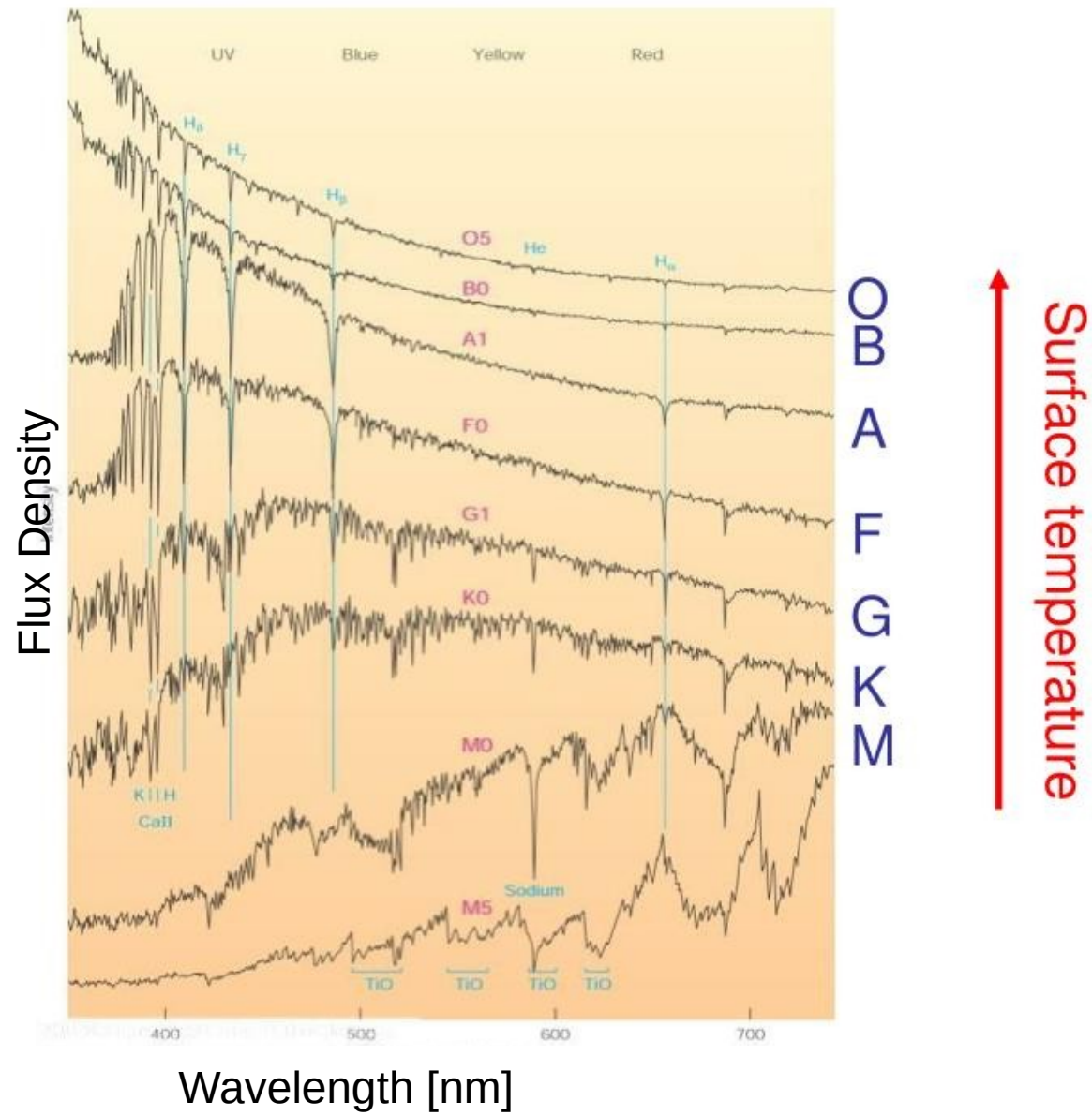


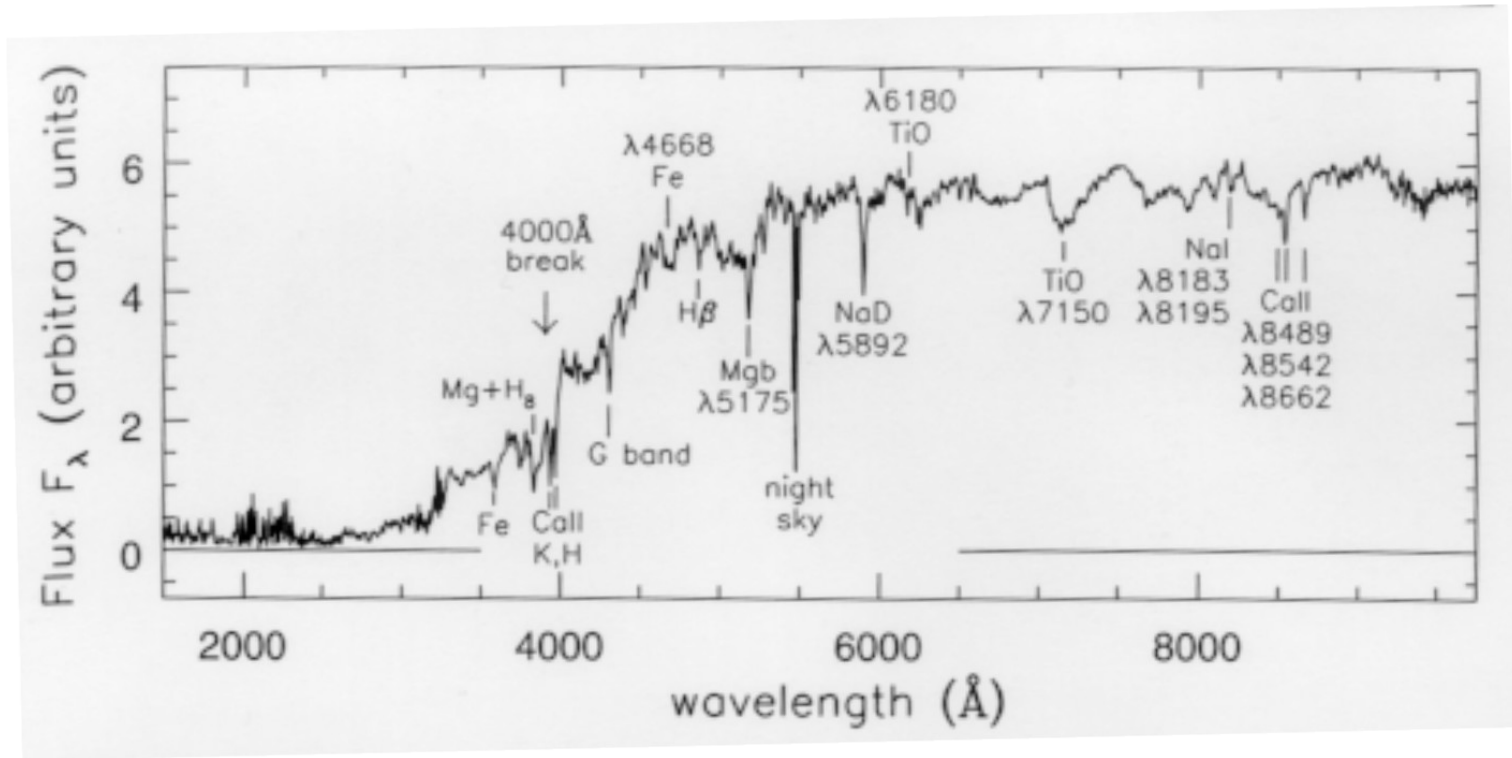
W13L1 – Active