

WEATHER OF THE ATLANTIC AND PACIFIC OCEANS

[The Marine Division, I. R. TANNEHILL, in charge]

NORTH ATLANTIC OCEAN, FEBRUARY 1936

By H. C. HUNTER

Atmospheric pressure.—Pressure averaged below normal over nearly the entire North Atlantic region, but around Iceland there was a considerable excess. The deficiency, however, was noteworthy over the eastern part of the ocean from near Ireland to the waters adjacent to northwestern Africa, and westward beyond midocean.

The average pressure at Horta, in the western Azores, was 29.84 inches, almost identical with the average for the preceding month. During the last 10 years there have been but two other months—January 1929 and March 1931—when pressure at Horta averaged as low as 29.84; and no other period of 2 consecutive months shows so low an average as these first 2 months of 1936. During the final week of February the pressure averaged greater than normal at Horta and also at Bermuda and Turks Island.

Of the four reports of force 12 wind so far received from the North Atlantic, only one was encountered to northward of latitude 38°. The lowest pressure reading of the month, 28.22 inches, early on the 9th, from the American steamship *Collamer*, occurred near the thirty-seventh parallel of latitude, about 600 miles west of Horta. It is not often that the lowest monthly pressure is encountered so far to the southward, unless it be connected with a hurricane of the West Indian region.

The highest pressure thus far reported, 30.69 inches, was observed on the British motorship *Wellfield*, during the forenoon of the 25th, near latitude 45° N., longitude 30° W.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure (sea level) at selected stations for the North Atlantic Ocean and its shores, February 1936

Station	Average pressure	Departure	Highest	Date	Lowest	Date
	Inches	Inch	Inches		Inches	
Julianaab, Greenland	29.66		30.26	26	28.90	8
Reykjavik, Iceland	29.85	+0.31	30.45	28	28.99	6
Lerwick, Shetland Islands	29.70	-.02	30.34	10	28.96	2
Valencia, Ireland	29.59	-.31	30.25	25	28.73	18
Lisbon, Portugal	29.85	-.25	30.25	24	29.44	18
Madeira	29.93	-.14	30.35	24	29.60	12
Horta, Azores	29.84	-.31	30.57	25	28.95	9
Belle Isle, Newfoundland	29.71	-.04	30.56	25	28.78	1
Halifax, Nova Scotia	29.94	+0.03	30.44	25	29.32	11
Nantucket	30.03	-.01	30.47	24	29.35	18
Hatteras	30.08	-.03	30.51	23	29.38	14
Bermuda	30.05	-.07	30.32	13, 24	29.71	11
Turks Island	30.03	-.05	30.23	25	29.94	10, 11
Key West	30.01	-.06	30.33	23	29.80	14
New Orleans	30.07	-.02	30.40	22	29.60	13

NOTE.—All data based on a. m. observations only, with departures compiled from best available normals related to time of observation, except Hatteras, Key West, Nantucket, and New Orleans, which are 24-hour corrected means.

Cyclones and gales.—Gales were comparatively numerous, especially from the 4th to the 18th. There were 9 instances when force 11 or force 12 was attained.

In the vicinity of the Grand Banks, whole gales were experienced on the 3d and 4th, one report even estimating force 11. The cyclone center moved from that vicinity to northeastward and northward, and ceased to have marked effect along the chief steamship routes.

An important low was just east of Cape Hatteras on the morning of the 7th, and advanced swiftly eastward, as a strong high-pressure area moved in behind it. Numerous gales were noted in the waters east of the Middle Atlantic States, the American steamship *F. Q. Barstow*

encountering force 12. This low by the 9th had become one portion of a vast cyclonic area, a northern center being over Greenland, and a southern center near Horta. During the 9th and 10th another wind of force 12 was recorded and three vessels estimated the greatest force as 11. These strongest winds were met near the thirty-fifth or fortieth meridians, approximately in the latitude of the Azores.

The morning of the 10th found the chief and very intense center of the great low in about the longitude of Horta, but not far from the fiftieth parallel, held by high pressure near the Shetland Islands from advancing in the usual northeasterly course. Its strength soon decreased, as it moved southeastward toward northern Spain.

