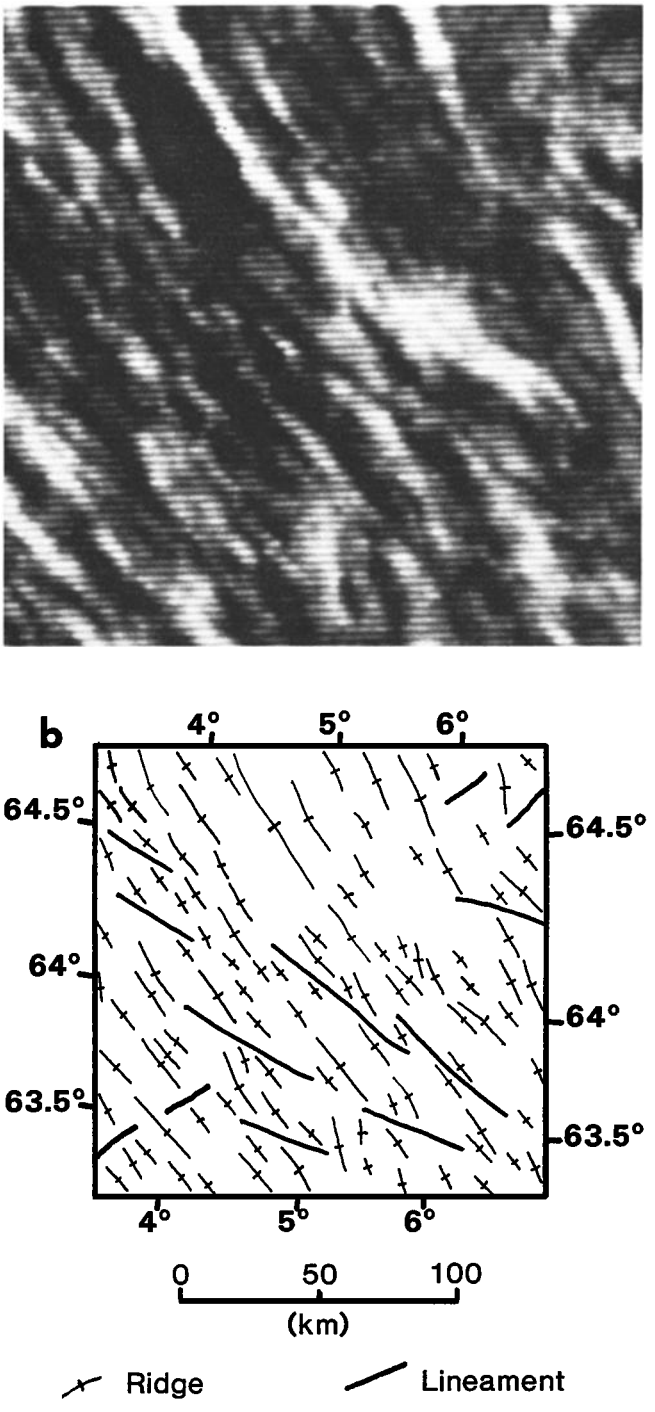

Fig. 5. Lineament example (*a*) Arecibo locator map. (*b*) Sketch map showing ridges (hatched lines) and lineaments (solid lines).

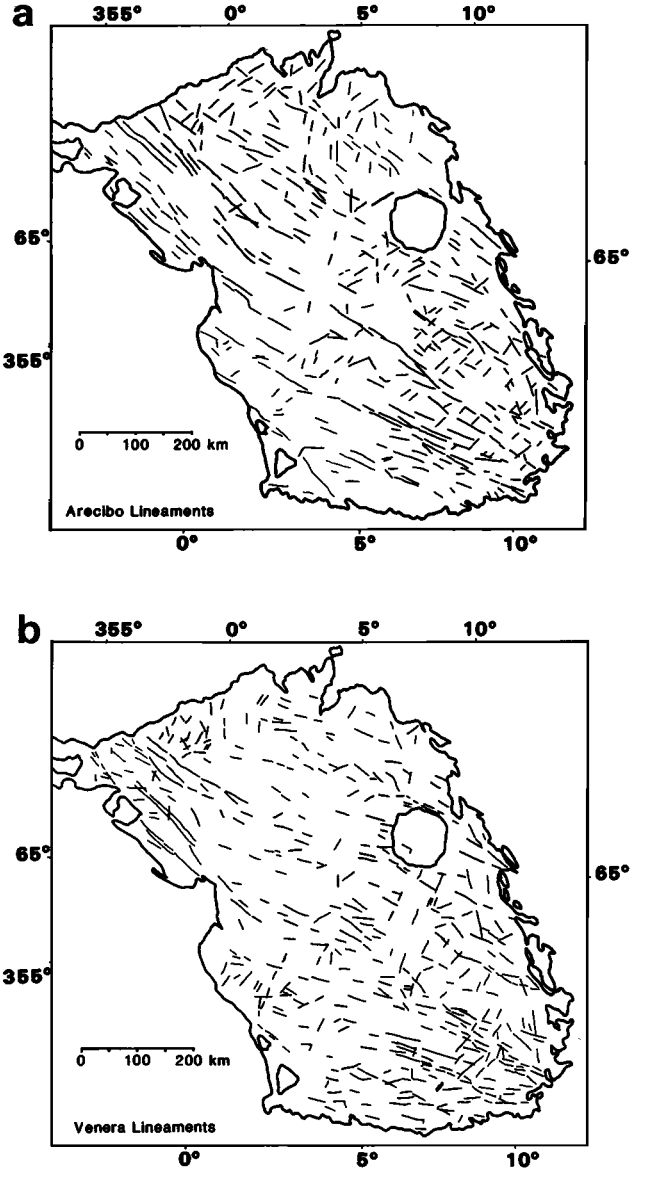

Fig. 6. (*a*) Arecibo lineament map. (*b*) Venera lineament map.

more. They can be bright or dark in either data set and could therefore represent faults, fractures, scarps, or ridges and troughs which are too small to be completely resolved by the radar systems. In particular, in the Venera data, a bright lineament most likely represents an east facing scarp or a small ridge at the limit of resolution, while a dark lineament might represent a west facing scarp or fault. Dark lineaments in the Arecibo data most likely represent faults or smooth scarps, while bright lineaments could represent rough ridges at the limit of resolution or faults filled with rough material.

The majority of the lineaments in both data sets are dark, an observation that may be due to the fact that dark features are more easily seen when they interrupt the continuity of the bright ridge structures. This also helps explain why these lineaments terminate most often in radar-dark areas, such as the smooth valleys in the Arecibo data and the west facing slopes in the Venera data, where they become indistinguishable from their surroundings. Resolved lineaments have a minimum length of 8 km and a maximum length of 140 km. More than 400 lineaments have been mapped with an average length of 24 km in both data sets (Table 2). The rose diagrams of Figure 7 reflect a dominant orientation of lineaments between N50°W and N80°W in both data sets. It is interesting to note that this major concentration of lineaments is close to perpendicular to the Arecibo look direction and close to parallel to the Venera look direction (Figure 7). This may account for the greater number and length of lineaments in the Arecibo data between N50°W and N70°W. The occurrence of a great number of lineaments within this range in the Venera data (Figure 7)