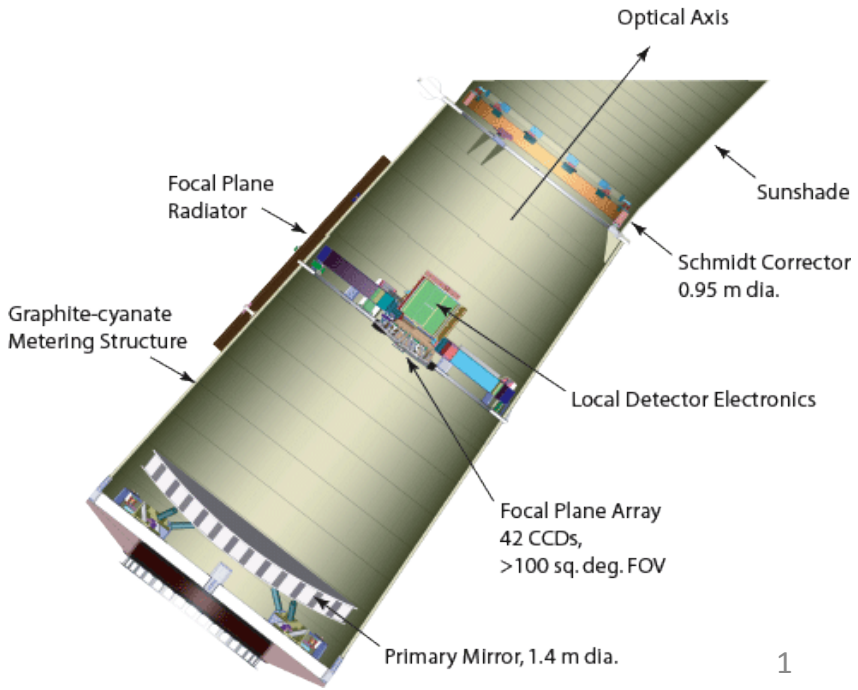
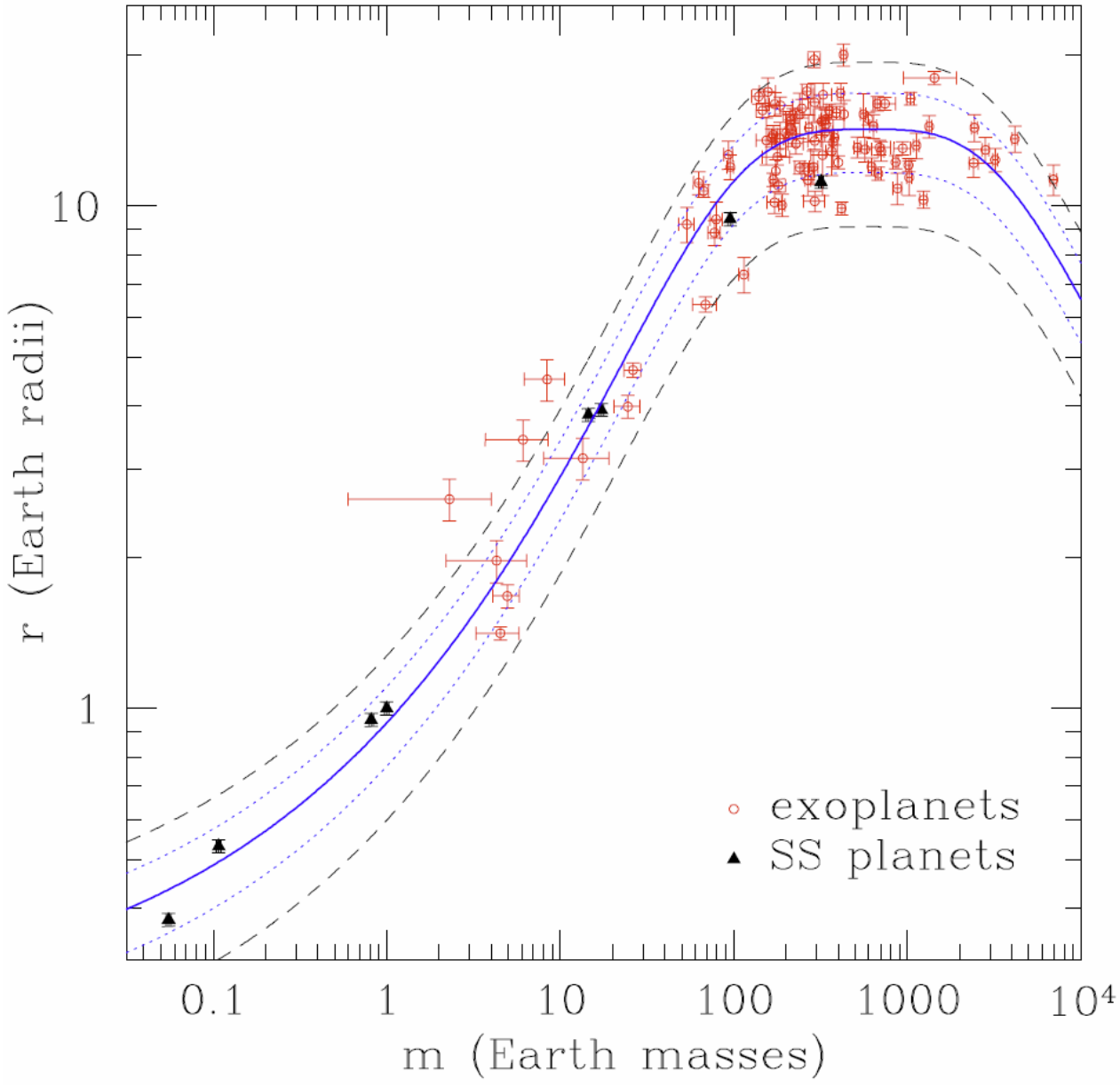
Terrestrial, Habitable-Zone Exoplanet Frequency from Kepler

