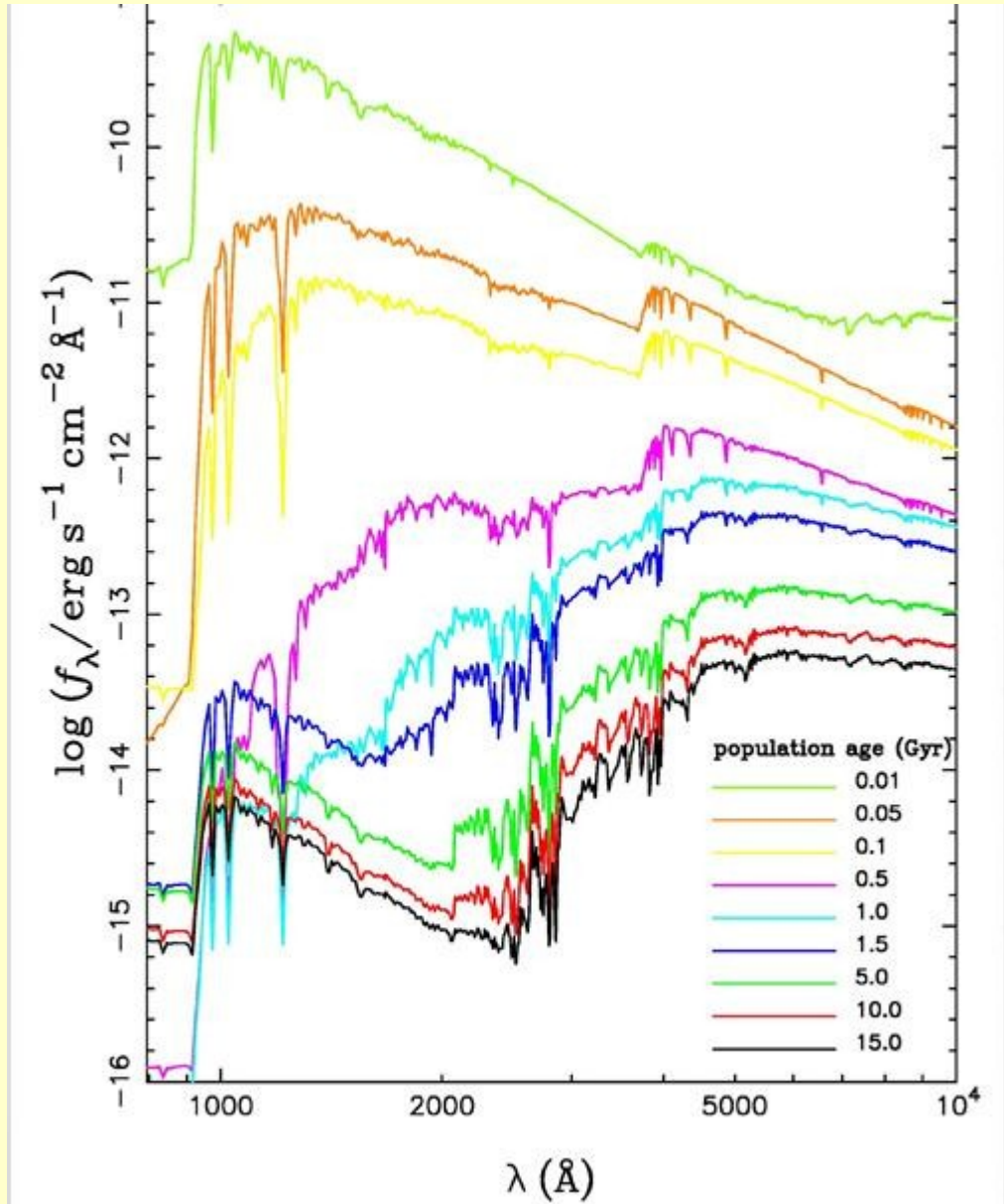


# Evolution model for an Elliptical galaxy (E)

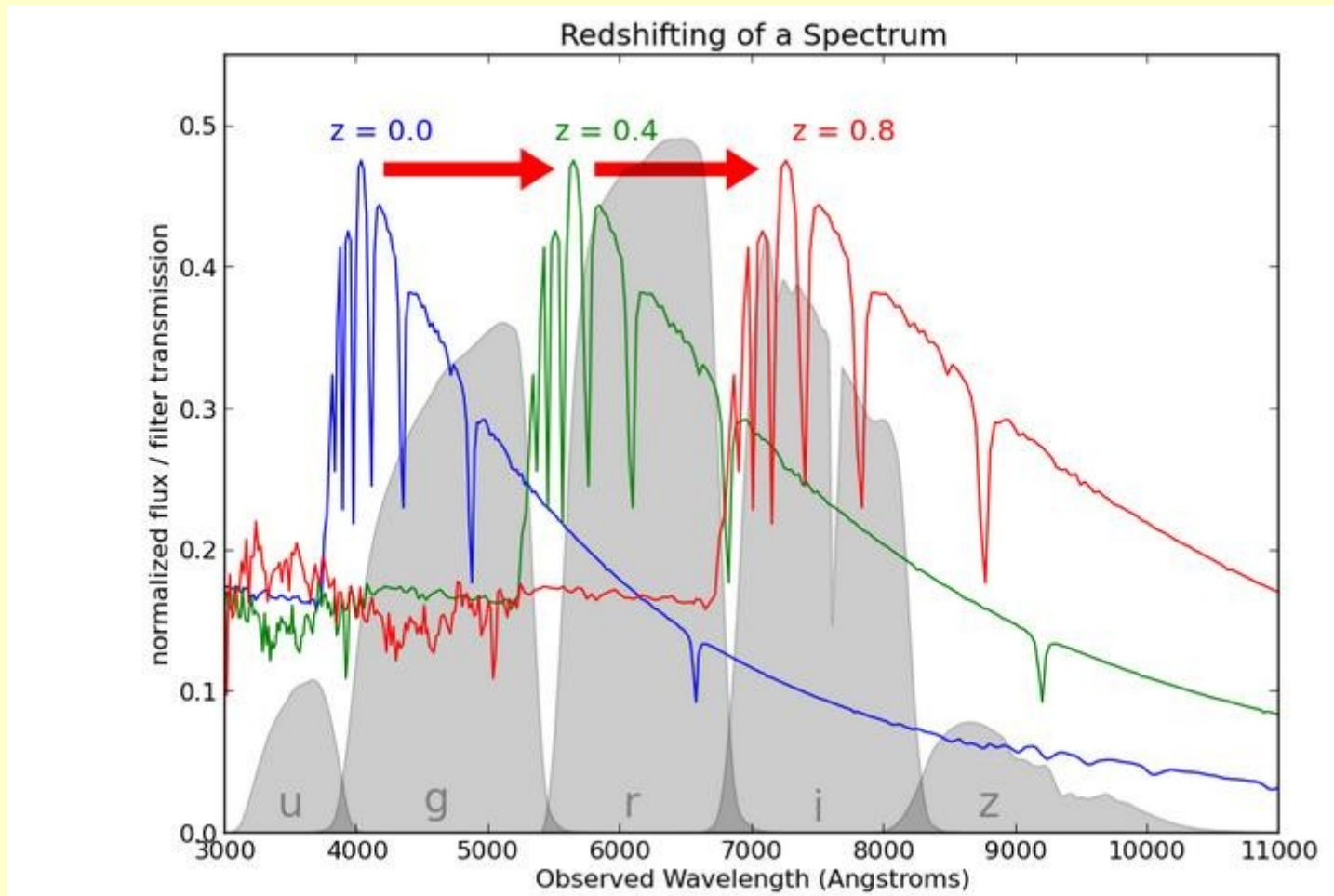
The evolution of spectral energy distribution (SED) of elliptical galaxies. The far-UV part is dominated by hot subdwarf stars from binary interactions when the age is larger than 1 Gyr (Han et al., 2007, MNRAS, 380, 1098).



