



The definition of both the instrumental and environmental backgrounds in the electromagnetic emissions above seismic regions for CSES satellite

Mirko Piersanti (1), Giulia D'Angelo (2), Piero Diego (3), Igor Bertello (3), Pietro Ubertini (3), and the The CSES-Limadou Collaboration

(1) National Institute of Nuclear Physics, Physics Department - University of Rome "Tor Vergata", Roma, Italy (mirko.piersanti@roma2.infn.it), (2) Department of Mathematics and Physics, University of "Roma Tre", Rome, Italy, (3) Istituto di Astrofisica e Planetologia, Rome, Italy.

To define a background in the electromagnetic emissions above seismic regions, it is necessary to define the statistical distribution of the wave energy in absence of seismic activity. Němec et al. [2008], built a map of electromagnetic emissions containing the statistical description of the intensity of electromagnetic waves obtained from the entire DEMETER satellite data set. Then, they estimated the probability of occurrence of a signal during a seismic event whose intensity results to be different to the background level defined by the map.

For CSES data, we applied a completely the method of Bertello et al. [2018] to determine both the environmental and instrumental background based on ALIF technique [Piersanti et al., 2018]. The results obtained has been compared to the one obtained for DEMETER satellite over L'Aquila seismic region cell.