題名　ISWI Newsletter - Vol. 4 No. 109
差出人　George Maeda

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* ISWI Newsletter - Vol. 4 No. 109 26 October 2012 *
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* I S W I = International Space Weather Initiative *
* (www.iswi-secretariat.org) *
*
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Attachment(s):
(1) "SOLAR PHYSICS PHENOMENA DIVISION ECUADOR", 5 MB, 55 pages.

: Re:
: Quito Observatory, Ecuador.
: (presentation by Prof. Lopez)
:

Dear ISWI Participant:

Yesterday in Volume 4, Number 108, I misspelled the name of the author of the IAU Working Group report. The correct spelling of his name is: David Webb.

Today, I attach the presentation by Prof. Ericson Lopez during UN/Ecuador Workshop on ISWI. He was the organizer of the workshop and he is also the Director of the Quito Observatory. Please note that towards the end of this pdf you will see the future plans for space-weather-related observation, research, and education, under the supervision of Prof. Lopez.

During the ISWI workshop, we had a conducted tour of the old observatory. It has been beautifully refurbished -- tomorrow I will attach the photos (a 2 MB pdf) that I took during this conducted tour.

Sincerely,
: George Maeda
: The Editor
: ISWI Newsletter

MAGDAS on page 33.

This pdf circulated in Volume 4, Number 109, on 26 October 2012.

SOLAR PHYSICS PHENOMENA

OBSERVATORIO ASTRONÓMICO QUITO
ESCUELA POLITÉCNICA NACIONAL

NEW SPACE PHYSICS DIVISION OF QUITO ASTRONOMICAL OBSERVATORY

Ericson Lopez and Kleber Vicente

QUITO ASTRONOMICAL OBSERVATORY

Quito Astronomical Observatory was founded in 1873 by President Gabriel Garcia Moreno.

Quito Astronomical Observatory is one of the oldest in Latin America

OBSERVATORIO ASTRONÓMICO QUITO
ESCUELA POLITÉCNICA NACIONAL

Collection of Instruments

OBSERVATORIO ASTRONÓMICO QUITO
ESCUELA POLITÉCNICA NACIONAL

Seismographs

In 1910 the first mechanical Bosch-Omori seismograph was intalled.

Mainka (1929).

The seismographs, are located in the basement and are still working perfectly

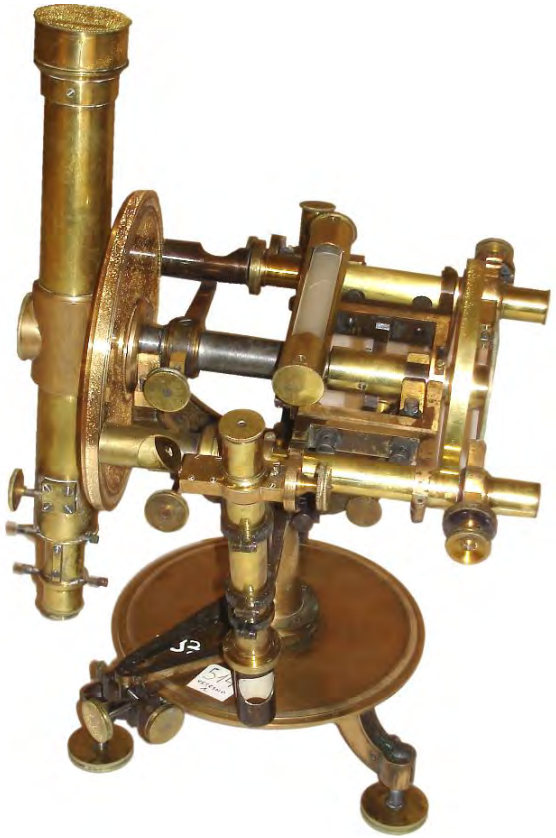
OBSERVATORIO ASTRONÓMICO QUITO
ESCUELA POLITÉCNICA NACIONAL

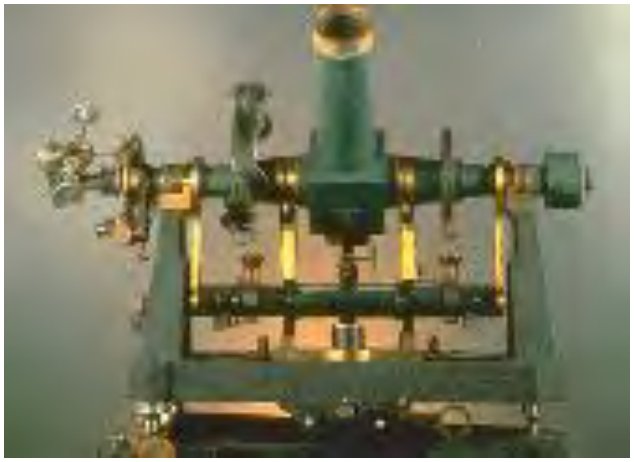
METEOROLOGY

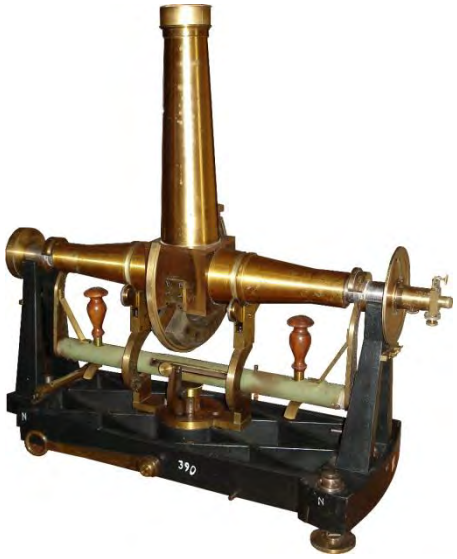
The First Station in Ecuador

The meteorological station of our observatory is in operation at its current position since 1891.

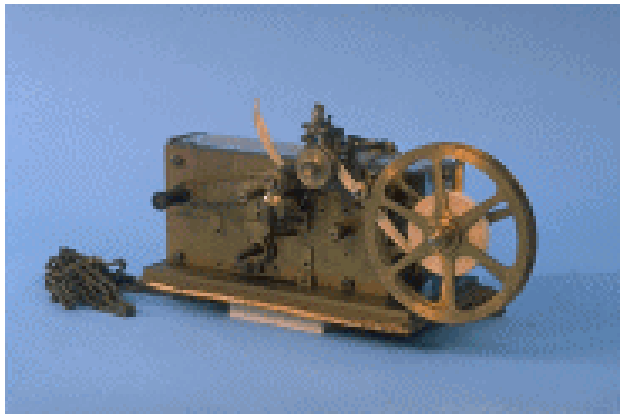
ASTRONOMICAL HERITAGE






390

Clocks and Chronographs



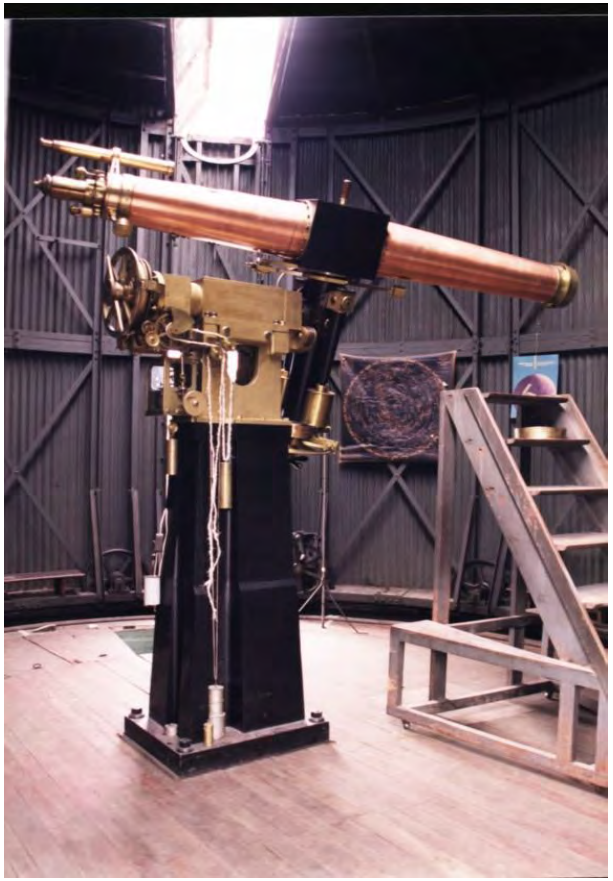
Electromagnetic
Chronograph

Steady Refracting Telescopes

The Great Meridian Circle
Repsold (1889)

focal distance 200cm,
lens: 162mm.

Merz Refracting Telescope (1875)



Focal distance: 319cm
lens: 238mm

Library and Historical Archive

A huge paper heritage, made of the volumes of the Library and the manuscripts of the Historical Archive. It is preserved at the Observatory.

Celestial and Terrestrial Atlases

The Historical Library owns incunabula, a apreciable stock of the 18th, 19th and 20th centuries.

