



Electric discharges in the atmosphere: an extreme value analysis

S. Vannitsem (1) and C. Nicolis (1)

Institut Royal Météorologique de Belgique, Brussels, (svn@oma.be, cnicolis@oma.be).

Electric discharges in the atmosphere can be viewed as extreme events in the sense that their occurrence implies that the value of the relevant variables have crossed some threshold. In this communication, the data collected from the Belgian SAFIR observation system are analysed in this perspective. It is shown that some basic features, such as the probability distribution of the time intervals between successive lightning discharges, can be accounted for by a simple analytic model of the normal form of a dynamical system undergoing a limit point bifurcation and forced by a Gaussian white noise.