

Abstract Submitted
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Dark Matter Scattering of Type Ia Supernovae Radiation DAVID

W. KRAFT, University of Bridgeport — Although more than 75 years have passed since the existence of dark matter was inferred to account for observed motions of stars and galaxies, there is still no firm understanding of its composition or structure. It is proposed here that, in a critical density Universe, a portion of the dark matter consists of baryonic matter in the form of an ionized intergalactic hydrogen plasma. An estimate of the density of this baryonic dark matter is obtained from the atomic abundance of hydrogen and from the observed matter density as inferred from its gravitational effect on visible matter. We apply our hypothesis to study the effect of Thomson scattering by the free electrons in the plasma on the dimming reported for Type Ia supernovae and find that these observations can be accounted for without recourse to cosmic acceleration or jerk.

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