Study of the effect of seismically-induced geoelectric and geomagnetic fields on secondary particle detection at a LAGO site.s

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Figure: Relative difference of distributions of secondary particles at ground level from regular conditions for showers initiated by a single proton. There is some degree of consistency when looking at the changes in distribution for particles in the electromagnetic component of the shower, Which is most clear for photons. Photons, Electrons and Positron all show high changes at distances closer to the detector Changes in the muonic component appear to lack this consistency and could be attributed to randomness

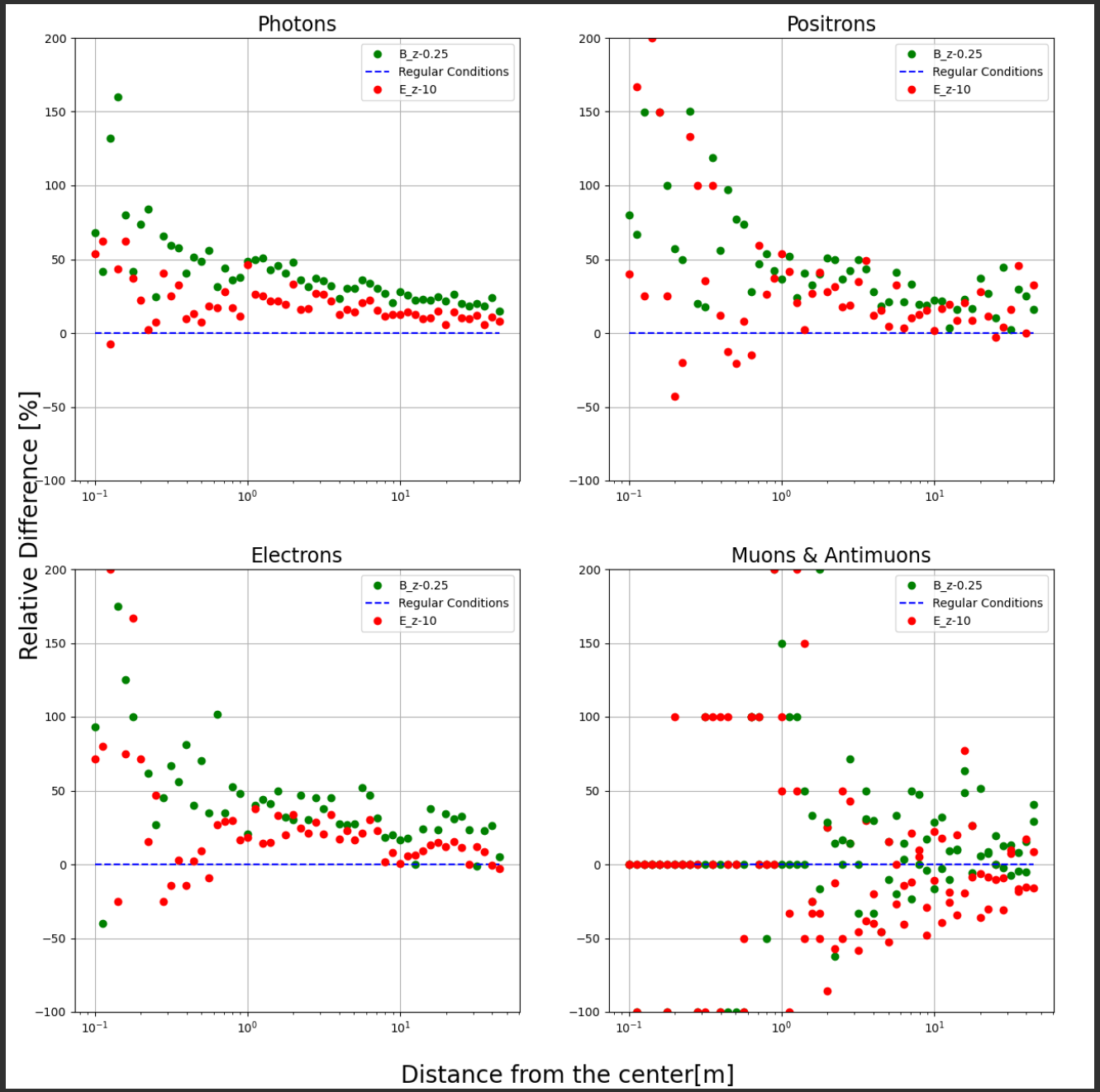

Figure: Relative difference of distributions of secondary particles at ground level from regular conditions for one-hour flux of particles. At distances close to the detector position, there is consistency when looking at the changes in distribution for particles in the electromagnetic component of the shower. The magnetic and electric field change distributions reproduce the different but consistent forms of change for photons, positrons and electrons. Changes in the muonic component appear to lack this consistency and could be attributed to randomness