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Looking for Accreting Protoplanets through \mathbf{H}_{α} observations

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Abstract

Young planets embedded in disks are expected to accrete material from the surrounding media. As a result of this process, they can emit in accretion tracers (like the H_{α} or Pa_{β} lines). In this poster, we show observations designed to detect embedded planets in the H_{α} line. Since our main result is the non-detection of accreting protoplanets, we explain this as a combination of different factors, like e.g. episodic accretion or/and extinction from the circumstellar and circumplanetary disks. Finally, we provide estimations of the line luminosity in different transitions used as accretion tracers. In particular, we show estimations for the Pa_{β} and Br_{α} lines, which are better suited to overcome high extinction.

My poster in zenodo.org can be found here