correspond to the different formation stages. The scenario was constructed by combining two kinds of observational data. One is the knowledge of kinematical characteristics, chemical abundances, and ages of various types of nearby stars. The other is the ones of the overall photometric structure of various types of external galaxies.

However, it has been known that all the nearby stars are not classified into two distinct populations but into some more of intermediate populations. In recent time, we have been accumulating photometric data for number of spiral and other types of galaxies, and they are decomposed into two components of disk and spheroid. However, again, some of the external galaxies are decomposed into three components including intermediate component which is called thick by some investigators.

The characteristics of the intermediate population will give us important key to know the formation process of our Galaxy. Star count data of UBV color bands for a large number of stars in a wide area of sky in high accuracy give a certain quantitative estimation of the intermediate population and metallicity gradient with the distance from the galactic plane.

The intermediate component thus identified has the local normalization factor 2% of the disk stars and scale height 1kpc. The stars of this component contribute 20% of the observed number of stars at $15 \leq V \leq 17$ in the North Galactic Pole region. Metallicity gradient is found to be $d[Fe/H]/dz = -0.5 \pm 0.1 kpc^{-1}$ at $z \leq 2$ kpc in logarithmic scale by assuming the solar abundance in the galactic plane.

Monochromatic Imagery of Galactic and Extragalactic Nebulae with the CFHT Camera

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Hereafter are reported some results of morphological studies of galactic and extragalactic extended sources obtained with the image photon counting system (IPCS) at the Cassegrain focus of the 3.6m Canada-France-Hawaii Telescope (CFHT) on Mauna Kea, Hawaii. The observations were carried out using narrow-bandpass interference filters centered at the H alpha and N II 6583 taking into account the radial velocity of the objects in question. The processing of the data was made using the CDCA software facilities made available at the Laboratoire d'Astronomie Spatiale (LAS-Marseille) based on the same techniques previously described. Thanks to the high spatial resolution combined with the low-level light sensitivity of the IPCS, a faint nebulosity has been detected in H alpha emission surrounding the "double" galaxy I Zw18, spreading towards the two flares already reported by Zwicky. Other results concern the separation in several H II regions inside the nucleus of M101 (NGC 5457), monochromatic observations of NGC 3310 and of two small planetary nebulae, IC 351, and IC 2165. The absolute calibration of the device enables an assessment of fluxes emitted by different objects at the wavelengths under consideration.