



National SCAR Committee, Spain

**ANNUAL SCAR REPORT ON SPANISH ANTARCTIC
SCIENTIFIC ACTIVITIES
2015-2016 CAMPAIGN
AND
PLANNED NEW PROGRAMMES**

**Report no. 28
for the Scientific Committee on Antarctic Research (SCAR)**

2016

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

**ANNUAL SCAR REPORT ON
NATIONAL ANTARCTIC SCIENTIFIC ACTIVITIES
1 July 2015 - 30 June 2016**

Member Country: SPAIN

National SCAR Committee:

Title	Comité Nacional de Investigación Antártica - SCAR
Address	Facultad de Ciencias, módulo 06 Universidad Autónoma de Madrid 28049 Madrid, Spain
Telephone	+34 91 497 45 13
Fax	+34 91 497 29 82
Web site	http://www.uam.es/cn-scar

Chairman/President Dr. J. López-Martínez

Representatives:

to SCAR

	Name	Address
Permanent Delegate	Dr. J. López-Martínez	(1)
Alternate Delegate	Dr. J. Galindo-Zaldívar	(2)

to SCAR Standing Scientific Groups

Geosciences	Dr. J. Galindo-Zaldívar	(2)
	Dr. J.A. Flores	(3)
Life Sciences	Dr. L.G. Sancho	(4)
	Dr. D. Vaqué	(5)
Physical Sciences	Dr. F.J. Navarro	(6)
	Dr. C. Escutia	(7)

National Operating units:

Scientific projects management:

Title	Área de Gestión de Investigación Polar Ministerio de Economía y Competitividad Secretaría de Estado de Investigación, Desarrollo e Innovación Dirección General de Investigación y Gestión del Plan Nacional de I+D+i Departamento Técnico de Medio Ambiente y Recursos Naturales
Address	Albacete, 5. 28043 Madrid. Spain
Telephone	34 91 603 77 10 / Fax: 34 91 603 70 12

Logistics and operations:

Title	Unidad de Tecnología Marina (UTM) Centro Mediterráneo de Investigaciones Marinas y Ambientales, CSIC
Address	Passeig Marítim de la Barceloneta, 37-49 08003 Barcelona. Spain
Telephone	34 93 230 95 00 / Fax 34 93 230 95 55

Data Center:

Title	National Polar Data Center Instituto Geológico y Minero de España
Address	Ríos Rosas, 23. 28003 Madrid. Spain
Telephone	34 91 349 57 31

Member Country: **SPAIN**

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)

Member Country: **SPAIN**

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.

Member Country: **SPAIN**

NATIONAL PROGRAMMES/PROJECTS

GEOSCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Geology	* Tectonic plates	Drake Passage	2015 -2017	F. Bohoyo A. Maestro	(8)
	* Continental margins				(9)
	* Geophysical and structural data				
Marine geology	* Geodynamic evolution	Tasman Sea	2015-2017	C. Escutia F. Lobo	(7)
	* Palaeoenvironmental changes				(10)
Geology and Geomorphology	* Geomorphology and neotectonics	South Shetland Islands, Northern Antarctic Peninsula	2015-2017	J. López-Martínez	(1)
	* Remote sensing. geological heritage and geoconservation				
	* Hydrology and Permafrost				
Permafrost studies	* Active layer, thermal behaviour	Livingston and Deception islands	2015-2018	M.A. de Pablo	(11)
	* Snow cover, remote sensing				
	* Serial data, CALM and TSP				

Member Country: **SPAIN**

NATIONAL PROGRAMMES/PROJECTS

LIFE SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Non marine aquatic ecosystems	* Microbial cyanobacterial mats * Virome and metagenomics * Ecological dynamics	Byers Peninsula, and Alexander Island	2012-2015	A. Quesada	(17)
Benthic communities	* Marine benthos * Biodiversity and structure * Bioactivity and natural products	Northern Antarctic Peninsula region	2014-2016	C. Ávila	(13)
Algal ecology	* Biomass * Biogeochemistry	Deception Island	2014-2016	M. Lastra	(14)
Biogeography and biodiversity	* Impacts in ecosystems * Alien species	Northern Antarctic Peninsula region, Deception and Livingston islands	2014-2016	M.A. Olalla	(15)
Vegetal Biology	* Physiology and photosynthesis * Evolutionary biology * Plant biotechnology	Livingston and King George islands	2015-2018	J. Flexas M. Rivas	(16) (17)
Vegetal Biology	* Mechanistic bases for photosynthesis and stress tolerance * Evolutionary biology * Plant biotechnology	Livingston and King George islands	2015-2018	J.I. García-Plazaola	(18)
Penguin studies	* Immune response * Parasitism and contaminants	Deception and Livingston islands	2016-2018	A. Barbosa	(19)

