

*Abstract: Retrieving the mid-infrared spectrum of HR 8799 e*

*Only a few tens of exoplanet spectra are known to date at medium and high spectral resolution, although we know more than five thousand exoplanetary systems. The use of the VLTI/GRAVITY interferometer has radically changed this situation, producing several high-quality, medium-resolution K-band spectra of exoplanets at low separations. A new strategy has been developed to extend this technique to the mid-infrared with VLTI/MATISSE, using GRAVITY as a fringe tracker. This spectral region is rich in information about the atmospheric physics and chemistry (e.g., temperatures, surface gravities, carbon-oxygen ratios, metallicities). The method was successfully tested on Beta Pictoris b, yielding its L&M-band spectrum for the first time. We are now starting a survey of all planets reachable by the instrument. We present here our observations of HR8799e, the shortest-separation planet in the HR8799 system, and the crucial constraints its mid-infrared spectrum provides on its atmospheric chemistry and formation scenario.*