

January 5, 1939  
212 W. Seminary Ave.  
Wheaton, Illinois

Dr. Edwin Hubble  
Mount Wilson Observatory  
Pasadena, California

Dear Dr. Hubble:

I have read and re-read several times your very interesting book on "The Observational Approach to Cosmology". Assuming the red shifts are introduced between the nebulae and the observer in an unknown manner this loss of energy must appear somewhere if the law of conservation of mass and energy holds thruout the universe. The total amount of this lost energy must be quite great in view of the large  $d\lambda/\lambda$  from the ~~large~~ number of faint nebulae. Have you any idea how this energy might manifest itself?

The foot note below Plate VI states the value of  $d\lambda/\lambda$  for the Hydra cluster has not been measured. Recently I have read of this being accomplished but cannot remember where. Perhaps you can give me this information so that I can include it with foot note.

Yours very truly,

  
Grote Reber