.: La frequenza del seminario è obbligatoria per gli studenti del primo anno di Dottorato, (salvo per chi sta svolgendo attività fuori sede) ed è inoltre fortemente consigliata ai dottorandi degli altri cicli. Infine, la partecipazione è aperta agli studenti del corso di laurea magistrale in Fisica, nonché a tutti gli interessati.