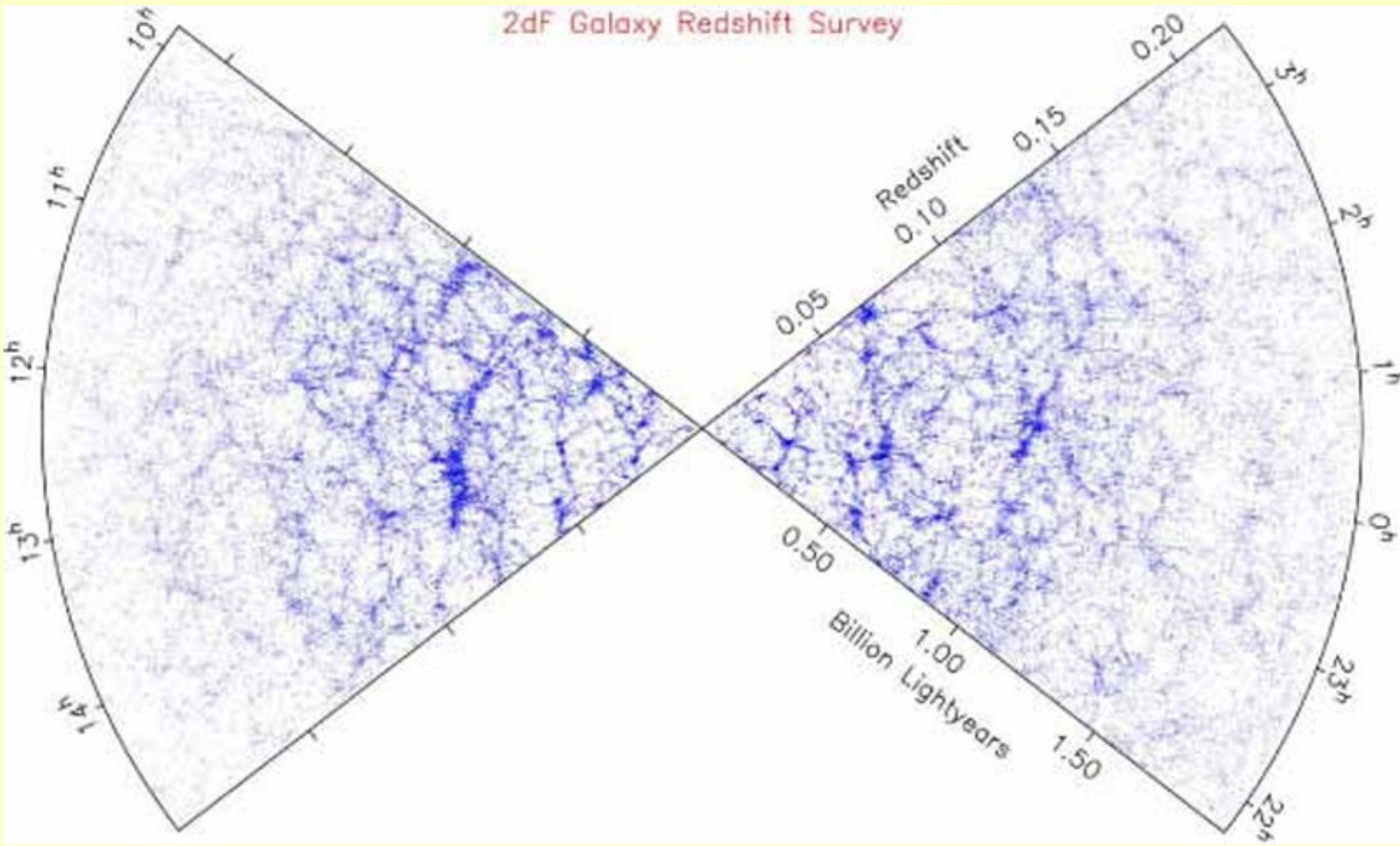
