# Mars Express OMEGA and Opportunity Coordination

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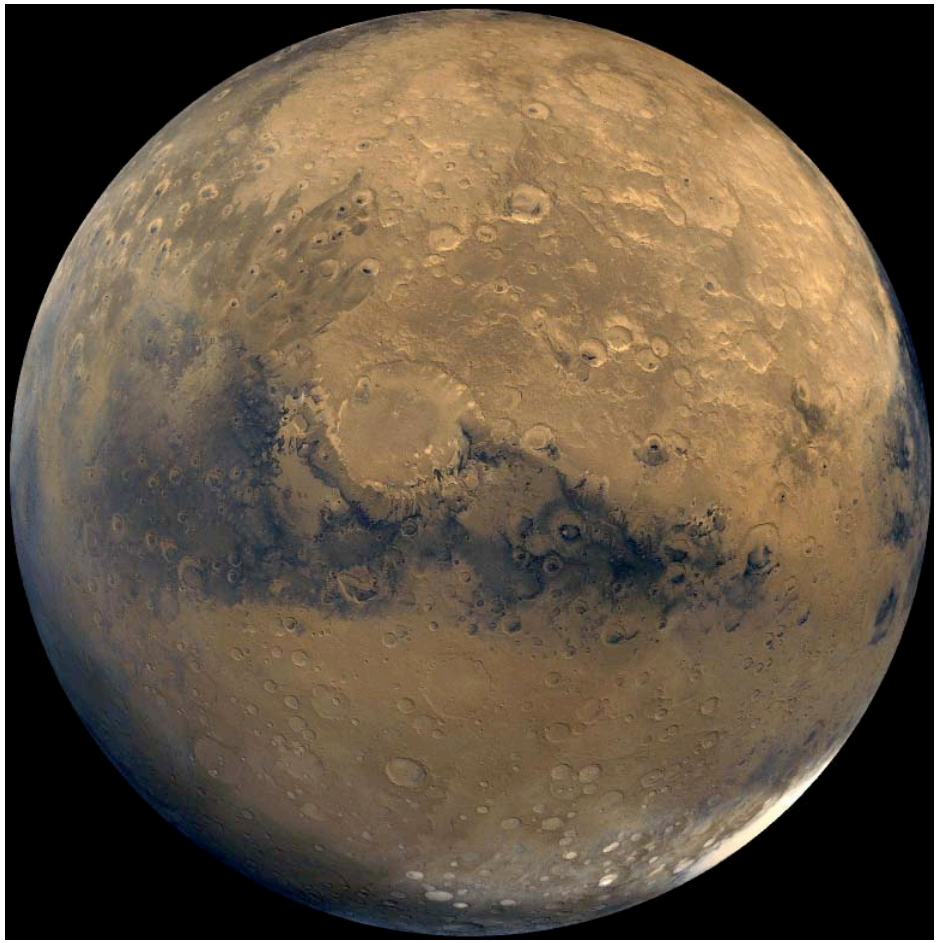
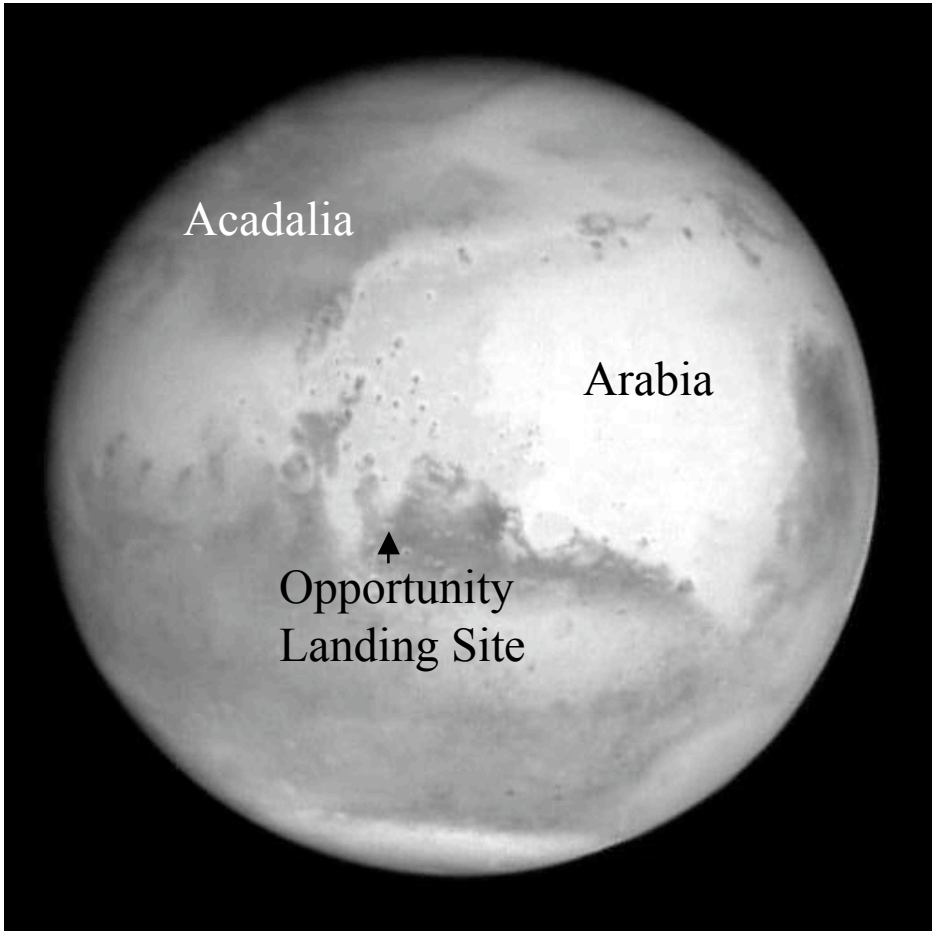
02/09/05

