

Cosmic rays and the structure of the universe studied in Cosmic Ray Extremely Distributed Observatory with citizen science

Monday 19 July 2021 18:12 (12 minutes)

Discovering the secrets of invisible cosmic particles and using them to study the structure of the universe is a citizens' initiative supported by the Cosmic Ray Extremely Distributed Observatory (CREDO). The method of operation is the parallel participation in research of all citizens: experienced scientists and people without scientific experience, aiming to the full immersion of all ages, geographic location and disabling factors preventing peoples with functional diversity from participating. For several years, CREDO has been conducting an intensive information campaign (scientific and popularization), thanks to which several thousand people on all continents collect data using free CREDO applications for smartphones (Android and iOS). Moreover, every year in schools in Poland competitions "Particle Hunters" are organized. Since 2020, CREDO has been carrying out activities to make such scientific activities available to the peoples with functional diversity. As an example smartphone applications are updated and activities are planned for the blind and visually impaired. Those are:

1. workshops and presentations on the use of sound to explore and analyze the invisible universe,
2. preparing and organizing people for joint activities supporting the acquisition of fascination with space through action games, educational platforms, selected information programs, creating new tools for discovering the mysteries of the cosmos and developing science about it,
3. organizing and networking an international community of experts in the field of sonification and space sciences. The result of this activity will be larger or smaller social groups or individuals who are increasingly familiar with space sciences, collecting more and more data, participation of non-scientists in scientific publications, popularizing the mainstream of space sciences among people at risk of exclusion.

Keywords

citizen science, Cosmic Ray Extremely Distributed Observatory, functional diversity, CREDO applications for smartphones, Particle Hunters in schools, sonification and space sciences

other Collaboration

Cosmic Ray Extremely Distributed Observatory (CREDO) Collaboration

Collaboration

Subcategory

Outreach and Education

Primary authors: Dr KAMINSKI, Robert (Institute of Nuclear Physics PAS, Cracow); FOR THE CREDO COLLABORATION

Co-author: Mr FIRLA, Janusz

Presenter: Dr KAMINSKI, Robert (Institute of Nuclear Physics PAS, Cracow)

Session Classification: Discussion

Track Classification: Outreach and Education: O & E | Outreach and Education