

Numerical lightning data in real-time

LINET data is nowcast's numerical lightning data stream. Both small as well as large private and state-run companies receive detailed real-time lightning information in the form of numerical raw data via streaming or (S)FTP. This data can be imported into the user's systems and combined with further sources of data.

The user can access the data files in real-time in various formats via internet. In addition to standard information pertaining to the location, time and stroke current, LINET reliably differentiates between intra-cloud strokes and cloud-to-ground strokes, and even ascertains the height of the intra-cloud strokes (patented).

"The precise and comprehensive lightning data provided by nowcast form an essential source of information for extremely short-term forecasting and when issuing storm warnings."

German Meteorological Service (DWD)

UNPARALLELED DATA QUALITY

LINET obtains the high quality by intelligent antenna design and clever algorithms that result in a location accuracy of effectively 75 m on average as well as a homogeneous detection efficiency of down to 2 kA.

The patented algorithm that detects the three-dimensional emission height of cloud strokes. This allows for groundbreaking recognition of thunderstorm severity and enables comprehensive total lightning.

FLEXIBLE FORMATS

In principle, LINET data can transmit individual strokes and raster data. The area to be monitored can be freely selected within the measurement network; this is also true of any coordinate projection and raster size. We would be pleased to provide you with a user-defined format as well. The data files are available in XML and text formats, and may be transmitted via "pull" (protocols: SFTP, HTTPS, SOAP via HTTPS) or "push" (protocols: FTP, SFTP) and streaming (ActiveMQ).

WHY LIGHTNING DATA?

Lightning strikes take place in the meteorological active areas of a thunderstorm. Those areas are often accompanied by hail, heavy rain and strong gusts. The precise recording of those areas is simply not possible with other measurement methods. Also, technical malfunctions can be assigned easily to a lightning strike.

RELIABLE DATA TRANSMISSION

Since LINET uses several lightning sensors, the malfunctioning of a single lightning sensor has little effect on the operation of network as a whole. The redundant internet and power supply of our primary and secondary data-processing center ensures the full availability of our LINET data service.

FAST DATA SUPPLY

Thanks to LINET data, the customer receives numerical lightning data in the best-available quality in real-time (< 30 sec). This quick and reliable supply of accurate lightning data is essential for weather services, energy suppliers, the military and other weather-dependent sectors. Lightning measurement via LINET is one of the fastest weather parameters – quicker than radar and satellite.

SPEED IS THE KEY

Unlike model-based forecasts, Cell Tracking and Nowcasting are calculated with the aid of real-time data. In this manner, the most current weather data gathered at the moment of occurrence are included in the calculation and allow for extremely precise forecasts in chronological and geographical terms.

Deutscher Wetterdienst
Wetter und Klima aus einer Hand



Gamesa



**CROATIA
CONTROL**

ADVANTAGES

Lightning stroke data:

- ▶ real-time & historical data
- ▶ date & time
- ▶ geographical coordinates
- ▶ lightning current strength
- ▶ stroke type (cloud-to-ground / intra-cloud)
- ▶ emission height of intra-cloud strokes
- ▶ assessment of location accuracy

Thunder-cell data:

- ▶ cell location and contours
- ▶ cell speed
- ▶ average height of cloud lightning
- ▶ severity of thunderstorm
- ▶ hail indication
- ▶ much more detailed information on cell and nowcasting

COMPREHENSIVE INFORMATION

Since LINET, thanks to its 3D-bearing function, ascertains not only the location, but also the height of intra-cloud strokes, the user is provided with an additional, extremely important feature for the assessment of the strength of storms. In this manner, weather services and meteorological-service providers for example receive a perfect picture of the current weather-situation, and are able to identify the hazard zones without delay.

CELL-TRACKING AND NOWCASTING rTNT

Based on the analysis of real-time lightning data, Cell Tracking and Nowcasting allow for the exact determination of the position of a thunderstorm, and the precise local and chronological short-term forecasting of the thunderstorm development. LINET data has fully integrated all advantages of rTNT real-time thunderstorm tracking and nowcasting providing fastest-possible alerts.



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WHO BENEFITS?

Private meteorological-service providers and state-run weather services import the numerical lightning data in their meteorological data and visualization systems. In combination with other meteorological data, such as radar, in particular, the real-time display of lightning types offers substantial added value when it comes to the observation of weather developments and risk potential.

Energy suppliers feed the numerical lightning data in real-time into their control-station software. In the event of a malfunction, an automatic check takes place as to whether a lightning stroke has taken place in the vicinity of the affected transmission line or pipeline at the time in question. In this manner, this frequent cause of malfunctions can be reliably verified and, if necessary, the prompt resumption of operations is made possible.

Every weather-dependent sector benefits from LINET data. Whether it is the planning of anticipated loads or malfunctions, the security of operations outdoors, or the analysis of lightning-induced damage: LINET lightning data by nowcast offers substantial potential for the optimization of processes and reduction of costs.

Further user groups include railway companies, wind parks, operators of pipelines or high-voltage grids, organizers of open-air and outdoor activities, and all other weather-dependent branches which monitor weather-sensitive installations.

TEST OUR PRODUCTS

Experience the quality of our lightning data yourself. We would be pleased to provide you with a free trial. Contact us:

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