



## Exceptional weather events

**Type of event:**

**Storm- *The Fastnet Disaster***

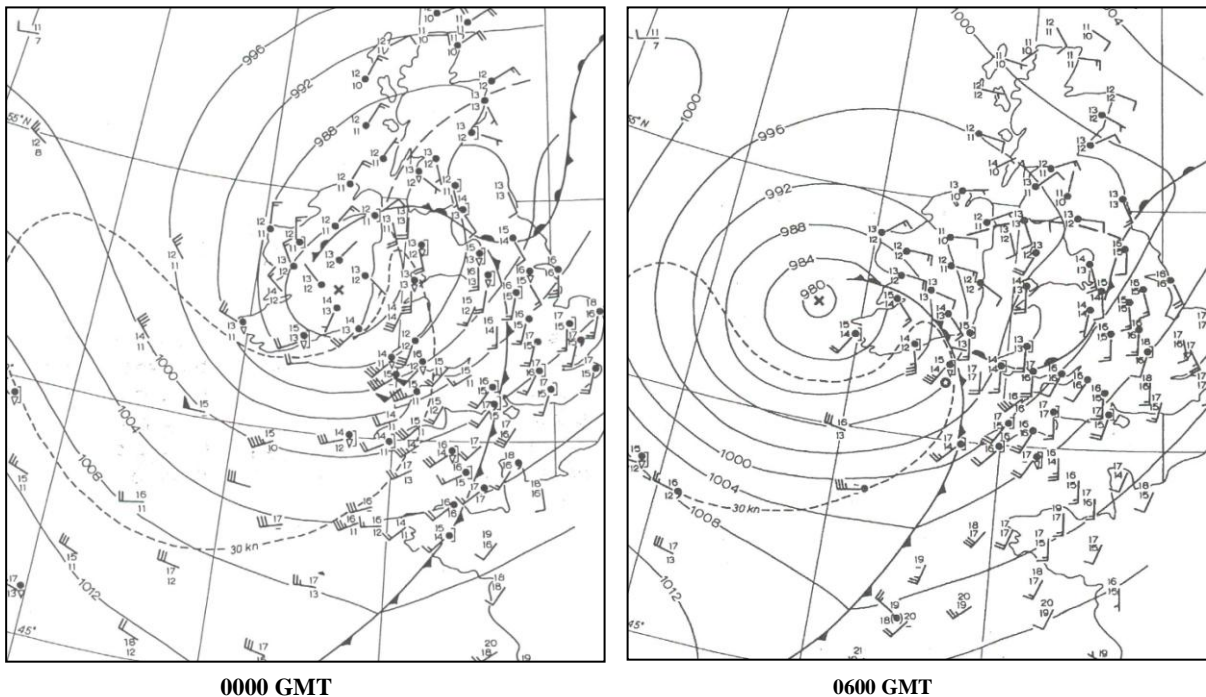
**Date:**

**August 1979**

## The Fastnet Disaster of August 1979

This review of the Met Éireann file on the ill-starred Fastnet race of 1979 was occasioned by again coming across the comprehensive article by D. E. Pedgley in the magazine 'Weather' (Aug 1997, Vol. 2, No. 8). He gives the shocking statistics on the loss of life, the damage done and also provides a most illuminating and interesting account of the meteorology of the storm, proffering an explanation for the severity of the winds and for the most unusual speed with which very high seas built up. The official report of the enquiry mentions 13 metre waves, which bespeaks winds of Beaufort force 10 or 11 (storm or violent storm). As it turned out there was some interesting corroborative material in the file.

Before presenting this, a brief description of the synoptic situation during the days preceding the fateful events late on 13<sup>th</sup> and early on 14<sup>th</sup> August 1979 is necessary to set the scene. A depression near Newfoundland late on 11<sup>th</sup> moved eastwards on 12<sup>th</sup> but filled rather than intensified. However during 13<sup>th</sup> it started to deepen rapidly and turned northeastwards, coming in over the southwest of Ireland very late on 13<sup>th</sup> to be centred over north Wexford at 0600GMT on 14<sup>th</sup> – see Fig.1 which indicates the severity of the winds off the south coast early on 14<sup>th</sup>.



Our stations near the south coast (Valentia Observatory, Roches' Point, Cork Airport and Rosslare) all reported winds of near gale or gale force (f7 or f8) with gusts in the range 46 to 52 knots (1 kt = 1.15 mph = 0.515m/s). However the maps show the strongest winds just off the south coast where yachtsmen were reporting storm or violent storm force winds with even a suggestion of hurricane force (f12). The winds recorded at the land stations would suggest winds at sea just about reaching storm force 10 but force 11 or force 12! Well the supplementary sources of information, the Fastnet lighthouse, the naval vessel Deirdre and the Marathon Gas Platform, indicate that the yachtsmen did not exaggerate.

