

# Terrestrial Interferometric Radar Observations of Terra Meridiani and Isidis

Kristopher Larsen

Albert F.C. Haldemann

Raymond F. Jurgens

Raymond E. Arvidson

Marty A. Slade

Washington University

Jet Propulsion Laboratory

Jet Propulsion Laboratory

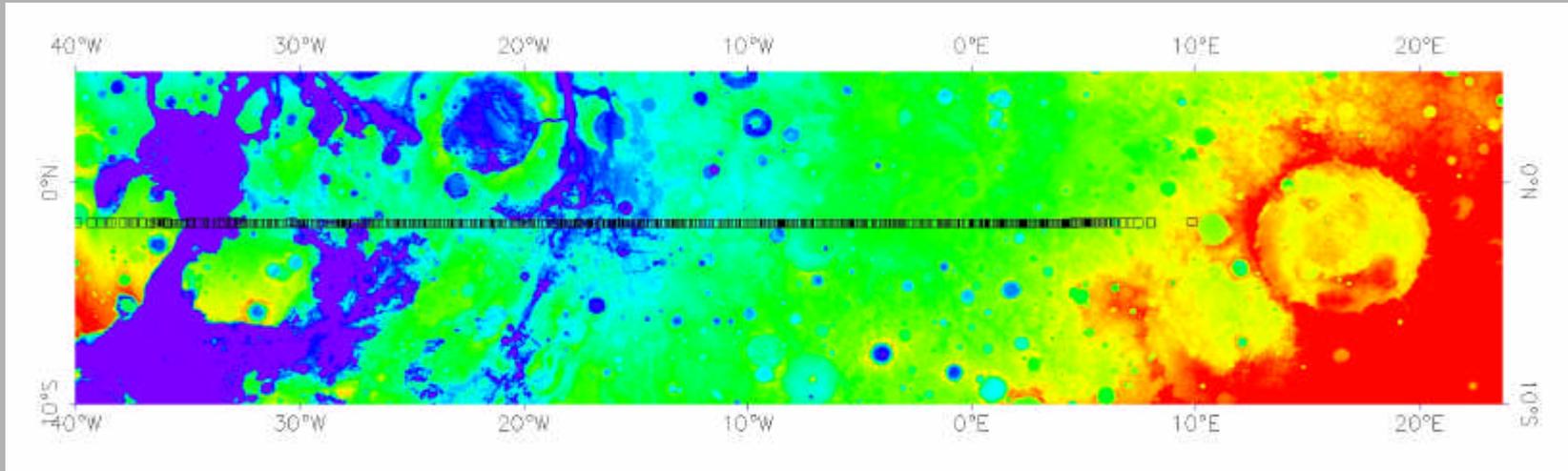
Washington University

Jet Propulsion Laboratory

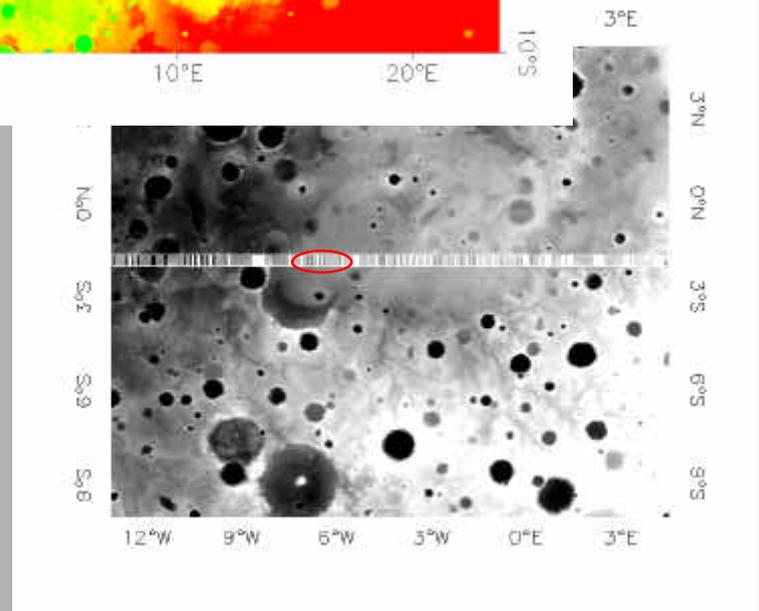
# Overview

<u>Date</u>	<u>DoY</u>	<u>Lat.</u>	<u>Rise Lon.</u>	<u>Set Lon.</u>	<u>Region</u>
3 May 2001	123	-1.825	320.9	35.2	T. Med.
17 June 2001	168	3.625	257.0	297.3	Isidis
14 July 2001	195	7.181	345.9	23.7	T. Med

