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# Isolated massive star formation in the A-SMASHeR survey

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## Abstract

Studying the birthplaces of massive stars is crucial for understanding the role of clustering in the formation of these objects. Some authors claim that massive stars cannot be born in isolation because the vast majority of them are part of a massive cluster or have been ejected from one of these groups. However, this may be caused by an observational bias towards conspicuous regions with intense star formation activity in the Galactic plane. On the other hand, even an isolated massive star whose origin cannot be traced back to any cluster is an ambiguous case, because the natal cluster might have dissolved. The only way to ensure that an isolated massive star was born in situ is finding the remainders of its natal cloud in the shape of an H II region.

The Alicante Survey of Massive Stars in HII regions (A-SMASHeR) addresses this issue through a selection of $\sim$ 100 poorly studied HII regions. Our preliminary analysis of LIRIS/WHT photometry yields $\sim$ 20% of regions showing only one or two bright central sources. EMIR/GTC spectra have been observed for part of these sources, allowing to confirm or discard their membership, their massive nature, and therefore their role as ionizing sources.

In this contribution, we present a photometric characterization of a A-SMASHeR region where massive star formation has occurred in relative isolation.

My poster in zenodo.org can be found here