

STORM TYPE MICROSEISMS RECORDED BY CALCUTTA SEISMOGRAPHS
& PASSAGE OF LOW PRESSURE WAVES ACROSS HEAD BAY OF BENGAL

It is known that storm-type microseisms are often recorded by the Milne-shaw seismograph at the Alipore Observatory when there is a well-formed depression or a cyclonic storm in the Bay of Bengal or in the East Arabian sea. A careful examination of the Alipore records for the last 5 years has, however, revealed that microseisms of the same type, though naturally much less marked, appear also on a number of other days on which the synoptic charts do not suggest the existence of any depression out in the sea. Such features are seen to occur more frequently in the pre-monsoon months than in the other seasons. The duration or life of these microseisms is generally very short, about 8-10 hours only, in contrast with the typical microseisms associated with a regular cyclonic storm or depression which often persist for days together.

With a view to finding out if these short-lived and rather subdued microseisms of the storm type are associated with any characteristic weather features in the neighbourhood, the synoptic charts of the days in question have been examined carefully. The study of these charts has shown that on many days in the pre-monsoon months when such microseisms occurred they were preceded by widespread thunderstorms in Orissa and south Bengal associated with a low pressure area moving towards northeast India across the central parts of the country. Although the movement eastward of these lows usually resulted in no more than the accentuation of the seasonal trough and occasionally its extension into northwest angle of the Bay, there are instances in which the progress of the weather as above causes a feeble cyclonic circulation in a shallow layer, which may not always extend down to the surface, to move across the head of the Bay of Bengal or develop there for a short period. It is seen that on most of the days on which short lived microseisms of the type mentioned appeared on the Alipore seismograms during the pre-monsoon months, there was a good evidence in support of the simultaneous existence of a closed or nearly closed cyclonic circulation over the neighbouring sea area, though this was often of a transient character. The results of this study seem to suggest that it is the cyclonic wind circulation over the sea which in some way determines the typical characteristics of the storm-type microseisms, although *naturally the microseisms* become more pronounced and affect more distant seismographs

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the greater the intensity of the cyclonic system. Further study on the subject is in progress and the details will be published in due course.

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