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The authors present an interesting study on data driven clustering of rain events based on the analysis of characteristics related to rain rates or rain accumulation (macro physical information) and to the raindrop size distribution (microphysical information). The research results are interesting, relevant and timely.
Some questions, and possibly suggestions for future work, are however presented

hereafter:

1) the authors adopt a Minimum Inter-event Time (MIT) of 30 minutes. Did they perform any sensitivity of the presented results versus lower (15 minutes) and higher (60 and 120 minutes) threshold?

Indeed, the study of the sensitivity to MIT has to be done, but regarding the future work our priority is to extend the study to measurements carried out by rain gauge with a time resolution of 5 mn (more common and accessible) We have not really investigated this point and consequently we are not really in position to answer to this question. A greater MIT value will aggregate rain periods together and consequently will modify some parameters like the event duration De or the Rain event Depth Rd. Some others parameters can remain unchanged or not, this is the case for example for parameters Pci (which is sensitive to the variability of the rain rate). We expect that a higher MIT may aggregate events of a different type, whereas a shorter MIT tends to increase the number of events while they belong to the same group of rain cells

2) a total of 23 indicators for macro physical description of rain events were defined, however the references provided in order to support their choices are rather limited. Please improve.

Line 161 section 2.1 added references:

Haile 2011 Brown 1985 Dris 1989

Added reference :

Driscoll, E. D., Palhegyi, G. E., Strecker, E. W., & Shelley, P. E. (1989). Analysis of storm events characteristics for selected rainfall gauges throughout the United States. *US Environmental Protection Agency, Washington, DC*.

Most parameters (mean, maximum, standard deviation,...) are common statistical descriptors for witch there is no particular references.

3) also the details provided about the 23 indicators computation are rather poor. Please improve

Among the 23 indicators described some of them are very classical like the event duration or Rain event depth. Some are less classical they are described in the provided references. We voluntarily chose not to detail certain indicators in order to shorten the paper.

4) by checking the position of the test site, namely “Site Instrumental de Recherche par Télédétection Atmosphérique” (SIRTA1) in Palaiseau (France), i noticed that it is not far from the Trappes sounding site. Then i was wondering if the authors plan to explore possible relationship between the identified characteristics related to rain rates or rain accumulation (macro physical information) and to the raindrop size distribution (microphysical information) versus the vertical thermodynamical structure observed for the identified events in the period 2008-2014. For example

Molini, L., Parodi, A., Rebora, N., Craig, G. C. (2011). Classifying severe rainfall events over Italy by hydrometeorological and dynamical criteria. Quarterly Journal of the Royal Meteorological Society, 137(654), 148-154.

For about 81 events, a time-scale for convective adjustment was computed, based on gridded hourly precipitation rates derived from rain-gauge data and ECMWF analysis (ERA-Interim) of convective available potential energy (CAPE). Values of the convective adjustment time-scale, τ c, shorter than 6 h indicate convection that is responding rapidly to to the synoptic environment (equilibrium), while slower time-scales indicate that other, presumably local, factors dominate.
It would be interesting to see if and how a local convective adjustment time-scale (computed using Trappes data) is related to the results of this study.

added p10 l25:
The hypothesis that the two categories of precipitation events corresponding to different dynamical regimes can be identified solely on the basis of hydrometeorological variables confirms the study of Molini et al (2011). These authors have shown the agreement between the hydrometeorological classification (based on duration and extent of events from rain gauge network data) and dynamical classifications (the convective adjustment time-scale identified to distinguish between equilibrium and non-equilibrium convection from ECMWF analysis)
Added reference :
Molini, L., Parodi, A., Rebora, N., Craig, G. C. (2011). Classifying severe rainfall events over Italy by hydrometeorological and dynamical criteria. Quarterly Journal of the Royal Meteorological Society, 137(654), 148-154.

5) in a recent paper

Bühl, J., Leinweber, R., Görsdorf, U., Radenz, M., Ansmann, A., Lehmann, V. (2015). Combined vertical-velocity observations with Doppler lidar, cloud radar and wind profiler. Atmospheric Measurement Techniques, 8(8), 3527-3536.
it is explored the potential of combined vertical-velocity observations with Doppler lidar, cloud radar and wind profiler. In this respect, even if the sodar located at the Charles de Gaulle Airport is relatively far away (50 km), did the authors consider as possible to explore relationship (if any) between updraft and downdraft velocity versus the microphysical analysis performed in this study?
I would be very curious to test, in a real-word situation, the results we got years ago in these papers about the relationship between raindrop diameter and updraft velocities:
Parodi, A., Emanuel, K. (2009). A theory for buoyancy and velocity scales in deep moist convection. Journal of the Atmospheric Sciences, 66(11), 3449-3463.
Parodi, A., Foufoula Georgiou, E., Emanuel, K. (2011). Signature of microphysics on spatial rainfall statistics. Journal of Geophysical Research: Atmospheres, 116(D14).

We are agree with the reviewer that the demonstration of the existence of a relationship between hydrometeorological variables and atmospherical processes can be exploited by carrying out the joint analyses of the two types of observations. We have thus explore the potential of combined measurements in Mercier et al. 2016 . We have built a 4-D-VAR data assimilation algorithm for retrieving vertical DSD profiles and vertical wind under the bright band from observations coming from a micro-rain radar (MRR) and from a co-located disdrometer, associated with a vertical advection model. This is also intended as a tool to better characterize rainfall microphysical processes. The coupling is done via a 4-D-VAR data assimilation algorithm. The dynamical model and the geometry of the problem are quite simple. They do not allow for the moment the complexity implied by all rain microphysical processes to be encompassed (evaporation, coalescence breakup and horizontal air motion are not taken into account). In the end, the model is limited to the fall of droplets under gravity, modulated by the effects of vertical winds et by the evaporation. Because of the limitations of the model, the retrieval algorithm is currently only suitable to study stratiform, light rain events. Some improvements are needed to provide an algorithm suitable for various weather situations (tropical rain and convective events, for instance). This is an ongoing work

Mercier F., Chazottes A., Barthès L., Mallet C. 4-D-VAR assimilation of disdrometer data and radar spectral reflectivities for raindrop size distribution andvertical wind retrievals Atmospheric Measurement Techniques, European Geosciences Union, 2016, 9 (7), pp.3145-3163. <10.5194/amt-9-3145-2016> - insu-01233557