THERMAL MAPPING OF THE MARTIAN SURFACE

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\[ ATI = \frac{1 - A}{\Delta T} \]

+ atmosphere correction

+ topography correction

Research scheme of the ATI and DATI methods
Comparison between TI (Fergason et al., 2006) and ATI values obtained on various slopes along profiles A to C.
Differential Apparent Thermal Inertia

a) Albedo map
b) Temperature difference map (K)
c) Thermal inertia map (J m⁻² K⁻¹ s⁻¹/²)

Neukum et al., 2004
Robbins et al., 2011

Olympus Mons caldera
PFS/MEX nighttime surface temperature distribution on Mars averaged over 9 martian years (MY26-34)

Seasonal changes

Ice caps

PFS/MEX