



Contribution ID: 22

Type: not specified

Atmospheric Electric Activity in central Argentina and its relationship with phenomena observed at the Auger Observatory

Wednesday, 13 July 2022 15:00 (30 minutes)

Due to its orography and southern extension, there is a great spatial variability of thunderstorms in Argentina that corresponds to mechanisms of different space-temporal scales. The central area of the country where the Pierre Auger Observatory is located (Mendoza Province, Argentina) presents unique meteorological and geographical conditions that result in a high spatial density of convective storms in a variety of thunderstorm modes that form under the shelter of a unique continental and mesoscale topography.

It is well known that this atmospheric electrical activity (AEA) produces Transient Luminous Events (TLEs) of which elves are the most prominent members of an extraordinary family that includes halos and jetstorms and sprites. Previous studies have indicated that the southern regions of Brazil and northern Argentina are prolific producers of TLEs, which can be observed at the Pierre Auger Observatory by means of the 24 UV telescope of the Fluorescence Detector (FD).

To help to understand which of the dynamic or microphysical processes could act in the formation of these events, we present in this work, the characterization of the AEA of the working area and the most important characteristics at meteorological level.

Primary author: Dr NICORA, Gabriela

Co-authors: Mrs BAISSAC, Daiana (CITEDEF); Mrs BARLE, Florencia (CITEDEF); Mrs BERTONE, Fiorela (SMN); Mrs SOLARI, Florencia (CITEDEF); Mrs VELAZQUEZ, Yasmin (CITEDEF); Mrs VILLAGRAN, Constanza (CITEDEF)

Presenter: Dr NICORA, Gabriela

Session Classification: TLE and atmospheric electricity monitoring