Credit to

<http://www1.yao.ac.cn/~zhanwenhan/bps.html>

# Vega “redshifted”



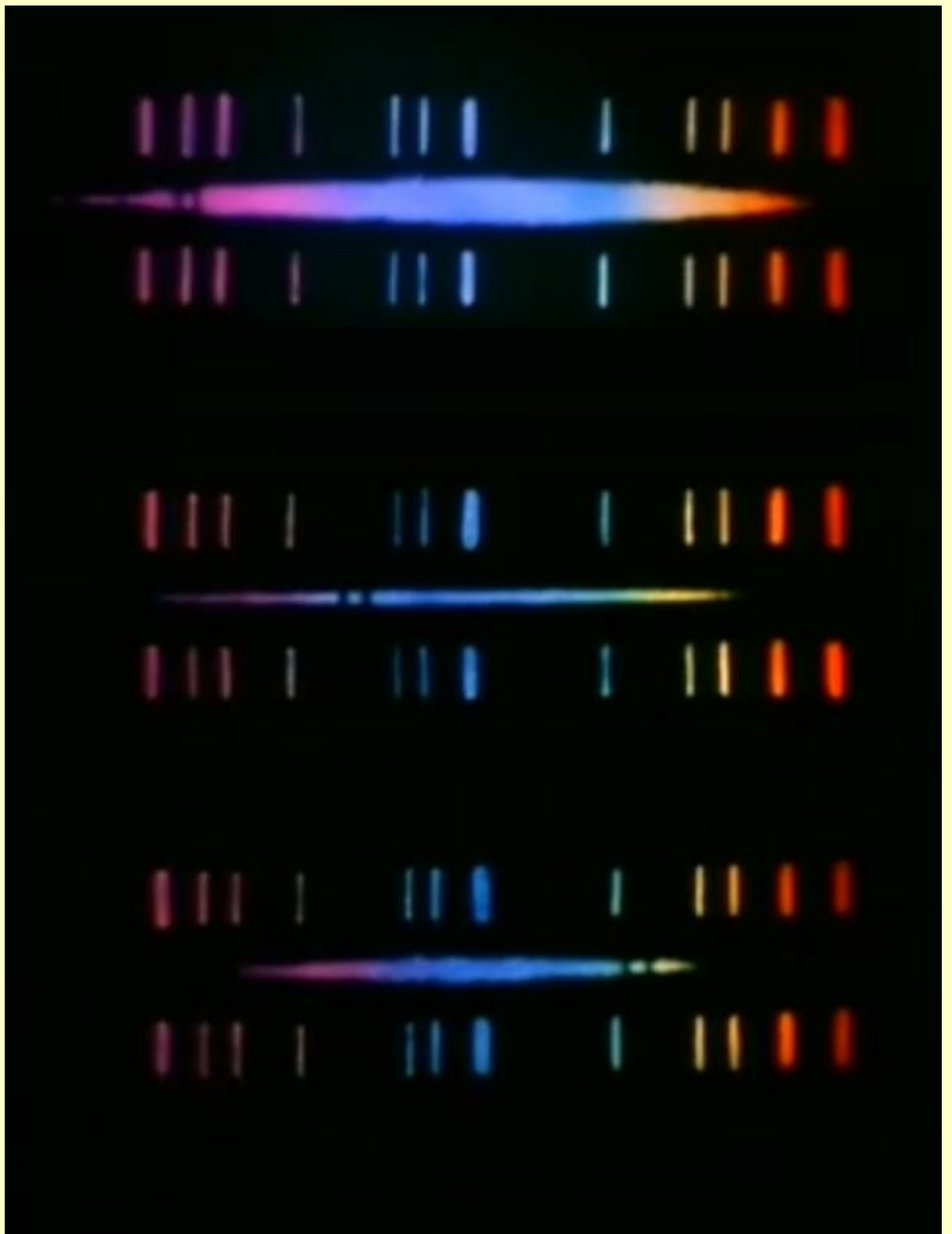
Credit to scikit-learn

[http://www.astroml.org/sklearn\\_tutorial/regression.html](http://www.astroml.org/sklearn_tutorial/regression.html)

