



PulseRadSM

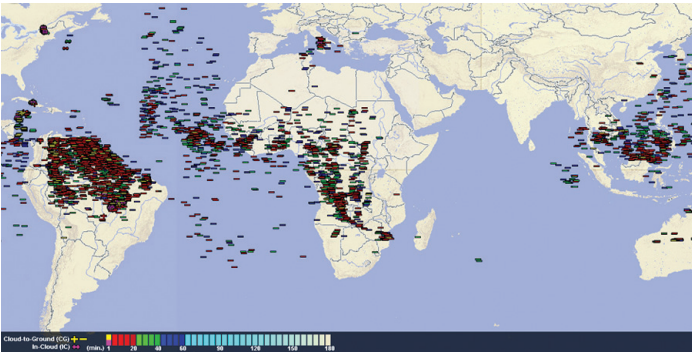
A Radar Alternative Based on Total Lightning Detection

While radar has proven an invaluable tool in weather forecasting, alerting and research, many areas of the world lack the financial resources and technical expertise to deploy, operate and maintain a radar solution.

PulseRad—the first practical radar alternative capable of coverage on a national and continental scale—visually resembles radar, is designed to provide similar benefits as radar at a lower cost, updates faster than radar, and can be implemented more quickly than radar.

How Does PulseRad Work?

PulseRad is made possible by the Earth Networks Total Lightning Network, the world's largest lightning network and the only one that comprehensively measures both in-cloud (IC) and cloud-to-ground (CG) lightning. The combination of IC and CG lightning is critical to establishing an accurate correlation between lightning activity and radar reflectivity.



Global total lightning data shown from more than 550 sensors comprising the Earth Networks Total Lightning Network

Using complex algorithms that correlate lightning flash rates to radar reflectivity, PulseRad provides forecasters with an interactive map of convective weather and, in the future non-convective weather in places where traditional radar coverage is often incomplete or nonexistent. Distinct algorithms for different climate zones (mountainous, tropical, subtropical) within a forecast area are seamlessly integrated into the map to ensure accuracy and reliability.

Key Benefits:

Identify Dangerous Storms

PulseRad highlights the potential for dangerous storms that may contain damaging winds, large hail and tornadoes, including in places where radar coverage is limited or not available. The resulting map looks similar to radar and uses the same units as radar (dBz) for easy interpretation.

Advanced Warning & Nowcasting

PulseRad's faster update time (every minute) than traditional radar (typically every 4 to 6 minutes) enables earlier alerts and better nowcasting of building storms.

Anticipate Flooding, Assess Drought

PulseRad, in conjunction with the Earth Networks Weather Network, provides real-time monitoring of accumulated precipitation for flooding and drought assessment.

Ocean and Mountain Coverage

PulseRad shows storms over oceans while traditional radar is limited in coverage to generally less than 300 miles from the land-based radar site. PulseRad also sees storms embedded within mountainous regions, providing critical information that traditional radar may not capture due to the challenging topography.

Lower Cost

PulseRad is a lower-cost but reliable and effective alternative to radar that enables advanced alerting of dangerous storms and potential for flooding and drought. Both up-front and operational costs are more affordable than traditional radar, which is often expensive to install and operate.