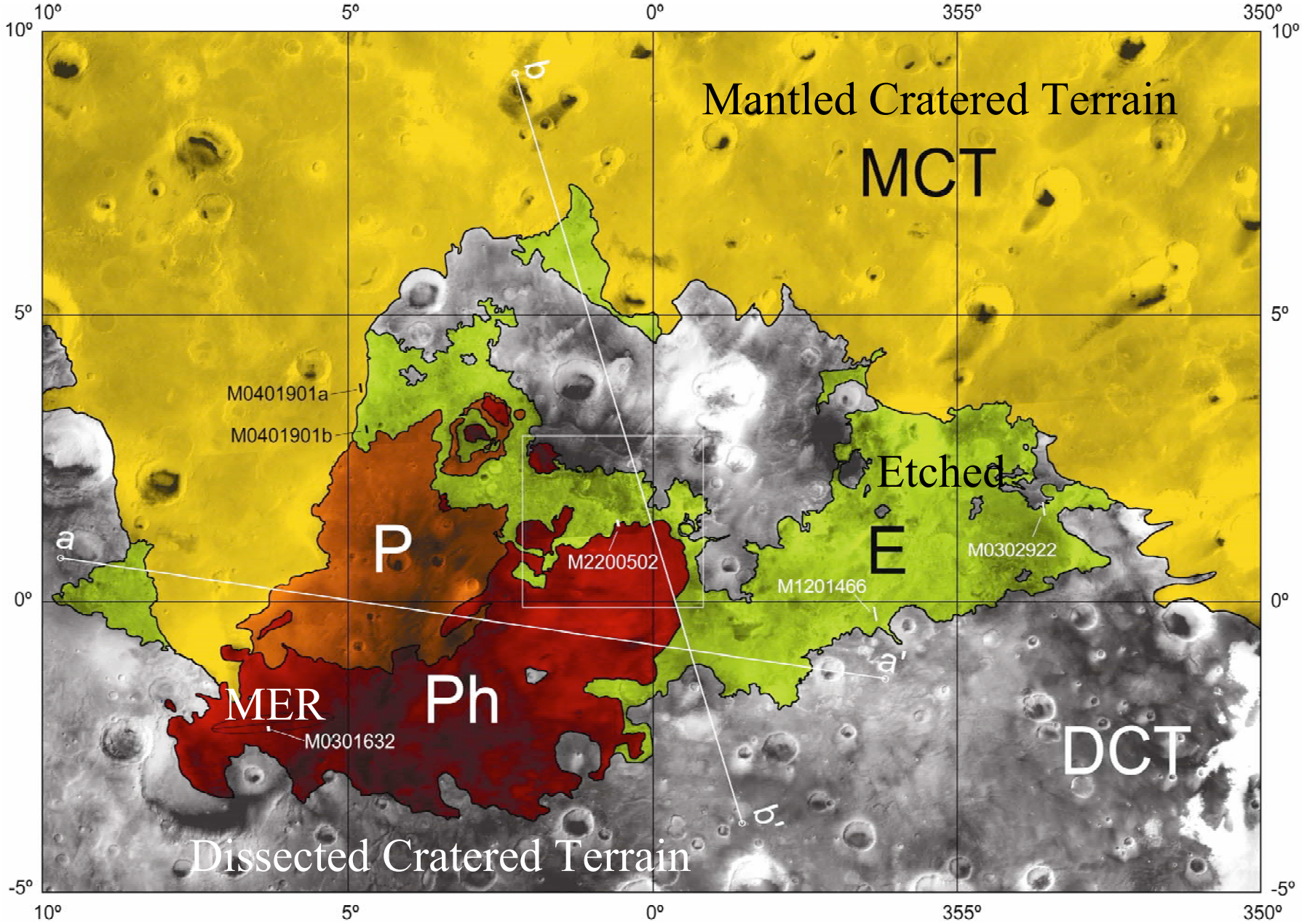
# Global Setting

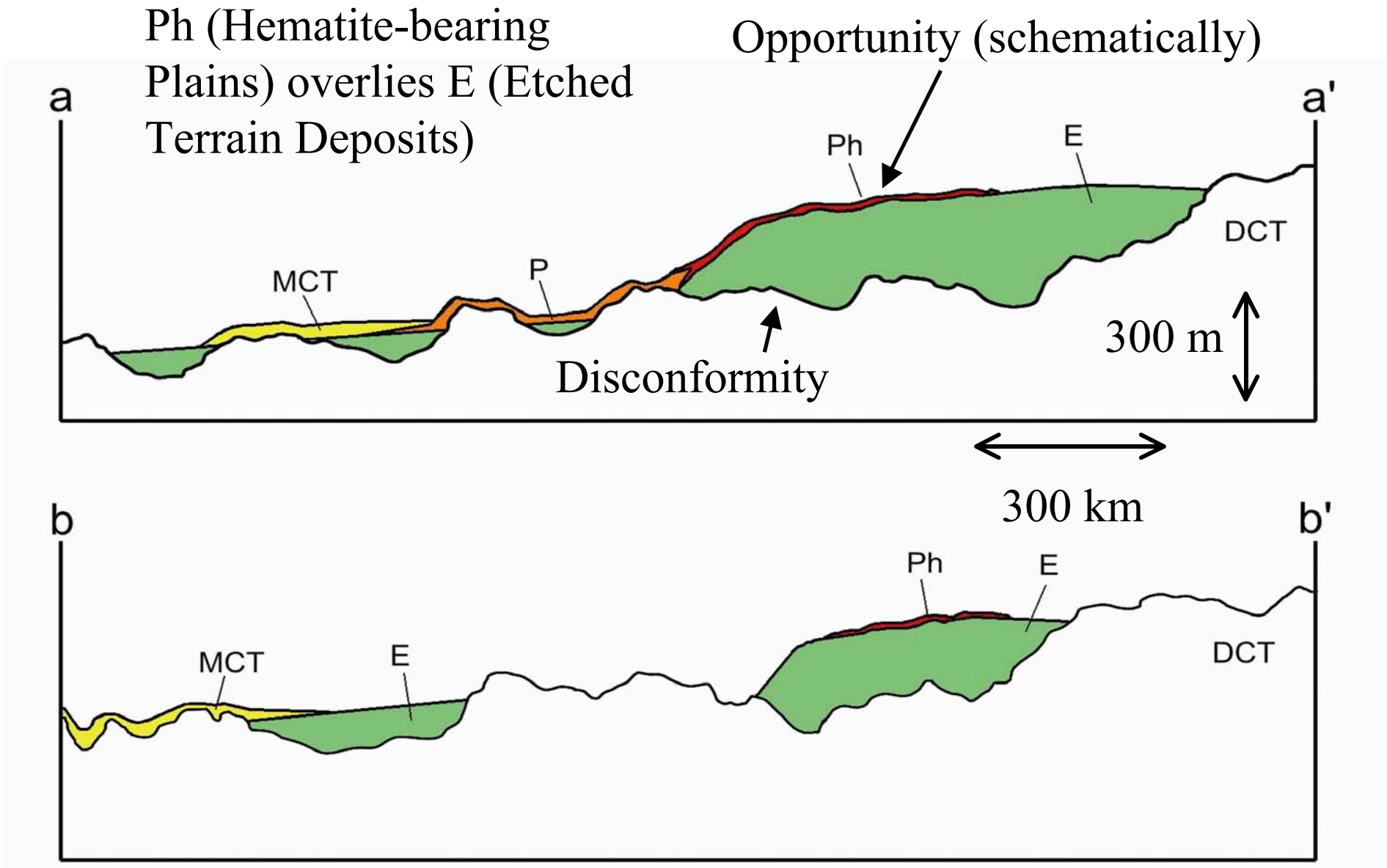


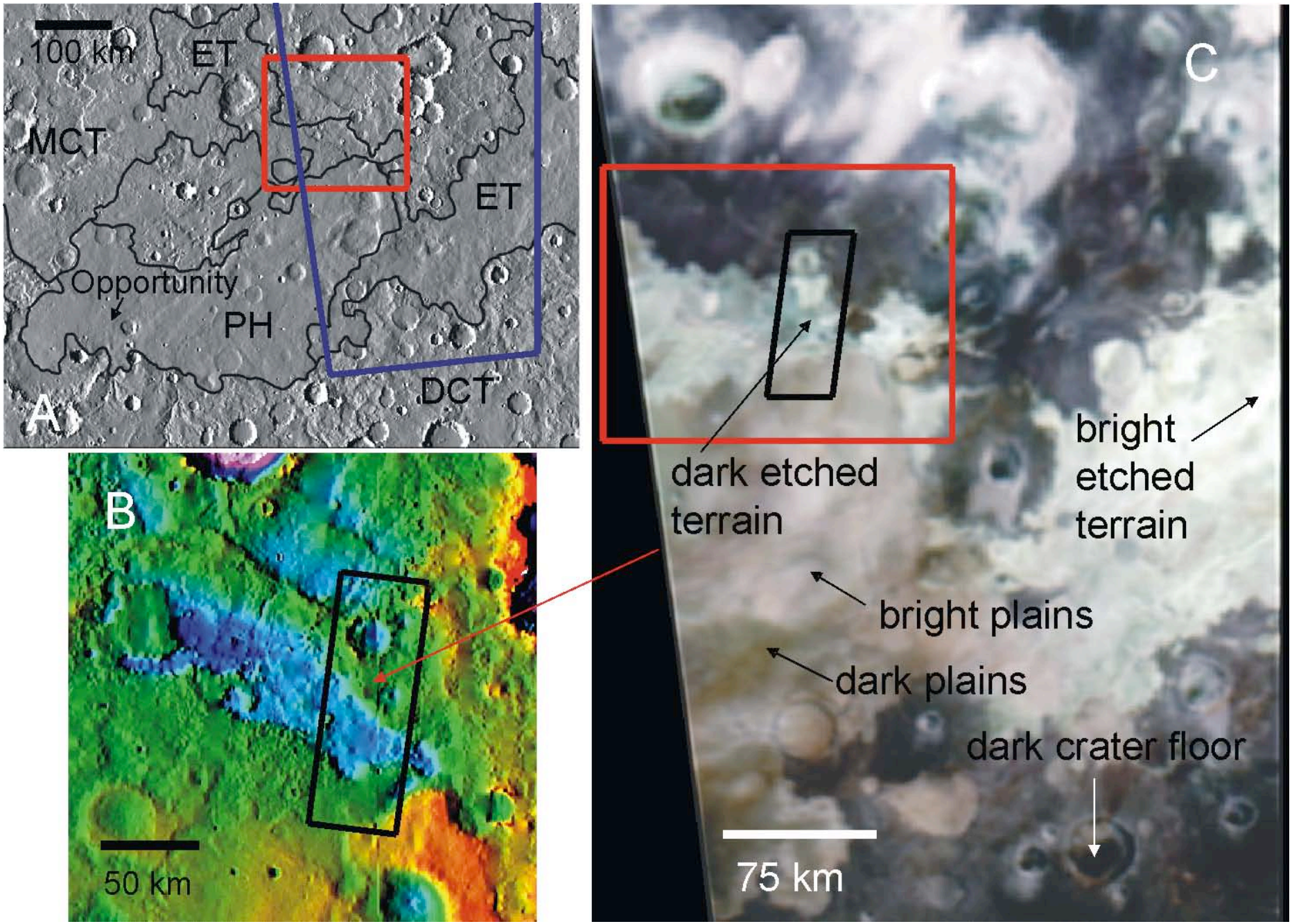
