Geophysical Research Abstracts, Vol. 9, 02500, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-02500

A Lightning Data Comparison Campaign, with Locations Produced by Two Different Detection Network in Central Europe: LAMPINET and LINET.

D. Biron (1), L. De Leonibus (2), H. D. Betz (3), C. Giorgi (4)

(1) Centro Nazionale di Meteorologia e Climatologia Aeronautica, Pratica di Mare, Italy.

(2) Ufficio Generale Spazio Aereo e Meteorologia, Reparto Meteorologia, Roma, Italy.

(3) Physics Department, University of Munich, Germany.

(4) Compiler of the Study on Ground Based Lightning Network financed by EUMETSAT.

LAMPINET: the Italian Air Force Meteorological Service lightning network, started operations during 2004. The detection network is based on G.A.I.-Vaisala technology, with 15 IMPACT ESP sensors uniformly distributed over the national territory.

LAMPINET network can reach a detection efficiency of 90% and location accuracy of 500 meters all over Italian and surrounding area. Basic requirements, fixed in the concept development phase, were highest reliability, redundancy, scalability, integrability.

LINET: a new lightning network, which uses VLF/LF whit capability of detect both cloud-to-ground and cloud discharges, high detection efficiency with low-current stroke as low as 2 kA, 3D location with altitude report and location accuracy of 150 meters.

LINET has been developed by co-operation group, University of Munich and Now-Cast mobile Inc., and it covers principally Germany and surrounding areas, but in the last month a program of implementation over all Europe has been started.

A comparison campaign was decided in late 2006, within the Study on Ground Based Lightning Network financed by EUMETSAT, to explore current capacity of already exiting ground based lightning network and future lightning observation, both ground and satellite based.

Basic scientific and technical details regarding the comparison campaign on data belonging from the two networks, LAMPINET and LINET, are presented; an analysis on what could be a standard in lightning detection and location has finally done.

biron@meteoam.it

deleonibus@meteoam.it

Hans-Dieter.Betz@Physik.Uni-Muenchen.de

giorgi@sagittario.com