

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Ground level radiation from cosmic ray shower secondaries ANDREW OVERHOLT, MidAmerica Nazarene University — Most cosmic ray secondaries never reach ground level, however high energy cosmic rays produce muons and neutrons which do. These particles are known to cause increased radiation and cancer rates under current day cosmic ray flux. Episodic increases in the high energy cosmic ray flux increase this radiation, and thus the risk to biological life. Our work models the flux of neutrons and muons produced by high energy cosmic rays, exploring the possibility of biological impact due to extended periods of increase high energy cosmic ray muon flux. Our results find secondary muon radiation to be significant in cosmic ray flux increasing events.

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Date submitted: 04 Jan 2013

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