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Primary and secondary cosmic ray →

The cosmic radiation incident at the top of the terrestrial atmosphere includes all stable charged particles and nuclei with lifetimes of longer. When discussing the astrophysical origin of cosmic rays, primary cosmic rays are those particles accelerated at astrophysical sources.

And secondaries are those particles interaction of the primaries with interstellar gas. Primary and secondary are used in a different but analogous sense when discussing cosmic ray interaction in the atmosphere. Thus electrons, protons and helium as well as carbon, oxygen, iron and other nuclei synthesized in stars are primaries. Nuclei such as lithium, beryllium and boron (which are not abundant end products of stellar nucleosynthesis) are secondary. Antiprotons and positrons are also in large part secondary.

Apart from particles associated with solar flares, the cosmic radiation comes from outside the solar system.