

SIMULATION OF THE LEPTON SPECTRA MEASURED BY AMS

L. Derome, Yong Liu, and M. Buénerd

Institut des Sciences Nucléaires, IN2P3/CNRS, 53 Av. des Martyrs, 38026, Grenoble cedex, France .

New measurements of particle flux close to earth have been achieved recently by the AMS experiment, providing a body of highly accurate new data on particle populations in the close terrestrial environment. A Monte Carlo simulation has been performed to investigate the origin of the e^+ and e^- fluxes below the geomagnetic cutoff, following the same lines as [?]. It is shown that the populations can be well reproduced only from the physics input to the simulation. The unexpectedly large ratio of the e^+ over e^- flux reported by the AMS experiment appears to be due to the geomagnetic East-West effect.

References

- [1] L. Derome et al., Phys. Lett. B 489(2000)1