

del ambiente de ventanas generado por SUNVIEW, lo cual permite seleccionar en forma interactiva los cuasares del catálogo de Hewitt & Burbidge mediante el ingreso de parámetros α y δ (ascensión recta y declinación), rangos de corrimiento al rojo y magnitud aparente.

Como resultado el software agrupa los cuasares de interés en dos archivos ASCII que contienen la siguiente información: parámetros de búsqueda, posición del cuasar en α y δ , corrimiento al rojo, magnitud aparente índices de color, líneas de emisión y referencias bibliográficas para el objeto. Finalmente es posible modificar los archivos durante la ejecución del programa, imprimirlos y crear un gráfico δ versus α de los objetos seleccionados.

SYSTEMATICS OF SPIRAL GALAXY ROTATION FROM TIDAL TORQUING. COMPARISONS WITH THE DATA

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We discuss the disk galaxy rotation curves expected in the tidal torque theory of angular momentum, in which the protogalactic angular momentum is not universal. If the fraction of dissipative material in a collapsed protogalaxy is approximately 5%, the value suggested by nucleosynthesis constraints if it is a universal constant, the amount of variation expected in the angular momentum (a) leads to rotation curves for bright galaxies whose systematics are much like those pointed out by Casertano & van Gorkom, and (b) the mass inside a "Holmberg" radius of 4.5 disk scale lengths shows a spread of values consistent with observations.

ALFVÉN WAVES IN THE FORMATION OF QUASAR CLOUDS

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The problem of the formation of broad line emitting clouds (BLEC) in quasars has not been resolved. The difficulty is that the BLEC is near the central engine of the quasar which is an intense source of radiation. The ambient region is at a temperature of $\sim 10^8$ K, while the BLEC is at a temperature $\sim 10^4$ K. We suggest that the BLEC are formed by a thermal instability in the presence of Alfvén wave heating. We investigate a heating-cooling function which depends on: line and continuum excitation,

heating and cooling associated with recombination, radiative losses due to resonance transitions in metal ions, thermal bremsstrahlung, Compton heating-cooling, and resonance surface damping of Alfvén waves. We find that a thermal instability exists with this heating-cooling function in the observed range of fluxes of quasars and can explain the existence of the quasar clouds.

MOLECULAR GAS IN FIVE SOUTHERN ACTIVE GALAXIES

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We are mapping southern nearby active and starburst galaxies in the $^{12}\text{CO}(1-0)$ and $^{12}\text{CO}(2-1)$ lines with the 15-m SEST radiotelescope. This is part of an ongoing project to investigate possible peculiarities in the dynamics, content and distribution of the gas which could lead to one or another type of activity, as proposed by some recent models of gas fueling into active galactic nuclei. Large scale stellar bars, rings or closely interacting companions seem to be present in most active galaxies, most probably providing for the mechanism of transport of the gas of the disc into the nuclear or circumnuclear regions. But there must be other relevant parameters in these mechanisms, like the total gas content, given that many of the barred or interacting galaxies do not show enhanced nuclear activity.

The galaxies in our sample were selected for their angular size, morphology and significant FIR luminosity, which is an indication of their activity. All of the galaxies studied happen to have companions, sometimes strongly interacting. We present results for five southern galaxies with different levels of activity, four of which are also barred: NGC 134, IC 1623, NGC 986, IC 2554 and NGC 4027. In the Seyfert-like NGC 134 the CO line is weaker in the center, with more intense and broad profiles around it. The strongly barred starburst galaxies NGC 986 and NGC 4027 show intense and narrow peaks in the nuclear region, and wider lines associated with the bars, with indications of inflow of gas along the bars. In the asymmetric SB(s) dm NGC 4027 the CO total intensity peaks $\sim 20''$ to the north of the optical center, probably better correlated with the H I distribution. The nearby merging galaxy IC 2554, with a Liner nucleus and spread starburst activity, shows strong point-to-point variations in the intensity and ratio of the CO lines. It is a case of enhanced nuclear and extranuclear