CAOSP 1

- changes in the latest version: error $\rightarrow$ deviation
- news about the transmission profile (Hammerschlag)
- an another definition of the reference intensity (Cauzzi et al. 2009, A&A, 503, 577)

CAOSP 2

- current state – why submit it as it is
- overview of figures

Solar Physics

- a suggestion of title and content
- preliminary figures

Astronomy & Astrophysics

- a suggestion of title and content
- preliminary figures
- a cooperation with G. Cauzzi and K. Reardon, an ask for data, merging of our and their results shown in their A&A, 503, 577 (2009)

CAOSP 1

Rob Hammerschlag

- suggestion: change “error” for “deviation”, accepted
- measured Gaussian-like transmission
  versus theoretical $\mathrm{sinc}^2 + \Pi$ transmission:
  - ➔ the central peak of the transmission profile is superimposed on the background of very low transmission spanning over the whole spectrum
  - ➔ the prefilter (FWHM = 16 Å) does not block out completely neighboring passbands

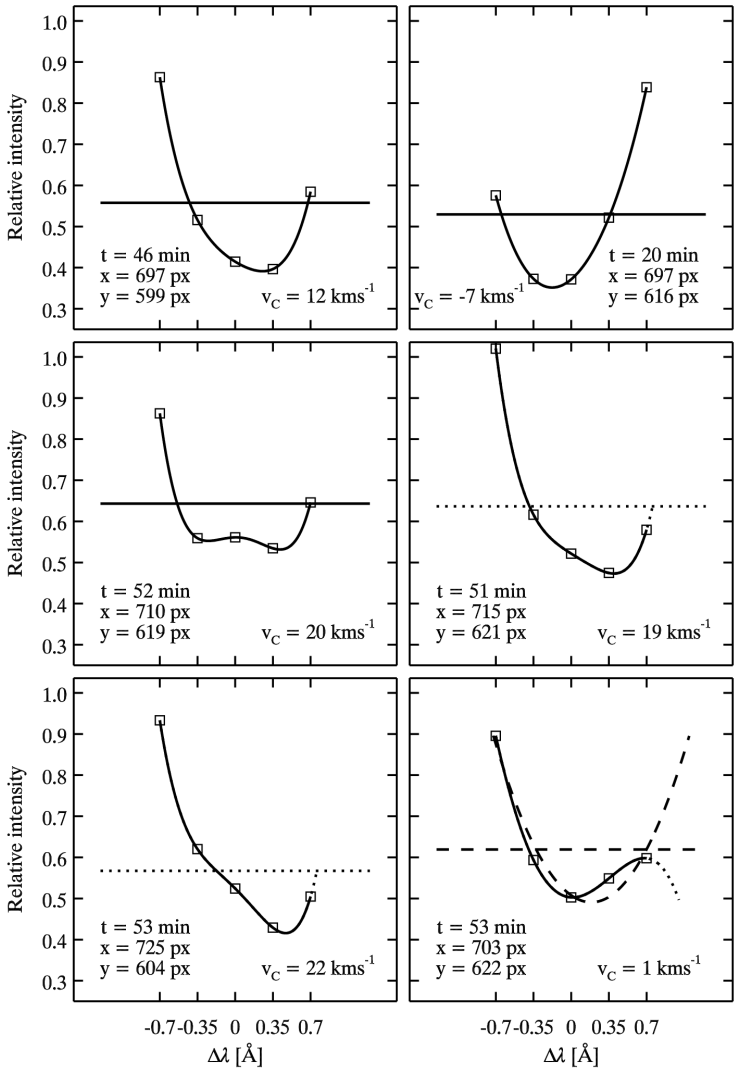


Figure from CAOSP 2

Our definition of the reference I_{REF} and the average I_{FW} intensities as a proxy for missing continuum:

$$I_{REF} = \frac{I_{+0.7} + I_{-0.7}}{2} , \qquad I_{FW} = \frac{I_{REF} + I_C}{2} .$$

An another possible definition (Cauzzi et al. 2009, A&A, 503, 577):

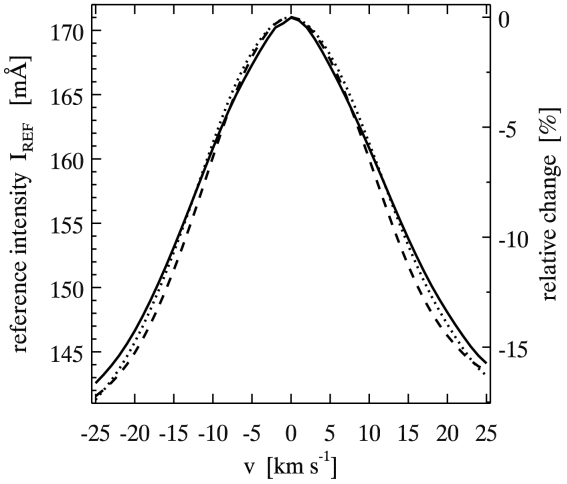
$$I_{REF} = \frac{I_{+\Delta\lambda} + I_{-\Delta\lambda}}{2} :$$

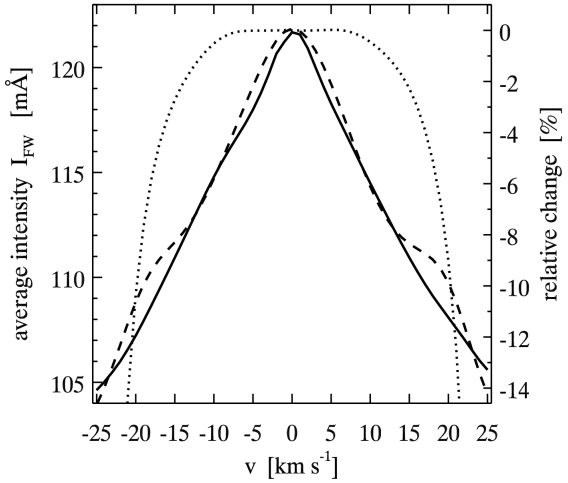
where $\Delta\lambda$ is an optional wavelength separation from the wavelength of the profile minimum.

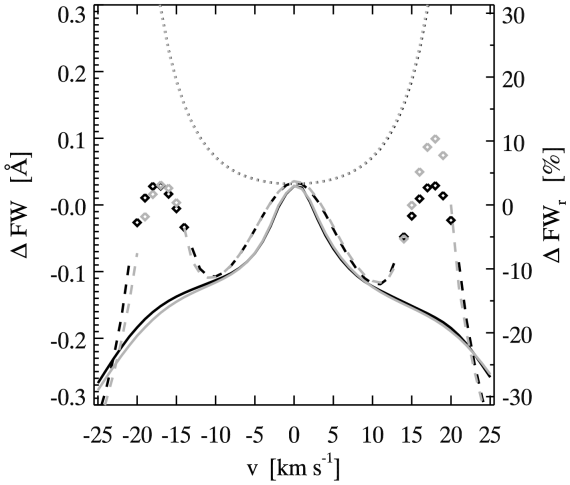
Pros compared to our definition:
more constant I_{FW}

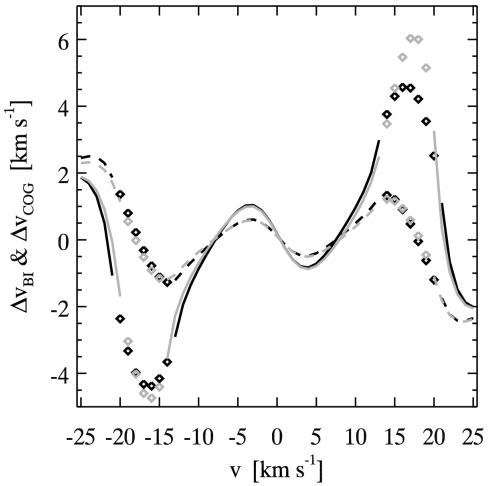
Cons: more frequent and longer extrapolations resulting in more frequent undulation and local maxima of the polynomial

CAOSP 1









An implementation of the Cauzzis's definition into the paper for completeness and easier referencing latter.

Consequences:

- top figures will be supplemented with new curves corresponding to Cauzzis's definition
- the paper will be supplemented with two more figures equivalent to the bottom figures

A question to discuss: co-authorship, name order, the reference Schwartz et al. (2012)

CAOSP 2

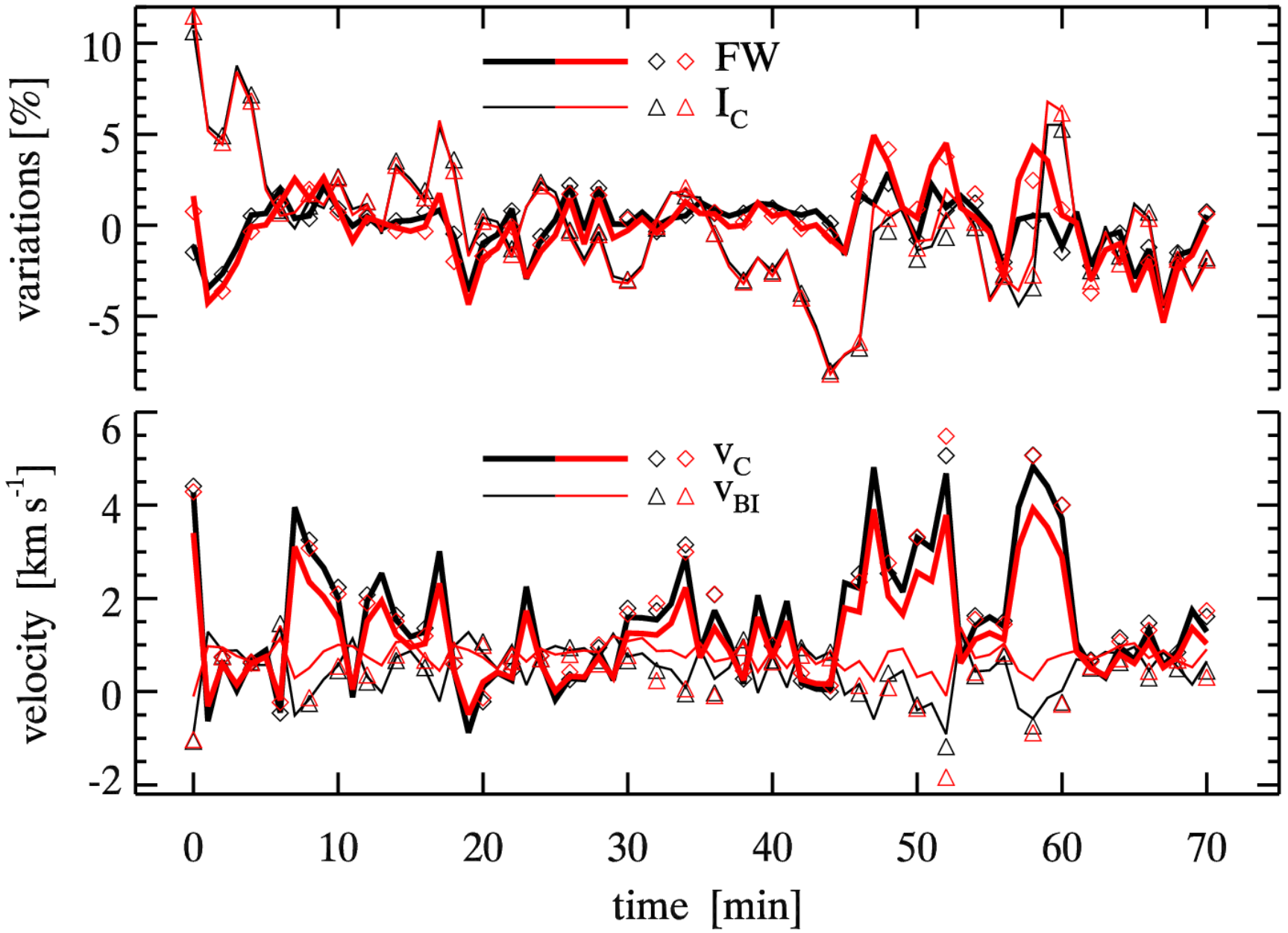
Current title:

