VAISALA
DIGITAL

Product Spotlight
www.vaisala.com

Continuing Current – Lightning Dataset

Identify the destructive lightning strikes most likely to have damaged your assets, or started a wildfire

Strikes with continuing current are the small fraction of lightning most likely to ignite wildfires, put holes in wind turbine blades, cause extreme heating damage to transmission networks and set fire to property.

Vaisala's Continuing Current Dataset has been developed to identify these events, determine their duration, and deliver that information in near real-time. It is available from both the US National Lightning Detection Network and Vaisala global network, the GLD360

In order to deliver this unique information this patented capability combines high accuracy lightning data from Vaisala's ground-based networks with data from NOAA's satellite-borne lightning mapping sensors, onboard two Geostationary Operational Environmental Satellites.

Lightning strokes with continuing current can have a duration hundreds of times longer than a normal stroke, and transfer significantly more electric charge, which can cause substantial damage due to extreme heating.

This capability is available with both NLDN and GLD360 providing coverage over the USA, Mexico and across most South American countries

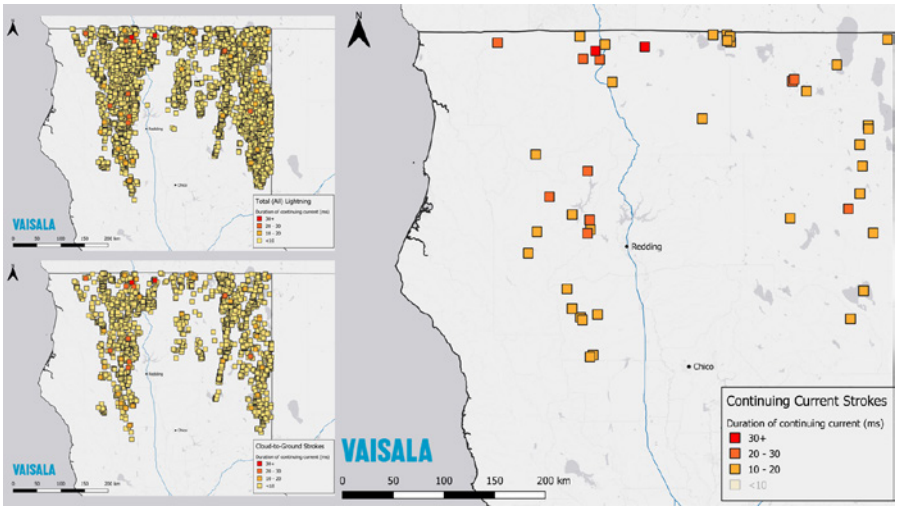
Key Benefits

Faster identification and more effective inspection
of likely damaged areas or areas in which a fire might have started

Warning alerts
that infrastructure is likely to have been seriously damaged.

Early intervention
to prevent progressive damage.

Cost reduction
by prioritizing post-storm inspections of assets and infrastructure likely to have been damaged.



Images of a 24 hours period in 2019 showing lightning across northern California demonstrating how Continuing Current Dataset can be implemented to identify potential problems. The map sequence progressively filters out, initially, the cloud lightning events leaving only the cloud-to-ground events, then filters out the cloud-to-ground lightning data without continuing current, leaving the data showing continuing current.

Availability of continuing current data

This capability is available with both NLDN and GLD360 providing coverage over the USA, Mexico and across most South American countries

While Vaisala provides global lighting detection coverage the geographical availability of the Continuing Current Data-set is determined by access to data from satellite-borne lightning sensors. Today that is over the Americas, where the NOAA GOES geostationary satellites have a field of view between 52°N and 52°S, from close to Canada's southern border to the southern tip of Argentina.

Why Vaisala?

The industry's most dependable technology

Vaisala understands the challenges lightning can bring to your business and operations. For over 30 years, we have created products and services that deliver lightning data that our customers trust to assist their critical decision-making.

Trusted solutions

We support your operations, whether you want to operate your own network, or rely on lightning data and decision support provided by us. Meteorological agencies around the world rely on Vaisala lightning technologies to improve forecasts, severe weather warnings, and keep their economies moving forward.

NLDN Quality Specifications	
Coverage extent	USA
Continuing current identification	Yes
Continuing current duration	Yes
Cloud-to-ground CG lightning type detection	Yes
Median CG stroke location accuracy	<150m
Cloud-to-ground flash detection efficiency	>95%
Intra-Cloud lightning type detection	Yes
Lightning type classification accuracy	90%
CG Stroke median peak current (kA) error	±15%
CG Stroke Polarity accuracy	~100%
Uptime	99.99%
Data latency – with continuing current	~75 secs
Data Latency – without continuing current	<15 secs

Real-time streaming	
SSH Port Redirect	one-to-one, secure and robust
Hardware VPN	one-to-one using CISCO or Juniper devices, secure with added redundancy
Streaming data latency	~75 secs
Tab delimited ASCII format	

Real-time file-based	
Options include 1min, 5min, 10min, hourly files etc.	
SFTP	Vaisala pushes
AWS S3	Vaisala pushes
Tab delimited ASCII format	

VAISALA DIGITAL

www.vaisala.com/lightning

Ref. B212124EN-A ©Vaisala 2020
This material is subject to copyright protection, with all copyrights retained by Vaisala and its individual partners. All rights reserved. Any logos and/or product names are trademarks of Vaisala or its individual partners. The reproduction, transfer, distribution or storage of information contained in this brochure in any form without the prior written consent of Vaisala is strictly prohibited. All specifications — technical included — are subject to change without notice.