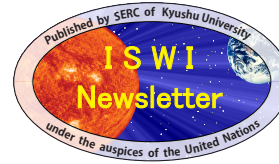


MAGDAS on page 33.



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

SOLAR PHYSICS PHENOMENA



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.

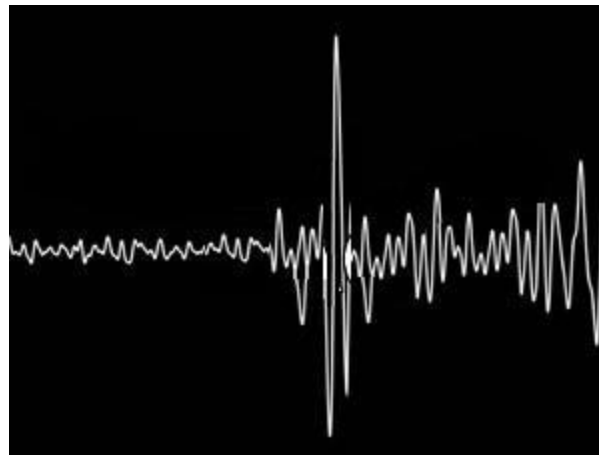
Quito Astronomical Observatory is one of the oldest in Latin America



Collection of Instruments

Seismographs

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



Mainka (1929).

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

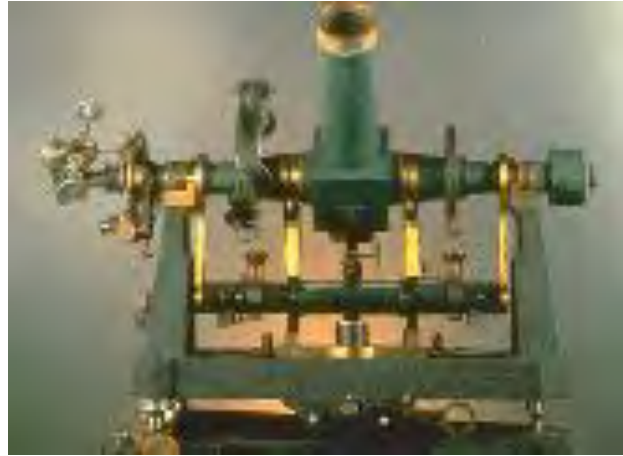
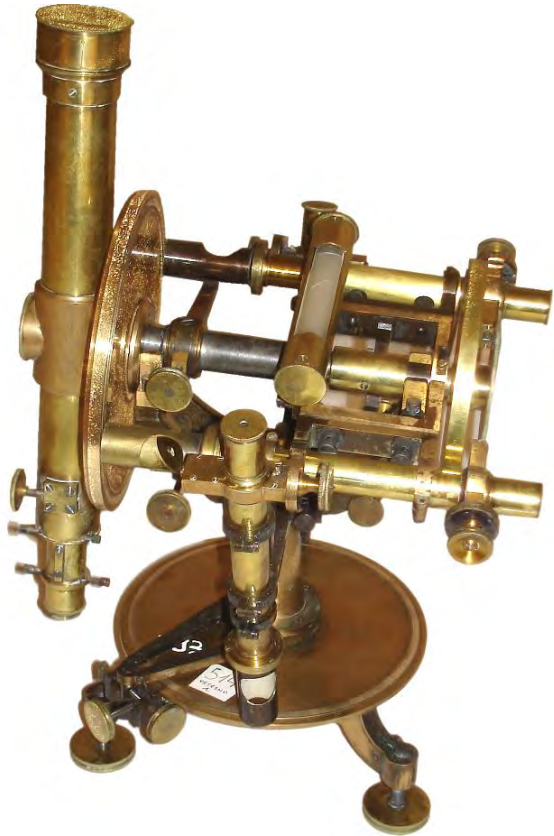
METEOROLOGY

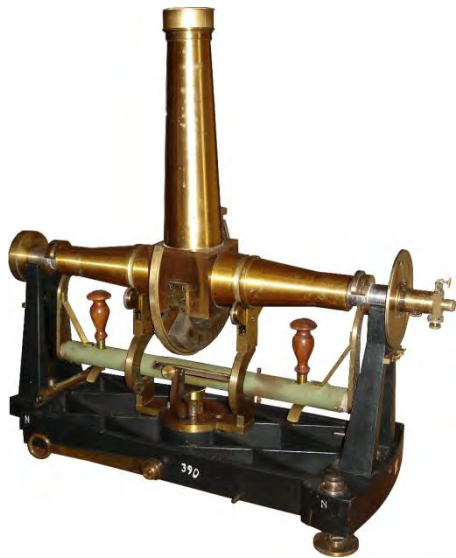
The First Station in Ecuador



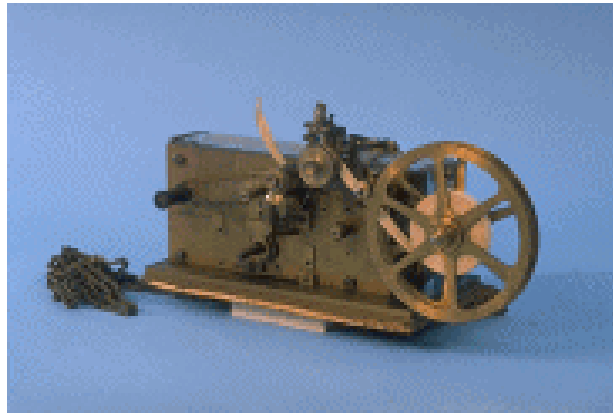
The meteorological station of our observatory is in operation at its current position since 1891.

ASTRONOMICAL HERITAGE





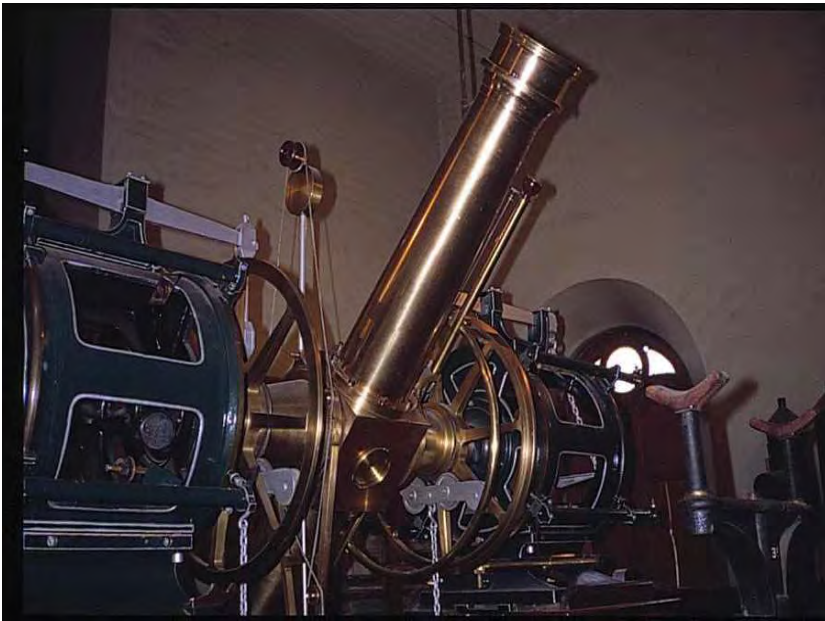
Clocks and Chronographs



Electromagnetic
Chronograph

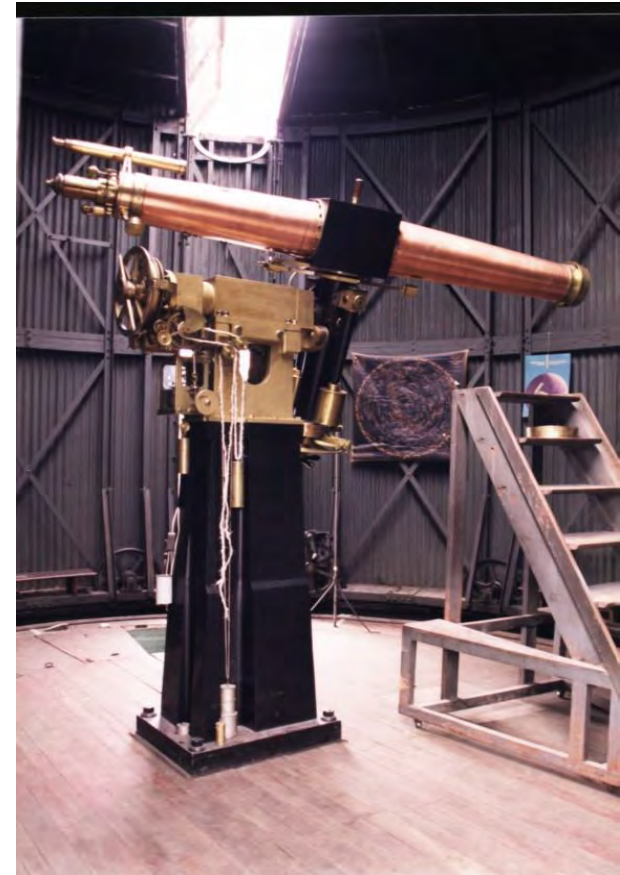
Steady Refracting Telescopes

The Great Meridian Circle
Repsold (1889)



focal distance 200cm,
lens: 162mm.