Search for Alfvén waves and chromospheric shocks
in a network element observed in Hα
I. Spectral characteristics

Why to submit it to CAOSP as it is and not elsewhere:

1. The title and Intro turns around Alfvén waves which haven't been found.
2. Shortening and redo of the text with respect to what we found wound be lengthy and lots of work would go into the trash including many figures.
3. An ample space offered by CAOSP allows to show figures which otherwise could not go into the following CC papers making them thus shorter (editors and referees like) and easier to handle for an author which only refers on them back.

Unfiltered images

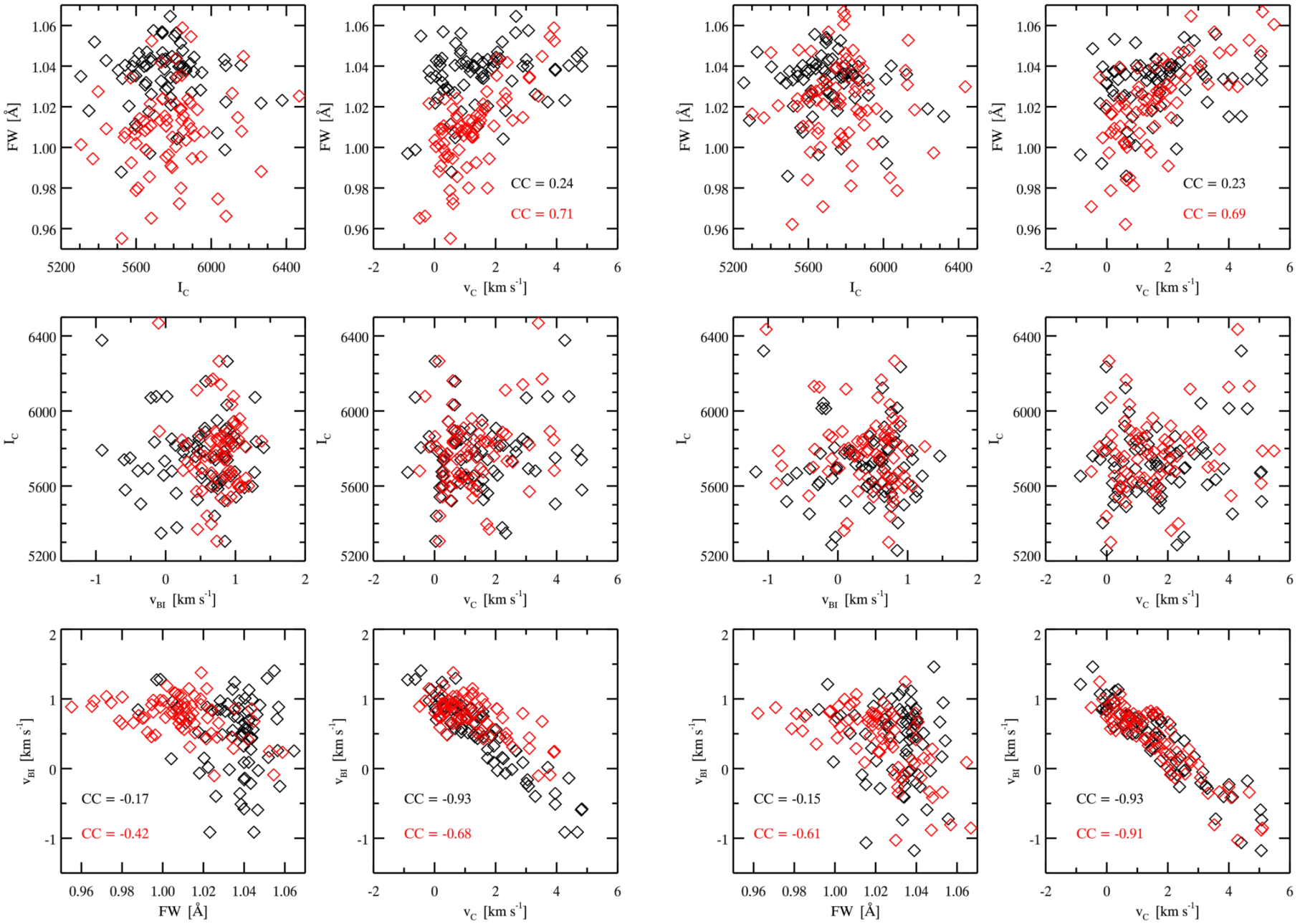


black / red – uncorrected / corrected spectral characteristics

Unfiltered images

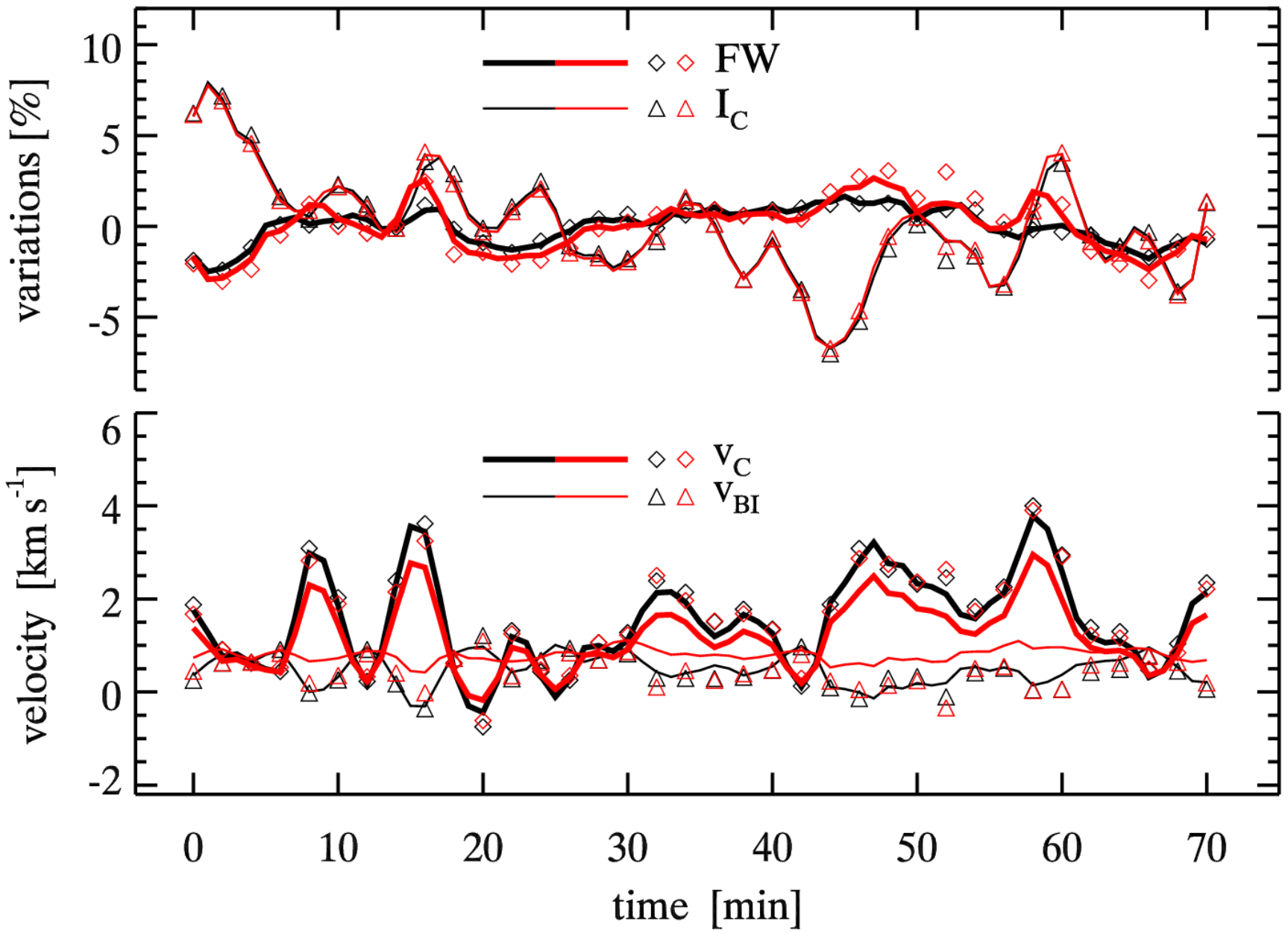
intensity averaging

per-pixel averaging



black / red – uncorrected / corrected spectral characteristics

Filtered images with the cutoff 20 kms^{-1}

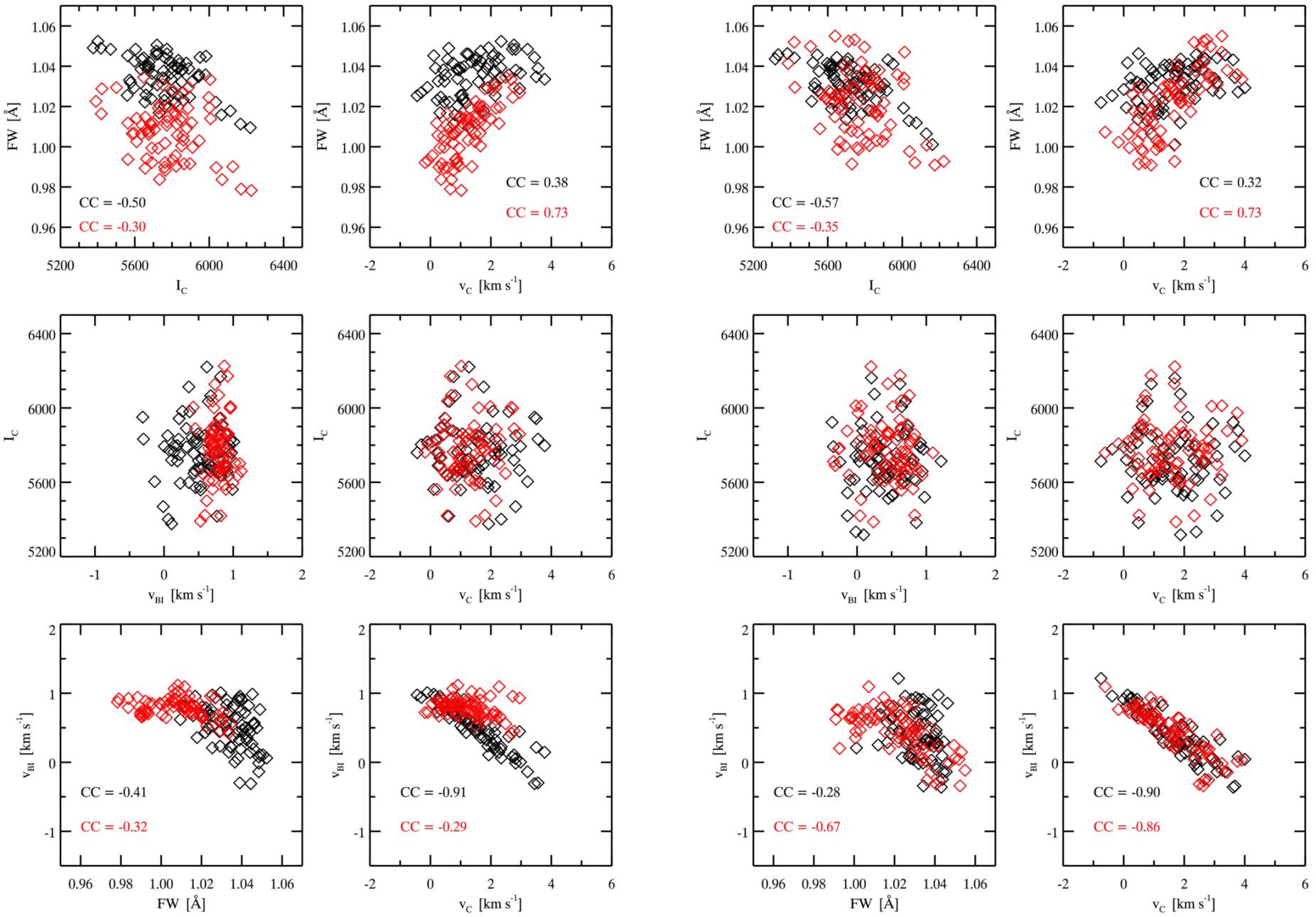


black / red – uncorrected / corrected spectral characteristics

Filtered images with the cutoff 20 kms^{-1}

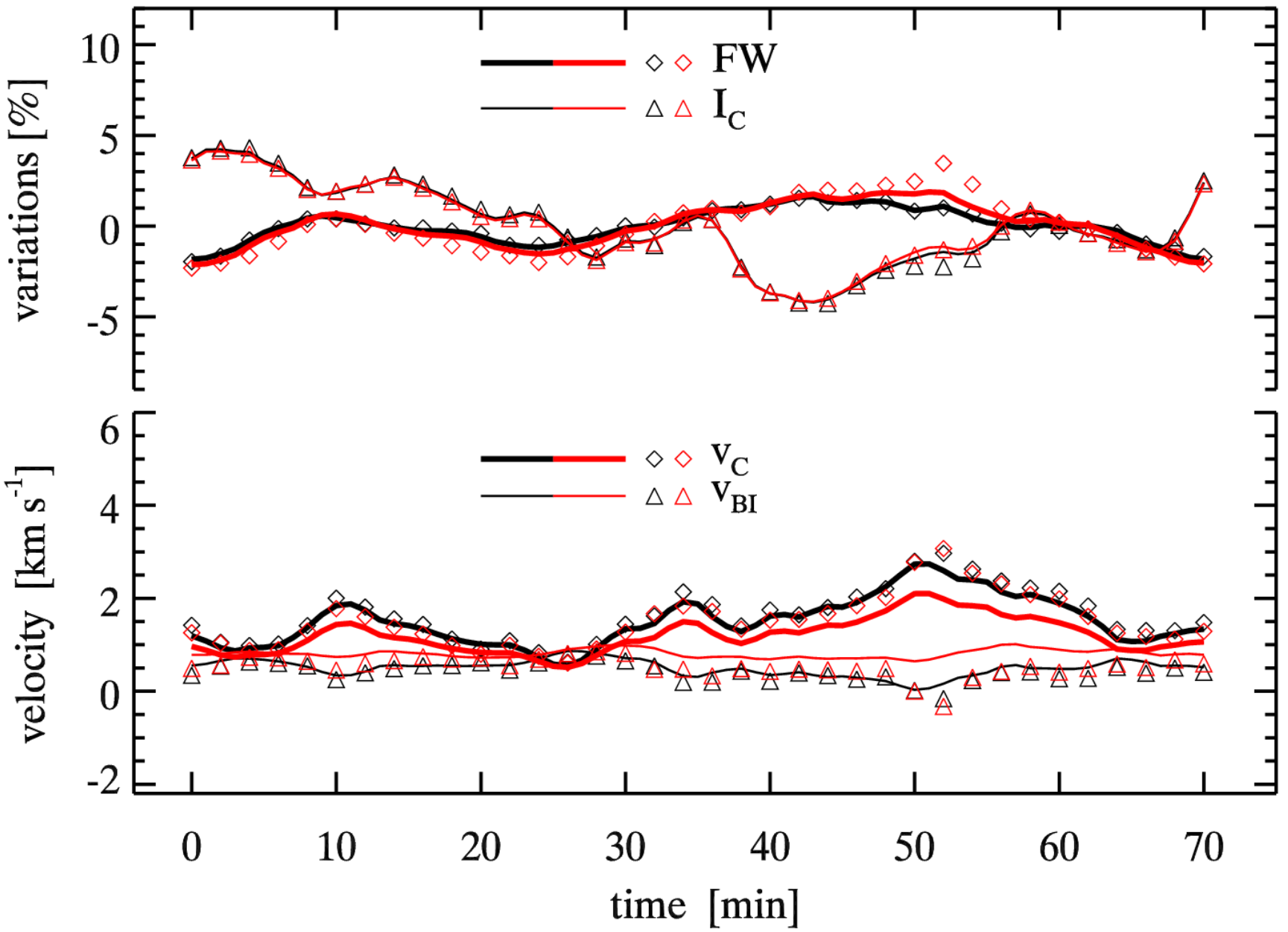
intensity averaging

per-pixel averaging



black / red – uncorrected / corrected spectral characteristics

Filtered images with the cutoff 7 kms^{-1}

