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ABSTRACT ONLY

OBSERVATIONAL EVIDENCE OF STAR FORMATION STOCHASTICITY IN THE CALIFA DATASET

N. Romero-Díaz[1], J.E Forero-Romero[1]

It is generally accepted that a galaxy's total luminosity in the UV and other emission line intensities are proportional to its Star Formation Rate (SFR). However, there is theoretical evidence that for low SFR values stochastic effects in the star formation process can break this proportionality. The stochasticity produces *distributions* of UV luminosities and emission line intensities for a given SFR instead of the deterministic unique expected value. In this work we analyze data from the public data releases of the Calar Alto Legacy Integral Field Area Survey (CALIFA) to test for the presence of these stochastic effects. We find some marginal evidence on the galaxy's outskirts for these stochastic events. We discuss the implications of these results for different theories of clustered star formation. We also present possible observational strategies that might make this effect detectable with more significance in the near future.

[1] Departamento de Física, Universidad de los Andes, Cra. 1 No. 18A-10, Edificio Ip, Bogotá, Colombia.