Viking

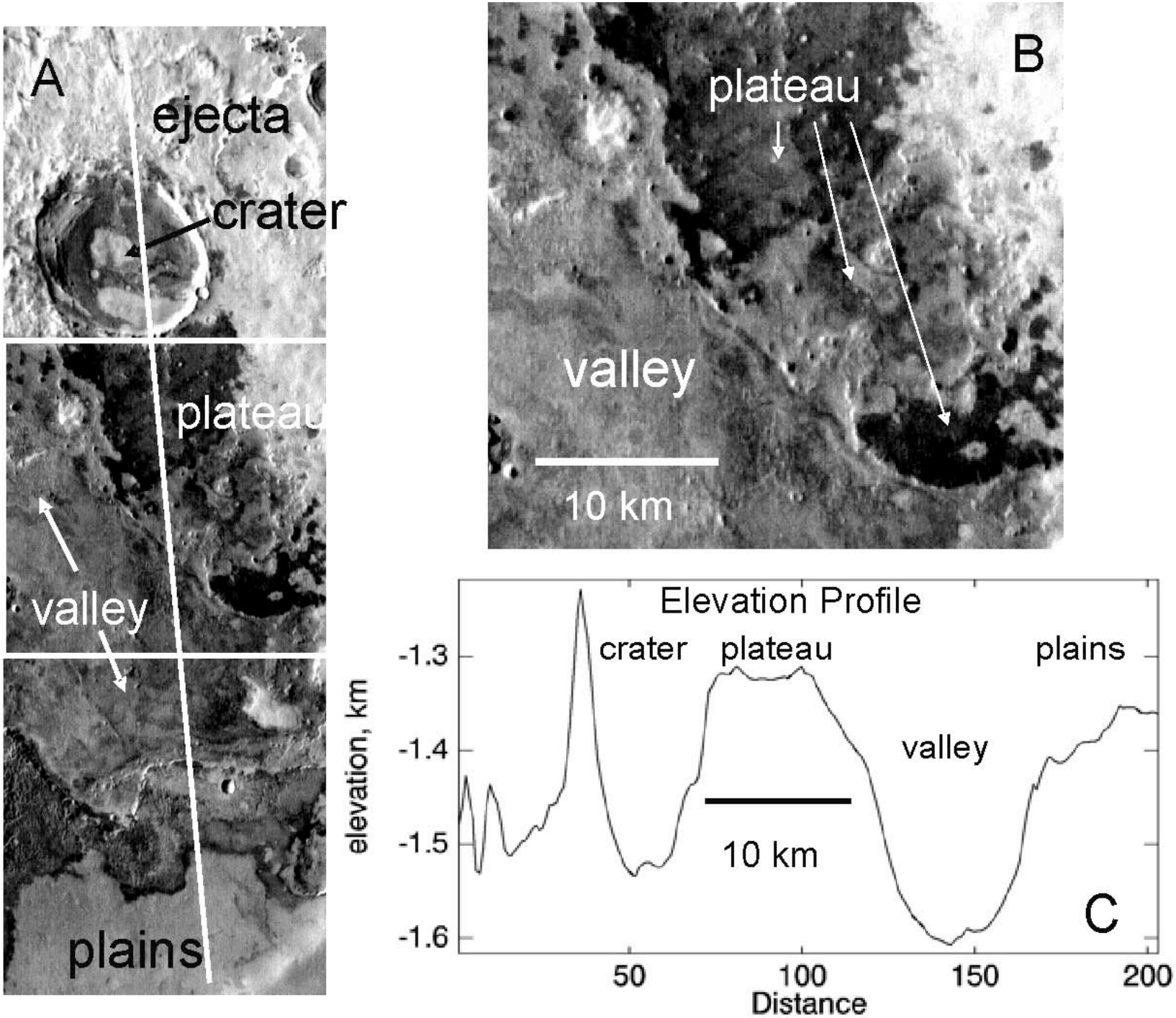



Hubble Space Telescope

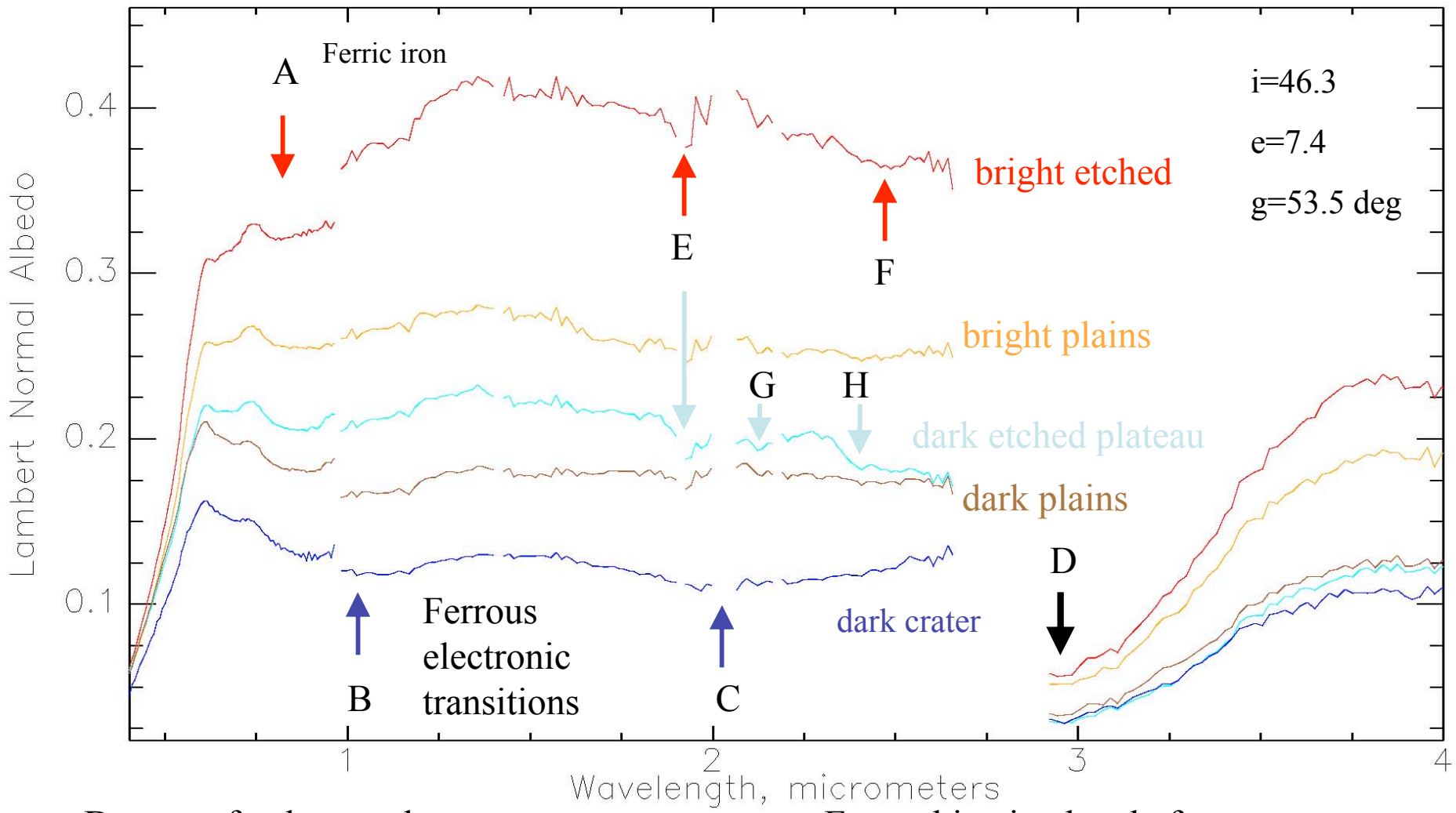

10º
5º
0º
355º
350º
10º
5º
0º
-5º
Mantled Cratered Terrain
MCT
M0401901a
M0401901b
Etched
E
M0302922
M1201466
M2200502
P
Ph
MER
M0301632
DCT
Dissected Cratered Terrain
a
a'
b
b'


