

## LETTER OF AGREEMENT

between

Latin America Lidar Network  
- hereinafter referred to as "ALINE" -

and

World Meteorological Organization  
Global Atmosphere Watch Programme  
- hereinafter referred to as "WMO/GAW" -

- hereinafter jointly referred to as the "Parties" -

related to

### **the recognition of ALINE as a contributing network for the World Meteorological Organization Global Atmosphere Watch Programme**

#### **1. General**

1.1 The Latin America Lidar Network - ALINE (the current provisional address <http://lalinet.no-ip.org/> will be replaced with [www.aline.org](http://www.aline.org) some time in 2013) is a Latin American coordinated lidar network. The website is hosted by the Instituto de Pesquisas Energéticas e Nucleares – University of Sao Paulo, Brazil. ALINE was established in 2001, measuring aerosol backscatter coefficient and aerosol extinction profiles over Latin America.

1.2 The Global Atmosphere Watch Programme (GAW) of the World Meteorological Organization (WMO) is a unique long-term international framework that provides the technical basis for integrated observations, analysis and assessment of atmospheric chemical composition. The mission of GAW is described in the "WMO Global Atmosphere Watch (GAW) Strategic Plan 2008 – 2015" (GAW report No. 172) and is implemented through "maintaining and applying global, long-term observations of the chemical composition and selected physical characteristics of the atmosphere; emphasising quality assurance and quality control; delivering integrated products and services of relevance to users". The WMO/GAW observational network consists of the Global and Regional stations, and stations operated by contributing networks.

1.3 The WMO/GAW coordinates integrated global observations of the following variables: greenhouse gases (CO<sub>2</sub> and its isotopes, CH<sub>4</sub> and its isotopes, N<sub>2</sub>O, SF<sub>6</sub>, H<sub>2</sub>, halocarbons), ozone (total column and vertical profile), reactive gases (O<sub>3</sub>, NO<sub>x</sub>, CO, VOCs, SO<sub>2</sub>), aerosols (physical properties and chemical composition), chemical composition of precipitation and UV radiation but is not limited by these compounds. This list can be extended in the future according to the society's needs.

#### **2. Purpose**

2.1 The purpose of this Agreement shall be to recognize the ALINE observational network for the aerosol backscatter and extinction coefficient profiles with high precision and accuracy as a contributing network to the WMO/GAW and in particular to GALION, the GAW Aerosol Lidar Observation Network, and to define each Party's responsibilities.

2.2 ALINE shall perform within the framework of this agreement the following activities:

- run the network according to the best practices currently implemented for ALINE;
- develop in 2013 an ALINE measurement protocol and run the network accordingly;
- update in 2013 the network web site with necessary information relevant for running the network;
- satisfy the requirements set up by the GAW Programme on the quality of the observations (via ALINE quality assurance (QA) programme, including regular QA tests and intercomparison with reference lidar systems), assessed by the GAW SAG for Aerosols;
- ensure that stations in the network listed in Annex satisfy WMO/GAW siting criteria (for the variables measured, they should be regionally representative and normally free of significant influence from local pollution sources);
- maintain metadata descriptions in the GAW Station Information System (GAWSIS) of all stations listed as contributing stations (Annex);
- participate where appropriate in WMO/GAW intercomparison campaigns;
- establish a link from the ALINE central data archive to the home page of World Data Centre for Aerosols as well as to GAWSIS.

2.3 WMO/GAW shall perform within the framework of this cooperation the following activities:

- assign the stations of the ALINE network listed in Annex status of the GAW contributing stations; this assignment does not impact the status of the stations which were accepted as GAW Regional or Global stations before the agreement entered into force;
- provide support in developing the web site and QA manual;
- store information about these stations in the GAWSIS;
- update the list of stations in the GAWSIS database upon the request of the ALINE focal point for GAW;
- provide an opportunity for individual stations of the network to be upgraded to the GAW Regional station status following the procedures of the Addendum to the GAW Strategic Plan: 2008-2015 (GAW report No. 197) on an individual basis;
- establish the link from GAWSIS and WMO/GAW World Data Centre for Aerosols to the to data archive of the ALINE network;
- facilitate the submission to the WMO/GAW World Data Centre for Aerosols of the ALINE data intended for use in WMO/GAW products, such as assessments and bulletins;
- invite ALINE partners to participate in WMO Expert meetings and thematic training events;
- acknowledge ALINE, where appropriate, for the contribution to the WMO/GAW Programme, including on its web pages.

### **3. General conditions**

3.1 The Parties shall inform each other regularly and exhaustively about planned and completed work and about the results generated under this Agreement. To do this, the Parties shall meet at regular intervals in order to exchange information and discuss their respective activities.

