Reference Documents for Level-1B Products

(Version 003, First Public Release)

(Provided by Marcel Dobber – KNMI, September 27, 2007, updated June 2, 2008)

RD01: GDPS Input / Output Data Specification (IODS) Volume 2: Level 1B output products and metadata, SD-OMIE-7200-DS-467, issue 5, 25 August 2006.

RD02: G. H. J. van den Oord, J. P. Veefkind, P. F. Levelt, M. R. Dobber, Level 0 to 1B processing and operational aspects, IEEE Trans. Geosc. Rem. Sens. 44 (5), pp 1380-1397 (2006).

RD03: GDPS Input / Output Data Specification (IODS) Volume 4: Operational Parameters File Specification , SD-OMIE-7200-DS-488, issue 5, 25 August 2006.

RD04: Transient signal flagging algorithm definition for radiance data, TN-OMIE-KNMI-717, issue 2, 12 July 2005.

RD05: Transient signal flagging algorithm definition for non-radiance data, TN-OMIE-KNMI-718, issue 2, 12 July 2005.

RD06: OMI GDPS algorithm to correct for wavelength shifts due to inhomogeneous slit illumination, TN-OMIE-KNMI-680, issue 1, 17 January 2005.

RD07: In-flight wavelength assignment: correcting for inhomogeneous slit illumination, TNOMIE-KNMI-692, issue 1, 17 March 2005.

RD08: Reducing along-track stripes in OMI-Level 2 products, TN-OMIE-KNMI-785, version 1.0, 13 March 2006.

RD09: Ozone Monitoring Instrument calibration, M. R. Dobber, R. J. Dirksen, P. F. Levelt, G. H. J. van den Oord, R. Voors, Q. Kleipool, G. Jaross, M. Kowalewski, E. Hilsenrath, G. Leppelmeier, J. de Vries, W. Dierssen, N. Rozemeijer, IEEE Trans. Geosc. Rem. Sens. 44 (5), pp 1209-1238 (2006).

RD10: Method of calibration to correct for cloud-induced wavelength shifts in the Aura satellite's Ozone Monitoring Instrument, R. Voors, M. Dobber, R. Dirksen, P. Levelt, Applied Optics, Vol. 45, No. 15, 3652-3658.

RD11: Validation of Ozone Monitoring Instrument level-1b data products, M. Dobber, Q. Kleipool, R. Dirksen, P. Levelt, G. Jaross, S. Taylor, T. Kelly, L. Flynn, G. Leppelmeier, N. Rozemeijer, submitted to J. Geophys. Res. special issue on EOS-Aura validation.

RD12: The high-resolution solar reference spectrum between 250 and 550 nm and its

application to measurements with the Ozone Monitoring Instrument, M. Dobber, R. Voors, R. Dirksen, Q. Kleipool, P. Levelt, submitted for publication to Solar Physics.

RD13: Use of Antarctica for validating reflected solar radiation measured by satellite sensors, G. Jaross and J. Warner, submitted to J. Geophys. Res. special issue on EOS-Aura validation.

RD14: Ozone Monitoring Instrument geolocation verification, M. Kroon, R. Dirksen, M.R. Dobber, submitted to J. Geophys. Res. special issue on EOS-Aura validation.

Above documents are for First public released OMI level-1b data and are applicable to orbit number 1 and higher (15 July 2004 and later).

For detailed of GDPS operational 0-1 processor, see documents RD01-RD03. The level-1b output products and metadata is described in detail in RD01. More details on the OMI instrument design characteristics and on the on-ground and in-flight calibration details are given in RD09.

For the summary of known problems and data quality issues, see document 'Known instrumental effects that affect the OML1B product of the Ozone Monitoring Instrument on EOS Aura'