Merz Refracting Telescope (1875)



Focal distance: 319cm
lens: 238mm

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



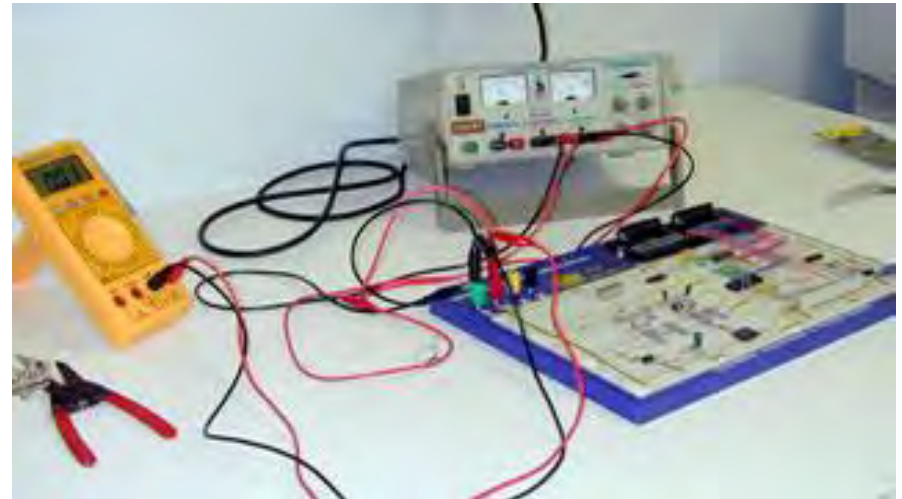
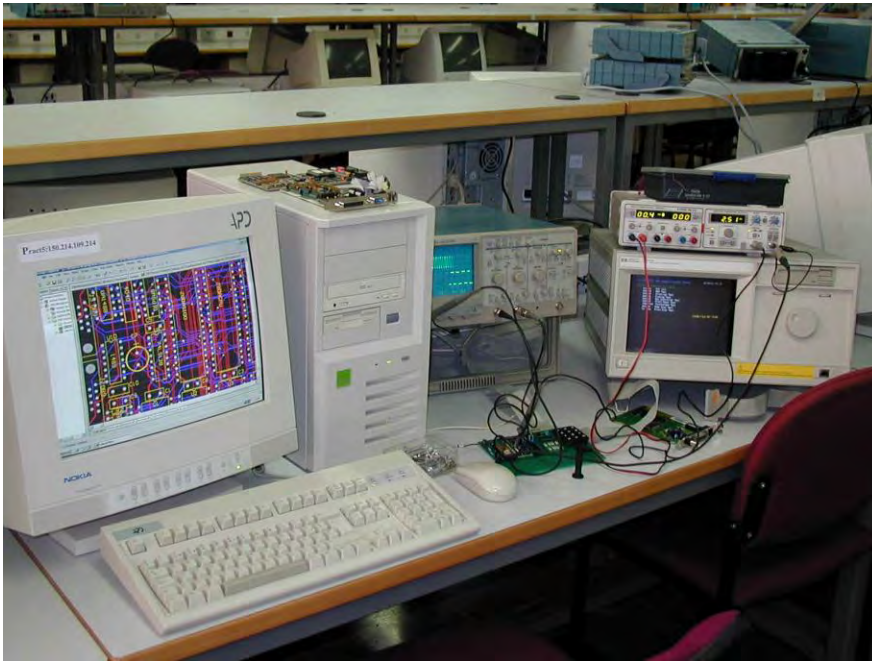
Library and Historical Archive



Celestial and Terrestrial Atlases

The Historical Library owns incunabula, a appreciable 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



ACTIVITIES

Astronomy and Astrophysics

RESEARCH:

Theoretical Research

Astronomical Data Analysis

EDUCATION:

Formal courses of astronomy

Public lectures

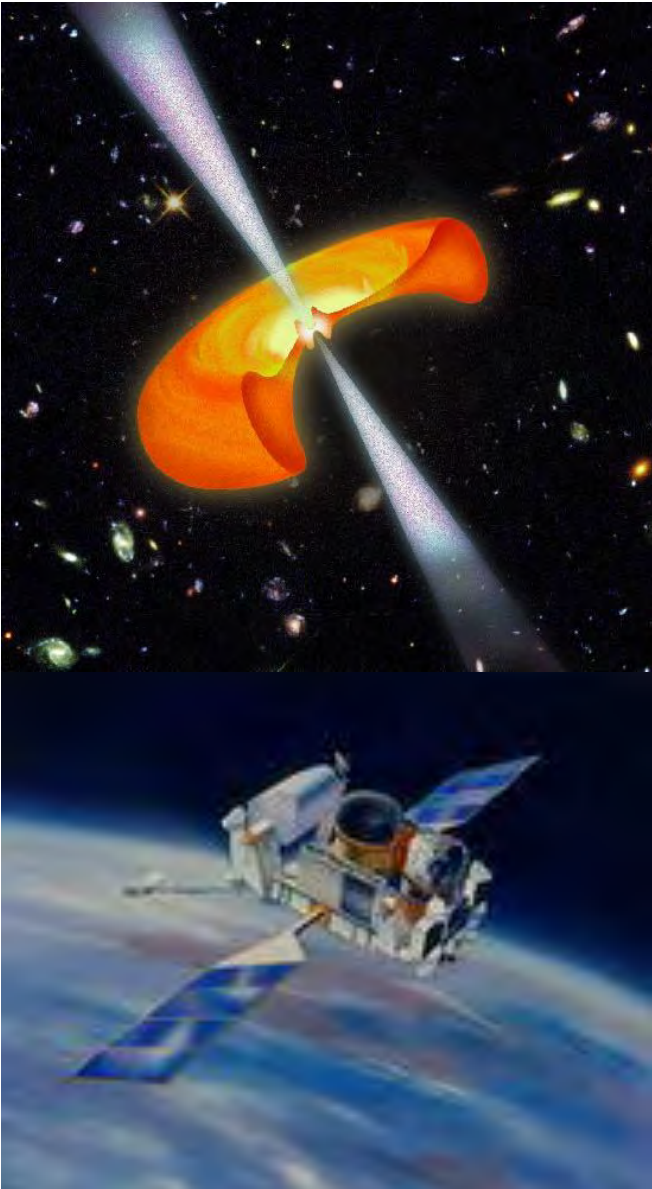
PROMOTION AND POPULARIZATION:

Museum

System of robotic telescopes

Public information

Theoretical Research



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

Virtual telescopes and astronomy in the classrooms using Streaming

System for connecting Several
OAQ telescopes.

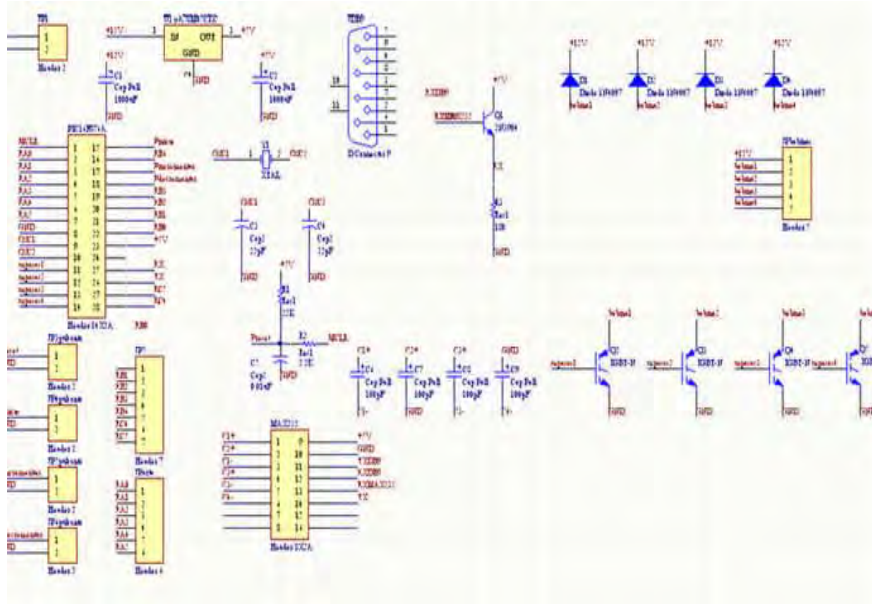
Oldest Quito Observatory
Telescope has been Automatized

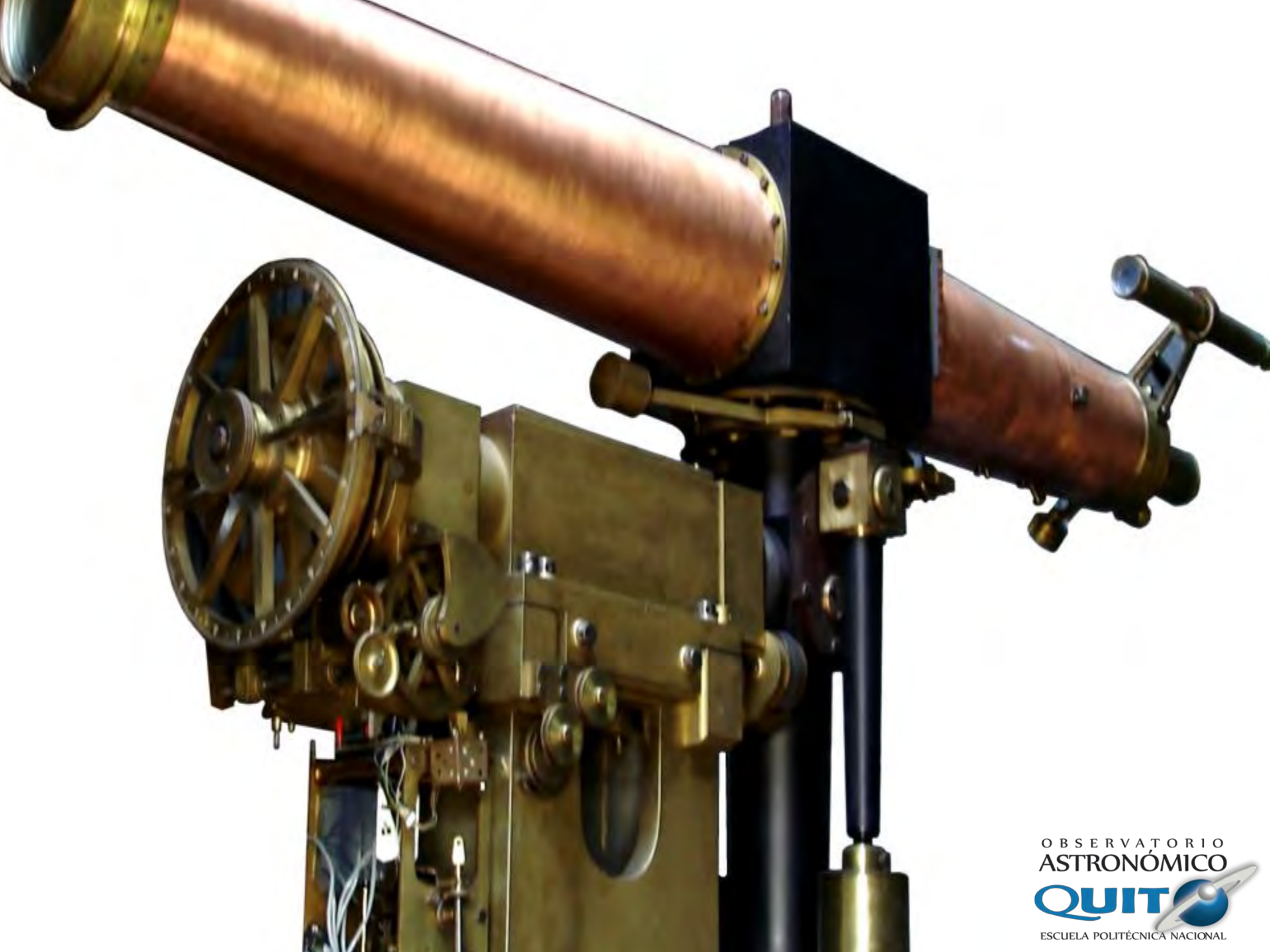
Automatic handling of the
telescopes from any computer.

