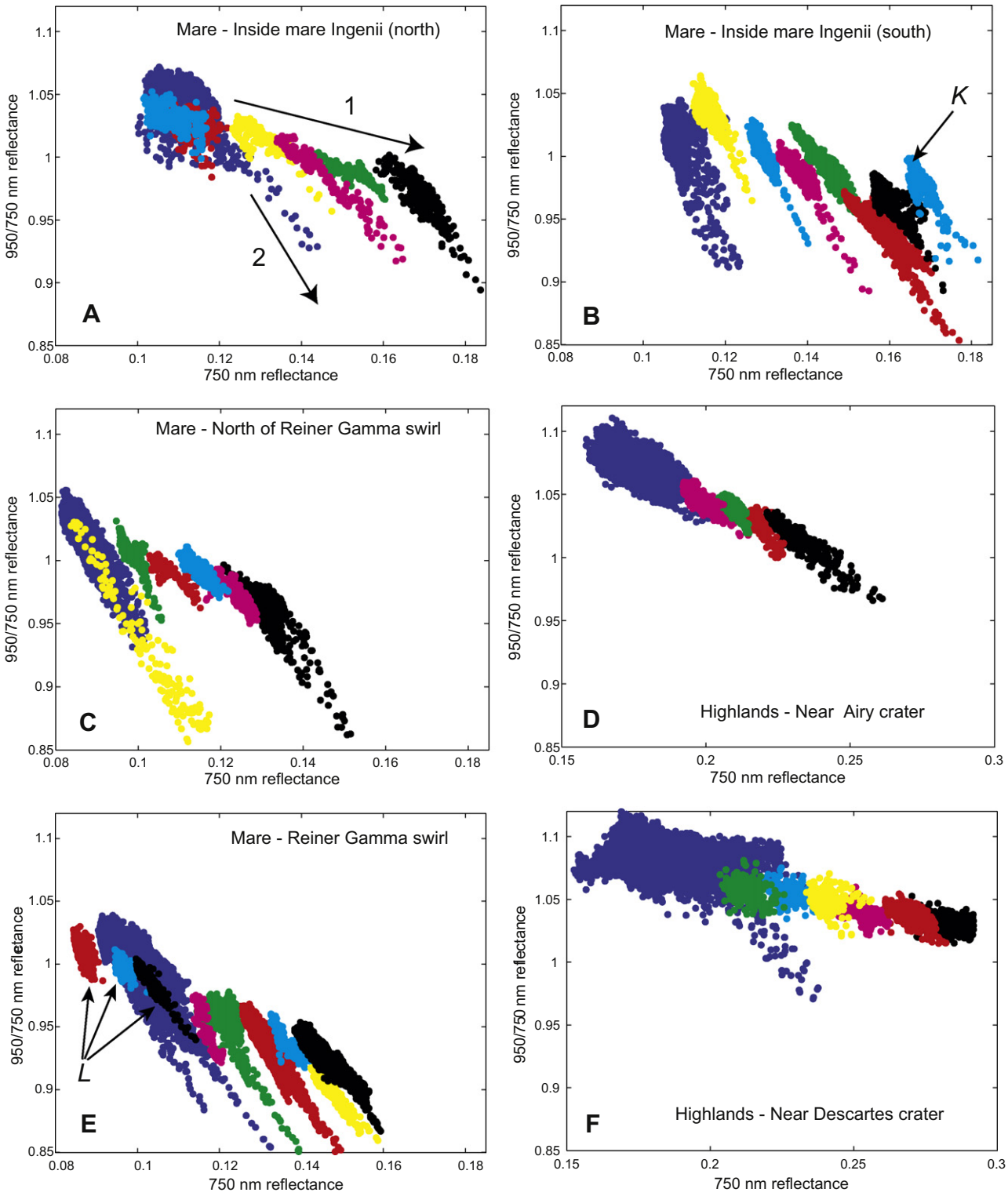

Fig. 3. Approximate band strength (950/750 nm) vs. albedo (750 nm) for the regions in swirls presented in Fig. 2. The data are taken from the white and black rectangles in Fig. 2, with the color of the data points corresponding to the colored circle labels at each rectangle. Labels *K* and *L* in parts B and E, respectively, indicate regions with repeated colors. The two trends of swirl maturation and normal maturation, are illustrated 1 and 2 in part A, respectively. Yellow potion of part C is not located at a swirl, but is shown to illustrate the normal background maturity trend for a fresh crater. In part D the two sets of magenta, red, and black rectangles have been averaged together.

penetration of protons and electrons causes a positive charge excess above the surface (Neugebauer et al., 1972; Siscoe and Goldstein, 1973; Goldstein, 1974; Burke and Reiff, 1975; Clay et al., 1975; Reiff, 1975; Reiff and Burke, 1976). Calculations suggest the charge excess is not likely to be shorted out by conduction through the lunar photoelectron layer or lunar surface (Siscoe and Goldstein, 1973). Note that if the magnetic field is strong enough to form a magnetopause, charge separation may still occur (Ferraro, 1952; Willis, 1971; Hood and Schubert, 1980; Hood and Williams, 1989).

The electric potential created by charge separation is known as a plasma double layer, a well-known state where quasi-neutrality