

Interactive comment on “The MACC reanalysis: an 8-yr data set of atmospheric composition” by A. Inness et al.

A. Inness et al.

a.inness@ecmwf.int

Received and published: 19 March 2013

Please find below our replies to referee 1.

Page 31249 line 17: “in most situations” – in most seasons/regions? - Changed to “in most seasons and regions”

Page 31253 line 11: “and harmful at high concentrations” – harmful to whom? - Changed to “... and at high concentrations near the surface harmful to human health.”

Page 31253 line 23 and 25: “Austral” vs. “boreal” – please make it consistent. - Changed this to “Austral” and “Boreal” throughout the text.

Page 31254 line 1: “clear oceans” – what does it mean? - Changed this to “ over the

C13534

oceans”

Page 31255 line 23: “wave number of T255” – letter “T” belongs to the truncation type not to a wave number. The whole sentence is confusing and inaccurate. Please rewrite this sentence. - Changed the sentence to : “The IFS is a spectral model and the global fields of the MACC reanalysis are archived at T255 spectral truncation, corresponding to a~reduced Gaussian grid (Hortal and Simmons, 1991) of about 80km horizontal resolution.”

Page 31258 line 19: “JNO2 depends on : : :” – please add “solar flux” - Done

Page 31261 line 1 and 2: “mixing ratios” and then “concentrations” these should not be used interchangeably. - Changed “ concentrations” to “mixing ratios”

Page 31261 line 27: “the Troposphere” should be “The Troposphere” – sounds strange but this is the way J. R. Drummond named the instrument. - Changed this.

Page 31263 line 27: “diffusion” – please add “vertical”. - Done

Page 31273 line 1: “Brewer-Dobson observations” – these are two different instruments. Do you mean “observations made with Brewer and Dobson Spectrophotometers”? - Changed this to “Brewer and Dobson Spectrophotometers”

Page 31274 line 8: “ozone layer is very thin and values around” – values of what? Do you mean “partial pressure”? - Changed this to “partial pressure values”

Page 31275 line 21: “WOUDC, SHADOZ, NDACC” – please expand or add a footnote. - Changed this to: World Ozone and Ultraviolet Radiation Data Centre (WOUDC), Southern Hemisphere ADDitional OZonesondes (SHADOZ), Network for the Detection of Atmospheric Composition Change (NDACC), and campaigns for the Determination of Stratospheric Polar Ozone Losses (MATCH)

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 31247, 2012.

C13535