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

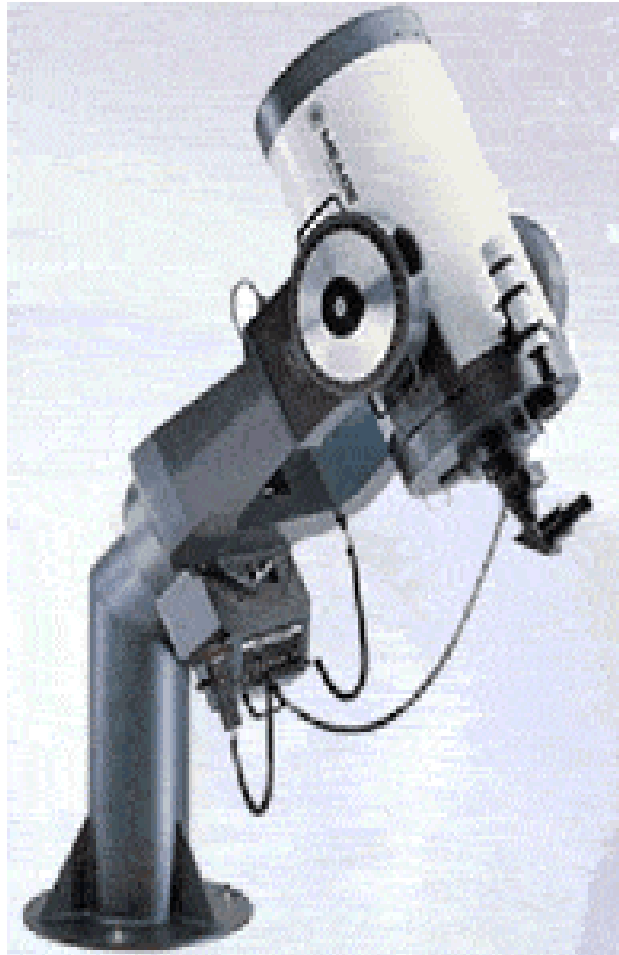


Automatic telescopes



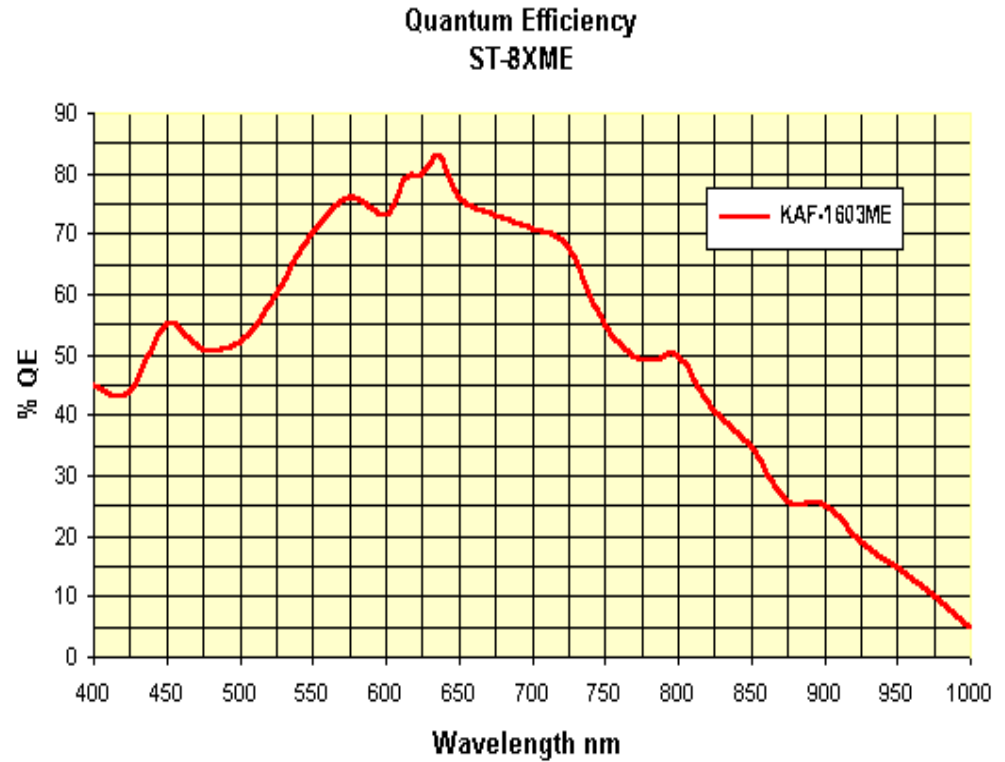


NEW EQUIPMENT

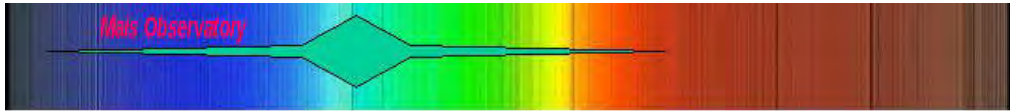


Especificaciones	MEADE 16"
Diseño óptico	Ritchey-Chrétien
Apertura	406.4mm (16")
Radio de la longitud focal	4064mm; f/10
Máxima longitud visual	950X (16")
Montaje	Tipo tripode y ecuatorial
GPS	16 canales GPS
Ocular	26mm
Visor	8 x 50mm
Autostar® II Hand Controller	Incluye 147,541 objetos
Peso	318 lbs.

