



National SCAR Committee, Spain

**ANNUAL SCAR REPORT ON SPANISH ANTARCTIC
SCIENTIFIC ACTIVITIES
2013-2014 CAMPAIGN
AND
PLANNED NEW PROGRAMMES**

**Report no. 26
for the Scientific Committee on Antarctic Research (SCAR)**

2014

**INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS
SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH**

**ANNUAL SCAR REPORT ON
NATIONAL ANTARCTIC SCIENTIFIC ACTIVITIES
1 July 2013 - 30 June 2014**

Member Country: SPAIN

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NATIONAL PROGRAMMES/PROJECTS

PERMANENT STATIONS (WINTERING)

Name	Location	Coordinates
NONE		

SUMMER-ONLY BASES

Name	Location	Coordinates
Juan Carlos I (http://www.utm.csic.es/bae.asp)	Livingston Island	62° 39' 46" S 60° 23' 20" W Altitude aprox.: 10 m
Gabriel de Castilla (http://www.ejercito.mde.es/mexterior/webantartida/)	Deception Island	62° 58' 40" S 60° 40' 30" W Altitude aprox.: 10 m

VESSELS OPERATING IN ANTARCTICA

- R/V Hespérides <http://www.utm.csic.es/hesperides.asp>

AUTOMATIC RECORDING STATIONS/OBSERVATORIES

Name/Identifier	Coordinates	Parameters Recorded
89064	62° 39' 46" S, 60° 23' 20" W (Livingston Island)	Meteorology
Gabriel de Castilla Station	62.98° S, 60.68° W (Deception Island)	Meteorology
Seismic network	62° 57' S, 60° 40' W (Deception Island)	Volcanoseismology, 5 short period three-component station (summer only, 1994-present)
DCP permanent	62° 59' S, 60° 41' W (Deception Island)	Seismology, 16-S, three-component station (continuous recording, 2008-present)

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NATIONAL PROGRAMMES/PROJECTS

Seismic array	62° 58' S, 60° 42' W (Deception Island)	Volcano seismology, (short period, 12-channel, vertical component, small aperture seismic array). (summer only, 1994-present)
LVN permanent seismometer	62° 40' S, 60° 23' W (Livingston Island)	Seismology, 16-s, three-component station (continuous recording, summer only)
CCV permanent Seismometer	64° 09' S, 60° 58' W (Cierva Cove)	Seismology, 16-s, three-component station (continuous recording, 2008-present)
----	62° 39' 44" S, 60° 23' 21" W (Livingston Island)	Magnetic elements (D, H, Z, F)
Campbell	62 ° 66' S, 60 ° 30' W (Johnson Glacier, Livingston Island)	Meteorology
Campbell	62 ° 65' S, 61 ° 11' W (Byers Peninsula, Livingston Island)	Meteorology

* Maintenance activities for acquisition of instrumental data series are indicated in the last section of this report.

Member Country: **SPAIN**

NATIONAL PROGRAMMES/PROJECTS

GEOSCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Marine geology and geophysics	* International data compilation * Bathymetric chart	Drake Passage	2012-2013	F. Bohoyo	(8)
Geodesy	* Volcanic activity monitoring * Thermal anomalies	Livingston and Deception islands	2012-2013	M. Berrocoso	(9)
Volcanology	* Volcanic risk * Contingency plans	Deception Island	2012-2013	A. Geyer	(10)
Geology	* Lithologic and chronostratigraphic studies * Volcanic and tectonic events dating	Deception Island, Port Foster	2012-2013	A. Maestro	(11)
Geology	* Active layer * Serial data CALM and TSP	Livingston and Deception islands	2012-2013	M.A. de Pablo	(12)
Sismology and Volcanology	* Seismisc monitoring * Maintenance of permanent stations	Livingston and Deception islands	2012-2013	D. Stich	(13)
Geology	* Tectonic plates * Continental margins * Geophysical and structural data	Tierra de Fuego, Jubany, Greenwich Island, James Ross archipelago and Hope Bay	2012 -2014	F. Bohoyo	(8)
Marine geology	* Glacial evolution * Palaeoenvironmental changes	Data from Wilkes Land IODP	2012-2014	C. Escutia	(14)

