



# Finding binaries...

- What is the best way to find binary candidates?
  - Emission lines
  - Optical/IR double nuclei
  - Radio, VLBI
- Confirmation?
  - Multiple methods
  - Higher resolution – HST?
- Issues:
  - Clustering
  - Winds and outflows
  - Narrow lines should be dynamically linked to host
  - Jets vs. hot spots

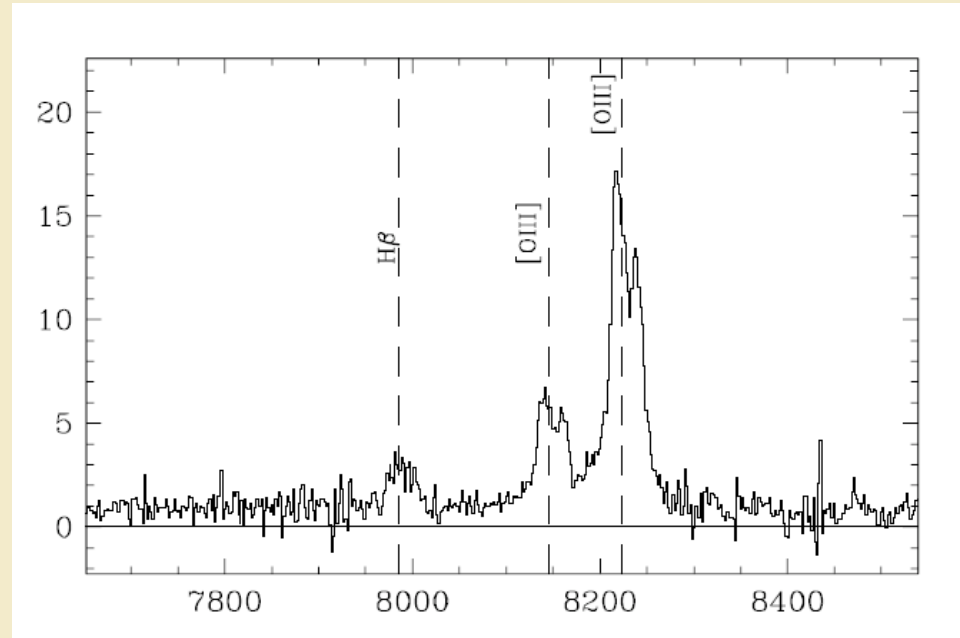
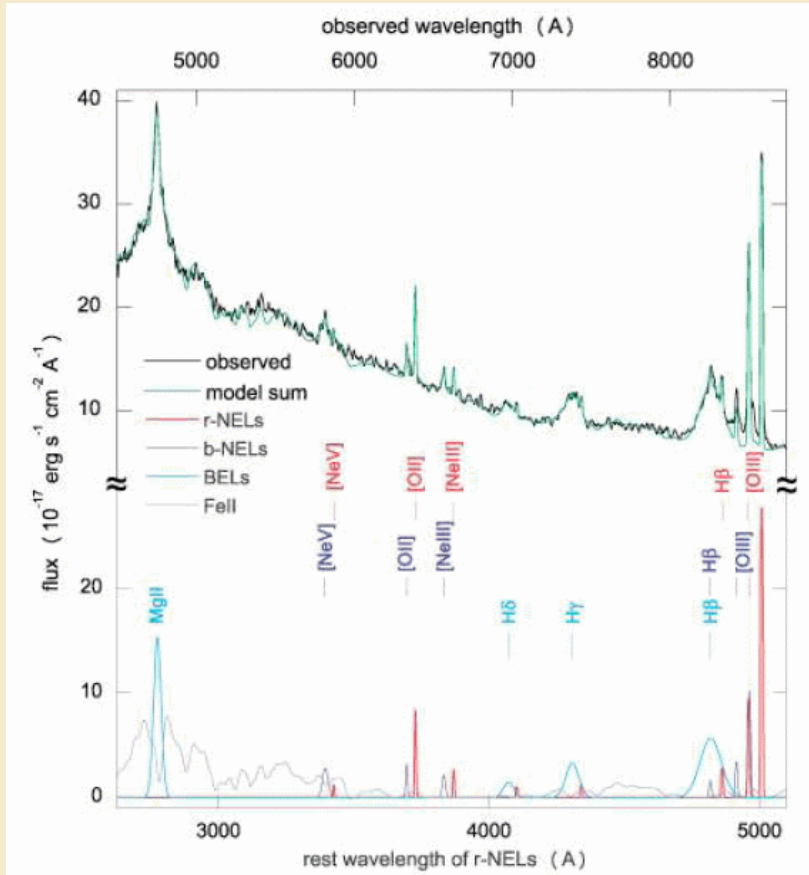


