

## CHEMICAL EVOLUTION IN SPIRAL AND IRREGULAR GALAXIES

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A brief review of models of chemical evolution of the interstellar medium in our galaxy and other galaxies is presented. These models predict the time variation and radial dependence of chemical composition in the gas as function of the input parameters: initial mass function, stellar birth rate, chemical composition of mass lost by stars during their evolution (yields), and the existence of large scale mass flows, like infall from the halo, outflow to the intergalactic medium or radial flows within a galaxy.

At present there is a considerable wealth of observational data on the composition of HII regions in spiral and irregular galaxies to constrain the models. Comparisons are made between theory and the observed physical conditions. In particular, studies of helium, carbon, nitrogen and oxygen abundances are reviewed.

In many molecular clouds the information we have on the amount of  $H_2$  is derived from the observed CO column density, and a standard CO/ $H_2$  ratio derived for the solar neighborhood. Chemical evolution models and the observed variations in O/H and N/O values, point out to the need to include these results in a CO/ $H_2$  relation that should be, at least, a function of the O/H ratio. This aspect is also discussed.