The astronomic instruments of the observatory are a great tourist attraction and usually awaken the interest of both locals and tourists

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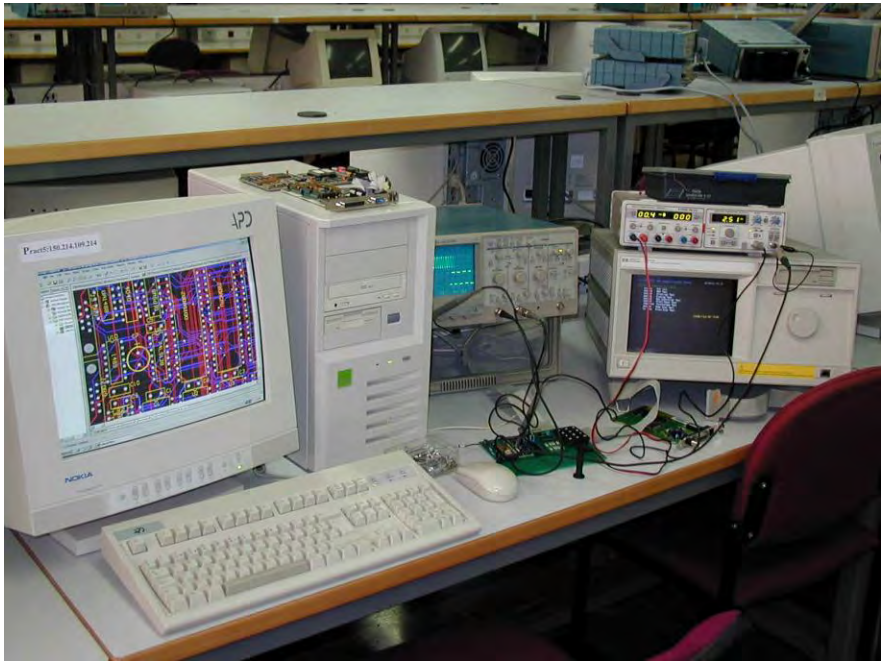

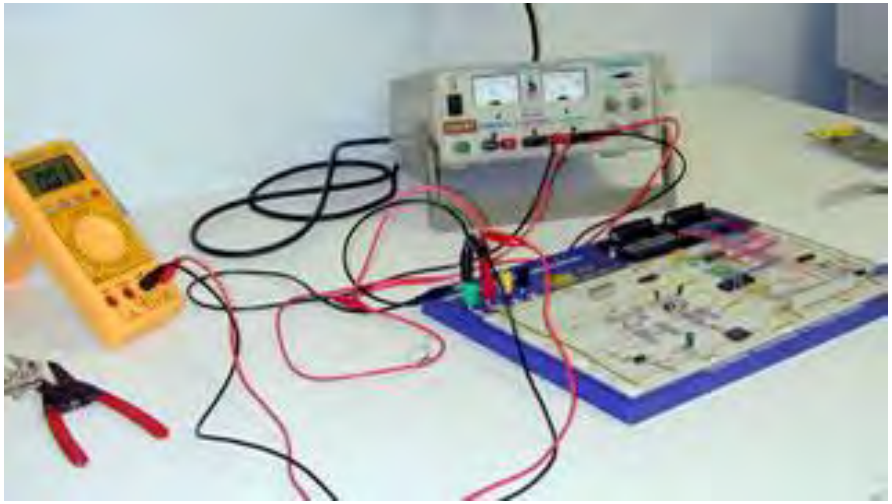

ACTIVITIES

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ESCUELA POLITÉCNICA NACIONAL

Astronomy and Astrophysics

RESEARCH:

Theoretical Research

Astronomical Data Analysis

EDUCATION:

Formal courses of astronomy

Public lectures

PROMOTION AND POPULARIZATION:

Museum

System of robotic telescopes

Public information

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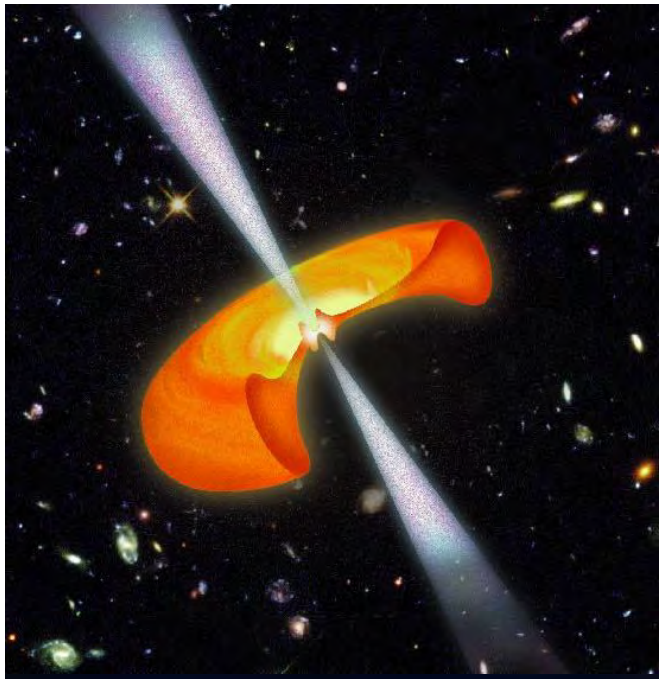
Theoretical Research



- **Cosmological Models with non-zero cosmological constant**
- **High Energy Astrophysics**
- **Radiation Transport Theory**
- **Gamma-ray astronomy**
- **Galaxies**

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Virtual telescopes and astronomy in the classrooms using Streaming

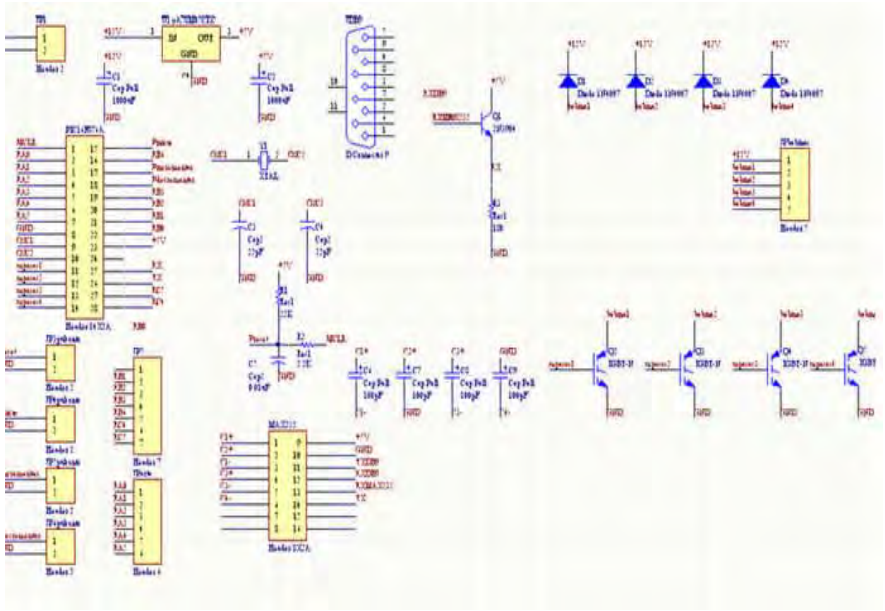
System for connecting Several OAQ telescopes.

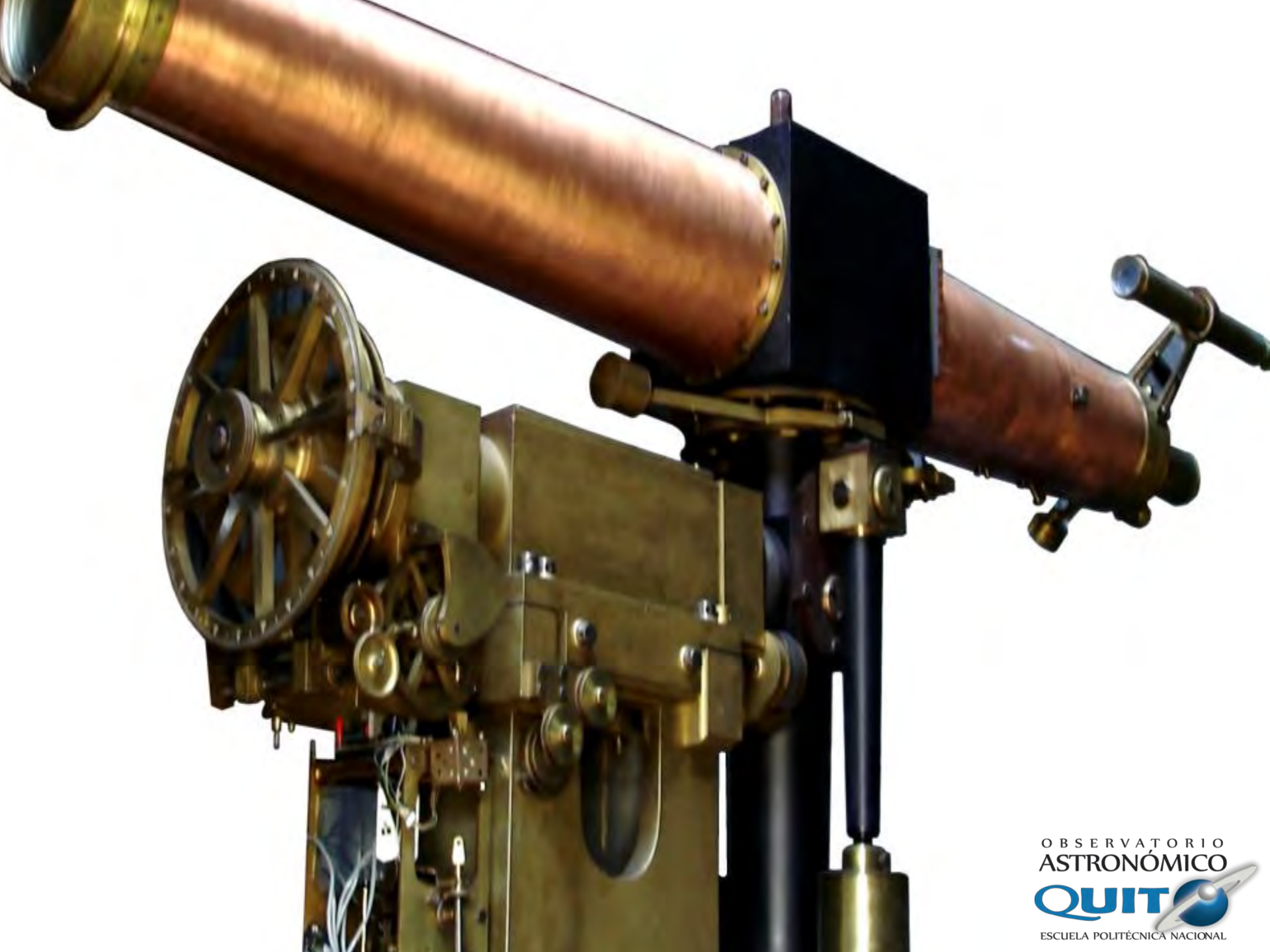
Oldest Quito Observatory Telescope has been Automatized

Automatic handling of the telescopes from any computer.

The images collected from the MERZ and MEADE could be available to the community through the internet.

