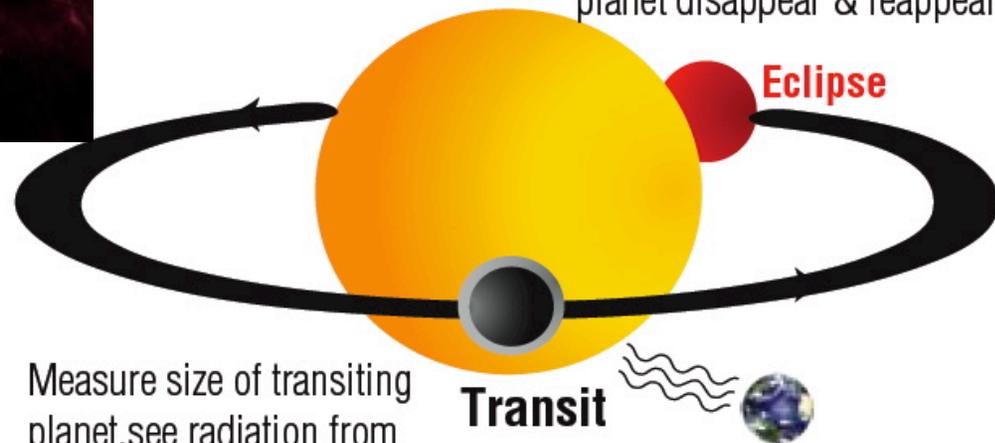
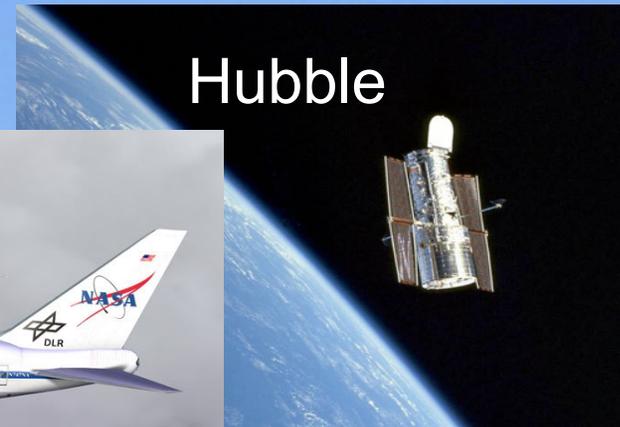
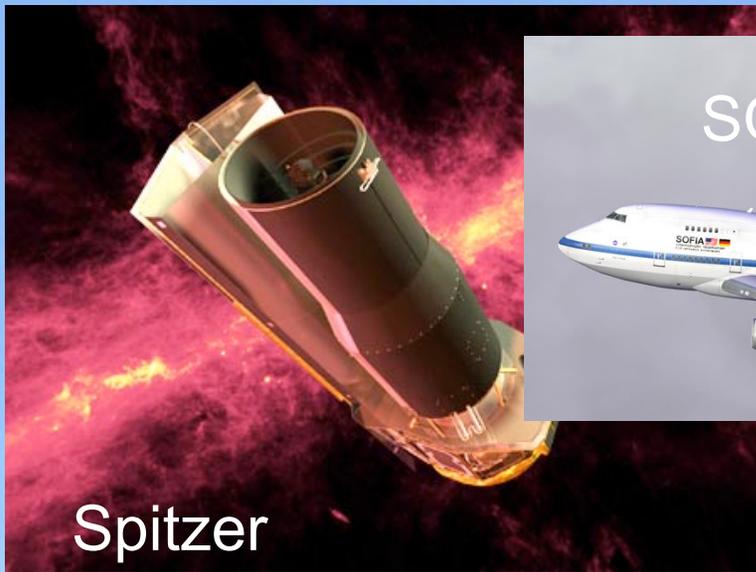


Research opportunities in transiting exoplanets

Drake Deming
Nov 22, 2010



See thermal radiation from planet disappear & reappear

Measure size of transiting planet, see radiation from star transmitted through the planet's atmosphere

Transit

Gravitational tug of unseen planets alters transit times

TRA0009

Why research extrasolar planets in Astr 695?



Collaborators:

Heather Knutson, Caltech

Dave Charbonneau, Harvard

Joe Harrington, UCF

Sara Seager, MIT

Exoplanets are interesting

Data are available

Hot field, good job prospects

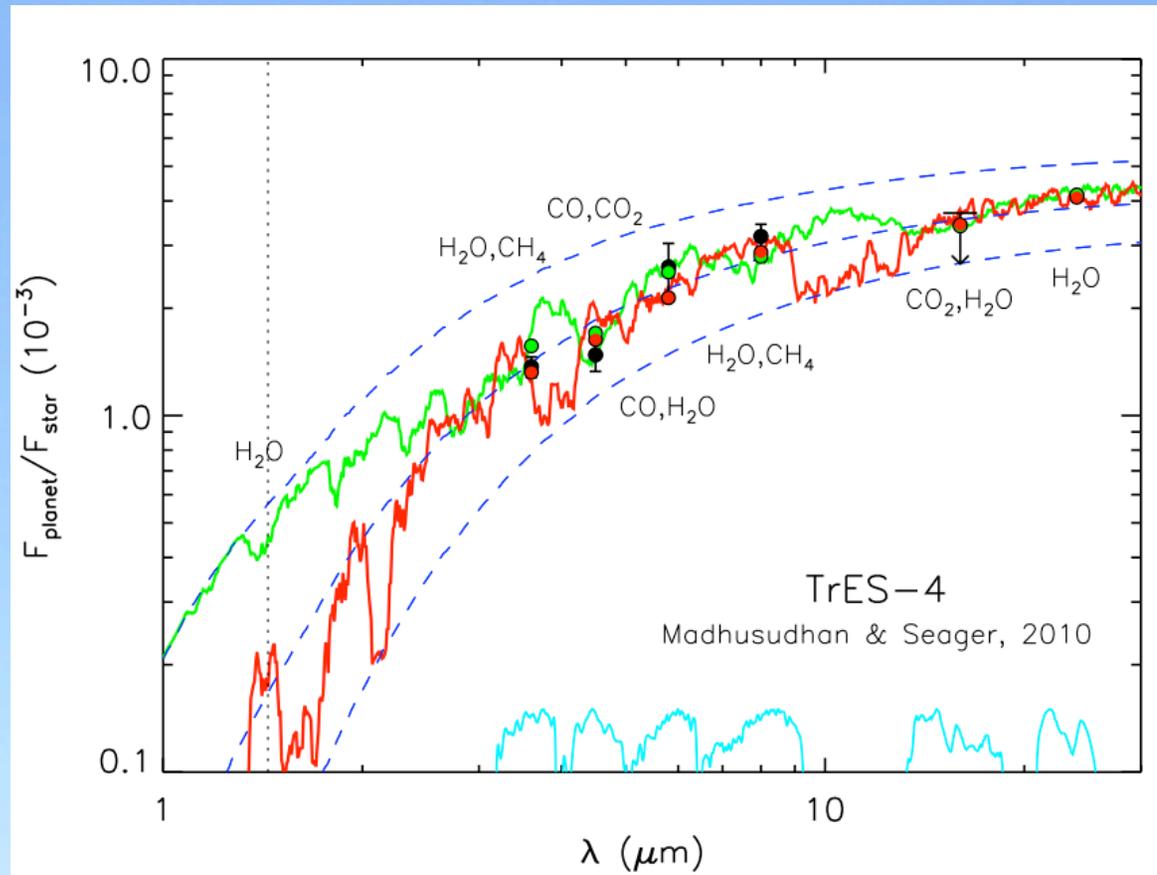
Opportunity to participate in an observing run

I'm easy to work with...