**2D spectra**

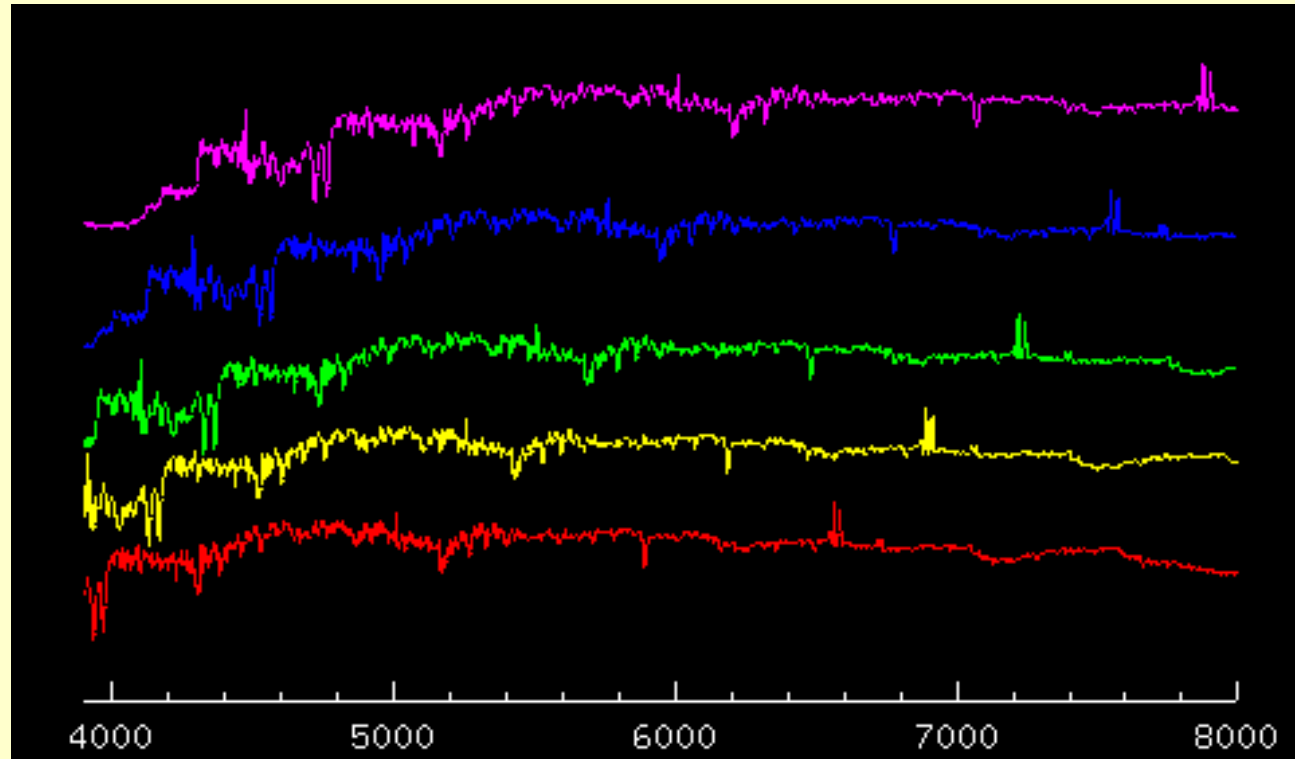
**Redshifted**

**Look at the  
H and K Lines  
of CaII**



**Spectra of E redshifted...