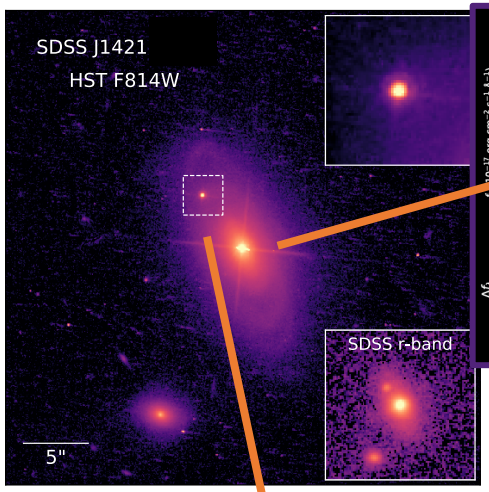
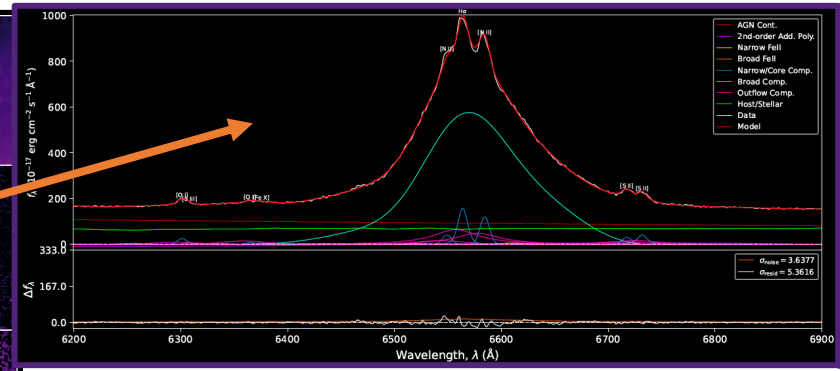
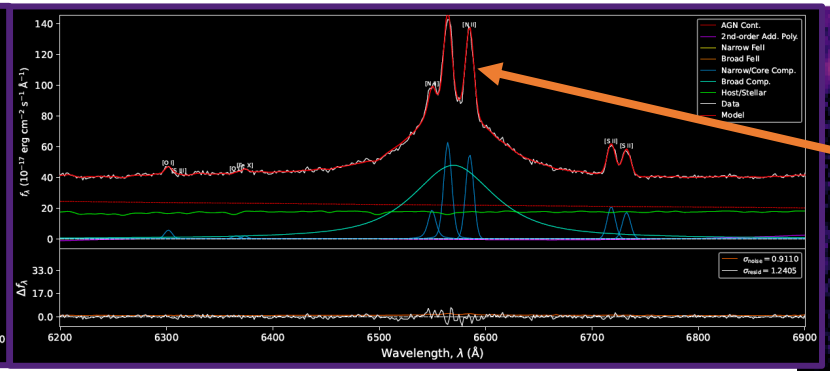
Spotted: Dual Broad Line AGNs in Minor Galaxy Mergers?

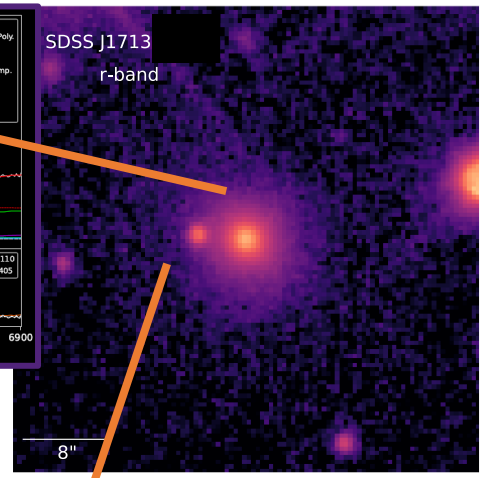
Ryan W. Pfeifle[1,*], Barry Rothberg[2,3], Remington O. Sexton[4], Kimberly Weaver[1], Jenna Cann[1,*], Nathan Secrest[4]

[1]NASA Goddard Space Flight Center [*]NPP Fellow [2]Large Binocular Telescope [3]George Mason University [4]US Naval Observatory

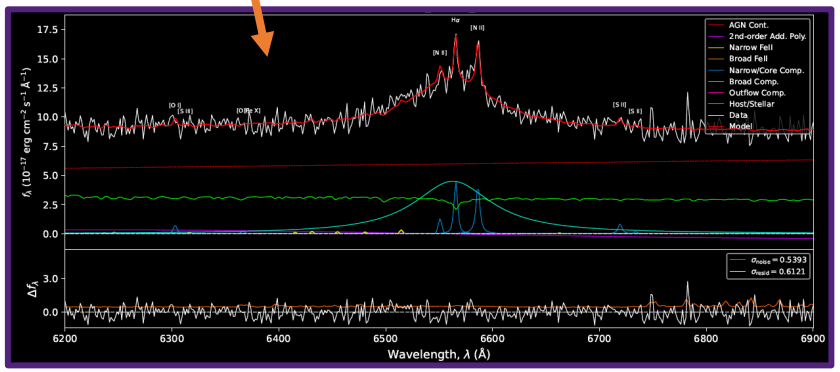








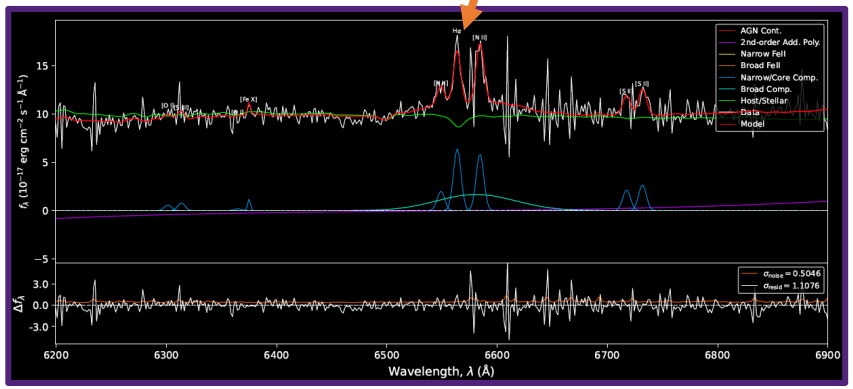
- **SDSS spec-z's for secondary nuclei are *incompatible* with background AGNs.**
- **Lack of foreground z~0 features argues *against* a foreground star.**



SDSS spectra show broad Hα/NII complexes in primary ***and*** secondary nuclei.

DBLR AGN1: 5.2" (7.2 kpc) separation
- 3" and 2" diameter fibers

DBLR AGN2: 4.2" (7.5 kpc) separation
- 3" diameter fibers



See my *XMM/NuSTAR* posters on:

Dual AGNs Bulgeless Galaxies

- Mass estimates indicate these are **1:7** and **1:29** mass ratio mergers!
- FWHM of primary and secondary broad lines are inconsistent, suggesting distinct kinematic regions.
- **Spatially resolved LBT optical spectra for each merger are being reduced now!**
  - **Two competing theories: (1) true dual AGNs or (2) fiber spillover**

ryan.w.pfeifle@nasa.gov