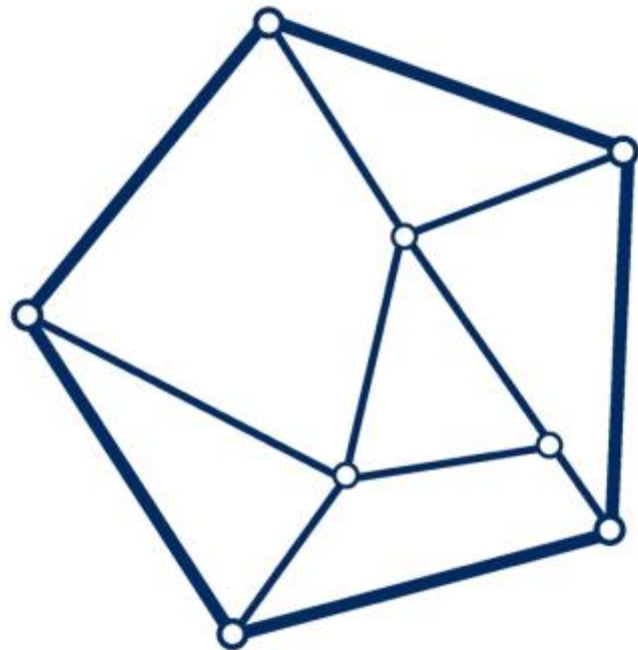




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THE UNIVERSITY OF
SYDNEY



Neutral Hydrogen in Reddened Quasars with BETA

Marcin Glowacki

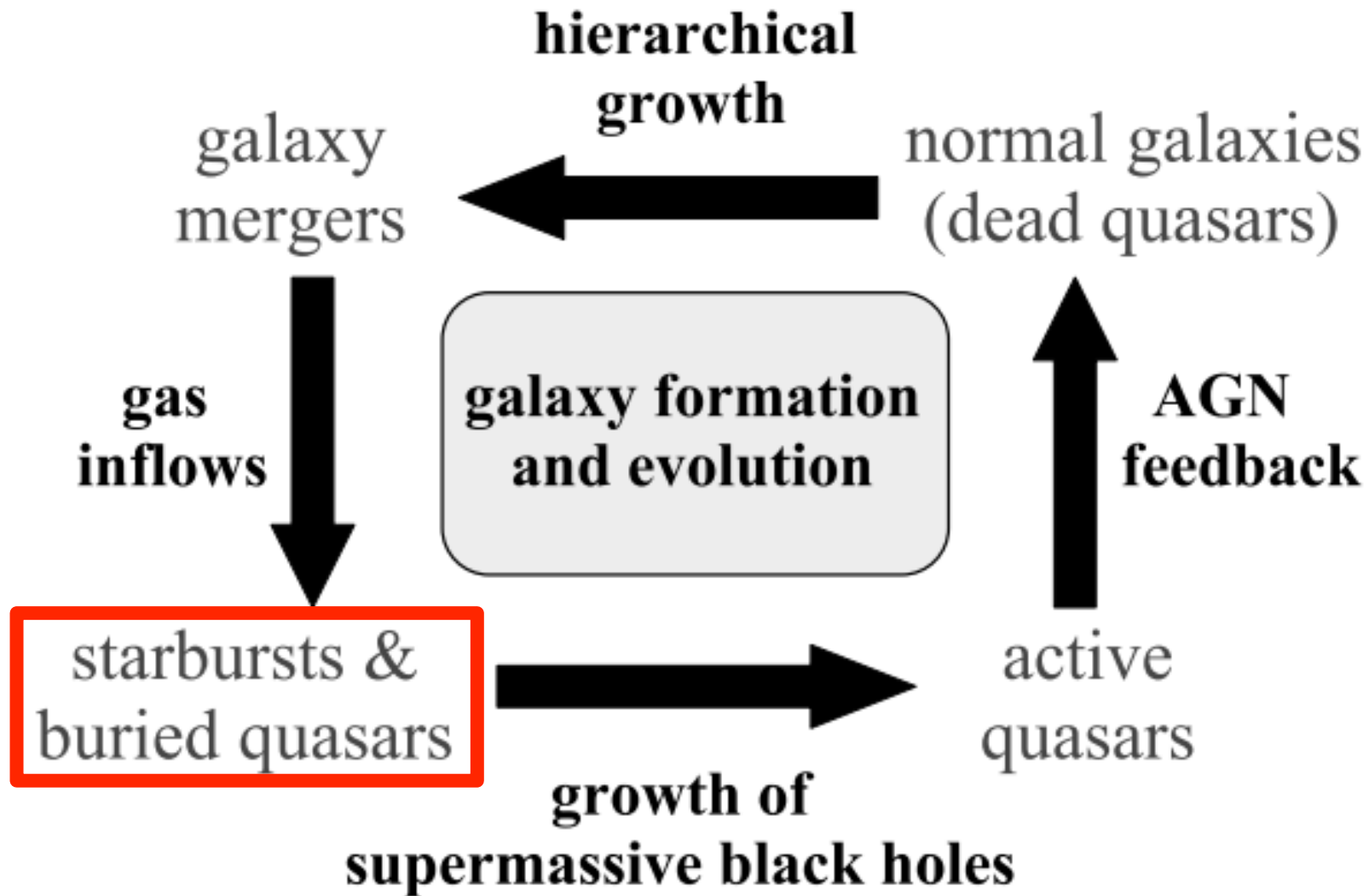


Australian Government
Australian Research Council



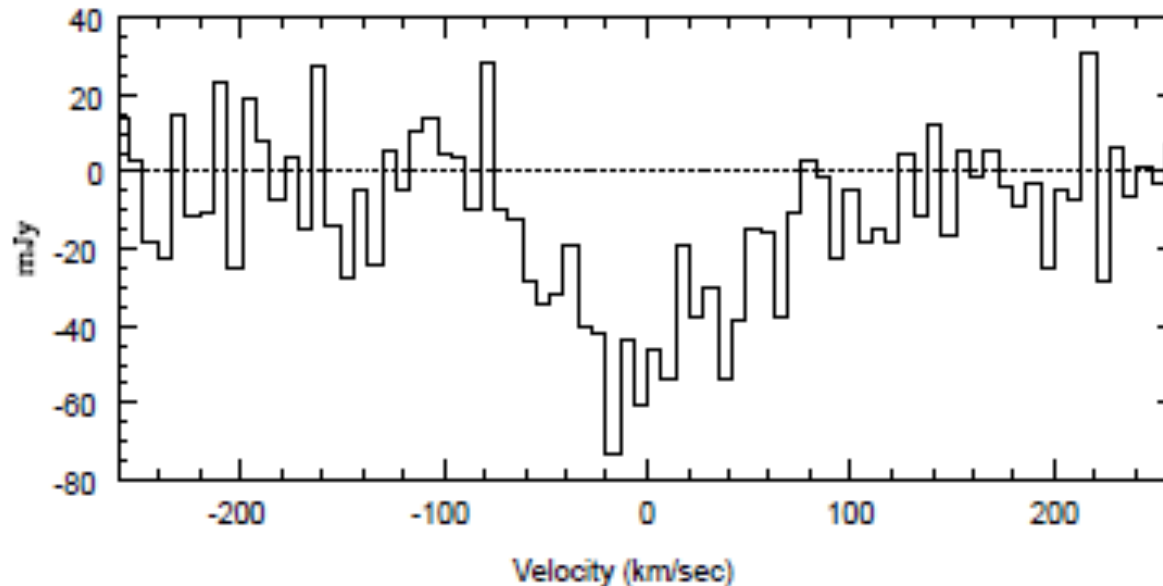


Reddened Quasars





- Carilli et al. (1998) found an **80% HI absorption detection rate**
- **Only 5 objects** searched however, to low optical depths
- Want to study a larger sample with BETA



*Carilli et al.
(1998)*



- **Kuhr et al. 1981** radio catalogue
- **Brighter than 1 Jy, no known redshift $z < 0.4$, south of declination 5 degrees.**
- Two groups:
 - **Optically faint** (R-band magnitude > 20 mag)
 - **Mid-infrared selected** (WISE) to be dusty

