



Wavelet analysis of solar decimeter spikes

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The Brazilian Solar Spectroscope (BSS), in operation at INPE, Brazil, have recorded a group of radio spikes observed on June 24, 1999 (16:53 - 16: 56 UT), in the decimeter frequency range of 1000-2500 MHz, with high temporal resolution of 100 ms and spectral resolution of 10 MHz. This event presents distinct clusters of spikes with intermittent behavior. The spectral and temporal behaviors of the observed groups of spikes of radio were investigated, applying wavelet techniques, which permits to determine the cadence of the clusters. From the dynamic spectra, the following observational parameters were determined: the total duration of the event and of each cluster, the total frequency band and cluster bands, in the case of the harmonic structures. The wavelet analysis shows an average periodicity of about 17 seconds (and harmonics) for the cadence of intermittent clusters of spikes. The analysis also suggested a semi-harmonic frequency ratio of 1:1.2. The same methodology of analysis is being applied to other selected groups of spikes recorded by BSS. These results will be presented and discussed.