

## **L'-band AGPM vector vortex coronagraph's first light on LBTI/LMIRCAM**

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### **Abstract:**

We present the first science observations obtained with the L'-band AGPM coronagraph recently installed on LBTI/LMIRCAM. The AGPM (Annular Groove Phase Mask) is a vector vortex coronagraph made from diamond sub-wavelength gratings tuned to the L'-band. It is designed to improve the sensitivity and dynamic range of high-resolution imaging at very small inner working angles, down to 0.09 arcseconds in the case of LBTI/LMIRCAM in the L'-band.

During the first hours on sky, we observed the young A5V star HR8799 with the goal to obtain the best sensitivity/contrast ever in the inner region ( $<1''$ ) of the planetary system. Preliminary analyses of the data reveal the four known planets clearly at high SNR. The performance of the instrument in this mode will be presented and compared to straight imaging (without coronagraph) which is used for the ongoing LBTI planet survey (LEECH, see abstract by A. Skemer).

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