Ph (Hematite-bearing Plains) overlies E (Etched Terrain Deposits)
Opportunity (schematically)
a
a'
Ph
E
DCT
MCT
P
300 m
Disconformity
300 km
b
b'
Ph
E
MCT
E
DCT


100 km
ET
MCT
ET
Opportunity
PH
DCT
A
B
50 km
C
dark etched
terrain
bright
etched
terrain
bright plains
dark plains
dark crater floor
75 km

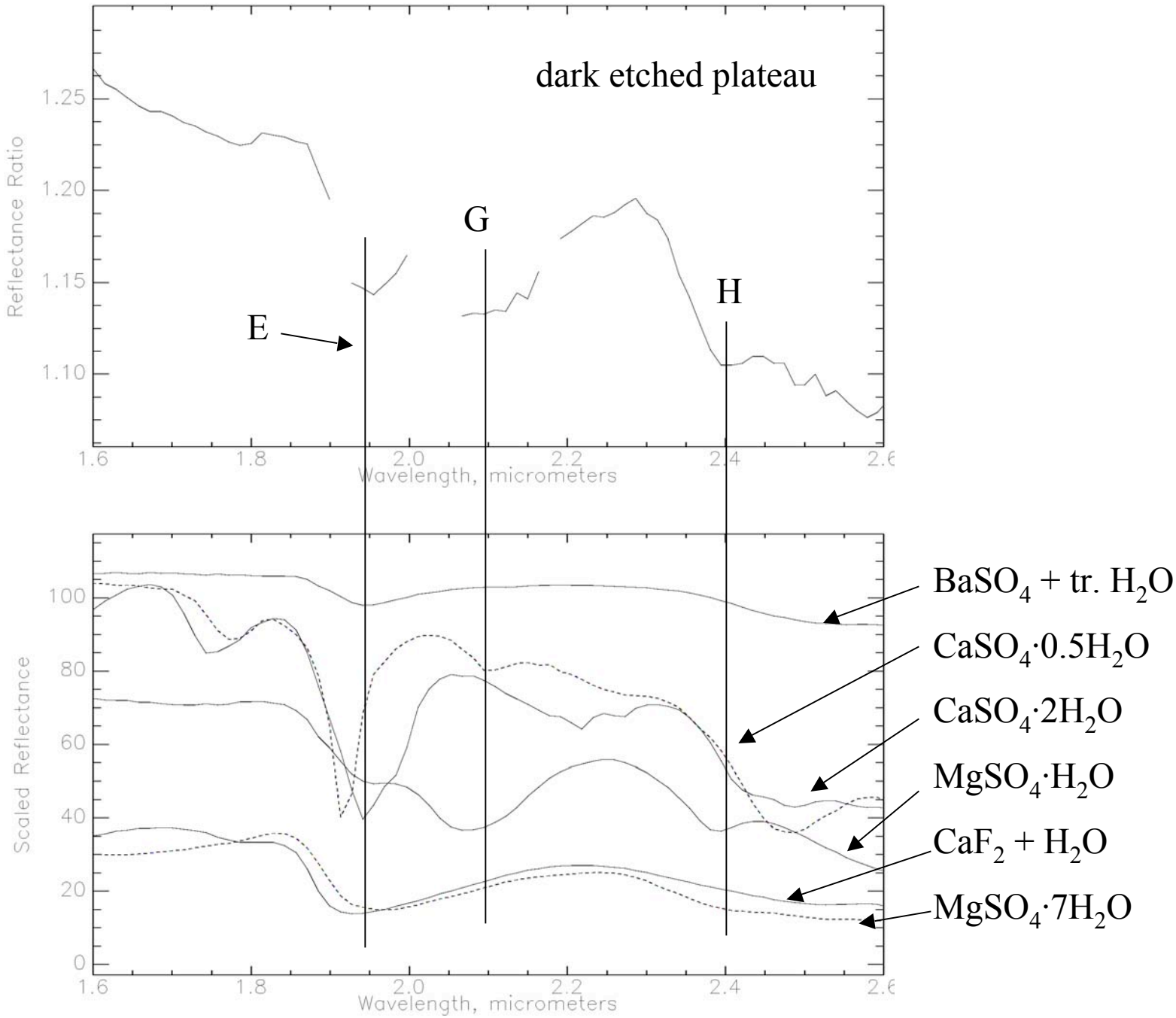

A
ejecta
crater
plateau
valley
plains
B
plateau
valley
10 km
Elevation Profile
crater
plateau
plains
valley
10 km
C
elevation, km
-1.3
-1.4
-1.5
-1.6
50
100
150
200
Distance