**

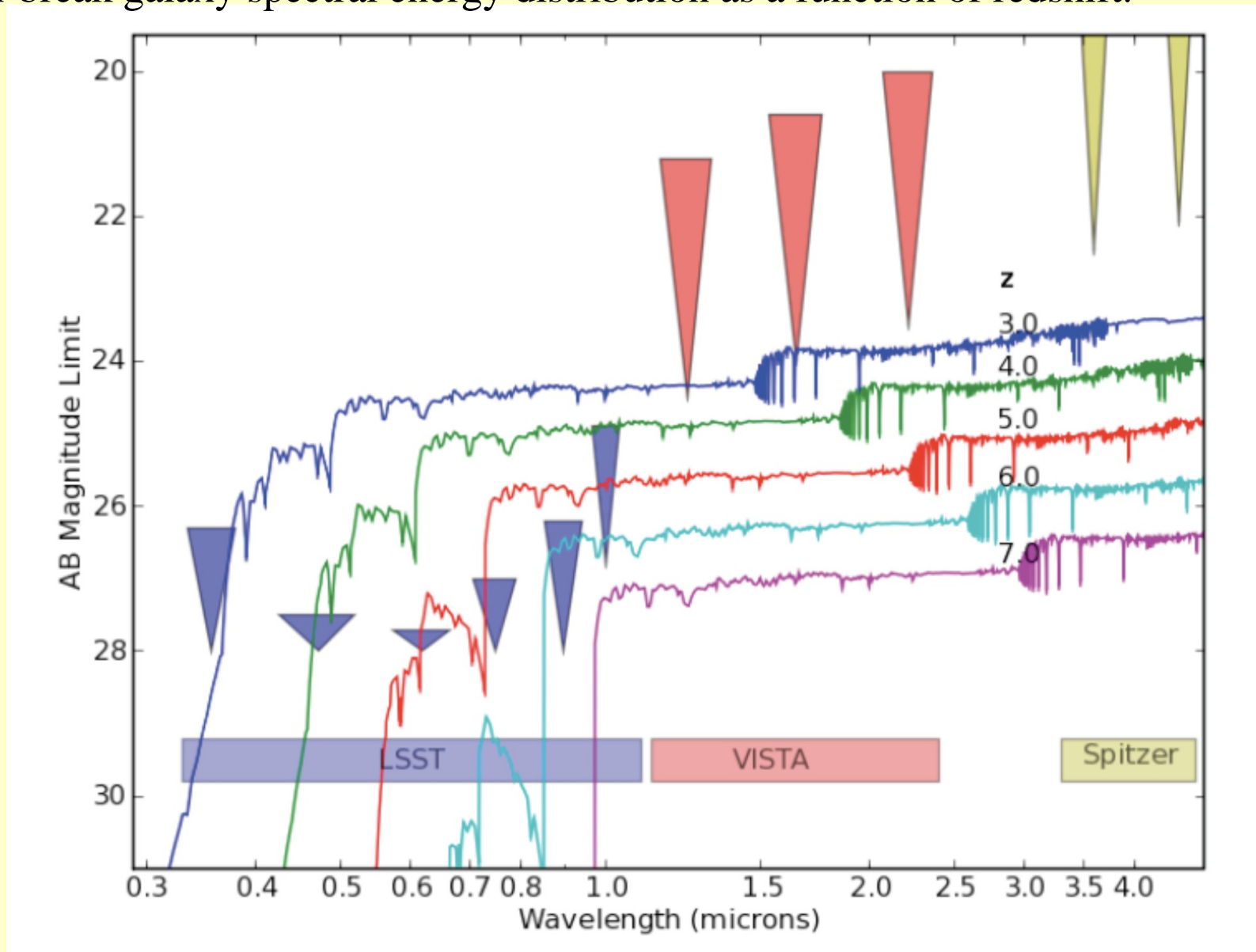
**Are you able to estimate  $z$ ?**



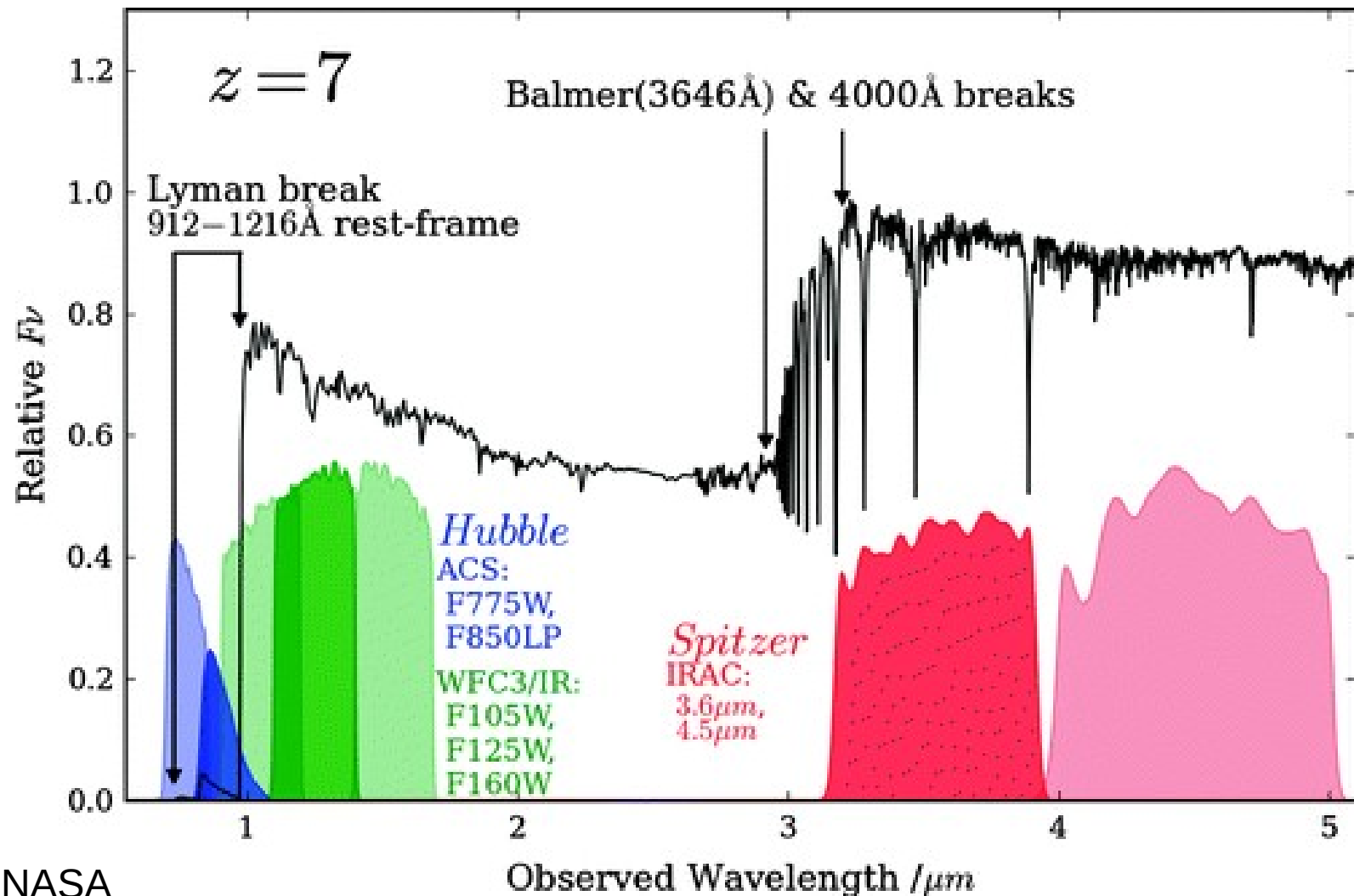
# Ly alpha break for different z and instruments

## (LSST, VISTA, Spitzer satellite)

Fiducial Lyman-break galaxy spectral energy distribution as a function of redshift.



