## ESTIMATION OF THE STELLAR EFFECTIVE TEMPERATURE AND STELLAR WIND DETECTION IN A HERBIG AE/BE TYPE STAR FROM SPECTRA ACQUIRED IN BOGOTÁ - COLOMBIA

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We present the results of spectroscopic observations in the range of 4280-6800 Å of AB Aur, a Herbig Ae/Be type star. These observations were carried out at the Observatory of the Universidad de los Andes in Bogotá - Colombia in 2015. We select the 4280-6000 Å spectral window for fitting our data to a black-body model of the star. In this range, the effects due to circumstellar disk emission are negligible and the nighborhood of the prominent accretion $H\alpha$ emission line is neglected. In this window the dominant lines due atomic processes are the Balmer series lines $H\beta$ and $H\gamma$. We remove data around $3\sigma$ for each of these lines in order to ignore quantum effects. We model the stellar continuum by doing a Monte Carlo bootstrap-sampled fitting of three parameters: (i) a bolometric correction factor due to atmospheric absorption and/or defect electronics, (ii) measured (relative) continuum flux, and (iii) stellar temperature $T_{\rm eff}$. We obtain a value for the stellar temperature of 9400K-9700K, in agreement with the temperature reported by Tannirkulam et al. 2008. We also successfully fitted the H lines using a two-component gaussian fit, which shows the effects of stellar wind on top of the gas accretion onto the star. Our measurements strongly suggest that even in the harsh observational conditions present in Colombia, it is possible to obtain quality astronomical data for teaching astrophysics at an undergraduate level.

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## IDENTIFYING GALACTIC HALO PN CANDIDATES IN THE IMAGING SURVEYS: J-PLUS/S-PLUS AND J-PAS

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Halo planetary nebulae (HPNe) are able to reveal important information about stellar and chemical evolution in galaxies. Their characteristic low continuum and strong emission lines make them good objects to be searched by multi-filter imaging surveys. Given that only 14 HPNe are known in the Galaxy, we are exploring colour-colour diagrams to search for these sources in Javalambre/Southern Photometric Local Universe Survey (J-PLUS/S-PLUS) and the Javalambre-Physics of the Accelerating Universe Astrophysical Survey (J-PAS). They are narrow- and broad-band imaging cosmological surveys, with 12 and 54 filters, respectively.

The J-PAS survey will be able to observe 8500 $\deg^2$ of Northern sky, it will detect sources up to magnitude $m_{\rm AB} \sim 23$. In the case of the J-PLUS survey the limit magnitudes is around $m_{\rm AB} \sim 21.5$. The S-PLUS survey will observe more than 6000 $\deg^2$ and it will map the Southern sky.

Other optical emission lines sources, such as Galactic and extragalactic symbiotic stars (SySts), cataclysmic variables (CVs), QSOs at different redshifts, star-forming galaxies (SFGs), extragalactic H II regions and supernova remnants (SNR) can mimic PNe. Therefore, we explore different colour-colour diagrams in order to highlight those that can better identify HPN candidates, separating them from these other objects.

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