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The ecological transition of the Extreme Energy Events experiment

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The need of reducing the emission of gases even potentially contributing to the greenhouse effect and climate change has impacted many fields, including scientific research. The Extreme Energy Event collaboration started, already several years ago, a series of tests devoted at finding the ideal replacement of the gases used in the Multigap Resistive Plate Chambers of its network, with other more eco-friendly ones.

After this test phase, successfully concluded with the identification of two very promising binary gas mixtures, data taking has begun with a subset of the telescopes of the EEE network, since January 2022, making of EEE the first experiment in the world completely implemented with MRPCs and running with eco-friendly gas mixtures. Here both results of the tests, and a comparison of the telescope performance measured with the old and the new eco-friendly gas mixtures are presented and discussed.

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