



National SCAR Committee, Spain

**ANNUAL SCAR REPORT ON SPANISH ANTARCTIC
SCIENTIFIC ACTIVITIES
2014-2015 CAMPAIGN
AND
PLANNED NEW PROGRAMMES**

**Report no. 27
for the Scientific Committee on Antarctic Research (SCAR)**

2015

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

**ANNUAL SCAR REPORT ON
NATIONAL ANTARCTIC SCIENTIFIC ACTIVITIES
1 July 2014 - 30 June 2015**

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	Livingston Island	62° 39' 46" S 60° 23' 20" W Altitude aprox.: 10 m (http://www.utm.csic.es/web/index.php/es/instalaciones/jci)
Gabriel de Castilla	Deception Island	62° 58' 40" S 60° 40' 30" W Altitude aprox.: 10 m (http://www.ejercito.mde.es/mexterior/webantartida/)

VESSELS OPERATING IN ANTARCTICA

- R/V Hespérides <http://www.utm.csic.es/web/index.php/es/instalaciones/hes>

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)

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NATIONAL PROGRAMMES/PROJECTS

DCP permanent	62° 59' S, 60° 41' W (Deception Island)	Seismology, 16-S, three-component station (continuous recording, 2008-present)
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)
----	Geographic: 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.

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NATIONAL PROGRAMMES/PROJECTS

GEOSCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
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	(9)
Geology and Geomorphology	* Geomorphology and neotectonics * Hydrology and Permafrost * Remote sensing and Human impacts	King George, Half Moon, Livingsgton 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	(10)
Geology	* Tectonic plates * Continental margins * Geophysical and structural data	Drake Passage	2015 -2017	F. Bohoyo A. Maestro	(8) (11)
Marine geology	* Geodynamic evolution * Palaeoenvironmental changes	Tasman Sea	2015-2017	C. Escutia F. Lobo	(9) (12)
Geology and Geomorphology	* Geomorphology and neotectonics * Remote sensing.	South Shetland Islands, Northern Antarctic Peninsula	2015-2017	J. López-Martínez	(1)

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NATIONAL PROGRAMMES/PROJECTS

geological heritage and
geoconservation

* Hydrology and
Permafrost

Permafrost studies	* Active layer, thermal behaviour	Livingston and Deception islands	2015-2018	M.A. de Pablo	(13)
	* Snow cover, remote sensing				
	* Serial data, CALM and TSP				

LIFE SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Penguin studies	* Ecophysiology	Deception Island	2012-2014	A. Barbosa	(14)
	* Immune response				
	* Host-parasites interaction				
Non marine aquatic ecosystems	* Microbial cyanobacterial mats	Byers Peninsula, and Alexander Island	2012-2014	A. Quesada	(15)
	* Virome and metagenomics				
	* Ecological dynamics				
Microbiology	* Viruses studies	Byers Peninsula, Livingston Island	2014-2015	A. Alcamí	(16)
	* Freshwater ecosystems				
Benthic communities	* Marine benthos	Northern Antarctic Peninsula region	2014-2016	C. Ávila	(17)
	* Biodiversity and structure				
	* Bioactivity and natural products				

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NATIONAL PROGRAMMES/PROJECTS

Algal ecology	* Biomass * Biogeochemistry	Deception Island	2014-2016	M. Lastra	(18)
Biogeography and biodiversity	* Impacts in ecosystems * Alien species	Northern Antarctic Peninsula region, Deception and Livingston islands	2014-2016	M.A. Olalla	(19)
Vegetal Biology	* Physiology and photosynthesis * Evolutionary biology * Plant biotechnology	Livingston and King George islands	2015-2018	J. Flexas M. Rivas	(20) (21)
Vegetal Biology	* Mechanistic bases for photosynthesis and stress tolerance * Evolutionary biology * Plant biotechnology	Livingston and King George islands	2015-2018	J.I. García-Plazaola	(22)

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NATIONAL PROGRAMMES/PROJECTS

PHYSICAL SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Glaciar thermo-mechanical processes	* Calving fluxes	Livingston Island	2012-2014	F.J. Navarro	(7)
	* Mass balance				
	* Numerical modelling				
Atmospheric composition	* Ozone distribution	Belgrano and Marambio stations, and Ushuaia	2014-2016	M. Yela	(23)
	* Halogens				
Glaciar thermo-mechanical processes	* Calving fluxes	Livingston Island	2015-2017	F.J. Navarro	(7)
	* Mass balance				
	* Numerical modelling				
Geomagnetism and Ionosphere	* Monitoring	Juan Carlos I station	2015-2017	M. Torta J. J. Curto	(24)
	* Automatic observatory				(25)
	* Technological application				

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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	2014-15	D. Altadill (26)
Permafrost measurements	Livingston and Deception islands, and Cierva Point	2014-15	M.A. de Pablo (13)
Geodetic measurements	Livingston and Deception islands	2014-15	M. Berrocoso (27)

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