Galactic Nuclei

PSet #7: due Monday, April 25

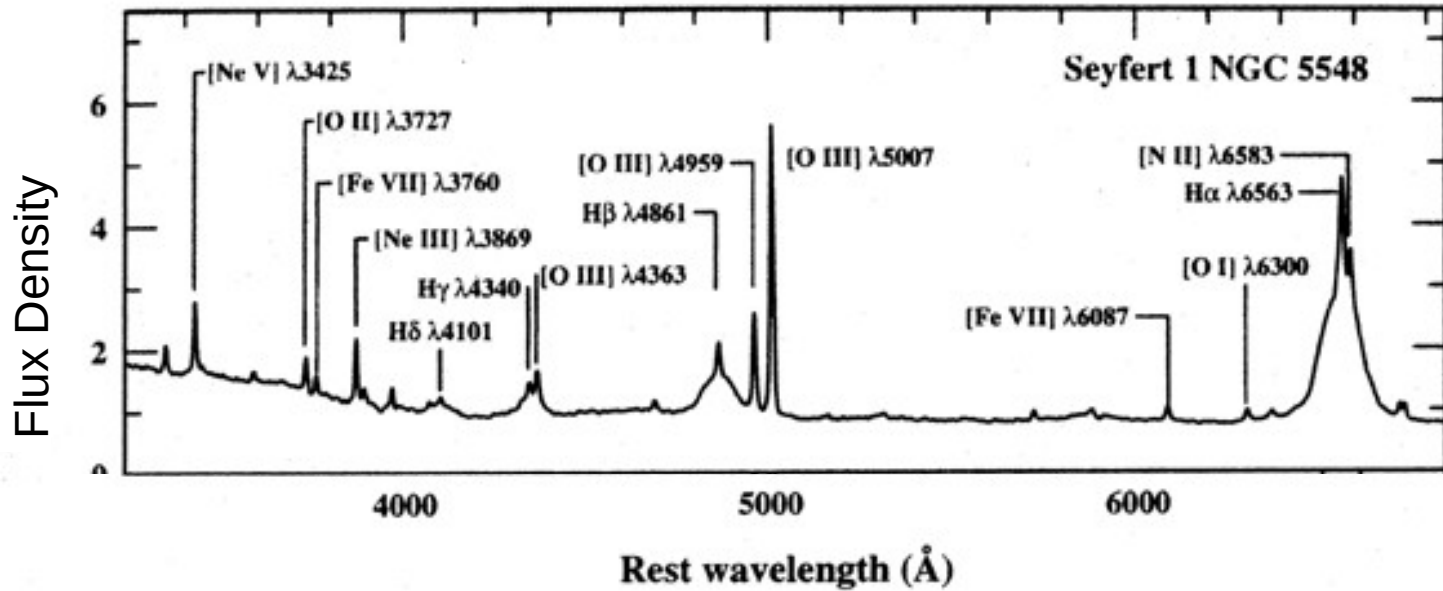
Stellar Spectra:



