



Fig. 9. Mercator map of dark terrain structures in the sub-Jovian hemisphere. Solid lines are system III furrows, and dotted lines are light terrain-dark terrain contacts. Curved lines extending across the map are small circles centered on the center of curvature of the arcuate furrows, and are placed at 10° increments. Arrows mark the small dark blocks in which furrow concentricity breaks down.

both consist almost entirely of heavily cratered, densely furrowed material, and both lack a significant depletion in the density of small craters (Figure 4). However at the eastern margin of southeastern Nicholson Regio, outside the crater-counted area, one small patch of higher-albedo dark smooth material infills older furrows and embays large craters (middle arrow, Figure 10b); this dark smooth surface was cut by younger furrows which retain the structural trend of the older, buried furrows (right arrow, Figure 10b).

Northwestern Nicholson Regio and possibly also Barnard Regio are depleted in craters ≤ 20 km in diameter (Figure 4), suggesting that a layer of dark resurfacing material 300-800 m thick has buried small older craters. Embayed, partially infilled larger craters are most clearly visible in northwestern Nicholson Regio (e.g., arrow, Figure 10d) [Murchie *et al.*, 1989b], where the resurfacing material possesses a diffuse

contact with the older furrowed surface of southeastern Nicholson Regio. The dark material of Barnard Regio is densely furrowed by troughs with a morphology different from those of "Eastern Barnard Regio" and Nicholson Regio; northwestern Nicholson Regio possesses relatively few furrows.

Measured crater densities and calculated crater ages indicate that the two surface units are probably of unequal age. The normalized ≥ 10 -km crater density for southeastern Nicholson Regio (Figure 5 and Table 2) is $420 \pm 32 \times 10^{-6} \text{ km}^{-2}$, whereas the normalized ≥ 10 -km densities for Barnard Regio and northwestern Nicholson Regio are $244 \pm 47 \times 10^{-6} \text{ km}^{-2}$ and $216 \pm 28 \times 10^{-6} \text{ km}^{-2}$, respectively. Measured densities are similarly less for Barnard Regio and northwestern Nicholson Regio than for southeastern Nicholson Regio and "Eastern Barnard Regio" (Table 1). The difference in the albedos,