ON INCONSISTENCIES FOUND IN LONG-TERM PARALLAX SERIES

W. D. HEINTZ

Dept. of Astronomy, Swarthmore College, U.S.A.

Abstract. Two recent papers (Hershey; Gatewood and Eichhorn; Astron. J., 1973) pointed out that:

(1) A proper motion irregularity interpreted as orbital motion was found duplicated in another field.

(2) The discontinuity found at one telescope failed to be confirmed by others, and might be ascribed to mere instrumental errors.

After the duplication was discovered two years ago, further measurements have revealed an identical pattern in at least seven parallax stars. Yet the cause of the effect, and the reason for its absence in other cases, have not been located. Colour effects and filter problems appear to be ruled out. Indications for discontinuities occurring at other epochs were found. Thus, the question cannot yet be safely answered whether the small variations (one or two micron) of proper motions reported in some cases are spurious; in any case, great caution should be exercised in interpreting onemicron effects unless confirmation from another instrument is obtained.

Gliese, Murray, and Tucker, 'New Problems in Astrometry', 317. All Rights Reserved. Copyright & 1974 by the IAU.