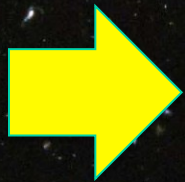


# ADVENTURES IN AGN-LAND

Most massive galaxies are formed by  $z=2$ , hence rapid star-formation must have occurred before that epoch, plus MBH build-up!



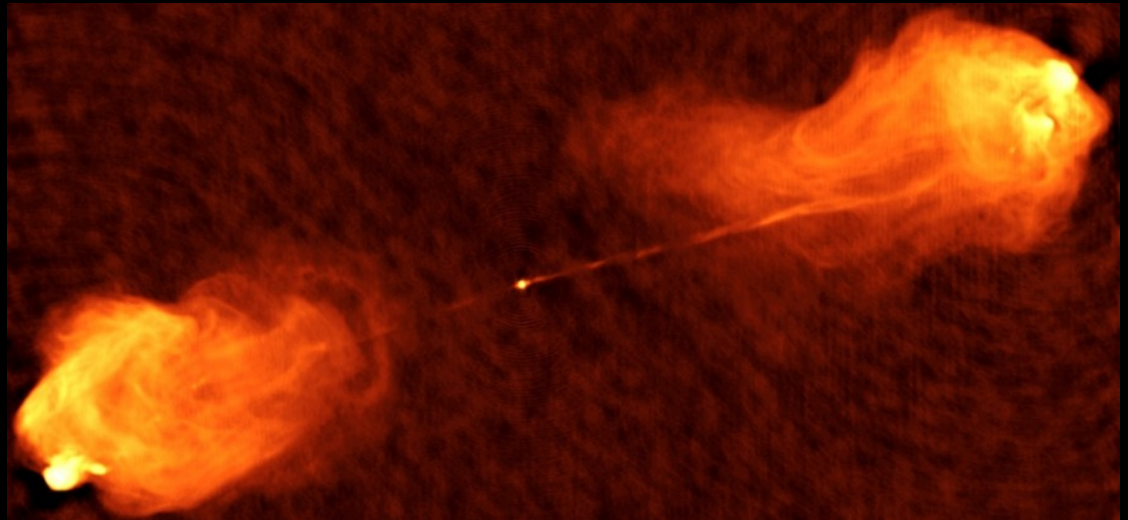
Investigate the starburst – AGN symbiosis in the most massive galaxies, the hosts of radio-loud AGN: subject of several Herschel programs (GT1 and OT1).

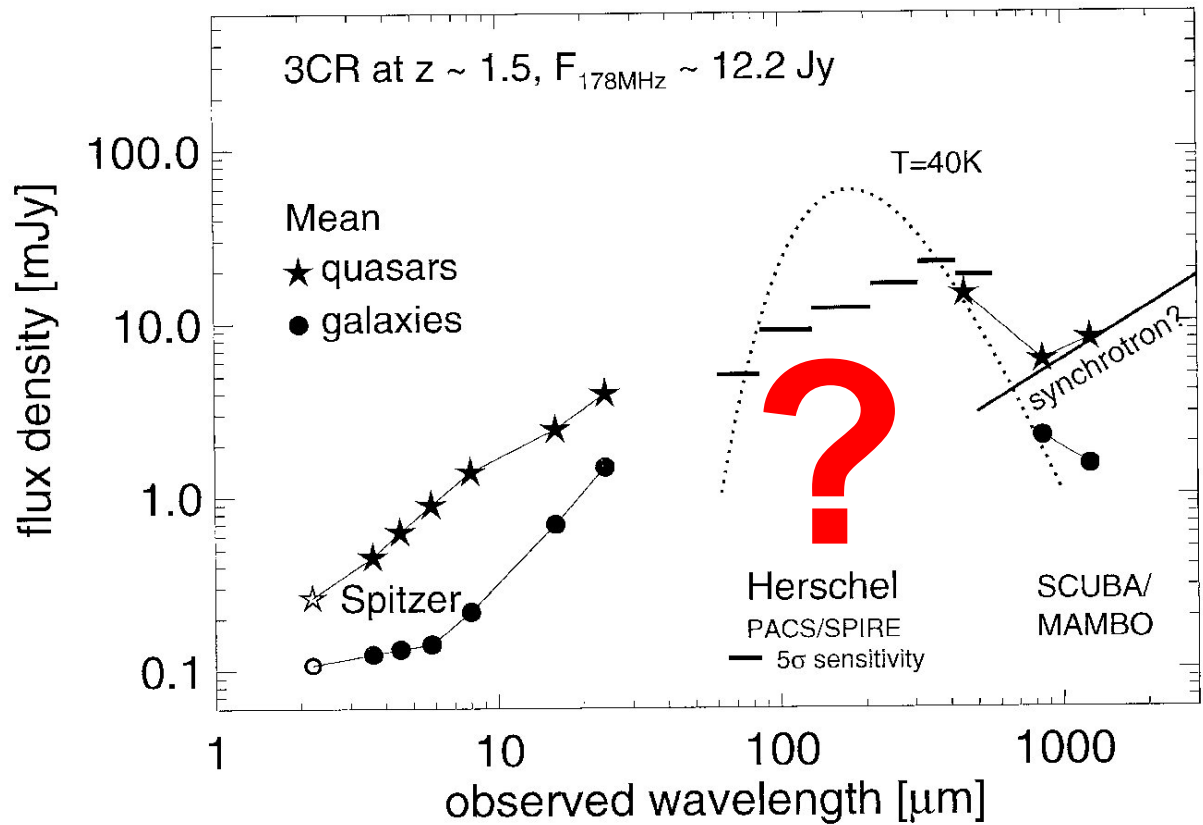
Progress report, by Peter Barthel, with Martin Haas, Christian Leipski, Belinda Wilkes, et al.