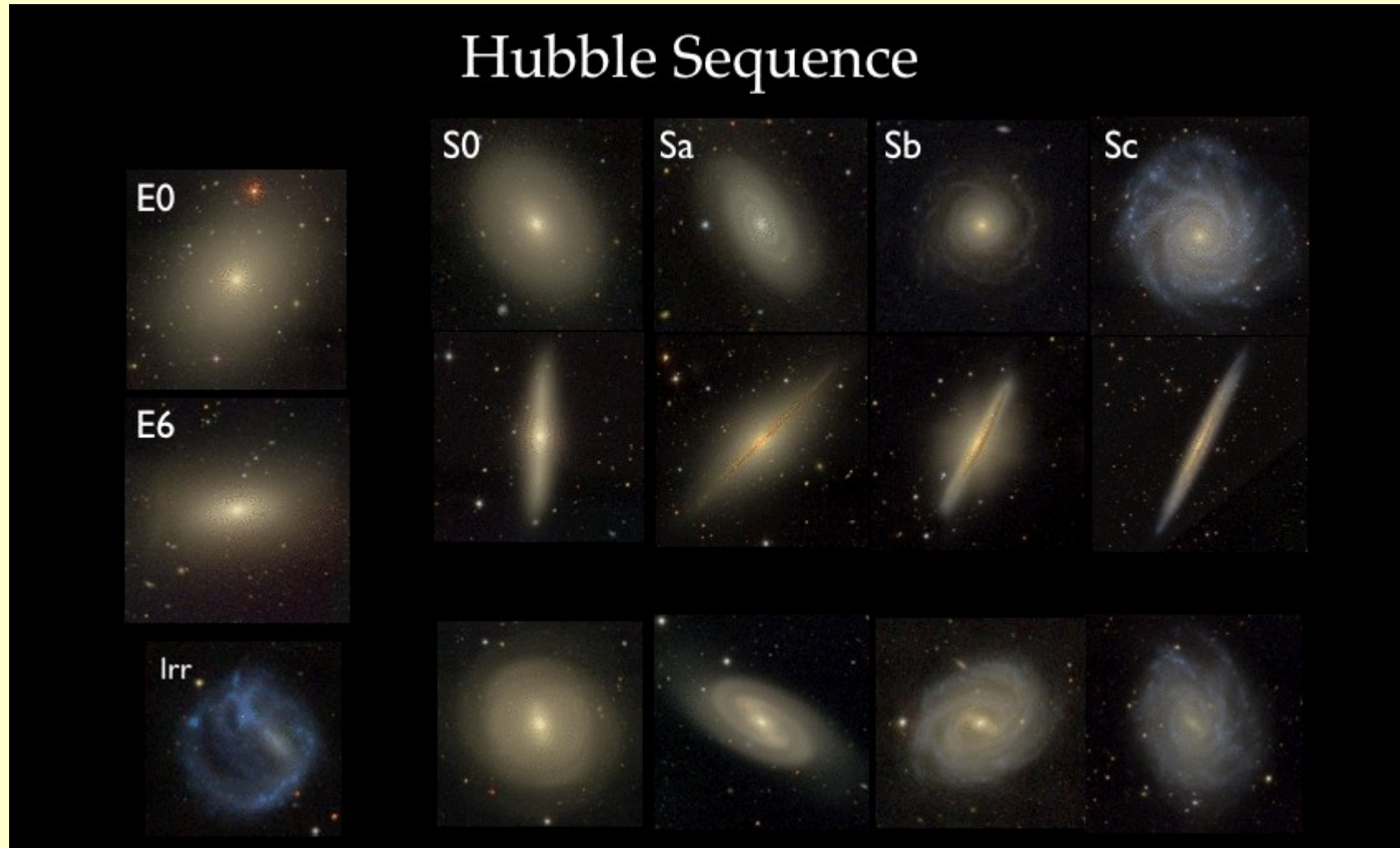