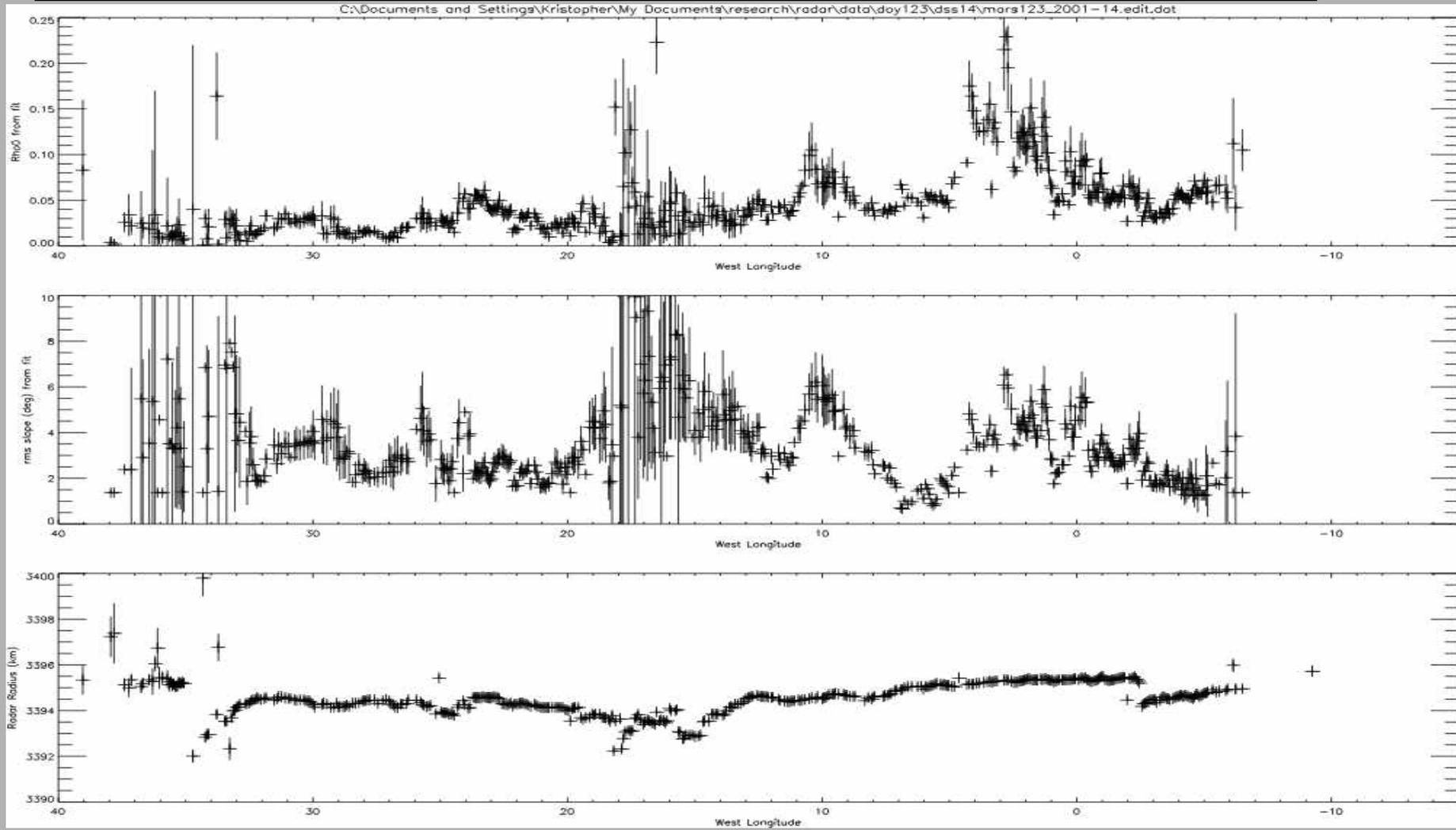
# May 3, 2001



- $\sim 50^\circ$  Longitude Coverage at  $1.8^\circ$  South
- Crosses Terra Meridiani and proposed MER landing site