## In the works:

Herschel 70, 160, 250, 350 and 500 $\mu$ m photometry, of:

- all 3C QSRs and RGs having  $z > 1$  (PDB+)
- representative 4C QSRs and RGs, up to  $z = 3.5$  (PDB+)
- remaining 3C (after Spitzer) having  $0.5 < z < 1$  (Haas+)
- representative 4C, 6C, MRC, .. RGs up to  $z = 5$  (Seymour+)
- Cygnus A, incl. FIR spectroscopy (Edge+)

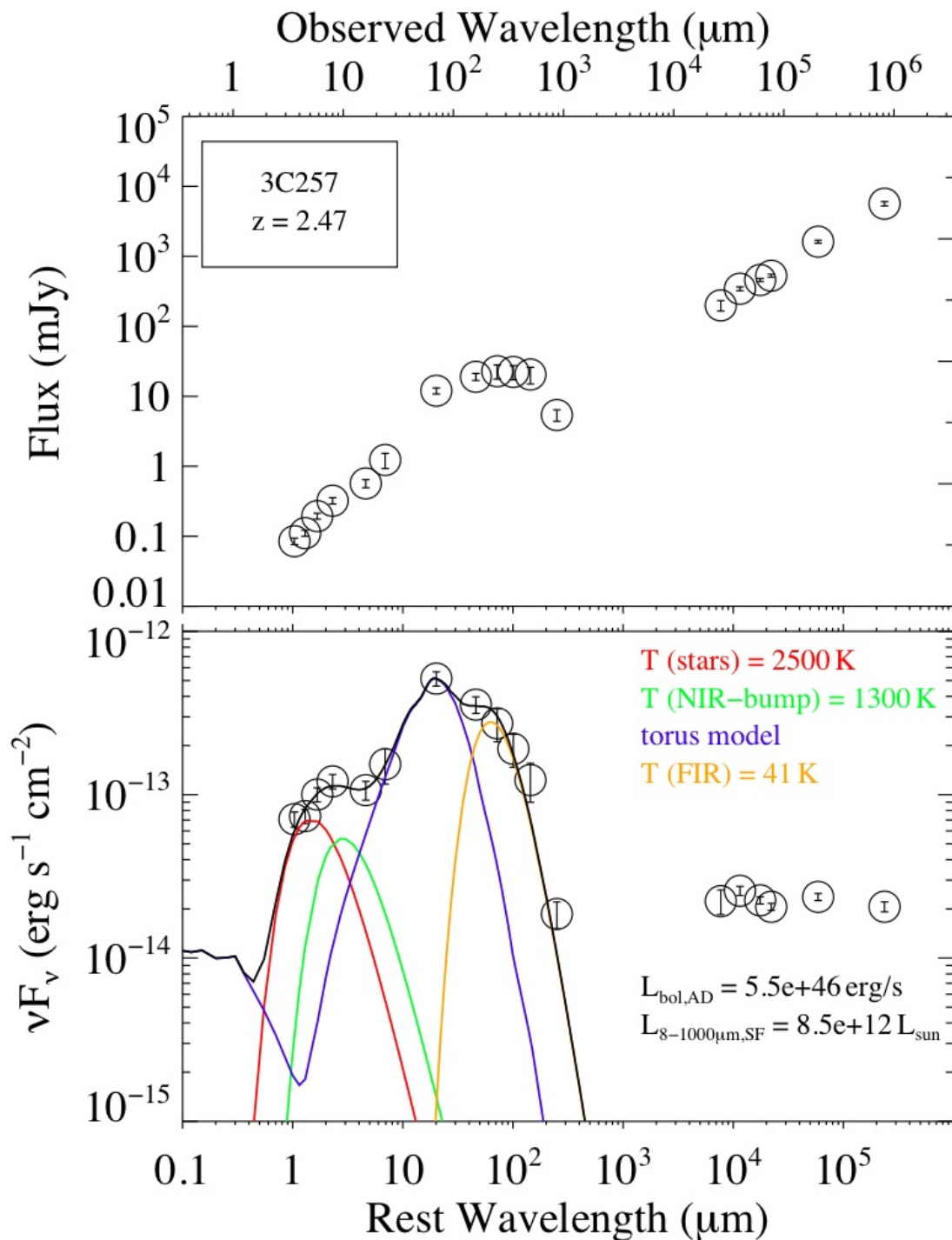




(Spitzer and  
 SCUBA/MAMBO  
 data are in hand)

**Goal of the 3C/4C program, using the PACS and SPIRE instruments: assess the FIR SED properties of radio-loud high redshift objects re. the starburst-AGN symbiosis and as unification test**





**Very first result:  
prodigious star-  
formation in several  
high z 3C radio  
galaxies.**

**Following earlier  
indications of a high  
SFR, from 850 $\mu\text{m}$  and  
350 $\mu\text{m}$  observations,  
the Herschel data  
permit quantification  
of that SFR.**

**See AGN and star-  
formation AT WORK!**



**William H. himself is pleased,**

**and I thank you for your attention.**

