SEARCH FOR EXOTIC PARTICLES WITH THE AMS EXPERIMENT

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Two very important open items in modern physics are the existence of Dark Matter and free quarks. A search for slow charged massive particles ($10^4 < m < 10^{10}\ GeV$ and $\beta = 10^{-4} \div 10^{-2}$) and free fractional charges ($q = 2/3e$) among Cosmic Rays has been perfomed with the AMS detector, using a special set of data taken during the first flight of June 1998.
The analysis and the limits on the fluxes of slow moving charged particles ($F_{lux} \leq 1.5 \cdot 10^{-6}\ cm^{-2}s^{-1}sr^{-1}$) and free quarks ($F_{lux} \leq 3.1 \cdot 10^{-6}\ cm^{-2}s^{-1}sr^{-1}$) are presented.