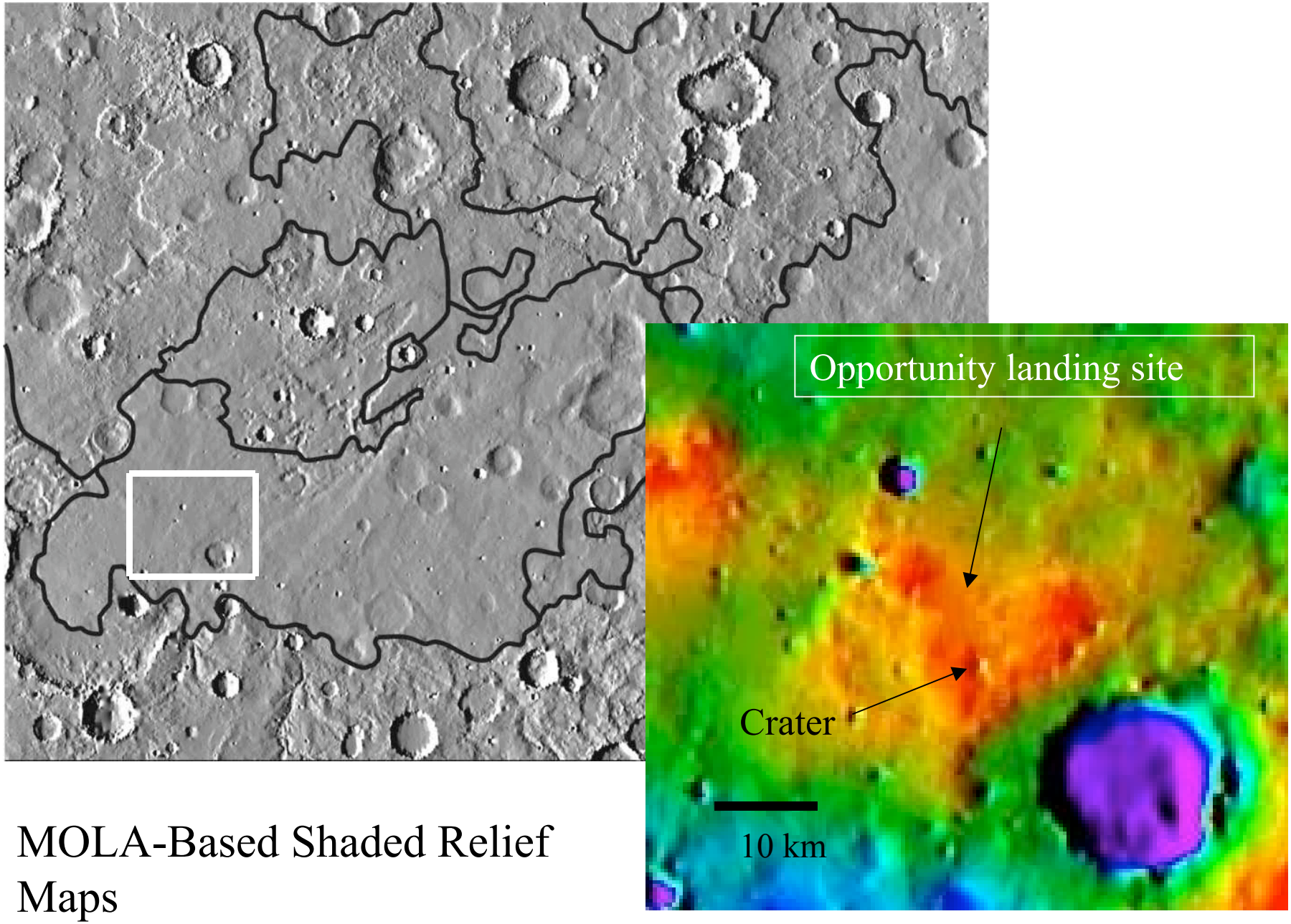
F, G, H =water in sulfate crystal lattice