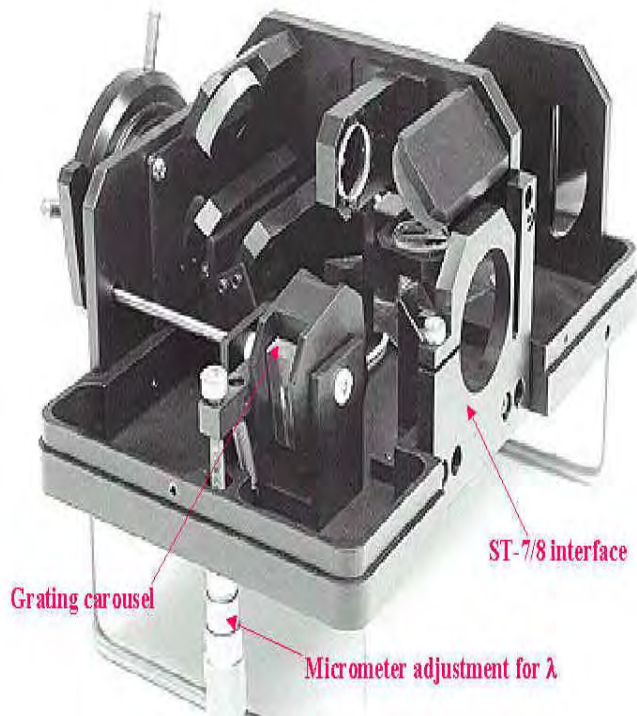
CCD Cameras



Spectrograph



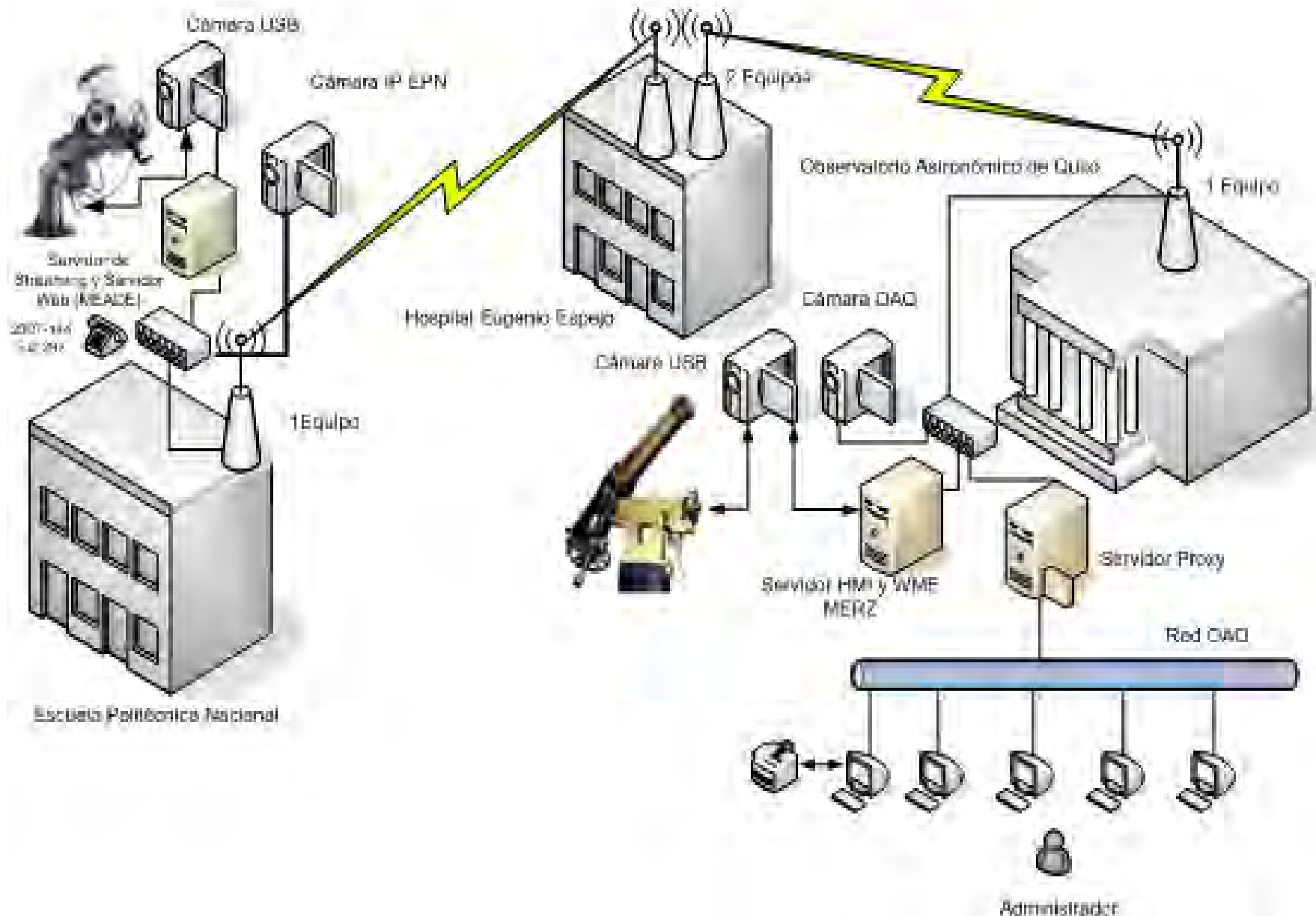
SBIG Spectrometer

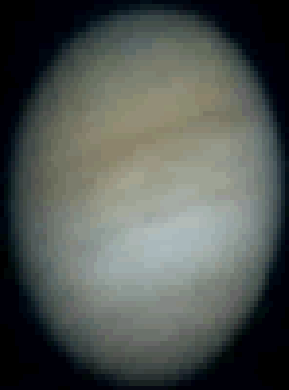
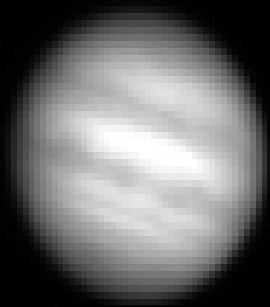


Range from the calcium H and K lines to H-Alpha (3000 Angstroms) with a single exposure.

Resolution will be 10 or 38 angstroms per pixel.

Wireless link and networking system





Web portal access

observaquito@gmail.com, Quito-Ecuador. Todos los derechos son reservados (R) 2006-2007'."/>

OBSERVATORIO ASTRONÓMICO DE QUITO - Microsoft Internet Explorer

Archivo Edición Ver Favoritos Herramientas Ayuda

Dirección <http://oaq.epn.edu.ec/>

ESCUELA POLITÉCNICA NACIONAL

EPN 2007 INICIACIONES

- ▶ PRINCIPAL
- ▶ INSTITUCIÓN
- ▶ DEPARTAMENTOS
- ▶ SERVICIOS
- ▶ PROYECTOS
- ▶ CONTACTO

Número de Visitas
697

Dirección: Av. 10 de Agosto y Av. Gran Colombia
Interior Parque "La Alameda", P.O. BOX: 17-01-165, Teléfono: 2570765, Telefax: 2583451, E-Mail: observaquito@gmail.com
Quito-Ecuador
Todos los derechos son reservados (R) 2006-2007

OBSERVATORIO ASTRONÓMICO DE QUITO Internet

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PROYECTO TELVIR - Microsoft Internet Explorer

Archivo Edición Ver Favoritos Herramientas Ayuda

Dirección <http://oaq.epn.edu.ec/tevir/index.htm>

PROYECTO TELESCOPIOS VIRTUALES Y ASTRONÓMICO

SENACYT

- ▶ PRINCIPAL
- ▶ PROYECTO
- ▶ VIDEO
- ▶ ADMINISTRACIÓN
- ▶ GALERÍA
- ▶ CONTACTENOS

Número de Visitas
686

Usuarios Activos
1

Dirección: Av. 10 de Agosto y Av. Gran Colombia
Interior Parque "La Alameda", P.O. BOX: 17-01-165, Teléfono: 2570765, Telefax: 2583451, E-Mail: observaquito@gmail.com
Quito-Ecuador
Todos los derechos son reservados (R) 2006-2007

