



RIC Buenos Aires, Argentina (RA III)

CIMO/WIGOS Exploratory Workshop
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SECRETARÍA DE
CIENCIA, TECNOLOGÍA
Y PRODUCCIÓN



Ministerio de
Defensa
Presidencia de la Nación





Background

- *Regional Instrument Center Buenos Aires is located in Buenos Aires , Argentina , under the administration of Servicio Meteorologico Nacional, member of RAIII.*
- *WMO Res 8/1 1976 establishes the responsibility of RIC Buenos Aires to assist WMO RAIII members in the calibration and maintenance of met instruments.*
- *Regional Radiation Center is an associated center under the same administration but located 5 km away from RIC.*



RRC BUENOS AIRES





RIC BUE

- LABORATORY
- MECHANICAL
- ELECTRONIC



Negretti Zambra Pressure Chamber





RIC BUENOS AIRES CAPACITY

- **BASIC CAPACITY**

- **ATMOSPHERIC PRESSURE**

DIGITAL BAROMETER VAISALA PTB220 Range 500 to 1100 hPa

- **TEMPERATURE**

DIGITAL THERMOHIGROMETER VAISALA HMT 330 Range -50°C to +60°C

- **HUMIDITY**

DIGITAL THERMOHIGROMETER VAISALA HMT 330 Range 0 to 100 %

- **WIND**

WIND TUNNEL Range 0 to 25 m/s

Domain	Calibrated item	Measurand	Range / Domain	Principle / Reference	Calibration instruments (Reference Standard, Equipment)	Best Capability	Traceability	
							Last standard calibration date	By
Pressure	Digital Barometer	Error	500 to 1100 hPa	Calibration by comparison	Digital Barometer Vaisala PA11	± 0.1 hPa at $\pm 20^\circ\text{C}$	DEC 2008	INTI National Institute of Tech
Pressure	Digital Barometer	Error	500 to 1100 hPa	Calibration by comparison	Digital Barometer Vaisala PTB220	± 0.1 hPa at $\pm 20^\circ\text{C}$	DEC 2008	INTI National Institute of Tech.
Temperature / Humidity	Thermohygrometer	Error	Temp -50 to +60°C Hum 0 to 100%	Calibration by comparison	Digital Thermohygrometer Vaisala HMT 333	Temp $\pm 0.2^\circ\text{C}$ at $20\pm\text{C}$ Hum $\pm 1\%$ at 0...90% HR	SET 2014	PTU INSTRUMENTAL LAB. VAISALA
Wind	Wind Tunnel	Error	0...25m/s	Calibration by comparison	Ultrasonic sensor Vaisala WMT 700	$\pm 0.135\text{m/s}$	DEC 2012	La Plata University LAB
Radiation	Pyrheliometer	Error	0-4000 W/m ²	Calibration by comparison	CM11 Pyranometer Kipp & Zonen	< 2% Daily	NOV 2014	SMN



RIC BUENOS AIRES

- Calibration performed per year and per domain:

Number of staff per domain

Name of Domain	Total	Internal	External	Manager	Operator	Number of staff per domain	
						Manager	Operator
Domain 1 Pressure Number:	27	22	5	1	3	4	4
Domain 2 Temp Number:	140	136	4	1	3	4	4
Domain 3 Hum Number:	17	14	3	1	3	4	4
Domain 4 Wind Number:	33	28	5	1	2	3	3
Total number of calibration done:	217	200	17				Total Lab staff: 4







Regional Assistance

- Calibration of mercury barometers from Paraguay, Venezuela , Ecuador and Peru
- Training of met technician from Venezuela, Paraguay and Dominican Republic in the maintenace and calibration of meteorological instruments
- Assistance with own technicians in situ to others countries
- Met students from Uruguay have visited the RIC and the RRC Buenos Aires .
- Interaction with RTC Buenos Aires to develop activities like regional workshops or training courses





TALLER DE LA **OMM** SOBRE
EVALUACIÓN DE LAS
COMPETENCIAS DEL
PERSONAL DE METEOROLOGÍA
AERONÁUTICA

BUENOS AIRES. ARGENTINA,
17-21 DE NOVIEMBRE DE 2014

WMO WORKSHOP ON
COMPETENCY ASSESSMENT
OF AERONAUTICAL
METEOROLOGICAL
PERSONNEL

BUENOS AIRES. ARGENTINA,
17-21 NOVEMBER 2014



TRAINING RIC & RTC





RIC GOALS

- BUILDING DURING THE LAST 3 YEARS UPGRADED.
- COUPLE OF YEARS AGO STARTED THE CHANGE OF MERCURY BAROMETERS FOR MODERN DIGITAL PTB330
- QMC STARTED IN 2008 - ISO 9001-2008 CERTIFIED
LAST CERTIFICATION NOV 2014



RIC PROBLEMS AT PRESENT

- BEST COMMUNICATION FACILITIES
- LOW QUANTITY OF TECHNICIANS
- TRAINING IN METEOROLOGICAL METROLOGY
- ONE THERMOHIGROMETER CHAMBER OUT OF WORK
- COMPLIANCE WITH ISO 17025





SHORT AND MEDIAN RANGE PLANS

- COMPLETE REVIEW OF STATION NETWORK MET INSTRUMENTS
- COMPLIANCE WITH INSPECTIONS REQUIREMENTS :
 - SYNOPTIC EVERY 2 YEARS
 - AERONAUTICAL AND GSN STATIONS EVERY YEAR
 - AWOS EVERY 6 MONTHS
- INCORPORATE QMC INTO THE OBSERVATION PROCESS
- DEVELOP RIC INFORMATION AND CONTACT PROCEDURES ON WEB SITE www.smn.gov.ar
- BUILD REGIONAL FACILITIES FOR MAINTENANCE
- REQUEST TRAINING IN METROLOGY AND IN BEST PRACTICES IN METEOROLOGICAL INSTRUMENTS CALIBRATION IN LAB AND IN SITU METHODS



Conclusions

RIC NEEDS CIMO ASSISTANCE IN ORDER TO OBTAIN:

- INTERACTION WITH LEAD CENTERS AND TESTBEDS
- WORKSHOPS IN METEOROLOGICAL METROLOGY AND BEST PRACTICES IN LAB CALIBRATION AND IN SITU COMPARISON.
- IMPROVE NEW TECHNOLOGY IN THE RIC TECHNICIANS INVOLVED IN METEOROLOGICAL INSTRUMENTS CALIBRATION PROCESS.
- BETTER INTERACTION WITH RAIH MEMBERS
- GUIDANCE ABOUT MINIMUM SPECIFICATIONS REQUIREMENTS FOR INCORPORATION INTO THE MET INSTRUMENTS TENDERS DEVELOPED BY MEMBERS.



Thank you

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