Wesley A. Traub
Jet Propulsion Laboratory,
California Institute of Technology

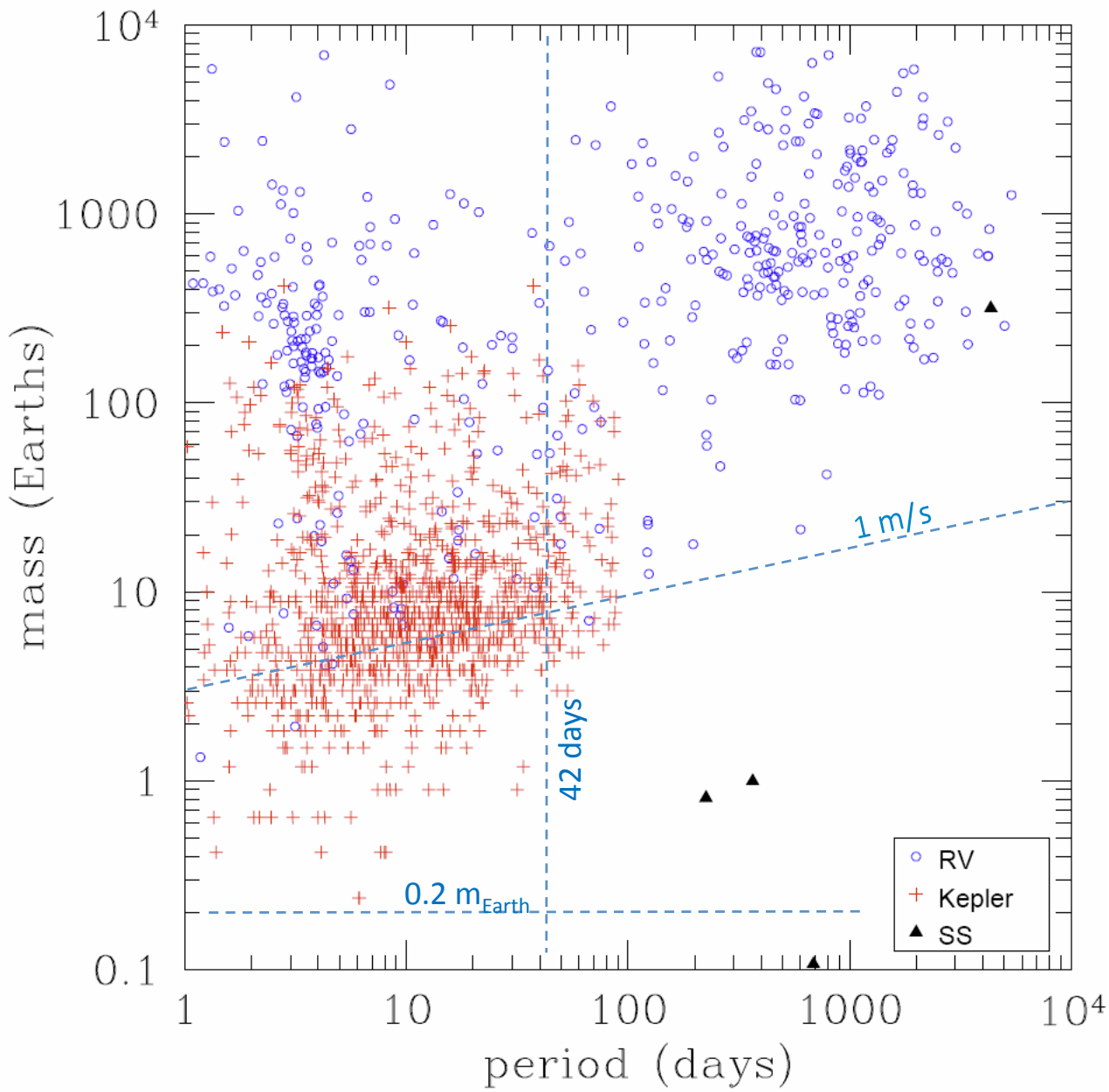
Joseph Fourier University
23 November 2011



