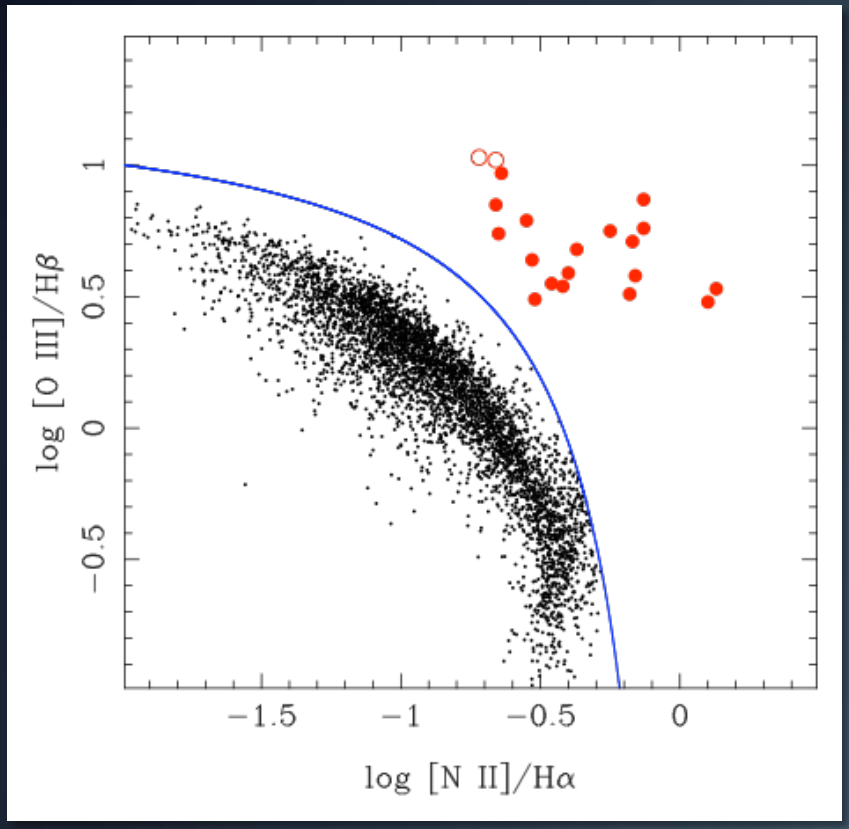
