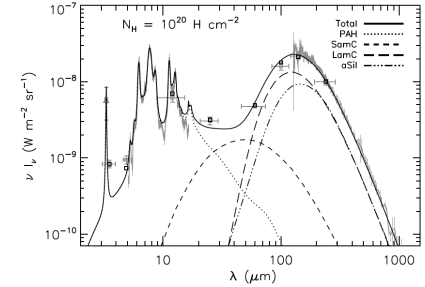
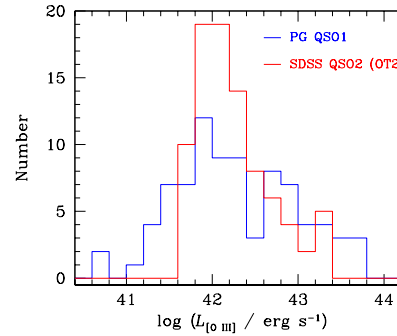
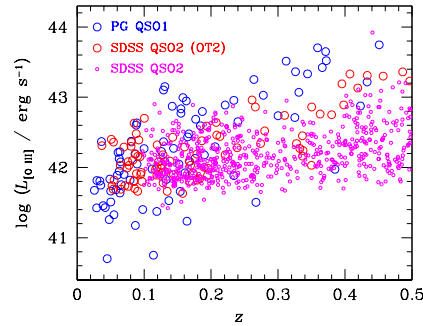
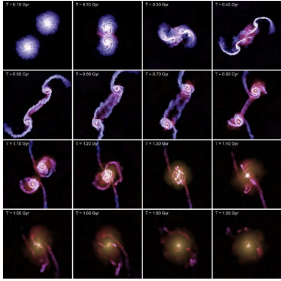


The Cold Dust Content of Optically Luminous, Nearby Quasars,

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Q: What data do we use?

Photometry

- Herschel 5-12" resolution, at 70, 100, 160, (PACS) and 250, 350 and 500 microns (SPIRE)
- We reached the expected sensitivities of ~10mJy for PACS and ~20mJy (confusion limit) for SPIRE
- 2MASS and WISE NIR and MIR photometry were compiled to assemble the IR SEDs

(QSO1: Petric et al. 2015, ApJS, 219, 22, QSO2s: Petric et al. in prep.)

NIR Spectroscopy

- Follow up study with Gemini's Near Infrared Spectrograph (XD mode) of 15 QSO1s and 8 QSO2s at z<0.3 (Schlechter, Petric et al. in prep.)

Conclusions QSO1s vs QSO2s

- 93% detected in at least one Herschel band (QSO1s and QSO2s)
- Most FIR SEDs well described by single-temperatures modified BB.
- Largest scatter in SED shapes comes from FIR properties for QSO1s. For QSO2s, the largest scatter in SED shapes comes from the ratios of FIR to MIR continuum emission.

- $L_{\text{FIR}} \sim 10^9 L \sim 10^{12} L_{\odot}$
- $M_{\text{DUST}} \sim 10^{-6.7} M_{\odot}$
- $T_{\text{DUST}} \sim 20 - 70 \text{ K}$

Q: How can we estimate the amount of cold dust?

A: FIR (if reprocessed star light) => dust

- We compare the L_{FIR} , IR colors, M_{DUST} and T_{DUST} with optical tracers of AGN accretion power and find only weak $\sim 2\sigma$ correlations.
- For QSO1s and QSO2s we find a tight correlation between SFR(FIR) and SFR(11.3 μm PAH) and also between the luminosity and EW of the 11.3 μm PAH feature and M_{DUST}
- For QSO1s at the lowest and highest FIR luminosities the ratio of the 11.3 μm PAH to the total FIR decreases in a non-linear fashion and no 11.3 μm PAH features seem to have been detected in sources with $T_{\text{DUST}} > 50\text{K}$.