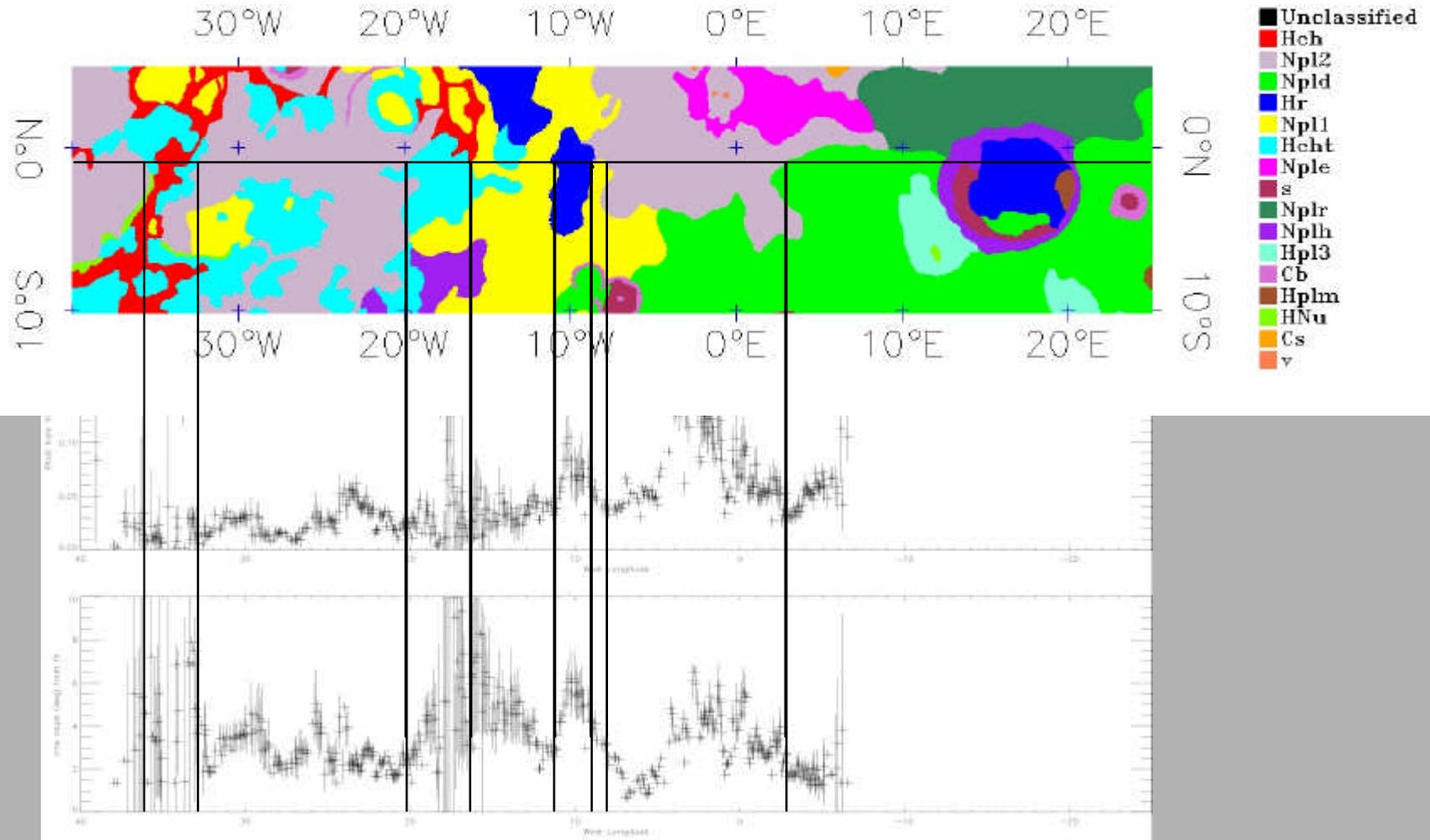
# *DSS-14 Sub-Radar Track Profile*



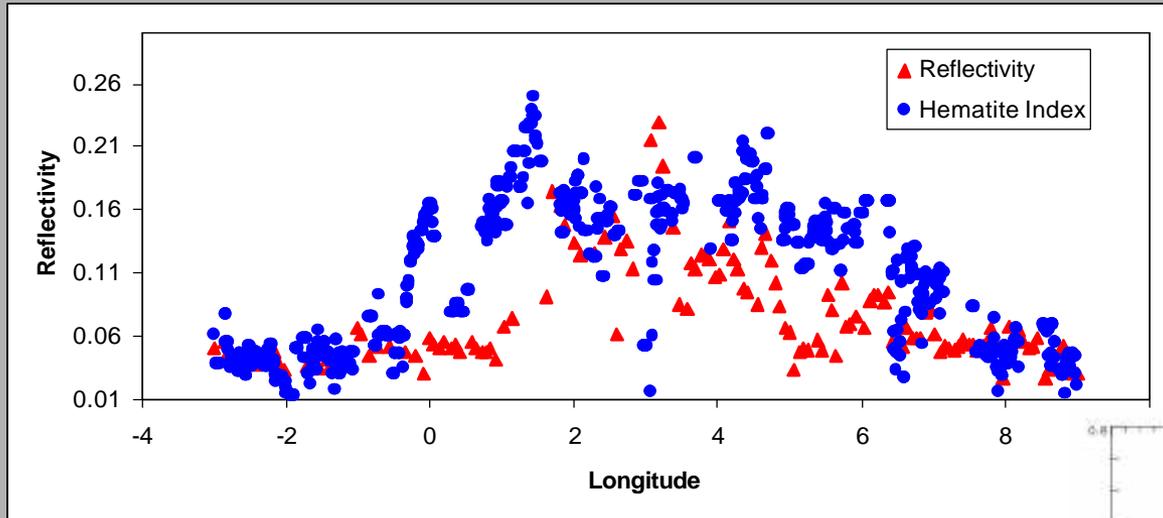
January 9, 2003

4<sup>th</sup> Mars Exploration Rover Landing Site Selection Workshop

# Radars vs. Geology

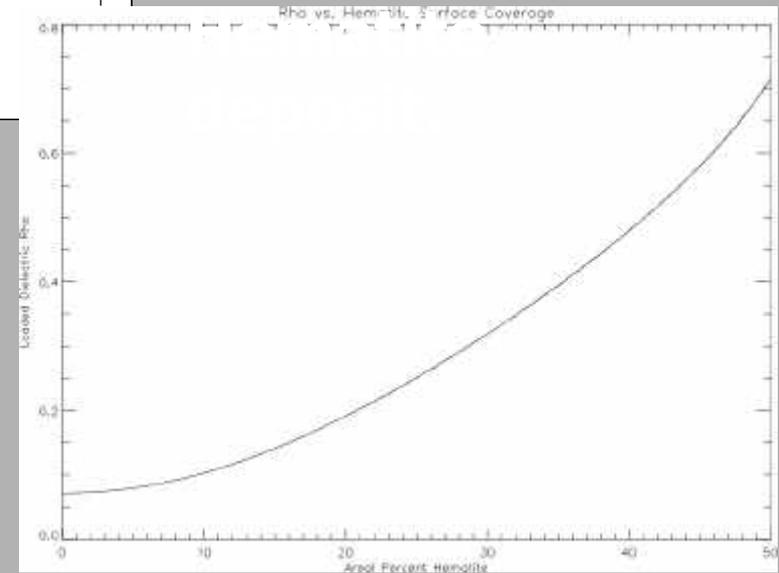


