

10th Meeting of the Ozone Research Managers of the Parties to the Vienna Convention  
Geneva, Switzerland, 28-30 March 2017

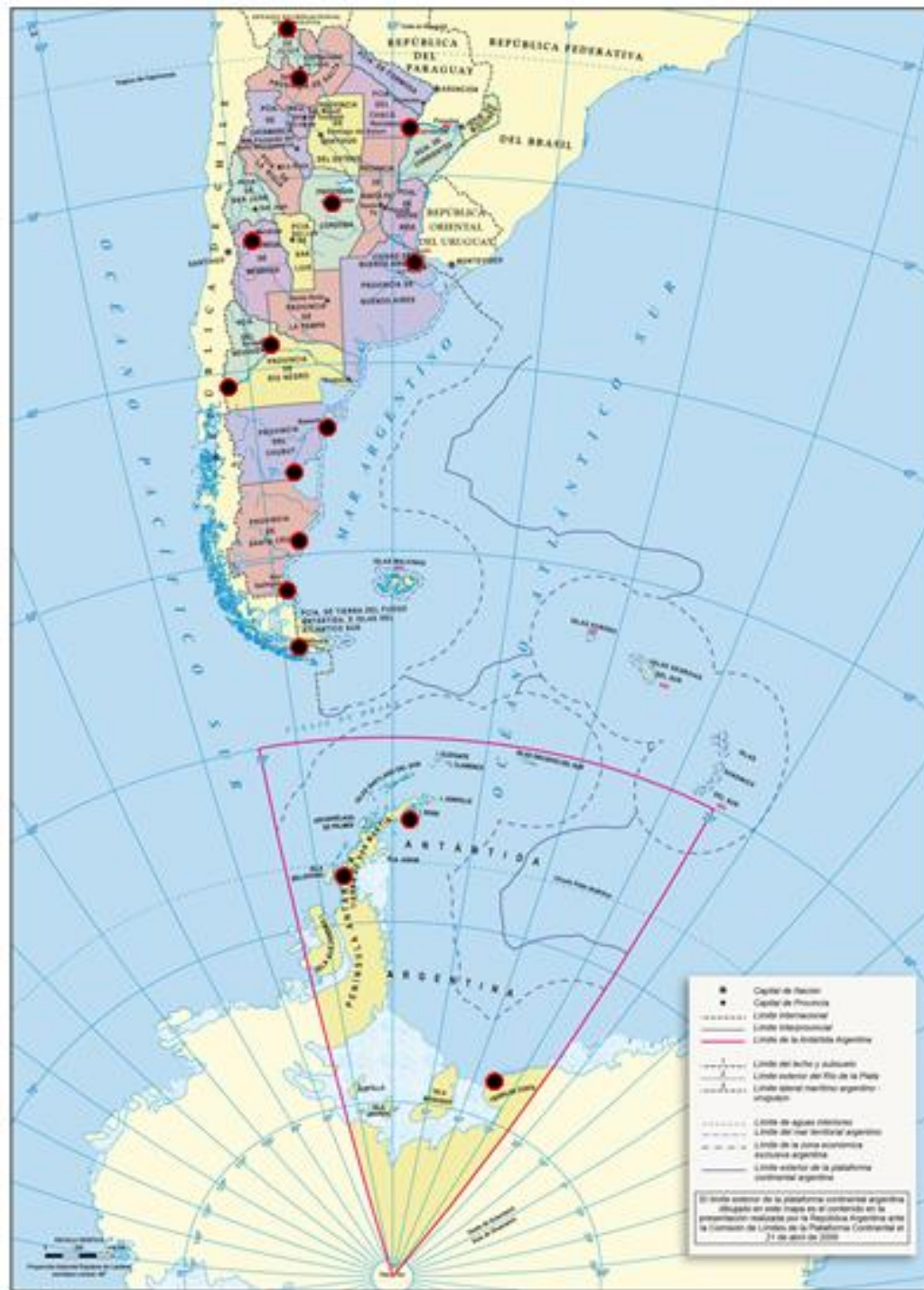
# ***REGION 3: South America***

## **Summary report**

# **OBSERVATIONAL ACTIVITIES**

# Argentina

**Geographical location of sites where monitoring of Ozone-UV radiation is presently carried out**



# Brasil

## *Dobson and Brewer spectrophotometer's network*

- only two of the six Brewers are presently measuring
- two Dobson instruments, to be calibrated (NT and CP)
  - two ozonesounding stations (NT and SM)