Member Country: **SPAIN**

NATIONAL PROGRAMMES/PROJECTS

Vegetal Biology	* Cryptogamic cover biocomplexity and functioning * Microbial biodiversity	Antarctic Peninsula region	2016-2019	L.G. Sancho	(4)
Vegetal Biology	* Biodiversity * Cryptogamic cover organization, functioning and interdependence	Antarctic Peninsula region	2016-2019	A. de los Ríos	(20)

PHYSICAL SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Atmosphere composition	* Ozone distribution * Halogens	Belgrano and Marambio stations, and Ushuaia	2014-2016	M. Yela	(21)
Glacial thermo-mechanical processes	* Calving fluxes * Mass balance * Numerical modelling	Livingston Island	2015-2017	F.J. Navarro	(7)
Geomagnetism and Ionosphere	* Monitoring * Automatic observatory * Technological application	Juan Carlos I station	2015-2017	M. Torta J. J. Curto	(22) (23)
Chemical contaminants	* Persistent organic contaminants * Accumulation and distribution	Livingston and Deception islands, and other places	2016-2018	J. Dachs B. Jiménez Luque	(24) (25)

Member Country: **SPAIN**

NATIONAL PROGRAMMES/PROJECTS

Atmosphere composition	* Atmospheric aerosols	Marambio station	2016-2018	V.E. Cachorro C. Toledano	(26)
	* Clouds and water vapor				(27)
	* Nocturnal photometry				
Communication	* Remote sensors	Juan Carlos I station and surrounding region	2016-2018	J.L. Pijoan	(28)
	* Data transmission				
	* HF and NVIS networks				

Member Country: **SPAIN**

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	2015-16	D. Altadill (29)
Permafrost measurements	Livingston and Deception islands, and Cierva Point	2015-16	M.A. de Pablo (11)
Geodetic measurements	Livingston and Deception islands	2015-16	M. Berrocoso (30)

**CONTACT ADRESSES, TELEPHONE,
FACSIMILE AND E-MAIL NUMBERS**

- (1) Jerónimo LÓPEZ-MARTÍNEZ
Dpto. Geología y Geoquímica
Facultad de Ciencias
Universidad Autónoma de Madrid
Ctra. Colmenar Viejo, km 15
28049 Madrid
Tel.: 34 91 497 45 13
e-mail: jeronimo.lopez@uam.es
- (2) Jesús GALINDO-ZALDIVAR
Dpto. Geodinámica
Universidad de Granada
18071 Granada
Tel.: 34 958 24 33 49
e-mail: jgalindo@ugr.es
- (3) José Abel FLORES
Dpto. Geología
Facultad de Ciencias
Universidad de Salamanca
37008 Salamanca
Tel.: 34 923 29 44 97
e-mail: flores@usal.es
- (4) Leopoldo G. SANCHO
Dpto. Biología Vegetal II
Facultad de Farmacia
Universidad Complutense de Madrid
Ciudad Universitaria, s/n
28040 Madrid
Tel.: 34 91 394 17 69 / 394 17 71
e-mail: sancholg@farm.ucm.es
- (5) Dolors VAQUÉ
Instituto de Ciencias del Mar
Centro Mediterráneo de Investigaciones
Marinas y Ambientales, CSIC
Passeig Maritim, 39-45
08003 Barcelona
Tel.: 34 93 221 64 16
e-mail: dolors@icm.csic.es
- (6) Francisco NAVARRO
Dpto. Matemática Aplicada
ETSI de Telecomunicaciones
Universidad Politécnica de Madrid
Ciudad Universitaria, s/n
28040 Madrid
Tel.: 34 91 453 35 65
e-mail: francisco.navarro@upm.es
- (7) Carlota ESCUTIA
Instituto Andaluz de Ciencias de la Tierra
CSIC- Universidad de Granada
Avda. de las Palmeras, 4
18100 Armilla, Granada
Tel.: 34 958 24 41 59
e-mail: cescutia@ugr.es
- (8) Fernando BOHOYO
Instituto Geológico y Minero de España
La Calera, 1
Tres Cantos
28760 Madrid
Tel.: 34 91 728 72 71
e-mail: bohoyo@igme.es
- (9) Adolfo MAESTRO
Instituto Geológico y Minero de España
La Calera, 1. Tres Cantos
28760 Madrid
Tel.: 34 91 728 72 60
e-mail: a.maestro@igme.es
- (10) Francisco José LOBO
Instituto Andaluz de Ciencias de la Tierra
CSIC- Universidad de Granada
Avda. de las Palmeras, 4
18100 Armilla
Granada
Tel.: 34 958 243 353
e-mail: pacolobo@ugr.es
- (11) Miguel Ángel de PABLO
Dpto. Geología
Universidad de Alcalá de Henares
Ctra. Madrid-Barcelona, km 33,600
28871 Alcalá de Henares, Madrid
Tel: 34 885 64 25
e-mail: miguelangel.depablo@uah.es
- (12) Antonio QUESADA
Dpto. Biología
Facultad de Ciencias
Universidad Autónoma de Madrid
Ctra. Colmenar Viejo km 15
28049 Madrid
Tel.: 34 91 497 81 81
e-mail: antonio.quesada@uam.es
- (13) Conxita ÁVILA
Edificio Ramón Margalef
Facultad de Biología
Universidad de Barcelona
Avinguda Diagonal 645
08028 Barcelona
Tel: 34 93 402 01 61
e-mail: conxita.avila@ub.edu
- (14) Mariano LASTRA
Facultad de Ciencias del Mar
Dep. de Ecología y Biología Animal
Campus de Lagoas Marcosende
36310 Vigo
Pontevedra
Tel.: 34 986 812 588
e-mail: mlastra@uvigo.es

