4th International Conference on
Earth Science & Climate Change
June 15 – 17, Melia Alicante Spain

Air ions: influences on microclimate modifications and the interactions with human physiology

Massimo Scalia°, Massimo Sperini°, Vincenzo Valenzi°^ Gualtiero Valeri ^*
°Sez Biomet CIRPS – "La Sapienza", Roma www.cirps.it
° Medical Science Departement Unimeier Milano www.unimeier.it*
^ CIFA www.cifafondation.org

ABSTRACT

The atmospheric electric charge plays an important role both on the climate genesis and on the weather evolution. And it is a parameter to measure air pollution, mainly in confined environment. An high correlation can be shown between the electric conductivity of the low atmosphere and the air ionization, which determines the formation of the microclimate in which the man lives. At the same time, we can exhibit a model that is able to focus on the importance of the amount of positive and negative ions in influencing both the physiological parameters that the behavioral ones in man.

New profiles of research demand new techniques of measurement to improve the results already obtained and to get a better control of the phenomenological aspects; in order to build models or theories that can give a deeper insight of many interaction mechanisms.

The models we are working on, need to be checked by a measure instrument with a higher resolving power, thus we are preparing an advanced electronics device to reveal and measure air ions, their electric current and other important parameters. About this instrument, it will be the "Generation II" of another one, that already got appreciable results in researches performed for all these years: the goal is to improve the general performances; mainly, to reach a resolving power up to a 10 Fenton Ampere current (10^{-5} nA). ,

Bibliography:

- Massimo Scalia, Massimo Sperini e Fabrizio Guidi."*Effetti biologici degli ioni aerei. Misure e Modelli*". Edizioni Andromeda (2014). Roma.
- G. Piccardi *Proceeding du Simposium international sur les relations entre phenomena solaires et terrestres en che mie.phisique en biologie*. 8-9-10 octobre 1958 Bruxelles .
- V.I.Valenzi, G.Monaco, S. Spada, P. Cimaglia, L.Petraccia, S.Palmieri, B. Messina M.Grassi: *Ruolo dei SEP (Skin electric Parameters) nello studio delle meteoropatie*, Annali di Medicina Interna, 2003: 18, 164S - Proceedings Congresso SIMI
- P. Avino, Vincenzo De Lisio, Marcello Grassi, Maria C. Lucchetta, Baldassare Messina, Giorgio Monaco, Luisa Petraccia, Giuseppe Quartieri, Rivka Rosentzwig, Sebastiano Spada, Vincenzo I. Valenzi : *Influence of* a*ir pollution on chronic obstructive respiratory disease: comparison between city Rome) and hillcountry environments and climates.* Annali di Chimica,94,2004, 629-35. by Società chimica Italiana..
- Scalia M. Sperini M. Marinelli F. Valenzi V et al. ***Ioni aeri e salute umana***. Andromeda Editore Roma 2013
- Morabito M, Crisci A, Grifoni D, Orlandini S, Cecchi L, Bacci L, Modesti PA, Gensini GF, Maracchi G."*Winter air-mass-based synoptic climatological approach and hospital admissions for myocardial infarction i*
-