# Reflectivity Enhancement

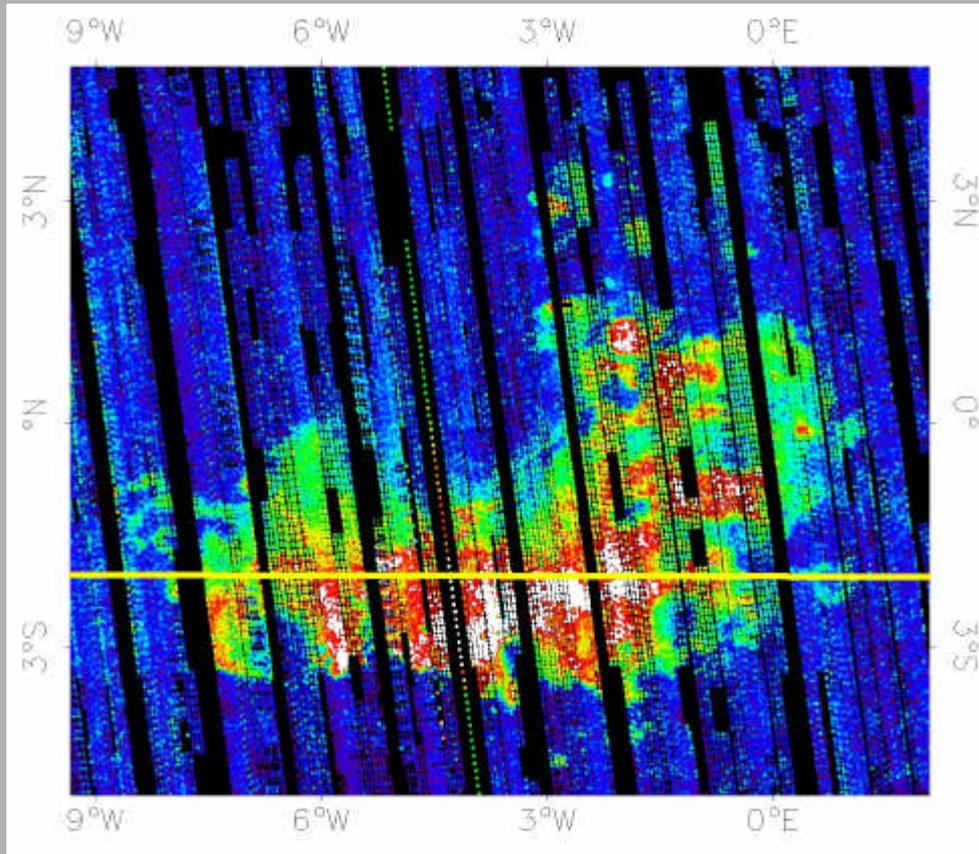


- Dielectric constant enhancement coincident with Terra Meridiani

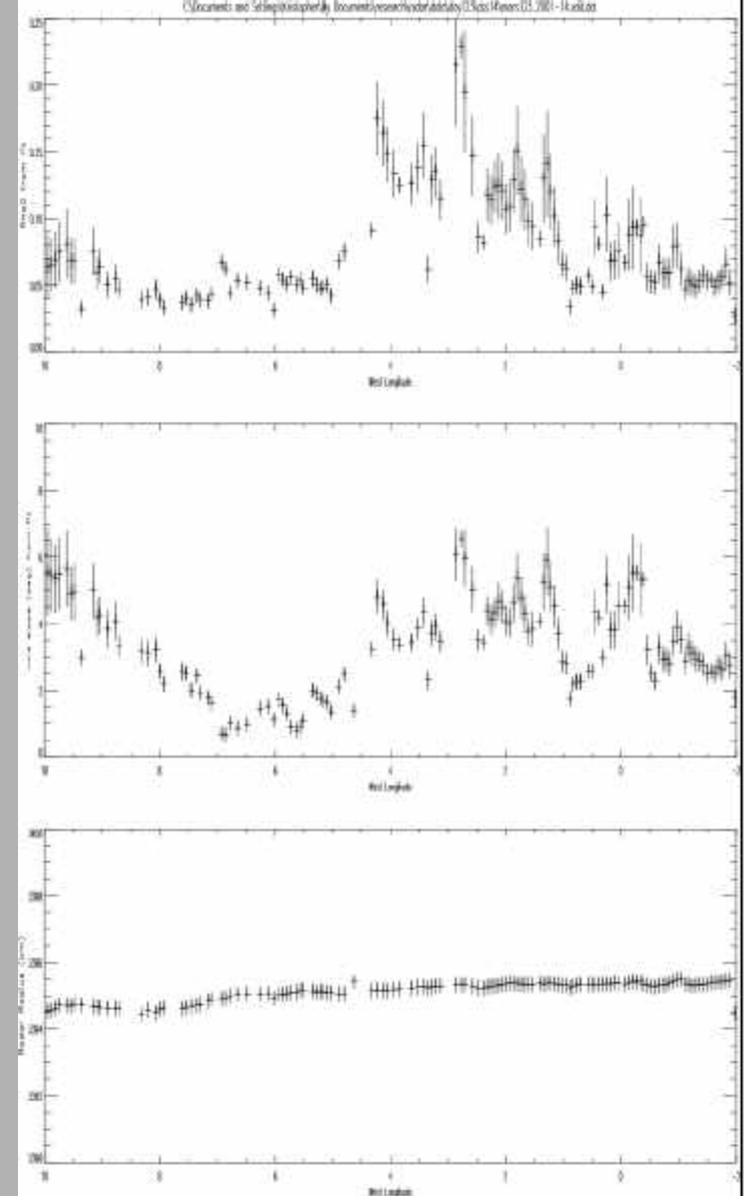
- Enhancement consistent with Loaded Dielectric model simulation of 15% hematite.