Credit to LSST coll., from <https://galaxies.science.lsst.org/projects/demographics>

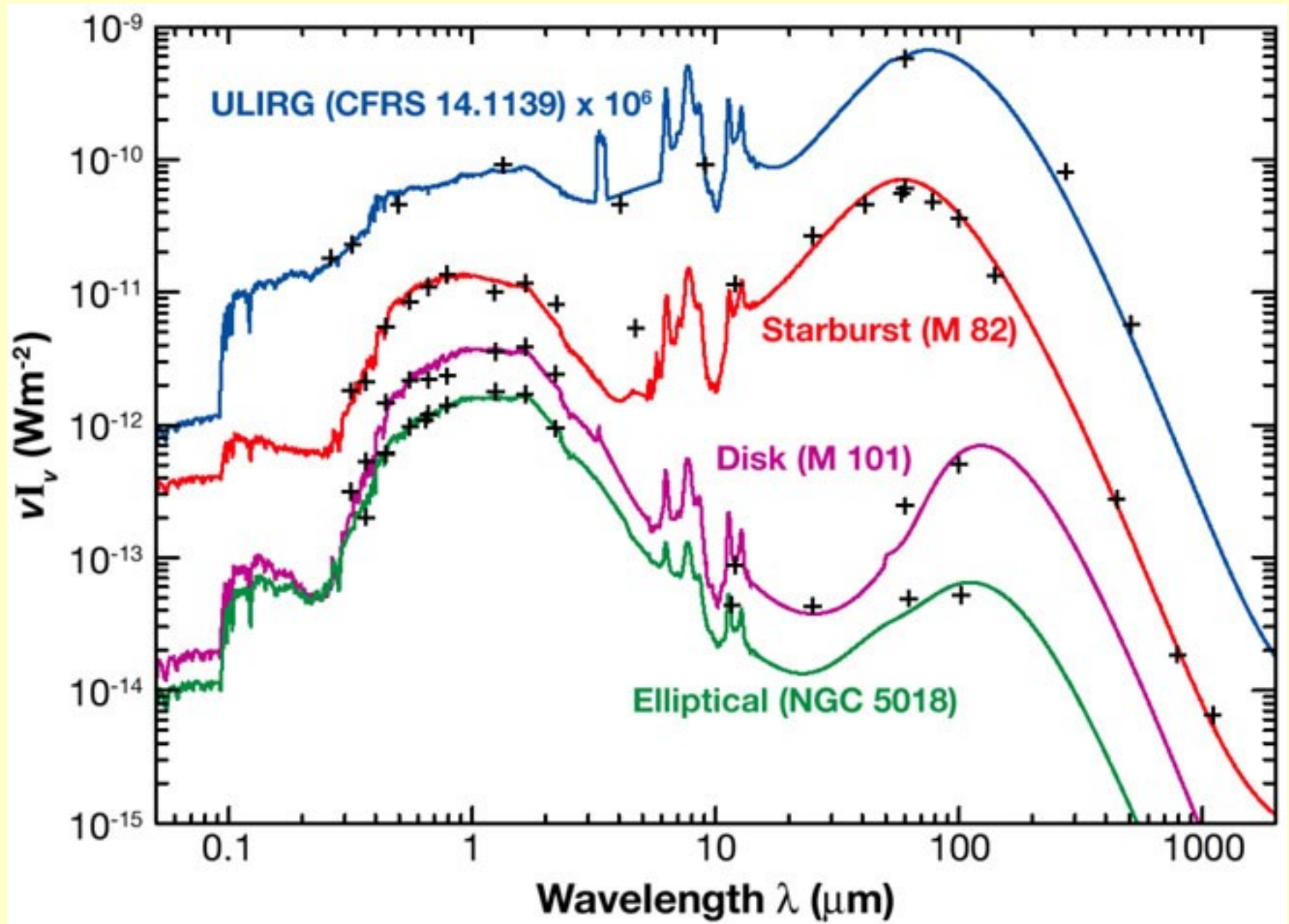


Credit to NASA

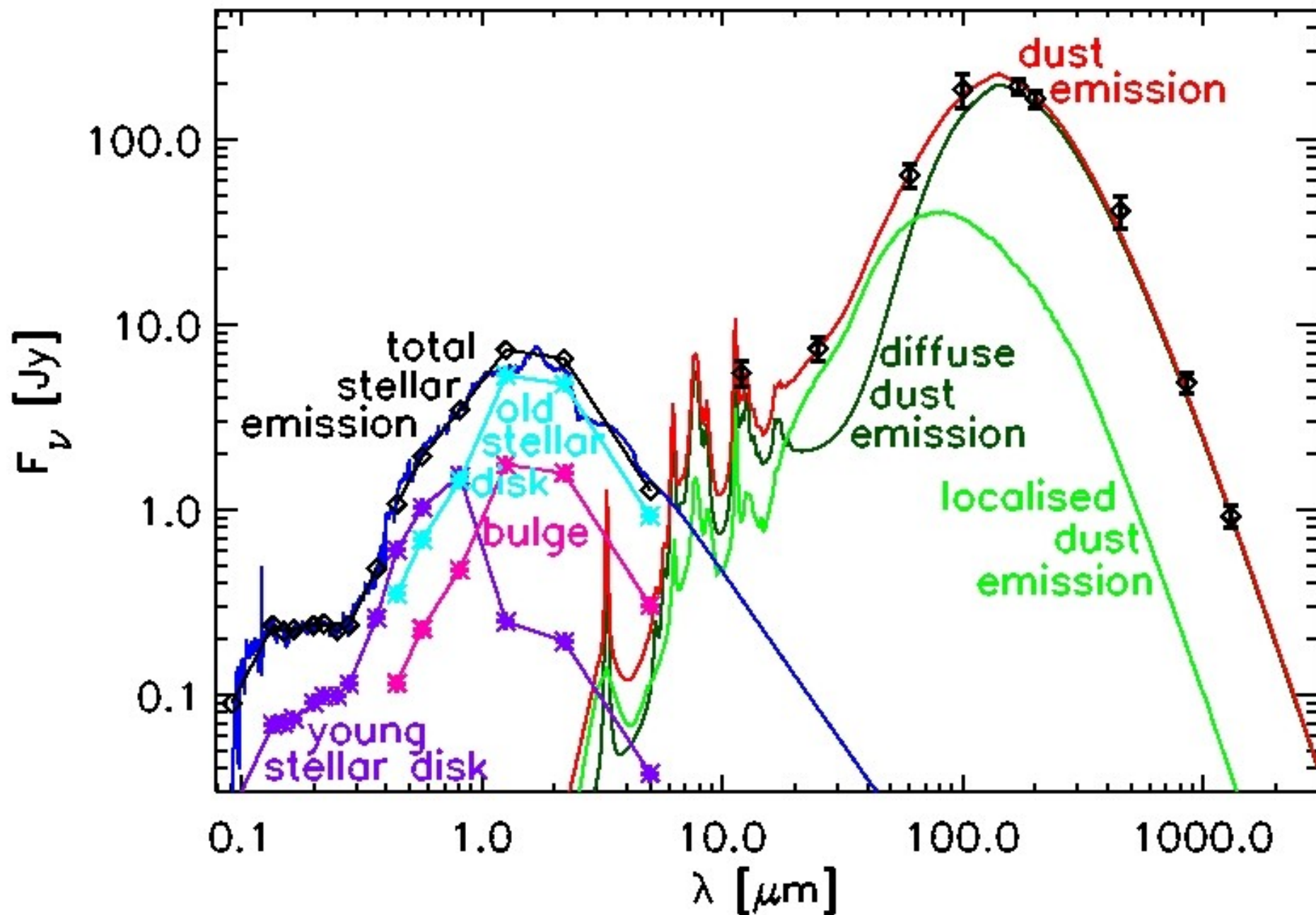


# SED (Spectral Energy Distribution) of different gals

From <http://elte.prompt.hu/sites/default/files/tananyagok/InfraredAstronomy/ch10s02.html>



# SED of a Spiral galaxy



From <http://www.star.uclan.ac.uk/~ccp/main.shtml>

Credit to Popescu et al. 2011