- (15) Miguel Ángel OLALLA
Escuela Superior de Ciencias
Experimentales y Tecnología
Universidad Rey Juan Carlos
Tulipán, s/n
28933 Móstoles
Madrid
Tel.: 34 91 803 35 85
email: miguel.olalla@urjc.es
- (16) Jaume FLEXAS
Universidad de las Islas Baleares
Dept. Biología
Carretera de Valldemossa, km 7.5
07122 Palma de Mallorca, Islas Baleares
Tel.: 34 971 172 365
e-mail: jaume.flexas@uib.es
- (17) Miquel RIBAS CARBÓ
Universidad de las Islas Baleares
Dept. Biología
Carretera de Valldemossa, km 7.5
07122 Palma de Mallorca, Islas Baleares
Teléfono: 34 971 172 051
e-mail: mribas@uib.cat
- (18) José Ignacio GARCÍA PLAZAOLA
Dept. Biología Vegetal
Universidad del País Vasco
Barrio Sarriena s/n
48940 Leioa, Vizcaya
Tel.: 34 946 015 319
e-mail: joseignacio.garcia@ehu.eus
- (19) Andrés BARBOSA
Dpto. Ecología Evolutiva
Museo Nacional de Ciencias Naturales, CSIC
José Gutiérrez Abascal, 2
Tel: 34 91 411 13 28
28006 Madrid
e-mail: barbosa@mncn.csic.es
- (20) Asunción de los RÍOS
Instituto de Recursos Naturales
Consejo Superior de Investigaciones
Científicas (CSIC)
Serrano, 115
28006 Madrid
Tel.: 34 91 745 25 00
e-mail: arios@ccma.csic.es
- (21) Margarita YELA
Instituto Nacional de Técnica Aeroespacial
Ctra. de Ajalvir, km 4
28850 Torrejón, Madrid
Tel.: 34 91 520 12 20
e-mail: yelam@inta.es
- (22) J. Miquel TORTA
Observatorio de Física Cósmica del Ebro
43520 Roquetes
Tarragona
Tel.: 34 977 500 511
e-mail: jmtorta@obsebre.es
- (23) Juan José CURTO
Universidad Ramón Llull
Observatorio del Ebro
Horta alta, 38
43520 Roquetes
Tarragona
Tel.: 34 977 500 511
e-mail: jjcurto@obsebre.es
- (24) Jordi DACHS MARGINET
Instituto de Diagnóstico Ambiental y
Estudios del Agua
Jordi Girona, 18-24
08034 Barcelona, España
Tel: 34 93 400 6100
e-mail: jdmqam@cid.csic.es
- (25) Begoña JIMÉNEZ LUQUE
Instituto de Química Orgánica
Consejo Superior de Investigaciones
Científicas (CSIC)
Juan de la Cierva, 3
28006 Madrid
Tel.: 34 912587550
e-mail: bjimenez@iqog.csic.es
- (26) Victoria CACHORRO
Facultad de Educación y Trabajo Social
Universidad de Valladolid
Lope de Vega, 10
Renedo de Esgueva
47170 Valladolid
Tel.: 34 983423270
e-mail: chiqui@goa.uva.es
- (27) Carlos TOLEDANO OLMEDA
Física Teórica, Atómica y Óptica, Facultad
de Ciencias
Universidad de Valladolid
Paseo de Belén, 7
47011 Valladolid
Tel.: (34) 983423608
e-mail: toledano@goa.uva.es
- (28) Juan Luis PIJOAN
E. T. S. de I. Electrónica e Informática La
Salle
Passeig Bonanova, 8
08022 Barcelona
Tel.: 34 93 290 24 00
e-mail: joanp@salleurl.edu

(29) David ALTADILL
Observatorio del Ebro, CSIC
43520 Roquetes
Tarragona
Tel: 34 977 500 511
e-mail: daltadill@obsebre.es

(30) Manuel BERROCOSO
Facultad de Ciencias
Universidad de Cádiz
11510 Puerto Real, Cádiz
Tel.: 34 956 016 4 73
e-mail: manuel.berrocoso@uca.es