

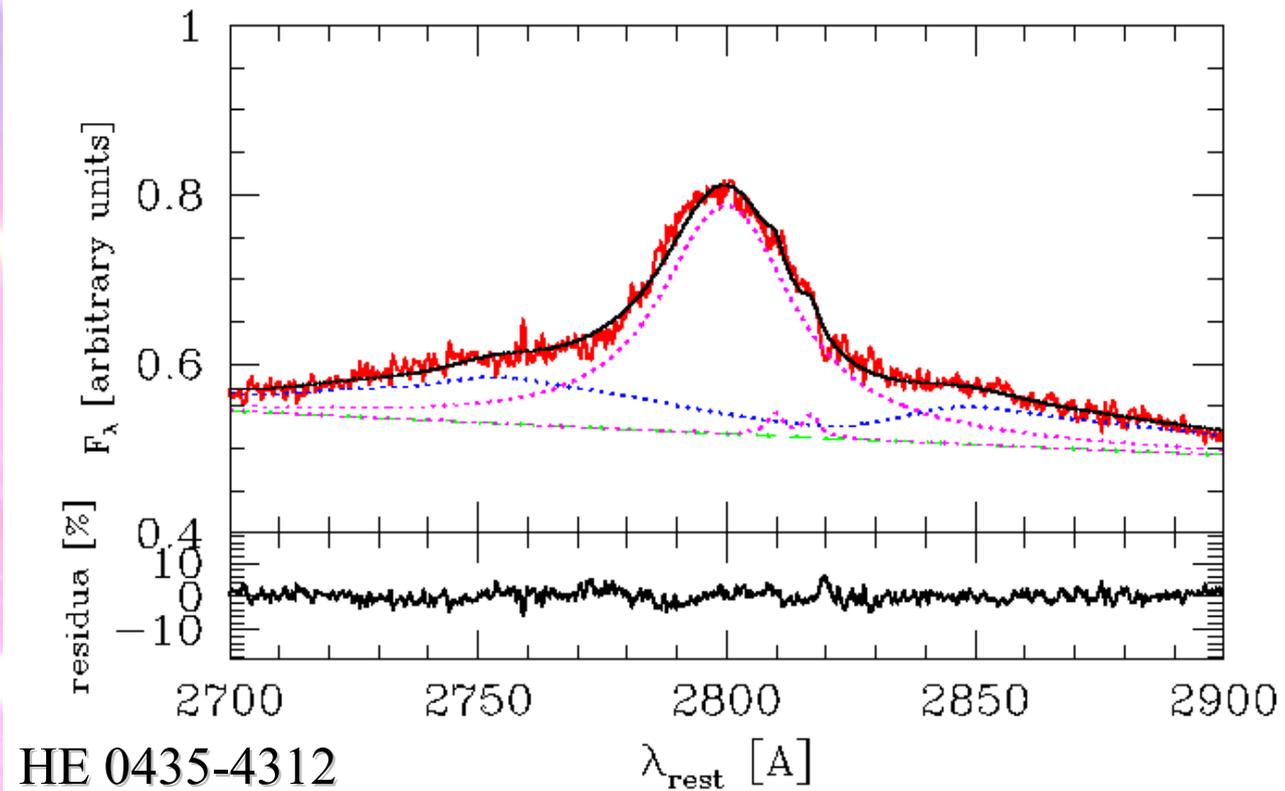
Variability of MgII line in quasars vs dark energy.

Two roles for quasars in cosmology:

1) quasars influence the formation of galaxies

2) quasars can be used to track the history of the expansion of the Universe

Data from SALT telescope



Quasars can be used to determine the expansion rate of the Universe:

1) The redshift

2) The observed brightness

3) The time delay between the line and the continuum – this allow to calculate the absolute luminosity of quasar.

Having information like this we have independent measurement of the distance (comparison of the absolute luminosity to observed brightness ) and the expansion of the Universe (redshift).