

TURBULENT PARTICLE ACCELERATION IN LARGE SOLAR FLARES

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Gamma ray observations in some solar events of large extension or long duration are still in need of adequate theoretical interpretation. In particular, to account for the gamma-ray emission at late stage of large solar events, one of the suggestions is that particles are accelerated at the source for rather long times. On the other hand, there are some evidence of that metric radio wave emission after large (complex) solar events is due to the particles accelerated in the low corona. In this paper, we obtain the power density spectra (PDS) of the metric radio emission for the events of 29 September 1989 and 15 June 1991. Those spectra are assumed to represent the spectrum of the MHD turbulence in the low corona. We then introduce them in the equations for the stochastic acceleration of ambient coronal particles. We make numerical calculations of an initial particle energy distribution and obtain preliminary results which indicate the presence of particles with sufficiently large energies to produce the gamma-ray emission observed at late stages of large solar events.