# Reflectivity Enhancement

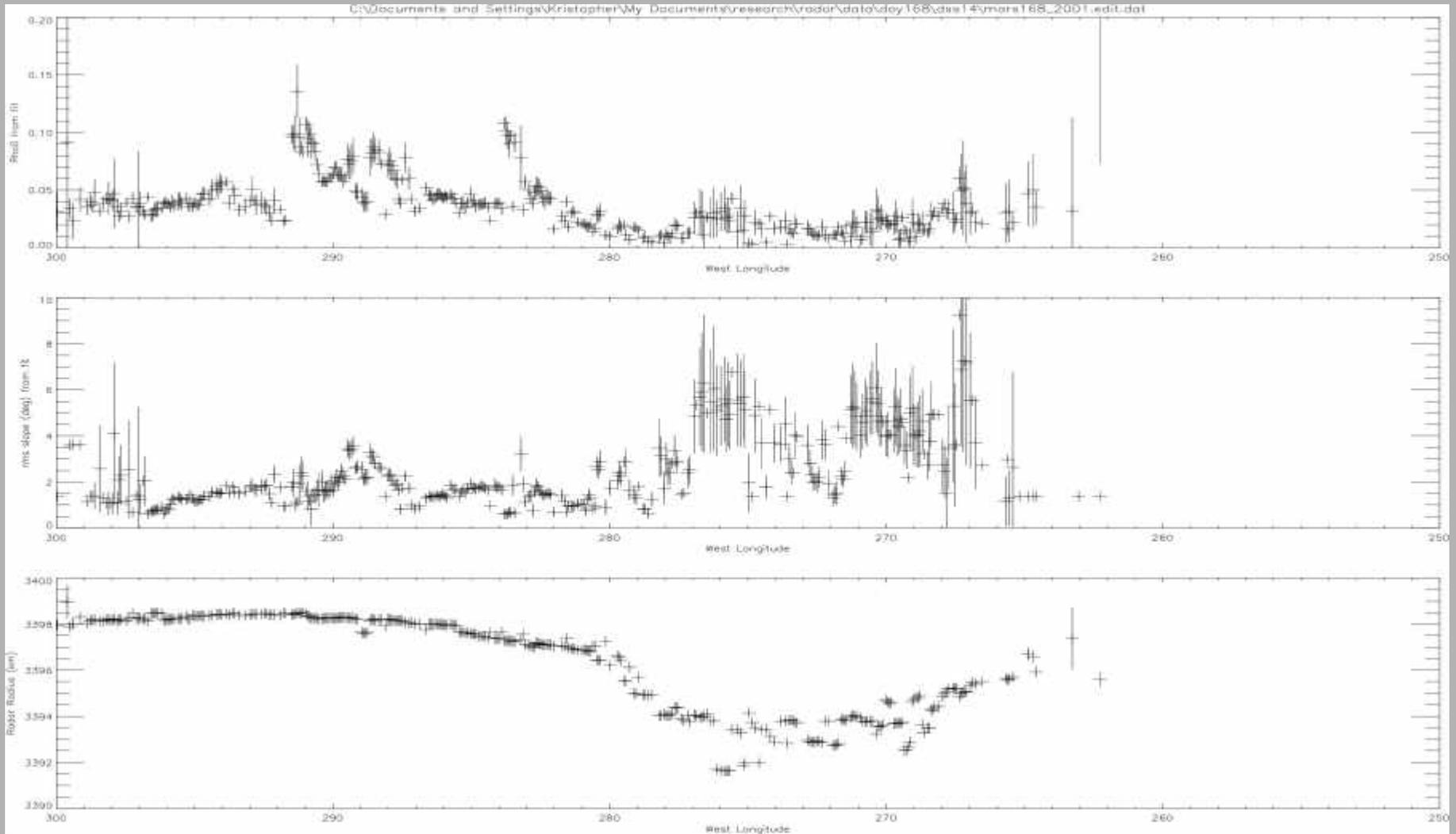


**TES Hematite Index**

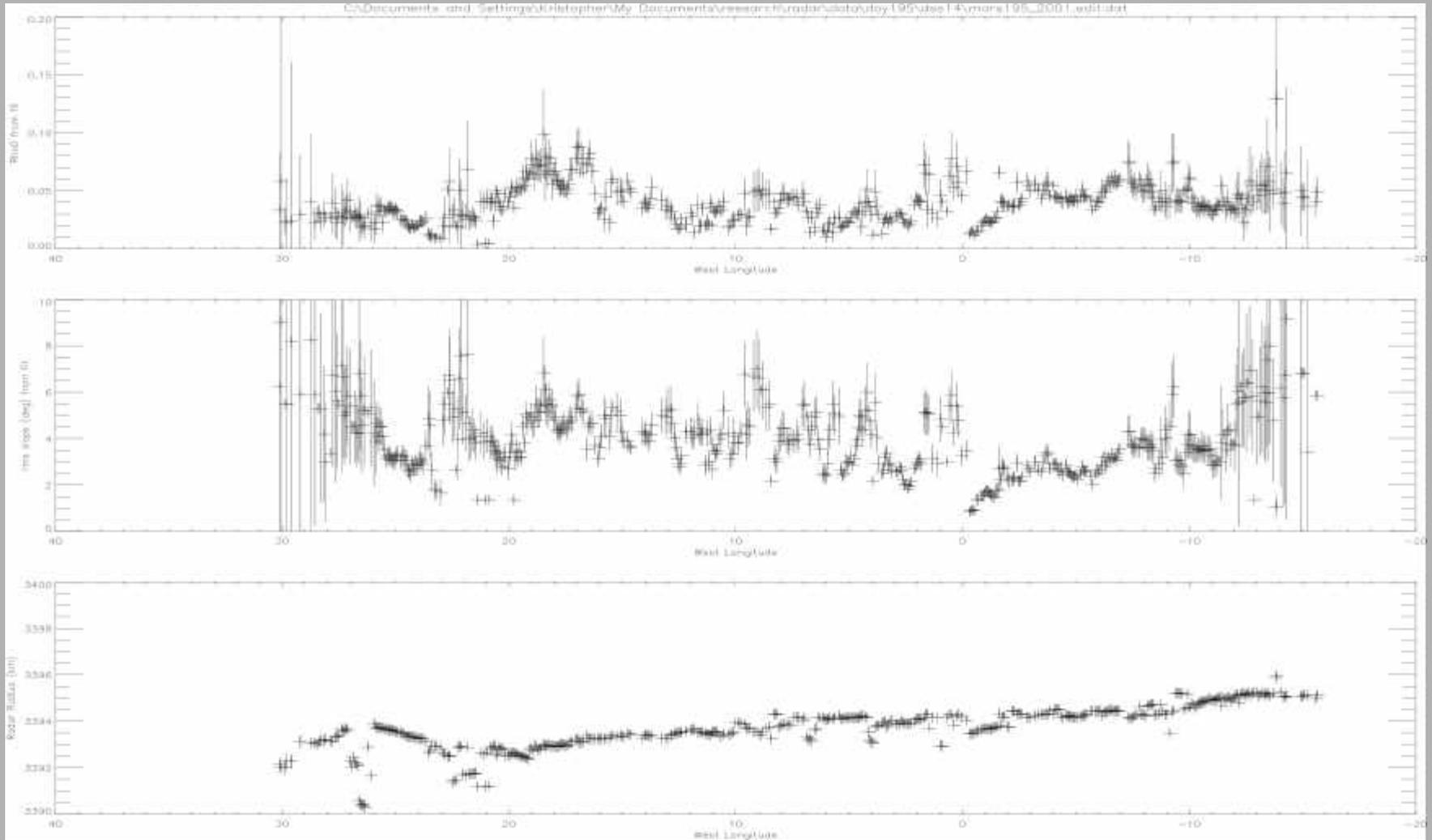


