Contribution ID: **17**   Type: **not specified**

Finding dusty AGNs from JWST ERO with mid-infrared photometry

Wednesday, 18 October 2023 14:36 (3 minutes)

Active galactic nuclei (AGNs) are one of the most intriguing and challenging phenomena in modern astronomy. The nature of the interaction between AGNs and their host galaxies remains an unsolved question. Therefore, conducting an AGN census is crucial to AGN research. However, many AGNs are obscured by their environment, which can block UV and optical observations due to the dusty torus surrounding the central supermassive black hole (SMBH). To overcome this challenge, mid-infrared (IR) surveys have emerged as a valuable tool for identifying obscured AGNs, as the obscured light is re-emitted in this range. In this work, we investigate AGN candidates in the Cosmic Evolution Early Release Science (CEERS) fields selected by the SED models from CIGALE. We report the relationships between the AGN luminosity contribution and AGN number fraction with redshift and total infrared luminosity, respectively. Our findings show that both the AGN luminosity contribution and AGN number fraction exhibit increasing trends as a function of redshift in certain total IR luminosity bins. Furthermore, with the high sensitivity of the James Webb Space Telescope (JWST), we extend the previous results on ULIRGs in Wang et al. (2020) to less luminous AGNs.

Primary author: CHIEN, Chia-Chen

Co-authors: LING, Chih-Teng (National Tsing Hua University); GOTO, Tomo (IoA); WU, Cossas K.-W. (National Tsing Hua University); KIM, Seong JIn (National Tsing Hua University); HASHIMOTO, Tetsuya (National Chung Hsing University); LIN, Yu-Wei; WANG, Po-Ya (National Tsing Hua University)

Presenter: CHIEN, Chia-Chen

Session Classification: Poster section

Track Classification: Poster section