

# Me, myself and Chromospheric Spicules

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- Members

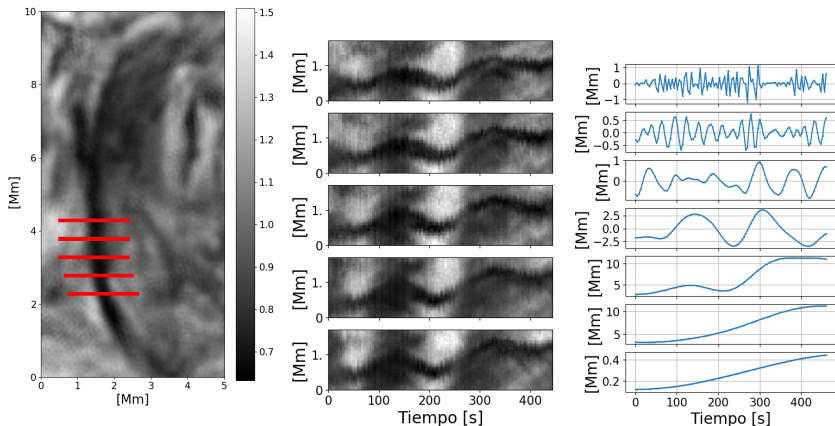
- Ramón Oliver
- José Lu s Ballester
- Jaume Terradas
- Roberto Soler

- Research Topics

- Cold plasma dynamics (Coronal rain, Chromospheric spicules, Coronal loops, Solar prominences...)
- MHD waves

# My research history

- 2018: Study of the transverse oscillations of chromospheric spicules using the Empirical Mode Decomposition.



# My research history

- 2019 - Magnetic Field of coronal rain blobs chromospheric spicules using the Weak Field Approximation (WFA) .

If the two following conditions are satisfied:

- The Zeeman width ( $\Delta\lambda_B$ ) is much smaller than the Doppler width ( $\Delta\lambda_D$ ) of the line:

$$\bar{g} \frac{\Delta\lambda_B}{\Delta\lambda_D} \ll 1$$

$$\Delta\lambda_B = 4.67 \cdot 10^{-13} \lambda_o^2 B, \quad \Delta\lambda_D = \frac{\lambda_o}{c} \sqrt{\frac{2k_B T}{m} + \xi}$$

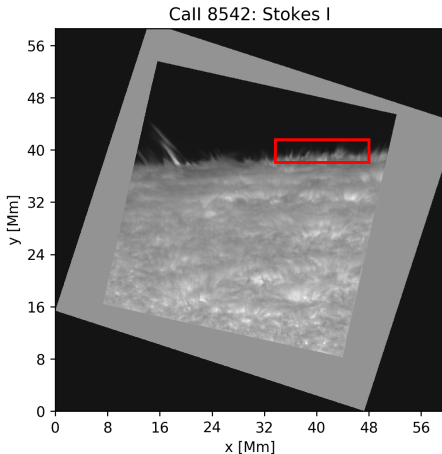
- B is constant along the line of sight.

Then

$$V = -\Delta\lambda_B f \bar{g} \cos(\theta) \frac{\partial I}{\partial \lambda}$$

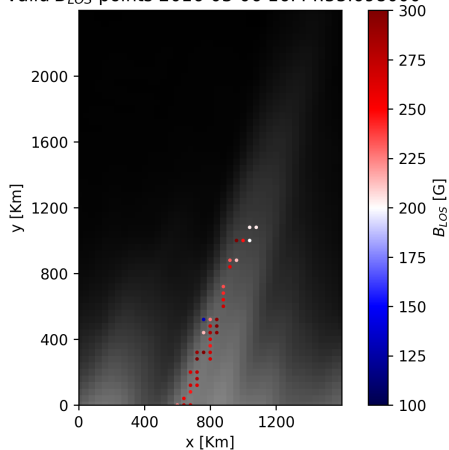
# Observations

CRisp Imaging SpectroPolarimeter (CRISP) at the 1m- Swedish Solar Telescope (SST)(La Palma). Stokes parameters over 15 spectral positions of the Ca II 8542 Å line.



# Partial Results

Valid  $B_{LOS}$  points 2016-03-06 16:44:55.698000



# Partial Results

