

Interactive comment on “Differential absorption radar techniques – Part 1: Surface pressure” by L. Millán et al.

Anonymous Referee #2

Received and published: 20 September 2014

The paper examines the precision and accuracy which could be expected using differential absorption of satellite radar echoes close to 60 GHz to measure surface pressure. The theory and methods are clearly presented and the number of computations made to illustrate the results for different atmospheric conditions is large and adequate for the task.

The paper would benefit from some discussion of the precision/accuracy requirements for prospective users

In addition there are a number minor corrections needed :
page 5797, line 5 'these method' should be 'this method' or 'these methods'

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page 5797, line 6 ' , region ' should be , a region'

page 5797, line 18 'Such wide spectral region' should be 'Such a wide spectral region'

page 5797 line 24 'absorptions measurements are cover ' should be ' absorption mea-
surements are covered '

page 5802, lines 8 and 9 'Precipitating ice was modeled using the snow size distribu-
tion of Sekhon and Srivastava (1970). An exponential function derived from extensive
field studies.' should probably be 'Precipitating ice was modeled using the snow size
distribution of Sekhon and Srivastava (1970), an exponential function derived from ex-
tensive field studies.'

page 5803, line 16 'wind surface ' should probably be 'surface wind '

page 5804, lines 11,12 'used to retrieved' should be 'used to retrieve '

page 5807, line 3 'retrievals allows us to select the radar tones which minimizes' should
be 'retrievals allow us to select the radar tones which minimize'

page 5807, line 23 'spectral differences in the target optical properties increases'
should be 'spectral differences in the target optical properties increase'

page 5808, line 4 'specific types scenarios' should be 'specific types of scenario'

page 5809, line 2 'a ocean' should be 'an ocean '

page 5809, line 12 'depends' should be 'depend'

page 5810, line 10 'betqter' should be 'better'

Caption for figure 1 'wind surface' should perhaps be ' surface wind'

Caption for figure 4 states 'In each scenario, linear regressions for all cases as well as
separated by total hydrometeors column are shown. ' It is not clear what this means -
there is only one regression line on each plot, no separate regression lines for different
column contents. Please clarify.

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 5795, 2014.

AMTD

7, C2788–C2790, 2014

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