

Lyman alpha emitters - Groups at $z \sim 6$ using NFIRAOS with the TMT (Casiana Munoz)

Lyman alpha emitters can be detected from the ground using narrowband filters images. With the 10 m GTC telescope, we sampled GOODS North and detected a good number of sources from $z \sim 3$ to more than 6. Some of them are in groups covering an area with projected sizes below $0.5'' \times 0.5''$. The typical number of the galaxy group members are below 10. To get spectroscopy of the individual sources with the GTC, more than 30 hour integration time would be needed, as they have magnitudes of about 24.5 - 25 AB. With the TMT using NFIRAOS the properties of the galaxies in these clusters could be obtained using a reasonable exposure time. Besides, only with this big telescope and its high spatial resolution by using AO in the NIR we will be able not only to firmly establish the group members but also to study the mass and metallicity distribution of the galaxies in groups at z up to 6. Notice that the number of LAEs with known metallicity is fairly scarce.

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