

NORTH PACIFIC OCEAN

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Average atmospheric pressures over Aleutian waters and to the eastward, as in November, were above the normal, the greatest departures occurring over the Gulf of Alaska, especially the northeastern part. Pressure in the Aleutian low fluctuated violently, but the average center of lowest pressure lay over the eastern Aleutians and adjoining waters. The North Pacific anticyclone was fairly well developed in middle latitudes east of the 180th meridian during the first two decades, thereafter it gave way to lower pressures until at the end of the month the whole eastern part of the Pacific was under cyclonic influences.

The following table gives pressure conditions for several island and coast stations in west longitudes:

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level at indicated hours, North Pacific Ocean, December, 1927

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	<i>Inches</i>	<i>Inch</i>	<i>Inches</i>		<i>Inches</i>	
Dutch Harbor ¹	29.61	+0.03	30.36	11th	28.88	13th.
St. Paul ¹	29.65	+0.04	30.24	10th ⁶	29.10	13th.
Kodiak ¹	29.74	+0.16	30.36	31st	28.80	3d.
Midway Island ¹	30.03	-0.01	30.28	3d.	29.76	22d.
Honolulu ⁴	29.95	-0.06	30.08	1st	29.73	25th.
Juneau ⁴	30.01	+0.22	30.61	8th	29.35	25th.
Tatoosh Island ⁴	30.04	+0.07	30.55	3d.	29.37	27th.
San Francisco ¹	30.05	-0.06	30.30	15th	29.70	24th.
San Diego ¹	30.03	-0.01	30.27	13th	29.64	11th.

¹ P. m. observations only.
² For 29 days.
³ For 30 days.

⁴ A. m. and p. m. observations.
⁵ Corrected to 24-hour mean.
⁶ And other dates.

The lowest recorded pressure reading of the month was 28.05 inches, by the American steamer *Wawalona*, in 47° 38' N., 175° 28' E.

Gales of force 8 or more were of daily occurrence somewhere on the sea. The area of severest and most

frequent storminess lay in east longitudes, along the upper steamer routes from the western Aleutians southward to the 40th parallel, 140th meridian, where gales occurred on more than 20 days. Abnormally frequent gales prevailed over the 10° square north of the Hawaiian Islands, bounded roughly east and west by the 150th and 160th meridians. The stormy periods here included the 7th to 10th, and the 25th to 30th. The higher wind forces, however, did not as a rule exceed 8 or 9. At Honolulu the maximum wind velocity was registered on the 7th, being at the rate of 49 miles an hour from the northeast. The prevailing monthly wind direction here was from the east.

Storm to hurricane gales over the ocean were reported on nine days, five in east and four in west longitudes. Hurricane velocities occurred on the 7th near 34° N., 168° W.; on the 28th off the Japanese coast southwest of Yokohama; and on the 30th and 31st at Tatoosh Island, the extreme velocities recorded at the Weather Bureau station here being 80 miles from the east, on the 30th, and 88 from the east, on the 31st. Gales of force 11 occurred within the 5° square, 45°-50° N., 180° and 175° E., on the 5th, 8th, and 18th.

Distinct lows derived from the prevailing oceanic cyclones entered the American continent on the 1st, 3d, 8th, 10th, 13th, 17th, 18th, 26th, and 27th.

At Honolulu and Juneau heavy precipitation occurred, this December being the rainiest on record at the former station, and one of the snowiest at the latter. It was the second coldest December on record at Juneau.

Light to moderate northers occurred in the Gulf of Tehuantepec, on the 2d, 22d, and 26th, but they were less frequent and severe than in November, none reported exceeding force 8.

Much less fog formed over the ocean than during November. Vessel reports show only two days with it in east longitudes, and only five days along the American coast. Roughly bounded, most frequent fog was observed between 45° and 51° N., 145° and 165° W., within which area it was encountered on 10 days.