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Related Experience Summary

PLANETARY RESEARCH AND ANALYSIS: NASA Mars Fundamental Research Program: Co-I, Experimental studies of the interaction of acidic volatiles and fluids with Mars surface materials (2005-2008); NASA Cosmochemistry Program: PI, Mars soil genesis project (1983-2003); PI or Co-I, Lunar regolith and space weathering (1975-2002); NASA Mars Data Analysis Program: PI, Coordinated analysis and calibration studies of Pathfinder IMP, APXS, and magnetics data (1998-2003); PI, Martian Weathering Simulation (1978-1985); NASA Exobiology Program: Co-I, Experimental studies of the abiotic formation of carbonate-sulfide-magnetite assemblages: Implications for Martian meteorite ALH84001 (1999-2001); NASA Hubble Space Tel. Gen. Obs. Prog.: Co-I, A global search for alteration minerals on Mars (2001-2004); NASA Astrobiology Program: Co-I, Institute for the study of biomarkers in astromaterials (1998-2000); NASA Planetary Geology Program: PI, Martian weathering processes (1977-1982).

MARS EXPLORATION MISSIONS: NASA Mars Science Laboratory 2009 Mission: Co-I, CheMin and SAM instruments (2005-Present); NASA Mars Scout 2007 Mission: Co-I, Phoenix Integrated Payload (2003-Present); NASA Mars Reconnaissance Orbiter 2005 Mission : Co-I, CRISM Instrument (2001-Present); NASA Mars Exploration Rover 2003 Mission: Co-I, Athena Rover Integrated Payload (1997-Present); OMEGA (ESA Mars Express 2003) and CRISM (MRO 2005) Missions, CRISM-OMEGA Collab (2003-Present); NASA Mars Surveyor 1998 Lander Mission (Mars Polar Lander), Participating Scientist (1999).

Employment History

Planetary Scientist or Astrophysicist, Astromaterials Research and Exploration Science Directorate (ARES), NASA Johnson Space Center, Houston TX 77058 (1973-Present).

Education

Ph.D., Physical Chemistry, Univ. of Wisconsin, 1973; B.S., Chemistry, Harvey Mudd College, 1968.

Awards and Honors

Rotary National Award for Space Achievement, Stellar Award (2001); 25+ NASA Group Achievement and Performance Awards (1973-Present).

Selected Relevant Publications

(130+ peer-reviewed journal articles; 320+ meeting/workshop abstracts.)

Morris, R. V. and G. Klingelhöfer (2008), Chapter 15. Iron Mineralogy and Aqueous Alteration on Mars from the MER Mössbauer Spectrometers, in *The Martian Surface: Composition, Mineralogy, and Physical Properties*, edited by J. F. Bell III, Cambridge University Press, in press.

Golden, D. C., D. W. Ming, R. V. Morris, and T. G. Graff (2008), Hydrothermal synthesis of hematite spherules and jarosite: Implications for diagenesis and hematite spherule formation in sulfate outcrops at Meridiani Planum, Mars, Amer. Mineral., in press.

Squyres, S. W., et al., R. V. Morris, et al. (2007) Pyroclastic activity at Home Plate in Gusev Crater, Mars, Science, 316, 738-742.

Clark, B. C., R. E. Arvidson, R. Gellert, R. V. Morris, et al. (2007), Evidence for montmorillonite or its compositional equivalent in the Columbia Hills, Mars, J. Geophys. Res., 112, E06S01, doi:10.1029/2006JE002756.

Morris, R. V., et al. (2006) Mössbauer mineralogy of rock, soil, and dust at Meridiani Planum, Mars: Opportunity's journey across sulfate-rich outcrop, basaltic sand and dust, and hematite lag deposits. J. Geophys. Res., 111, E12S15, doi:10.1029/2006JE002791.

Morris, R. V., et al. (2006) Mössbauer mineralogy of rock, soil, and dust at Gusev Crater, Mars: Spirit's journey through weakly altered olivine basalt on the Plains and pervasively altered basalt in the Columbia Hills, J. Geophys. Res., 111, E02S13, doi:10.1029/2005JE002584.
