

National SCAR Committee, Spain

**ANNUAL SCAR REPORT ON SPANISH ANTARCTIC
SCIENTIFIC ACTIVITIES
2005-2006 CAMPAIGN
AND
PLANNED NEW PROGRAMMES**

**Report no. 18
for the Scientific Committee on Antarctic Research (SCAR)**

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

**ANNUAL SCAR REPORT ON
NATIONAL ANTARCTIC SCIENTIFIC ACTIVITIES
1 July 2005 - 30 June 2006**

Member Country: SPAIN

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Member Country: **SPAIN**

PERMANENT STATIONS (WINTERING)

Name	Location	Coordinates
NONE		

SUMMER-ONLY BASES

Name	Location	Coordinates
Juan Carlos I (20 Nov. 2005 - 1 March 2006) (http://www.utm.csic.es/bae.asp)	Livingston Island	62° 39' 46" S 60° 23' 20" W
Gabriel de Castilla (20 Nov. 2005 - 1 March 2006) (http://www.ejercito.mde.es/mexterior/webantartida/)	Deception Island	62° 58' 40" S 60° 40' 30" W

AUTOMATIC RECORDING STATIONS/OBSERVATORIES

Name/Identifier	Coordinates	Parameters Recorded
89064	62° 39' 46" S 60° 23' 20" W	Meteorology
1900-03	62° 58' 40" S 60° 40' 30" W	WOVO network (summer only)
-----	62° 39' 46" S 60° 23' 20" W	Seismology (summer only)
-----	62° 39' 46" S 60° 23' 20" W	Ozone, NO ₂ and CO ₂ (summer only)
-----	Geographic: 62° 39' 44" S 60° 23' 21" W Geomagnetic: 52° 06' 15" S 08° 12' 40" E 19.4 m a.s.l.	Magnetic elements (D, H, Z, F)

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NATIONAL PROGRAMMES/PROJECTS

GEOSCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Sedimentary processes	* Palaeoenvironments, palaeoceanography and palaeoclimatology * Continental margins	Laboratory in Spain Data from Antarctic Peninsula, Wilkes Land, Prydz Bay	2003-2006	C. Escutia	(8)
Marine geology	* Oceanic basins formation * Palaeoceanography and global change	Scotia and Weddell seas	2004-2007	A. Maldonado	(9)
Structural geology	* Seismotectonics * Tectovolcanism	Deception Island	2006-2007	R. Pérez-López	(10)
Geology and geomorphology	* Geomorphology and neotectonics * Permafrost, soils and hydrology * Remote sensing and geological and geomorphological mapping	South Orkney Islands, Seymour Island region	2006-2008	J. López-Martínez	(1)
Geodesy	* Geodesy and geophysical measurements * Gravimetry * Remote Sensing	Deception Island	2006-2008	M. Berrocoso	(11)
Geophysics Seismology	* Seism-volcanic activity * Crust model	Deception Island	2006-2008	J. Ibáñez	(12)

Member Country: **SPAIN**

NATIONAL PROGRAMMES/PROJECTS

LIFE SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Microbial Ecology and Exobiology	* Geomicrobiology * Ross desert samples	Laboratory in Spain	2003-2006	J. Wierzchos	(13)
Marine Biology	* Benthos * Interaction between plankton and benthos	Weddell Sea	2003-2006	F. Pagès	(14)
Terrestrial Biology	* Photosynthesis studies * Biodiversity evaluation * Microclimatic measurements	Livingston Island	2003-2006	L.G. Sancho	(5)
Penguin studies	* Penguin response to climate effect * Response to parasites	Livingston Island, Deception Island.	2004-2007	A. Barbosa	(15)
Benthos biodiversity	* Biological sampling * Integrated study	Bellinghausen Sea and Antarctic Peninsula	2004-2007	A. Ramos	(16)
Chemical ecology	* Bioactive substances * Benthonic invertebrates * Pharmacology	Bellinghausen Sea	2004-2007	C. Ávila	(17)
Chemical ecology	* Benthos development * Environmental and biological conditions	Weddell Sea, Antarctic Peninsula	2005-2006	J.M. Gili	(18)

Member Country: **SPAIN**

NATIONAL PROGRAMMES/PROJECTS

Non marine aquatic ecosystems	* Biodiversity * Limnology * Microbiology	Byers Peninsula, Kerguelen Islands	2006-2008	A. Quesada	(19)
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Non marine aquatic ecosystems	* Biotic interactions * Limnology * Microbiology	Byers Peninsula, Kerguelen Islands	2006-2008	A. Camacho	(20)
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PHYSICAL SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Communications	* Ionospheric channel characterization and analysis * HF communications	Livingston Island	2003-2006	J.L. Pijoan	(21)
Ionospheric activity	* Geomagnetism * Ionospheric channel modelling * Ionospheric state	Livingston Island	2003-2006	J.M. Torta	(22)
Ozone layer	* O ₃ , NO ₂ , OClO distribution * Polar vortex dynamics * Satellite data validation	Marambio and Belgrano II stations	2004-2007	M. Yela	(23)
Aerosol measurements	* Ozone * UV radiation * Aerosols * Polar Vortex	Marambio and Belgrano II stations	2004-2007	A. Redondas	(24)