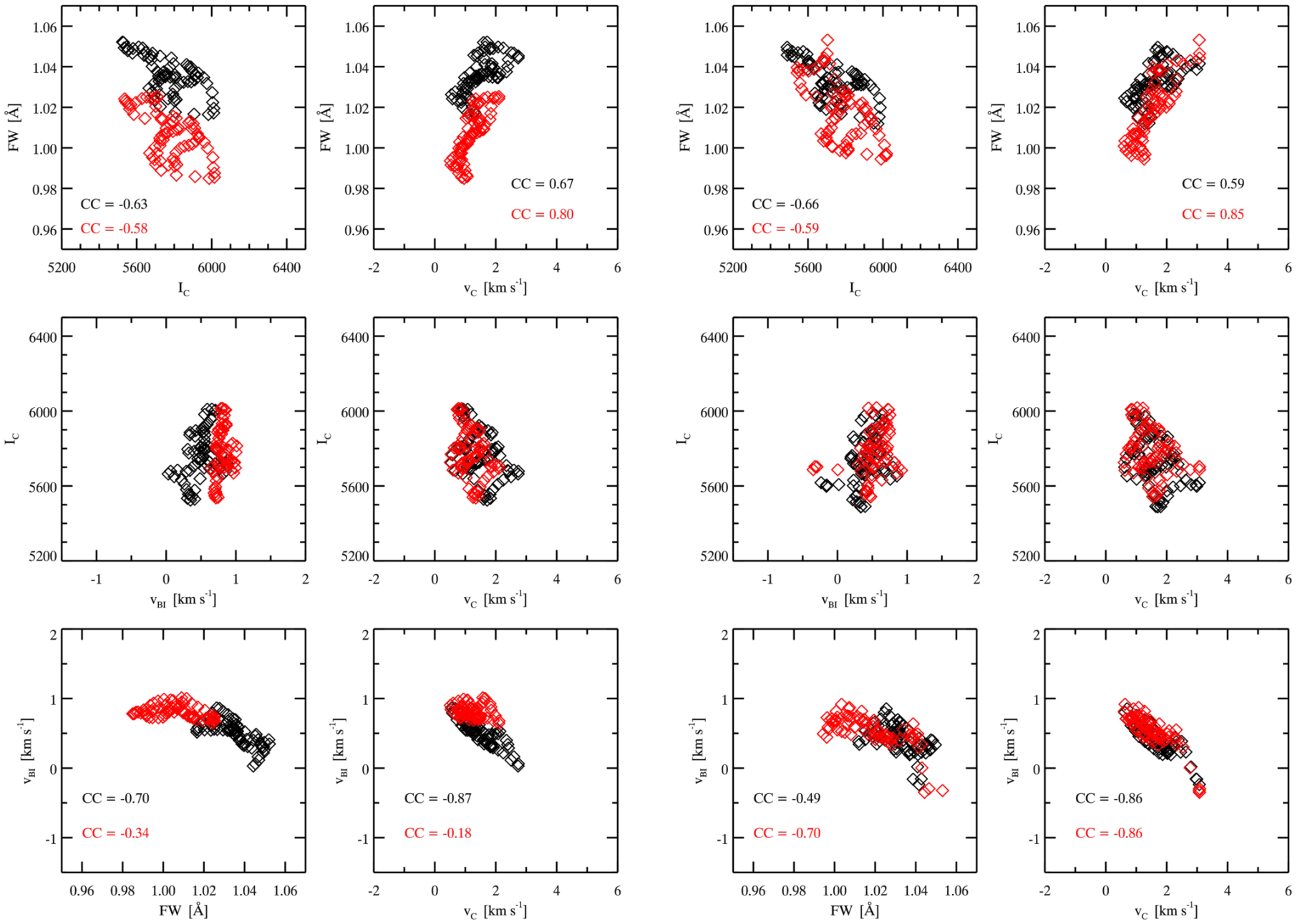


black / red – uncorrected / corrected spectral characteristics

Filtered images with the cutoff 7 kms^{-1}

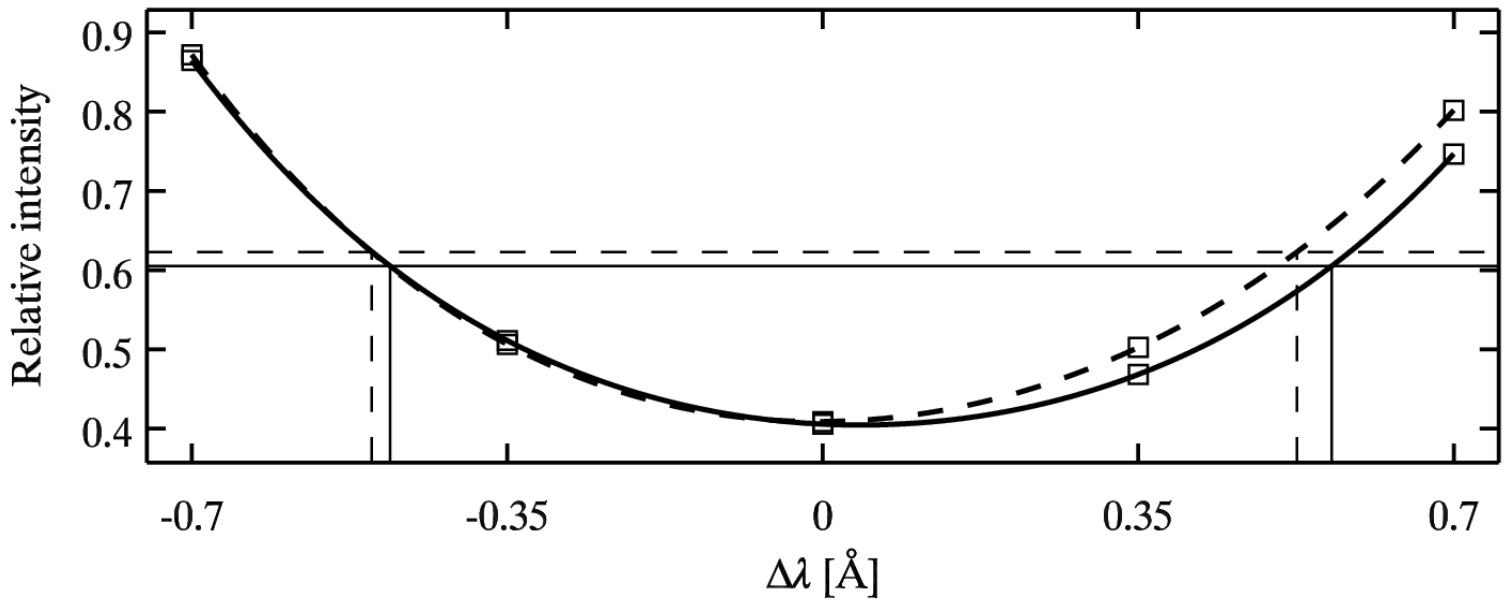
intensity averaging

per-pixel averaging

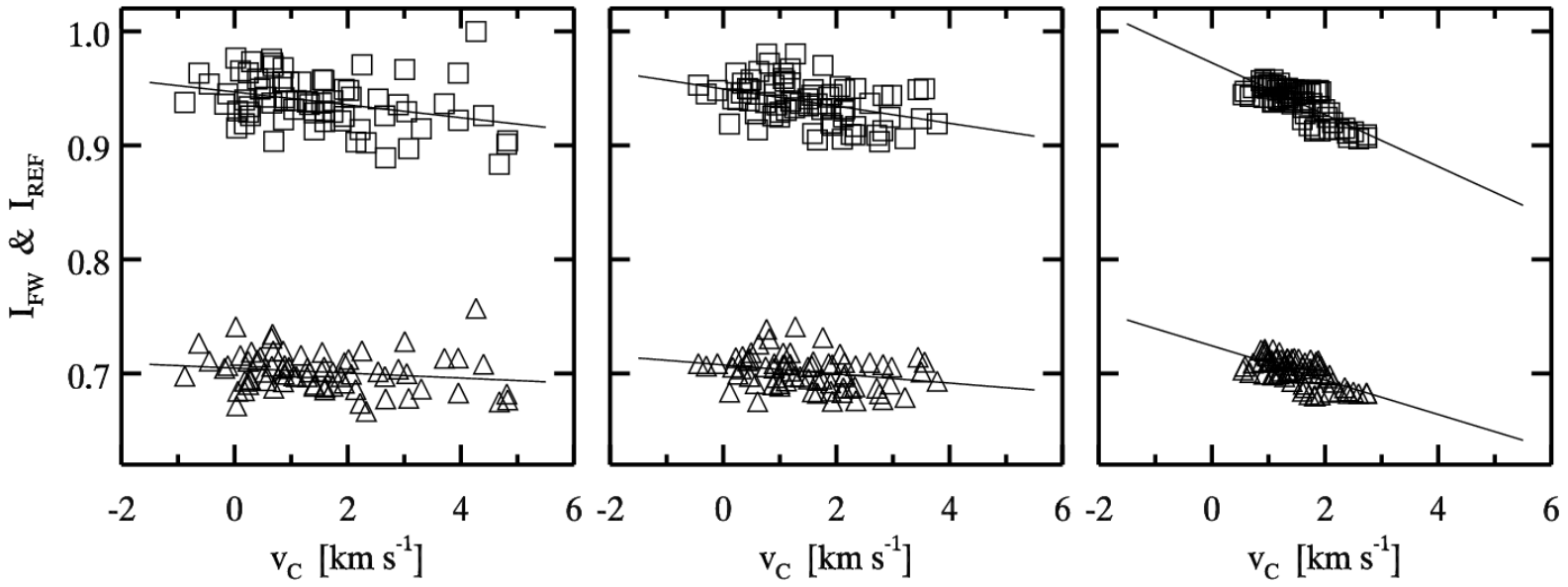


black / red – uncorrected / corrected spectral characteristics

Broadening of the Hα line core with increasing redshift



Observed dependence of the reference and the average intensities on the velocity



Solar Physics

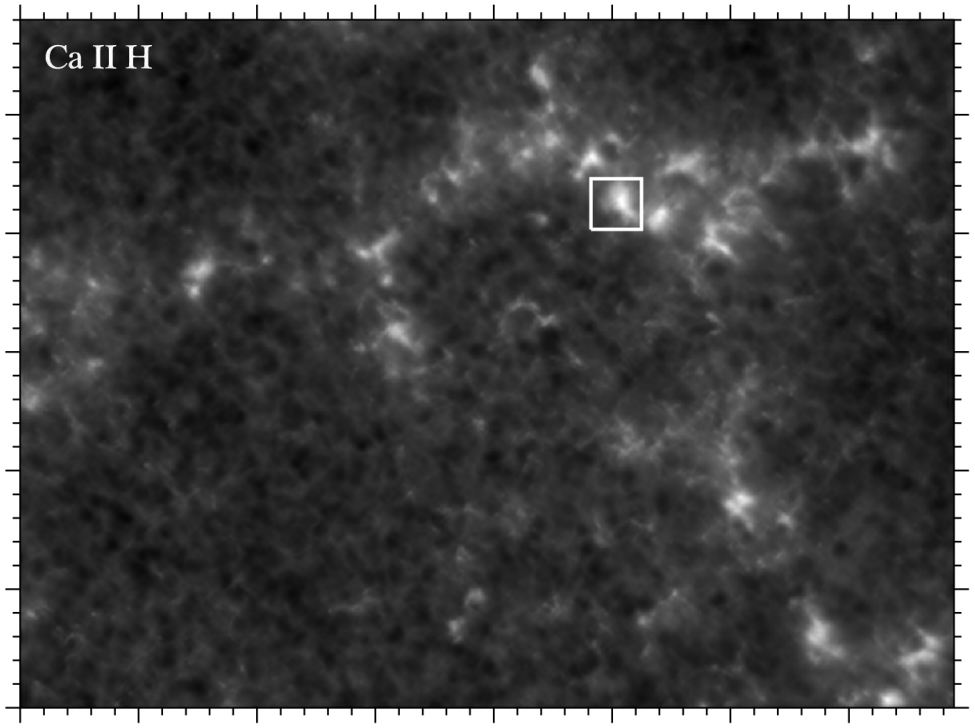
- suggested title:

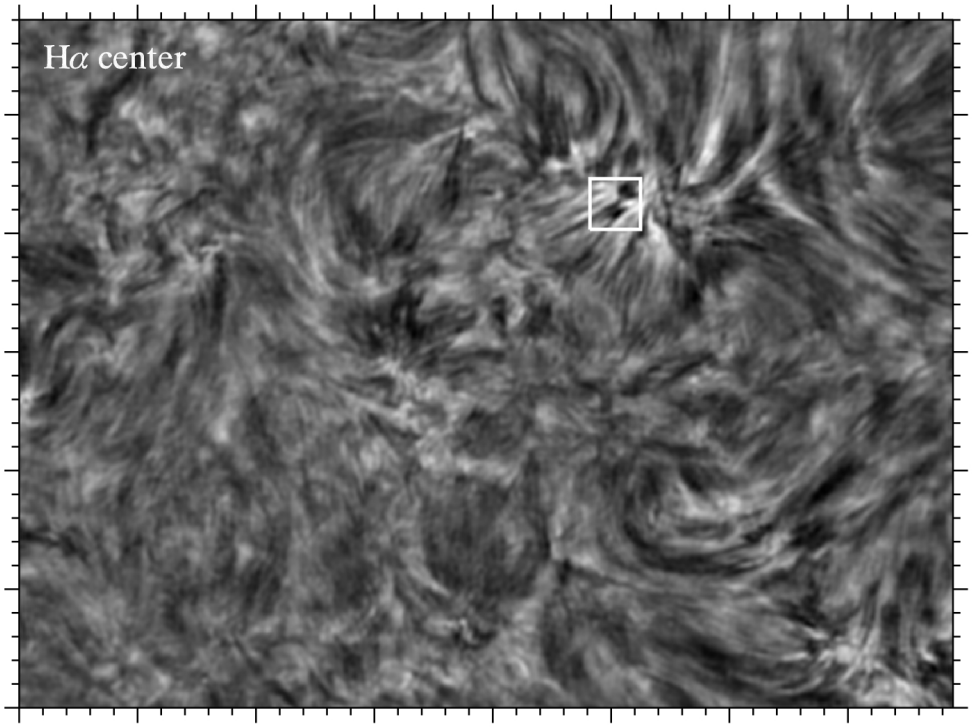
  Spectral characteristics of a bright network element observed in Hα and Ca II H

