

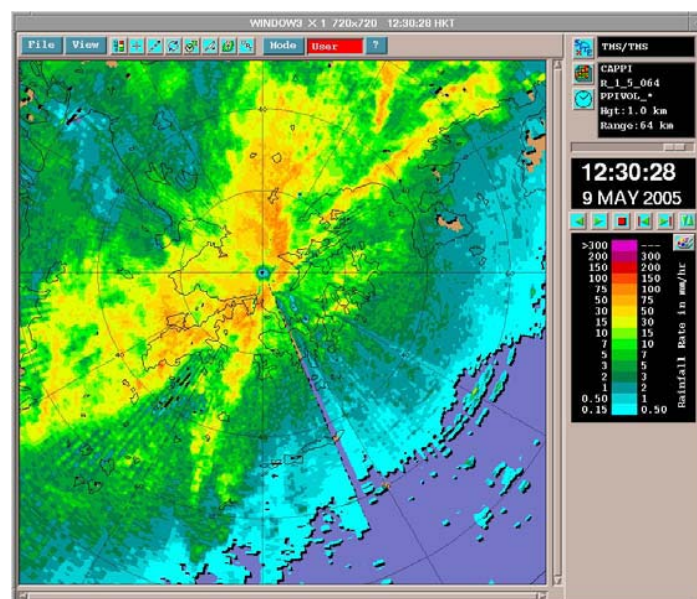
Severe gust associated with thunderstorms

Written by Ng Moon-chiu June 2011

Severe gust, which is a short blast of wind, is one of the inclement weather phenomena that pose a threat to the shipping community. Severe gust in Hong Kong normally occurs in typhoon and thunderstorm situations.

In a thunderstorm, cooler air rushes down from the storm cell to the surface and spreads out to form gust. A squall line is a cluster of severe thunderstorms along a line. On the radar display, a squall line, which spans tens to hundreds of kilometers in length, manifests itself as a narrow band of intense rain area with a width of about ten to a few tens kilometers. Sometimes it curves like a bow, known as “Bow Echo”. Its passage is also marked by severe gust together with rapid increase in pressure and sudden drop in temperature. Severe gust exceeding 100 km/hour recorded over Hong Kong during the passage of a squall line is not uncommon.

Under the influence of severe gust, especially the gust associated with a squall line, the increase in wind speed may be so abrupt that there is little time for mariners to take precaution and make response, causing casualties and damages. Over the years, damages to property and life caused by severe gust have been reported.



Radar image captured at 1230HKT on 9 May 2005 showing a squall line passing through Hong Kong from northwest to southeast

The Hong Kong Observatory will include gust report and forecast, if appropriate, in the thunderstorm warnings issued to alert the public to take necessary precautionary actions. Near real-time maximum gusts recorded over Hong Kong by the Observatory's anemometer network are also made available at the webpage http://www.hko.gov.hk/wxinfo/ts/index_e_gust.htm.