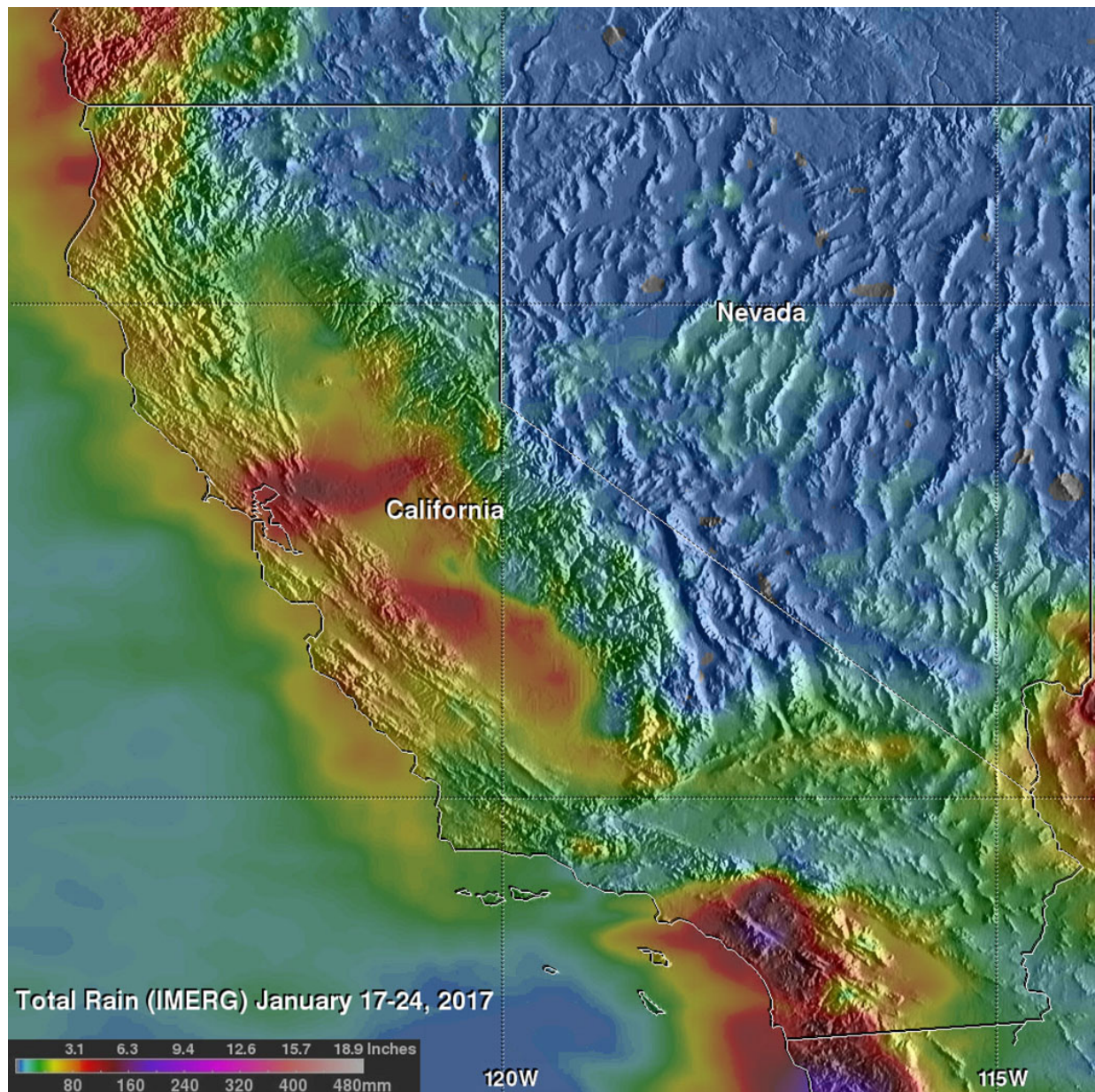


NASA observes extreme rainfall over Southern California

January 26 2017, by Hal Pierce



The IMERG analysis from June 20 through 26, 2016 showed that extreme rainfall that fell over the western United States from Jan. 17 to 24, 2017. Rainfall totals of over 9 inches (228.6 mm) were shown in red in some areas. Credit: NASA/SSAI, Hal Pierce

NASA calculated California's rainfall over seven days using a constellation of satellites and created a map to provide the visual extent of the large rainfall totals. It is sunny in southern California today but recent unusually heavy rainfall led to rock slides, mudslides and flooding in that part of the country. Rainfall of almost 4 inches (101.6 mm) in one day was reported in Long Beach, California. Some highways in the area were flooded due to intense downpours.

Rainfall since the fall of 2016 has improved drought conditions over northern California but southern California has been slower to improve because of the exceptional rainfall deficit in that area.

At NASA's Goddard Space Flight Center in Greenbelt, Maryland, NASA's Integrated Multi-satellitE Retrievals for GPM (IMERG) were used to estimate the total amount of rain that fell over the western United States from January 17 to 24, 2017. Rainfall totals of over 9 inches (228.6 mm) were shown in some areas.

According to the National Weather Service's California Nevada River Forecast Center (NWS CNRFC), the town of Julian in southern California measured 7.81 inches of rainfall over 5 days, ending January 25. Julian is in San Diego County, California. Further north Lytle Creek, California recorded 8.62 inches of rainfall for that same period. Lytle Creek is located in the San Gabriel Mountains, San Bernardino County. North of San Francisco in Venado, an unincorporated area in Sonoma, California, the NWS CNRFC recorded 5.88 inches ending on January

25, including five days of rainfall.

The Integrated Multi-satellitE Retrievals for GPM (IMERG) creates a merged precipitation product from the GPM constellation of satellites. GPM is the Global Precipitation Measurement (GPM) mission and is managed by NASA and the Japan Aerospace Exploration Agency.

The constellation of GPM satellites include DMSPs from the U.S. Department of Defense, GCOM-W from the Japan Aerospace Exploration Agency (JAXA), Megha-Tropiques from the Centre National D'etudies Spatiales (CNES) and Indian Space Research Organization (ISRO), NOAA series from the National Oceanic and Atmospheric Administration (NOAA), Suomi-NPP from NOAA-NASA, and MetOps from the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT).

All of the instruments (radiometers) onboard the constellation satellites are intercalibrated with information from the GPM Core Observatory's GPM Microwave Imager (GMI) and Dual-frequency Precipitation Radar (DPR).

For more information about [rainfall](#) in southern California, visit the NWS CNRFC website: <http://www.cnrfc.noaa.gov/>.

Provided by NASA's Goddard Space Flight Center

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