A NEW CALCULATION OF THE INTERSTELLAR SECONDARY COSMIC RAY ANTIPROTONS

A.Molnar(1) and M.Simon(1)
(1) Universität Siegen, 57068 Siegen, Germany

The interstellar antiproton flux produced in cosmic ray interactions with the interstellar gas is calculated within the framework of the Leaky Box Model (LBM) and the Diffusion Halo Model (DHM) including stochastic reacceleration and energy changing due to the nonannihilation process. Results of this calculation will be presented and a comparison with recent measurements of the antiproton flux show a good agreement, thus indicating that the antiprotons are of secondary origin. At low energies there is however a hint of an overabundance of measured antiprotons which can to some extent be interpreted as a result of the reacceleration process.