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Recent Progress and New Puzzles in Cosmic Ray Physics

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New exciting cosmic ray data have been reported during the last two years. One of the most interesting ones was the report of the Auger collaboration on the correlation with nearby AGN at distances less than 70 Mpc. The correlation is however not seen in the Northern sky by the HiRes collaboration and many questions are asked about it most of them by the Auger collaboration itself. If confirmed the correlation starts the era of cosmic ray astronomy. Other very interesting observations are at the beginning of the high energy cosmic ray spectrum, at energies between 10 and 1000 GeV. Unexpected anisotropy of the cosmic rays of energy above 1000 GeV was reported by the MILAGRO collaboration. The ATIC experiment presented a spectrum of the cosmic ray electrons that has a peak at about 500 GeV when the flux is multiplied by the cube of the energy. The Pamela experiment presented a positron to electron ratio increasing with energy up to 100 GeV. Both results can be interpreted as indirect detection of dark matter although there are other explanations and the two results are not fully consistent. We will discuss the importance of these results and their interpretations and will spend some time pointing at the development of new experimental techniques for cosmic ray observations.