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## **Fabrizio Gentile - Radio-Selected NIR-Dark galaxies: the ALMA view behind the dust**

*Monday, 12 June 2023 15:34 (1 minute)*

Since the first (sub)mm observations, it has been clear that the cosmic census of high- $z$  galaxies based on deep optical/NIR surveys is far from complete. The "darkest galaxies", in which significant amounts of dust absorb the stellar emission, are in fact missed by these surveys, even though their contribution to the cosmic Star Formation Rate Density and to the evolution of massive galaxies is thought to be significantly high. Due to their elusive nature - however - most of the studies regarding these extremely obscured sources still rely on low statistics and are potentially biased by cosmic variance. In this talk, I will illustrate the potentialities of a radio selection, paired to the lack of a NIR counterpart, to assemble the largest homogeneous sample of "dark" star-forming galaxies currently known. I will present the Radio-Selected NIR-Dark galaxies collected in the COSMOS field, their properties estimated through SED-fitting and their likely evolutionary path (Gentile 2023a, *subm.*). Finally, I will discuss our first results on these sources obtained through a new series of ALMA observations and the future perspectives of this project (Gentile 2023b, *in prep.*).

**Session Classification:** Posters: 1-minute talks