

CHAPTER 8 FORMATION OF TYPHOONS *

8.1 Introduction

**8.2 Requirements – Sea Temperature, Shear, Latitude,
 Cloud Clusters, Outflow**

8.3 Equatorial Trough

8.4 Other Surface Troughs

8.5 Mid-Pacific Trough

8.6 Easterly Waves

8.7 Radiation

8.8 Jet Streams

8.9 The Most

8.10 Cold-core Storms

** Not Completed*

Cloud clusters and weak areas of low pressure can often be tracked for long distances across the Pacific Ocean and the Bay of Bengal. Fig. 8. shows the tracks of two cloud clusters that became low pressure areas and tropical storms and eventually merged over the Bay of Bengal to form the Bangladesh Cyclone of November 1970. The tracks were determined from satellite, surface and upper-air observations supplemented over the South China Sea by aircraft reconnaissance.

It is conceivable that a disturbance originating over North Africa could subsequently cross the Atlantic, Pacific and Bay of Bengal that is, about three quarters of the way around the globe. During its journey it could develop into a tropical cyclone, on one or more occasions, over the development areas in the Atlantic, North Pacific or Bay of Bengal.

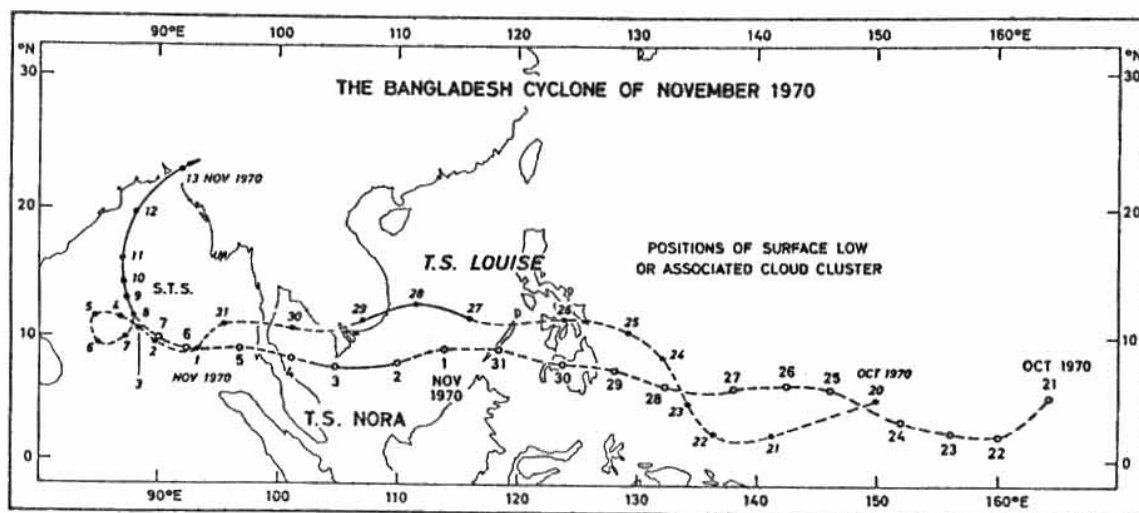


Fig. 8. The tracks of the cloud clusters, lows and tropical storms that preceded the formation of the Bangladesh Cyclone.

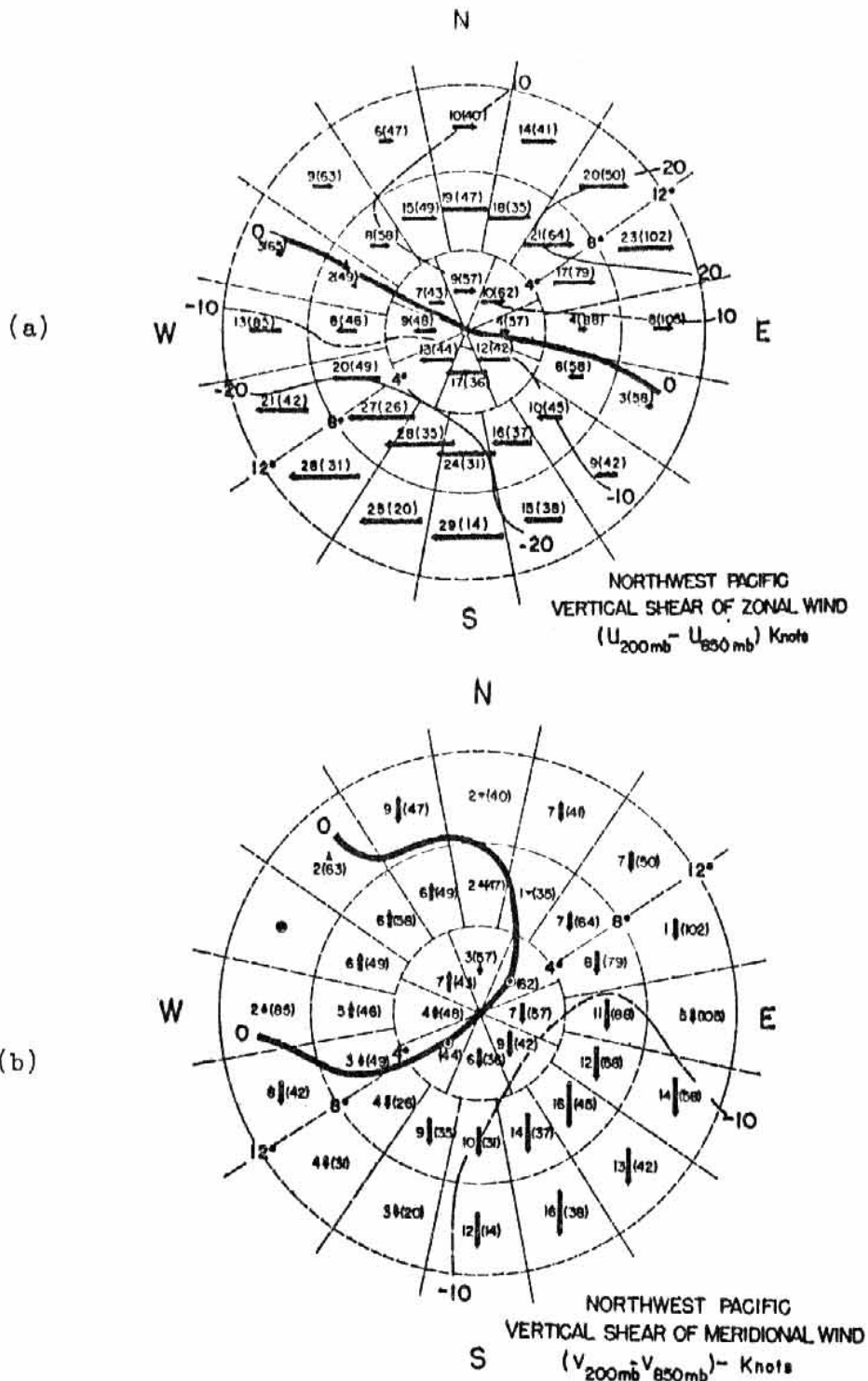


Fig. 8. Composite zonal vertical wind shear (a) and meridional vertical wind shear (b) for average rawin information in each area relative to the center of 110 tropical disturbances in the NW Pacific which later developed into tropical storms. The length of the arrows is proportional to the wind shear which is given in knots. Values in parentheses are number of wind reports in each area average. Distance from the center is shown by lightly dashed circular lines at 4° lat. increments.