COSMIC DICHOTOMY IN THE HOSTS OF STAR-FORMING SYSTEMS AT LOW AND HIGH REDSHIFTS Manuela Magliocchetti (IAPS-INAF)+PEP-Herschel Team

We use Herschel-PEP observations of GOODS-S, COSMOS and Extended Groth Strip (EGS) to estimate the dependence of the clustering properties of star-forming galaxies on cosmic epoch between z=0 and z=2.5. In order to remove any bias in the selection process, we only include galaxies observed at the same rest-frame wavelength, with comparable bolometric luminosities and star-formation rates (SFRs > 100 M_{sun}/yr). Our analysis shows that the same amount of (intense) star forming activity takes place in extremely different environments at the different cosmological epochs. At relatively modest z<⁻¹ redshifts the hosts of star forming systems are small, Mhalo > 10^{11.6} M_{sun1} isolated galaxies. High (z⁻²) redshift star formation instead seems to uniquely take place in extremely fluctuation field at those epochs. Interestingly enough, this result is not specific to FIR galaxies but is a general characteristic of all systems undergoing intense (SFR>30 M_{sun1}/yr) star-forming activity selected throughout the whole electromagnetic spectrum from the radio to the UV.



Projected two-point correlation function w(q) in GOODS-South. Galaxies @ z^2 10 times more strongly clustered than the whole sample

Performed further analysis on $z<^{1}$ COSMOS & EGS sources (@ 100 μ m). Compared with clustering results @ z^{2} in GOODS-S (@160 μ m) and locally for IRAS galaxies. All sources selected @ 60 μ m rest-frame and all PEP galaxies with comparable SFR >~ 100 M_{sun}/yr.



Magliocchetti + 2011: 2013a: 2013b