



## **Project 5**

Measurements of chemical abundances in local galaxies are different from measurements along single sight lines because light from all the stars in the galaxy is collected as if the galaxy was a single point source. These stars probe different portions of a galaxy, some with different chemical abundances and physical conditions, and can hide saturation effects. Spectra of local galaxies might also have low S/N, which further compounds the problem. This project consists of assessing the saturation effects in abundance measurements of extragalactic sight lines by using nearby stars to measure abundances in each sightline individually as well as in the combined spectrum of all the stars, to simulate a galaxy spectrum. The measurements will use the apparent optical depth technique on echelle data obtained with the Space Telescope Imaging Spectrograph (STIS) onboard the Hubble Space Telescope (HST).