Charts IX, X, and XI indicate the conditions on the 7th, 9th, and 10th days of February, respectively.

About the 12th to 14th, low pressure was again experienced near the Azores, especially to the westward and northwestward; and there were two other instances of force 12 winds near midocean. At about the same time a storm central near the Carolina coast caused strong winds over a considerable area, including the northeast part of the Gulf of Mexico. One vessel in the Atlantic, about 400 miles east of Jacksonville, Fla., noted force 11.

On the morning of the 18th a low was central over the province of Quebec, with a well-marked southward extension located off the coast of the Middle Atlantic States. High winds in connection with this cyclonic system seem to have been the principal factor in the distress of the Greek freight steamer *Stefanos Costomenis*, which foundered late on the 18th, 400 miles off the Virginia Capes. The entire crew had been safely taken on board the American liner *City of Newport News*.

The last important storm over the western Atlantic during February was centered over the Gulf of Mexico on the 20th, and traveled toward the east-northeast and then the northeast, reaching the vicinity of Newfoundland by the 23d. Chart XII indicates the situation on the 22d.

Several instances of comparatively strong winds south of the Tropic of Cancer were reported. In the western Caribbean Sea the trades were intensified about the 8th, and in the north-central part, about the 23d. In the Gulf of Mexico a wind of force 7 was noted close to Vera Cruz on the 28th. On the 26th to 28th strong trades were encountered by the Italian motorship *Neptunia*, near the coast of northwestern Africa.

Fog.—While the Gulf of Mexico had distinctly less fog than there had been during January just preceding, yet the regions near the coast from the Carolinas to Newfoundland had a marked increase. Practically throughout this area there was more fog than February usually brings, the 5° square from 35° to 40° N., 70° to 75° W. reporting 9 days, the greatest number experienced by any one square, as far as now known. Here, and in the Grand Banks region, and thence eastward to about the thirtieth meridian, the second half of the month was more foggy than the first half.

Between the thirtieth meridian and the coasts of the continent of Europe and the British Isles, fog was no more frequent than during January, and nearly all the occurrences reported were during the first 12 days of February.

Coastal ice.—As during January, the heavy ice in most coastal waters from Virginia to Maine and beyond was a

great hindrance to navigation, but during the last few days of the month there was some improvement, most of this ice softening or breaking up.

Numerous steamships were damaged by ramming their way through ice, and a few were caught in heavy ice floes and carried aground.

