

SEARCH FOR LARGE RADIAL VELOCITIES IN DIRECTION OF NGP
USING THE FEHRENBACH TECHNIQUES

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The Observatory of Strasbourg will participate in the future in the general radial velocity survey which is in hand at the Observatories of Haute-Provence and of Marseille with FEHRENBACH's Objective-prism astrophotograph. A programme of this type, providing a large number of data, is particularly suitable at the place where the "Data Center" is growing up.

A radial velocity survey is a vast programme which needs many years to be fulfilled. It is natural that one starts with the most interesting areas in the sky, one of them being the area near NGP. In 1976 twenty fields were covered, each by one plate, in that direction. The whole programme covers 70 overlapping fields in an area of 100 square degrees centered at NGP. The limiting magnitude shall be almost the 12th.

The meticulous measurement of the plates gives the radial velocities but a first superficial investigation is sufficient to find out the high velocity stars. That is what we shall do first. An investigation into ABT's catalogue of radial velocities in a wide area around the NGP shows that the rate of the number of high velocity stars (with $|v| > 100$ km/s) to the number of normal stars increases rapidly with the magnitude, getting three times higher for stars fainter than the 10th magnitude than for brighter stars.

In the future, the survey will partially be done with the new devices which are already available at the Observatoire de Haute-Provence: the 60 cm Objective-prism mounted on a Schmidt telescope and the new automatic measuring device called "MESUCOR". The first results obtained by FEHRENBACH and his collaborators with this instrument are very promising, giving better than an accuracy of 7 km/s for the velocities.