



Earthquake map of the United States for 1969.

twenty-two states, although seismographs recorded many thousands of minor shocks. Top of the league table was California (ninety-one), followed by Montana (eighty-three) and Alaska (fifty-one). It is unusual for Montana to feature so high—the last really serious tremor there occurred in 1959 at Hebgen Lake when twenty-eight people died. Normally Alaska and California fight for top place, although because of the sparse population in Alaska it is probable that many earthquakes are not recorded. The most severe tremor last year caused six million dollars' worth of damage in Santa Rosa, California, where two shocks occurred within 85 minutes, injuring several people. Both of these earthquakes were felt along the west coast from Clear Lake to San José and shook large buildings in San Francisco.

Elsewhere in the world, the worst earthquake killed 136 Peruvians in October. Reports of 3,000 deaths by an earthquake in China last July have not been confirmed. Other fatal earthquakes in 1969 included those in the Celebes Islands (sixty-four killed), Iran (fifty), Ethiopia (twenty-four), Yugoslavia (twenty), Morocco-Portugal (thirteen), South Africa (eleven), Turkey (eleven), Egypt (two) and Albania (one).

SUN

America in Eclipse

by our Astronomy Correspondent

THE next astronomy spectacular is the total eclipse of the Sun on Saturday, March 7. As the accompanying eclipse map from *The American Ephemeris and Nautical Almanac* shows, the partial eclipse will be visible over all of central and north America with the exception of parts of Alaska and Greenland, but the total eclipse is limited to a roughly 100-mile wide band which sweeps across Mexico, Georgia and the Carolinas, and grazes the east coast of the United States and Canada.

Readers planning to be on the east coast next month would do well to arrange their itinerary around the eclipse, the first since 1963 to touch the continental United States. All the details are in the circular published by the US Naval Observatory—the eclipse observer's bible—in this case circular No. 125. In the United States the best locations are in Florida, the

Carolinas and Virginia, where the climatological data show that there is a 40 per cent chance of seeing the eclipse. Farther north the conditions deteriorate, and Nantucket Island, which is on the path, is not a recommended site. In Nova Scotia and Newfoundland the chances that March 7 will be a clear day are small; Shearwater, NS, is probably best with a 26 per cent probability of a clear day, but at Gander Airport, just off the path of totality, the probability is down to 19 per cent.

	Time of mid-eclipse	Percentage of totality
Albany, NY	13.43 EST	92
Boston, Mass.	13.46 EST	96
Chicago, Ill.	12.25 CST	72
Columbus, Ohio	13.30 EST	83
Dallas, Tex.	12.00 CST	71
Denver, Col.	10.57 MST	46
Halifax, N.S.	14.55 AST	100
Kansas City, Mo.	12.12 CST	64
Los Angeles, Cal.	9.26 PST	36
New York City	13.42 EST	96
San Francisco, Cal.	9.26 PST	27
Tucson, Ariz.	10.34 MST	48
Washington, DC	13.37 EST	95

But devotees will be going to Mexico—not to Minatitlan where the eclipse path crosses the north coast and which has a weather record inferior to the southern United States, but to Oaxaca de Juarez where cloudiness is low because of the elevation of more than 5,000 feet, or to Salina Cruz on the south coast. The magazine *Sky and Telescope* has prepared a guide to eclipse sites in Mexico together with useful hints (stock up on supplies, including canned and prepared foods, and especially bottled water and drinks; your physician may suggest additions to your medical kit), as well as a list of sites which have been set aside for observers in the United States.

The table lists the times of mid-eclipse and the percentage of totality for several locations in north America.

