



Contribution ID: 68

Type: talk

Microwave emission from extensive air showers as seen by CROME

Wednesday, 15 February 2012 18:10 (15 minutes)

A measurement of extensive air showers in the microwave range has been considered as a possible successor to current measurement techniques. The CROME (Cosmic Ray Observation via Microwave Emission) experiment consisting of several parabolic antennas measures radiation from the atmosphere in coincidence with air showers detected by the KASCADE-Grande experiment. Nanosecond radio pulses are expected for vertical showers and thus, fast read-out electronics is used. Tens of KASCADE-Grande showers have crossed the field of view of our antennas after one year of data taking. A preliminary limit on microwave emission from air showers is presented.

Primary author: SMIDA, Radomir (Karlsruhe Institute of Technology)

Co-authors: HAUNGS, Andreas (Karlsruhe Institute of Technology); WERNER, Felix (Karlsruhe Institute of Technology); SALAMIDA, Francesco (Universita dell'Aquila and INFN); KLAGES, Hans O. (Karlsruhe Institute of Technology); SCHIELER, Harald (Karlsruhe Institute of Technology); WILCZYNSKI, Henryk (Institute of Nuclear Physics PAN, Cracow); STASIELAK, Jaroslaw (Institute of Nuclear Physics PAN, Cracow); BLUEMER, Johannes (Karlsruhe Institute of Technology); WOCHOLE, Juergen (Karlsruhe Institute of Technology); RAUTENBERG, Julian (Bergische Universität Wuppertal); KAMPERT, Karl-Heinz (Bergische Universität Wuppertal); WEBER, Marc (Karlsruhe Institute of Technology); ROTH, Markus (Karlsruhe Institute of Technology); KLEIFGES, Matthias (Karlsruhe Institut of Technology); RIEGEL, Michael (Karlsruhe Institute of Technology); UNGER, Michael (Karlsruhe Institute of Technology); KRÖMER, Oliver (Karlsruhe Institute of Technology); ENGEL, Ralph (Karlsruhe Institute of Technology); MATHYS, Sebastian (Bergische Universität Wuppertal); HUEGE, Tim (Karlsruhe Institute of Technology)

Presenter: SMIDA, Radomir (Karlsruhe Institute of Technology)

Session Classification: New detection techniques and detector designs