

MICHAEL S. RAMSEY

Bio Sketch

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Michael Ramsey is a Professor of Volcanology 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 19 years by more than \$8 million dollars in grants from National Aeronautics and Space Administration (NASA), the National Science Foundation (NSF) and the National Geographic Society (NGS). His research interests are quite varied but focus on active volcanic process around the globe, instrument development, hazard mitigation, and planetary surface processes 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, BBC and the Discovery Channel. Professor Ramsey has over 60 peer-reviewed papers and over 250 conference abstract publications.

Ramsey was appointed by the NASA Administrator as an inaugural member of the Earth Science Subcommittee from 2006-2009, and was a member of the 2018 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 served as the PI for current and past Earth-orbiting sensors 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 approaches to infrared image processing 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 Introduction to 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, Italy, Reunion Island and the Cascades in the US.