PROYECTO TELVIR Internet

SPACE SCIENCES PROJECTS

AWESOME

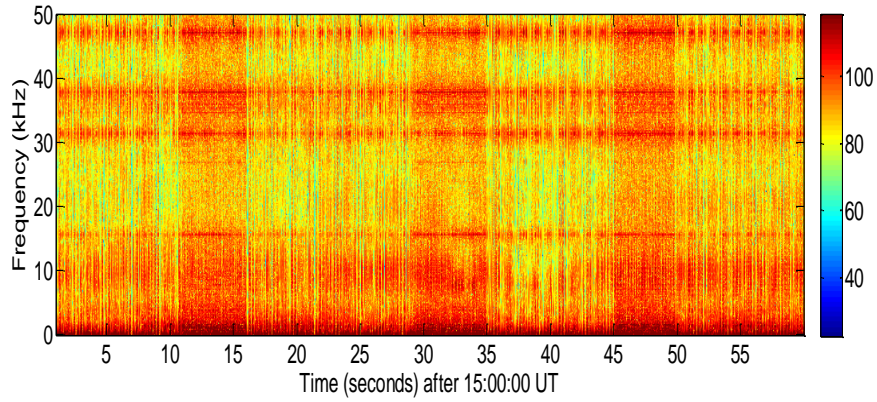


LOCATION

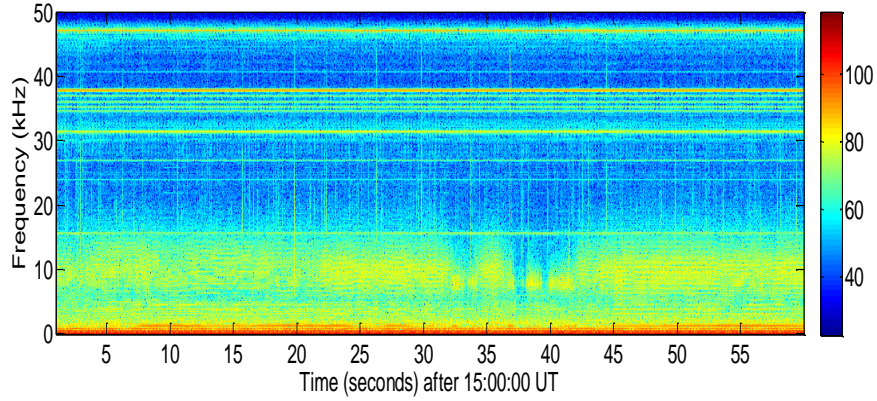


LATITUDE: $0^{\circ}12'41.29''S$; LONGITUDE: $78^{\circ}29'25.70''O$ and 2812m

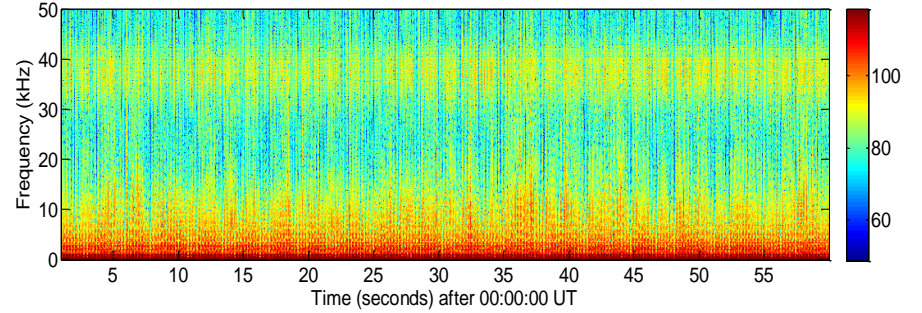
Ecuador 23-Oct-2010 UT N/S Antenna



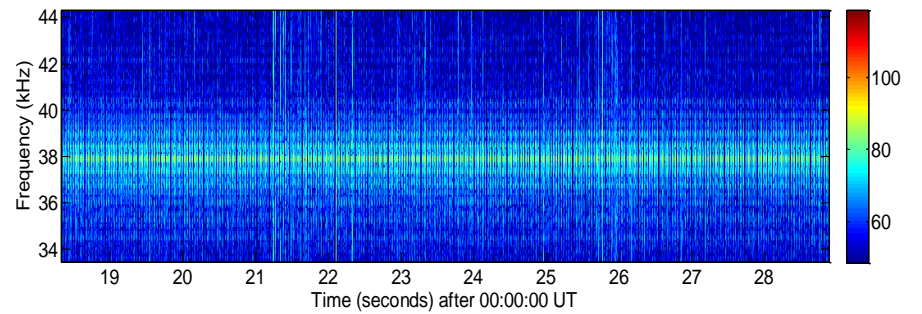
Ecuador 23-Oct-2010 UT E/W Antenna



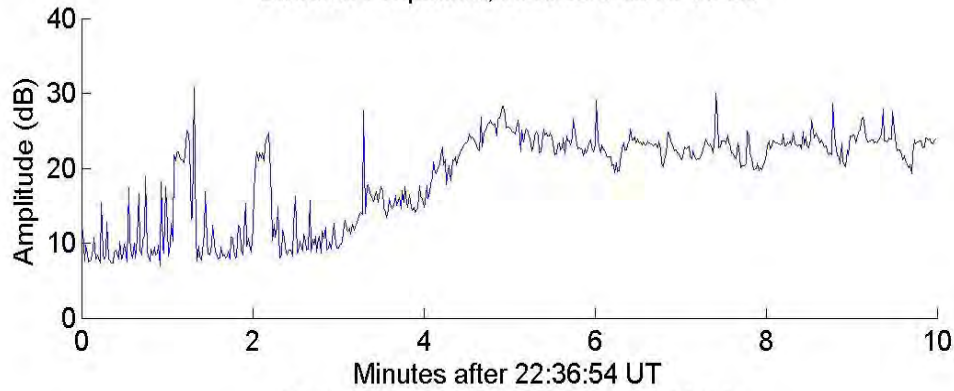
Ecuador 12-Oct-2011 UT N/S Antenna



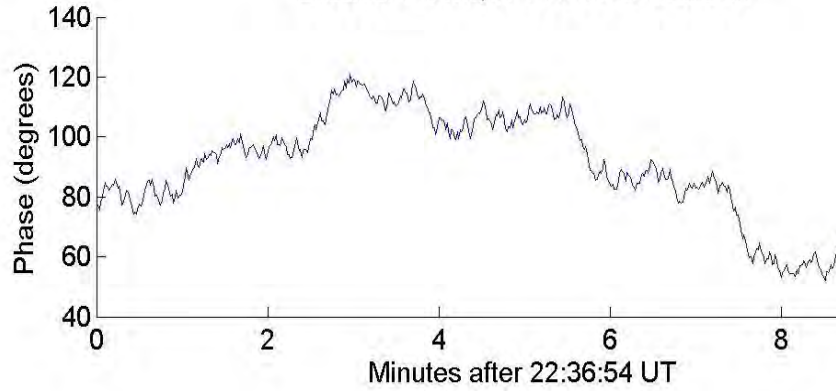
Ecuador 12-Oct-2011 UT E/W Antenna



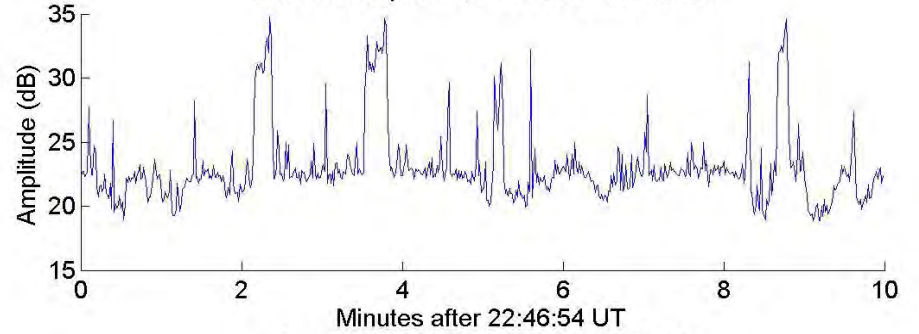
Ecuador Amplitude, DHO EW 2012-03-23



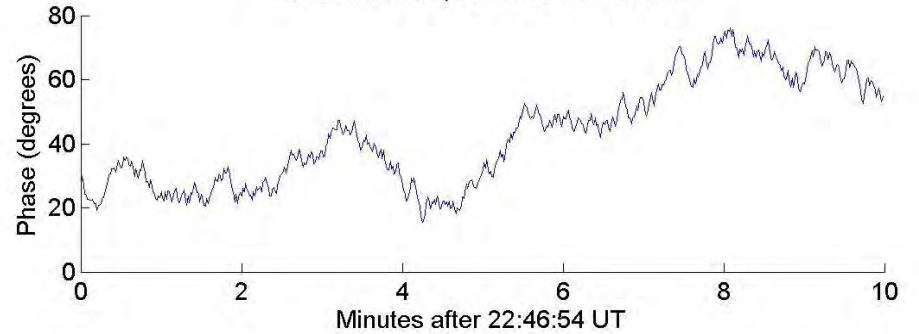
Ecuador Phase, DHO EW 2012-03-23



Ecuador Amplitude, NAA EW 2012-03-23



Ecuador Phase, NAA EW 2012-03-23

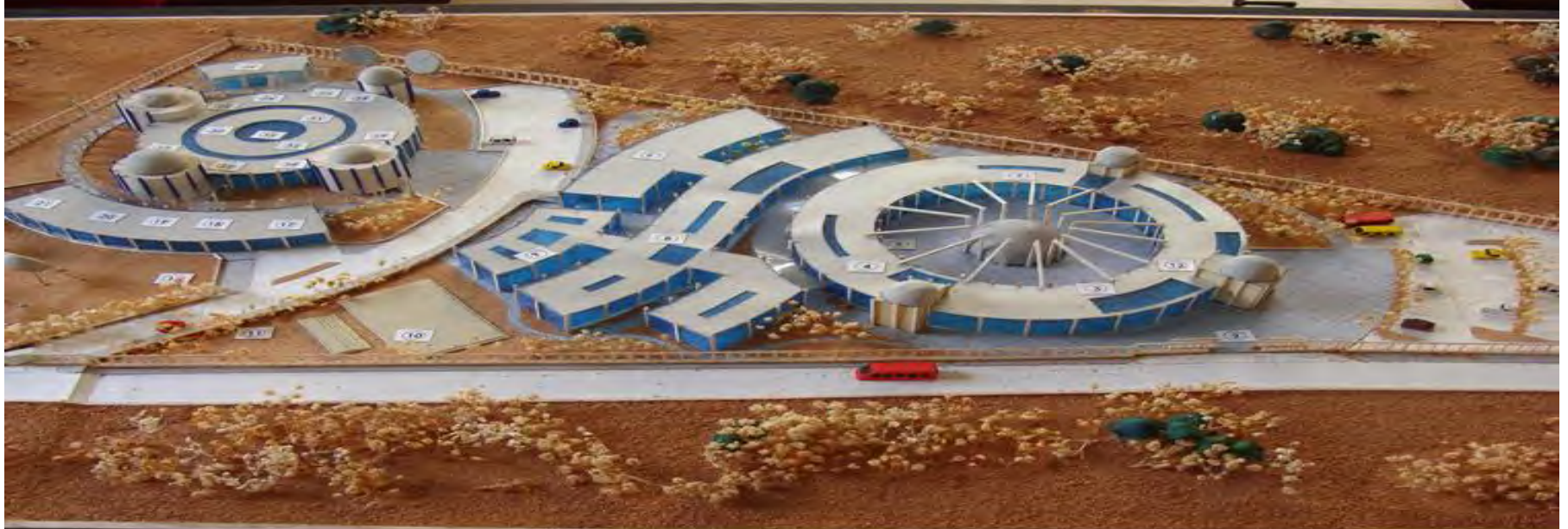
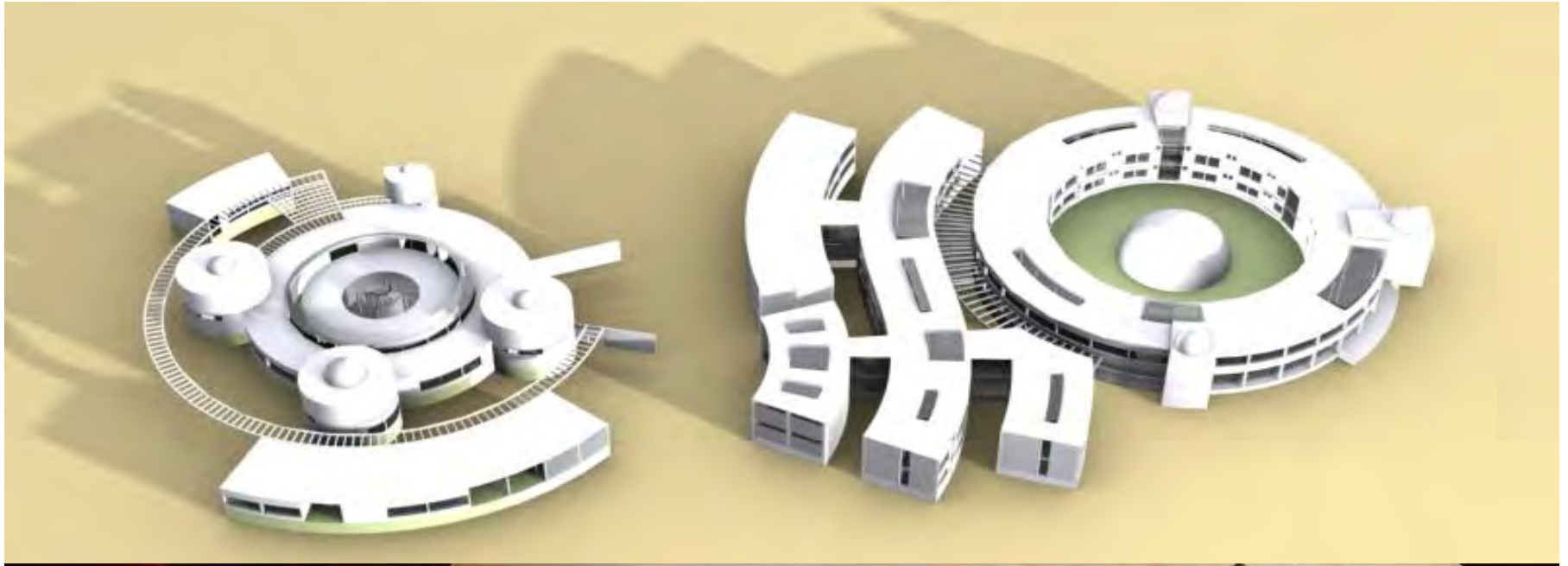