Automatic telescopes





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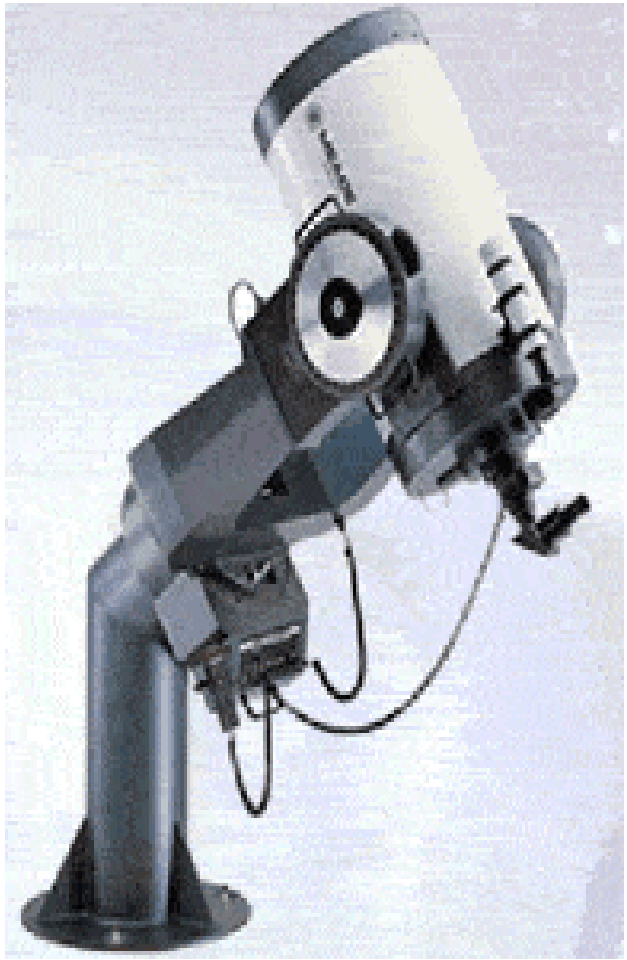
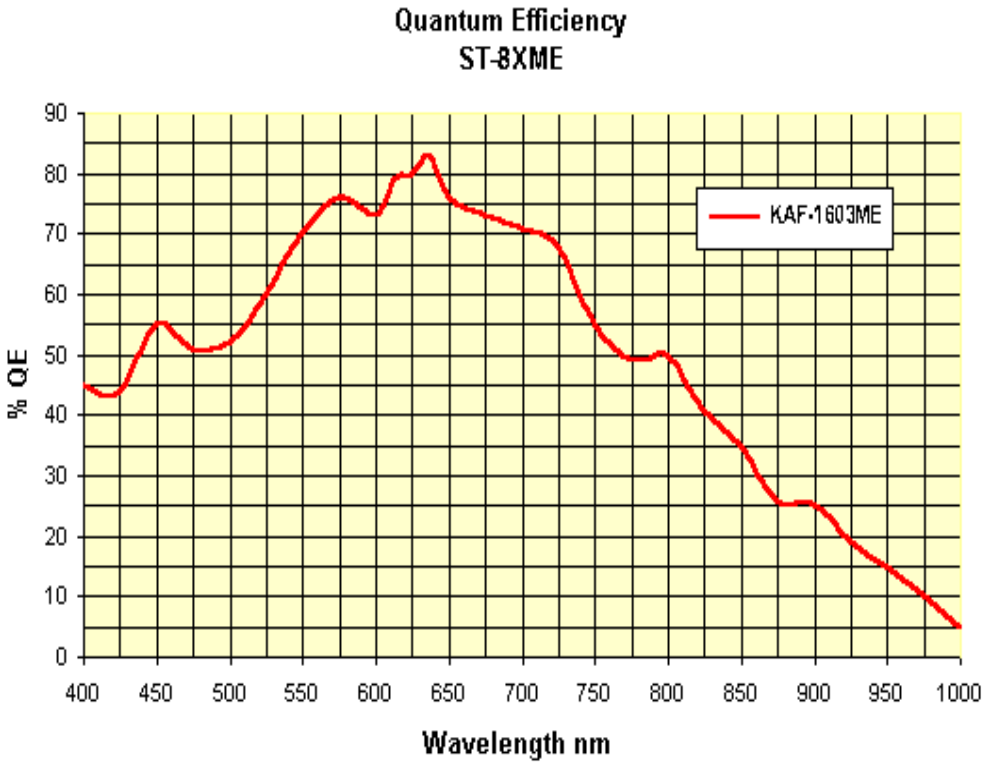
ASTRONÓMICO
QUITO
ESCUELA POLITÉCNICA NACIONAL

NEW EQUIPMENT



Especificaciones	MEADE 16"
Diseño óptico	Ritchey-Chrétien
Apertura	406.4mm (16")
Radio de la longitud focal	4064mm; f/10
Máxima longitud visual	950X (16")
Montaje	Tipo tripode y ecuatorial
GPS	16 canales GPS
Ocular	26mm
Visor	8 x 50mm
Autostar® II Hand Controller	Incluye 147,541 objetos
Peso	318 lbs.

CCD Cameras



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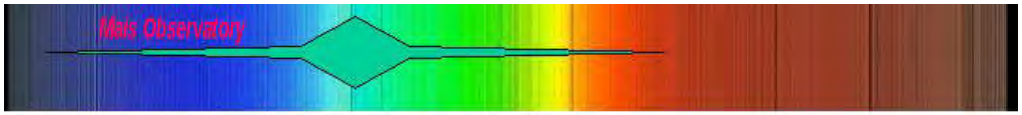
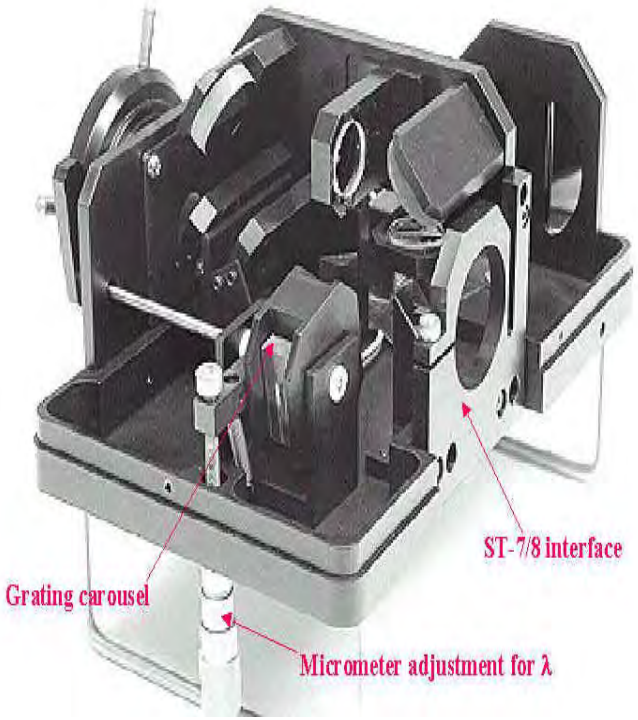
Spectrograph



SBIG Spectrometer



Range from the calcium H and K lines to H-Alpha (3000 Angstroms) with a single exposure.

Resolution will be 10 or 38 angstroms per pixel.

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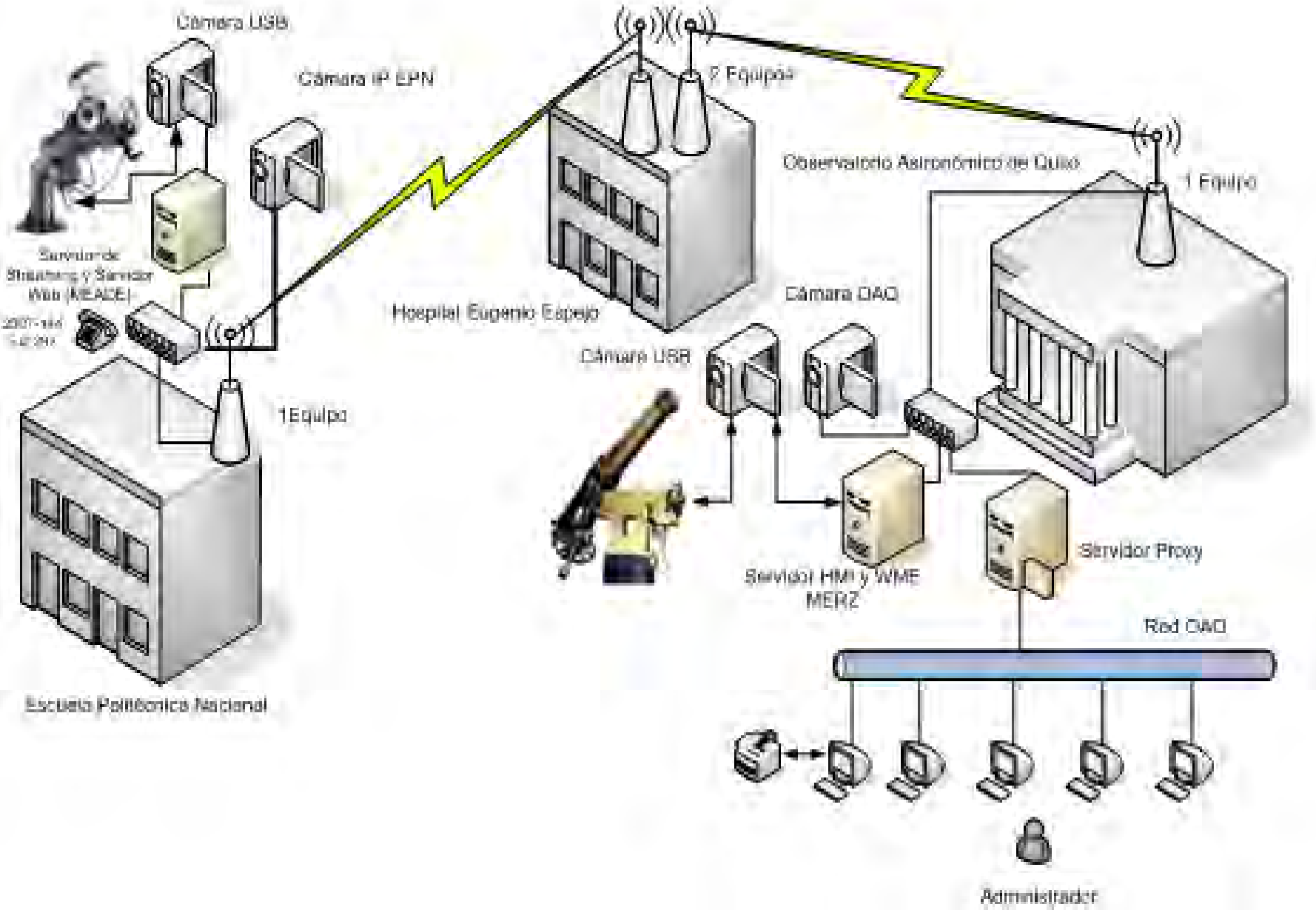
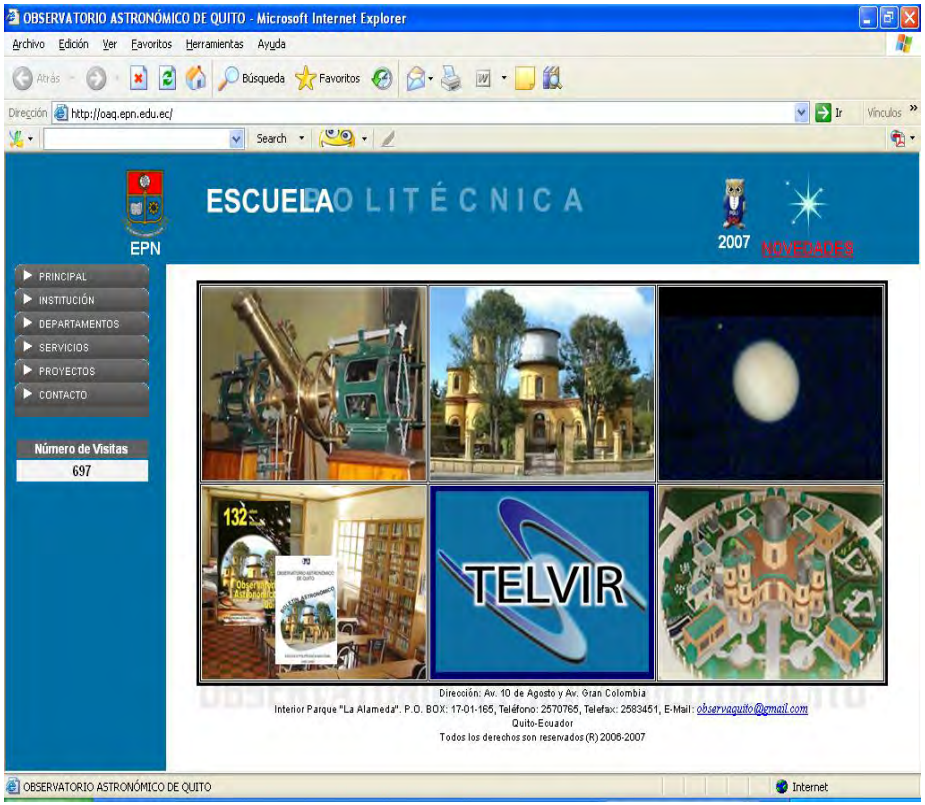
Wireless link and networking system



