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Education and Outreach Activities in Astroparticle Physics offered by Netzwerk Teilchenwelt

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What are cosmic particles and where do they come from? These are questions which are not only fascinating for scientists. The German education and outreach organization 'Netzwerk Teilchenwelt' offers a large variety of projects and activities to bring the methods and newest results of high energy and astroparticle physics to high school students and teachers. Several experiments with a focus on the latter have been established which can be built and conducted in the classroom. Cloud chambers help students understand basic methods of detecting charged particles. Scintillation detectors as well as small water Cherenkov detectors based on coffee thermos and photomultipliers can be used to measure the flux of secondary particles from cosmic ray induced air showers. These setups enable the students to do their own measurements, e.g. the zenith angle distribution of the flux or the half life of muons.
Additionally students can participate in masterclasses either at schools or organized as international masterclasses, where they can analyze real data from the Pierre Auger Observatory or the IceCube Neutrino Observatory. The talk gives an overview of the different projects and an outlook of activities planned for the near future.

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