## **Simulated Blazar Surveys**

(An very quick update)

#### P. Giommi

...and a comment of multi-wavelength observations

### Software for blazar survey simulations Main properties and parameters

•Starts from a radio Luminosity function + Cosmological evolution

- Monte Carlo simulation of redshift and radio luminosity

•Radio luminosity of each source is extrapolated to other energy bands (micro-wave, optical, X-ray, gamma-ray) based on SSC model + and randomized based on observed distributions.

•Gamma-ray flux simulated taking into account of duty cycle and GRB constraints (see Giommi et al. 2005 A&A in press, astro-ph/0508034)

•Sources are accepted above a set of flux limits (radio, opt, X-ray etc.) that can be a function of the position in the sky

•Results are written to a DBMS or to a FITS file

#### **Recent Improvements**

- Inclusion of  $\Omega_{\rm M}$   $\Omega_{\Lambda}$  cosmology
- Red-shift dependant cosmological evolution for the case of FSRQs.

# Still to do

•New radio luminosity function from DXRBS survey

(Padovani, Giommi, Landt and Perlman, To be submitted in Feb 2006)

- •Luminosity-dependant cosmological evolution
- •Complete comparison with major blazar surveys (e.g. WMAP, 1/4 Jy, EMSS, DXRBS, EGRET etc.)

1/17/06

# Simulation of EGRET detected blazars (redhisft distribution of FSRQ)



1/17/06

#### Multi-wavelength observations of 3C 454.3

