Interactive comment on “MIPAS-STR measurements in the arctic UTLS in winter/spring 2010: instrument characterization, retrieval and validation” by W. Woiwode et al.

Anonymous Referee #2

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This paper presents an overview of the measurements from the MIPAS-STR instrument on board the M55 Geophysica aircraft during the RECONCILE campaign. Validation is performed against colocated in situ measurements and CRISTA-NF measurements. The content of this paper is suitable for publication in AMT.

General:

Figures: Ensure that all the figures are legible when printed out at the actual page size.

P7062/P12-17: The issue of not scanning above the flight path seems rather important and I would have expected to see a detailed simulation of a case where where there is
considerable overlaying stratospheric O3 above the measurement scan and its effect on the retrieved O3 below. This is listed as a ‘seconday error’ in section 5.5 but no convincing argument is given as to why this effect can be ignored.

Minor corrections and typos:

{text} add the text in brackets

/text/ delete the text between slashes

P7037/L3: RECONCILE => expand the acronym

P7037/L3: Arctic

P7037/L24: Considering for => Taking into consideration

P7038/L18 (and many other instances throughout the paper): 'ballon-borne' => 'balloon-borne'

P7038/L24: APE-GAIA => expand the acronym

P7038/L26: inconsistent use of ENIVSAT/Envisat (P7040/L23)

P7038/L28: MARSCHALS => expand the acronym

P7040/L24: and in a certain extend also to => and to a certain extent to the

P7041/L12: /,respectively/

P7041/L13: is entering => enters

P7042/L10: 10-states => 10-state

P7042/P11: low data age => low latency

P7043/P6: deep space => cold space

P7045/L19: sweep => sweeps
P7046/L5: higher artefacts => higher order artefacts
P7046/L21: are resulting => result
P7048/L2 (and many other instances throughout the paper): suggest {flight part} is replaced with {flight segment} or {flight section}
P7048/L21: are containing => contain
P7048/L23: to obtain finally => to obtain final
P7049/L25: CRISTA was already defined
P7050/L18: from {the} north-west
P7050/L19: well coinciding => coinciding well
P7050/L20: Figs 7 to 8 => Figs 7 and 8
P7050/L22 (and many other instances throughout the paper): time should be followed by UTC, i.e. 10:30 UTC
P7050/L24: Atlantic western coast
P7050/L25: Voight profile
P7053/L15: which are not or inaccurately => which are omitted or inaccurately
P7055/L1: whereas => consequently
P7057/L23: origin => origins
P7059/L1: adjusted {to be} as
P7059/L8 (and many other instances throughout the paper): suited => suitable
P7049/L12: number independent => number-independent
P7059/L17: additional => an additional
are resulting => result
referred => referred to
other /side/ {hand}, to {a}
along {the} flight
extend => extent
are scattering well around => are scattered around
found => retrieved
of to => in
whereas => where
whereas => where
are resulting => result
While e.g. => For example, while
except that
shown result => result shown
in the context
shown profile => profile shown
are varying => vary
dominating => dominant
air volume
along {the} flight track
/also/ profiles .... are {also} shown
P7070/L8: as {the} initial
P7071/L13: which are not or inaccurately => which are omitted or inaccurately
P7075/L20: are resulting => do result
P7077/L29: Arctic ... in /the/ early /year/ 2010