

SECONDARY ANTIPROTONS IN COSMIC RAYS

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High energy collisions of cosmic ray particles with interstellar gas are believed to be the mechanism producing the majority of cosmic ray antiprotons. Recently new data with large statistics on both low and high energy antiproton flux have become available, and the possibility to launch a probe to measure low energy particles in interstellar space is being discussed. It is therefore important to make a precise calculation of the "background", the flux of cosmic ray secondary antiprotons. We use our 3D Galactic cosmic ray propagation code (GALPROP) to make a new accurate calculation of the antiproton flux resulting from interactions of cosmic ray particles with interstellar matter. We use a steady-state drift model for heliospheric modulation and for comparison with the antiproton flux measurements made during the most recent solar minimum. We explore the sensitivity of the antiproton flux to parameters of the propagation model.