- main messages:

  1. Hα core width – Dopplershift correlation
     - contrary to spatial averages presented in CAOSP 2:
       - demonstrated by pixel-to-pixel scatter plots
       - computed by the Gaussian fit and the reference intensity a la Cauzzi et al. (not done yet)
     - similar correlation was observed in the past in the transition-region line C IV
  2. Hα core width – asymmetry correlation
  3. Hα asymmetry – Dopplershift correlation

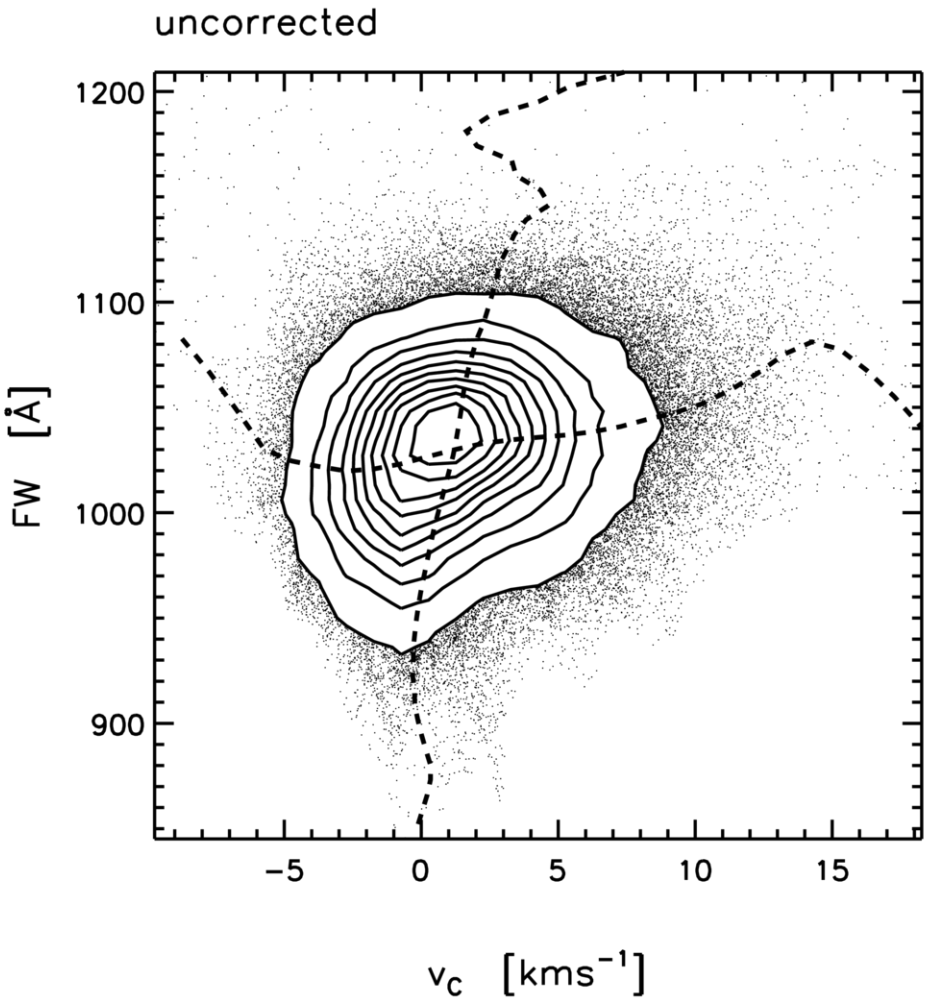
Selected bright network element

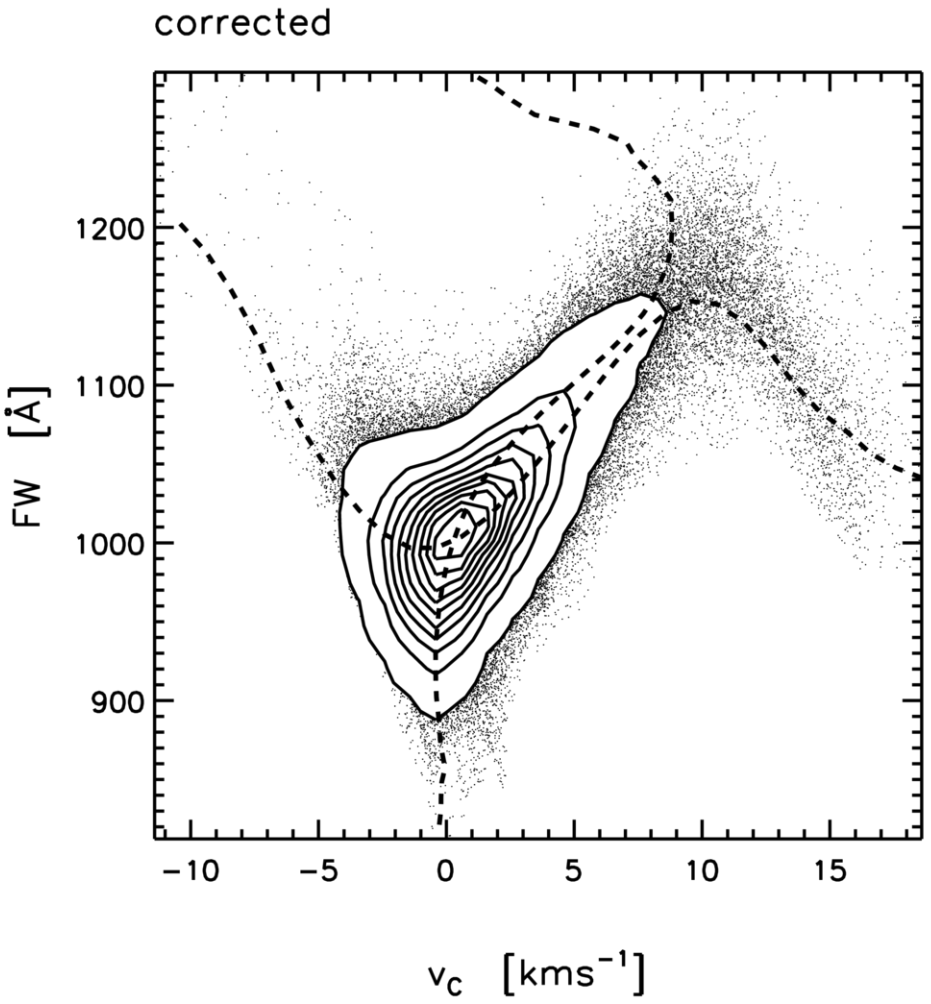




Filtered images with the cutoff 7 kms^{-1}

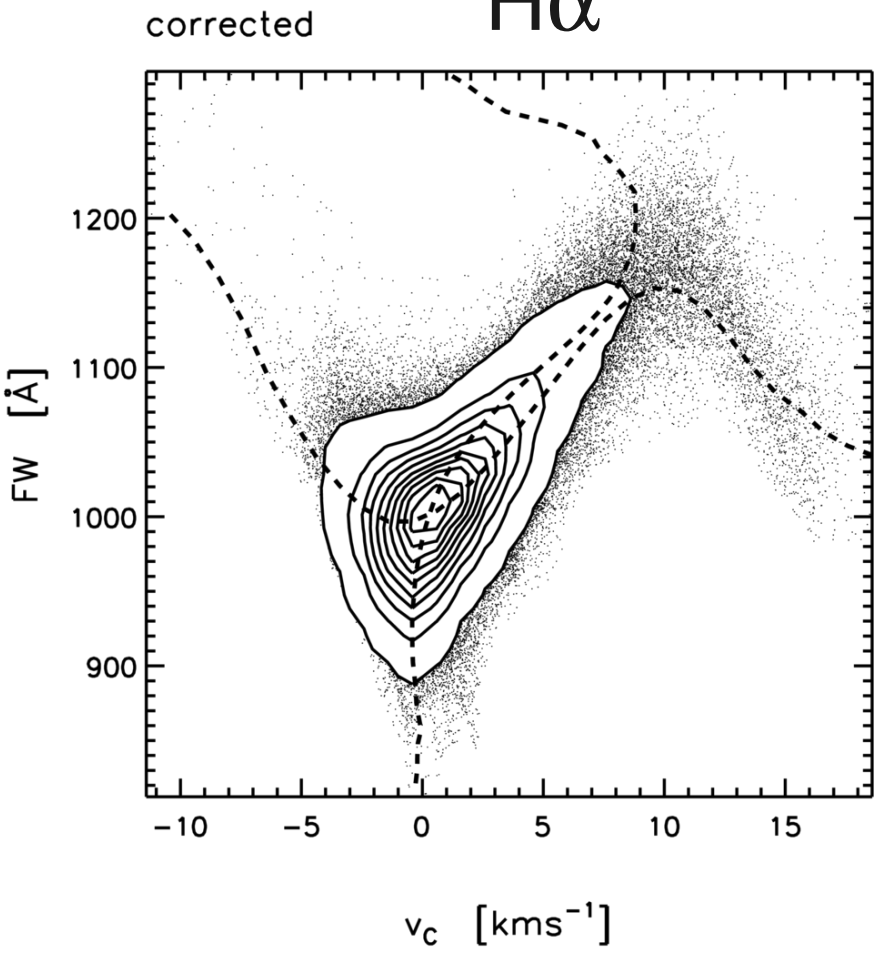
the spectral characteristics inferred by the 4^{th} order polynomial



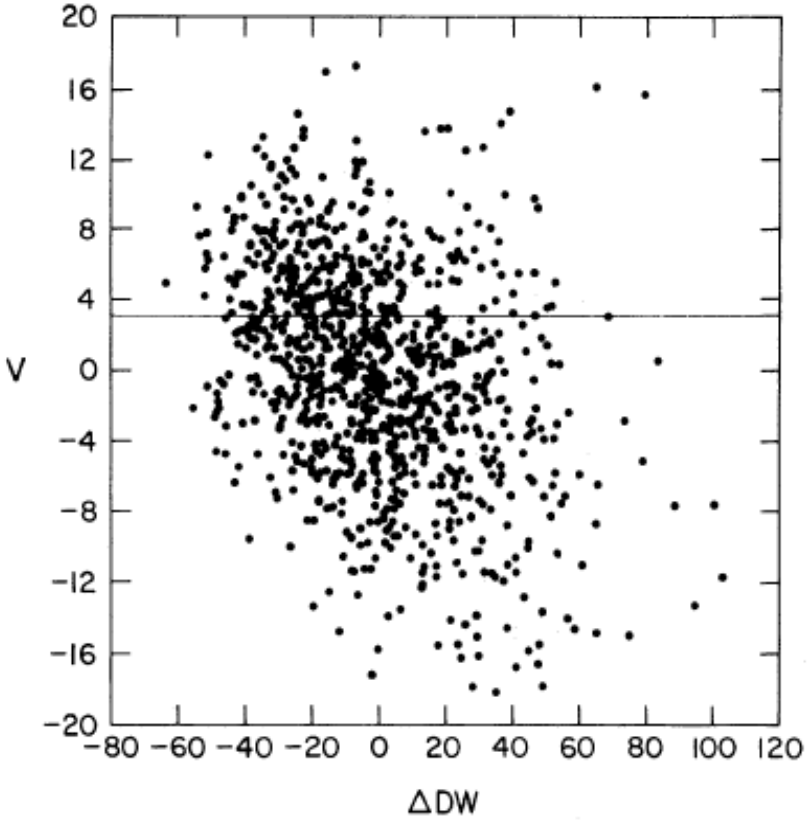


Chromosphere – transition region connection ?

