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Peering into the accretion on planetary-mass objects with UVES at VLT.

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Emission lines tracing active accretion have been detected in the youngest directly imaged exoplanets (e.g., PDS 70 b and c) and their free-floating counterparts. The profiles of these lines can provide valuable insights into the physics and kinematics of gas accretion, a process believed to determine the final spin of planetary-mass objects, their early physical evolution (hot- vs. cold-start scenarios), and the formation of exomoons.

I will present the first results from the ENTROPY campaign, which uses UVES at the VLT to obtain time-series observations of emission line profiles in young planetary-mass objects and wide-orbit companions. These observations aim to establish the first inventory of emission line profiles in planetary-mass objects and to identify the accretion mechanisms at play. I will focus on two objects whose line properties are characteristic of magnetospheric accretion.

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