Web portal access



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SPACE SCIENCES PROJECTS

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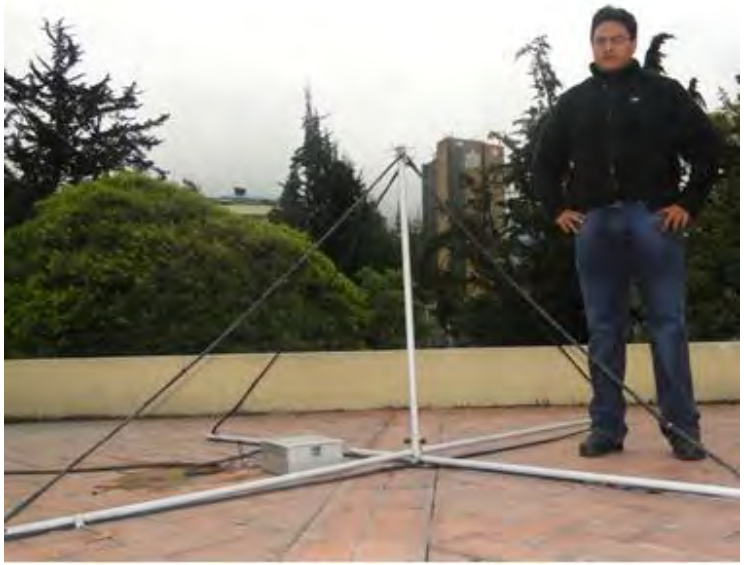
AWESOME



LOCATION

LATITUDE: 0°12'41.29"S; LONGITUDE: 78°29'25.70"O and 2812m

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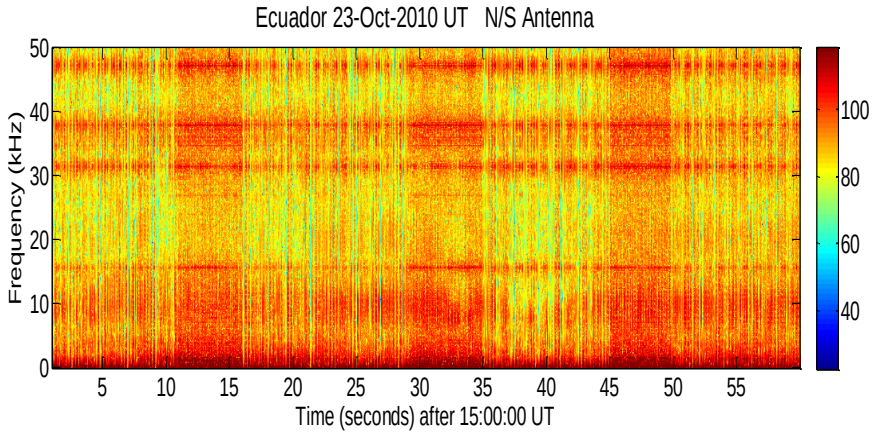
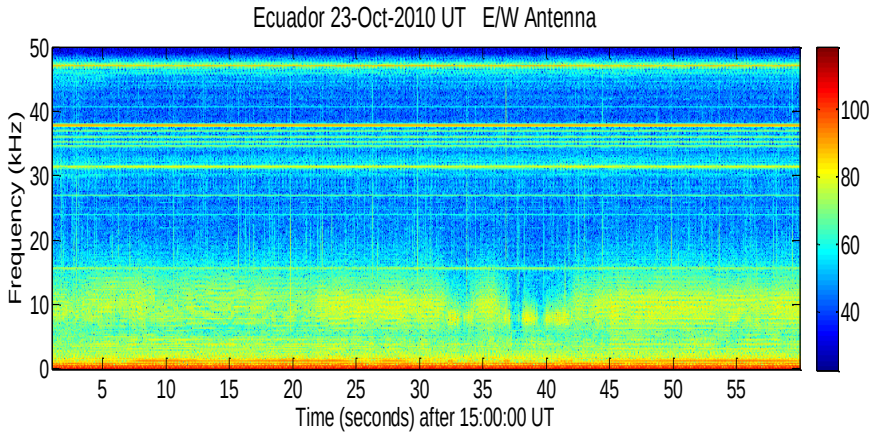
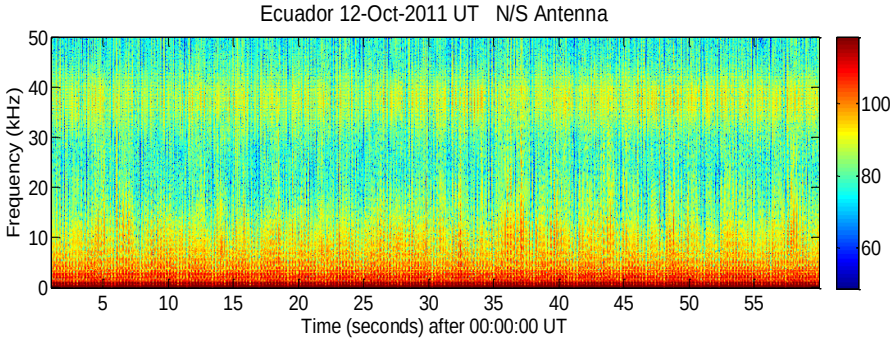
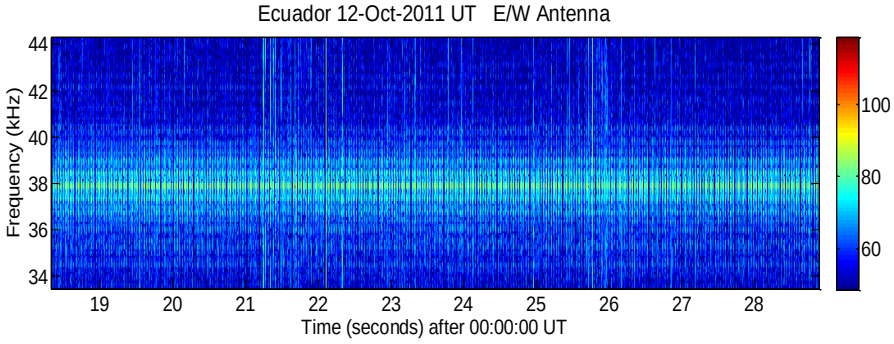
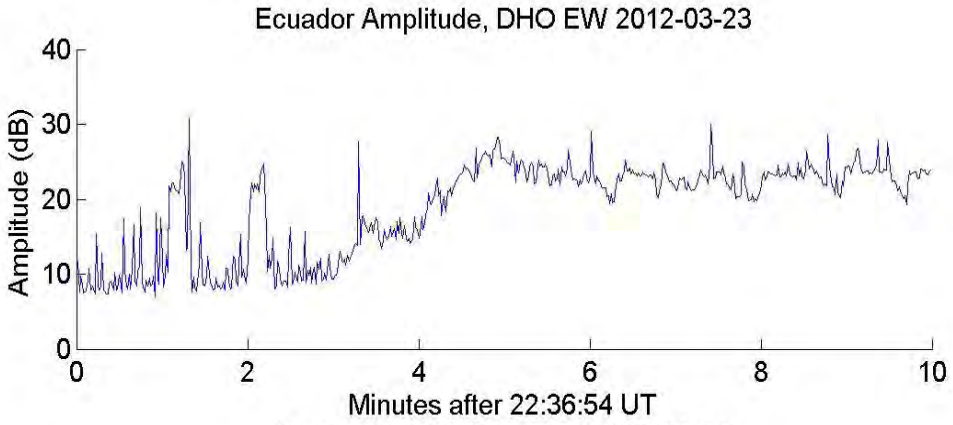
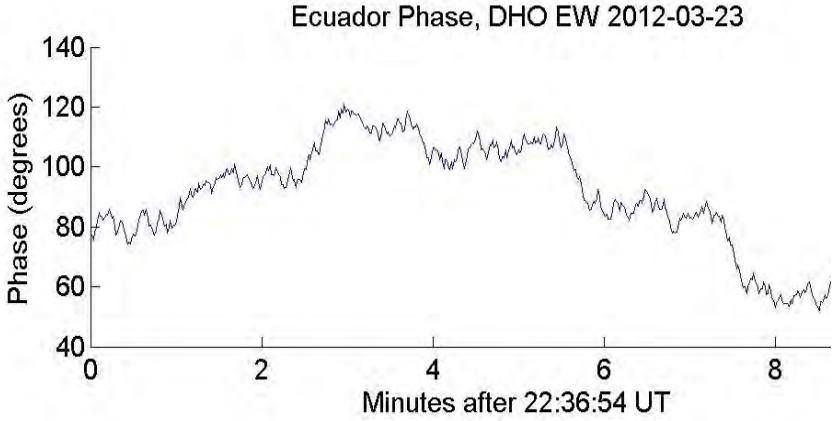

