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# Spatio temporal flares correlations from SIDC flare catalog

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We compute flares waiting time distribution using Parzen-Rosenblatt method and two years of data from a flare catalog that was built at the Solar Influences Data analysis Center (SIDC) of the Royal Observatory of Belgium based on the SEC/NOAA daily events lists. This catalog includes smaller flares than the 'solarsoft' one used in a previous study [Lepreti et al. 2001, 2003]. For the solarsoft list, we have found power-law or exponential distributions, depending on the definition of waiting times, in qualitative and quantative agreement with Wheatland et al. 1998; Lepreti et al. 2001, 2003, Buchlin et al, 2004. However for SIDC database, the type of distribution is much less sensitive on waiting times definition. PDFs have heavy tails with an approximately power-law decay, but characteristic times are present also. We compare these distributions with the waiting time distributions from a lattice coronal heating model with the different scales of magnetic driving and using different type of current sheet dissipation [Krasnoselskikh et al. 2002, Podladchikova et al. 2003].