Fires and smoke in southern California and the northern Baja California Peninsula, October 26, 2003. Fires are burning in the vicinity of Los Angeles and San Diego. On this day, the Santa Ana winds helped fuel the fires, pushing their smoke plumes out over the Pacific. Images like this one provide a new tool that can help firefighters track the progress of fires and plan appropriate responses. The data are also useful once the fires are under control. Land managers can use information from satellite imagery to help plan the rehabilitation of burned areas and to protect water quality in the affected area. Scientists use fire observations to understand the effects of fire on local ecosystems and to estimate the amount of carbon dioxide and other greenhouse gases released by a fire, which can affect atmospheric composition and regional and global climate. (Data from the MODIS instrument on the Terra satellite.)