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Decimetric fine structures and time evolution of the 6th June 2000 solar flare

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For the detailed study of the evolution of intense solar flares and of the occurrence of fine structures in high decimetric frequencies (1000-2000 MHz) it is required solar observations with high temporal and spectral resolution and also over a large range of frequency. In this work we analyze the temporal evolution and the global behavior of the 06 June, 2000 (15:00-17:00 UT) solar flare, associated with the active region 9026 and classified as X2.3. It is emphasized the identification and evolution of the decimetric fine structures (in time and frequency) recorded by the Brazilian Solar Spectroscope (BSS) during the flare. The related solar activity to this flare was very great. The Ondrejov Observatory recorded radio emission up to 4.5 GHz. SOHO Satellite recorded a series of solar eruptions, including a full-halo Coronal Mass Ejection (CME) (15:54 UT). Type II and IV bursts had also been recorded. In the decimetric band, this event presented two distinct peaks (15:21 UT and 16:42 UT). The first peak coincides with the flare recorded in soft X-rays (GOES) and hard X-rays (Yohkoh). The dynamic spectra with high resolution of the BSS had disclosed some fine structures, mainly type "zebra" and "fiber" emissions, radio pulsations, type III bursts and of the unique case of harmonic "zebra" emissions in the decimetric band reported. The characteristics of each kind of fine structures and their occurrence in respect of the global evolution of the flares will be presented and discussed.

Keywords: **solar flares, radio radiation, decimetric fine structures**

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