Ecuador 23-Oct-2010 UT N/S Antenna
Frequency (kHz)
Time (seconds) after 15:00:00 UT

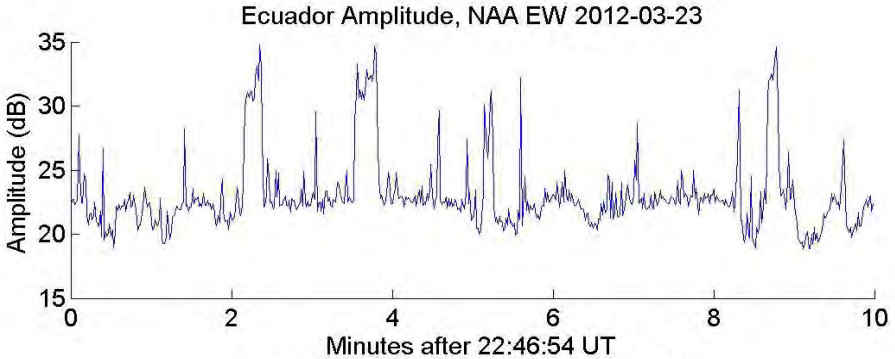

Ecuador 23-Oct-2010 UT E/W Antenna
Frequency (kHz)
Time (seconds) after 15:00:00 UT

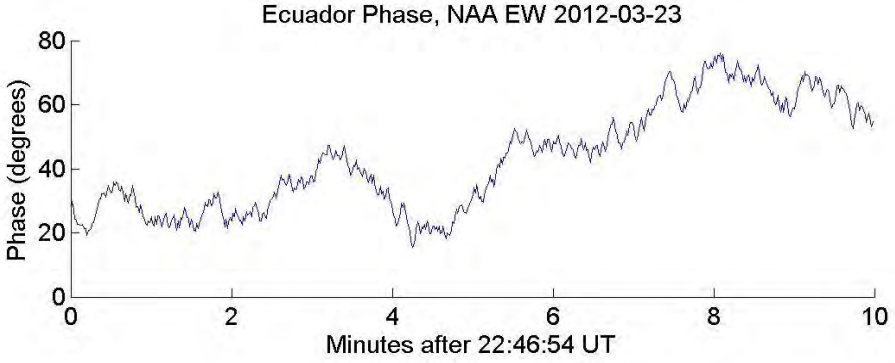

Ecuador 12-Oct-2011 UT N/S Antenna
Frequency (kHz)
Time (seconds) after 00:00:00 UT


Ecuador 12-Oct-2011 UT E/W Antenna
Frequency (kHz)
Time (seconds) after 00:00:00 UT


Ecuador Amplitude, DHO EW 2012-03-23
Amplitude (dB)
Minutes after 22:36:54 UT


Ecuador Phase, DHO EW 2012-03-23
Phase (degrees)
Minutes after 22:36:54 UT


Ecuador Amplitude, NAA EW 2012-03-23
Amplitude (dB)
Minutes after 22:46:54 UT

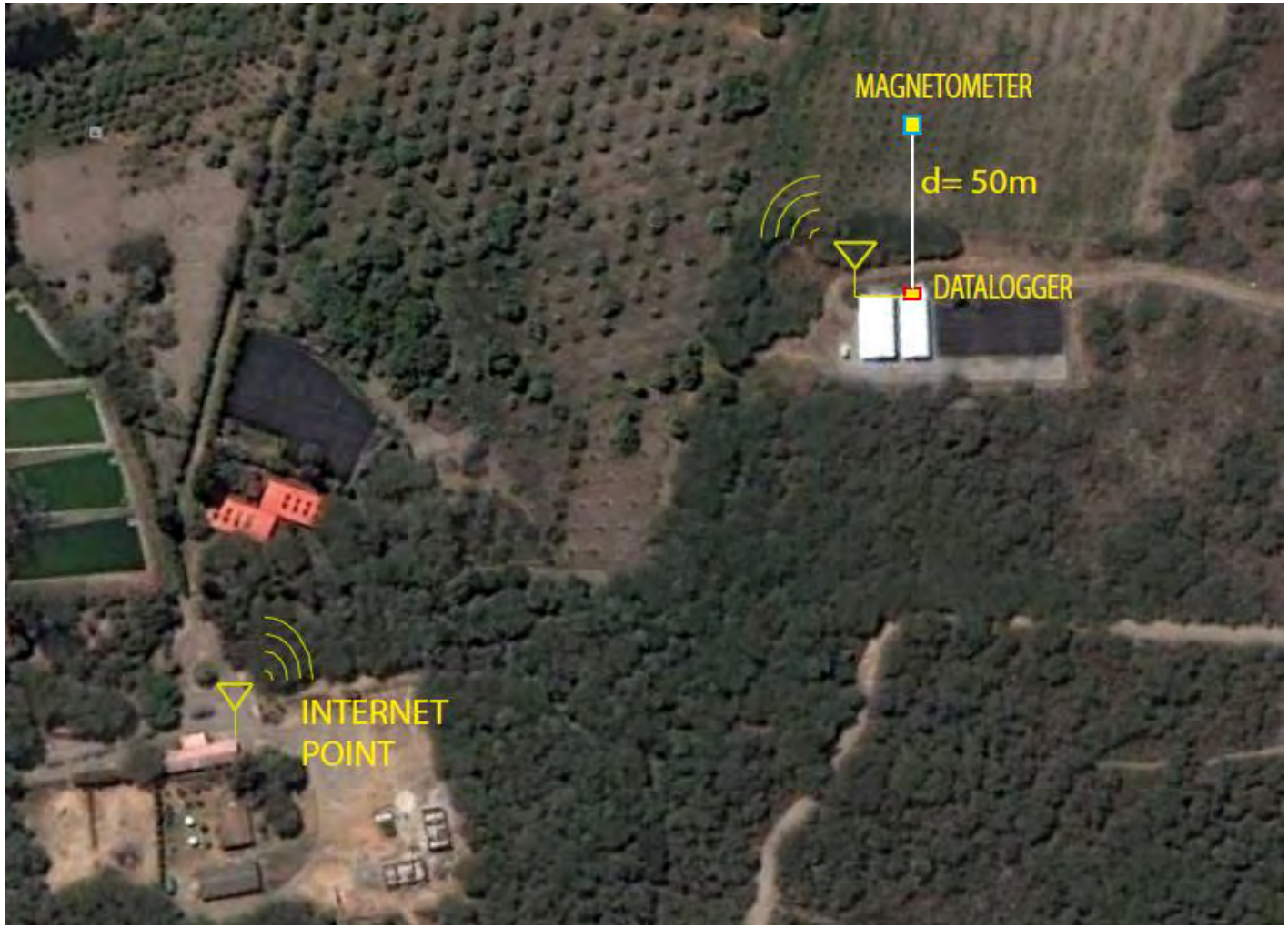

Ecuador Phase, NAA EW 2012-03-23
Phase (degrees)
Minutes after 22:46:54 UT

JERUSALEM-MALCHINGUI

Latitude: 0° 0'22.70"S Longitud: 78°21'27.26"O Altura and 2269m

NEW ECUADORIAN ASTRONOMICAL OBSERVATORY

MAGDAS



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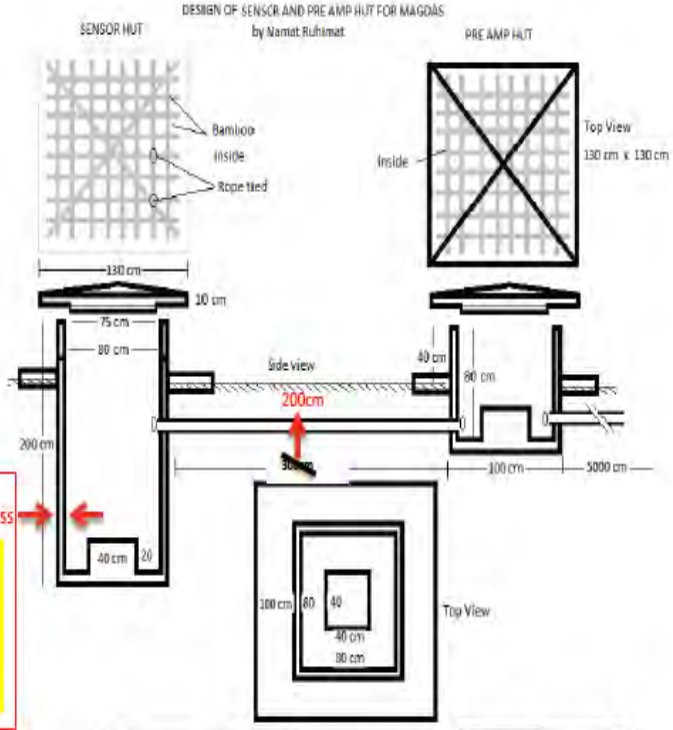
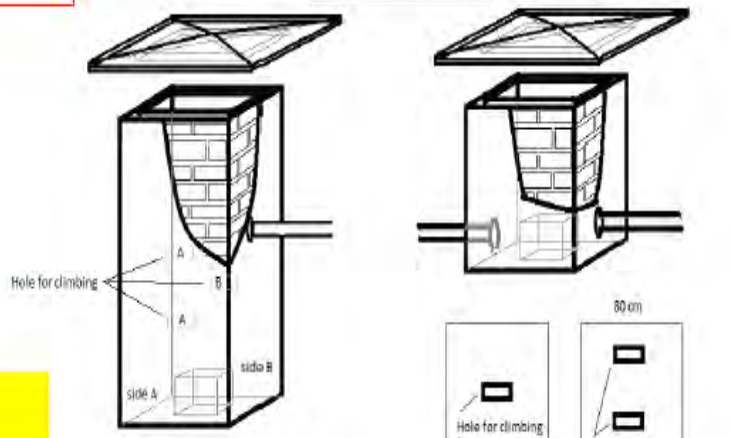
ESCUELA POLITÉCNICA NACIONAL

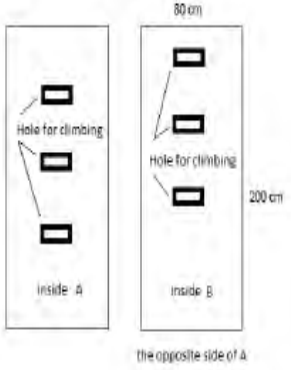
Sensor house sketch sent to Prof. Lopez on 14Aug2012.



Wall thickness: 20cm is best.

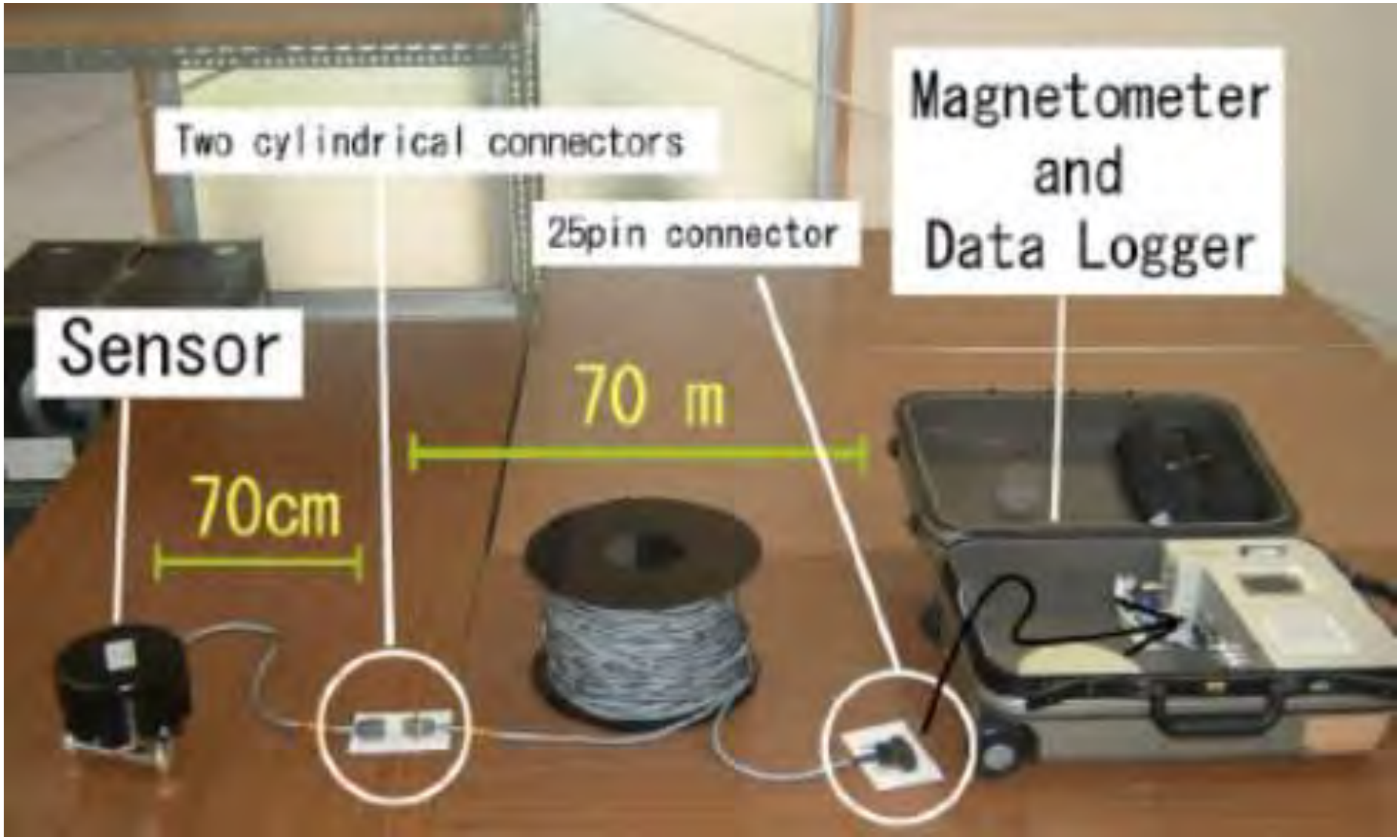


Material	Volume	Unit
1. Bamboo	6	meters
2. Red brick (20x10x5)	1300	pieces
3. Sand	2.5	meters cubic
4. Cement	10	meters cubic
5. Pipe 3 inch (4 m each)	14	pieces
6. Waterproof paint	10	Kg
7. Rope	10	meters



Note:
This structure goes deep into the ground.


GENIOS
15


Two cylindrical connectors
25pin connector
Magnetometer
and
Data Logger
Sensor
70 m
70cm

NEW COLLABORATION ARE COMING

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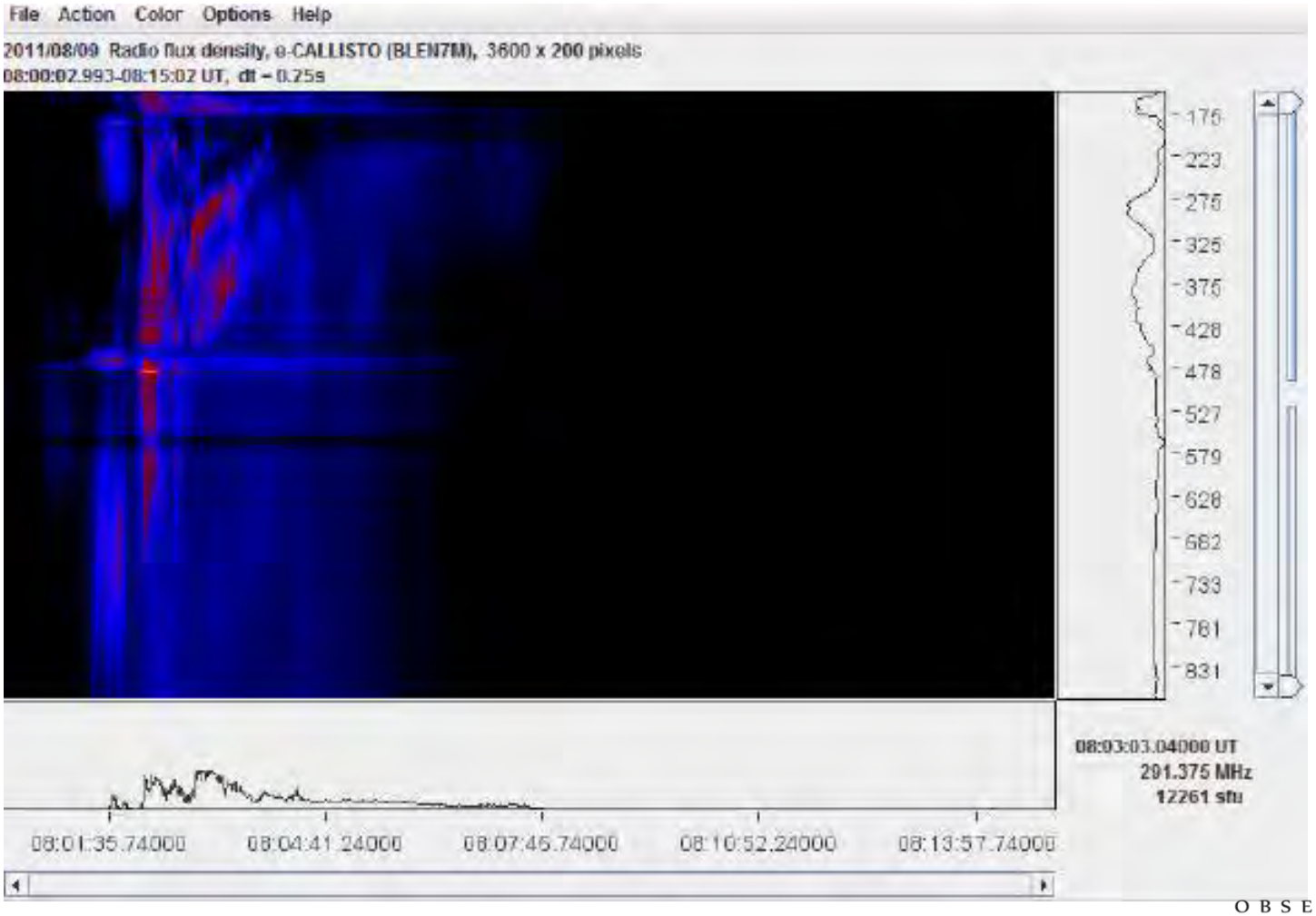
ESCUELA POLITÉCNICA NACIONAL

CALLIPSO



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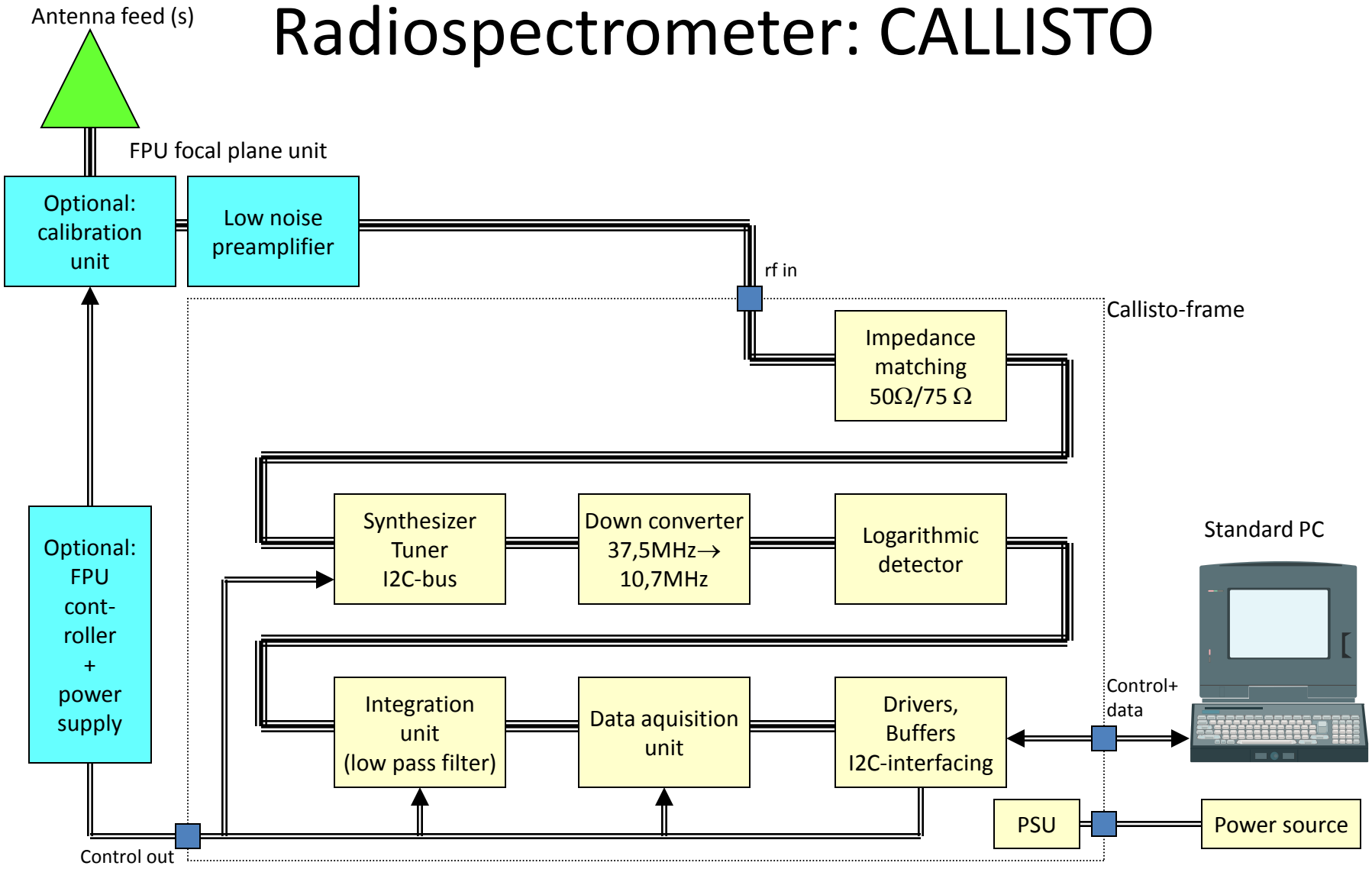
Radiospectrometer: CALLISTO



Control path
Signal path
Control- data link Callisto/Host-controller

Frequencyrange:	50MHz...850MHz
Frequency resolution:	62,5KHz
Bandwidth:	280KHz

File: spectrometerV2.ppt, 2002-12-4, Monstein

SAVNET

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GPS

Products and Applications

GPS satellite ephemerides
GLONASS satellite ephemerides
Earth rotation parameters
IGS tracking station coordinates and velocities
GPS satellite and IGS tracking station clock information
Zenith tropospheric path delay estimates
Global ionospheric maps

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ESTRUCTURE

AWESOME COLABORATIVE

MAGDAS

SAVNET

GPS

CALLIPSO

SPACE PHYSICS DIVISION

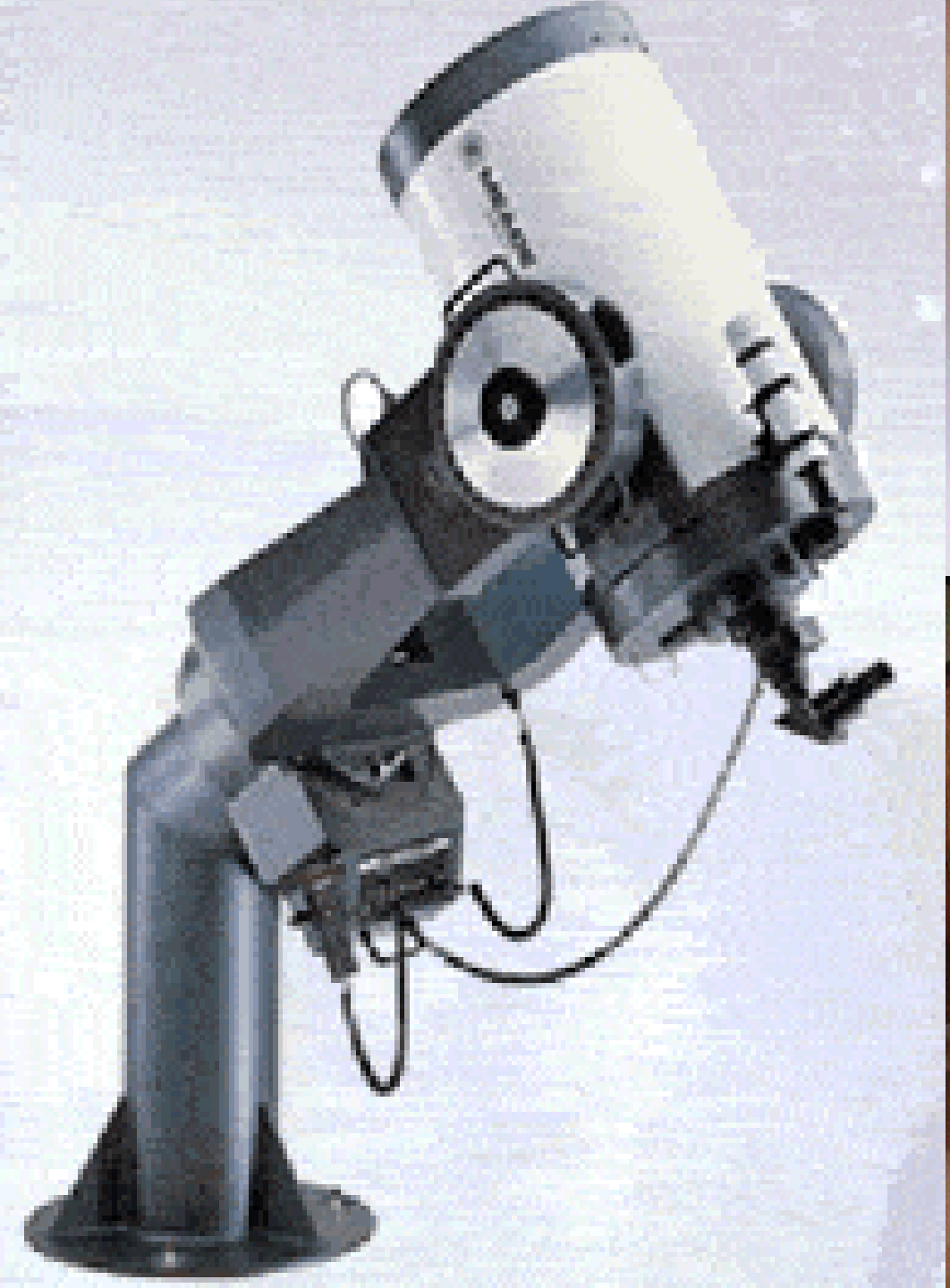
OBSERVATORIO ASTRONÓMICO QUITO
ESCUELA POLITÉCNICA NACIONAL

SOLAR PHYSICS PHENOMENA DIVISON

QUITO ASTRONOMICAL OBSERVATORY

OBSERVATORIO ASTRONÓMICO QUITO
ESCUELA POLITÉCNICA NACIONAL

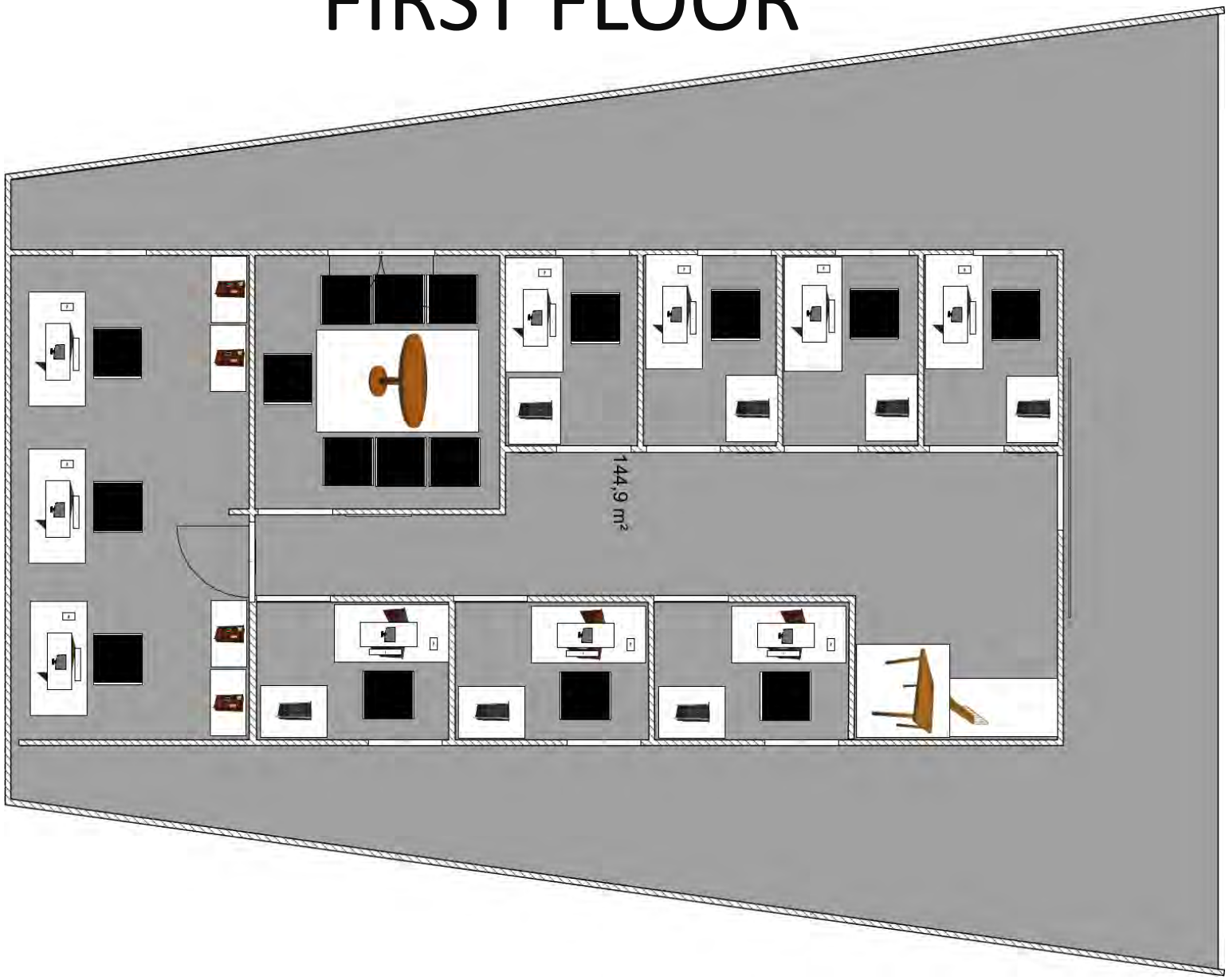
FACILITIES



SOLAR PHYSICS PHENOMENA DIVISION

OBSERVATORIO ASTRONÓMICO QUITO
ESCUELA POLITÉCNICA NACIONAL

FIRST FLOOR



MEETING ROOM

RESEARCH OFFICES

OBSERVATORIO ASTRONÓMICO QUITO
ESCUELA POLITÉCNICA NACIONAL

DATA PROCESSING CENTER

OBSERVATORIO ASTRONÓMICO QUITO
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UP THE SECOND FLOOR

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SECOND FLOOR

LABORATORY PROJECTS

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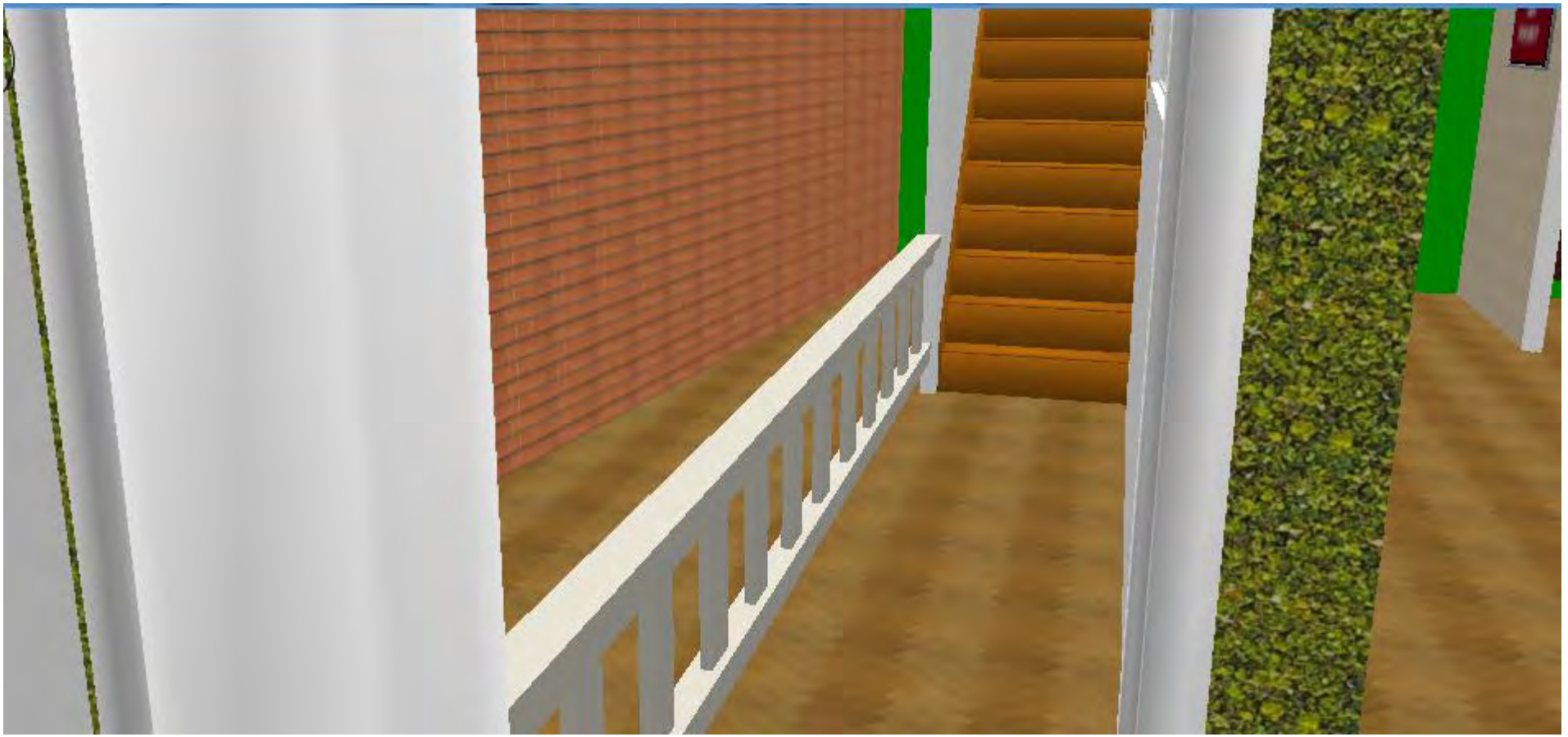
ACCESS TO TERRACE



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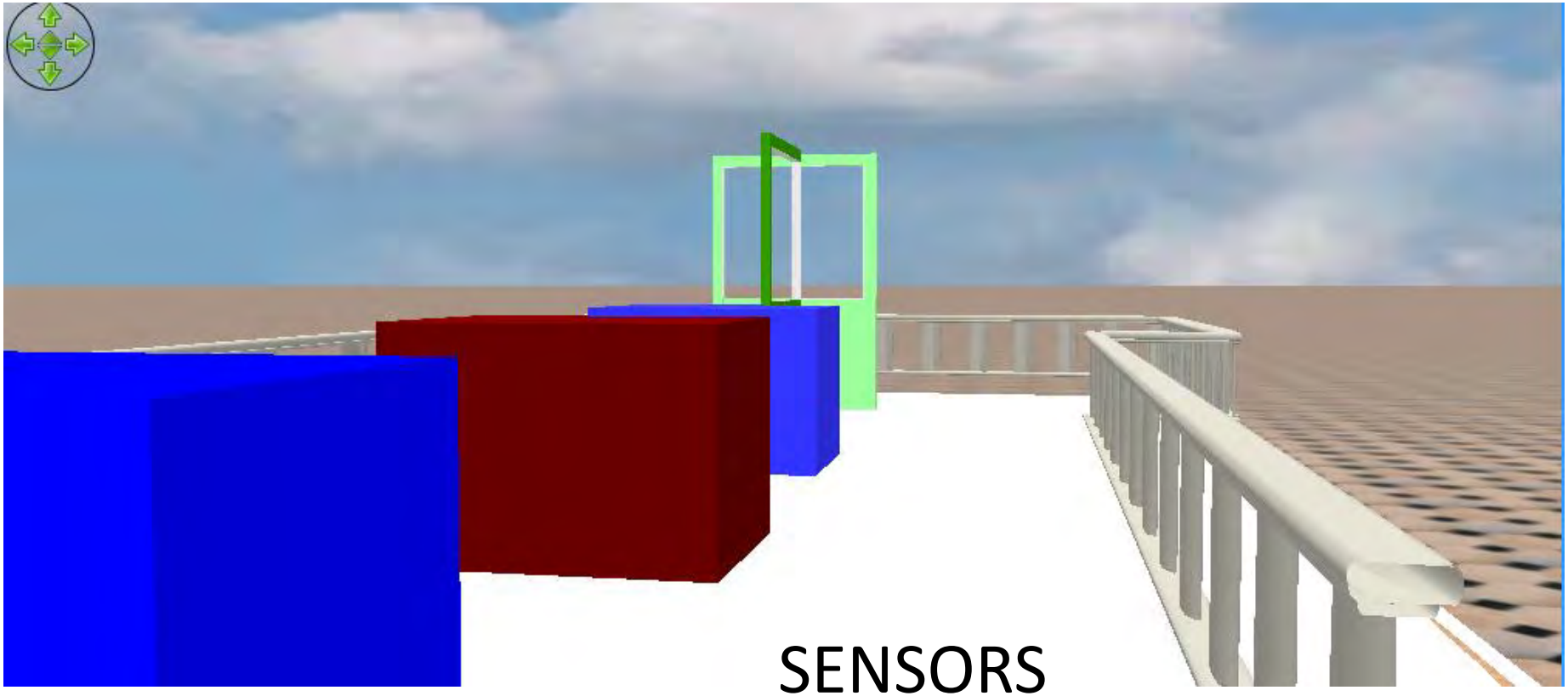
ESCUELA POLITÉCNICA NACIONAL

TERRACE



SENSORS

OBSERVATORIO ASTRONÓMICO QUITO
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QUITO

JERUSALEM

National Polytechnic School