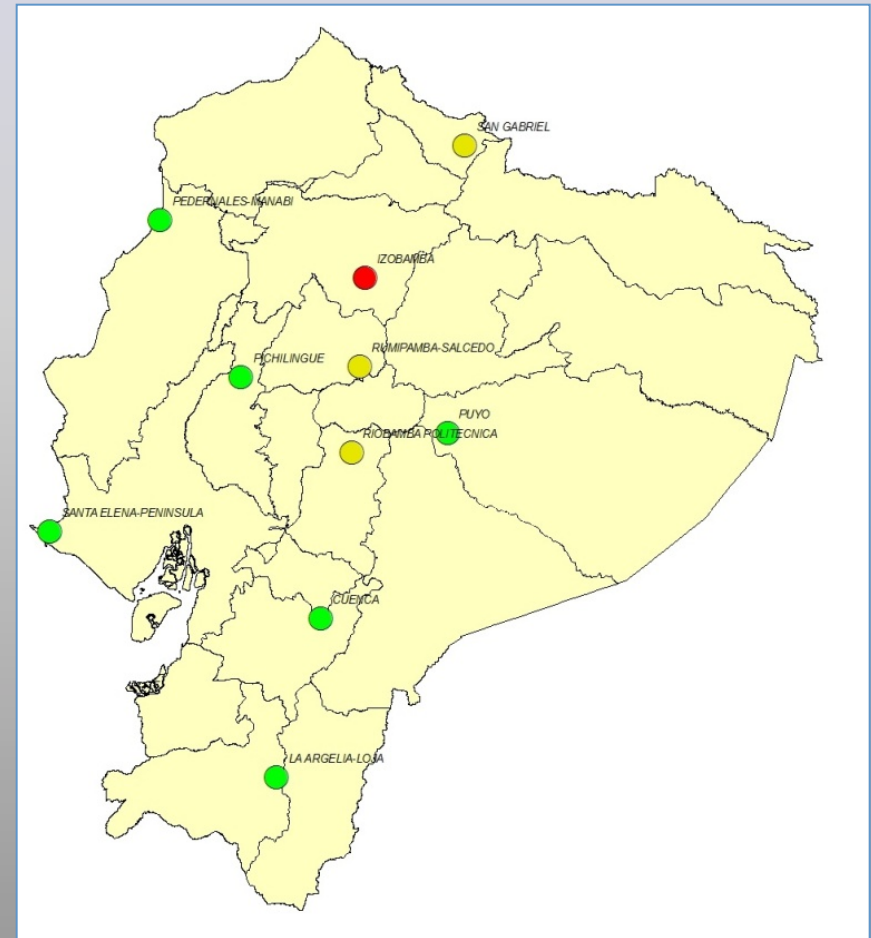


# Chile

- Brewer at Punta Arenas
- Ozonesounding at:  
Isla de Pascua  
Punta Arenas



# Ecuador



Green and Yellow: UV network

Red: Brewer spectrophotometer  
(deactivated since April 2016)

Cyan: Ozonesounding station



# Colombia

- Ozonesounding station

Station	Latitud	Longitud	Altura
Bogota	04° 43'N	74° 03'W	2546 m

- UV measurement network

Station	Latitude	Longitude	Height (m)
Riohacha	11° 32' N	72° 56' W	4
Bogotá	04° 42' N	74° 09' W	2546
Pasto	01° 11' N	77° 18' W	2580
Leticia	04° 33' S	69° 23' W	84
Isla de San Andrés	12° 35' N	81° 42' W	2

# República Bolivariana de Venezuela

Venezuela participates for the first time in the ORM Meetings with the intention to start their integration to the international ozone-related monitoring programs and activities.

Venezuela is willing to participate in assessments and measurements of ozone and other variables of interest, so it will evaluate the feasibility of installing instruments for these purposes in the short term, considering the options for the relocation of equipment, mentioned in this meeting.