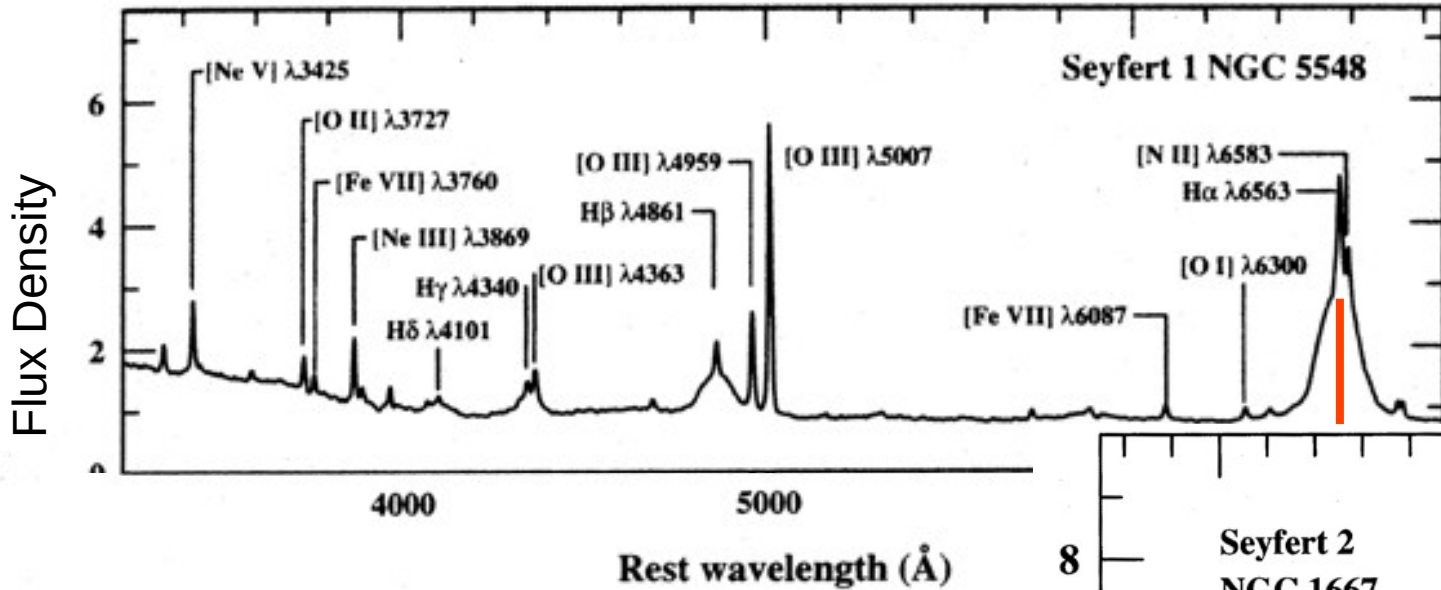
Optical spectrum of a “normal” elliptical galaxy:



