

NASA video shows birth and death of Tropical Storm Sonia

November 4 2013, by Rob Gutro

Tropical Storm Sonia formed on Friday, Nov. 1 from the eighteenth tropical depression of the Eastern Pacific Ocean hurricane season. Sonia became a tropical storm on Nov. 2 and by Nov. 4 made landfall in western Mexico. Sonia's brief life was captured in a NASA animation of imagery from NOAA's GOES-West satellite.

NOAA's GOES-West satellite keeps a continuous eye on the eastern Pacific and western U.S. NASA's GOES Project at the NASA Goddard Space Flight Center in Greenbelt, Md. takes the satellite data and creates video and still images. A 36 second video that runs from Nov. 1 to Nov. 4 shows Tropical Depression 18E strengthen into Tropical Storm Sonia (it appeared more rounded as the circulation became more organized), and then moved northeast and made landfall during the early morning hours on Nov. 4.

On Nov. 2 at 8 p.m. EDT, Tropical Depression 18E was located about 345 miles/555 km south of the southern tip of Baja California and was moving northwest. By Sunday, Nov. 3 at 4 a.m. EST, Tropical Depression 18E strengthened into Tropical Storm Sonia when it was about 285 miles/455 km south of the southern tip of Baja California. That's when [tropical storm](#) warnings and watches were issued from Mazatlan northward to Altata. Hours after strengthening, Sonia turned to the north-northeast and headed for mainland Mexico.

Sonia's strongest maximum sustained winds reached 45 mph/75 kph but only for several hours. Sonia maintained that strength from 10 a.m. EDT

to 7 p.m. EST and then weakened.

By 4 a.m. EST on Monday, Nov. 4, Sonia had already made landfall along the coast of Sinaloa near the city of El Dorado. Sonia had already weakened to a [tropical depression](#) as it continued moving further inland on a north-northwesterly track. Sonia's maximum sustained winds were near 35 mph/55 kph and it was weakening as it moved over western Mexico's rugged and mountainous terrain. It was centered about 20 miles/30 km southeast of Culiacan, Mexico, near 24.6 north and 107.3 west.

Rainfall is the biggest threat from Sonia, as with any land falling tropical cyclone. The National Hurricane Center expects between 3 and 6 inches of rainfall with isolated totals as high as 10 inches in the Mexican states of Sinaloa, western Durango and southern Chihuahua on Nov. 3.

Provided by NASA's Goddard Space Flight Center

Citation: NASA video shows birth and death of Tropical Storm Sonia (2013, November 4) retrieved 24 April 2024 from <https://phys.org/news/2013-11-nasa-video-birth-death-tropical.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.