

Interactive comment on “Cloud detection and classification based on MAX-DOAS observations” by T. Wagner et al.

Anonymous Referee #1

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This work is of high importance for the MAX-DOAS community, because it gives for the first time a balanced overview of the effect of clouds (and aerosols) on different quantities that can be measured with MAX-DOAS. Also it provides for the first time a cloud classification scheme which can be used to pre-select suitable conditions (clear skies) for MAX-DOAS profile and column retrievals. This is also important for the use of MAX-DOAS observations in the context of satellite validation.

As the authors note themselves, there is still room for improvement, such as optimization of thresholds (e.g. dependence on solar zenith angle). Also the method could be validated more thoroughly, e.g. by comparison with independent observations which were also available at the CINDI campaign (e.g. from the total-sky imager, and the Baseline Surface Radiation Network site (BSRN-Cabauw)). In my view, this is however

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not a prerequisite for the present publication.

Therefore the manuscript is accepted as is.

Interactive comment on Atmos. Meas. Tech. Discuss., 6, 10297, 2013.