Galaxy distribution – Colless 2001



Galaxies differ for their morphologies



Credit to NASA-HST

Merging Galaxies and Environmental Effects

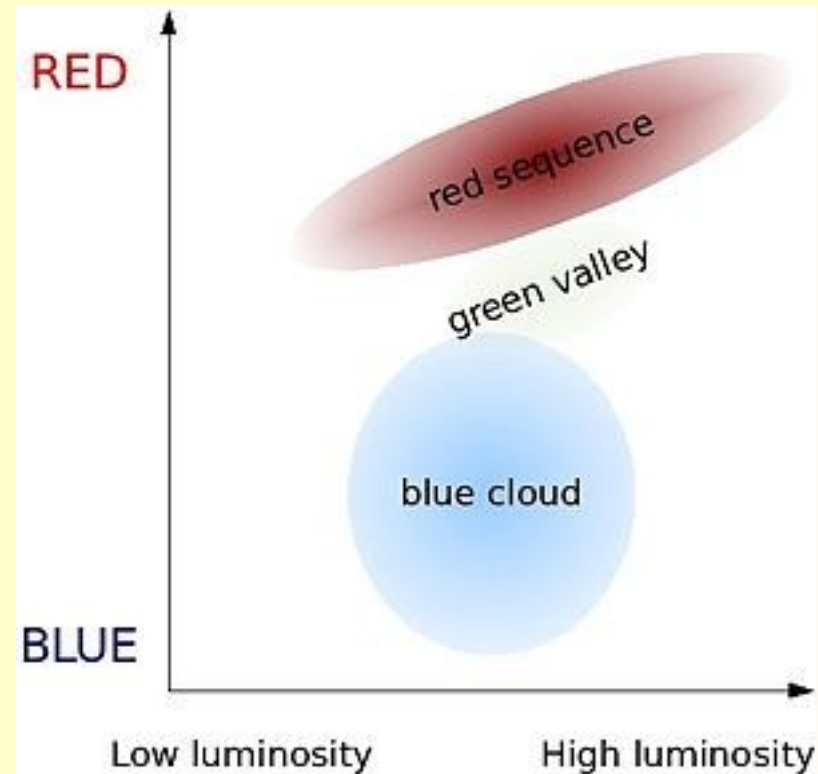
Credit NASA – Martin – here you can see tails of the tidal interaction

Merger: 2 galaxies \rightarrow 1 galaxy



Galaxies differ for their colors

Color-magnitude diagram



A mock-up of the galaxy color–magnitude diagram with three populations: the red sequence, the blue cloud, and the green valley. Credit to Wikipedia website

Galaxy dichotomy: EARLY TYPES Red Passive Spirals/Irregulars Galaxies
LATE TYPES Blue Star-Forming Ellipticals Galaxies

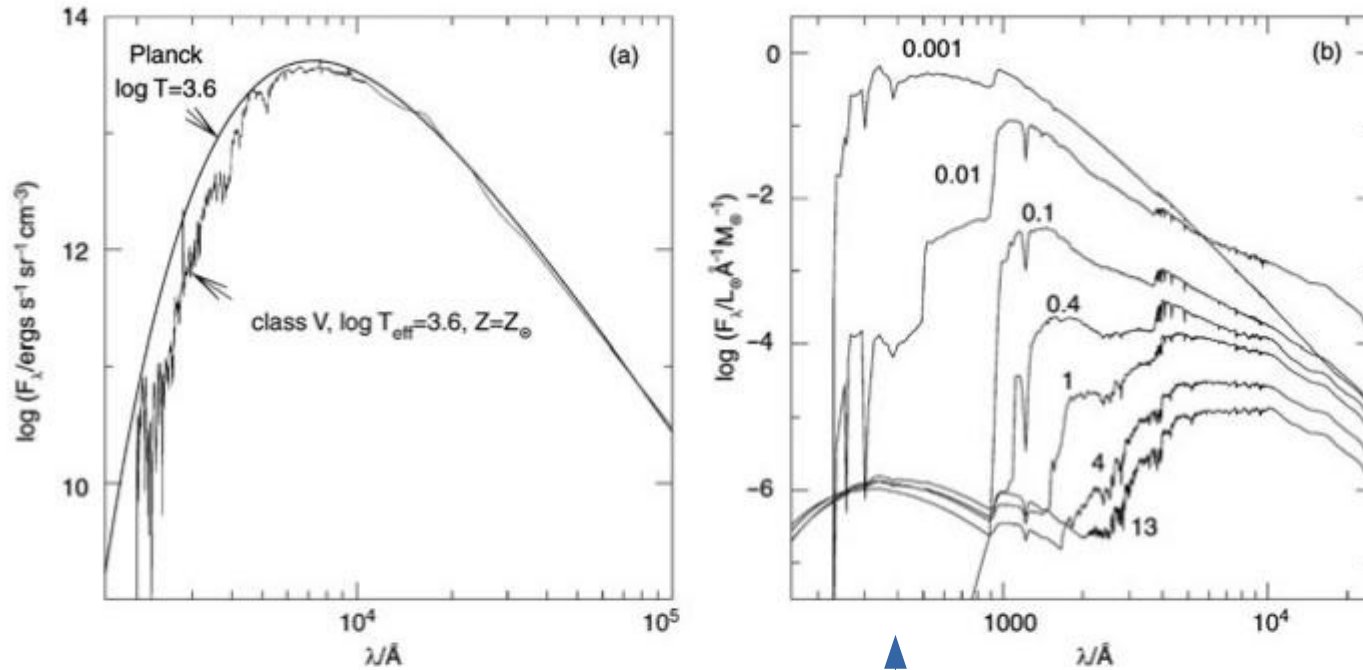
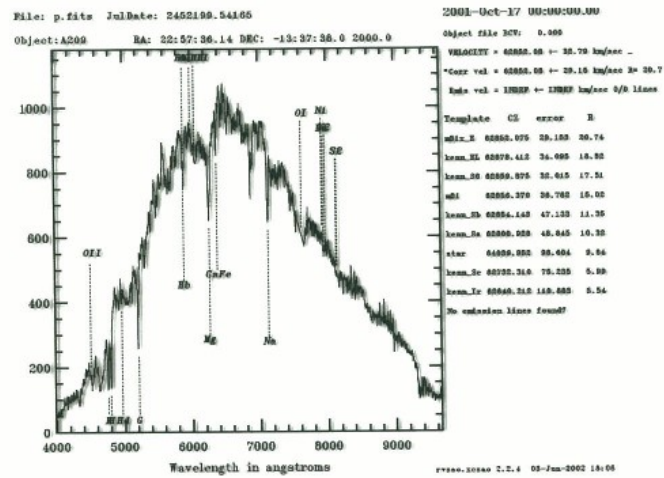