OCEAN GALES AND STORMS, FEBRUARY 1936

Vessel	Voyage		Position at time of lowest barometer		Gale began February—	Time of lowest barometer February—	Gale ended February—	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH ATLANTIC OCEAN													
Exporter, Am. S. S.	Casablanca	New York	35 49 N.	62 08 W.	1	Noon, 1.	3	29.84	W	W, 7	WNW	WNW, 10	W-WNW.
Steel Inventor, Am. S. S.	Swansea	Baltimore	47 18 N.	45 36 W.	4	9a, 3	5	29.37	W	W, 6	S	NW, 11	
Chickasaw City, Am. S. S.	Cristobal	Boston	12 00 N.	78 02 W.	3	4p, 3	4	29.75	NE	NE, 7	E	E, 8	
Exporter, Am. S. S.	Casablanca	New York	37 40 N.	70 14 W.	4	11p, 4	5	29.68	S	SW, 9	N	SW, 10	SW-Var-NW.
Jean Jadot, Belg. S. S.	New York	Antwerp	45 08 N.	41 49 W.	5	Mdt., 4	5	29.25	WNW	W, 10	NNW	WNW, 10	W-WNW.
Cardonia, Am. S. S.	Rotterdam	New Orleans	32 15 N.	30 45 W.	5	2p, 6	5	29.61	NW	NW, 10	N	NW, 10	NW-N.
American Importer, Am. S. S.	Liverpool	New York	47 15 N.	42 07 W.	6	4a, 6	7	29.04	W	SW, 7	NW	NW, 10	SSW-W.
F. Q. Barstow, Am. S. S.	Baytown, Tex.	Providence	35 16 N.	74 45 W.	7	10a, 7	7	29.32	NE	E, 6	NNE	NW, 12	E-WNW-NW.
Borinquen, Am. S. S.	New York	San Juan	36 00 N.	71 40 W.	6	4p, 7	7	29.30	NE	SW, 7	NNW	NNW, 10	S-SW-NNW.
Collamer, Am. S. S.	Havre	New York	37 15 N.	42 00 W.	8	1a, 9	10	28.22	WSW	W, 11	NW	W, 12	W-NNW.
Maiden Creek, Am. S. S.	Glasgow	Mobile	35 20 N.	42 25 W.	8	do	9	28.96	WSW	W, 11	NNW	W, 11	WSW-W.
Louisiana, Fr. S. S.	Antwerp	do	35 10 N.	39 00 W.	8	3a, 9	10	29.13	WSW	WSW, 10	NNW	WNW, 11	WSW-NW.
West Tacook, Am. S. S.	London	Galveston	32 25 N.	36 35 W.	8	4a, 9	10	29.46	WSW	WSW, 8	NW	NW, 9	WSW-W.
Imlay, Am. S. S.	New York	Corpus Christi	27 26 N.	94 41 W.	8	6a, 9	9	29.89	NW	NW, 9	N	NW, 9	WNW-NW.
American Shipper, Am. S. S.	do	Liverpool	50 20 N.	19 17 W.	8	2p, 9	9	28.86	E	ESE, 9	SSE	ESE, 10	
Shickshinny, Am. S. S.	Antwerp	Wilmington, N. C.	41 17 N.	32 50 W.	6	do	11	28.57	WSW	NNE, 10	SW	NW, 11	NE-NNE.
Helmstrath, Br. S. S.	Huelva	Philadelphia	36 16 N.	20 08 W.	9	4a, 10	10	29.29	SW	SW, 8	WSW	SW, 9	SW-WSW.
San Antonio, Fr. S. S.	Havre	Cristobal	43 00 N.	16 00 W.	10	Noon, 10	10	28.73	SSW	SW, 10	WSW	SW, 10	SW-WSW.
Boston City, Br. S. S.	Halifax	Cardiff	51 21 N.	18 07 W.	8	7p, 10	10	28.55	E	E, 8	S	E, 10	E-S.
Shickshinny, Am. S. S.	Antwerp	Wilmington, N. C.	38 00 N.	41 50 W.	12	4a, 12	14	29.65	SW	SW, 8	NW	NW, 12	None.
Losada, Br. M. S.	Magallanes	London	24 32 N.	17 00 W.	11	6a, 12	13	29.66	W	W, 8	WNW	W, 9	W-WNW.
Pawnee, Am. S. S.	Tampa	New Orleans	28 39 N.	87 38 W.	13	6a, 13	13	29.34	S	W, 10	W	W, 10	S-W-NNW.
