

3 modern Observations and to come

Using the modern detectors (CCD), observations free of all atmospheric effects of agitation, distortion and disturbances of the images, as it is possible to make it in space, and finally with the data-processing treatment of sequence of images, it is clear that enormous projections are to be waited in the years to come in the study from the chromosphere. This also results from the possibility of using matrices of detectors (CCD) sensitive and perfectly linear which are well adapted to space. To start, they are the observations of the whole disc which require the development of an instrument of modest size (10 kg; 400 mm length approximately) and thus a very reasonable investment.

One of the first application will be the measurement of so significant solar variability in the context of the study of the influence of the Sun on the climate of the Earth. It is about a vast subject which only has would deserve a space mission to it !

Moreover, the images treated by subtraction will show the phenomena of coronal origin of fast waves (Moreton and others) which are propagating close to surface and produce a signature on the structures of the chromosphere.

Can be even more significant, it will be possible to detect the eruption of protuberances and abrupt disappearances of filaments with a great sensitivity and to undoubtedly detect phenomena associated with instabilities coronal and obviously the CME.

The chromospheric magnetograms of the whole disc will be very invaluable to specify the fields in the corona, associated to the fields already measured in photosphere. It is about almost all the problems related to the predictions on the solar activity and there still, the applications are enormous.

A prototype of instrument is currently being studied with the IAP (S. Koutchmy, J Vilinga); another is in the course of definition with the Pic du Midi Obs. (J-C Noens and coll). The essence will be developed with the team of A. Adjabshirizadeh (Univ. de Tabriz) and that of S. Kuzin (Lebedev-Moscow Institute).