**DSS-14 Profile**

# *DSS-14 Sub-Radar Track Profile: Isidis*



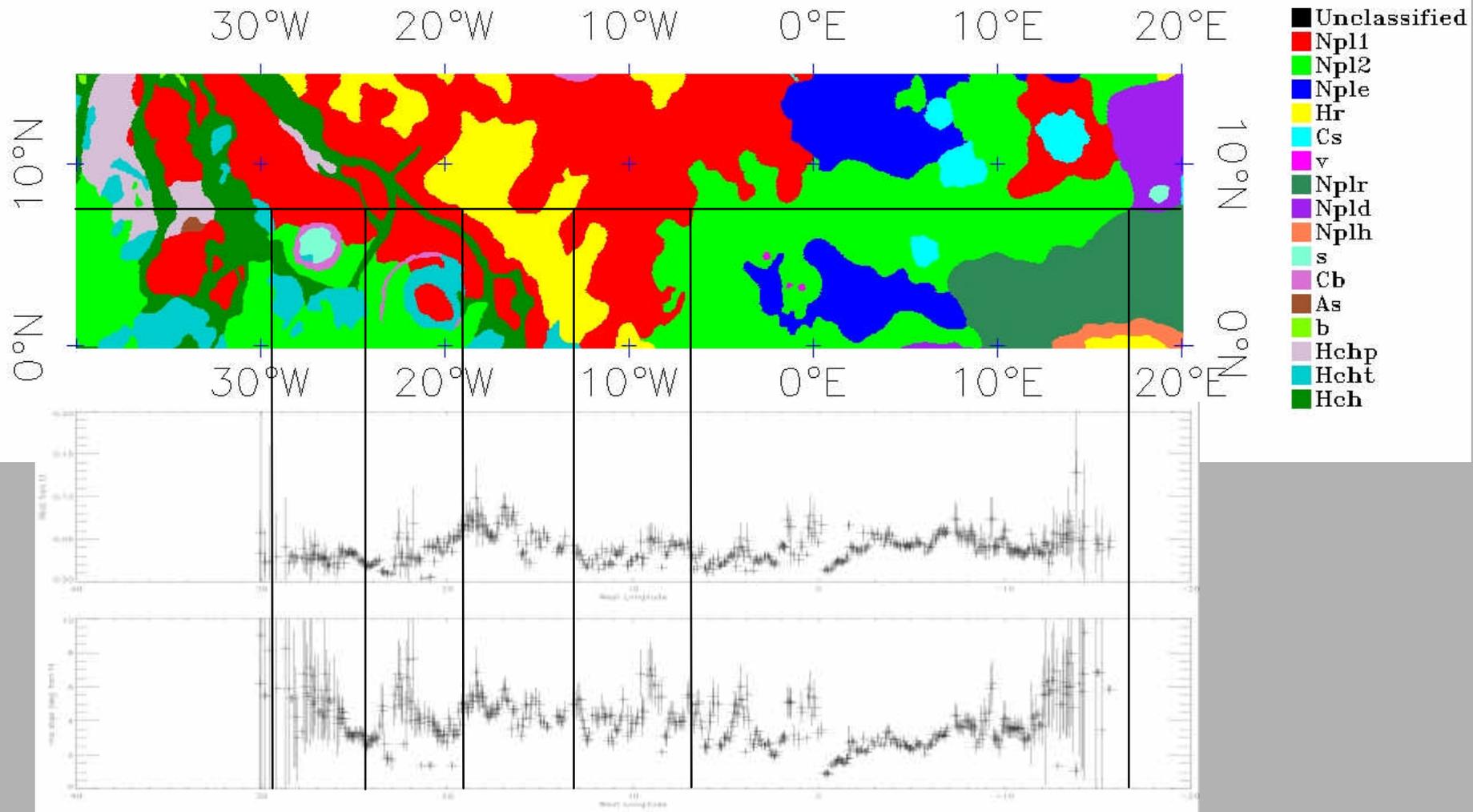