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NATIONAL PROGRAMMES/PROJECTS

Geology and Geomorphology	* Geomorphology and neotectonics * Hydrology and Permafrost * Remote sensing and Human impacts	King George, Half Moon, Livingston and Deception islands	2012-2014	J. López-Martínez	(1)
Marine geology	* Geodynamic evolution * Palaeoceanography * Continental fragmentation	Drake Passage, Scotia Sea, Bransfield Strait	2012-2014	A. Maldonado	(15)

LIFE SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Chemical ecology	* Natural products from marine benthos * Pharmacological interest	Deception Island	2011-2013	C. Ávila	(16)
Ecology	* Human impacts	Barrientos Island, Byers Peninsula	2011-2013	J. Benayas	(17)
Molecular biology	* Genomics and proteomics * Microbial environmental adaptation	King George Island, Antarctic Peninsula	2012-2013	A. Aguilera	(18)
Biology	* Biogenic material * Organic matter accumulation	Laboratory (material from Larsen A y B ice shelves)	2012-2013	J.M. Gili	(5)

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NATIONAL PROGRAMMES/PROJECTS

Penguin studies	* Ecophysiology * Immune response * Host-parasites interaction	Deception Island	2012-2014	A. Barbosa	(19)
Non marine aquatic ecosystems	* Microbial cyanobacterial mats * Virome and metagenomics * Ecological dynamics	Byers Peninsula, and Alexander Island	2012-2014	A. Quesada	(20)
Benthic communities	* Marine benthos * Biodiversity and structure * Bioactivity and natural products	Northern Antarctic Peninsula region	2014-2016	C. Ávila	(16)
Algal ecology	* Biomass * Biogeochemistry	Deception Island	2014-2016	M. Lastra	(21)
Biogeography and biodiversity	* Impacts in ecosystems * Alien species	Northern Antarctic Peninsula region	2014-2016	M.A. Olalla	(22)

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NATIONAL PROGRAMMES/PROJECTS

PHYSICAL SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Atmospheric Composition	* Ozone and NO ₂ * Halogens distribution * PSC	Coast Land, Seymour Island, Tierra del Fuego	2010-2013	M. Yela	(23)
Geophysics Geomagnetism	* Ionospheric change studies * Historical data series	Livingston Island	2011-2013	D. Altadill	(24)
Geophysics Geomagnetism	* Geomagnetic monitoring * HF data transmission	Livingston Island	2011-2013	J. Pijoan	(25)
Geophysics Geomagnetism	* Ionospheric models * Spatial methods	Livingston Island	2011-2013	J. Sanz	(26)
Physical oceanography	* Circumpolar current * Oceanic ventilation	South Scotia Sea	2012-2013	M. Flexas	(27)
Glacial thermo-mechanical processes	* Calving fluxes * Mass balance * Numerical modelling	Livingston Island	2012-2014	F.J. Navarro	(7)
Atmospheric composition	* Ozone distribution * Halogens	Belgrano and Marambio stations, and Ushuaia	2014-2016	M. Yela	(23)

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NATIONAL PROGRAMMES/PROJECTS

INSTRUMENTAL DATA SERIES MAINTENANCE

(These activities are supported for maintaining the acquisition of instrumental data. They are not equivalent to the previously mentioned projects and have not been evaluated by the same system)

Instrumental data recovered	Location	Duration	Responsible
Geomagnetism and Ionosphere Measurements	Juan Carlos I station	2013-14	D. Altadill (24) and J.L. Pijoan (25)
Permafrost measurements	Livingston and Deception islands, and Cierva Point	2013-14	M.A. de Pablo (12)
Geodetical measurements	Livingston and Deception islands	2013-14	M. Berrocoso (9)
Seismic and volcanic measurements	Deception island	2013-14	J. Almendros (28)

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