

## Astronaut view of Colorado fires

June 27 2013



Thick smoke billows across the landscape in these digital photographs of the western United States. Both photographs were taken by astronauts aboard the International Space Station (ISS) on June 19, 2013.

The images show a plume wafting from the West Fork Complex <u>fire</u>, which was burning explosively in southwestern Colorado near Pagosa Springs. To the northwest, a smaller plume from the Wild Rose fire is also visible (upper image).



While the Wild Rose blaze was fully contained by June 25, 2013, the West Fork Complex was still raging through the San Juan and Rio Grande National Forests. The West Fork Complex is a combination of three fires: the West Fork fire, the Windy Pass fire, and the Papoose fire. Lightning ignited the first of the blazes on June 5, 2013, and together they had charred approximately 75,000 acres (30,000 hectares) by June 25. The fires were burning in rugged terrain with large amounts of beetle-killed spruce forests.

The West Fork Complex fire was so hot that it spawned numerous pyrocumulus clouds—tall, cauliflower-shaped clouds that billowed high above the surface. Pyrocumulus clouds are similar to cumulus clouds, but the heat that forces the air to rise comes from fire instead of sunwarmed ground.

Scientists monitor <u>pyrocumulus clouds</u> closely because they can inject smoke and pollutants high into the atmosphere. As those pollutants are dispersed by wind, they can affect air quality over broad areas. As noted by the University Maryland at Baltimore County (UMBC) Smog Blog, smoke from western fires contributed to elevated concentrations of particulate matter over large sections of the eastern United States.





Preliminary observations by the Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO) satellite indicate the West Fork Complex fire lofted smoke plumes as high as 13.5 kilometers (8.4 miles) into the atmosphere. Satellite observations also show that smoke reached European airspace by June 24.

Provided by NASA's Goddard Space Flight Center

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