Dynamic evolution of proton pitch angle distributions due to wave-particle interactions during geomagnetic storms

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The equation of pitch angle diffusion is offered, which also allows to model change of pitch angle distribution from time and due to wave-particle interactions. Two examples are presented. The first example is evolution of pitch angle distribution of protons during a typical moderate magnetic storm. The second example is evolution of pitch angle distribution of protons during the 2 - 7 May 1998 storm. The received results are compared among themselves and to results of other works.