Yoshinobu Fudamoto

Title

A Panchromatic View of Galaxy Build-up in the First 2 Gyrs of Cosmic History

Abstract

Over the past decades, several important steps have been taken to understand the formation and evolution of first generations of galaxies. In particular, thanks to deep multi-wavelength observations by Hubble Space Telescope (HST), studies of early galaxies have now been pushed well into the Epoch of Reionization, i.e. up to z~10-11 only 500Myr after the Big Bang (e.g. Bouwens+15, Oesch+16, Atek+18). However, our current knowledge beyond z~2-3 is significantly biased to the rest-frame ultraviolet observations as it's only accessible by deep optical/near-infrared observations, and dust-obscured properties of high-redshift galaxies has remained mostly unknown. This situation was revolutionized by extremely sensitive and high-resolution far-infrared (FIR) interferometers such as ALMA and NOEMA. First ALMA observations showed us surprises by finding fainter FIR emission than expected from low-redshift galaxy observations, suggesting an evolution of dust-obscured galaxy properties at high-redshift (e.g. Capak+15, Bouwens+16). To understand this potential evolution with statistical sample and with wide range of galaxy parameters, large ALMA observations were required. In this talk, I will discuss the evolution of dust attenuation and dust-obscured star-formation of galaxies at z~3 to z~6 revealed by ALMA, including a recent ALMA large program: ALPINE and an on-going large program: REBELS.

Yoshinobu Fudamoto — *Curriculum Vitae*

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Research Interest

Observational Study of High-Redshift Galaxies
Panchromatic View of Galaxy Build up across Cosmic Time
ISM and Dust Evolution in the Re-Ionisation Era

Academic Career

2020 — now	Waseda University, Tokyo, Japan NAOJ ALMA project, Postdoctoral Research Fellow
2016 — 2020	University of Geneva, Geneva, Switzerland, PhD Supervisor: Pascal Oesch Thesis Title: “Dust Obscured Star Formation in the First 2 Gyr of the Universe”
2013 — 2016	Ludwig-Maximilians-Universität München, Munich, Germany, MSc Supervisor: Rob Ivison
2008 — 2012	Kyoto University, Kyoto, Japan, BSc

Research Projects

2017 - Now	Research Collaborations with Extragalactic ALMA Large Programs in Cycle 4 - 7 ALPINE: “The ALMA Large Program to INvestigate CII at Early Times” ASPECS: “The ALMA Spectroscopic Survey in the HUDF” ALCS: “ALMA Lensing Cluster Survey” REBELS: “An ALMA Large Program to Discover the Most Luminous [CII]+[OIII] Galaxies in the Reionization Epoch”

Awarded Grants

2018, Switzerland	SSAA Travel Grant Award Travel Grant from the Swiss Society for Astrophysics and Astronomy