Fig. 3.33 (a) Comparison of the spectrum of a main sequence star with a black body spectrum of equal effective temperature. The opacity of the stellar atmosphere causes clear deviations from the Planck spectrum in the UV/optical. (b) Spectrum of a stellar population with Solar

metallicity that was instantaneously born a time t ago; t is given in units of 10^9 yr. Source: S. Charlot 1996, *Spectral Evolution of Galaxies*, Lecture Notes in Physics 470, Springer-Verlag, p. 53

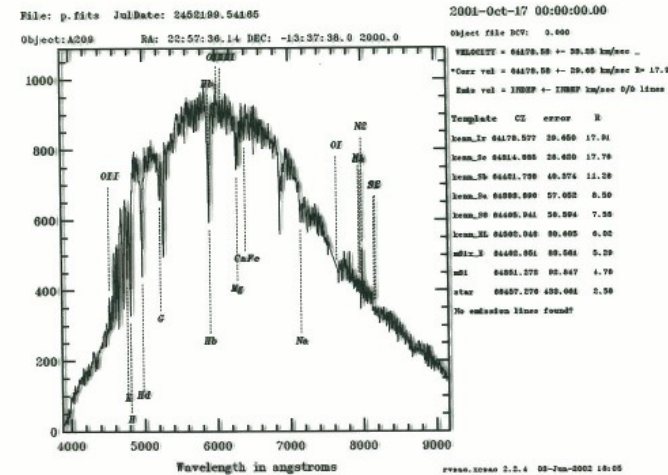
If more than expected: UV-excess

Galaxies differ for their spectra



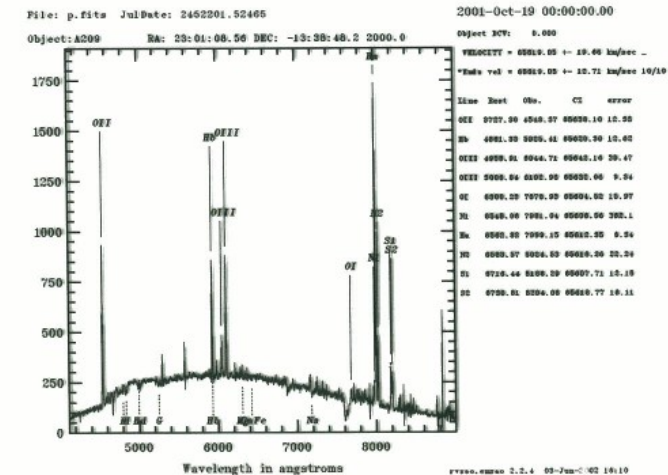
CD GALAXY

deep H β



E+A GALAXY

POST-STARBUST GALAXY?



EMISSION LINE GALAXY

... STARBUST?

Abell 209
Girardi+Mercurio(PhD)
obs. NTT

Color-Mag
Relation for
Cluster galaxies
in
MACSJ1206

Girardi+2015

Different
spectral types