# *DSS-14 Sub-Radar Track Profile: N Meridiani*



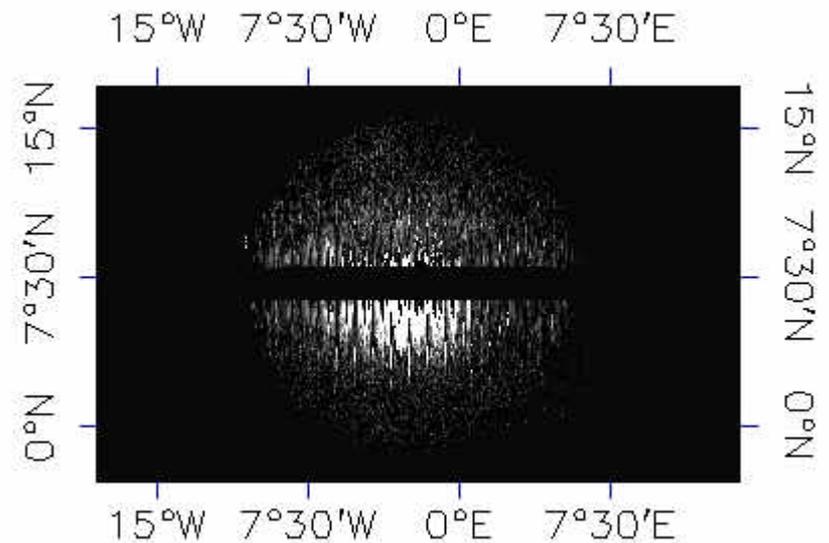
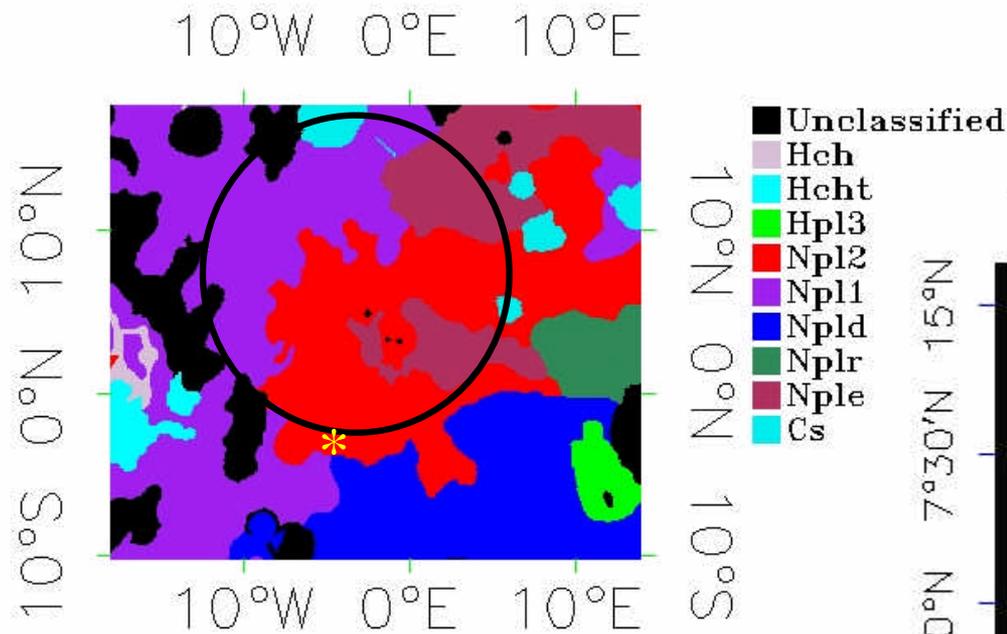
January 9, 2003

