

# An Expository Essay on the Observance of Cosmic Ray Detection and the Phenomenon of Particle Physics

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It's amazing that there are all these particles surrounding us every day, and yet we don't know a lot about most of them. I really didn't know a lot about particle composition, fission, fusion, or cosmic rays until I began reading about it. In this essay, I will do my best to describe what I have learned about cosmic ray detection and particle physics.

First of all, I have learned that cosmic rays are particles from outer space that travel through earth's atmosphere at very high speeds. These rays help to cause the ionization of the very air we breathe. Professor Matthew Jones, a member of QuarkNet, came to our class and tried to explain the intensities of different particles. He also brought a cosmic ray detectors and showed ho There are several cosmic ray detectors around the world that help measure the amount of cosmic rays during a specific amount of time, and the detectors even measure the intensity of the rays coming through the atmosphere. These detectors are very large and require international cooperation in order to fund the research conducted with the detectors.

Secondly, I have learned about the many different types of subatomic particles. I had heard of most of the subatomic particles before, but I never really knew what their function was in the composition of the atom. I learned about the types of interactions between the nucleus and the particles, and I was also amazed that gravitational interactions are the weakest kind of interactions. I figured that since gravity is a strong force on earth it would be a strong subatomic force, but that is not the case. Some of the particles have very general descriptions because they haven't been observed yet.

All in all, it's been fascinating to learn about all of the different theories that surround particles. It's interesting to see how science is trying to figure out the structure of atoms and nuclei. Maybe someday scientists will be able to explain the particles more clearly and finally learn about what makes up the basic building blocks of matter.