# Principal activities and facts in the period 2014-2017

1. The surface ozone Primary Standard (TEI49-PS S/N 56084-306, Buenos Aires) was calibrated in EMPA (Swiss Federal Laboratories for Materials Science and Technology) Switzerland, 2014.
2. During 2016, the Regional Calibration Centre for surface ozone in Buenos Aires has repaired and calibrated the following instruments:
  - TEI49C S/N 61161 – 330 Regional GAW La Quiaca, 2016. State: Good!
  - TEI49 S/N 54577 – 300 Regional GAW Pilar, 2016. State: Good!
  - TEI49 S/N 54947 – 302 Regional GAW San Julián, 2016. State: Not Good! (Discarded).
  - TEI49C S/N 58546 – 318 Global GAW Ushuaia, 2016. State: Good!
  - TEI49 S/N 47306 – 278 Regional GAW Marambio, 2016. State: Good!
3. Instituto Antártico Argentino (IAA) and Instituto Nacional de Técnica Aeroespacial (INTA, Spain), requested the calibration of two surface ozone analyzers:
  - TEI49i PS S/N 0628518938 (Antarctic Belgrano II Station), 2016. State: Good!
  - TEI49C S/N 75719-380 (Antarctic Belgrano II Station), 2016. Repaired, State: Good!
4. The Ushuaia GAW Station was audited by the WMO World Calibration Centre WCC-EMPA, Switzerland (Dr. Christoph Zellweger), February 2016.

# Principal activities and facts in the period 2014-2017

5. Brewer instrument at Ecuador deactivated in April 2016 (damaged by an electric storm).
6. Ozonesondes program ended at Bogota, Colombia, and where not reinitiated in the last years.
7. Colombia implemented in several cities a sensor-based UV program for local real-time information to the public.
8. The Argentine SMN UV daily forecast web site was updated in 2015 adopting both the official World Health Organization risk color scale and risk numeric scale.
9. The Argentine SMN implemented during 2016 the real-time online availability of UVIndex measured by UVBiometers at their stations of Buenos Aires and Ushuaia.
10. Four of the six Brewers at Brasil were deactivated but could be operative again with the appropriate reparations.
11. Ozonesounding at Santa Maria in Brasil could finish soon by lack of funds to continue them.

# Principal activities and facts in the period 2014-2017

12. The Argentine SMN installed in 2015 a Dobson spectrophotometer (#D097) at La Quiaca GAW station.
13. A new MAX-DOAS spectrophotometer for O<sub>3</sub>, NO<sub>2</sub> and IO (surface and column) measurements was installed at Ushuaia GAW station in 2015.
14. 50<sup>th</sup> anniversary of the start of measurements with Dobson spectrophotometers (#D094, #D097, and #D070) in Buenos Aires (1965 - 2015).
15. Other activities: The SMN is collaborating with the submission of data for the elaboration of the Ozone Hole Bulletin (Ushuaia and Marambio Stations). SMN contributes with surface ozone data in near-real-time for the validation of analysis and forecast of global atmospheric composition developed by the Copernicus Atmosphere Monitoring Service (CAMS), European Union. Technical support to regional activity. In 2014 the Salto regional GAW station (Uruguay) was set up with the SMN collaboration. Four UV radiation sensors were compared in Buenos Aires against the standard purchased in the same year. Change of the UV sensor at Pilar station. The SMN participated at meetings organized by the MINCyT in order to form a risk team with the aim of implementing a risk protocol to face the UV radiation threat. SMN personnel was trained in courses by the GAWTEC at the Schneefernerhaus Observatory, in Germany.

# **Planned and potential activities for period 2017-2020**

- Regional Dobson calibration campaign for November 2017 at SMN Buenos Aires station, Argentina. Supported by the Trust Fund.
- Installation of four new Pandora instruments at Argentine stations during 2017.
- Installation at Pilar station of a new Lidar instrument for vertical atmospheric sounding developed in Argentina.
- Support is needed to maintain or to reactivate ozonesounding programs in Region 3, some of them supported locally by many years.

# Planned and potential activities for period 2017-2020

- Urgent need of:
  - a Brewer Regional calibration campaign!
  - a UV-Biometer Regional calibration campaign!
- We recommend to include these activities in the official calibrations agenda, even though funds to support them were still not assured.