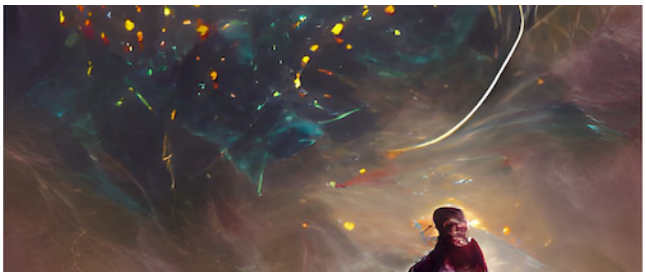

Contribution ID: **12** Type: **not specified**

Cartography of the Forming Galaxy Clusters: Proposal for a NIR spectroscopic campaign on IGM tomography map by PFS-SSP

Tuesday, 8 March 2022 10:00 (20 minutes)

We will present highlights of our past deep Hα imaging and follow-up spectroscopy to dense forming proto-clusters at the cosmic noon (Shimakawa et al. 2014-18). We found enhanced star formation and gas-phase metallicity in low-mass galaxies in the protocluster cores at z=2-3. Combined with Lyα deficits therein, we suggest the forming cluster cores are associated with lavish gas reservoirs and also enriched by metals and dust. To reach a consensus, we propose an intensive NIR spectroscopic campaign with TAO/SWIMS (and Subaru/MOIRCS), focusing unique IGM environments and control fields probed by the upcoming Lyα tomography with PFS-SSP. This will help us resolve the controversial issues among previous studies of proto-clusters.

Presenter: SHIMAKAWA, Rhythm (NAOJ)

Session Classification: Day 2 Morning