

EL REAL INSTITUTO Y OBSERVATORIO DE LA ARMADA

250 YEARS WORKING IN ASTROMETRY AND GEOPHYSICS

(1753 - 2003)

González, F.J. & Pazos, A.



ASTROMETRY

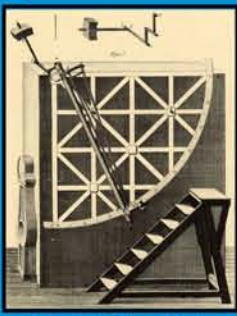
EPHEMERIDES

GEOPHYSICS

TIME

ROYAL NAVAL OBSERVATORY (CADIZ. Since 1798 at SAN FERNANDO)

1753
1788
1792



Cuarto de Circulo Bird



First Spanish Nautical Almanac



Meteorological station



1833
1878



1831: Circulo Mural Jones

Geomagnetic station



Naval Chronometry



1878: Bola de señales Horarias

1880



1864: Circulo Meridiano Troughton

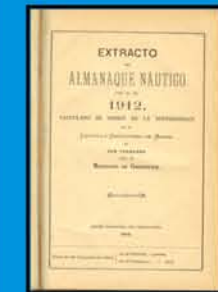
Coastal Meteorological Service



1889



1887: Astrógrafo Gautier



1912: Extracto Almanaque Náutico



Nº 6 Milne Pendulum

First Spanish Seismograph



1915: Recepción de señales horarias

1958



1952: Circulo Meridiano Grubb Parsons



1945: Almanaque Aeronáutico

Satellite station



1928: Transmisión de señales horarias

1961

Astronomical Ephemerides



1979: Almanaque Náutico Reducido

1958: Quartz Oscillators



1968



1968: Rotación de la Tierra

Laser telemetry



1972

Atomic oscillators



1976

Spanish Legal Time

1980

CMAC "La Palma"



GPS



1977: Time transfer by flying clock

1996

CMASF "El Leoncito" (Argentina)



1980: Fenómenos Astronómicos



1998: Almanaque Náutico para PC



1986: GPS time transfer by Common View technique