

IV Workshop ADONI



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Science with ELVIS, the IFS upgrade of SHARK-VIS

Tuesday, 24 May 2022 16:30 (20 minutes)

ELVIS (Exoplanets at LBT with a Visible IFS for Shark-vis) is the integral field spectrograph upgrade that will be installed on SHARK-VIS. In this talk we will present some of the exciting new scientific aspects that ELVIS will allow us to investigate. We will focus in particular on the analysis of very young planets in formation within the disk of their parental star, which represent the key science project for SHARK-VIS. With a goal spectral resolution around $R=15000$, ELVIS will be able to resolve for the first time the profile of the $H\alpha$ line emitted by accreting giant planets, which will provide crucial information to constrain planetary accretion and formation models. We will show simulations of ELVIS observations for a number of accreting planets with different parameters, which will highlight the capabilities of the instrument and its potential breakthrough scientific contribution.

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