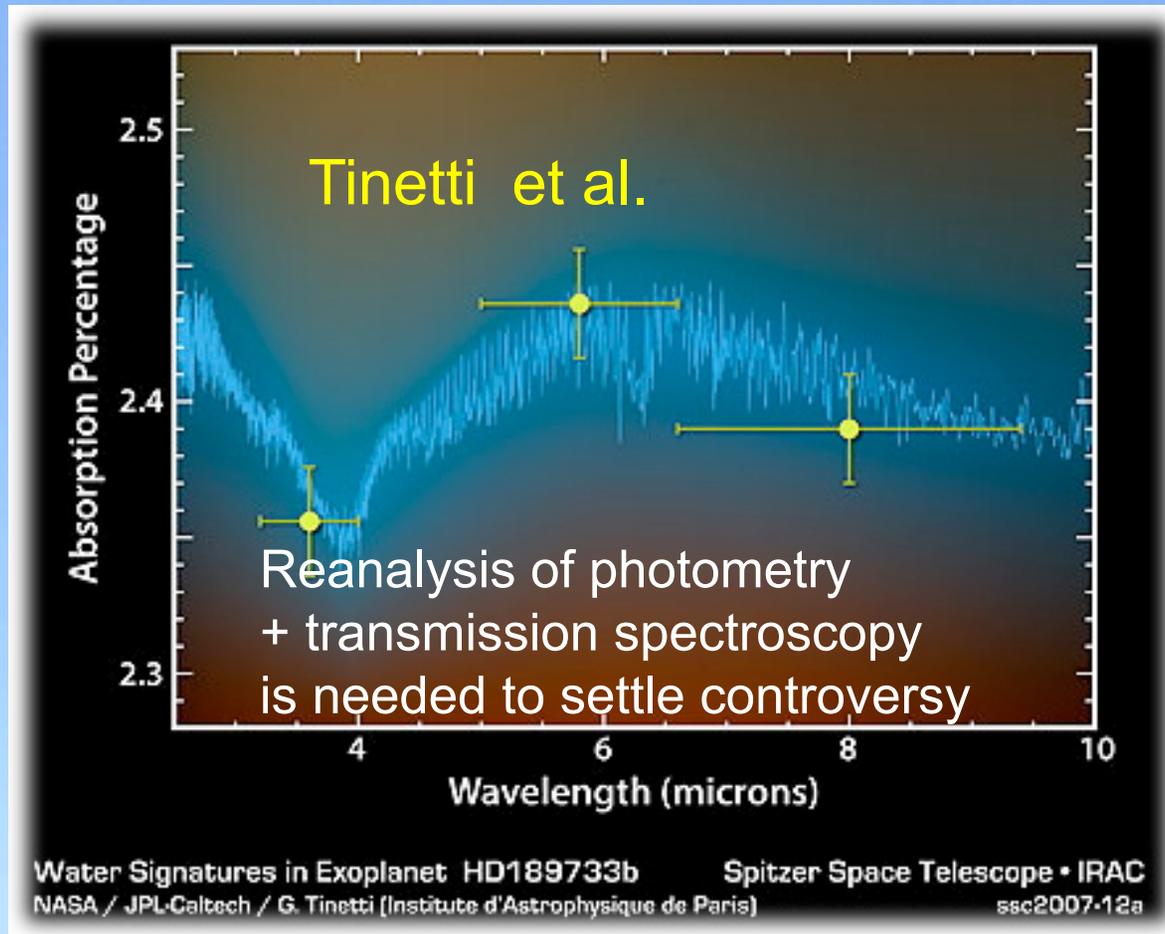
but very publication-focused

Specific examples of possible projects

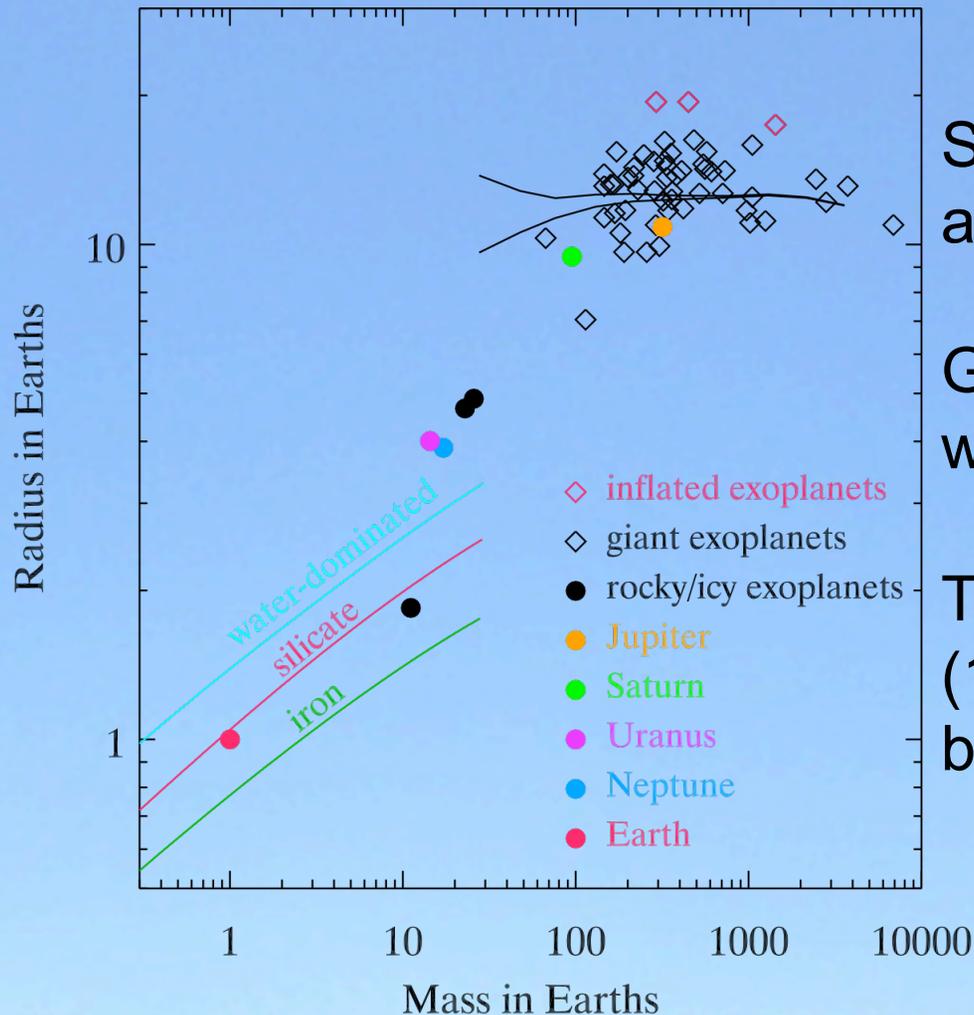
Hubble WFC3 grism spectroscopy of water in emission and transmission



Spitzer transmission spectroscopy of HD 189733b



J-band radii for giant exoplanets



Several giant exoplanets are “too big”

Generally a poor agreement with theory for $R=f(M)$

Transits observed in the J-band (1.2 microns) could produce better observed radii