

## SWEDISH PROGRAMMES CONCERNING THE Z DISTRIBUTION OF STARS

Tarmo Oja  
Astronomical Observatory, Uppsala, Sweden.

Swedish investigations on stellar space distribution generally are based on the Uppsala - Stockholm spectral classification system. In this system the properties of the stars are derived from objective prism spectra by means of narrow-band photometry. The main criteria are the hydrogen-line intensities, the intensity of the K line, the intensity of the G band, the break at the G band, and the intensity of the blue cyanogen band (for a description of the system see e.g. Ljunggren and Oja, 1961), when possible supplemented by a measure of the Balmer discontinuity (Rydström, 1976). The method yields absolute magnitudes with a dispersion of about  $0^m.6$  and intrinsic colours  $(B-V)_0$  with a mean error below  $0.05$  for most kinds of stars.

Three investigations are relevant to the subject of this Joint Discussion.

Dr T. Elvius (at the Lund Observatory) and his collaborators are investigating the stellar distribution in 52 of Kapteyn's Selected Areas distributed over all latitudes. The aim is to establish the z distribution of stars not only at the position of the sun, but also at some distance from it. Up to now data have been published for 19 areas (Elvius and Lodén, 1960).

A region around the South Galactic Pole is investigated by Eriksson at Uppsala. The excess curve and the z distributions of several groups of stars have been established; the final result will be published very soon.

Häggkvist and Oja are carrying out an investigation towards the North Galactic Pole. Data will be determined for more than 12,000 stars; see e.g. Häggkvist and Oja, 1973.

### References:

- Elvius, T. and Lodén, K. 1960, Stockholm Obs. Ann. 21, N:o 2.  
Häggkvist, L. and Oja, T. 1973, Astron. Astrophys. Suppl. 12, 381.  
Ljunggren, B. and Oja, T. 1961, Uppsala Astr. Obs. Ann. 4, N:o 10.  
Rydström, B. 1976, Uppsala Astr. Obs. Rep. N:o 8.