

**Abstract**

As part of the Accretion Discs in Halpha with OmegaCAM (ADHOC) survey, we imaged in r, i and H-alpha a region of  $12 \times 8$  square degrees around the Orion Nebula Cluster. Thanks to the high-quality photometry obtained, we discovered three well-separated pre-main sequences in the colour-magnitude diagram towards the cluster's center. Although several reasons could be invoked to explain these sequences including unresolved binaries, independent high-resolution spectroscopy supports the interpretation that these correspond to discrete episodes of star formation, each separated by about a million years. A detailed study of the region using the recently released GAIA DR2 catalogue, seems to also discard the hypothesis that binaries can be at the origin of the feature observed in our colour-magnitude diagram.

Our observations reveal that these star-forming events occurred in the densest central regions of the cloud. The stars from the two youngest populations rotate faster than the older ones, in agreement with the evolution of stellar rotations observed in pre-main sequence stars younger than 4 Myr in several star forming regions. If confirmed these results prompt for a revised look at the formation mode and early evolution of stars in clusters.