Geophysical Research Abstracts, Vol. 7, 07815, 2005 SRef-ID: 1607-7962/gra/EGU05-A-07815 © European Geosciences Union 2005



Characteristics of the EISCAT radar meteor echoes

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We present results from recent high resolution meteor observations conducted with the EISCAT 930 MHz UHF tristatic and 230 MHz VHF radar systems, located in northern Scandinavia. Some echoes contain peculiar pulsations in received power, which may be a sign of a modulation in the meteor ionisation process. The UHF system is used to determine the absolute geocentric velocities for meteoroids detected by all three receivers simultaneously. In these cases, precise radiant information and orbits of the meteoroids can be obtained. These orbit determinations will give initial conditions for simulating the solar system dust cloud and/or give hints of the origin of interstellar dust. Tristatic data and examples of different types of echoes are presented.