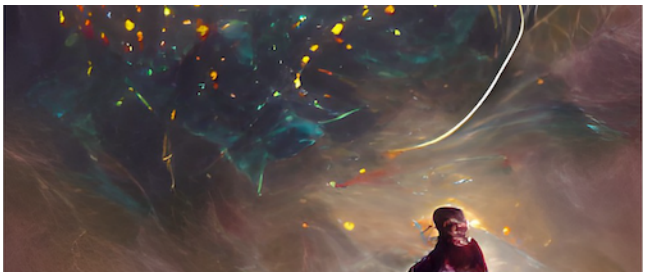

Contribution ID: **35** Type: **not specified**

GOODS-ALMA: Optically dark ALMA galaxies shed light on a cluster in formation at z = 3.5

Wednesday, 9 March 2022 14:00 (20 minutes)

We study the properties of the six optically dark galaxies detected in the GOODS-ALMA survey. While none of them are listed in CANDELS catalog down to H = 28.16 AB, we were able to de-blend two of them from their bright neighbor and measure an H-band flux. We present the spectroscopic scan follow-up of five of the six sources with ALMA. We show that nearly 70% of them belong to the same overdensity of galaxies at z ~ 3.5 overdensity. AGS24, is the most massive galaxy without an AGN at z > 3 in the GOODS-ALMA field. It falls in the very center of the peak of the galaxy surface density, which suggests that the surrounding overdensity is a proto-cluster in the process of virialization and that AGS24 is the candidate progenitor of the future BCG.

Presenter: ZHOU, Luwenjia (NANJING UNIVERSITY)

Session Classification: Day 3 Afternoon