

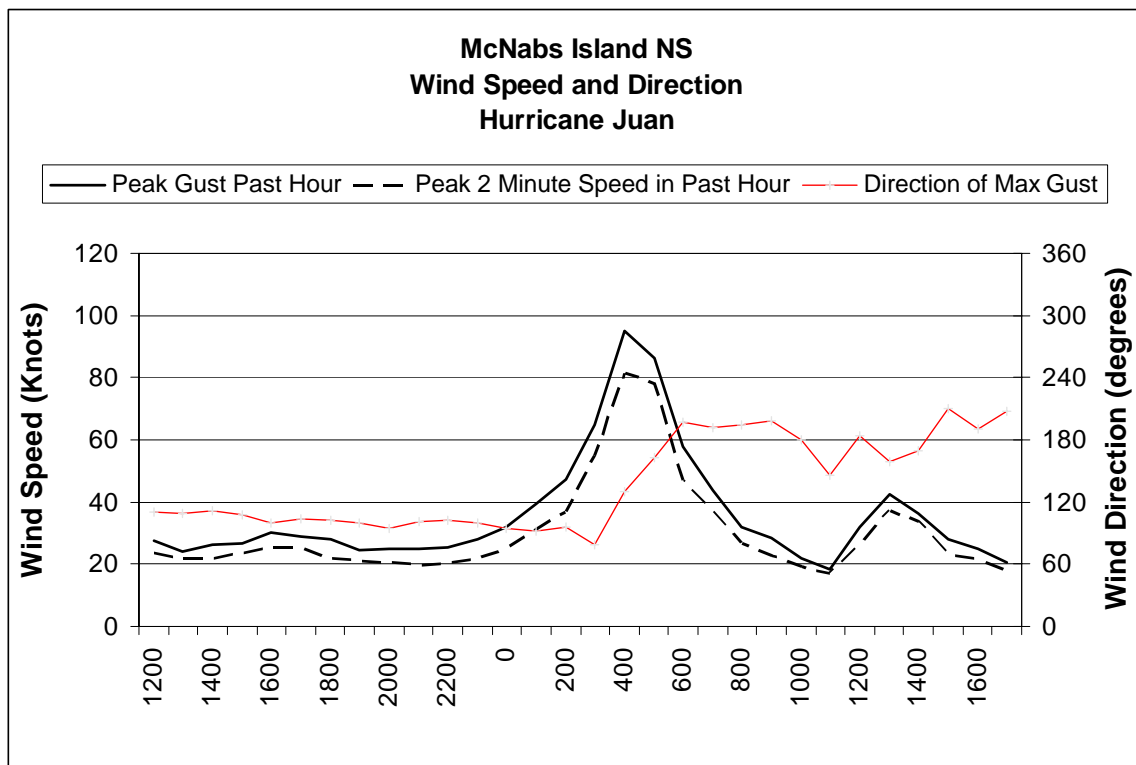
Wind Speed Observations at McNab's Island

McNab's Island is located in Halifax harbour. During Hurricane Juan communications with the weather station on McNab's Island were interrupted at about 0300Z. Even though observations were not communicated the station continued to operate and record data internally throughout the storm. We were able to download the data later. In this note I present these raw data and a graphical display of them.

The McNab's station is an automatic weather station based on a Campbell Scientific data logger. Thirty three data fields are recorded hourly. Of these fields, we are concentrating on three of them:

- Maximum 2 minute wind speed during the past hour,
- Peak 5-second wind speed during the past hour (i.e. the maximum gust) and
- Direction of maximum gust.

A time series of these data is displayed in the Figure below.



Sustained winds exceeded the Category 1 hurricane threshold for about 1.5 hours beginning at about midnight. The maximum sustained (2-minute) wind was 151 km/hr (81.4 knots). The peak gust of 176 km/hr (95 knots) occurred at 0024 ADT. The anemometer level is 19 metres, which when corrected to the standard 10-metre level and to sustained 1-minute wind gives 82 kts. A category 2 hurricane has to be at least 83 kts sustained wind. Assuming that McNab's was not exactly in the highest winds, we concur that Juan was a category 2 hurricane at landfall, largely based on this piece of data.

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