Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Research Concerning Detection of Cosmic Rays MAXWELL GRADY, JOHN CUNNINGHAM, Loyola University Chicago, STEVE KUHLMANN, HAL SPINKA, DAVE UNDERWOOD, Argonne National Lab, MARK HAMMERGREN, Adler Planetarium — Throughout my academic career at Loyola I have carried out research with the Loyola University Cosmic Event Detection System concerning the possibility of detection of ultra high energy cosmic rays (UHECRs) based on radio meteor scattering methods. This research was furthered through summer internships and research fellowships at Adler Planetarium Chicago and Stony Brook University in New York. At Adler Planetarium we used a helium balloon carrying a Geiger counter and other equipment to record the cosmic ray flux at various points in the atmosphere. The results clearly show the flux depends on the atmospheric density. At Stony Brook University I studied their advanced system for detecting cosmic rays in similar manner to radio meteor scattering principles. Research there focused on detection algorithms and also on the possibility of utilizing Digital Tv (DTv) signals for further research. Through the research a solid understanding of cosmic rays was formed including topics such as origins and energy scales of cosmic rays, both of which pose unanswered questions.

Maxwell Grady
Loyola University Chicago

Date submitted: 21 Oct 2009 Electronic form version 1.4