Interactive comment on “An overview of the lightning and atmospheric electricity observations collected in Southern France during the HYdrological cycle in Mediterranean EXperiment (HyMeX), Special Observation Period 1” by E. Defer et al.

Anonymous Referee #2

Received and published: 4 November 2014

This manuscript describes the suite of instrumentation used and provides examples of some of the lightning and atmospheric electricity measurements and results obtained during the PEACH project of HyMeX SOP1.

The results presented in this manuscript represent an important contribution to improving our understanding of storm and lightning activity in the Northwestern Mediterranean Sea and surrounding coastal regions. The manuscript is within the scope of AMT. I rec-
ommend that the paper be accepted with minor revisions.

Specific comments: I note that the specific issues I was going to raise have already been covered and addressed by the authors in their interactive replies.

Technical corrections: Abstract

p8015 L14: are aimed at characterizing

2 The HyMeX program

p8019 L26: 10-year program

p8020 L8: These measurement platforms

3 The PEACH experiment

P8020 L26: Based on 3 years of

P8021 L1: remove "as deduced from LIS". redundant.
P8021 L14: forecasts

P8021 L20: remove "a"

3.1 Scientific objectives and observational/modelling strategy

P8022 L16: aims to document

P8022 L23: of deploying relevant instrumentation

P8023 L14: has previously experienced heavy precipitation

P8024 L8: descriptions of lightning activity

P8024 L15: relative to

3.2.1 HyLMA

P8025 L1: data were

P8025 L2: for detailed post-processing.

3.2.3 MBA/MPA

p8026 L19: signal from

3.2.4 EFM

p8027 L15: used at three

p8027 L22: data from each sensor were

3.2.5 VFRS

p8028 L11: data could record distances up to

P8028 L13: A detailed description of the

C3516
3.2.6 Locations and status of the research instruments

Consisted of network, a few tens hills, a few hundred meters away from the Grande: initially operational with ... 2012, and expanded to 11 stations.

3.3.1 ATDnet

Paths of VLF sferics

3.3.2 EUCLID

Has been steadily improving

3.3.3 LINET

Each sensor includes by a lightning discharge. LINET also detects

3.3.4 ZEUS

Capable of detecting

3.5.2 The WRF model

The use of available to improve the monitoring: the authors applied an assimilation: presence of convection in the MM5 mesoscale model

Examples of unusual lightning flashes

Splits into two paths: capability of operational systems: occurred in relative to HyLMA

Such discrepancies are

Concurrent VHF and Acoustics measurements
4.2.2

Although not discussed here, it is worth mentioning associated with scattered 2012) associated with scattered The VFRS operated from and then moved to Mont Ventoux shows an extensive area of: Analyses combining records are precursors related to this tornado.

5 Prospects

density to populate the LMA will be established in may 2014 PEACH project have already helped

References
