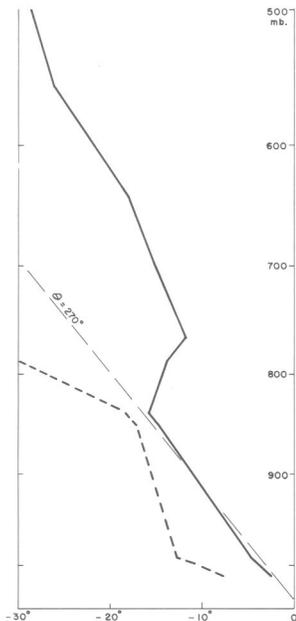
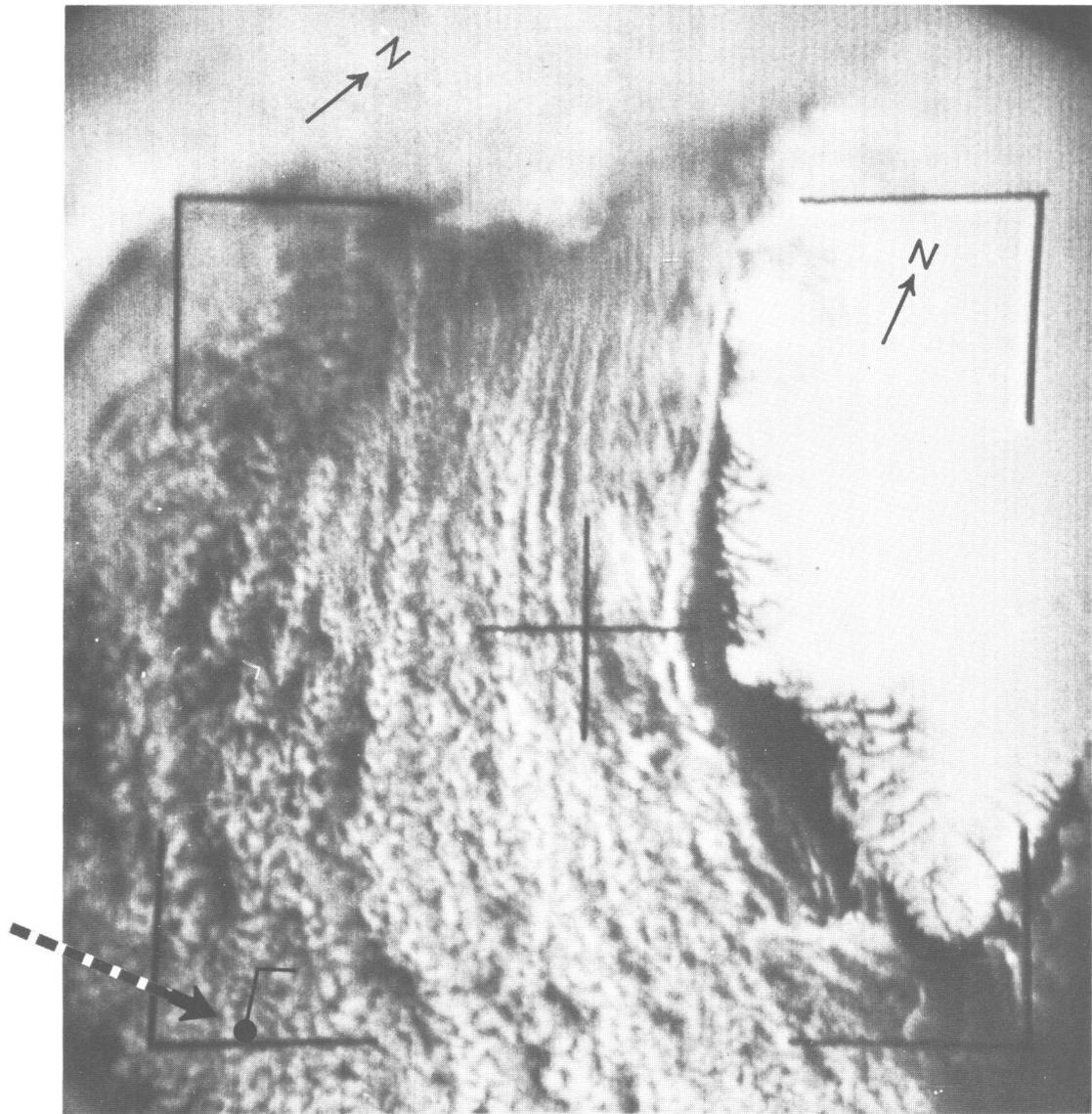


PICTURE OF THE MONTH



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TIROS VII, Pass 4365/4364, Camera 1, frame 13, 1456 GMT, April 9, 1964. Plotted data are for Ship "B" (56.5° N., 51° W.), 1200 GMT, April 9, 1964.

The Greenland Ice Cap and some remarkable low-level convective cloudiness are clearly visible in this photograph taken at 1456 GMT, April 9, 1964. Plotted at left are the 1200 GMT surface and radiosonde observations from weather ship "B", which was located within the photographed area near the lower left corner. North is indicated by the arrows.

The surface synoptic analysis for 1200 GMT, April 9, showed a weak ridge of high pressure extending from northern Greenland to the Labrador Coast, indicating that most of the area was under a moderate northerly or northwesterly flow of Arctic air. Temperatures at stations along the west coast of Greenland ranged from -28°C . at Thule in the far north (outside pictured area) to -5°C . at Prins Christians Sund near the southern tip. The region of Davis Strait, between Greenland and Baffin Island (upper center of photograph), was largely filled with sea ice; it is believed that air flowing southward from that region was initially some 15° to 20°C .

colder than the underlying water. Numerous small parallel cloud lines appear over the open-water area south of Davis Strait. These are thought to represent an initially shallow but very unstable low-level convective layer characterized by strong heating from below. Farther south, at ship "B", a near-adiabatic lapse rate has been created up to 837 mb., topped by an inversion in the layer 837-765 mb. Narrow cloud lines are no longer in evidence; instead the appearance is one of a cellular cloud pattern with cells arranged in much larger, ill-defined coarse lines.

Similar patterns in less well-developed form are frequently seen. Preliminary studies indicate that all occur within a rapidly deepening layer of heated air.

A portion of the west coast of Greenland is bordered by clear air while a line of enhanced convection appears offshore. This line of enhanced convection probably represents the convergence of low-level drainage from the ice cap with the general southward and southeastward flow of air from Davis Strait.