Geophysical Research Abstracts, Vol. 7, 10932, 2005
SRef-ID: 1607-7962/gra/EGU05-A-10932

Rethinking the spatial distribution of Venus wind streaks; on the correlation between the wind streak distribution and the radar settings

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The Magellan spaceprobe provided the first high-resolution map of Venus' surface with a spatial resolution exceeding 100 m/pixel.ă Magellan operated an S-band (?=12.6 cm) synthetic aperture radar (SAR) imaging radar which is not common in terrestrial remote sensing, and little is known about the advantages or disadvantages of this wavelength for geologic and geomorphic mapping.ă Therefore, extra caution must be exercised in any interpretation of the images produced by Magellan SAR.ă In this report an aspect of the Magellan wind streak database is examined and some limitations inherent from the SAR settings are suggested.ă It is shown that there is a strong correlation between incidence angle and the spatial distribution of streaks.ă It is also shown that based on terrestrial analogs, potential dune fields may not be noticed in the equatorial latitudes because of the radar incidence angle.ă