

Earth Observations from a New Generation of Geostationary Satellites

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ABSTRACT

The latest generation of geostationary satellites carry sensors such as the Advanced Baseline Imager (GOES-16/17) and the Advanced Himawari Imager (Himawari-8/9) that closely mimic the spatial and spectral characteristics of widely used polar orbiting sensors such as EOS/MODIS. More importantly, they provide observations at 1-5-15 minute intervals, instead of twice a day from MODIS, offering unprecedented opportunities for monitoring large parts of the Earth. In addition to serving the needs of weather forecasting, these observations offer new and exciting opportunities in managing solar power, fighting wildfires, and tracking air pollution. Creation of actionable information in near realtime from these data streams is a challenge that is best addressed through collaborative efforts among the industry, academia and government agencies.

BIOGRAPHY

Dr. Ramakrishna Nemani is a senior Earth scientist with the Earth science division at Ames Research Center, California, USA. He leads NASA's efforts in ecological forecasting to understand the impacts of the impending climatic changes on Earth's ecosystems and in collaborative computing, bringing scientists together with big data and supercomputing to provide insights into how our planet is changing and the forces underlying such changes. He has published over 200 papers on a variety of topics including remote sensing, global ecology, ecological forecasting, climatology and scientific computing. He served on the science teams of several missions including Landsat-8, NPP, EOS/MODIS, ALOS-2 and GCOM-C. He has received numerous awards from NASA including the exceptional scientific achievement medal in 2008 and outstanding leadership medal in 2012.



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