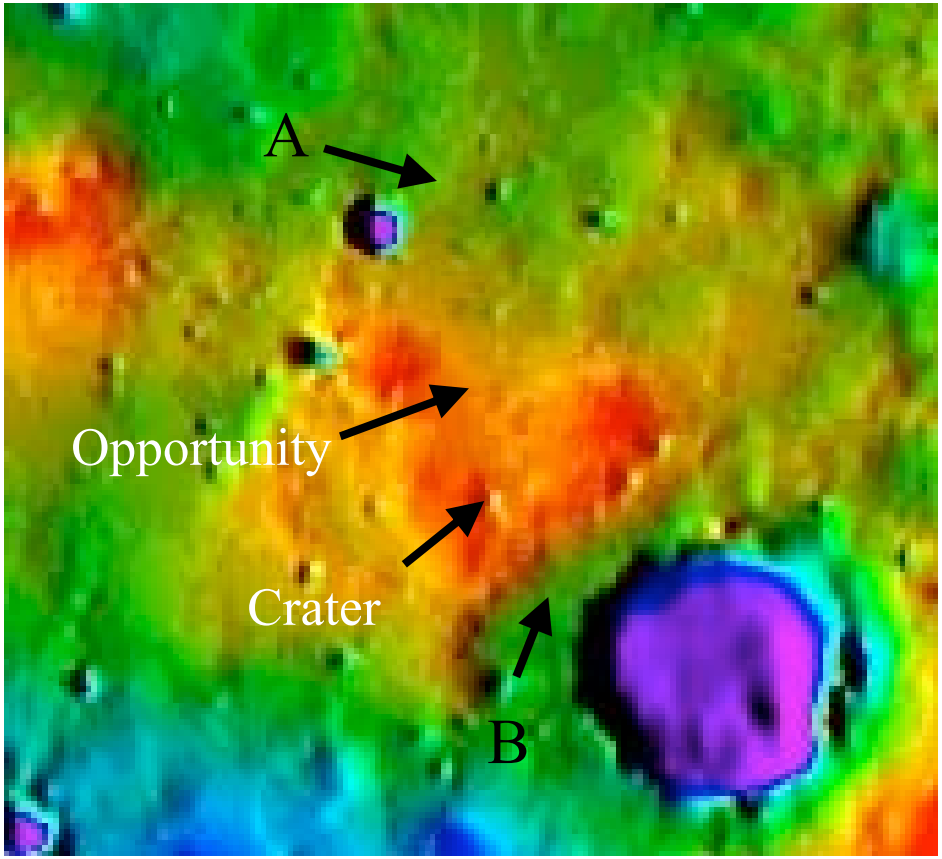

D=water fundamentals

E=combination band of water

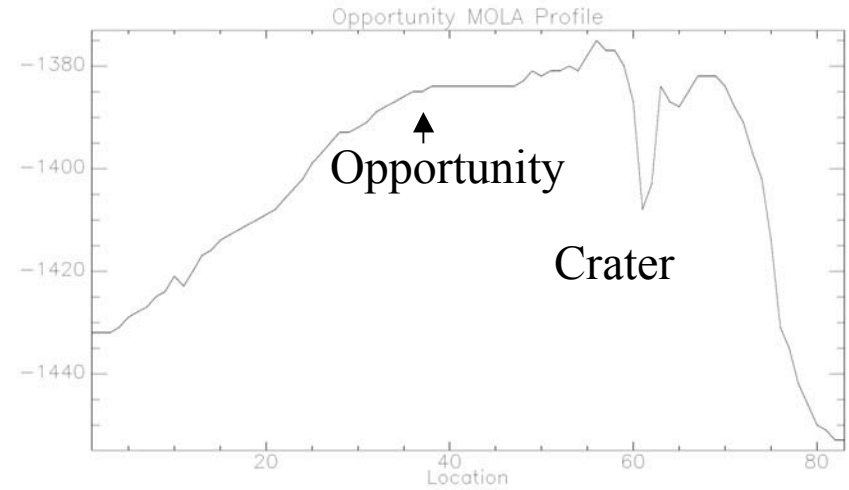

dark etched plateau
Reflectance Ratio
1.25
1.20
1.15
1.10
E
G
H
1.6
1.8
2.0
2.2
2.4
2.6
Wavelength, micrometers
Scaled Reflectance
100
80
60
40
20
0
BaSO4 + tr. H2O
CaSO4·0.5H2O
CaSO4·2H2O
MgSO4·H2O
CaF2 + H2O
MgSO4·7H2O




