

Exercise 2

Inversion of profiles from dark-cored penumbral filament.

- Hinode/SO observations with SNR~1000, no telluric lines, 2 lines Fe I 630.1 & 630.2 nm. Strong, symmetric signals.

1. What kind of model would you use to invert them?
2. Can the fit be improved with more nodes in T? (use 2 cycles!)
3. What happens with 2 nodes in B and v_{LOS} ?
4. What happens with 10 nodes in B and v_{LOS} ?

If no instrumental PSF is available, use **macroturbulence** to mimic its effect (i.e, invert v_{mac})

Use more weight for Q, U and V to force better fits to those parameters