Hα



C IV

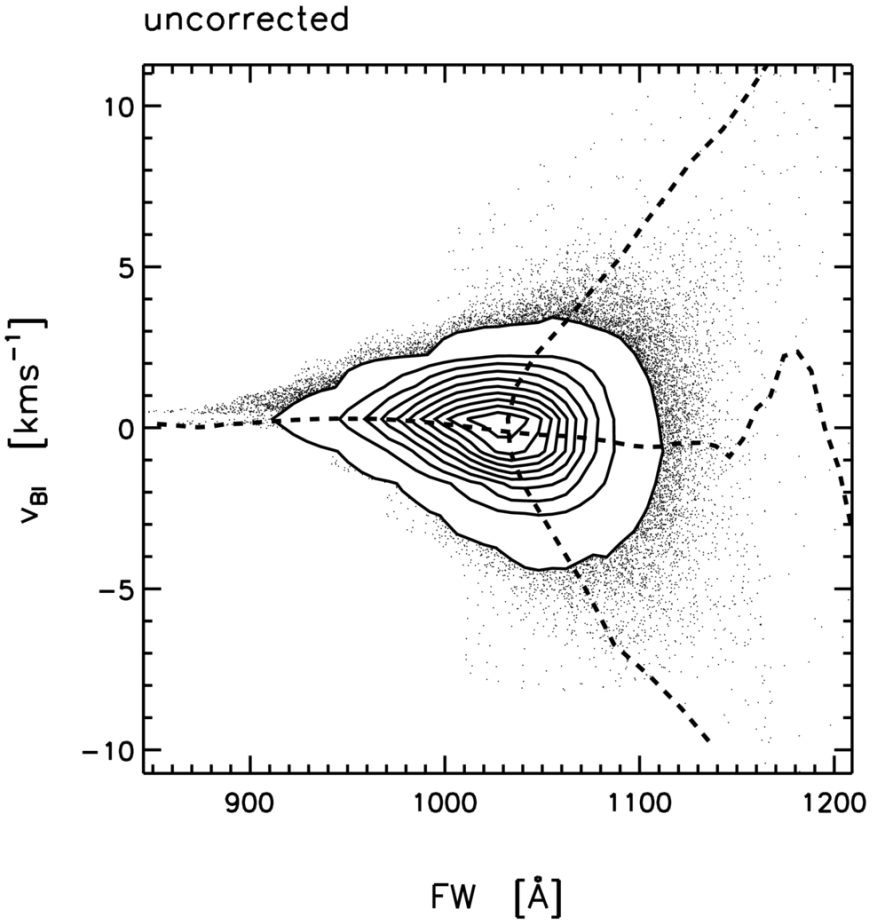


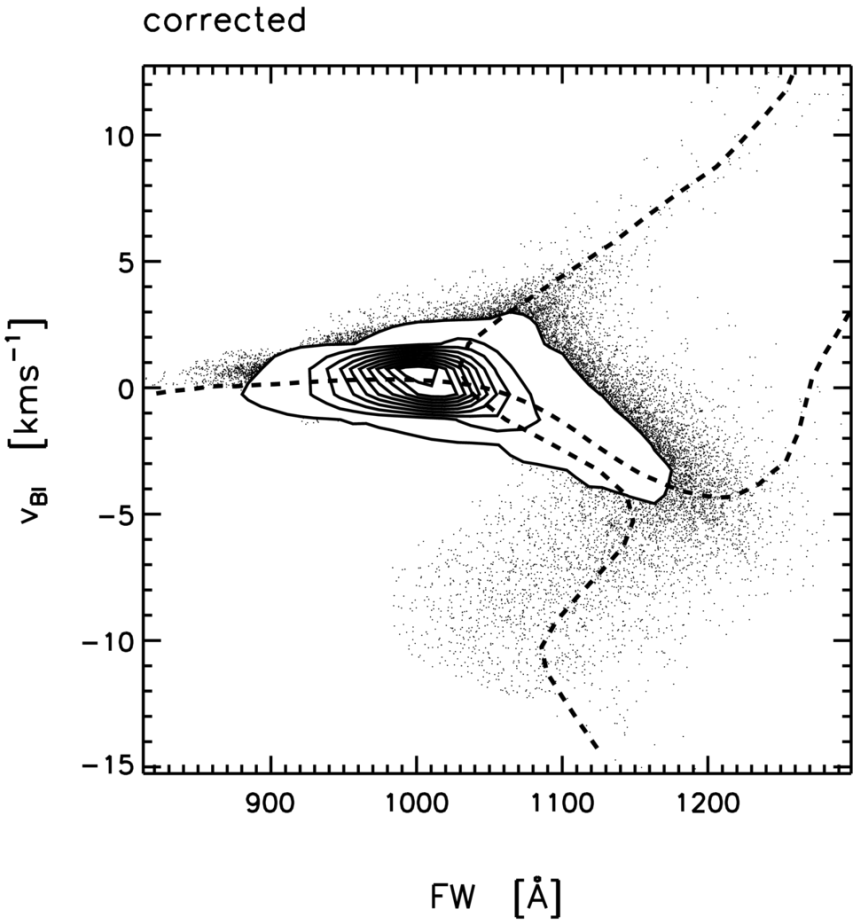
Athay et al. 1983, ApJ, 265, 519

Fluid motions in the solar chromosphere-corona transition region.
I - Line widths and Doppler shifts for C IV

Filtered images with the cutoff 7 kms^{-1}

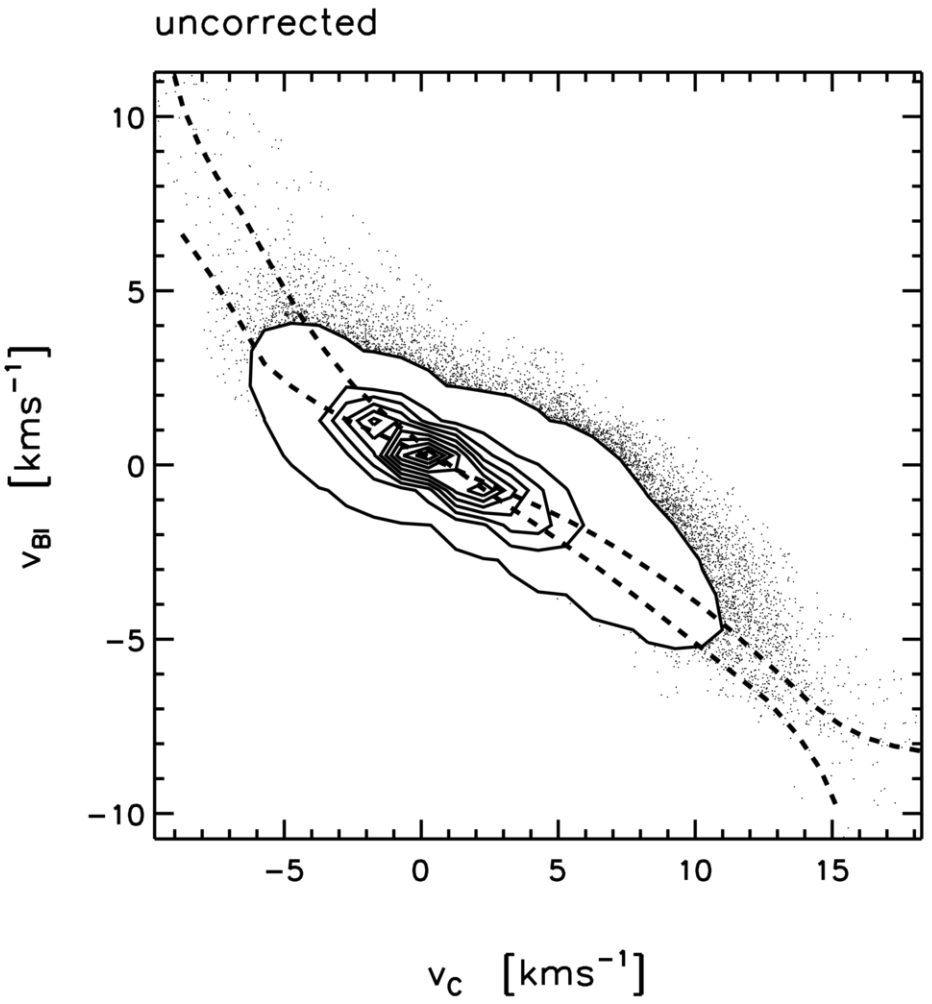
the spectral characteristics inferred by the 4th order polynomial