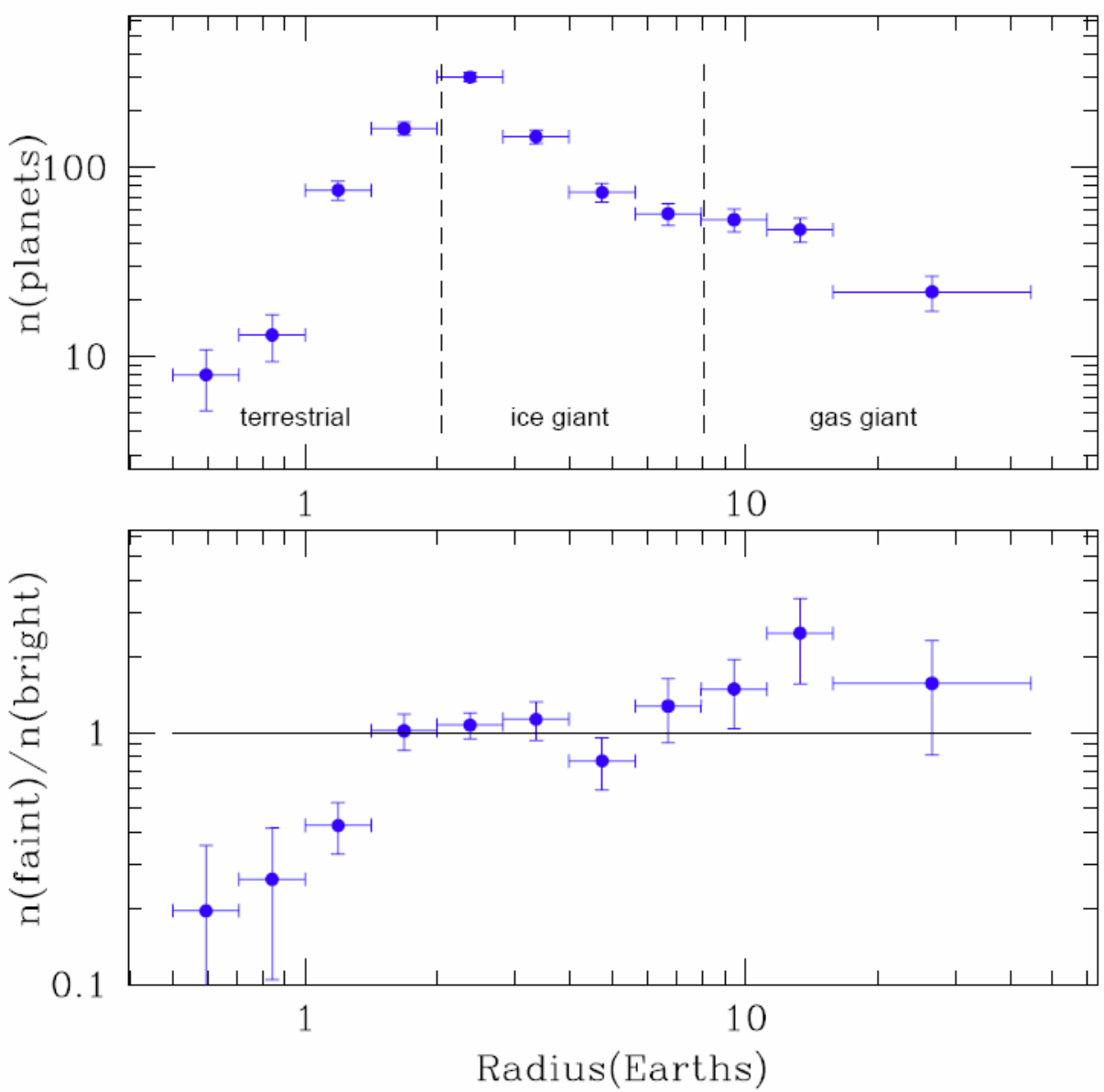
Radius vs mass from transits+RV



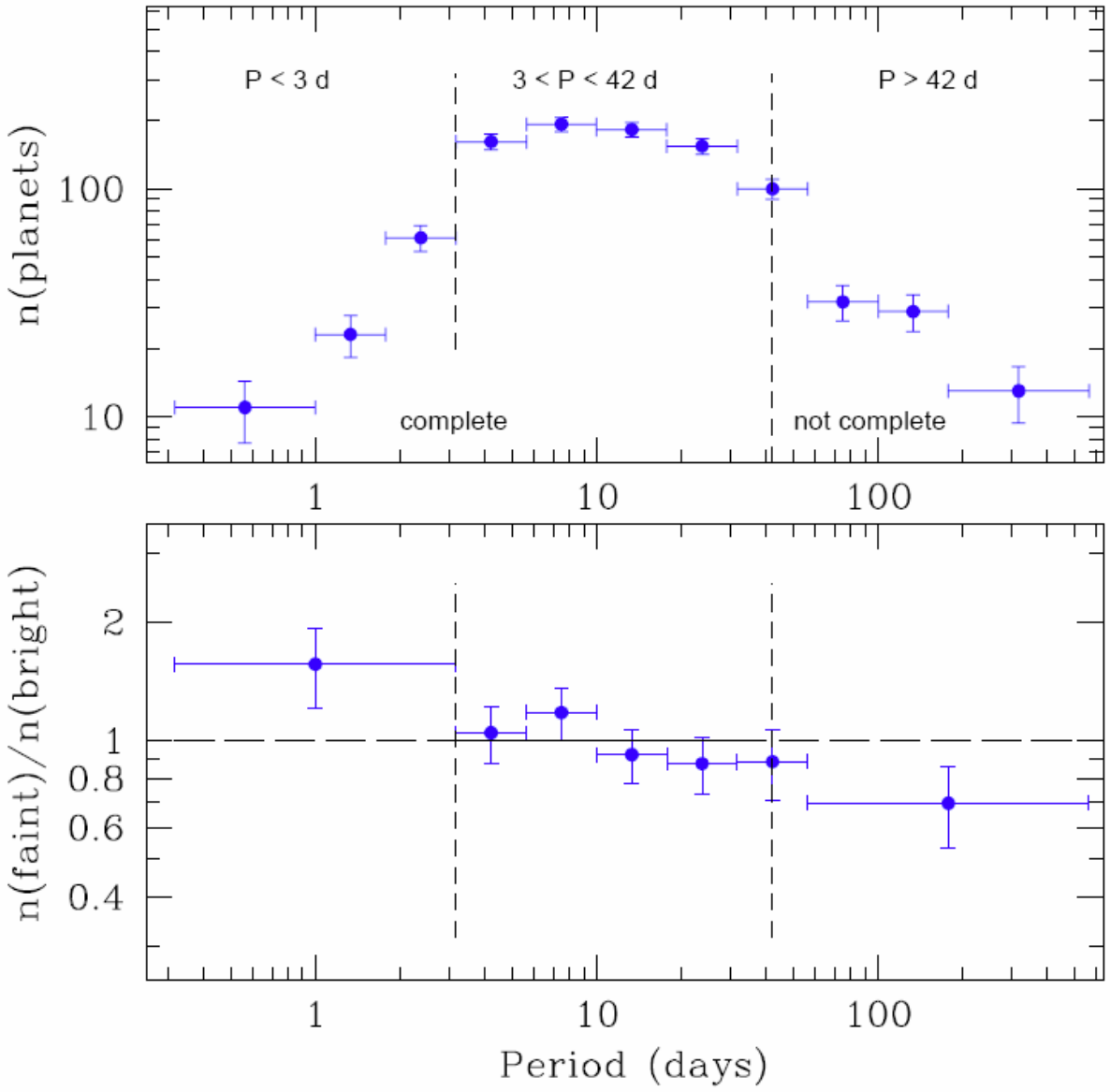
Mass *vs* period from RV & Kepler



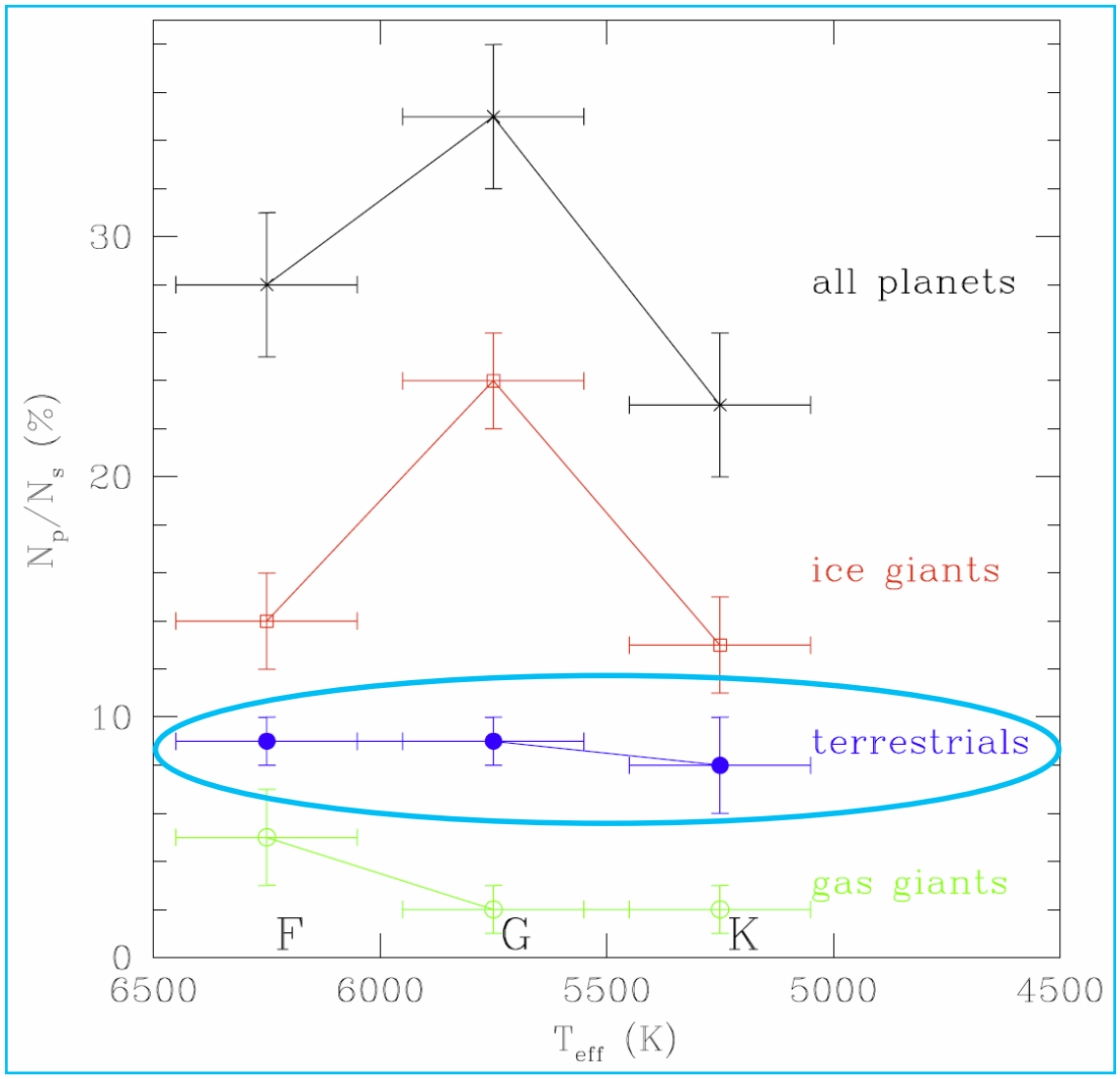
