

**Titre : What causes the dust's asymmetric emission in the inner parts of protoplanetary disks seen by the VLTI ?**

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Interferometric observations conducted with the VLTI have revealed asymmetric near-infrared dust emission in the innermost regions of several protoplanetary disks, where planets are expected to form and migrate. Moreover, some of these observations show a temporal variability in the asymmetry, which can not be explained by axisymmetric disk models. We explore the hypothesis that a vortex generated by the Rossby Wave Instability (RWI) is responsible for dust trapping, and therefore for the asymmetric emission. To investigate this scenario, we carried out 2D and 3D hydrodynamical simulations with the FARGO3D code to model the inner parts of protoplanetary disks, which feature a transition between an inner strongly turbulent region and an outer weakly turbulent region. Our simulations show that this transition can trigger the formation of a dust-trapping vortex due to the RWI, whose lifetime can be significantly increased by the presence of multiple planets near the transition region. Our simulations results are post-processed with RADMC-3D dust radiative transfer calculations to compute synthetic dust emission maps in the near-infrared, and synthetic interferometric observations are then produced with the ASPRO2 tool. In this communication, we will discuss the possibility to reproduce, with our setup, the observed asymmetries in the inner regions of HD 163296 and the possible contribution of planets to account for these asymmetries.