F P14 Lithium in the atmospheres of some sharp-lined and slowly rotating roAp stars

A. Shavrina[1], N. Polosukhina[2], Ya. Pavlenko[1], S. Khan[3], P. Quinet[4], V. Khalack[1], A. Yushchenko[5], V. Gopka[5], N. Mikhailitska[1] and G. A. Wade[6]

[1] *Main Astronomical Observatory, National Academy of Sciences, Zabolotnoho st. 28 Kiev 650, Ukraine*
[2] *Crimean Astrophysical Observatory, 98409 p/o Nauchny 2/2 Crimea Ukraine*
[3] *Simferopol University, Yaltinskaya str. 4, Simferpol, Crimea, Ukraine*
[4] *IPNAS, Université de Lége, Sart Tiplam, B15, B-4000 Liége, Belgium*
[5] *Odessa Astronomical Observatory, Park Shevchenko, Odessa, 65014, Ukraine*
[6] *Royal Military College of Canada, Kingston, ON, Canada, K7K 7B4*

The lines of lithium at λ 6708 Å and λ 6103 Å are analyzed in the high resolution spectra of some sharp-lined and slowly rotating roAp stars. Three spectral synthesis codes - STARSP, ZEEMAN2, SYNTHM were used. New lines of the rare earth elements from the DREAM database, and lines calculated on the basis of the NIST energy levels were included. Magnetic splitting and various processes of the line broadening were taken in to account. Enhanced abundance of lithium in the atmospheres of the stars studied results for both the lithium lines.