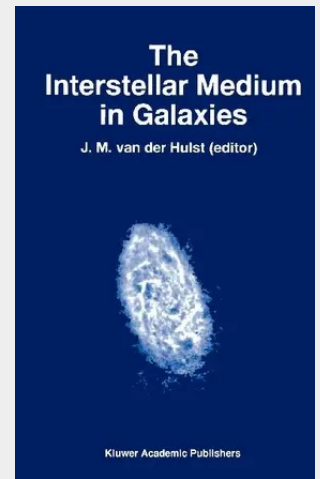


The Interstellar Medium in Galaxies

It has been more than five decades ago that Henk van de Hulst predicted the observability of the 21-cm line of neutral hydrogen (HI). Since then use of the 21-cm line has greatly improved our knowledge in many fields and has been used for galactic structure studies, studies of the interstellar medium (ISM) in the Milky Way and other galaxies, studies of the mass distribution of the Milky Way and other galaxies, studies of spiral structure, studies of high velocity gas in the Milky Way and other galaxies, for measuring distances using the Tully-Fisher relation etc. Regarding studies of the ISM, there have been a number of instrumental developments over the past decade: large CCD's became available on optical telescopes, radio synthesis offered sensitive imaging capabilities, not only in the classical 21-cm HI line but also in the mm-transitions of CO and other molecules, and X-ray imaging capabilities became available to measure the hot component of the ISM. These developments meant that Milky Way was no longer the exclusive playground for ISM studies and that by reaching out to other galaxies astronomy had gained the advantage of having an "outside" view, though at the expense of giving up some linear resolution. Studies of the ISM in other galaxies are intimately connected to studies of the ISM in the Milky Way.

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