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NATIONAL PROGRAMMES/PROJECTS

Glaciology	* Glacier melting monitoring * Modelling	East Antarctica and Peninsula region	2005-2006	M.C. Domínguez	(25)
Physical oceanography	* Oceanography * Water masses studies	Drake Passage, Bransfield Sea	2006-2007	J.J. Alonso	(26)
Geomagnetism and Ionosphere	* Geomagnetic monitoring * Historical series	Livingston Island	2006-2007	J. M. Torta	(22)
Ionosphere	* Ionospheric soundings * HF radio-communications	Livingston Island	2006-2007	J.L. Pijoan	(21)
Glacier thermo-mechanical processes	* Ice radar * Numerical simulation * Hydrological regime	Livingston Island	2006-2008	F. Navarro	(7)
Permafrost thermodynamics	* Active layer * Heat transfer Abel equations	Deception Island	2006-2008	M.J. Rodríguez - Arias	(27)

Member Country: **SPAIN**

PLANNED NEW PROGRAMMES/PROJECTS

GEOSCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Sedimentary processes	* Palaeoenvironments, palaeoceanography and palaeoclimatology * Continental margins	Data from Wilkes Land	2007-2009	C. Escutia	(8)
Seismology and Volcanology	* Broadband seismic stations * Cortical structure	Livingston Island, Deception Island and Cierva Cove	2007-2009	F.J. Almendros	(28)
Palaeoceanography	* Micropalaeontology * Asteroid impact zone	Pacific Sector of Southern Ocean	2007-2009	J.A. Flores	(4)
Tectonics and Geophysics	* Continental breakup * Continental margins * Marine basins evolution	Drake Passage, Bransfield Strait, South Shetland Islands, Antarctic Peninsula region	2007-2009	J. Galindo-Zaldívar	(3)

LIFE SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Seals studies	* Focids and Otariids * Parasites	Deception Island	2006-2007	L.M. Ortega-Mora	(29)
Lichens and mosses studies	* Alelopathic studies * Photosynthetic organisms * Lake studies	Gabriel de Castilla and Juan Carlos I stations, Cierva Cove and Byers Peninsula	2006-2007	J.C. García-Galindo	(30)

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PLANNED NEW PROGRAMMES/PROJECTS

Terrestrial biology	* Photosynthesis studies * Biodiversity evaluation * Microclimatic measurements	Livingston Island and Transantarctic Mountains	2007-2009	L.G. Sancho	(5)
Biological Oceanography	* Interactions sea-atmosphere * Pollution	Livingston Island, Bellinghausen Sea, Bransfield Strait, Weddell Sea and South Orkney Islands area	2007-2009	C.M. Duarte	(31)
Penguin studies	* Penguin response to climate effect * Response to parasites	Deception and Livingston islands, Potter Cove, Ronge, Yalour and Avian islands	2007-2009	A. Barbosa	(15)
Plankton and benthos studies	* Plankton and benthos connections * Global change	Antarctic Peninsula, Weddell Sea	2007-2009	E. Isla	(32)
Terrestrial biology	* Glacier retreat * Colonization processes * Gen flow	South Shetland Islands and Victoria Land	2007-2009	L.G. Sancho	(5)
Non marine aquatic ecosystems	* Biodiversity * Limnology * Microbiology	Byers Peninsula, Livingston Island	2007-2009	A. Quesada	(19)

Member Country: **SPAIN**

PLANNED NEW PROGRAMMES/PROJECTS

PHYSICAL SCIENCES

Subject	Investigation	Locality	Duration	Principal Investigator	Address
Permafrost thermodynamics	* Permafrost * Energy balance * Modelling	Juan Carlos I and Gabriel de Castilla stations	2006-2007	M. Ramos	(33)
Glaciology	* Glacier melting monitoring * Modelling	King George Island	2007-2008	M.C. Domínguez	(25)
Geomagnetism	* Geomagnetic research *Magnetic prospecting	Deception Island	2007-2008	A. García	(34)
Geomagnetism	* Geomagnetic research * Magnetic prospecting	Deception Island	2007-2008	M. Catalán-Morollón	(35)
Chemical Oceanography	* Water contamination * Chemical analysis	Seas around Deception Island, Livingston and King George islands	2007-2008	A. Segura	(36)
Physical Oceanography	* Interaction sea-atmosphere * Sulphur global cycle	Palmer base	2007-2008	R. Simó	(37)
Physical Oceanography	* Circumpolar Antarctic tide * Shelf slope interactions	Elephant Island, South Orkney Islands	2007-2009	D. Gomis	(2)
Communications	* Ionospheric soundings * HF radio-communications	Livingston Island	2007-2009	J.L. Pijoan	(21)

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PLANNED NEW PROGRAMMES/PROJECTS

Geomagnetism and Ionosphere	* Geomagnetic monitoring * Historical series	Livingston Island	2007-2009	J. M. Torta	(22)
Permafrost thermodynamics	* Permafrost * Energy balance * Modelling	Livingston Island, Deception Island	2007-2009	M. Ramos	(33)
Ozone layer	* O₃, NO₂, OClO distribution * Polar vortex dynamics * Satellite data validation	Marambio, Belgrano and Ushuaia	2007-2009	M. Yela	(23)

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