



Balloon-borne Tropospheric Ozone Measurements from a New Station in Palau (Tropical West Pacific)

Katrin Müller, Peter von der Gathen, Ingo Wohltmann, Ralph Lehmann, and Markus Rex

Alfred-Wegener-Institute, Helmholtz-Zentrum für Polar- und Meeresforschung, Potsdam, Germany (katrin.mueller@awi.de)

The West Pacific warm pool has been identified as the major source region for stratospheric air, coinciding with a tropospheric ozone minimum (Rex et al. 2014). The close coupling of ozone concentration and oxidizing capacity of the clean tropical troposphere influences the overall transport of chemical species to the stratosphere. To improve the limited availability of tropospheric ozone profiles from this key region, intensive campaigns and continuous measurements with ECC ozone sondes have been conducted at a new measurement station in Palau (7° N, 135° E) within the scope of the EU-project StratoClim since early 2016. We present the comprehensive instrumental setup of the station and insights from the first three years of balloon-borne measurements regarding seasonality and origin of air masses for specific cases with high/low ozone/water vapor mixing ratios respectively.