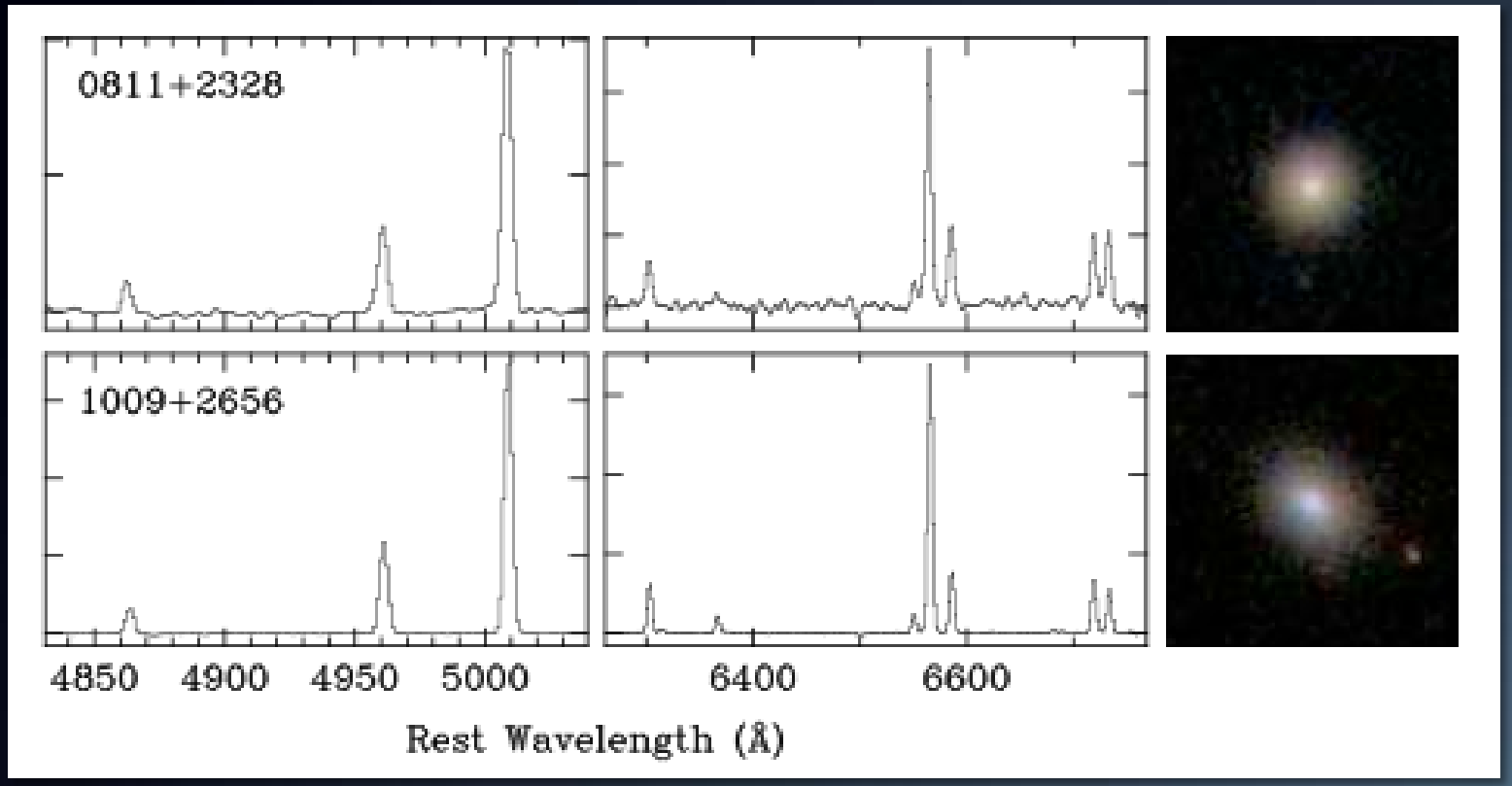
# Searching the full SDSS DR7

