Fig. 3*a*. Venera image of type area for subparallel ridged terrain (T_{sr}), located to the east of Maxwell Montes, in Fortuna Tessera. Image is centered at approximately 67°N, 16°E. The three major ridges to the left and below the center of the image appear to be crosscut by lineations in some cases, crosscut lineations in others, and typify the complex relationships between ridges and lineations (see Figure 3*b*).

Fig. 3*b*. Sketch map of type area for subparallel ridged terrain.

over distances greater than 100 km. Lineations in the type area were noted previously by *Ronca and Basilevsky* [1986] and can alsoi be observed in Arecibo images of the region.

Morphologic characteristics of ridges in the T_{sr} suggest that they formed by compression. Ridges and troughs form repetitive sets of subparallel structures, are continuous over relatively long distances (~100 km), and appear to be relatively symmetric, characteristics most commonly associated with compressional structures. Ridges in the T_{sr} are thus similar to ridges observed in Maxwell, Akna, and Freyja m ontes, which have been interpreted as compressional in origin [*Crumpler et al.*, 1986; *Pronin*, 1986; *Basilevsky et al.*, 1986; *Vorder Bruegge et al.*, 1990]. Ridges in the T_{sr} also lie parallel to ridges in Maxwell Montes. It seems likely that both sets of structures were formed by the same process.

Characteristics of ridge-lineation intersections suggest that lineations are due to strike-slip or shear deformation. At the intersections of ridges and lineations, subparallel ridges undergo a number of changes. Most typically, ridge trends stop at such intersections. In other cases ridges, change strike in the near vicinity of lineations or change character, becoming significantly less prominent and exhibiting less relief. In some cases there is little or no interruption of ridge continuity as it passes through a lineation, indicating that formation of ridges and lineations overlapped somewhat in time. Angular and crosscutting relationships between ridges and lineations are consistent with compression followed by (and partly synchronous with) conjugate strike-slip faulting. If the ridges were extensional, conjugate strike-slip faults would be expected to strike approximately N30°E and N30°W, inconsistent with the observed trends. The partly synchronous nature of ridges and lineations indicates that the two sets of features did not originate independently. Thus we interpret T_{sr} structures to originate by compressional and strike-slip or shear deformation. Lineations similar to those in the T_{sr} are observed in Akna, Freyja, [*Crumpler et al.*, 1986], and Maxwell montes [*Vorder Bruegge et al.*, 1990] and have also been interpreted as strike-slip faults or indications of shearing.

Trough and ridge terrain. Structures in the trough and ridge terrain (T_{tr}) are expressed as troughs in one direction and as ridges and valleys oriented orthogonal to the troughs. The type area for T_{tr} is located in eastern Laima Tessera (Figure 4*a*). Trough and ridge terrain is also found in Meshkenet Tessera, in Tethus Regio.

Troughs appear as both broad (~50 km) and narrow (~10-20 km) structures, with spacing between troughs typically greater than 30 km. Broad troughs commonly consist of two distinct scarps separated by a flat floor composed of smooth plains deposits and are continuous over distances of up to 1000 km. Given the low erosion rates on Venus [*Ivanov et al.*, 1986], the apparent lack of extensive soil deposits [*McGill et al.*, 1983; *Bindschadler and Head*, 1988*a*, 1989], and the pervasive nature