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Presentation Requested: oral
Category: Role of AGN in Galaxy Evolution in the ALMA Era
Question: Is AGN feedback more, less or equally important as stellar feedback? Is this dependent on the galaxy types and how? What is the role that ALMA and other new facilities like NuStarr play in addressing this question?

Investigating the Most Luminous QSOs and Their Host Galaxies

Using data combined from sky surveys in the UV to the mid-IR, we have identified the most luminous (unobscured) QSOs in the Universe. Of over 100,000 QSOs identified as broad-line QSOs in the SDSS, with mid-infrared data from WISE, we find 140 with bolometric luminosities greater than $2x10^14L_\odot$, even more luminous than the most luminous obscured QSOs known, with redshifts ranging from 1.5 to 5. Merger-based galaxy evolution models predict that the host galaxies of such sources at peak QSO luminosity are undergoing a short-lived phase of extreme AGN feedback and massive star-formation activity after a major merger. I will present current results based on ALMA Cycle 2 observations. We are identifying extreme feedback outflows via broadened narrow-line emission and estimating star formation rates in the host galaxies of these ultra-luminous QSOs.