

Lithium survey in evolved stars observed in the SACY project

B. L. Canto Martins,¹ S. Vieira,² C. A. O. Torres,² G. R. Quast,²
L. da Silva,³ R. de La Reza,³ C. H. F. de Melo⁴
and J. R. de Medeiros¹

¹DFTE/UFRN, Natal, RN, Brazil

²Laboratório Nacional de Astrofísica, Itajubá, MG, Brazil

³Observatório Nacional, Rio de Janeiro, RJ, Brazil

⁴European Southern Observatory, La Silla, Chile

Abstract. The primary goal of the SACY project (Search for Associations Containing Young Stars) was to identify possible associations of stars younger than the Pleiades association among optical counterparts of *ROSAT* X-ray-bright sources. The study of the chemical abundance in stars located in regions of stellar formation is extremely important to understand stellar nucleosynthesis, the physical mechanisms controlling mixing in stellar interiors, and chemical enrichment in the Galaxy. The present work highlights the first results of a chemical-abundance study of evolved stars identified in the SACY survey. For this, we performed a detailed spectroscopic analysis for the determination of atmospheric parameters and Li abundance for a sample of giant and subgiant stars. The observations were carried out with high resolution using the FEROS ($R = 48\,000$) échelle spectrograph. We measured the stellar parameters (T_{eff} , $\log g$, v_{mic} , $[\text{Fe}/\text{H}]$) from LTE analysis in the complete range of 420 – 1100 nm. Li abundance was derived from the region around the lithium line at 6707.78 Å for the entire sample of stars.

Keywords. stars: abundances, stars: fundamental parameters, Hertzsprung–Russell diagram, open clusters and associations: general

The full poster (in pdf format) is available at
<http://www.astro.iag.usp.br/~iaus266/Posters/pCanto-Martins.pdf>.