JERUSALEM-MALCHINGUI

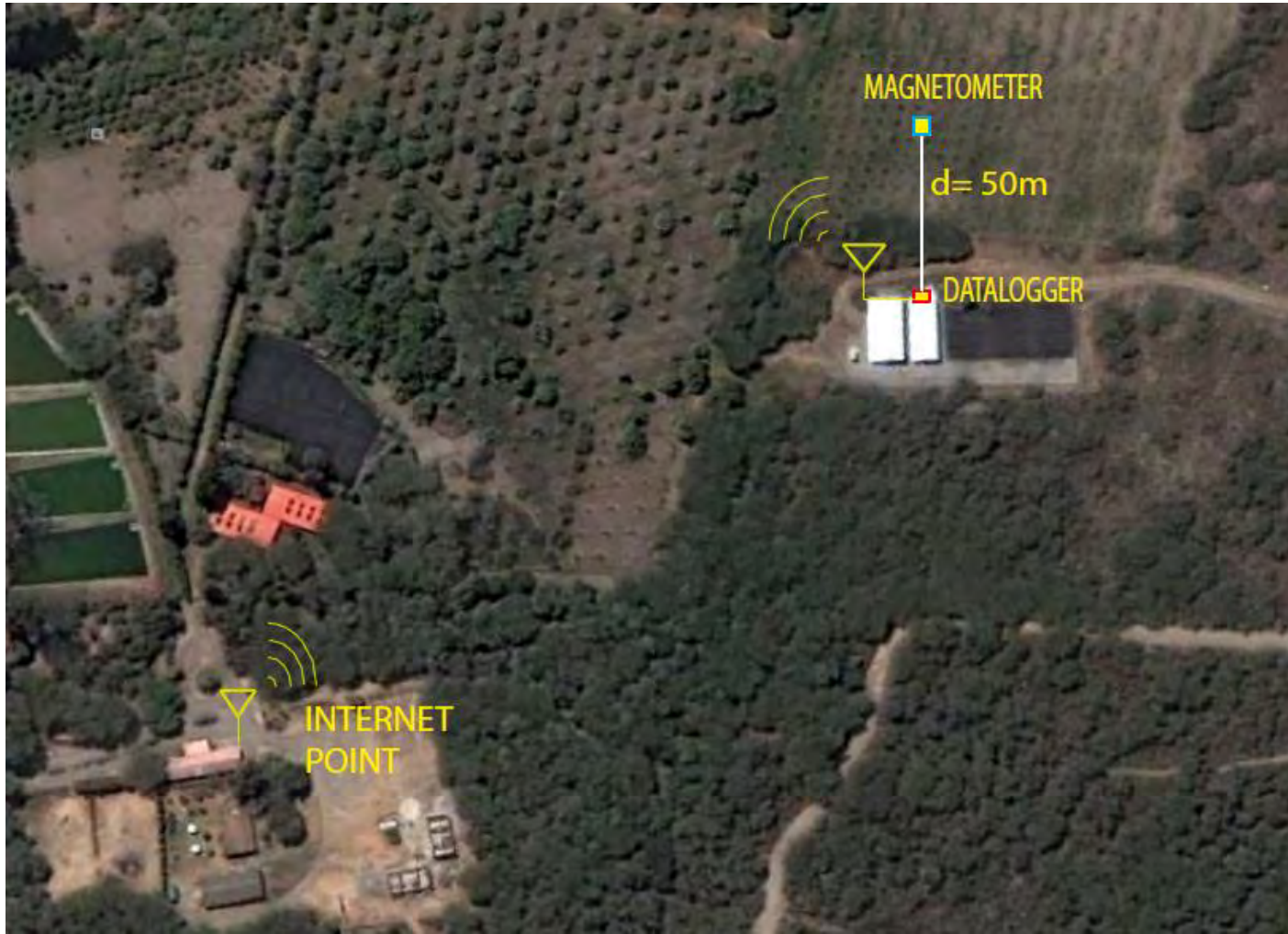


Latitude: 0° 0'22.70"S Longitud: 78°21'27.26"O Altura and 2269m

NEW ECUADORIAN ASTRONOMICAL OBSERVATORY



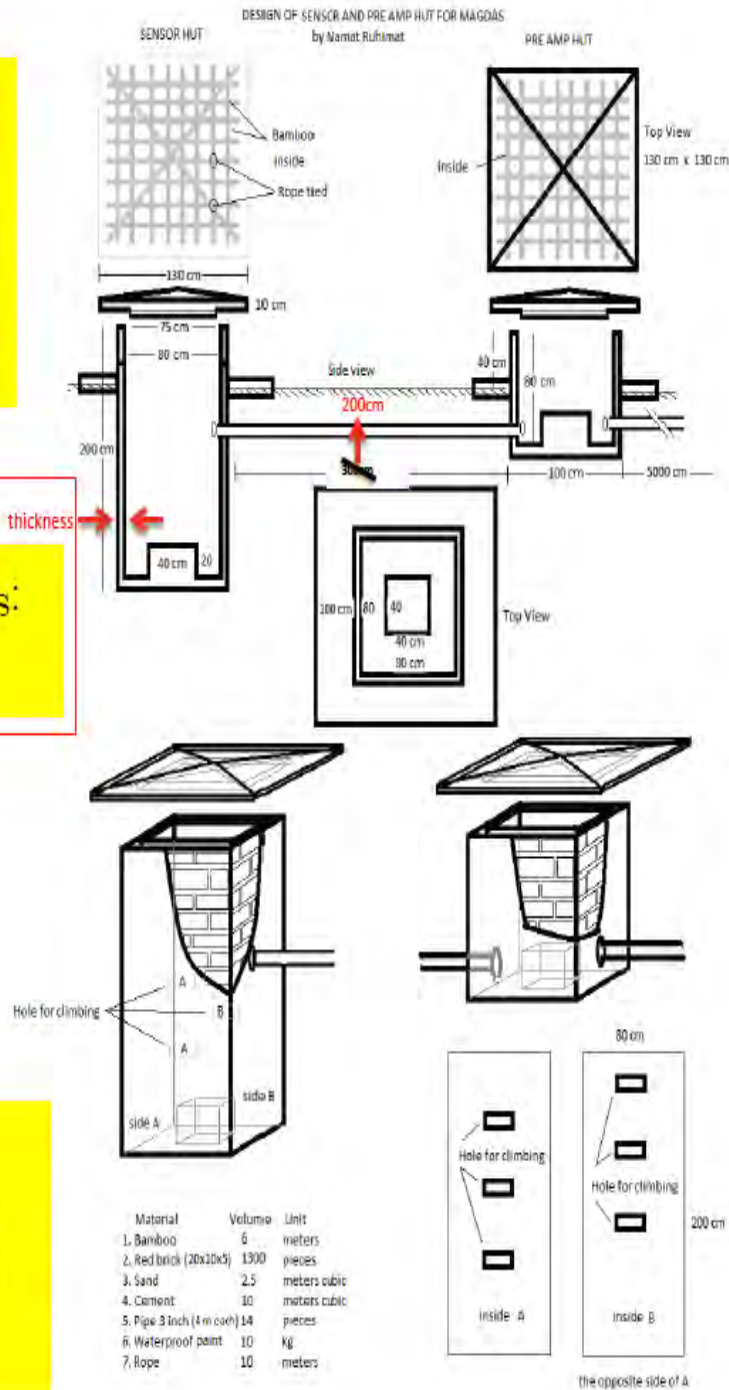
MAGDAS



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

Wall thickness: 20cm is best.

Note: This structure goes deep into the ground.





