

Interactive comment on “Humidity sensor failure: a problem that should not be neglected by the numerical weather prediction community” by Y. Liu and N. Tang

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Dear anonymous review and associate editor: We thank that you are interested in our paper. Your valuable comments and suggestions will help us to improve the quality of our paper. We have studied the reviewer' comments carefully and have made some modifications and corrections for this paper.

1) Before this paper, we had studied the abnormally dry problem of relative humidity observations in the low- and middle-troposphere based on the Chinese L-band radiosonde observations. We have attributed such low RHs within a deep range to

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the failure of the radiosonde hygrometers. Tang, N., Liu, Y., Li, G. and Li, F. : Preliminary analysis on abnormally dry phenomena of relative humidity observations of the Chinese L-band radiosonde system, *Journal of Tropical Meteorology*, 30(4), 1004-4965(2014)04-0065-11, 2014 (in Chinese). The aim of this paper is to further reveal the universality and facticity of the phenomena based on the occurrence percentage calculated by the worldwide operational humidity observations. Thank the referee for the reminder that that very dry air may exist in the atmosphere, even in the low- and middle-troposphere. In this paper, we only study the low relative humidity observations which meet our threshold. We think these data are false, not the results of natural atmosphere variability, because they have stopped response to the atmospheric change at least within the range of 200mb. Maybe our English is poor, we cannot express ourselves clearly. According to the suggestions of the reviewer, we have modified the abstract, the introduction and other part of the paper, including the section 5. We also have asked a native English-speaking expert to edit the paper for us. This time we only submit ourselves revision. After receiving the manuscript edited by the expert, we will replace this version.

2) We have corrected the title of figure 1, 2 and 8.

. Best Regards.

Yan

Please also note the supplement to this comment:

<http://www.atmos-meas-tech-discuss.net/7/C2340/2014/amtd-7-C2340-2014-supplement.pdf>

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 6625, 2014.

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