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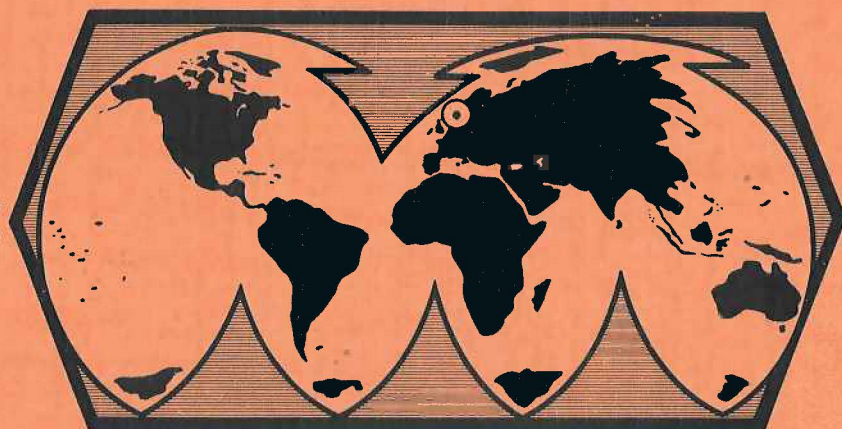
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J. SEISMICITY OF THE GREENLAND AND NORWEGIAN SEAS

Extensive efforts have been made in the recent years to investigate the geological and geophysical features of the Greenland and Norwegian Seas, and a relatively consistent picture of past and present tectonic movements has been obtained. Since earthquake occurrence is closely associated with such features, a study of seismicity pattern may provide additional evidence of tectonics besides being a valuable tool for outlining new areas which should be subject to further investigation.

At NORSAR a study of the seismicity of this region is in progress, predominantly based upon events reported by Sykes from the period 1955-60 and by NOAA (National Oceanic and Atmospheric Administration) from 1961-72. As precision in the epicenter estimates represents a limitation in all seismicity studies, an analysis was made to get an idea of the errors involved. The conclusion was that more than 10 reporting stations give a precision of about 20-30 km in most cases.

Expectedly, little new evidence was obtained at the mid-oceanic ridges and major fracture zones, as these areas have been thoroughly investigated earlier, also with respect to seismicity (Sykes 1965). However, a series of quite interesting features were discovered outside these main belts, especially at the Norwegian-Barents shelf and in the Lofoten basin. The seismicity pattern is discussed in the light of earlier works and attempts are made to relate seismic activity to known or postulated movements. Furthermore, a search in literature

has resulted in a list of 14 focal plane solutions, most of which show a reasonable agreement with expected tectonic features. A few events have very interesting solutions, emphasizing the need for additional focal mechanism studies in the Norwegian-Greenland Sea.

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