Geophysical Research Abstracts,
Vol. 11, EGU2009-11548, 2009
EGU General Assembly 2009


# The Meteorological and Fire Extremes of California 2008

T. Brown (1), J. Abatzoglou (), and J. Snook ()

(1) Desert Research Institute, Reno, USA (tim.brown@dri.edu), (2) San Jose State University, San Jose, USA (abatz@met.sjsu.edu), (3) US Forest Service Predictive Services, Redding, USA (jsnook@fs.fed.us)

The California wildfires beginning in June 2008 were historic in the way that four extreme climate events synergized to cause the most geographically extensive, lengthy, and costly fire and smoke event to impact a single state to date. Extreme dry conditions during the spring and early summer produced plentiful dry fuels. Then beginning on 20 June, an extreme event of over 5,500 lightning strikes occurred–rare for both the sheer number and time of year. These strikes caused more than 1000 fire starts over a two-day period, an extreme number of starts for a limited geographic area and the short period of time. Because of limited suppression resources available in the face of an overwhelming number of natural caused fires, many fires became large conflagrations and produced substantial amounts of smoke. Shortly after the fires began, a persistent atmospheric circulation pattern led to long sequences of non-mixing days, which also was a rare condition for the time of year. This situation led to substantial surface smoke, and subsequent visibility and human health impacts. The importance of identifying and discussing this event in part is the nature of these extremes, and how they fit into the emerging global picture of extreme fire and societal impacts. This presentation provides details on the climate and weather extremes related to the California fires of 2008, and a discussion of impacts.