

ABBREVIATIONS, SYMBOLS, UNITS

A-1. NAMES AND LOCATIONS

CCF	Concentric Crater Fill
DMD	Deuteronilus Mensae depression
FSD	Fan shaped deposits
GLF	Glacier-like features
FT	Fretted Terrain
LDA	Lobate Debris Apron
LVF	Lineated Valley Fill
MAAT	Mean annual air temperature
MST	Mean annual surface temperature
NWT	North-West Territories, Canada
SPLD	South Polar Layered Deposits
SPP	South Polar Polygons
SPT	South Polar Trough
TT	Tempe Terra
VFF	Viscous flow features

A-2. INSTITUTES AND ORGANIZATIONS

ASU	Arizona State University
AWI	Alfred Wegener Institut Potsdam
DLR	German Aerospace Center <i>Deutsches Zentrum für Luft- und Raumfahrt e.V.</i>
ESA	European Space Agency
FUB	Freie Universität Berlin
FSU	Former Soviet Union
GSFC	Goddard Space Flight Center
GSL	Geological Society of London

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IAPWS	International Association for the Properties of Water and Steam
IAU	International Astronomical Union
IPA	International Permafrost Association
JPL	Jet Propulsion Laboratory
MIPL	Multimission Image Processing Lab
MSSS	Malin Space Science Systems
NASA	National Aeronautics and Space Administration
PDS	Planetary Data System, JPL-NASA, USA
PSA	Planetary Science Archive, ESA
PSI	Planetary Science Institute
SI	Système international d'unités
UNIS	University Centre, Svalbard
USGS	United States Geological Survey

A-3. MISSIONS, INSTRUMENTS, SOFTWARE

CRU TS	Climate Database, Climatic Research Unit, University of East Anglia (UEA), Norwich (<i>Mitchell and Jones, 2005</i>)
DEM/DTM	Digital Elevation Model/Digital Terrain Model
ETM	Enhanced Thematic Mapper
GCM	General Circulation Model
GIS	Geographic Information System, here: ArcGIS by ESRI (http://www.esri.com)
GMT	Generic Mapping Tools, by <i>Wessel and Smith (1991, 1995, 1998)</i>
IDL	Integrated Development Language, by RSI Software
ISIS	Integrated Software for Imagers and Spectrometers, by USGS
MDIM	Mars Digital Image Mosaic, (v. 1.0-2.1)
MEGDR	MOLA Mission Experiment Gridded Data Record
MER	Mars Exploration Rovers
MEX	Mars Express (since 2004)
MEX-HRSC	High Resolution Stereo Camera
MGS	Mars Global Surveyor (since 1997)
MGS-TES	Thermal Emission Spectrometer
MGS-MOLA	Mars Orbiter Laser Altimeter
MGS-MOC (WA/NA)	Mars Orbiter Camera (Wide Angle/Narrow Angle)
MGS-MOC cPROTO	compensated Pitch and Roll Targeted Observation
MO	Mars Odyssey (since 2001)
MO-THEMIS (VIS/IR)	Thermal Emission and Imaging Spectrometer (Visible/Infrared)
MO-HEND	High Energy Neutron Detector

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MO-GRS	Gamma-Ray Spectrometer
MO-NS	Neutron Spectrometer
MRO-HiRISE	High-Resolution Imaging Science Experiment
MRO	Mars Reconnaissance Orbiter (2005-today)
NSSDC	National Space Science Data Catalogue
PEDR	MOLA Precision Experiment Data Record
TAE	Transportable Application Environment
TM	Thematic Mapper
VASClmO	Variability Analysis of Surface Climate Observations Deutscher Wetterdienst (DWD) and J. W. Goethe University, Frankfurt on Main
VICAR	Visual Image and Communication Retrieval, by JPL/MIPL
VIS-A/B	Viking Imaging Subsystem A and B
VO-1/2	Viking Orbiter 1/2(1976-1981)

A-4. PHYSICAL UNITS

px	pixel
(k)m	(kilo-)meter
(k)Pa	(kilo-)Pascal (= 10^{-5} bar)
K	Kelvin
J	Joule
W	Watt
s	second
(G)a	(Giga)year

A-5. SYMBOLS

A, B, n	temperature-dependent parameters
C	specific heat capacity [$\text{J}\cdot\text{kg}^{-1}\cdot\text{K}^{-1}$]
g	acceleration due to gravity [$\text{m}\cdot\text{s}^{-2}$]
h	height of mixed atmospheric water [km]
I	thermal inertia, [$\text{J}\cdot\text{m}^{-2}\cdot\text{s}^{-1/2}\cdot\text{K}^{-1}$] or [IU]
K	decay constant [-]
k	thermal conductivity [$\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$]
L	length [km]
L_s	solar longitude [$^\circ$]
M	normalized mass of water in the atmosphere [pr μm]
P	dynamic viscosity [Poise = $0.1 \text{ Pa}\cdot\text{s}$]

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Q	activation energy [$\text{kJ}\cdot\text{mol}^{-1}$]
Q_g	geothermal heat flux [Wm^{-2}]
R	universal gas constant, $8.314 \text{ J}\cdot\text{mol}^{-1}\cdot\text{K}^{-1}$
T	temperature [K]
T_{mp}	melting-point temperature [K]
\bar{T}_s	mean annual surface temperature [K], see MST
V	volume [m^3]
z	depth [km] or height [km]
α	angle [$^\circ$], chapter 3
α	coefficient of linear thermal expansion [K^{-1}], chapter 4
β	coefficient of cubic thermal expansion [K^{-1}]
$\varepsilon, \dot{\varepsilon}$	strain, strain rate [a^{-1}]
$\bar{\eta}$	viscoelastic parameter, chapter 4
η	dynamic viscosity [$\text{Pa}\cdot\text{s}$]
Φ	porosity [%]
ρ	density [$\text{kg}\cdot\text{m}^{-3}$]
τ	shear stress [Pa, bar]
τ_o	yield stress [Pa, bar]

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