3.2 The Parties agree that any differences of views arising out of the execution of this Agreement shall be resolved on an amicable manner.

3.3 Each Party shall bear its own costs arising to it in the course of implementation of this Agreement.

3.4 Rights and obligations arising from this Agreement shall not be assignable without the prior written consent by the other Party.

3.5 Nothing in or relating to this Agreement shall be deemed a waiver, expressed or implied, of any of the privileges and immunities of the WMO.

3.6 WMO shall not be liable for any damage arising out of the application of this Agreement.

3.7 Should a provision of this Agreement be or become invalid, this shall not affect the validity of the rest of provisions of this Agreement or the Agreement as a whole. The Parties shall attempt in a concerted effort to reach retroactively an agreement on a new valid provision, the result of which shall reflect as much as possible the invalid provision which it will replace.

### **4. Focal Points**

Each Party shall appoint the following contact persons in order to make cooperation effective:

#### **For ALINE:**

Dr Eduardo Landulfo  
Instituto de Pesquisas Energéticas e  
Nucleares – Centro de Lasers e Aplicações  
(IPEN-ICLA)  
Av Prof Lineu Prestes 2242  
SAO PAULO – SP 05508-000  
Brazil

#### **For WMO/GAW:**

Dr Liisa Jalkanen  
Chief  
Atmospheric Environment Research Division  
Research Department  
World Meteorological Organization  
7 bis, Avenue de la Paix  
Case Postale 2300  
CH-1211 GENEVA 2  
Switzerland

### **5. Rights of Use**

5.1 The results of work shall become the property of the Party generating them.

5.2 Each Party shall grant to the other Party for the purposes and term of this Agreement a non-transferable, non-exclusive right of use without charge of the data and metadata generated under this Agreement, as well as the data and metadata held by the respective

Party prior to the signing of this Agreement but relevant to it, provided that the respective Party is able to dispose of this information.

## 6. Publications

6.1 In all publications and statements to the general public including publication of scientific work related to cooperation under this Agreement, each Party shall take into account the justified interests of the other Party and shall consult the other Party prior to publication.

6.2 In all publications, presentations or other information destined for the public which relate to cooperation under this Agreement appropriate reference shall be made to the cooperation and the partners involved.

## 7. Duration, Termination

7.1 This Agreement shall come into force when signed by both Parties and shall have duration of five years.

7.2 Parties shall sign two copies of this Agreement. Each party shall have one original copy.

7.3 This Agreement may be terminated by either Party upon three months' notice. The notice of termination shall be in writing to be effective.

## 8. Amendments

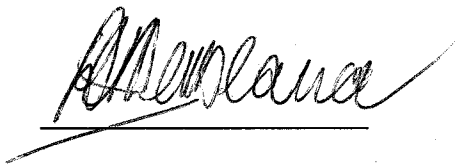
8.1 Any reference to this Agreement shall also include the Annex. Any amendment to this Agreement shall be effected only on the basis of written mutual consent by both Parties.

Signed on behalf of the World Meteorological Organization (WMO/GAW):      Signed on behalf of ALINE

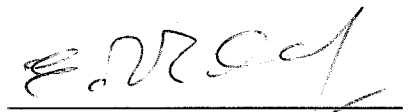
Dr Deon Terblanche  
Director  
Atmospheric Research and Environment  
Branch  
Research Department  
World Meteorological Organization

Dr Eduardo Landulfo  
Chair of the ALINE Council  
Instituto de Pesquisas Energéticas e  
Nucleares

Signature:



Signature:



Date:

26/3/2013

Date:

02/04/2013

## List of stations

Site	Latitude/Longitude (degrees)	Altitude a.s.l. (m)	station GAW status
Buenos Aires, Argentina <sup>1</sup>	34.555269 S, 58.50615 W	20	Regional
Bariloche, Argentina <sup>2</sup>	41.14730 S, 71.16398 W	842	contributing
Comodoro Rivadavia, Argentina	43.23601 S, 65.32659 W	58	contributing
La Paz, Bolivia	16.538 S, 68.068 W	3420	contributing
Manaus, Brazil	2.891 S 59.970 W	100	contributing
São Paulo, Brazil	23.4608 S, 46.2345 E	740	contributing
Concepcion, Chile	36.84 S, 73.02 W	170	contributing
Medellín, Colombia	6.1355 N, 75.3405 W	1538	contributing

<sup>1</sup>GAW Buenos Aires and Observatorio are the same stations

<sup>2</sup>La Paz and Chacaltaya GAW stations are not the same stations.