

Signs of the β Pictoris b Hill Sphere Transit?

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The Hill sphere of the directly-imaged planet beta Pictoris b recently transited its host star resulting in the first opportunity for astronomers to study the circumplanetary environment of a young (~ 23 Myr) exoplanet. The rarity of such a unique event combined with the knowledge that the next transit will not happen for another ~ 23 years spurred the astronomy community to obtain a cascade of new beta Pic observations using some of the worlds largest telescopes (e.g. HST, VLT and SALT) and lead to the creation of dedicated beta Pic telescopes (e.g. bRING, PICSAT).

In this talk I will introduce the beta Pic system and give an overview of the observational efforts aimed at observing the Hill sphere transit. The talk will focus on the results of a 27 orbit HST observing campaign of beta Pic in the far-UV. I will present the variable emission and absorption signatures seen in the data and discuss their potential relationship with the Hill sphere transit.

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