Nat. Hazards Earth Syst. Sci. Discuss.,
https://doi.org/10.5194/nhess-2018-179-RC2, 2018
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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Brief Communication: Meteorological and climatological conditions associated with the 9 January 2018 post-fire debris flows in Montecito and Carpinteria California, USA" *by* Nina S. Oakley et al.

Anonymous Referee #2

Received and published: 27 July 2018

A bit puzzled on the whole process here. Not seeing any open scientific discussion having occurred at all, just the comments made weeks ago by Anonymous Referee #1. In the absence of the former, fail to see how the process of peer review and publication in Natural Hazards and Earth System Sciences (NHESS) differs from traditional scientific journals. Also unclear on what the expectations are for a "Brief Communication" submission and am unable to find information in that regard. It is with those caveats that this review is provided, and I leave it to the editor and authors as to how they wish to consider my comments. Recommendation: Accept for publication after

suitable moderate to major revision. âĂć Major Comment #1: Would like to see this focused down to what the key triggering meteorological event was, the accompanying hydro-meteorological circumstances that resulted in the extreme outcome, and the basic synoptic and mesoscale evolution. Much of that is already there, but believe it could be better organized to present a clearer picture. o In section 2.1, just give the basic synoptic evolution – say 500 mb, SLP and IWV every 12 hours for the 36 or so hours leading up to the event. Can omit the rest of it. o Not immediately seeing the connection between this event and atmospheric rivers. Page 2, lines 20-26: (i) need to provide evidence in support of the claim that the moisture plume resulted from reorganization of the remnant moisture from the AR that moved through the previous day. ïĆğ (ii) Are you really making the claim that this event itself was associated with a weak AR? Are the spatial scales consistent with the definition of an AR? And then might want to expand a bit on the consequent implication that weak ARs can potentially result in catastrophic hydro events. ïĆğ On the other hand, if it isn't an AR, would be worth noting that catastrophic hydro events can occur in coastal California that are not associated with ARs. Either way, it's interesting and important, just needs to be clarified.

o In section 2.2, just need clear sequences of satellite images, radar images, and surface analyses leading up to the event. o New section 2.3: focus down on the microscale event itself, when and where the 5 to 15 minute extreme precip bursts occurred, how much fell, and in relation the exact locations and time frame of the debris flows.

âĂć Major Comment #2: After reducing down to and organizing key figs, recommend including all in the manuscript itself rather than some as "supplemental material."

âĂć Major Comment #3: Strongly recommend confining the focus to this event, especially given the "Brief Communication" nature of the submission (and thus eliminating Figs S10, S11 and accompanying discussion, etc)

âĂć Other Comments: o Page 1, this event occurred on January 9 but the Thomas Fire

not 100% contained until January 12? o Page 1, might want to note how long it had been since last significant precip o Page 1, lines 28-29: cite ref re exceeding USGS 15-min design storm. . . o Page 3, line 2: Markowski and Richardson, 2010 not found in Reference section. o Page 3, line 9: intense convective precip bands? But sounding in Fig S6 shows $\sim$ zero CAPE. o Page 3, line 21: created o Page 4, lines 30-31: thought this NCFR developed behind the primary AR, not in it. o References: not entirely in alphabetical order.

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