

TABLE 2. Lineament Statistics

Radar System	Number of Lineaments	Total Lineament Length, km	Average Lineament Length, km
Venera	470	11157	23.74
Arecibo	410	9915	24.18

confirms that there actually are many lineaments in this orientation, and that the Arecibo look direction enhances their detection.

Cross-strike discontinuities. Close examination of the lineament maps of Figure 6 reveals that some of the longest lineaments are aligned with one another to form several semicontinuous, subparallel, linear features across the entire width of Maxwell Montes. The dominant trend of these semicontinuous linear features is between N50°W and N60°W, matching the dominant trend of the individual lineaments (Figure 7). In addition, further examination of the ridge maps (Figure 3) reveals that individual ridge discontinuities occur

along the trend of the semicontinuous linear features, in the gaps between individual lineament segments. As described above, discontinuities in ridges can take the form of ridge termination, changes in ridge strike, changes in ridge width, or combinations of these. When these individual lineaments and ridge discontinuities are combined, they define nine subparallel, linear features that trend approximately N55°W and are generally continuous across the entire mountain belt. Since these linear features cut across the strike of the ridges and valleys on Maxwell Montes we refer to them as cross-strike discontinuities or CSDs after Wheeler [1980]. The individual lineaments and ridge discontinuities used to identify the CSDs are mapped in Figure 8, for both the Arecibo and Venera data sets. A sketch map showing the traces of the CSDs is displayed in Figure 8c. All of the CSDs are mappable for up to 1000 km across the high backscatter portion of Maxwell Montes, where they exhibit a spacing of 15-100 km. In addition, by utilizing high contrast linear stretches of digital images of this region, some of the CSDs can be observed to continue to the east-southeast for up to 100 km from the high-backscatter boundary. However, along the northern, southern, and western edges of Maxwell, the CSDs all terminate at or before the high backscatter boundary. This is not surprising since the plains

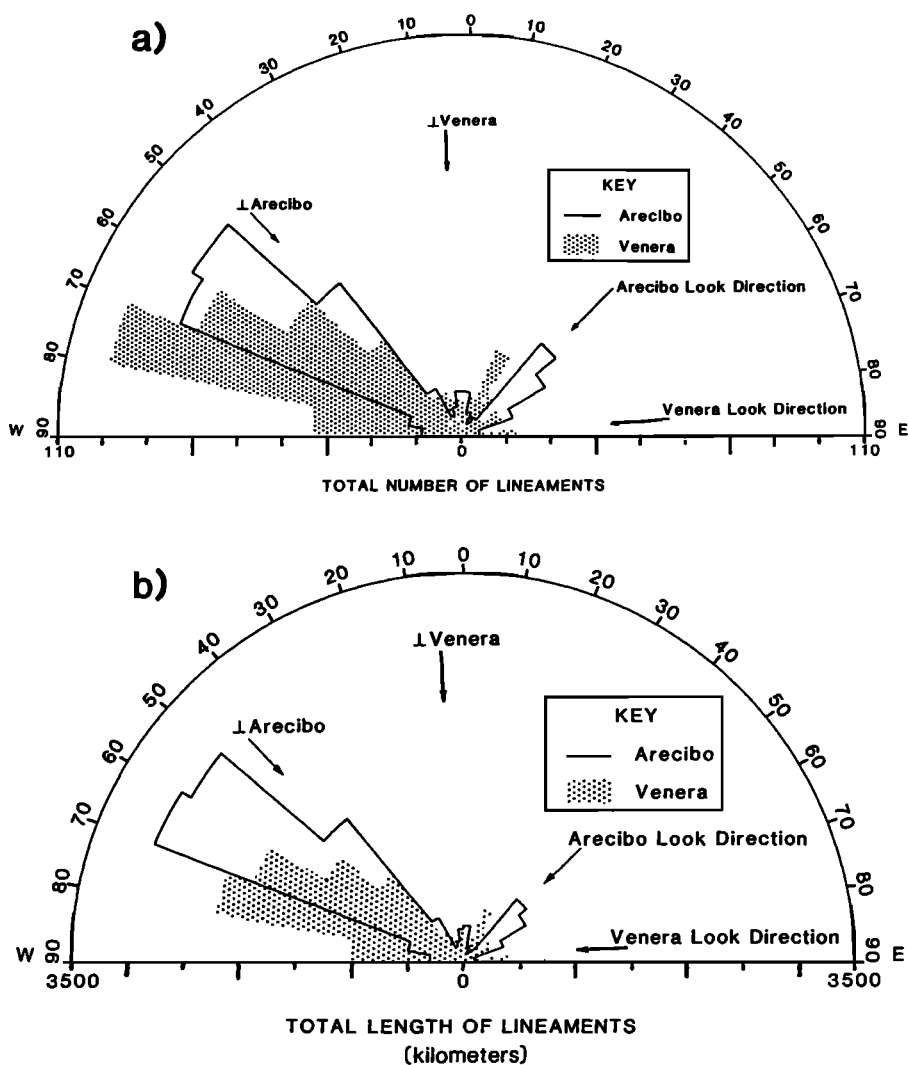


Fig. 7. Rose diagrams of Arecibo (outlined) and Venera (stippled) lineaments. Bin size is 10°. (a) Total number of lineaments. (b) Total length of lineaments.