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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Characteristics of Monsoon inversions over Arabian Sea observed by satellite sounder and reanalysis data sets" *by* Sanjeev Dwivedi et al.

Anonymous Referee #3

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This is a detailed study on an imporant phenomenon, namely, temperature inversion over the Arabian Sea during the boreal summer. Unique geographic location of the Arabian Sea and wind/pressure field give rise to strong inversions, however, this has not received much attention. Authors combine data from a variety of sources and have carried out a detailed analysis. I recommend its acceptance after a revision accounting for the comments given below.

1. P.35279, line 9. Colon (1964) also used dropsonde data 2. P.35282, line 15, support product availability at 100 pressure levels looks too high a vertical resolution. 3. p. 35284, line13-15: MI lies between 900 & 800 hPa. Authors infer MI from DT between

950 and 850 hPa. This may be alright for the WAS however, may miss the MI over the EAS. As authors pointed out referring to Colon (1964), MI rises from west to east over the Arabian Sea. So why not deine DT between 950 hPa and a level at or above 800 hPa?

4. Fig. 2, x-axis: Julian day can be used

Finally, ERA-interim data might have utilized IASI data product. So, can that be an independent source for omparison?

There are some grammatical errors and the text can be reduced by eliminating some repetitions.

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 35277, 2015.