

The MODIS Rapid Response System: a near-real-time processing system to support Decision Support Systems for Wildland Fire Management

Jacques Descloitres, Jeff Schmaltz, Louis Giglio, John Seaton, and Jackie Kendall

The Moderate-resolution Imaging Spectroradiometer (MODIS) instrument on board the Terra and Aqua satellites has the capability to detect fires from space with an unprecedented accuracy. MODIS also offers a unique geographic coverage that makes this sensor ideal for fire monitoring. The MODIS Rapid Response System is a new processing and distribution system developed at NASA's Goddard Space Flight Center to generate near-real-time MODIS products to support disaster management and other near-real-time applications. NASA collaborates with the University of Maryland and the USDA Forest Service Remote Sensing Applications Center (RSAC) to deliver MODIS fire data to wildfire managers in the United States in order to facilitate strategic planning. Active fire locations are operationally integrated only 2-3 hours after acquisition into several fire management decision support systems, including the Forest Service MODIS Active Fire Mapping Program. The MODIS Rapid Response software was also packaged for direct broadcast applications, and now runs in several direct broadcast stations in the US. The Rapid Response System routinely collects MODIS direct broadcast fire information within only 30 minutes after acquisition over specific regions, including the eastern states. This paper presents the capabilities of the Rapid Response System and its fire management applications.