Satellite View of the Americas

[1]NOAA's GOES-East satellite captured this stunning view of the Americas on Earth Day, April 22, 2014 at 11:45 UTC/7:45 a.m. EDT. The data from GOES-East was made into an image by the NASA/NOAA GOES Project at NASA's Goddard Space Flight Center in Greenbelt, MD.

In North America, clouds associated with a cold front stretch from Montreal, Canada, south through the Tennessee Valley, and southwest to southern Texas bringing rain east of the front. A low pressure area in the Pacific Northwest is bringing rainfall in Oregon, Washington, Idaho, stretching into the upper Midwest, according to NOAA's National Weather Service. That low is also bringing precipitation north into the provinces of British Columbia and Alberta, Canada. Another Pacific low is moving over southern Nevada and the National Weather Service and rain from that system is expected to fall in central California, Nevada and northern Utah.

Near the equator, GOES imagery shows a line of pop up thunderstorms. Those thunderstorms are associated with the Intertropical Convergence Zone (ITCZ). The ITCZ encircles the Earth near the equator.

In South America, convective (rapidly rising air that condenses and forms clouds) thunderstorms pepper Colombia, Venezuela, Ecuador, Peru, Bolivia, Paraguay and northwestern and southeastern Brazil.

GOES satellites provide the kind of continuous monitoring necessary for intensive data analysis. Geostationary describes an orbit in which a satellite is always in the same position with respect to the rotating Earth. This allows GOES to hover continuously over one position on Earth's surface, appearing stationary. As a result, GOES provide a constant vigil for the atmospheric "triggers" for severe weather conditions such as tornadoes, flash floods, hail storms and hurricanes.

For more information about GOES satellites, visit: www.goes.noaa.gov/ [2] or goes.gsfc.nasa.gov/ [3]

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