Two cylindrical connectors

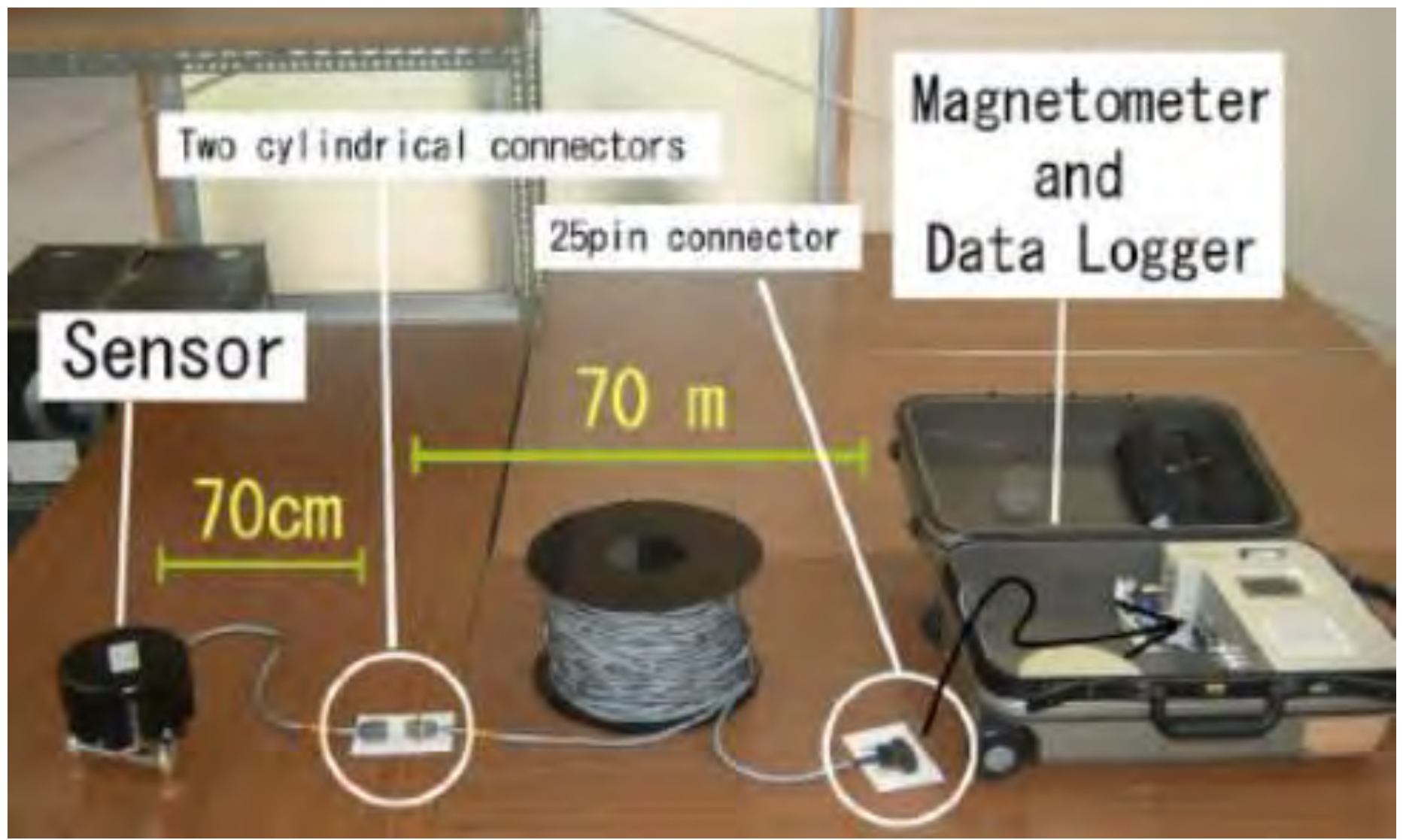
25pin connector

Magnetometer
and
Data Logger

Sensor

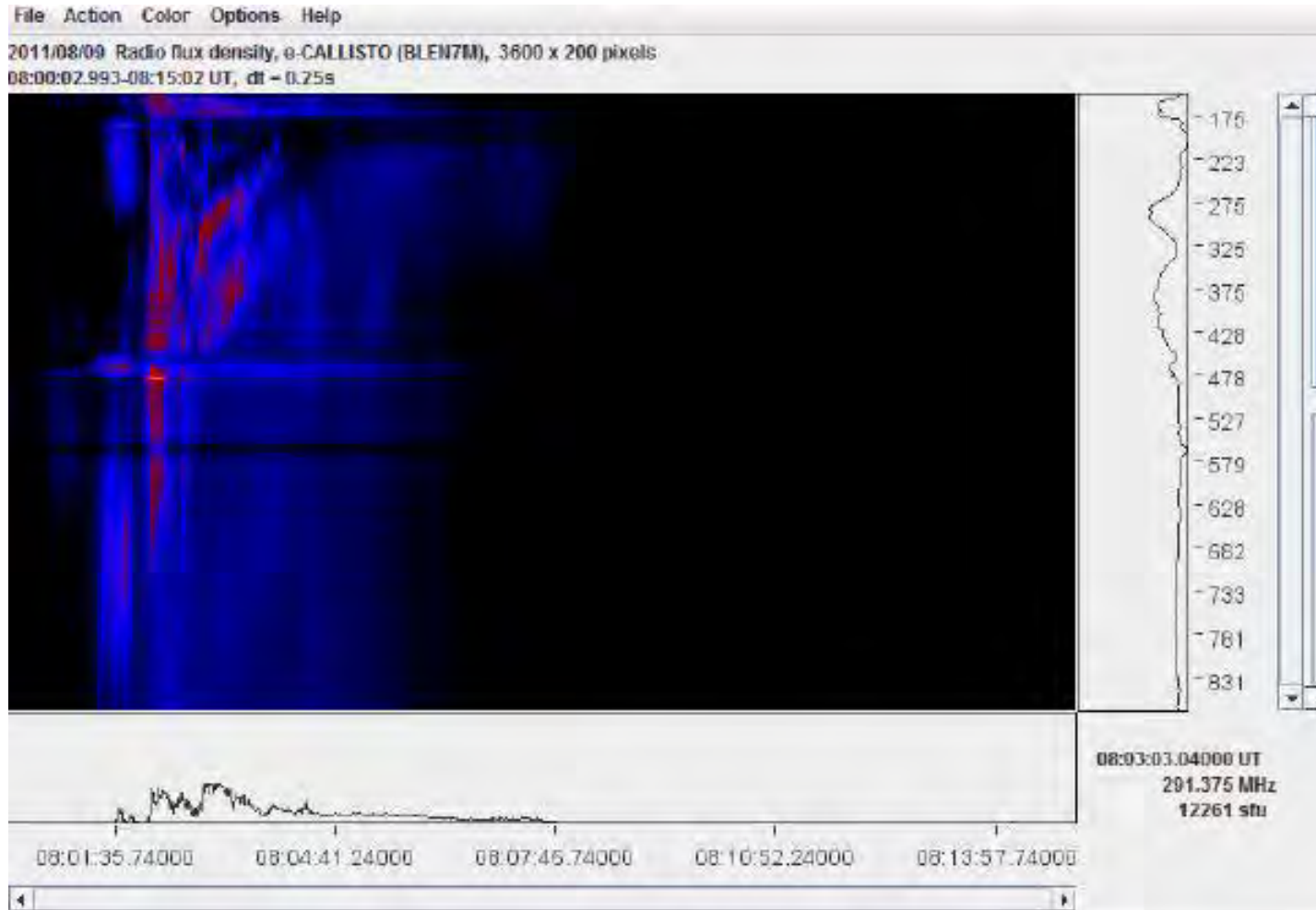
70 m

70cm

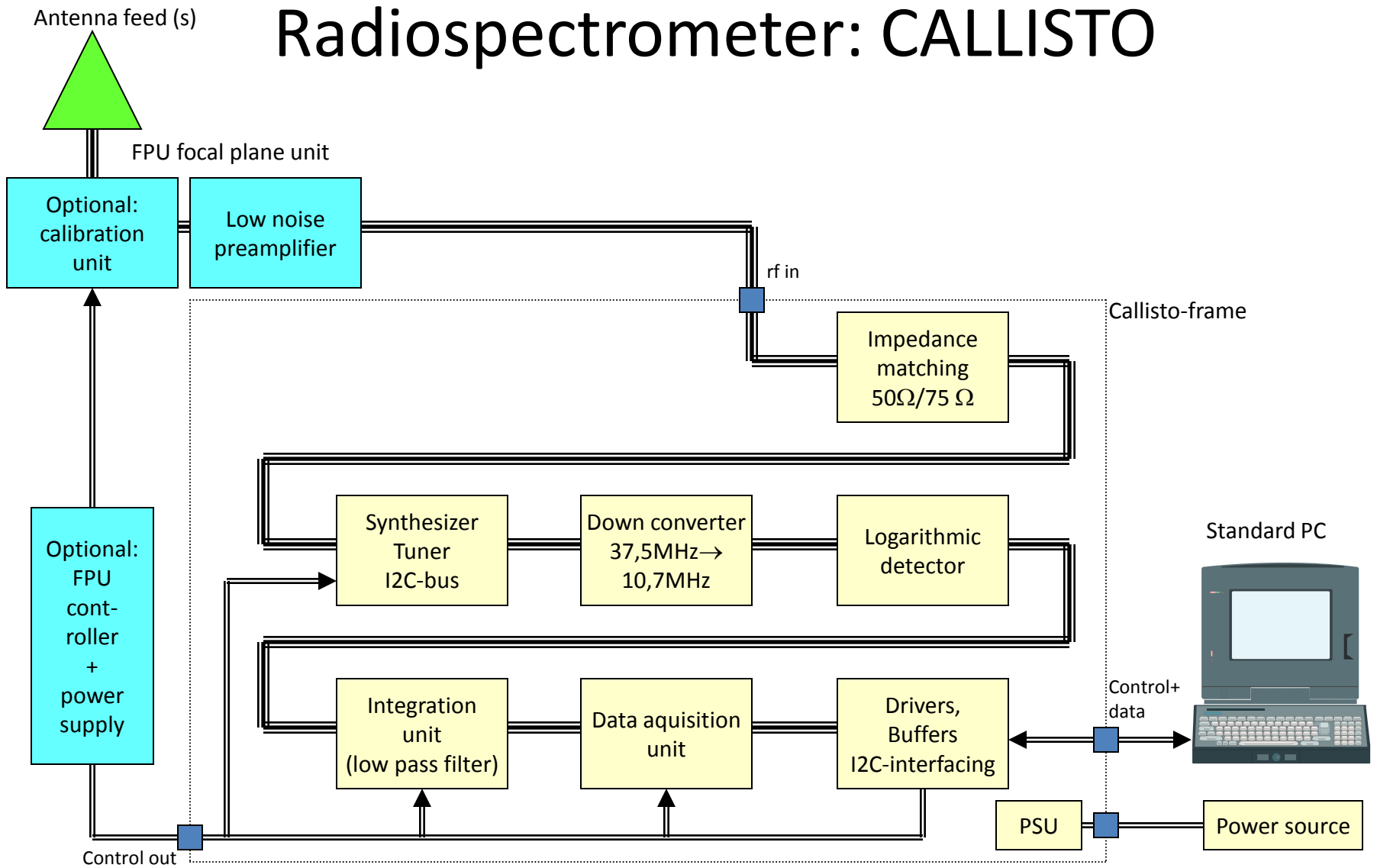


**NEW COLLABORATION
ARE COMING**

CALLIPSO



Radiospectrometer: CALLISTO



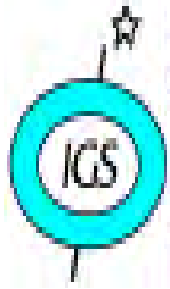
- ==== Control path
- ===== Signal path
- ↔ Control- data link Callisto/Host-controller

Frequencyrange: 50MHz...850MHz
 Frequency resolution: 62,5KHz
 Bandwidth: 280KHz
 File: spectrometerV2.ppt, 2002-12-4, Monstein

