

PLERION AS A SOURCE OF PRIMARY COSMIC RAY ELECTRONS

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The positron production spectrum in the Galaxy is determined and its equilibrium spectrum obtained using the Leaky Box Model. By a comparison of this computed spectrum with observation, propagation parameters are derived. Using these, equilibrium spectra of primary electrons are calculated for various types of source spectra. The spectra and the charge ratio are then compared with observation. It is found that a flat injection powerlaw spectrum consistent with the radio spectrum of the Crab nebula with a spectral break by one power at about 5 GeV reproduces the observations. Implications of result are being examined