

South American Dobson Intercomparison Campaign for RA-III

G. McConville^{1,2}, and K. Miyagawa³

¹Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado, Boulder, CO 80309; 303-497-3989, E-mail: glen.mcconville@noaa.gov

²NOAA Earth System Research Laboratory, Global Monitoring Division (GMD), Boulder, CO 80305

³Guest Scientist at NOAA Earth System Research Laboratory, Global Monitoring Division (GMD), Boulder, CO 80305

The WMO GAW Regional Association III (RA-III) international comparison of Dobson spectrophotometers was held between March 4–22, 2019 in Buenos Aires, Argentina. This activity is performed as a quality control requisite condition for monitoring atmospheric total ozone. Previous Region III intercomparisons were carried out in 1999, 2003, 2006, and 2010. The individual participants performed a WMO GAW-required calibration procedure under the scientific staff's supervision. The event also provided instructions on standard operating procedures for making observations with a Dobson spectrophotometer, conducting routine maintenance checks, and data management. The final intercomparison showed a maximum difference of 0.2% in total ozone values from the standard for ADDSGQP observations in the mu range 1.5 to 2.5. The participant countries and Dobson instrument numbers are below (Figure 1).

Dobson #	Organization	Country	WOUDC/others
65	NOAA	USA	World Secondary
67	La Habana, Instituto de Meteorología de Cuba	CUBA	311
70	Buenos Aires Observatory	Argentina	091/RA III Std.
87	Servicio Nacional de Meteorológico e Hidrografía de Perú – SENHAMI Marcapomacocha	PERÚ	429
93	Sao Paulo Instituto Nacional de Investigaciones Espaciales (INPE)	BRASIL	219
97	La Quiaca Observatory, Jujuy Servicio Meteorológico Nacional	Argentina	513
98	MÉXICO: Cd. De México	MÉXICO	192
99	Estación Antártica Marambio	Argentina	233
114	Instituto Nacional de Investigaciones Espaciales (INPE)	BRASIL	200
131	Ushuaia – GAW Station, Provincia de Tierra del Fuego, Antártida e Islas del Atlántico Sur. Servicio Meteorológico Nacional	Argentina	339
133	Comodoro Rivadavia Station, Chubut Servicio Meteorológico Nacional	Argentina	342
134	El Salto Instituto Uruguayo de Meteorología	URUGUAY	343

Figure 1. Table of participants.



Figure 2. The final intercomparison of all the participating Dobson instruments and the U.S.A. world Secondary Dobson (D065) on March 18, 2019.