

A 16-year global climate data record of total column water vapour generated from OMI observations in the visible blue spectral range

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1. General Comments

This paper assesses a long term record (2005-2020) of monthly mean total column water vapour (TCWV) from the Ozone Monitoring Instrument (OMI) on board NASAs Aura platform. The authors describe adaptations to an existing algorithm used for ESAs TROPOMI instrument, which is seen as a successor to OMI. This includes the rationale for the how and why they switch to using earth shine spectra as the reference in the DOAS retrieval setup. This study goes on to present results from an inter-comparison of TCWV against two additional remote sensing products from RSS and ESA and ERA5 reanalysis.

Since my previous review, all comments have been adequately addressed and I recommend it for publication. There is one very minor technical correction I would ask the authors to change. The combined MW and NIR TCWV from ESA WV_cci is being referred to as 'COMBI', could this be changed to CM SAF/WV_cci or the text altered to say that this study refers to it as 'COMBI'. This way of defining the product has only really been settled on recently and I would not expect the authors to be aware.