

THE POLARIZATION DISCOVERY AND INVESTIGATION  
OF T TAU STARS IN BYURAKAN

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The results of the polarization observations of T Tau, RY Tau and of field stars are presented (Fig.1). The ratio  $p/A_v$  for RY Tau is equal to 0.066 and is larger than the same ratio for surrounding field stars. The observed variations of the polarization parameters of T Tau and RY Tau as well as the maximum value of the ratio  $p/A_v$  for RY Tau have permitted already in 1964 to suggest that these stars have intrinsic polarization.

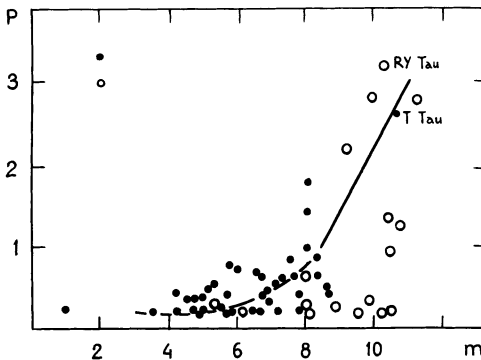


Figure 1. The dependence of the polarization (P) from the brightness (m) for the stars in the regions of T Tau and RY Tau stars.

Then it has been shown, that the directions of axes of cometary nebulae coincides nearly with the plane of polarization of the surrounding stars. This means that these directions for the cometary nebulae are conditioned by general or local galactic magnetic fields.

The electropolarimetric, photometric and spectroscopic observations of stars T Tau, RY Tau, NU Ori are given (Fig. 2), which confirm the existence of the intrinsic polarization and its changes in time.

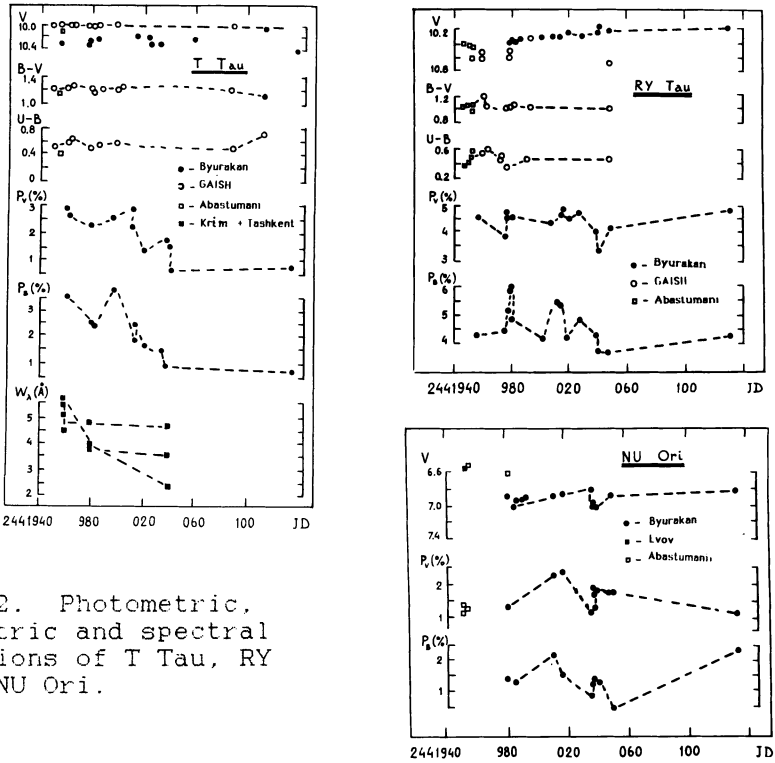


Figure 2. Photometric, polarimetric and spectral observations of T Tau, RY Tau and NU Ori.

At last electropolarimetric observations of stars located in the area between the stars T Tau and RY Tau are carried out (Fig. 3).

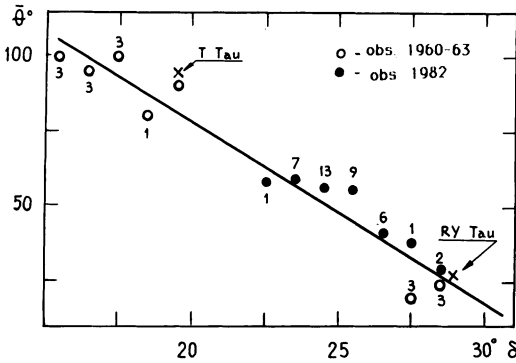


Figure 3. Correlation between the position angle of polarization ( $\theta$ ) and the declination of stars in the regions of T Tau and RY Tau stars.