



CREDO as a portal to the world of real science

To transform an ordinary smartphone into a cosmic ray particle detector and join in the current CREDO recording infrastructure, just download the free CREDO Detector application. After installing and starting it, create your own account and start recording secondary cosmic ray particles. All you need do is leave the smartphone with its camera lens completely covered.

This forms one of the key features of CREDO, the dynamic nature of its infrastructure. All the time, recording devices of various types are being connected to and disconnected from the network of detectors forming this globally distributed cosmic ray particle detector. Due to their sensitivity and efficiency, professional detectors used in various types of scientific observatories form the basis of the CREDO project. However, with an increase in the number of those interested, the segment related to citizen science is starting to play an increasingly important role in the project. This is because anyone can join CREDO's research infrastructure at any time.

Internet-based research projects, using the computing power of a large number of private individuals' computers, have been running for years. CREDO stands out from these in an important way. Participants in the project are not just passive subcontractors processing data collected by someone. Instead, they actively participate in the recording of cosmic ray particles! Here, each smartphone becomes a detector that collects its own set of observational data, shared with other participants of the project. After logging onto the project website you can check how important your own contribution is to the experiment currently underway. In this way, all participants of the CREDO project become co-authors of the scientific publications based on collected data.

The measurements are made more attractive by various competitions. On the CREDO project website there is a team competition called the League of Particle Hunters. (<https://credo.science/lowcyczastek/>). Teams that enter, including large numbers from schools, compete in various 'disciplines', such as the total number of cosmic ray particles detected by a team or the total time spent recording by the team. "We try to show our appreciation of all the people involved in particle detection. Apart from the satisfaction resulting from the possibility of seeing their own names in a scientific publication, we want all participants to feel really involved in the research being conducted," emphasizes Dr. Piotr Homola, the coordinator of CREDO.

The creators of CREDO regularly organize free training sessions and workshops for project participants. Here not only teachers and students, but also interested individuals can learn about the nature of cosmic radiation, the construction of particle detectors, the software for data analysis, ongoing experiments, as well as experiments that are still being prepared for implementation under CREDO.

"CREDO is planned to be the largest detector of cosmic ray particles in the history of science. From the very beginning, we created it with the idea that it would not become just 'our' project. We want CREDO to be YOUR project as well!", stress the physicists from Cracow. "If you want, your smartphone can become a portal to the world of real research for you, allowing you to interact with other science enthusiasts as well as with the scientists involved in the project. Join us. Help us push back the boundaries of human knowledge."