





For Scientific Research Teachers Direction for Technology



The Sun is the source of many physical processes (radiations, winds, mass ejections, energetic particles) that may affect the terrestrial environment

## Objectives

-To learn about the solar processes

influencing the terrestrial environment

- To learn how to use data obtained with the network of instruments in Africa

## Program

Lectures and practical work

**First week** 

Solar Physics: Solar radiation and its variability Solar cycle and activity Solar flares, Coronal mass ejection and solar energetic particles Solar wind and its perturbations Magnetosphere and Ionosphere of the Earth Solar-terrestrial Physics and Space Weather



Northern Lights



Instruments deployed in Africa in the context of the International Heliophysical Year IHY (2007-2009)

## Program

Lectures and practical work

Second week

Upper Atmosphere Ionospheric electric currents Earth's magnetic field Atmospheric electricity Precipitation Systems Chemistry and Transport in the atmosphere Sounding of the earth'atmosphere by microwave radio instruments

## Sunspot and magnetic loops at the surface of the Sun



The community of users of space weather products (from Bell Laboratories Lucent Technologies)

Context of the school

International Space Weather Initiative (ISWI) 2010-2012

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