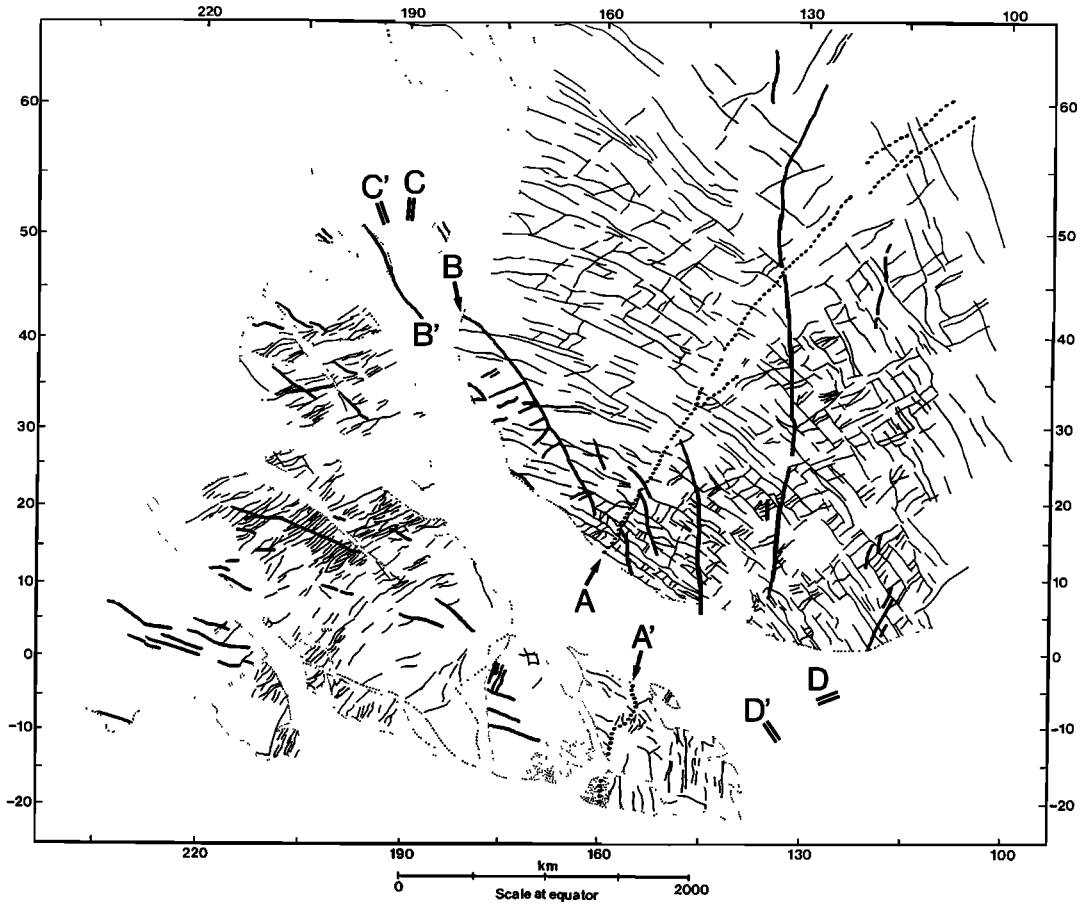

Fig. 4. Mercator map of the dark terrain structures in the anti-Jovian hemisphere of Ganymede. System I furrows are shown as light lines, system II furrows as heavy solid lines, and the unique postfurrow dark terrain trough segments as heavy dotted lines. Light dotted lines show major light terrain-dark terrain contacts. Letters identify specific trough segments and regional groove orientations discussed in the text. The stippled area is the faint giant palimpsest near the center of the system I arcuate furrows. Note the misalignment near the center of the map of furrows in Galileo Regio with furrows in Marius Regio (arrows).

calculated. The term "region" describes one of the six separate dark terrain expanses for which poles were initially calculated ("A"-"F", Figure 7*a*). The term "area" refers to a group of one or more adjacent regions having indistinguishable furrow poles. The four areas are shown in Figure 7*b*, labeled with the bracketed numerals 1, 2, 3, and 4; their furrow poles are shown in Figure 7*c*, labelled with unbracketed numerals. Furrow poles calculated in this and other studies are listed in Table 1, and the populations of furrow segments and small circles calculated from pairs of them are given in Table 2.

Area 1, Galileo Regio (regions "A" and "B" in Figure 7*a*), has an average pole of furrow concentricity of 22°S,183°W. This pole is within 5° of that determined for the four proximal sub-regions by *Schenk and McKinnon* [1987], but it is about 10° to the west of the range of possible poles provided by *Zuber and Parmentier* [1984*a*], probably due to the use in this study of better-controlled base materials. The separate poles of regions "A" and "B" are 22°S,179°W and 22°S,187°W, respectively; the small but not significant difference supports *Schenk and McKinnon's* [1987] conclusion that azimuthal variation in furrow geometry does occur. Later in this study, a possible source of this variation within Galileo Regio will be identified.

Area 2 consists of northern Marius Regio and extreme northwestern central Marius Regio (regions "C" and "D" in Figure 7*a*), a mosaic of smaller dark blocks. The average pole of concentricity is 1°N,187°W. The difference from each of the two possible poles calculated for northern Marius Regio by *Zuber and Parmentier* [1984*a*] (region "C" only) may be due to inclusion of region "D" in the area, improvements in coordinate control, and the difference in pole determination algorithms. A large number of widely scattered poles for individual furrow-segment pairs underlines the irregular nature of furrows in this area and demands caution in interpretation of the average pole.

Area 3, central Marius Regio (region "E" in Figure 7*a*), contains the giant palimpsest suggested by *Shoemaker et al.* [1982] and *Passey and Shoemaker* [1982] to be at the center of curvature of the furrows. The furrows in area 3, unlike those in area 1, are in general linear rather than curvilinear features. Furthermore, there is a very uneven distribution of furrows of different orientation: A 160° range of orientations is represented throughout the area, but the largest number of furrows occurs in western Marius Regio and is characterized by a northeast-southwest orientation.

To assess the importance of the sampling of different orienta-