**AFTER**

The existence of a thick disk in our Galaxy has been known for over thirty years. Then, the existence of such a structure was confirmed in other galaxies. The mechanisms of thick disk formations in galaxies can be subdivided as follows: accretion and collapse of external satellites, intensive star formation in galactic thin disks during early stages of their evolution, and the radial migration of stars from central areas of galaxies due to the resonant interaction with the gravitational field of the central bar. The most frequently discussed accretion model was first proposed by Abadi et al. The researchers suggested that the collapse of accreted satellites led to the formation of a thick disk that primarily consisted of a satellite galaxy substance. A numerical example of this type of accretionary thick disk formation was presented by Tsuchiya et al.

The formation of thick galactic disks due to the accretion and collapse of satellite galaxies is not the only possible mechanism. Thick galactic disks may have formed during an early stage of their evolution due to a turbulent star formation phase in the galaxy or large-scale gas accretion. The stars may migrate from the central areas of galaxies due to the resonant interaction with the gravitational field of either a spiral pattern or a central bar. The higher values of disk velocity dispersion in its central areas would lead to the formation of a large-scale star subsystem in a direction that is perpendicular to the disk plane in the areas with a reduced surface density. Based on the above-mentioned mechanism of thick disk formation in galaxies, an exponential growth of the vertical scale of thick galactic disks is expected. However, this is not observed.

Various mechanisms of thick disk formation in galaxies affect its observed characteristics. A reliable definition of thick disk parameters in our Galaxy would allow us to decide which formation mechanism to favor. Finally, this could shed light on the formation history of our Galaxy.