

1D Video Distrometer

Characterizing Individual Precipitation Particles



THE INNOVATION COMPANY



Analysis

of canting angle

3D reconstruction

Open interface for

user-defined models

User-specific analysis

of rain drops

on request

Qualitative estimate

Size and qualitative

1D Video Distrometer



Capabilities

 Contour information and front view of every single particle
Optical resolution
0.17 mm, no upper limit of particle size
Time stamp with
high resolution of ~18 µs

Your Benefit

- Automatic recording and access to every single precipitation particle
 - Cost-effective information about precipitation microstructure

The Task

 Automated and permanent recording of all precipitation particles
Precipitation bulk parameters (rain rate, size distribution...)





Customer Scenarios



Efficiency of irrigation systems



 Precipitation information for agricultural industry
Input for glaciology
Research information on effects of climate change



 Drop size distributions for weather radar systems
(Air) Traffic control
Hydrological models for flood warning and water resource management

Technical Details



The Outdoor Unit measures every single precipitation particle - i. e. rain drops, hailstones or snowflakes - from front with one high-speed camera in real-time. The Indoor Unit's analysis PC gives detailed information about size, shape and state of aggregation of each precipitation particle. Taking into account rain rate and accumulated amount of rain, these measurement data are the basis for a thorough understanding of atmospheric processes. Such results are of great value in various operational scenarios as well as environmental and meteorological applications. Software for data acquisition and analysis is included.

1DVD Specifications

Resolution (vertical) better than 0.17 mm for veloc. < 10 m/s Sampling Area approx. 150 x 250 mm² Integration Time 15 sec. to 12 hours



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