



OPEN DATA

AUGER OBSERVATORY MAKES 10% OF DATA PUBLIC

The scientific collaboration of the Pierre Auger Observatory has decided to make public 10% of the data recorded using the world's largest cosmic ray detector, which covers an area of approximately 3000 square kilometres in the province of Mendoza, Argentina. The goal is that the data can be used for both scientific research purposes and educational projects by a large and diverse community of users.

The data is a part of all the events selected to obtain the physics results recorded in almost 15 years of operation of the surface detectors, 1600 water tanks that observe the cosmic ray shower when it hits the Earth's surface, and of the 27 fluorescence telescopes distributed around the surface detector grid which, on the other hand, collect the flashes of fluorescence light produced in the air by the charged particles of the shower, thus observing their longitudinal development along the direction of origin. The Observatory's data include raw data, obtained directly from these instruments, as well as data generated from detailed analyses. Sample codes for reading it, derived from those used to obtain the results published by the Collaboration, are released along with the data. Part of the data is routinely shared with other observatories to allow analysis with coverage of the entire celestial sphere and to facilitate multi-messenger studies.

The Pierre Auger Observatory is managed by an international collaboration of over 400 scientists from 18 different countries in which INFN has always played a major role. Italy is participating with groups from the Universities and INFN divisions of Catania, Lecce, Milan, Naples, Rome Tor Vergata, Turin, the Universities of L'Aquila and Palermo, the Polytechnic of Milan, the Gran Sasso National Laboratories, GSSI and with the INAF groups of the Astrophysical Observatory of Turin and the Institute of Space Astrophysics and Cosmic Physics of Palermo.

The data is available at www.auger.org/opendata ■