Title: Surface deposition of marine fog and its treatment in the WRF model
Author(s): Peter Allan Taylor et al.
MS No.: acp-2021-344

Responses to referee comments RC1, RC2, were posted (AC1, AC2) on the interactive discussion web site, https://acp.copernicus.org/preprints/acp-2021-344/#discussion. We have no further responses.

RC3: No response seemed needed. We focussed on citing Zhang et al (2014) rather than Zhang's 2010 thesis, although we have looked at it.

Revisions made in response to Referees.

RC1: This is a very positive review and we have not made any significant changes based on it, except to reference the companion article (acp-2021-594) currently posted as preprint in ACPD. Specifically in lines 164, 165, we say " A more detailed analysis is presented in a companion ACP discussion paper, Taylor (2021).". This is in relation to the combined effects of gravitational settling and turbulent diffusion in the downward flux of fog water to the underlying surface.

RC2: As noted in our detailed response, AC1: 'Reply on RC2', Peter A. Taylor, 14 Jul 2021, we have avoided too much discussion of "life cycle" but have looked at the spatial extent of the modelled fog, and have now added Fig 4 to illustrate "spatial extension" from our 3D WRF runs. We have also tried to avoid different notations for the same quantities. "We will use Qc for mixing ratio (g kg^{-1} or kg kg^{-1}) and $LWC = \rho_a Qc$, where ρ_a is air density, as liquid water content (kg m^{-3} or g m^{-3}) unless discussing results from specific papers where, for clarity, it is sometimes useful to use their symbols."

We have followed up on the work undertaken by Meteo France and included reference to important work by Mazoyer et al (2017) and Zhang et al (2014) that we had overlooked, perhaps because our focus is on marine fog.

Other Revisions
Dr Isaac and I were participants in the recent ICCP on-line conference (https://iccp2020.tropmet.res.in/agenda). Based on talks and posters presented there, we have added material related to recent field programs, including LANFEX, SoFog on land and C-Fog (coastal and marine locations), and to the upcoming Fatima program on marine fog (https://efmlab.nd.edu/research/Fatima/).

We have done our best to match the word template. I have not tracked all the format changes, including reference formats, or slight modifications to figures to avoid excessive tracking. I have however tracked text changes. There are a number of editorial revisions but no significant content changes apart from those noted above.