MOLA-Based Shaded Relief Maps

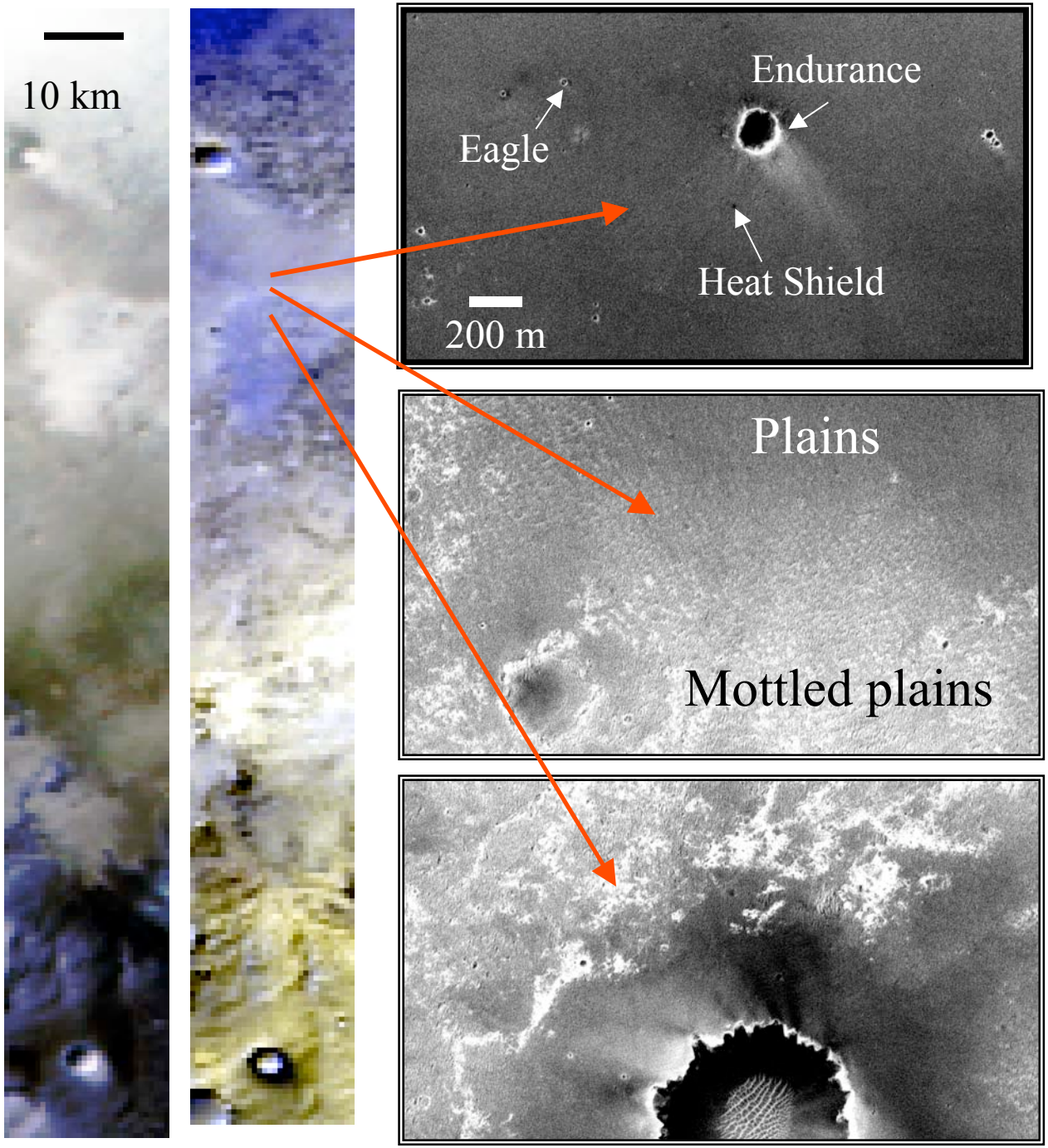



Vertical Profile, meters




A B

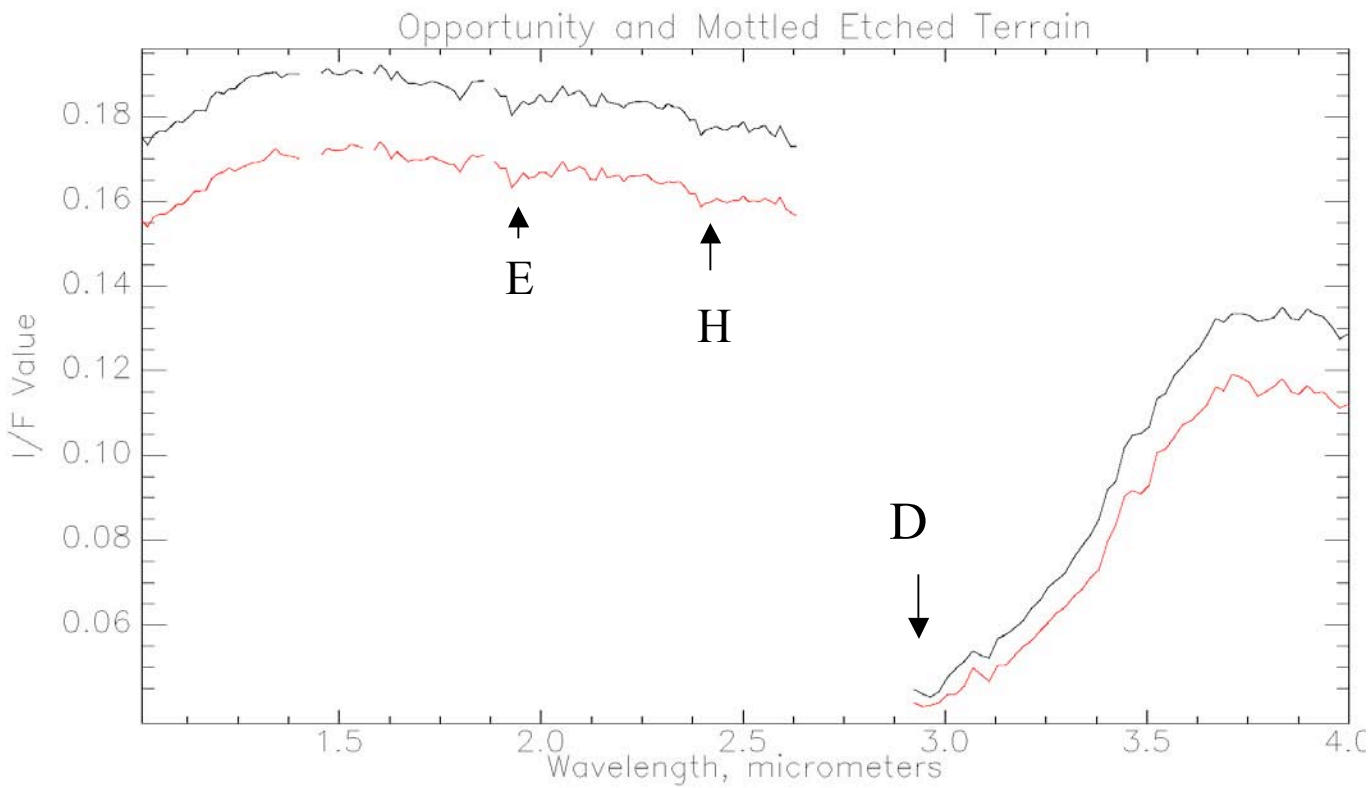
10 km




- OMEGA Orbit 1183-5
  - 12/20/04
  - 14:00 MLST
  - i=33, e=17.8, g=31.8 deg
- C and L Spectrometer color composites
- MOC NA
  - R1400021

Victoria

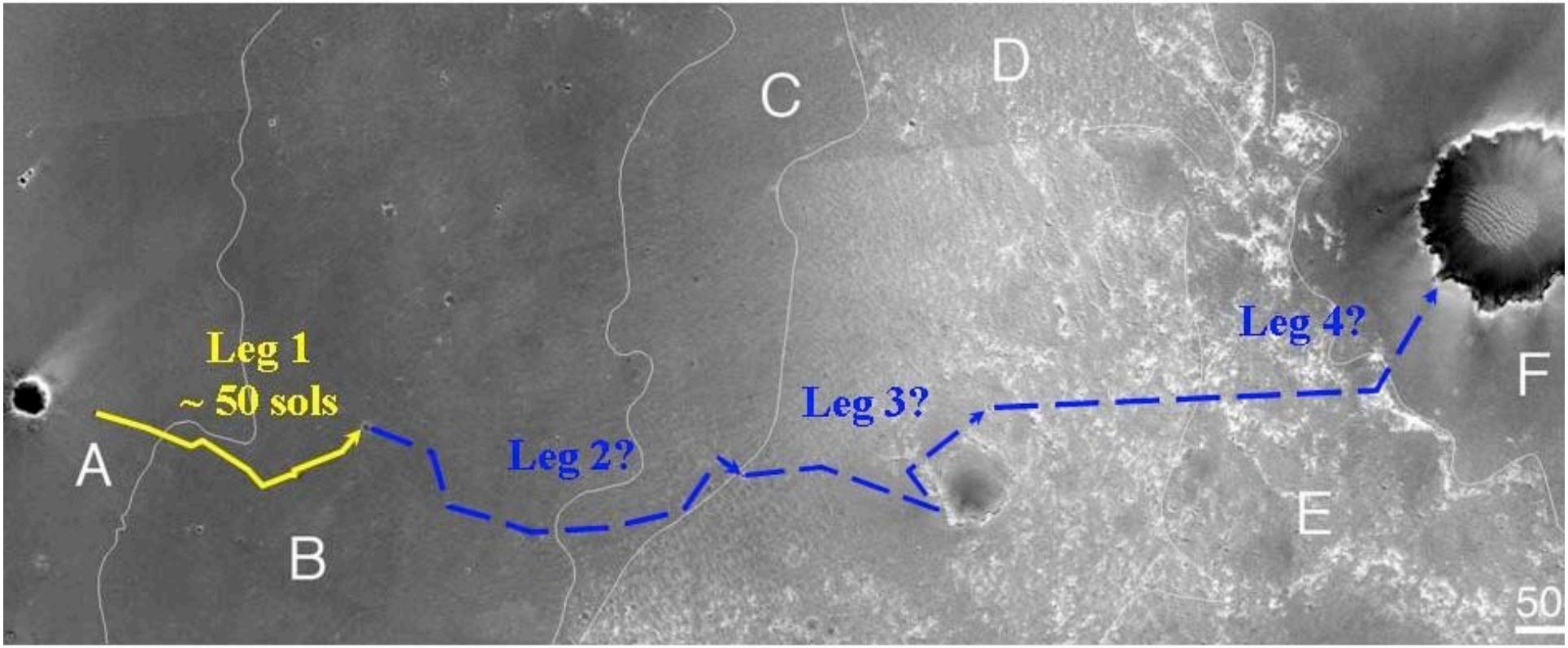
# OMEGA 1183-5 C Spectrometer composite and C, L spectra



# Looking Forward

**Opportunity**

*Long Term Planning* | *Mars Exploration Rover*




North