

Tropical Cyclone Report
Tropical Depression Fifteen
(AL152007)
11 – 12 October 2007

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A large and complex area of disturbed weather extended from the northwestern Caribbean Sea into the western Atlantic beginning on 4 October. A surface low pressure system formed near the eastern end of the area on 8 October about 150 n mi northeast of the Turks and Caicos Islands. The associated convection gradually increased as the low moved east-northeastward, and by 1200 UTC 11 October there was sufficient organized convection to designate the system as a tropical depression while it was centered about 645 n mi east-southeast of Bermuda. The best track positions and intensities for Tropical Depression 15 are listed in Table 1.

The depression turned eastward after genesis and its forward motion slowed. This was followed by a slow northward drift on 12 October. An upper-level trough moved over the depression late on 11 October, with strong northerly vertical wind shear developing over the cyclone in the wake of the trough. This shear caused the associated convection to dissipate, and the depression degenerated to a remnant low late on 12 October about 790 n mi east of Bermuda.

The remnant low moved northwestward on 13 October, then turned northeastward and merged with a frontal zone on 14 October. The resulting extratropical low developed gale-force winds on 16 October and maintained them until it was absorbed by a larger extratropical low on 17 October north of the Azores Islands.

Table 1. Best track for Tropical Depression Fifteen, 11 – 12 October 2007.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
11 / 1200	29.5	52.6	1011	30	tropical depression
11 / 1800	30.1	51.0	1011	30	"
12 / 0000	30.0	50.0	1011	30	"
12 / 0600	30.1	49.6	1011	30	"
12 / 1200	30.2	49.4	1011	25	"
12 / 1800	30.5	49.4	1012	25	"
13 / 0000	30.9	49.9	1012	25	remnant low
13 / 0600	31.3	50.3	1012	25	"
13 / 1200	31.8	50.3	1013	25	"
13 / 1800	32.5	50.0	1012	25	"
14 / 0000	33.1	49.2	1012	25	"
14 / 0600	33.7	48.3	1012	25	"
14 / 1200	34.6	46.8	1010	25	extratropical
14 / 1800	35.6	44.7	1010	25	"
15 / 0000	36.0	43.0	1009	25	"
15 / 0600	36.1	41.4	1006	30	"
15 / 1200	36.1	39.9	1005	30	"
15 / 1800	36.3	38.8	1004	30	"
16 / 0000	37.4	37.0	1003	30	"
16 / 0600	38.6	35.2	1000	30	"
16 / 1200	39.8	33.5	999	35	"
16 / 1800	40.8	31.8	996	40	"
17 / 0000	41.9	30.1	996	45	"
17 / 0600	43.7	28.4	997	45	"
17 / 1200	45.8	26.7	998	45	"
17 / 1800	48.7	25.2	999	40	"
18 / 0000					absorbed by larger extratropical low
11 / 1200	29.5	52.6	1011	30	minimum pressure as a tropical cyclone