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Fostering Curiosity and Learning: The Journey from Tool Development to Practical Education.

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In recent years, Universities and Research institutions have increasingly developed programs and outreach initiatives aimed at making physics and other scientific disciplines accessible and engaging for a broader audience. The primary goal of these initiatives is to stimulate interest in science, promote understanding of fundamental principles of physics, and inspire future generations of scientists.
Concurrently, CAEN, an important INFN spin-off committed to collaboration with the Research World, has also moved in this direction by focusing on student needs. CAEN has developed several modular Educational Kits featuring experiments of varying difficulty levels. All Educational Kits serve as modern and flexible platforms for teaching the fundamentals of Statistics, Particle Detection, and Nuclear Imaging. The main objective of CAEN Educational branch is to inspire students and guide them toward the analysis and comprehension of different physics phenomena using state-of-the-art technologies, instruments, and methods.
With a focus on young students, CAEN has developed dedicated educational kits for applications in environmental radiation, including both cosmic rays and terrestrial radiation. Specifically, to enhance student familiarity with cosmic ray radiation, special educational solutions have been designed: Cosmic Hunter and Detection System Plus.
The Cosmic Hunter is a user-friendly educational kit for cosmic ray detection, consisting of a coincidence module that supplies bias voltage to two scintillating tiles and counts hits produced by muons on each one.
The Detection System Plus is a compact system for cosmic ray detection, serving as both a didactic instrument and an external trigger system for other experimental setups.
Both devices are suitable for high school and university-level physics labs and, specially, serve as valuable tools for introducing individuals to modern physics through explanations of the scientific method via cosmic ray experiments. Indeed, cosmic ray experimental activities enable students to integrate theoretical knowledge with hands-on setup operations, data analysis, and critical synthesis of results.

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