

Physics of High-Mass Star Formation - Contributions from PACS

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The formation of massive stars plays a major role in structuring galaxies and determining their chemical and dynamical state. In contrast to this fact, we presently do not know if such stars form by the accretion process or the coalescence of intermediate-mass protostellar clumps. We will discuss how the PACS instrument can contribute to the determination of the (proto)stellar content of high-mass star-forming regions - a necessary information we need for the evaluation of the coalescence scenario. Complete line surveys with PACS will lead to a better understanding of the cooling mechanisms of quiescent molecular cloud cores, Hot Cores, and PDRs. The temperature of the star-forming regions is a key parameter for the accretion process.