No. of planets *vs* radius, in sample



No. of planets *vs* period, in sample



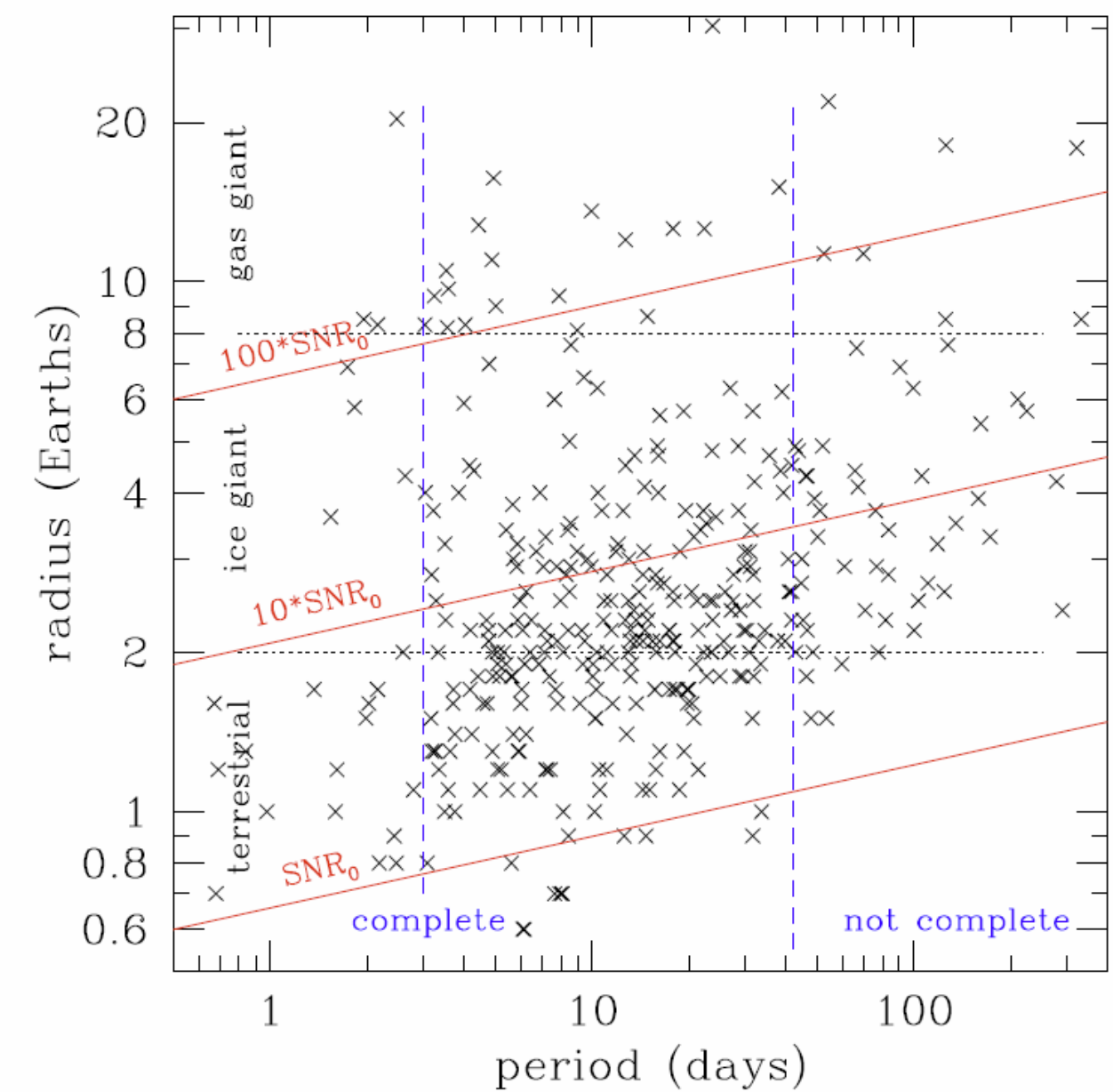
Planet types *vs* star **spectral types** in population



SpTy	$\frac{N_p(terr)}{N_s}$ (%)	$\frac{N_p(ice)}{N_s}$ (%)	$\frac{N_p(gas)}{N_s}$ (%)	$\frac{N_p(all)}{N_s}$ (%)
F	9 ± 1	14 ± 2	5 ± 2	28 ± 3
G	9 ± 1	24 ± 2	2 ± 1	35 ± 3
K	8 ± 2	13 ± 2	2 ± 1	23 ± 3
FGK	9 ± 1	18 ± 1	3 ± 1	29 ± 2

Close-in (P < 42 days), terrestrial-size planets are found around about 9% of each of F, G, K stars.

No. of planets *vs* radius & period, in sample



No. of planets *vs* period, in population