

## **Plumes Seen In The Ultraviolet**

## LUCA TERIACA

## Max Planck Institut für Sonnensystemforschung, Max Planck Str. 5, 37191 Katlenburg-Lindau, Germany

Polar plumes are the most prominent phenomenon characterising the large coronal holes present on the Sun around its activity minimum. These structures have long been known from visible light observations during eclipses. However, the knowledge of their physical parameters has been boosted by the advent of space observations since most of the transitions arising from ions formed at coronal temperatures fall at VUV (Vacuum UltraViolet: 16 nm – 160 nm) wavelengths. The availability of narrow-band images and, in particular, of high resolution spectra has allowed the use of spectroscopic diagnostics to determine fundamental parameters such as the electron density, temperature and chemical composition of the plumes and of the background interplume regions. Moreover, the study of the line profiles gives further insights on the mechanisms responsible for the heating of the corona and the acceleration of the fast solar wind.

In particular these observations are important to the attempt of determining whether the fast wind, known to originate from coronal holes [1], arises from the plumes or from the dark interplume regions. Here, I review the status of our knowledge of plumes and interplumes as inferred from VUV observations, with some emphasis on the problem of understanding which structures may be responsible for the acceleration of the fast solar wind.

Keywords: Sun, UV radiation, Coronal Plumes.

## References

[1] A. S. Krieger, A. F. Timothy, and E. C. Roelof, Sol. Phys. 29, 505 (1973)