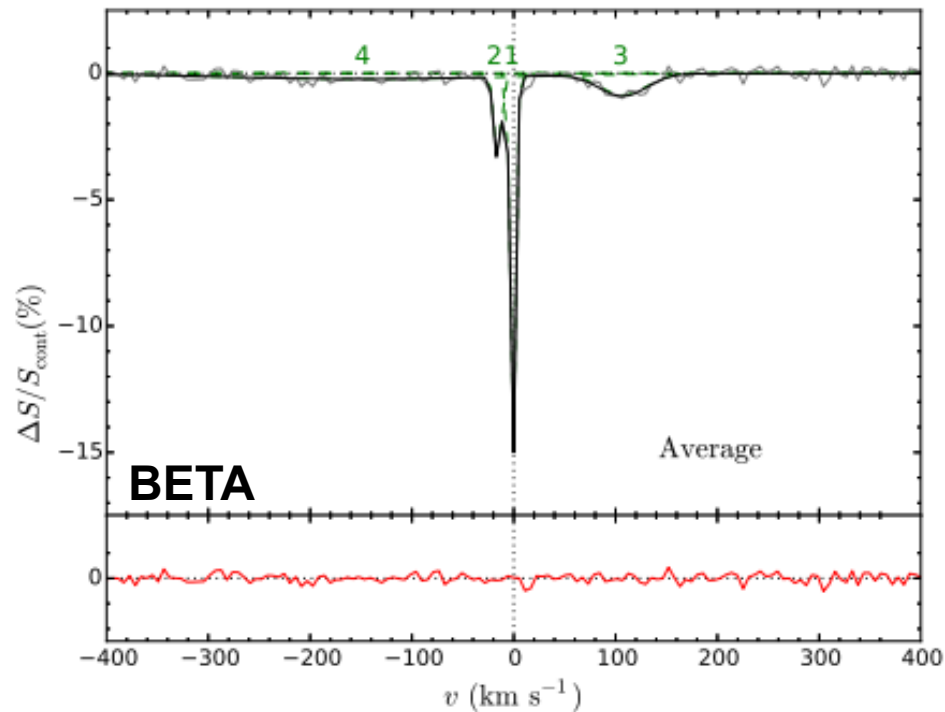
	Optically Faint	Mid-Infrared Selected
Number	31	15
Detections	3	0

Overlap: 7



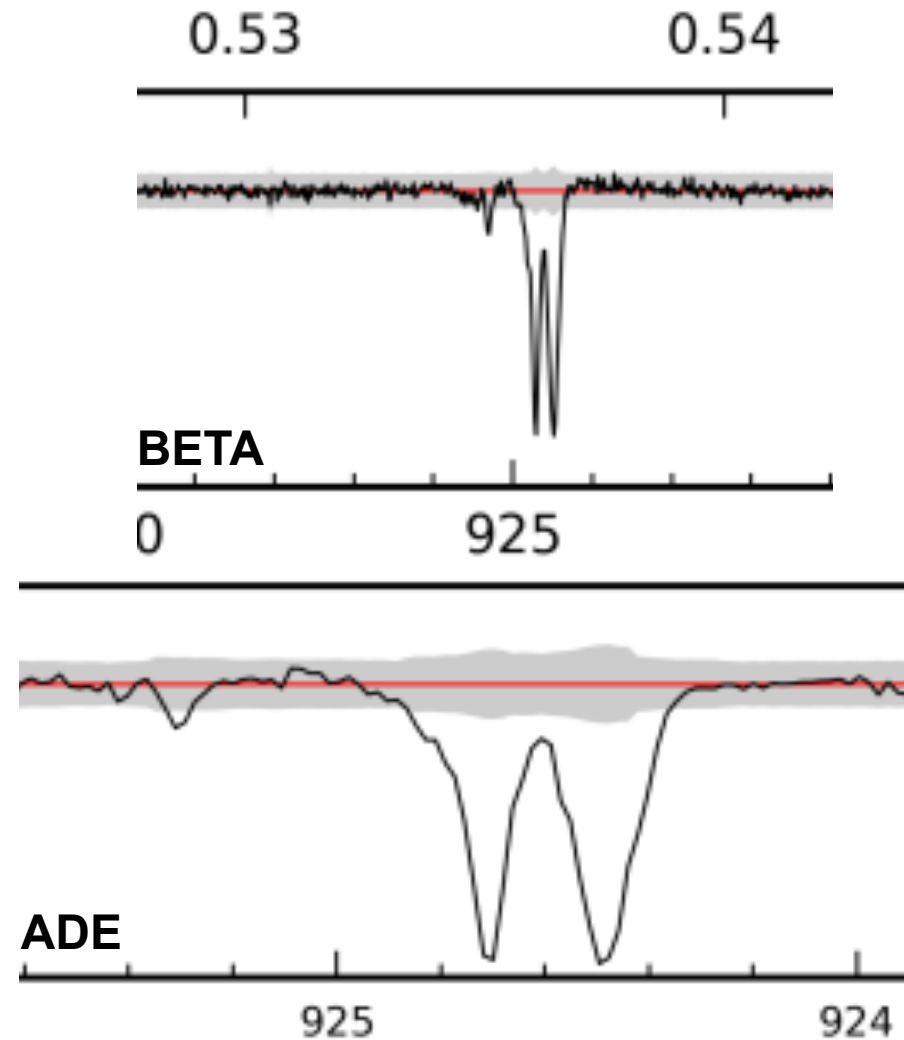
PKS 1740-517

Allison et al. 2015, MNRAS



PKS 1829-718

Optical magnitude > 23 mag





- These detections are within Giga-Hertz Peaked Spectrum (GPS) sources.
- Modelling required to understand gas kinematics.

Includes preliminary MWA GLEAM data. Courtesy of Joseph Callingham.

