

Atmos. Chem. Phys. Discuss., referee comment RC2
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Comment on acp-2021-125

Anonymous Referee #2

Referee comment on "Lightning-ignited wildfires and long continuing current lightning in the Mediterranean Basin: preferential meteorological conditions" by Francisco J. Pérez-Invernón et al., Atmos. Chem. Phys. Discuss.,
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The paper elucidates the role of Long-Continuing-Current (LCC) lightning flashes. (20ms) in Lightning Induced Fires (LIW) by an exhaustive analysis of satellite and meteorological reanalysis products. The goal is to identify parameterizations for LIW that are informed by LCC, and some current treatments are shown to be incorrect. Furthermore, the LIE/LCC connection has not been probed in the Mediterranean region that makes this study valuable. The results are described and aggregated well and will be valuable to the community.

My major concern is that the paper focuses entirely on the LCC and meteorology (P, T, CAPE, H₂O) and does not evaluate the state of the vegetation (e.g. how dry?, vapor pressure deficit, soil moisture). Is this important for ignition and/or propagation, will this promote more dry-lightning events regionally? I would like to see a short discussion explaining the role of these lower frequency drought periods. Specifically, are there any changes in the records of LIW/LCC relations during drought years in the long records analyzed here. Can this explain some of the difference reported between the Iberian peninsula and Greece.

Minor edits

58 LIW tend to occur in Clouds with High Base (CBH, prefer to high-base clouds, at multiple places in paper)

60 have been made

70 RS are composed of a we identify shared meteorological conditions