Hyperspectral data are never perfect, there are a lot of effects that adds to the uncertainties in the final data product. In this presentation we will go through the different sources of uncertainties and the impact they have on the data. The most obvious place to start is the noise sources from the detector used inside the hyperspectral camera which gives you the top-level limitation of your system, but other effects like spatial and spectral misregistration, straylight and so on contributes a lot to the final uncertainties in your data product. All these effects from the design of the hyperspectral camera to the way it is operated will be discussed.