

THE SPECTRUM OF SECONDARY ANTIPROTONS

R. Sina (1), V. S. Ptuskin (2) and E. S. Seo (1)

(1) IPST, University of Maryland, (2) IZMIRAN, Moscow.

sina@pbar.umd.edu/Fax: 1-301 314 9363

The cosmic-ray antiproton spectrum may be an important tool for understanding and constraining the nature of dark matter and baryon-symmetric cosmological models. Its understanding requires a good theoretical modeling of antiprotons produced as secondary particles in the interactions of high-energy protons and nuclei with interstellar gas. The production rate of antiprotons in cosmic-ray interactions depends on physical and astrophysical parameters whose values have recently been revised and refined. In this paper we describe the wind-diffusion model of antiprotons and discuss uncertainties in the flux calculation.