

Exercise 7bis

Inversion of CRISP profiles from sunspot penumbrae

SST/CRISP observations with $\text{SNR} \sim 500$, sequential spectral sampling of Fe I 617.3 nm (30 wavelengths in ~ 30 s)

Strongly Doppler-shifted polarization profiles

1. What kind of model would you use to invert them?
2. Include stray-light contamination, and a small weight for Q & U stokes profile (for instance: 10, 0.1, 0.1, 10)

Example of Stokes profiles observed with a **Fabry-Pérot interferometer**.
Extremely high spatial resolution, but modest spectral resolution (~ 50 mÅ at 617 nm).
Sequential sampling of line means first and last wavelengths are observed ~ 30 s apart.