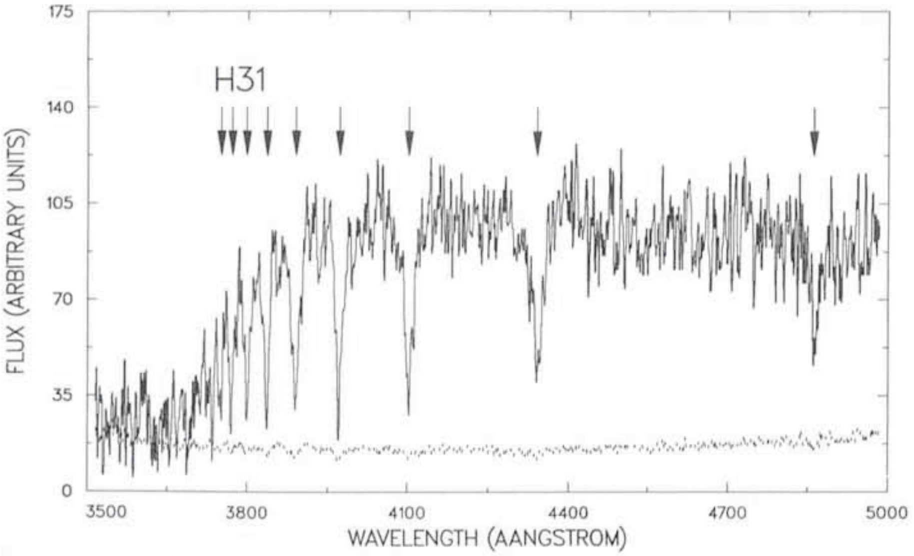

Figure 1: *Part of the spectrum obtained for the bhbf object H31. The full drawn curve is the flux spectrum. The dotted curve shows the 1 σ level due to statistics. The magnitude of the object is V = 18.4, inferring a heliocentric distance of 29.6 kpc. The exposure time was 2,700 sec. The arrows show the positions of the Balmer lines H 10 (3750 Å) to Hβ (4861 Å). The radial velocity of this bhbf star was determined to be 20 ± 20 kms^{-1}.*

3200–5500 Å. The intrinsic resolution of the RPCS detector with this dispersion was ~2.0 Å, but with the 2 arcsec wide slit, the resolution increased to 3.5 Å.

Each object was observed twice, focusing the object in the two decker holes subsequently. He-Ar calibration spectra were obtained after each pair of exposures. Every star which had an A-star type spectrum, and therefore was a potential bhbf star, was exposed until at least 100 (sky-subtracted) counts per channel had accumulated in the continuum in the centre of the array. No (double) exposure lasted more than 3,600 s. We were able to obtain such spectra for bhbf stars as faint as V = 18.7 with this combination of telescope and detector. Such stars are located at Galactocentric distances r ~40 kpc. A spectrum of a V = 18.4 bhbf star is shown in Figure 1.

Radial (line of sight) velocities were obtained using the correlation technique. The rms error was 20 km/s for the brighter stars, increasing to 25 km/s for the faintest stars.

Balmer line widths were used to get a rough estimate of the surface gravities of the bhbf star candidates. 116 of the 131 candidates could unambiguously be identified as bhbf stars. The remaining 15 may have too high surface gravities to be bhbf stars and are tentatively identified as field blue stragglers.

3. Discussion

An analysis of the data obtained gives the following results: The system of bhbf stars in the Galactic halo is quite round with an axial ratio q ~0.8. The density distribution out to the limit of the sample (r ~40 kpc) is well described by a power law with index ν ~−3. The system of bhbf stars does neither expand nor contract as would be expected for an old, well mixed system. It rotates, if at all, very slowly relative to a Galactic rest-frame: v_{ROT} = 10 ± 32 km/s assuming $v_{\odot}$ = 220 km/s. This is consistent with what is found in general for metal poor stellar subsystems in the Galaxy. There are indications that the velocity distribution of bhbf stars is peaked in the radial direction (towards and away from the Galactic centre) everywhere in the inner Galactic halo.

The observed spatial and kinematical properties of the system of bhbf stars in the outer Galactic halo can be modelled without assuming that the Galaxy is embedded in an extended, massive halo characterized by an approximately flat rotation curve to r ≥50 kpc. If the Galaxy is embedded in such a massive halo then the motion of bhbf stars in the outer Galactic halo must be predominantly tangential (low eccentricity orbits). This contrasts with what is found for halo stars in the inner Galactic halo and tells us something about early Galactic history. It certainly does not support a rapid collapse picture for the outer Galactic halo. It may suggest that the bhbf stars in the outer Galactic halo were formed out of turbulent gas rather than out of gas with small macroscopic motions.

Our study of the inner and outer Galactic halo is by no means complete. Observations of bhbf stars in considerably more fields probing other parts of the Galactic halo would be of great interest in the light of the results obtained so far. Such observations are planned.

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And then there were Three . . .

At the end of the article about the recovered minor planet MALLY (*Messenger* **46,** 11), the five remaining 'lost' minor planets were enumerated. Readers of this journal may be interested to learn, once more, that things move fast in astronomy nowadays, not only in front-line areas of high energy astrophysics, but also in the classical backwaters of celestial mechanics.

By early February 1987, two more lost minor planets had been 'shot down'. Persistent efforts by Mr. Syuichi Nakano, who is spending one year at the IAU Minor Planet Centre in Cambridge, Mass., lead to the identification of (1026) INGRID with a minor planet observed in early 1986. He sent the resulting orbit to ESO, where no less than six further images of this planet were found on plates in the plate library.

The remeasurement at ESO of the original 1901 Heidelberg plates of (473) NOLLI, lost since that year, showed that the published positions were somewhat in error (one by more than 30 arcseconds). Based on the improved measurements, Dr. Brian Marsden, who heads the Minor Planet Centre, was able to find identifications with minor planets, observed in 1940, 1981 and 1986. Three additional images were found in the ESO plate library, definitely confirming these identifications.

So, now there are only three left . . . (there are rumours that some of the MP-people are busy).