## Emission lines...

- Julie Comerford
- Stephanie Komossa
- Double lines also seen by:
  - Zakamska et al (2003) 5 of 291 (SDSS type 2)
  - Croom et al 5/132 (emission line radio gals)



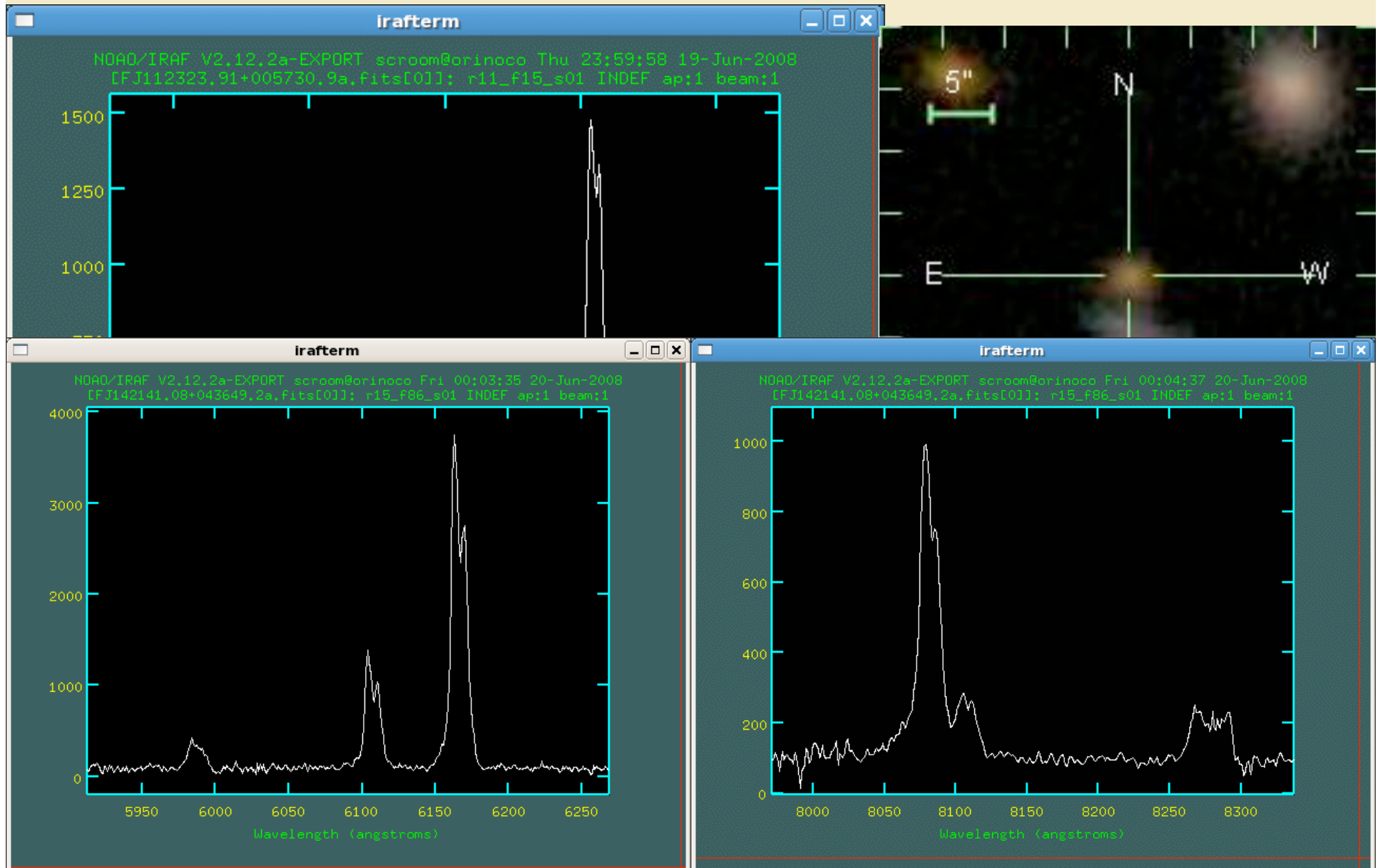
# Double emission lines...



