Neutrino Annihilation into Quarks

Cosmic-Ray Anti-Protons From

ABSTRACT

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Introduction

1. Source function for Comisi-Kaye antiprotons

2. Source function for Comisi-Kaye antiprotons

We concentrate on a single PE-WIMP scenario to illustrate the possibilities. The results for the annihilation section at the Earth's surface are similar to those for neutralino-NaI. Then we will present numerical solutions for the production produced by neutralino annihilations. For each observation, we can show, for reasons of astrophysical and astroparticle models, the production for the annihilation section of a given particle model. Due to numerous astrophysical uncertainties, it is impossible to make a precise prediction. However, we can show, for reasons of astrophysical and astroparticle models, the production for the annihilation section of a given particle model. Due to numerous astrophysical uncertainties, it is impossible to make a precise discussion. We concentrate on the new physics contribution. 

2. Source function for Comisi-Kaye antiprotons

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1. Introduction
been discussed previously in the literature [8]. We will use the 'g' function defined in (2.1) to study the problem of the \( \mathrm{g} \) and \( \mathrm{f} \) functions of gmm and fmm, which have been discussed previously in the literature [10]. We will use the \( \mathrm{g} \) function defined in (2.1) to study the problem of the \( \mathrm{g} \) and \( \mathrm{f} \) functions of gmm and fmm, which have been discussed previously in the literature [8].

\[ \frac{d}{dx} \left( \frac{df}{dx} \right) + a = \langle \psi_i \rangle \]

In order to the contrast \( C \) and the normalise the \( \psi \) function, in (2.1) we have used the fact that the \( \psi \) function is a product of \( \chi X \) and \( \psi \) functions. Note that this data includes a contribution from the unmerged data.

\[ \chi X \left( \chi X - \frac{1}{3} \right) \exp\left( -\frac{1}{3} \chi X \right) = (\chi X)^2 \]

\[ \int \chi X \left( \chi X - \frac{1}{3} \right) \exp\left( -\frac{1}{3} \chi X \right) \, d\chi X = \langle \psi_i \rangle \]
\[
(1.2) \quad \left( \frac{f_{w}}{A_{w} Q_{w}} \right) \cdot \left( \frac{f_{u}}{A_{u} Q_{u}} \right) e^{\frac{E}{k}} \times \pi \eta \approx q
\]

and

\[
(2.1) \quad e^{-\frac{E}{k}} \left( \frac{f_{w}}{A_{w} Q_{w}} \right) \cdot \left( \frac{f_{u}}{A_{u} Q_{u}} \right) e^{-\frac{E}{k}} \times \pi \eta \approx q
\]

where \( E \) is the energy of the boson in units of 100 keV, \( q \) is the number density of the target material, and \( \eta \) is the efficiency of the detector.

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\]

is the formula for the suppression of the elastic electron scattering cross section.

In the context of the problem discussed, where \( q \) is the number density of the target material, and \( \eta \) is the efficiency of the detector, the following expression is used to calculate the cross section:

\[
\sigma_{\text{el}} = \sigma_{\text{el}}(\theta) = \frac{1}{2} \pi \left( \frac{f_{w}}{A_{w} Q_{w}} \right) \cdot \left( \frac{f_{u}}{A_{u} Q_{u}} \right) e^{-\frac{E}{k}} \times \pi \eta
\]

where \( \sigma_{\text{el}} \) is the elastic cross section, \( \theta \) is the angle of scattering, \( f_{w} \) and \( f_{u} \) are the fluxes of incident and scattered particles, respectively, \( A_{w} \) and \( A_{u} \) are the masses of incident and scattered particles, respectively, \( Q_{w} \) and \( Q_{u} \) are the interaction cross sections, and \( E \) is the energy of the incident particle.

The formula above is used to calculate the yield of elastic scattering events.

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2. Results for the Observed Spectrum

significant for the resulting compton-effect approximation spectrum.

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The data presented here contains some uncertainties from the physics of collisions and reactions. It would be difficult to use non-relativistic quantum mechanics or standard-field theory to construct a model that would account for the observed spectrum. There is no evidence that the two-proton spectrum is the result of a two-proton reaction. The observed spectrum can be explained by a two-proton former and a two-proton follower. The model described here takes into account these two processes.

4. Discussion

When shown are the current observation upper limits [30]. The dotted line is the expected spectrum of the two-proton yield for a 30-GeV (60-GeV) incident beam. The dotted line is the expected spectrum from standard propagation. The upper (lower) solid curve is the spectrum expected from standard propagation. The dotted curve is the expected spectrum for a 30-GeV (60-GeV) incident beam. The dotted line is the observed spectrum as a function of kinetic energy. The present model of the observed spectrum is consistent with the data.

The results for the non-relativistic two-proton spectra at lower nuclei are shown. The results for the observed two-proton spectrum are consistent with the data. The model described here takes into account these two processes.
References

The existence of particle dark matter

is an important constraint to string-inspired unified theories of the

universe. Therefore, the search for low-energy candidate models provides

a unique opportunity to probe the range of possibilities. One arena, in

which the cold dark matter is likely to be entangled for models where the

neutralino is a non-thermal particle, is the detection of neutralino and antineutralino

annihilation products in collider experiments. In this Letter, we report on recent

reduction of dark matter and its detection, see Procedures of the

Institute of Physics and the National Academy of Sciences.

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We thank E. A. Tarle, P. Reines, and A. Yelis for helpful discussions and

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J. Haggard, K. N. Navarro, and M. Nojiri. "Neutralino

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