

Interactive
Comment

Interactive comment on “All weather IASI single field-of-view retrievals: case study – validation with JAIVEx data” by D. K. Zhou et al.

Anonymous Referee #1

Received and published: 20 January 2009

General Comments:

This paper presents IASI sounding retrievals and their validation using collocated dropsondes, radiosondes and airborne systems as part of the international JAIVEX experiment. The retrieval algorithm has been previously tested with other instruments and is given as an overview only (no details); the focus is on the validation part. Real and simulated data shows promising performance of the (currently) most advanced sounder in orbit. In general, the paper is well written and no major technical errors are noticed. The review has no significant comments (see below for some specific and technical comments) and recommends publication in ACP.

Specific Comments:

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Section 1, page 21003, line 9: the use of 'formative' in this context is confusing. Consider using 'precursor'.

Section 2, page 21005, line 6: please state version of SARTA model used.

Section 2, page 21005: Is emissivity retrieved in the physical inversion, or only in the regression?

Readers might be interested if, how (and where) IASI performs better than AIRS. e.g. IASI should provide better vertical variability of moisture distribution.

The authors might consider evaluation of IASI cloud products with A-Train products (future plan?).

Technical corrections:

Section 3.2, page 21010, line 20-29: this is a very long sentence, 2 sentences (e.g. second one starting with 'although the cloud') would be better.

Section 3.3, page 21012, line 7: remove 'which' in 'distribution is shown even though the retrieval which is performed independently ...'.

Section 3.3, page 21012, line 24: 'Figures' instead of 'Figure'.

References, page 21018, line 19-33: put the papers by Zhou et al in chronological order.

Figures, page 21032, Fig.13 caption: replace 'on' by 'of' in 'Locations of two dropsondes and on one radiosonde ...'.

Figures, page 21034, Fig.14 caption: 'differences' instead of 'difference'.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 21001, 2008.

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