Canadian Association of Physicists
Association canadienne des physiciens et physiciennes

Contribution ID: **1989** Type: **Oral (Non-Student) / Orale (non-étudiant(e))**

Search for Vertical Stratification of Element Abundances in Chemically Peculiar stars

Tuesday 12 June 2018 16:15 (15 minutes)

A portion of upper main-sequence stars, called chemically peculiar (CP) stars, show significant abundance anomalies mainly due to atomic diffusion of chemical elements within the stellar atmospheres of these stars. Slowly rotating CP stars may have hydrodynamically stable atmospheres where a competition between the gravitational and radiative forces launches the mechanism of atomic diffusion that can be responsible for the abundance peculiarities observed in CP stars. Recently, Project VeSElkA (Vertical Stratification of Elements Abundance) was initiated with the aim to detect and study the vertical stratification of element abundances in atmospheres of CP stars. The first results from abundance analysis of several slowly rotating (Vsin(i)<40 km/s) CP stars observed recently with ESPaDOnS are presented here. Signatures of vertical abundance stratification for several chemical elements have been found in stellar atmospheres of HD22920, HD41076, HD95608, HD116235, HD148330 and HD157087.

Author: Prof. KHALACK, Viktor (Université de Moncton)

Presenter: Prof. KHALACK, Viktor (Université de Moncton)

Session Classification: T4-6 DASP General Contributions II (DASP) | DPAE: contributions générales II (DPAE)

Track Classification: Atmospheric and Space Physics / Physique atmosphérique et de l'espace (DASP-DPAE)