Plinius Conference Abstracts
Vol. 17, Plinius17-49, 2022
https://doi.org/10.5194/egusphere-plinius17-49
17th Plinius Conference on Mediterranean Risks

NASA MPLNET precipitation detection algorithm validation by ground-based disdrometers in the frame of future ESA Earthcare mission

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Lidar measurements can detect exceptionally light precipitation, such as drizzle or virga. This kind of precipitation is really hard to detect by other remote sensing techniques such as radars because a very short longwave (in the visible) is needed due to the small size of raindrops. For those reasons, lidar instruments are well suited to fill a gap in detecting light precipitation. In this study, we show the intercomparison results between the ground-based disdrometer observations and lidar precipitation algorithm detection at Goddard Space Flight center for future precipitation calibration/validation of the next European Space Agency (ESA) Earthcare mission, which is expected to be launched in 2023.