El Estero, Am. S. S.	Norfolk	Houston	30 00 N.	77 24 W.	13	6p, 13	13	29.62	S	SSW, 8	SW	S, 10	S-SW.
Forbes Hauptman, Am. S. S.	do	Colon	29 48 N.	74 23 W.	13	11p, 13	14	29.73	E	SSW, 11	SSW	SSW, 11	SSE-SW.
Standard, Am. S. S.	New York	Aruba	37 38 N.	73 10 W.	14	8a, 14	14	29.30	SE	SSW, 8	WNW	W, 10	S-W.
Yaka, Am. S. S.	Manchester	Tampa	40 29 N.	31 02 W.	14	2p, 14	16	28.65	WSW	WNW, 12	WSW	WNW, 12	WSW-WNW
Japan Arrow, Am. S. S.	Boston	Beaumont	37 37 N.	70 45 W.	13	do	15	29.23	SE	WSW, 8	NW	SE, 10	SSW-W.
Helmstrath, Br. S. S.	Huelva	Philadelphia	34 45 N.	34 06 W.	14	4p, 14	15	29.67	W	WNW, 10	WNW	WNW, 10	WNW-NW.
Syros, Am. S. S.	Rotterdam	Galveston	37 50 N.	28 30 W.	14	2a, 15	16	29.20	S	W, 10	W	W, 10	None.
Afoundria, Am. S. S.	do	Tampa	42 30 N.	25 15 W.	14	9a, 15	16	28.67	SW	WSW, 7	W	WNW, 10	WSW-WNW.
West Harshaw, Am. S. S.	Manchester	New Orleans	38 19 N.	37 16 W.	16	8a, 16	16	29.14	SW	SW, 9	NNW	WSW, 10	SW-NNW.
Mahanada, Br. S. S.	Gibraltar	Boston	36 10 N.	27 40 W.	16	2a, 17	17	29.09	SW	W, 7	WNW	WSW, 10	WSW-NW.
Losada, Br. M. S.	Magallanes	London	43 16 N.	9 37 W.	15	5p, 17	18	29.02	WSW	SSE, 8	SSW	SSE, 9	SSE-SSW.
Quaker City, Am. S. S.	New York	Cork	42 00 N.	60 35 W.	18	Mdt., 18	19	29.45	SSW	SSW, 10	W	SW, 10	W-SW.
Otho, Am. S. S.	Freetown	Philadelphia	32 55 N.	62 36 W.	23	6p, 22	24	29.74	WNW	SSW, 7	NW	NW, 9	SSW-WNW.
Standard, Am. S. S.	Aruba	New York	12 54 N.	70 24 W.	24	7p, 22	25	29.97	NNE	E, 4	ENE	NE, 8	
Greystock Castle, Br. M. S.	Penang via Cape of Good Hope	do	26 23 N.	63 41 W.	22	10p, 22	24	29.92	SW	NW, 8	N	NW, 8	SW-NW-N.
Bredyk, Du. S. S.	Rotterdam	Tampa	32 56 N.	51 48 W.	23	3p, 23	24	28.79	S	SSW, 8	NNW	WNW, 8	SSW-NNW.
Neptunia, Ital. M. S.	Capri	Gibraltar	9 00 N.	25 35 W.	26	10a, 25	28	29.80	NE	NE, 5	NE	NE, 8	None.
Salawati, Du. M. S.	Recife	Boston	25 40 N.	46 06 W.	27	4p, 27	28	29.86	NNW	NNW, 10	NNE	NNW, 10	NNW-N.
Narbo, Am. S. S.	Greenock	Port Neches	51 20 N.	7 49 W.	28	Mdt., 27	* 1	29.20	NNW	NW, 6	N	N, 10	W-NW.
Mexique, Fr. S. S.	New Orleans	Vera Cruz	20 00 N.	95 37 W.	28	do	28	29.98	W	W, 7	NNW	NW, 7	W-NW.
NORTH PACIFIC OCEAN													
Ogura Maru, Jap. M. S.	Yokohama	Los Angeles	36 18 N.	149 30 E.	1	10a, 2	2	29.26	NW	W, 7	WNW	NW, 8	WNW-W.
Diamond Head, Am. S. S.	Portland, Oreg.	Port Allen, T. H.	28 08 N.	153 03 E.	* 31	6p, 2	2	29.13	E	SE, 4	S	SE, 10	SE-S.
Tai Ping, Yang, Pan. M.S.	Yokohama	San Francisco	41 42 N.	162 00 E.	1	10a, 3	1	29.13	WNW	WSW, 5	WNW	WNW, 9	
Tatsuno Maru, Jap. S.S.	do	Los Angeles	39 42 N.	157 17 E.	* 31	4a, 3	4	29.11	NW	WNW, 6	W	WNW, 10	NW-W.
Chinese Prince, Br. M.S.	Los Angeles	Kobe	29 56 N.	161 06 E.	3	Mdt., 2	3	29.70	WSW	WSW, 10	NNW	WSW, 10	WSW-WNW.