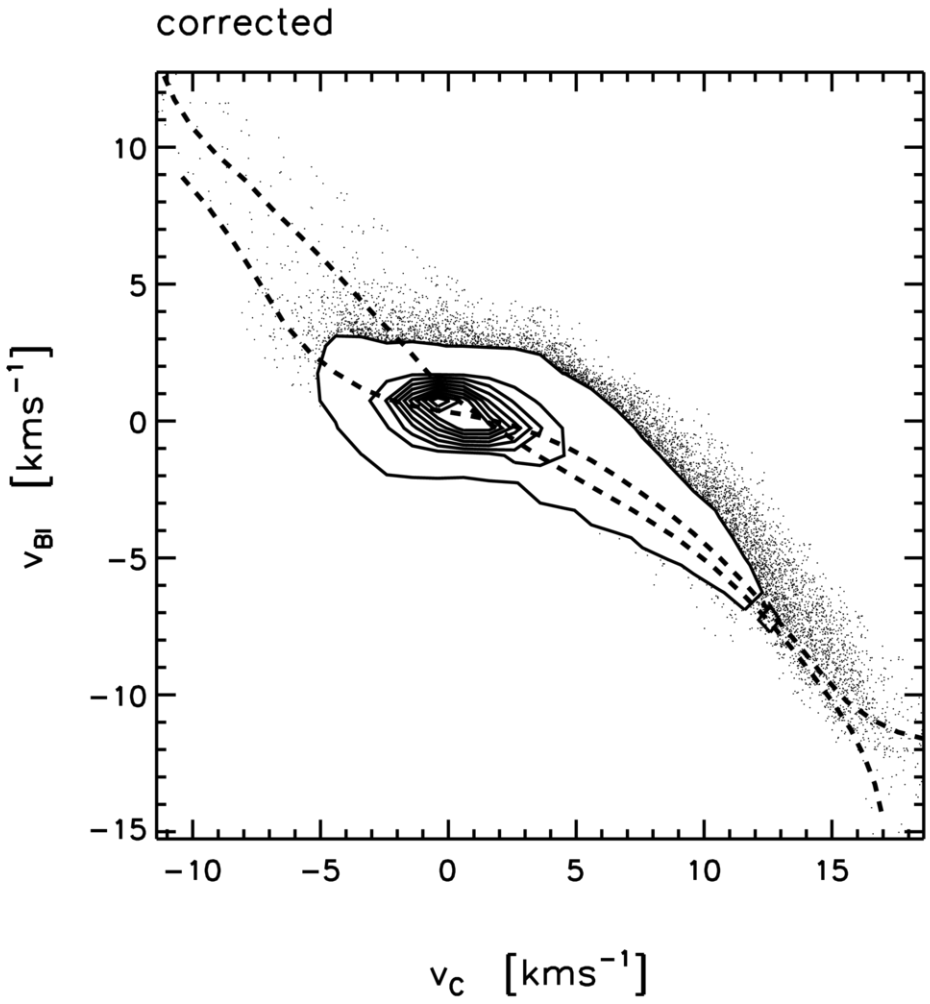




Filtered images with the cutoff 7 kms^{-1}

the spectral characteristics inferred by the 4^{th} order polynomial





It is desirable to check the correlations:

fit width (Gf) – Dopplershift (Gf)
fit width (Gf) – asymmetry (polynomial)
asymmetry (polynomial) – Dopplershift (Gf)

by the Gaussian fit (Gf) and the definition of the reference intensity a la Cauzzi et al. (2009).

Astronomy & Astrophysics

- suggested title:

  DOT tomography of the solar atmosphere VIII.
  Spectral characteristics of the chromospheric network

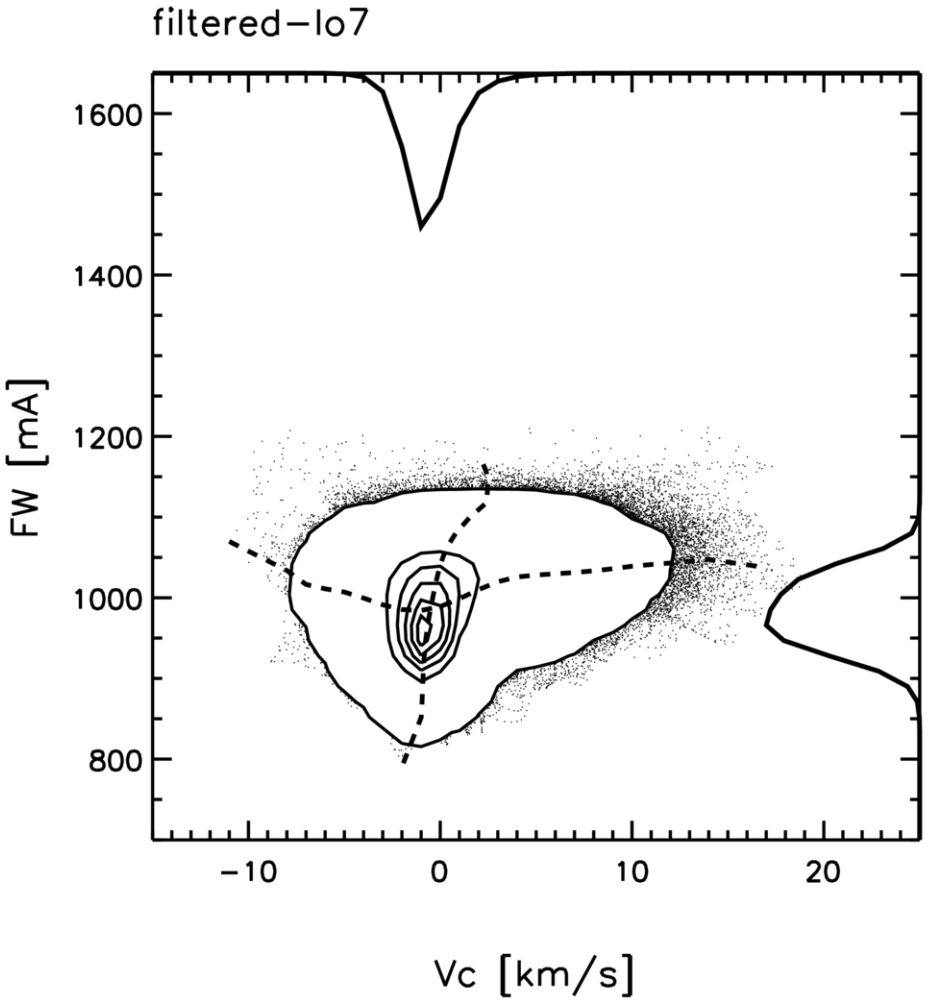
- main messages:

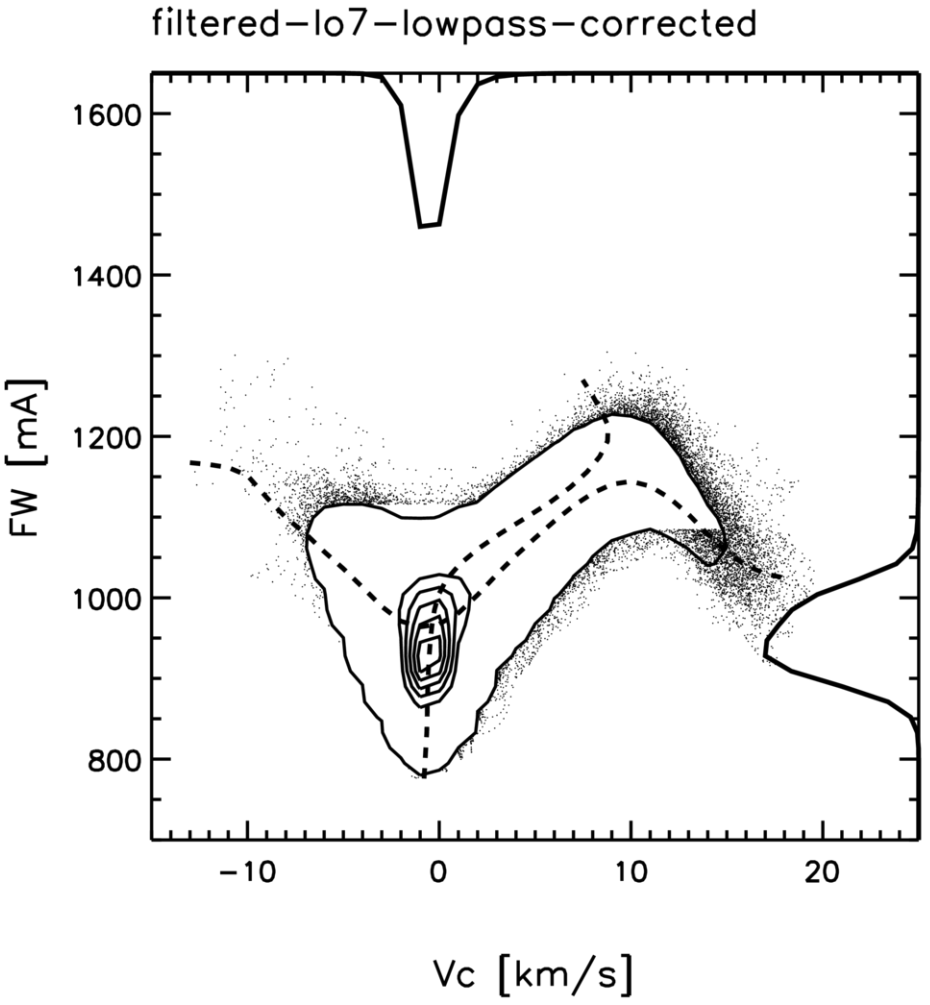
  1. Hα line width – Dopplershift correlation
     - demonstrated by pixel-to-pixel scatter plot of data from the whole network contrary to SolPhys and CAOSP 2
     - an independent observation of the correlation in the IBIS data (Cauzzi et al. 2009, A&A, 503, 577)
  2. Hα core width – asymmetry correlation
  3. Hα asymmetry – Dopplershift correlation

An attempt for interpretation with the help of H. Uietenbroek and R. Rutten.