Zakamska et al (2003)

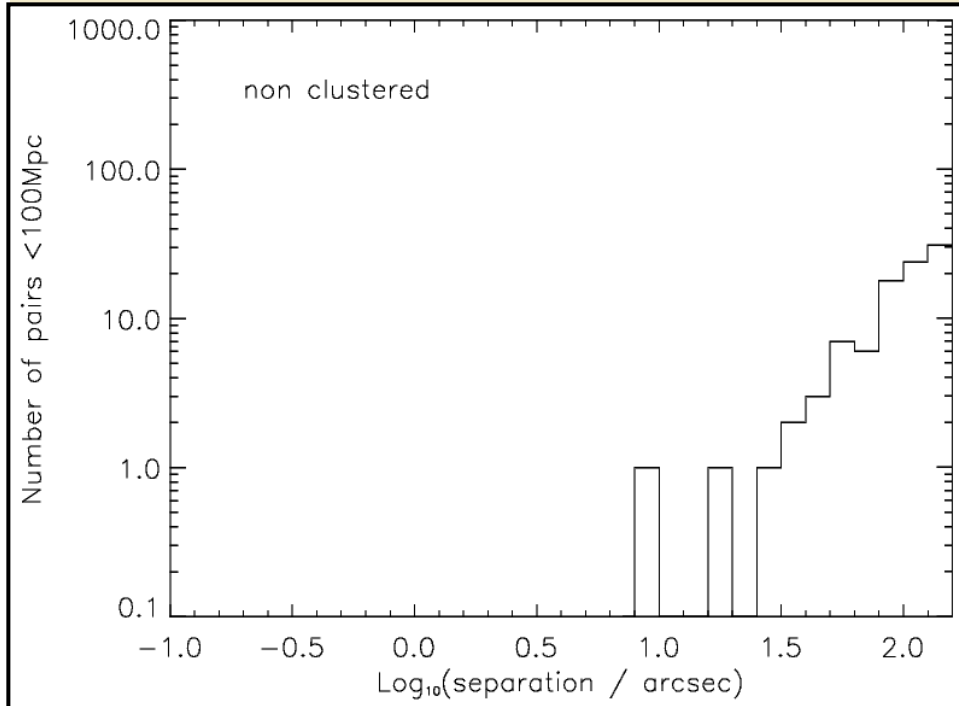


# Double emission lines...



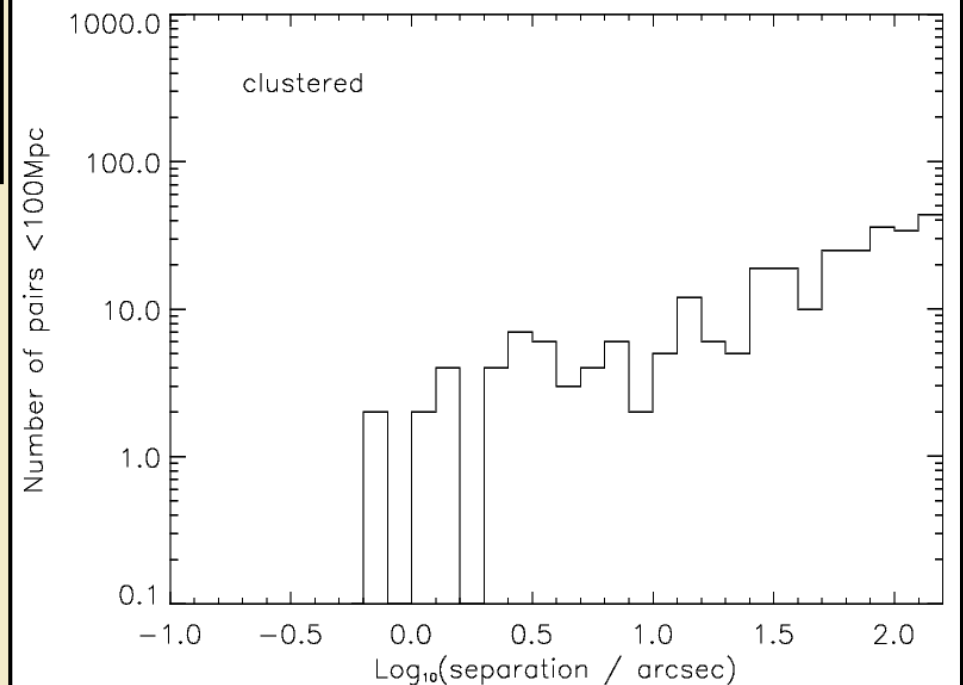


# Clustering



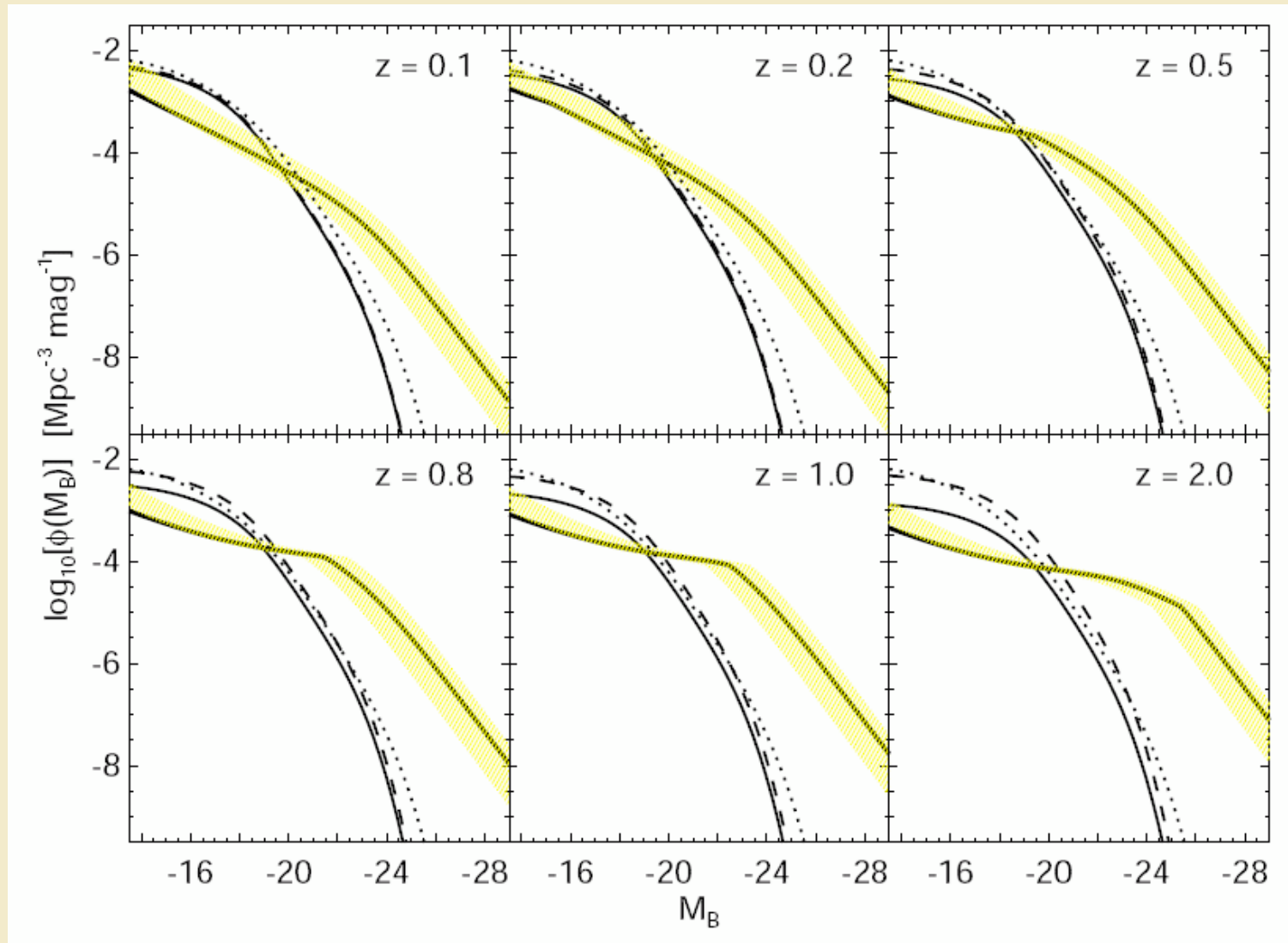
- Number of pairs per 400 sq deg.
- Use measured QSO clustering.

(Matt Jarvis)





# Mergers vs stochastic accretion



Hopkins & Hernquist (2006)