Interstellar extinction curves in Orion nebula

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This paper, presents the results of the study of interstellar extinction (absorption+scattering) in the visible to near infrared region (0.45 µm-1<λ-1<2.91 µm-1) based on photometric study of 98 stars in Orion nebula. Absolute visual extinction Av for individual stars for selected stars is deduced by two methods based on the van de Hulst theoretical curve 15 and the empirical formula of Cardelli, Clayton and Mathis.

It has been concluded that the relation Av=1.1 E (V-K) based on the van de Hulst theoretical curve, provides a reliable and simple way to estimate Av for individual stars. The extinction curves which converge to a single functional form in the infrared region (0.45 µm-1<λ-1<1.11 µm-1), are described by a power law with (α=1.834) very well. An empirical relation between Av and color excess E(V-K) has been detected, and then used in determining Av for highly obscured objects.

Biography

Mohammed Azeez Saeed has his expertise in Astronomy, Universe and interstellar dust grains teaching and research. I am working as assistant professor of Meteorology/Astronomy at the College of Basic Education, Salahaddin University-Erbil (SU). Also, I am the Director of the Office of Grants & Academic Projects at Salahaddin University-Erbil.

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