Filtered images with the cutoff 7 kms^{-1}

the spectral characteristics inferred by the 4^{th} order polynomial

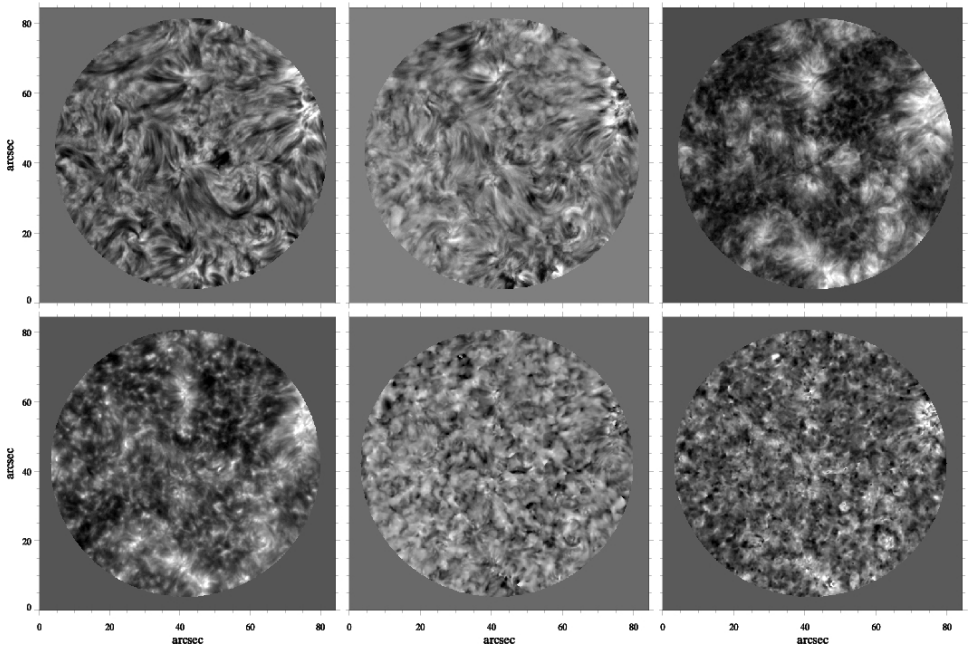


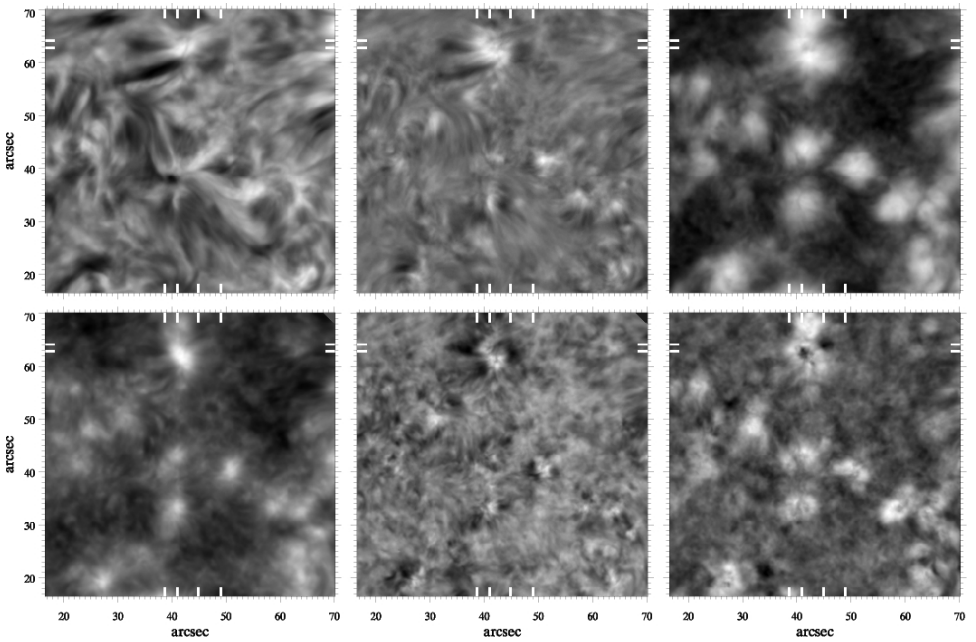


No network / internetwork separation yet.

The solar chromosphere at high resolution with IBIS
IV. Dual-line evidence of heating in chromospheric network

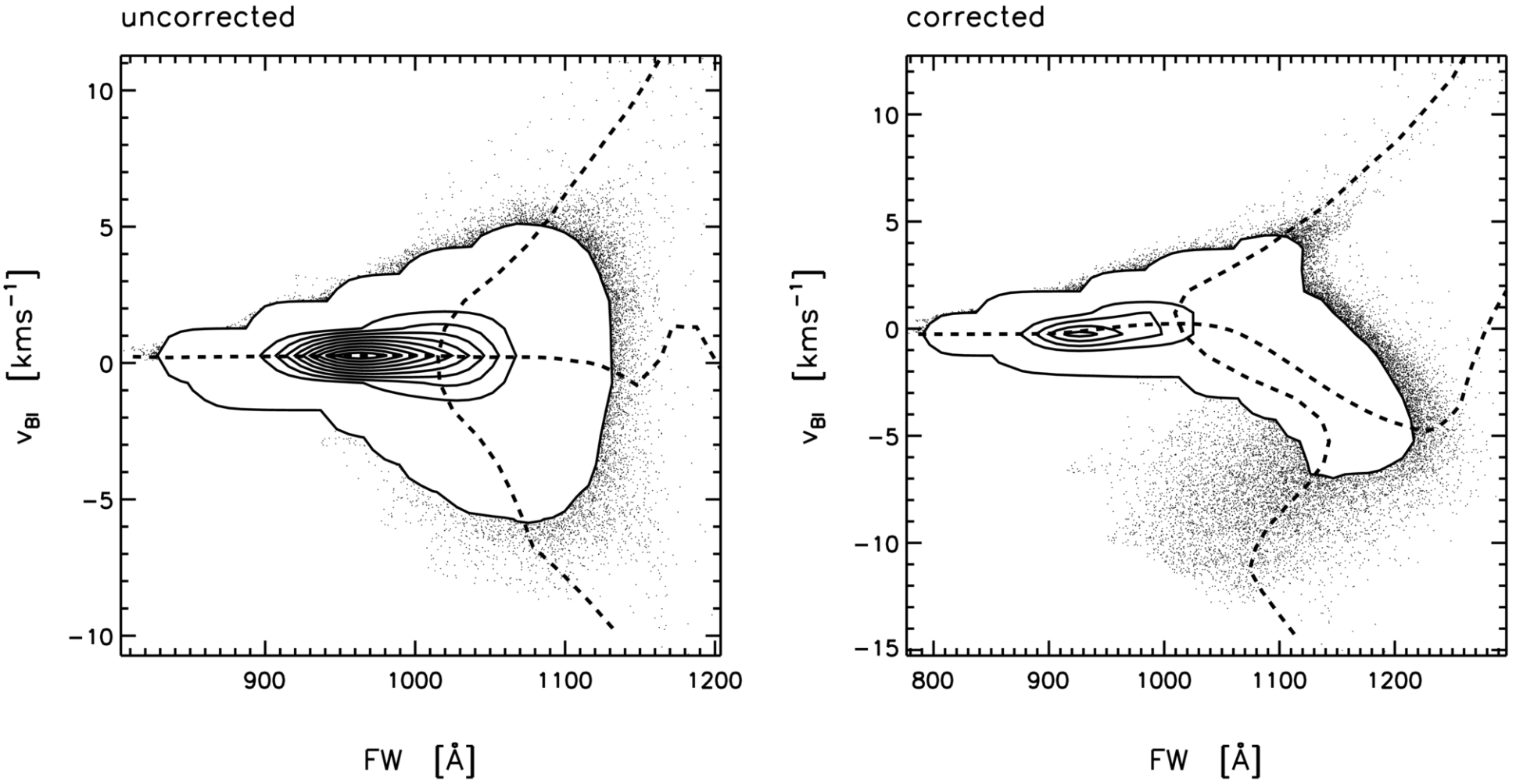
Cauzzi et al. 2009, A&A, 503, 577





Filtered images with the cutoff 7 kms^{-1}

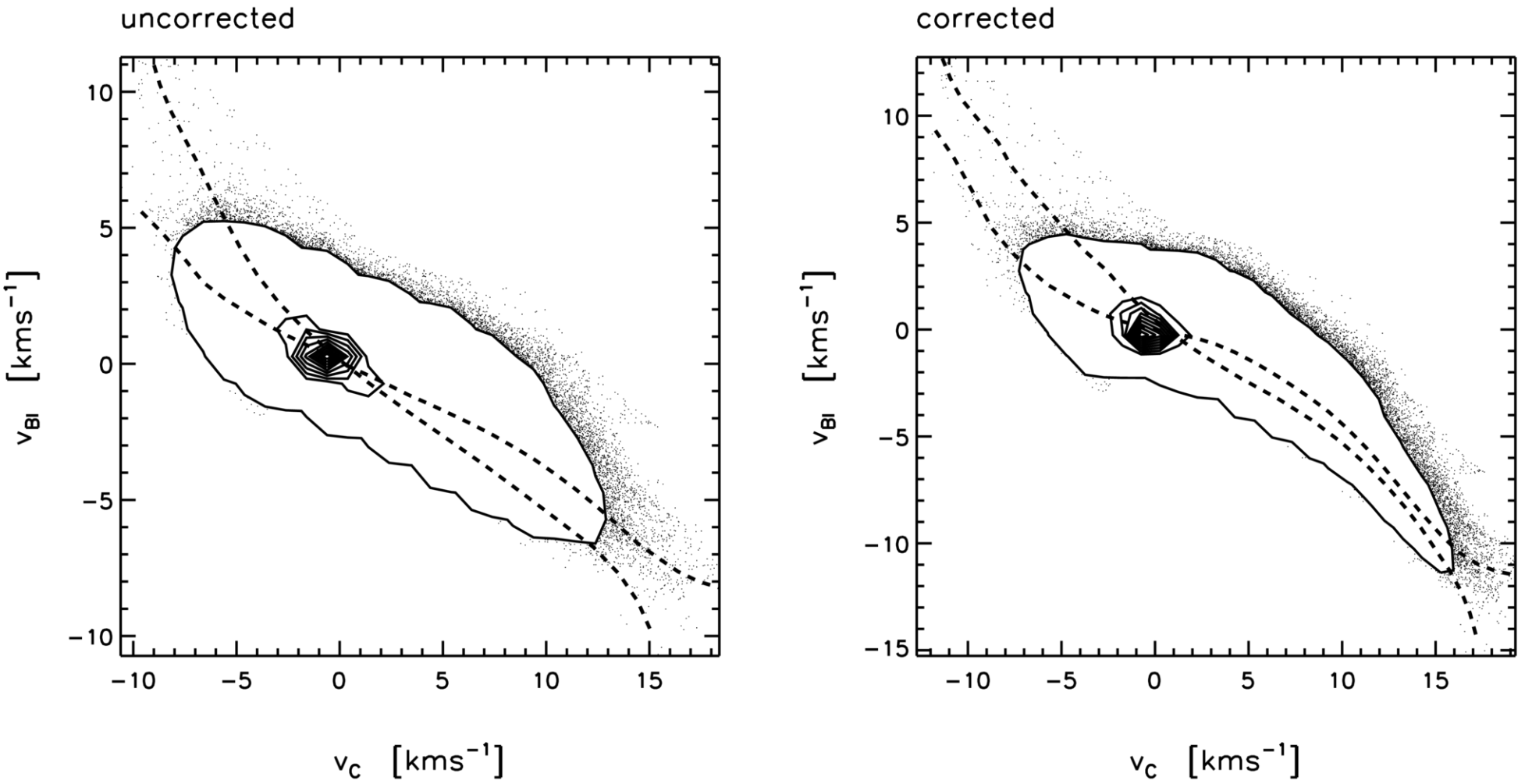
the spectral characteristics inferred by the 4th order polynomial



No network / internetwork separation yet.

Filtered images with the cutoff 7 kms^{-1}

the spectral characteristics inferred by the 4th order polynomial



No network / internetwork separation yet.

Hα dynamic fibrils