### Estimated Hourly Winds at Fastnet Lighthouse

Day	Hour	Direction	Force
Monday 13th	1800	SSE	5/6
	1900	SSE	7/8
	2000	SSE	8
	2100	SSE	8
	2200	SSE	9
	2300	S	9

Tuesday 14th	0000	S	9/10
	0100	S	9/10
	0200	W	9/10
	0300	W	9/10
	0400	W	9/10
	0500	W	9
	0600	NW	9
	0700	NW	9
	0800	NW	9
	0900	WNW	8/9
	1000	WNW	8
	1100	WNW	8
	1200	WNW	7

The wind observations at the Fastnet lighthouse show the development of a southerly gale or strong gale ahead of the depression during the evening of 13<sup>th</sup>, gale to storm force 10 winds from the south around midnight on 13<sup>th</sup>/14<sup>th</sup>, followed by strong gale to storm force winds (f10 or f11) from the west later in the night. During the morning of 14<sup>th</sup> there were northwesterly or westerly winds of gale or strong gale force which backed westerly and eased during the afternoon.

### Estimated Winds - L.E. Deirdre

Day	Hour	Direction	Force
Monday 13th	2100	S	6
	2200	S	7
	2300	S	7
Tuesday 14 <sup>th</sup>	0000	S	8/9
	0100	S	9
	0200	S	9
	0300	SSW	9/10
	0400	SSW	8/9
	0500	SW	8
	0600	SW	8
	0700	SSW	8
	0800	SSW	8
	0900	SW	8
	1000	WSW	8
	1100	WSW	8/9
	1200	WSW	8

The reports from the L. E. Deirdre show similar wind strengths but, unfortunately, its position was not on file. However, the reports are of strong gale or storm force winds from a southerly direction early on 14<sup>th</sup>. It is a bit surprising that winds did not veer to the a westsouthwesterly direction until near noon as this veer occurred at Rosslare in the early morning but they were still reporting winds of gale force in the early afternoon of 14<sup>th</sup>.

### Wave Reports from the Marathon Gas Platform

51° 04'N 7° 09'W

Day	Hour	Sig. Height metres	Max Height metres
Monday 13 <sup>th</sup>	1600	1.2	1.7
	1800	-	2.2
	2300	2.5	4.0
Tuesday 14 <sup>th</sup>	0000	2.7	3.9
	0200	4.9	9.6
	0300	5.6	8.5
	0400	6.6	11.4
	0600	7.5	14.5
	0900	6.0	9.5
	1200	5.1	7.8
	1500	3.6	5.9

The Marathon Gas Platform measurements are extremely important as they corroborate the statements of the yachtsmen about the viciousness of the seas, showing a general height of 7.5m and a maximum wave height of 14.5 metres at 0600GMT (significant wave height is the average of the highest one third of the waves as this is close to what observers give as the wave height).

While its consequences were uniquely bad the Fasnet storm was not unprecedented. Pedgley points to a similar storm on 29<sup>th</sup> July 1956 which deepened rapidly as it came up over the southwest of England and over Wales, causing much damage both overland and to marine interests and wreaking particular havoc on the Channel Race. Fig. 2 shows that if Cahirciveen were translated to Land's End, the pattern is very similar to Fig. 1.

It is probably true that the emphasis on designing for speed which was very much in vogue in 1979 contributed to the Fasnet disaster. Forecast guidance did not convey either the severity of the conditions or the speed with which they developed but then such explosive deepening is very difficult to forecast. However, predictive ability has improved considerably since 1979 and so we may hope that warnings will be more timely and accurate in future.

Wave Reports from the Marathon Gas Platform  
51° 4'N 7° 9'W

	Time	Sig. Height ( m )	Max ( 17 min ) Ht. ( m )
Monday 13th	1600	1.2	1.7
	1800	—	2.2
	2300	2.5	4.0
<hr/>			
Tuesday 14th	0000	2.7	3.9
	0200	4.9	9.6
	0300	5.6	8.5
	0400	6.6	11.4
	0600	7.5	14.5
	0900	6.0	9.5
	1200	5.1	7.8
	1500	3.6	5.9
	1800	3.2	5.0

*Kindly by  
1 dB/ wave / tape 1137*

Irish Naval Vessel L.E. Deirdre

	Time	Wind Direction	Force	Barometer
<b>Monday 13th</b>				
	1600	200	4	1010
	1700	200	4	1007
	1800	200	4	1004
	1900	190	5	1002
	2000	180	6	999
	2100	180	6	996
	2200	190	7	992
	2300	190	7	989
	2400	190	8/9	984

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**Tuesday 14th**

	0100	190	9	F
	0200	190	9	F
	0300	200	9/10	F
	0400	200	8/9	S
	0500	210	8	R
	0600	210	8	R
	0700	200	8	R
	0800	200	8	R
	0900	220	8	R
	1000	240	8	R
	1100	240	8/9	R
	1200	240	8	R

## Hourly Winds reported by Fastnet Lighthouse

Monday 13th	Time	W/Direction	Force
	1700	SSE	5—6
	1800	SSE	5—6
	1900	SSE	7—8
	2000	SSE	8
	2100	SSE	8
	2200	SSE	9
	2300	S	9—10

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### Tuesday 14th

0000	S	9—10
0100	S	9—10
0200	W	9—10
0300	W	9—10
0400	W	9—10
0500	W	9
0600	W	9
0700	NW	9
0800	NW	9
0900	NW	8—9
1000	WNW	8
1100	WNW	8
1200	WNW	7
1300	WNW	7
1400	W	7
1500	W	6