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Pre-flare decimetric fine structures

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The Brazilian Solar Spectroscop (BSS) is operating at INPE, in the frequency range of (1000-2500) MHz, with high frequency and time resolution, and having 25 up to 100 digital channels. With this instrument, we have carried out solar observations for last ten years. >From 1999 to 2002, BSS have recorded various types of decimetric fine structures associated with pre-flare phase of many solar flares. Fine structures are typically having frequency range and total durations up to the frequency and time resolutions of the BSS, i.e. up to 5 MHz and 20 milliseconds, respectively. The observed flux density values are above 10 sfu. Their frequency drift range varies from almost zero to maximum up to the limit of the BSS. The most important types of fine structures observed are the intermittent chains of fast drifting, narrow-band and small duration fine structures. They are drifting towards either lower or higher frequencies with slow rates typically of about of 100 MHz s⁻¹. Total duration of these drifting fine structures is couple of minutes. The main characteristics of different types of pre-flare fine structures and the details of the chains of the fine structures were obtained and will be presented.

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