4<sup>th</sup> Mars Exploration Rover Landing Site Selection Workshop

# July 14, 2001

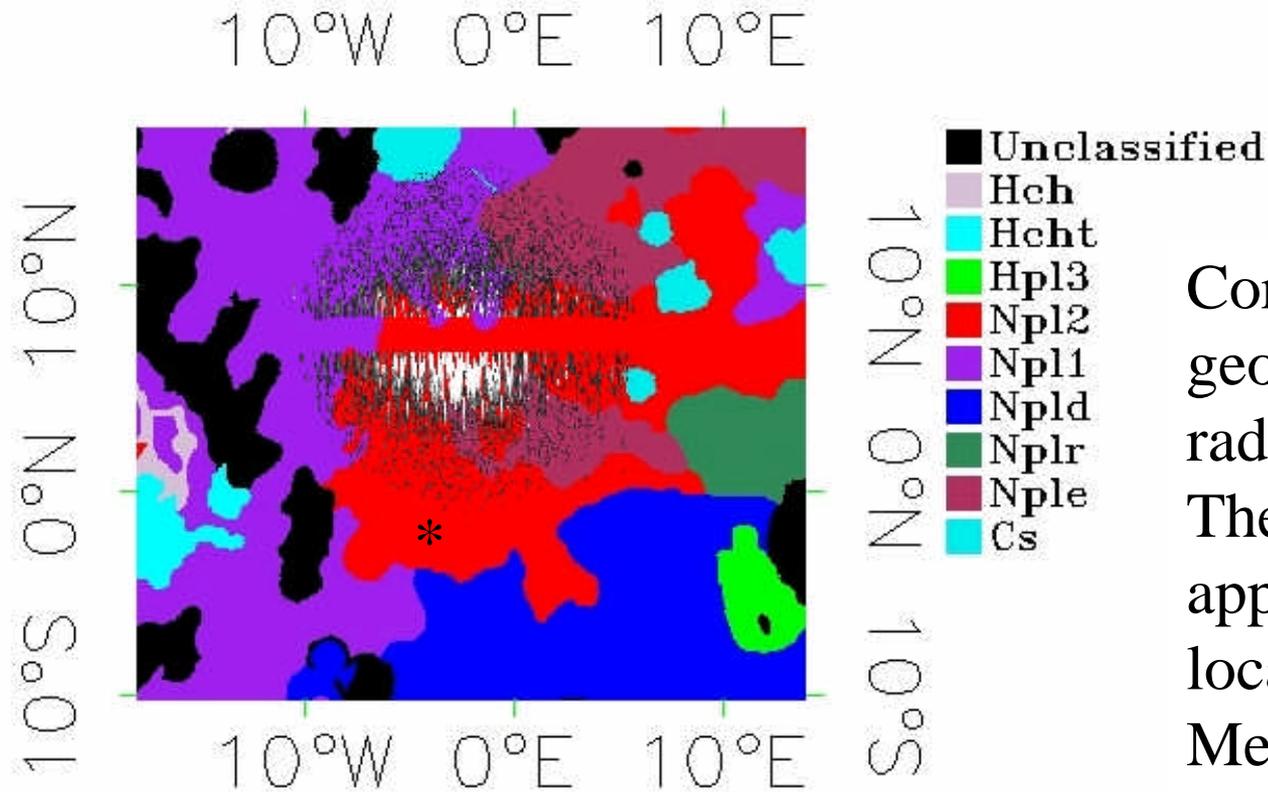


# July 14, 2001 Bistatic Mapping



Correlation of geologic units with radar backscatter. The \* is the approximate location of the Terra Meridiani Landing Site.

# July 14, 2001 Bistatic Mapping



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