Peter Maersk, Dan. M.S.	do	Yokohama	34 18 N.	152 00 W.	2	9p, 4	4	29.57	E	E, 7	SE	E, 8	E-SE.
Biyo Maru, Jap. S. S.	Miike	Seattle	31 28 N.	131 51 E.	4	5a, 4	5	29.89	5	29.89		NNW, 9	W-NNW.
Cornville, Nor. M. S.	San Francisco	Yokohama	32 N.	150 E.	4	2p, 5	6	29.13	SSW	W, 12	NNW	W, 12	None.
Chinese Prince, Br. M.S.	Los Angeles	Kobe	30 37 N.	150 10 E.	5	6a, 5	6	29.40	SSW	SSW, 9	NW	W, 12	SSW-W.
Pres. Hoover, Am. S. S.	Honolulu	Yokohama	29 49 N.	153 10 E.	5	2p, 5	6	29.46	SSW	W, 9	NW	WNW, 11	S-W.
Peter Maersk, Dan. M.S.	Los Angeles	do	34 38 N.	160 52 W.	6	6a, 6	7	29.37	WNW	NW, 7	NW	NW, 9	Steady.
Athelprincess, Br. M.S.	Nagasaki	Esteros Bay	34 44 N.	187 51 E.	6	Noon, 6	6	29.38	SSE	SW, 9	W	S, 10	S-SW.
Pres. Polk, Am. S. S.	San Francisco	Honolulu	23 54 N.	153 30 W.	6	2p, 6	7	29.51	SW	W, 8	WNW	WNW, 8	None.
Paul Shoup, Am. S. S.	do	do	25 00 N.	150 20 W.	6	2a, 7	8	29.53	W	W, 8	W	W, 8	
Manoa, Am. S. S.	do	do	31 14 N.	140 11 W.	10	2a, 9	10	29.43	WSW	S, 5	WSW	W, 8	S-W.
Empress of Japan, Br. S. S.	Victoria	do	38 27 N.	141 02 W.	10	4p, 10	11	29.14	W	SE, 2	WNW	WNW, 8	SE-W.
Spirita, Br. S. S.	Los Angeles	Kobe	31 01 N.	148 20 E.	11	7p, 11	12	29.72	W	W, 6	NW	W, 10	None.
Peter Maersk, Dan. M. S.	do	Yokohama	34 49 N.	168 45 E.	12	4p, 12	13	29.36	S	SSW, 7	WNW	W, 10	SSW-SW.
Koyo Maru, Jap. S. S.	Yokohama	Port San Luis	38 21 N.	175 15 W.	13	2a, 13	13	29.05	WSW	WSW, 7	W	W, 10	WSW-W.
Peter Maersk, Dan. M. S.	Los Angeles	Yokohama	34 37 N.	158 33 E.	15	Noon, 15	16	29.54	S	SSW, 7	NNW	NW, 11	SSW-W.
Pres. Jefferson, Am. S. S.	Seattle	do	49 52 N.	173 30 E.	20	8p, 22	22	29.05	SE	S, 6	S	SE, 9	SSE-SSW.
Koyo Maru, Jap. S. S.	Yokohama	Port San Luis	38 08 N.	136 21 W.	20	10p, 20	21	29.06	SW	SW, 7	WSW	W, 8	SW-W.
Illinois, Am. S. S.	Manila	San Francisco	47 18 N.	163 36 W.	23	1p, 24	24	29.41	ESE	SW, 6	SE	ESE, 9	S-SSW-W.
Golden Mountain, Am. S. S.	Tandoc	do	31 57 N.	147 19 E.	23	5a, 24	24	29.02	S	WNW, 12	N	WNW, 12	W-NW.
Pennsylvania, Am. S. S.	Manila	do	33 06 N.	148 06 E.	23	3a, 24	24	28.76	SW	SW, 11	NNW	W, 12	SW-WNW.
Shelton, Am. S. S.	Tabaco	Los Angeles	31 30 N.	149 10 E.	24	4a, 24	24	29.35	SW	SW, 8	NW	WNW, 11	SW-WNW.
Skramstad, Nor. M. S.	Manila	do	28 42 N.	158 50 E.	24	10a, 24	25	29.42	SSE	SW, 8	NW	W, 9	S-SSW-W.
Meigs, U. S. A. T.	do	San Francisco	36 50 N.	170 32 E.	24	6a, 25	26	28.43	SE	ESE, 5	W	WNW, 11	ESE-WSW.
Golden Hind, Am. S. S.	Otaru	do	41 38 N.	169 18 W.	24	4a, 26	27	28.54	SSE	SE, 8	WSW	SW, 10	SE-SW.

* Position approximate.

* Barometer uncorrected.

* March.

* January.