

I. PHYSICS

Astrophysics (Infrasonic Pressure)

INFRASONIC PRESSURE VARIATION DURING ECLIPSE

R. VENKATACHARI

National Physical Laboratory, New Delhi

(Received 13 October 1980)

Two identical microbarographs (.001–2Hz) were operated in Delhi and Hyderabad for the eclipse studies. In Delhi records, there was no evidence of gravity wave type motions. But in the Hyderabad records, a definite wave motion was seen from totality superposed on the random variations for 1 to 2 hours. The initial period was 55 minutes and then it decreased. Power spectra analysis show the power was maximum corresponding to a period of 33 minutes on eclipse day whereas on control day it was only 17 minutes.

Keywords : Infrasonic Pressure; Microbarograph; Gravity Wave Motion.

In Delhi, the wave like pattern can be seen from the shape of F_1 layer even though no perceptible change was noted in f_0F_2 . In addition, the wave motion was definitely shown in Dopplonites (10 MHz) records (Delhi-Calcutta path) from totality.