

MICHAEL S. RAMSEY

Biographical Sketch

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Michael Ramsey is a Professor in the Department of Geology and Planetary Science at the University of Pittsburgh. He earned his Ph.D. in Geology from Arizona State University in 1996 and his B.S. in Mechanical Engineering from Drexel University in 1990. In 2000 he relocated to the University of Pittsburgh and formed the Image Visualization and Infrared Spectroscopy (IVIS) Laboratory, which is a state-of-the-art image analysis, infrared spectroscopy, and GPS facility supported over the past 16 years by more than \$6.7 million dollars in grants from National Aeronautics and Space Administration (NASA), the National Science Foundation (NSF) and the National Geographic Society. His research interests are quite varied but focus on physical volcanology, hazard mitigation, planetary surface processes, and eolian dynamics using thermal infrared ground, laboratory and satellite data analysis. His work has been featured in local and national newspapers, local television and radio, as well as NPR, CNN, and the Discovery Channel. Professor Ramsey has over 50 peer-reviewed papers and over 200 conference abstract publications.

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Ramsey was appointed by the NASA Administrator as an inaugural member of the Earth Science Subcommittee from 2006-2009, and is currently a member of the National Academy of Sciences Decadal Survey Review for NASA Earth Sciences. He serves as a science team member on three thermal infrared NASA instruments: the Earth-orbiting Advanced Spaceborne Thermal Emission and Reflectance Radiometer (ASTER); the Mars-orbiting Thermal Emission Imaging System (THEMIS); and the airborne Mineral and Gas Identifier (MAGI). He also is the PI for the proposed \$168M Infrared Continuity And Plume Experiment (ICAPE) mission to examine global volcanic emissions. Using these datasets, Ramsey researches explosive volcanic hazards and predictive monitoring around the world. This work also involves NSF-funded laboratory studies of the thermal emission of molten materials and ash plumes. His Mars-based studies are focused on crater, eolian, and volcanic processes using new image processing techniques for enhancing the spatial and thermal resolution of the infrared data, which allows better mapping of the compositional and thermal variations on the surface.

Ramsey's research group currently consists of five graduate students one post-doctoral researcher and a computer programmer. He teaches six courses for the Department including lower-level classes such as Natural Disasters and Remote Sensing, as well as graduate-level classes such as Remote Exploration of Mars and Advanced GeoHazards & Risk Management. His field-based research is focused on Kamchatka, Alaska, Hawaii, Japan, Central America and much of the Cascades in the US.