<http://burro.case.edu/Academics/Astr222/Galaxies/Elliptical/stellarpops.html>

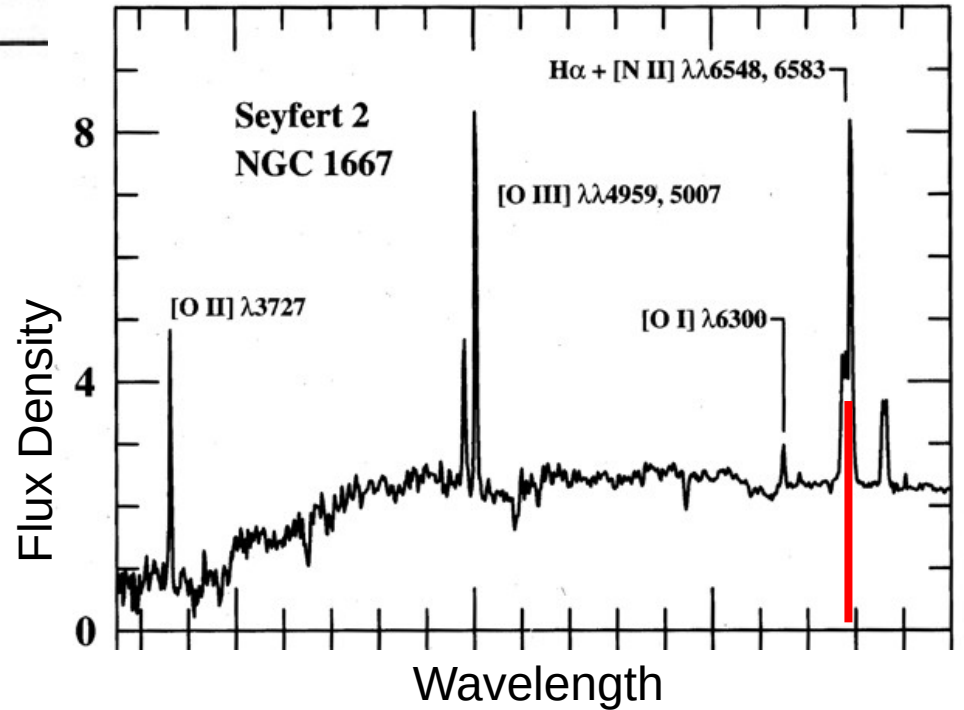


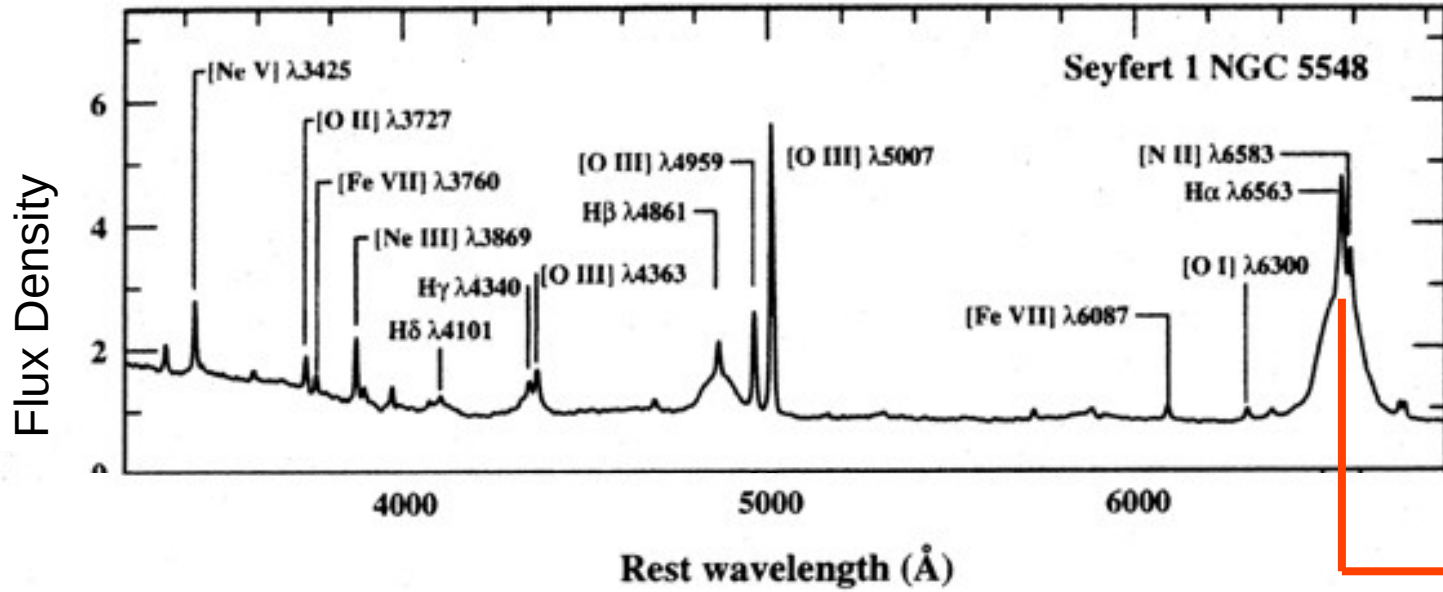
Seyfert I-type AGN:
Very broad emission lines in spectrum



Seyfert I-type AGN:
 Very broad emission lines in spectrum (also has some narrow lines)

Seyfert II-type AGN:
Only narrow emission lines in spectrum





Seyfert I-type AGN:
Very broad emission lines in spectrum

H-alpha line:
Rest wavelength ~656 nm
Width of line: ~30 nm

3C 273: A STAR-LIKE OBJECT WITH LARGE RED-SHIFT

By DR. M. SCHMIDT

Mount Wilson and Palomar Observatories, Carnegie Institution of Washington, California Institute of Technology, Pasadena

THE only objects seen on a 200-in. plate near the positions of the components of the radio source 3C 273 reported by Hazard, Mackey and Shimmins in the preceding article are a star of about thirteenth magnitude and a faint wisp or jet. The jet has a width of 1"-2" and extends away from the star in position angle 43°. It is not visible within 11" from the star and ends abruptly at 20" from the star. The position of the star, kindly furnished by Dr. T. A. Matthews, is R.A.

Table 1. WAVE-LENGTHS AND IDENTIFICATIONS

λ	λ_0	
3239	2798	Mg II
4595	3970	H ϵ
4753	4102	H δ
5032	4340	H γ
5200-5415		
5632	4861	H β
5792	5007	[O III]
6005-6190		
6400-6510		

(observed
wavelengths
of spectral
lines, in 10^{-10} m)

(reported
identification and
rest-wavelengths of
spectral lines)

“Unified Torus” model of AGN:

