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A Science Service Feature

? WHY THE WEATHER ?

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GETTING A LINE ON LINE-SQUALLS

The occurrence of a line squall is marked by the passage of a wedge-shaped mass of cold air, known as the "cold front". A vertical section through the forward portion of this mass has the outline of a very narrow V, lying on its side, with the point of the V forward. In England, where line-squalls have been more thoroughly studied than anywhere else in the world, the following experiment has lately been carried out:

Instruments for recording temperature were installed at several heights on a number of tall wireless masts. The highest recorders were 300 feet above the ground. When a line-squall, with its mass of cold air, passed over the masts, the fall in temperature was recorded first by the highest instruments, and then at successively lower levels down to the ground. As the records showed the time the cold air reached the different levels, and as the speed with which the storm traveled was known from the readings of wind instruments, it was easy to determine the inclination of the lower surface of the wedge. This was found to be very gradual, making an angle with the ground of only a degree or so.

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