

ABSTRACT

Investigations of apparent horizontal drifts in the E and F regions of the ionosphere are described. A limited amount of data was obtained during the daytime and night-time of the summer of 1965 at the University of the West Indies, Mona, Kingston, Jamaica. The spaced-receiver method of Mitra was used at a frequency of 2.4 Mc/s.

Because of the limited number of data all conclusions should be accepted with caution.

The experimental apparatus and the method of analysis are discussed in detail.

Experimental results are presented under two main sections. These are the ionospheric drifts and the spatial properties of the diffraction patterns. The former section includes the steady drift and random velocities, whilst the latter includes the axial ratio, orientation angle and structure size of the diffraction pattern. The prevailing and solar semi-diurnal components of the steady drift velocity (V) are also determined.

The E and F region results are compared with each other as well as with those for northern latitude stations.

Suggestions for future studies are made.