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## Results from the observations of Forbush decreases by the Extreme Energy Events experiment

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The monitoring of galactic cosmic ray flux decreases is of interest for the understanding of phenomena that occur on the solar corona, as well as on other observable stars. As it is known, they are related to the emission of mass from the star corona and often related to solar flares, even if such relation is not completely understood. The effect on the solar wind directly affects the measured galactic cosmic ray flux on Earth, giving typical flux fluctuations of a few percent on a few days basis. The phenomenon is therefore observable by any apparatus surveying the cosmic ray radiation with a comparable overall accuracy.

The Extreme Energy Events telescope array is an array of 47 tracing detector (growing), each made of three MRPC planes, spread over more than 10 degrees in latitude and 11 in longitude, organized in clusters and single telescope stations. The overall acceptance of the EEE stations allows for a flux rate measurement within the 15-50 particle/s, depending on the set-up, while the timing within different station is driven by the GPS time resolution and it is better than 50 ns.

On November 10, 2015, a flux decrease was observed at the same time by six stations, covering almost the whole latitude and longitude range. Even if the s/n ratio by a single station was between 1 and 3, the averaged observation on the whole set of telescopes gave a  $s/n \sim 4$ , better than what was obtained by OULU monitor. This observation came after other flux decreases observed by EEE.

The observation is promising, in view of the construction of a solar surface phenomena survey, with both high accuracy and low systematics and wide longitude/latitude coverage features.

### Collaboration

– not specified –

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