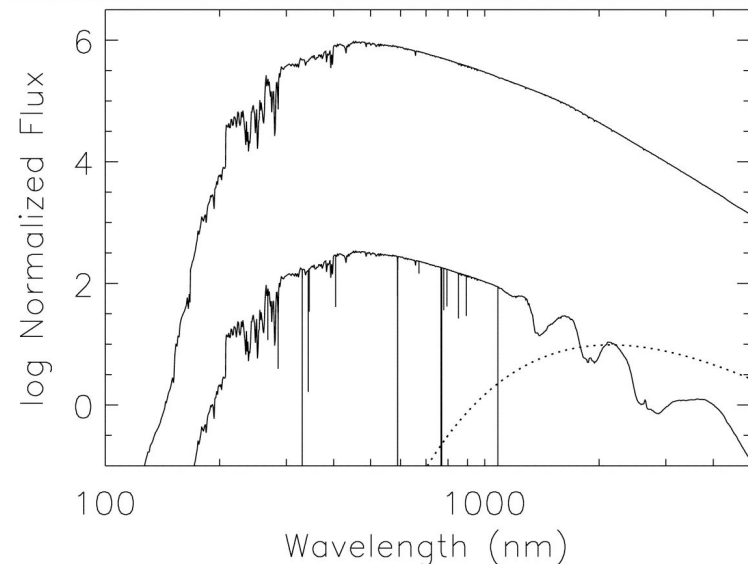# Transmission spectroscopy

- During transit, light from the star passes through the planet's atmosphere

- Some wavelengths absorbed

- Smaller flux at these wavelengths – deeper transit

- Absorption lines superimposed on stellar spectrum

- Sodium a strong absorber

Atmospheric Model

SWARM

Sodium

WASP

Atmospheric

Rossiter

Model

- Code written in IDL
- Takes parameters from MCMC file
- Calculates position of planet
- Calculates orbital radial velocity of planet
- Calculates decrease in flux due to transit
- Uses synthetic spectra to generate model transit spectrum
- Calculates radial velocity of model transit spectrum, including RM effect
- Will incorporate model atmosphere data
- Observations compared to model