Lecture 6 : Interstellar Medium - Molecular Gas

"The ratio of intensities suggested rotational temperature of 2.3K, which, of course, has a limited meaning." A remark made by Herzberg on the basis of the observations on the molecular spectra of cyanogen (CN), 24 years before the discovery of Cosmic Microwave Background radiation which, we now know, has that characteristic temperature.

Apart from giant clouds of atomic hydrogen, there are also giant clouds of molecular hydrogen in interstellar space. These molecular clouds are the sites of formation of new stars and hence have a special role in the life cycle of the birth and death of stars. This lecture is devoted primarily to an understanding of the various energy levels of simple diatomic molecules, and the resultant radiation from them. The spatial distribution of giant molecular clouds in our Galaxy, as well as other galaxies, is described.

For the advanced -

Lyman Spitzer, Jr., 1978, ***Physical Processes in the Interstellar Medium***, Wiley-Interscience

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