

Abstract Submitted
for the DNP12 Meeting of
The American Physical Society

Is cosmic expansion of the universe accelerating? D.C. CHOUDHURY, Dept. of Physics, Polytechnic Institute of NYU — Currently available Type Ia distant supernovae observed data appear to support the evidence that cosmic expansion of the universe is accelerating. The new concept advanced to account for the acceleration is dark energy, although there has been no laboratory confirmation of it. Hence, the present investigation analyzes the consequences of Thomson scattering on Type Ia supernovae data for two significant reasons; (i) very recently observed data reveal the existence of sufficient amount of ionized baryonic (hydrogen) dark matter in the intergalactic medium, a necessary ingredient for Thomson scattering, and (ii) its effects have not been considered earlier in determining distances to the supernovae from their observed distance moduli. Quantitative results of the present investigation based on observed data and corrected for Thomson scattering are in excellent agreement with the prediction of Hubble expansion of the universe.

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Date submitted: 09 Jul 2012

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