- ~ 9600 nuclear spectra within 80 Mpc
- subtract the stellar continuum, look at every one…
- 20 Seyfert galaxies fainter than $M_g = -18.3$, $\log M_* < 10$



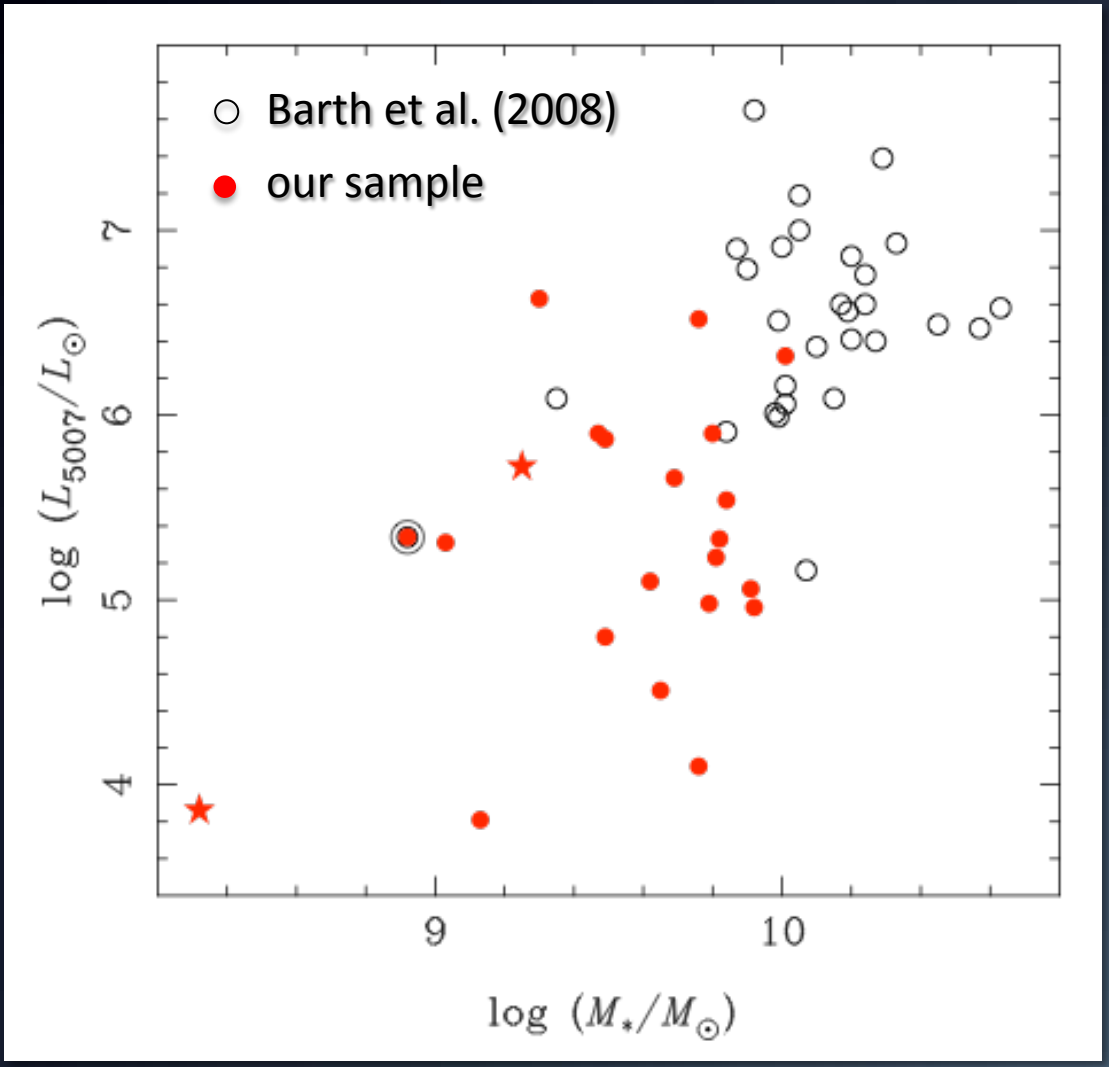
# Some examples:




Both galaxies: $M_g = -17$, $M_* = 10^9\ M_{sun}$

# DR7 results

- Only 4 objects previously identified as AGNs
  - NGC 4395, NGC 4117, J1223+58, J1109+61
- Host galaxies
  - $M_g$ = –16.3 to –18.3
  - $M_* \approx 10^9 – 10^{10}\ M_{sun}$
  - only 2 clear spirals (NGC 4395 and J1109+61)
  - the rest: round blobs/disks with bright stellar nuclei
- Nuclei weak
  - only 2/20 obviously broad-line (type 1) AGNs


Barth et al. (2008)
our sample
log $(L_{5007}/L_{\odot})$
4
5
6
7
9
10
log $(M_*/M_{\odot})$

# Questions

- Is this the right survey approach?
  - seems to extend the range of nuclear/host galaxy properties
  - optical spectroscopy vs. others, e.g. X-rays (Gallo, Reines)
  - how similar are low-mass and classical AGNs?
- What's our policy on LINERs? Composites?
- $M_{BH}$ for narrow-line AGNs in dwarf galaxies?
- What are the environments of IMBH candidates?
- Next steps? $\sigma_*$ for a complete sample?
  Occupation fraction vs. stellar mass?