SAVNET



GPS



International GNSS Service
Formerly the International GPS Service

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

ESTRUCTURE



AWESOME
COLABORATIVE



MAGDAS



SAVNET



GPS



CALLIPSO

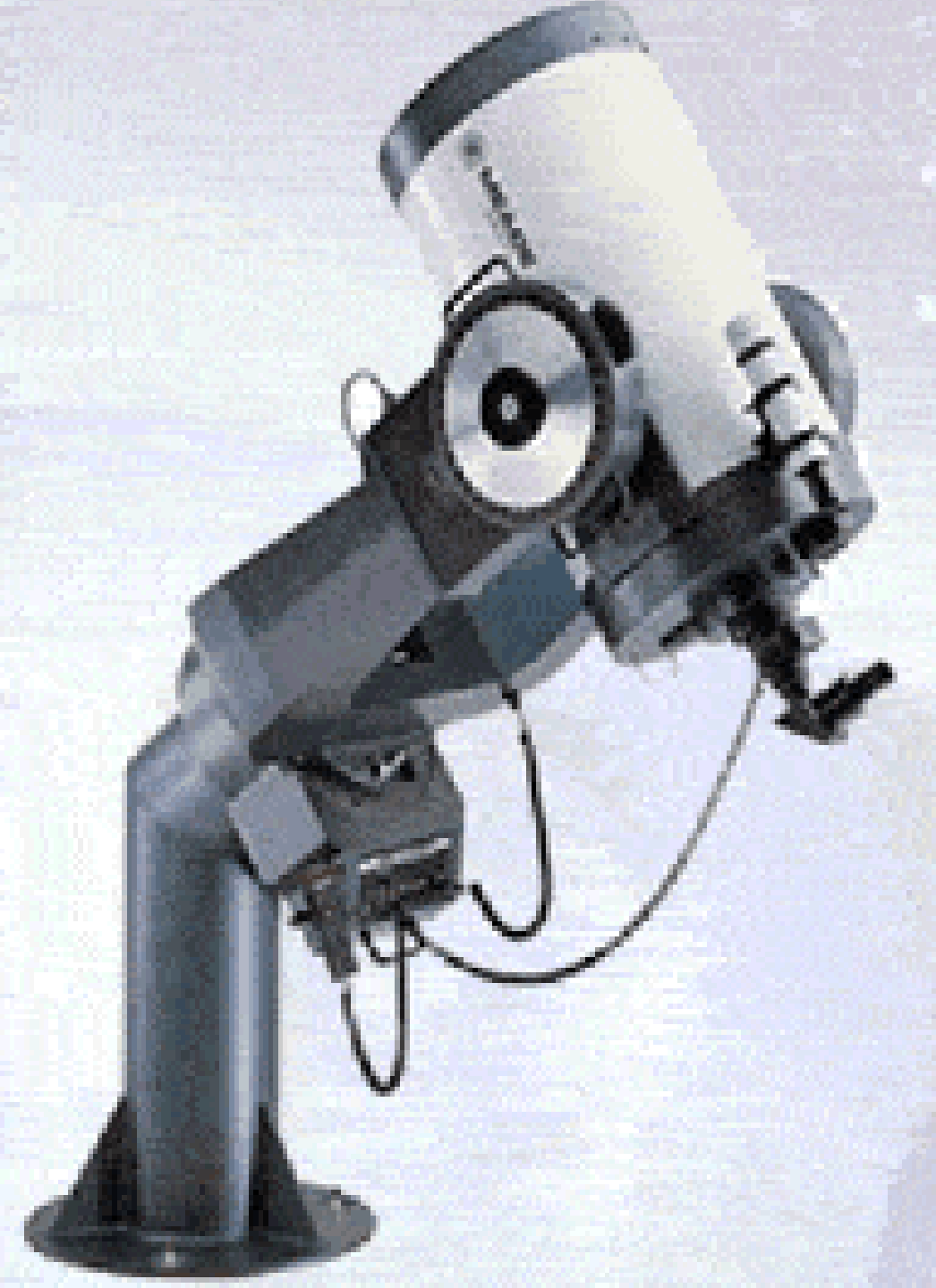
SPACE PHYSICS DIVISION

SOLAR PHYSICS PHENOMENA DIVISION

QUITO ASTRONOMICAL OBSERVATORY

FACILITIES

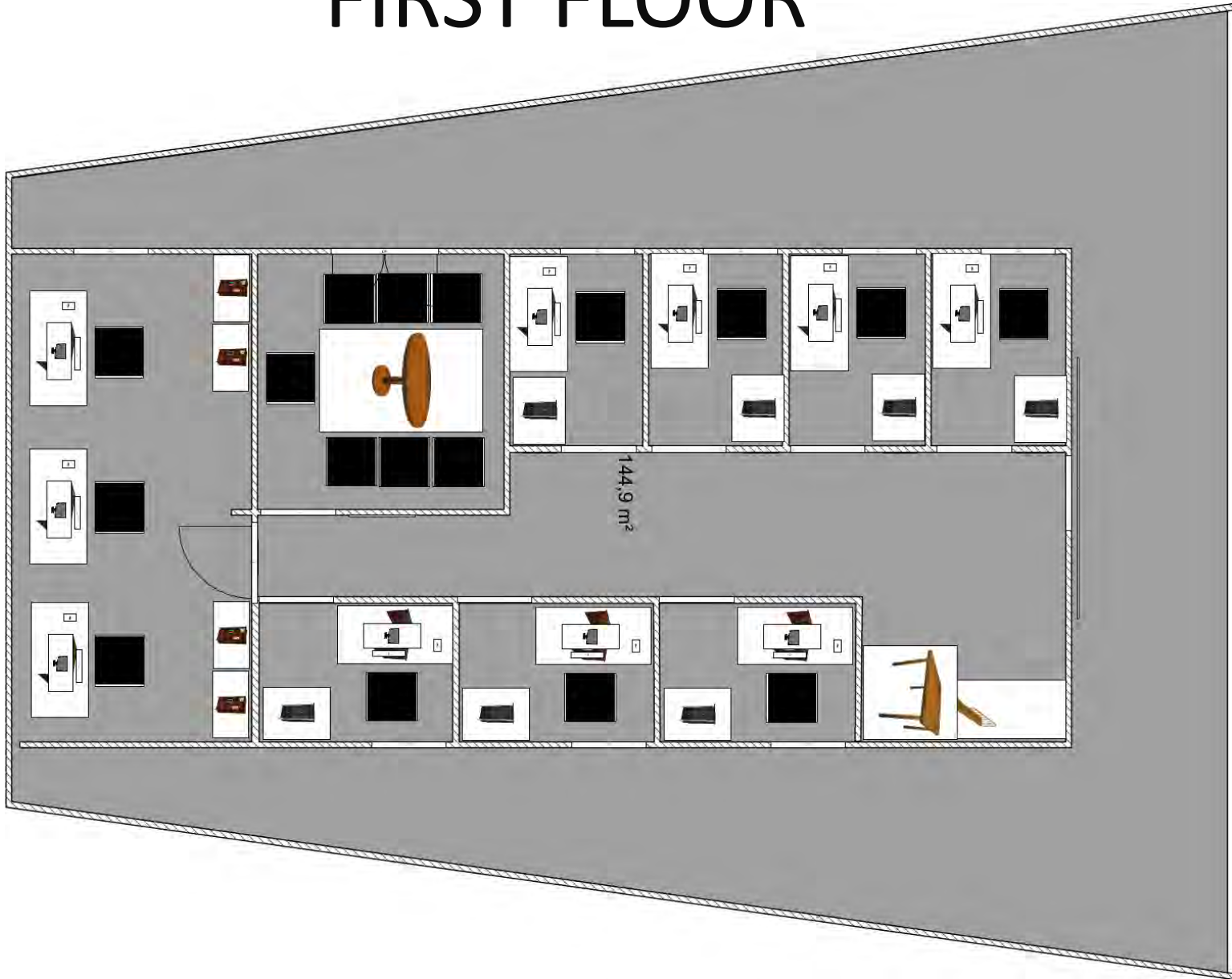


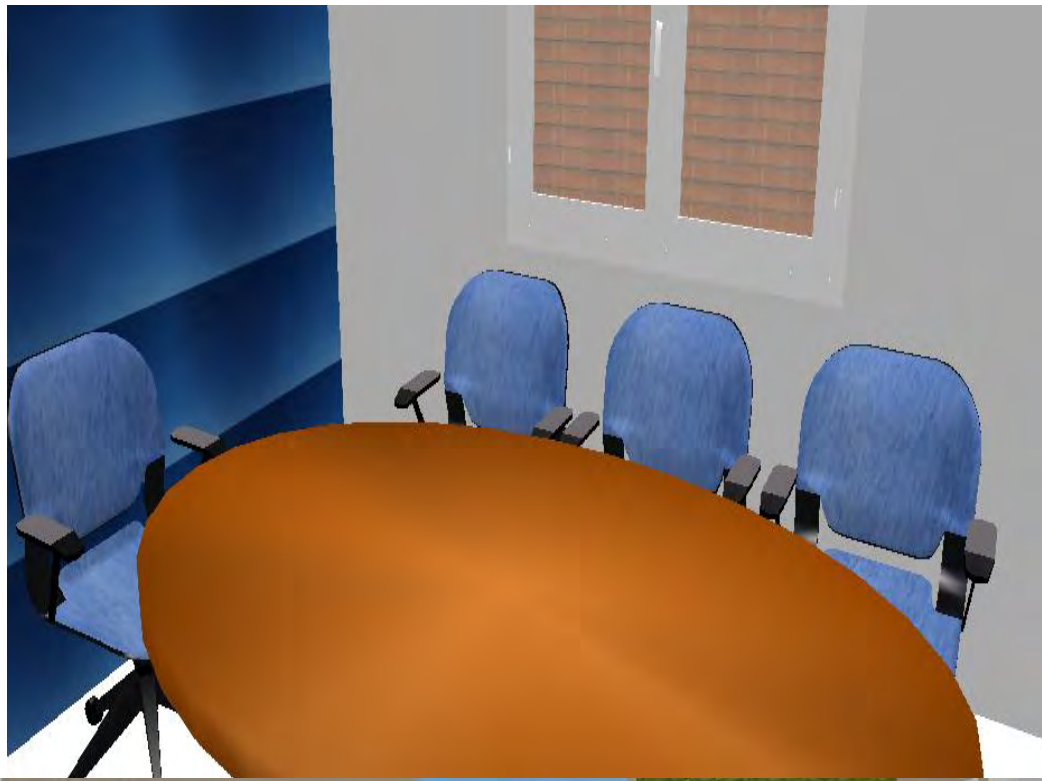


SOLAR PHYSICS PHENOMENA DIVISION



FIRST FLOOR





MEETING ROOM

RESEARCH OFFICES



DATA PROCESSING CENTER



UP THE SECOND FLOOR



SECOND FLOOR

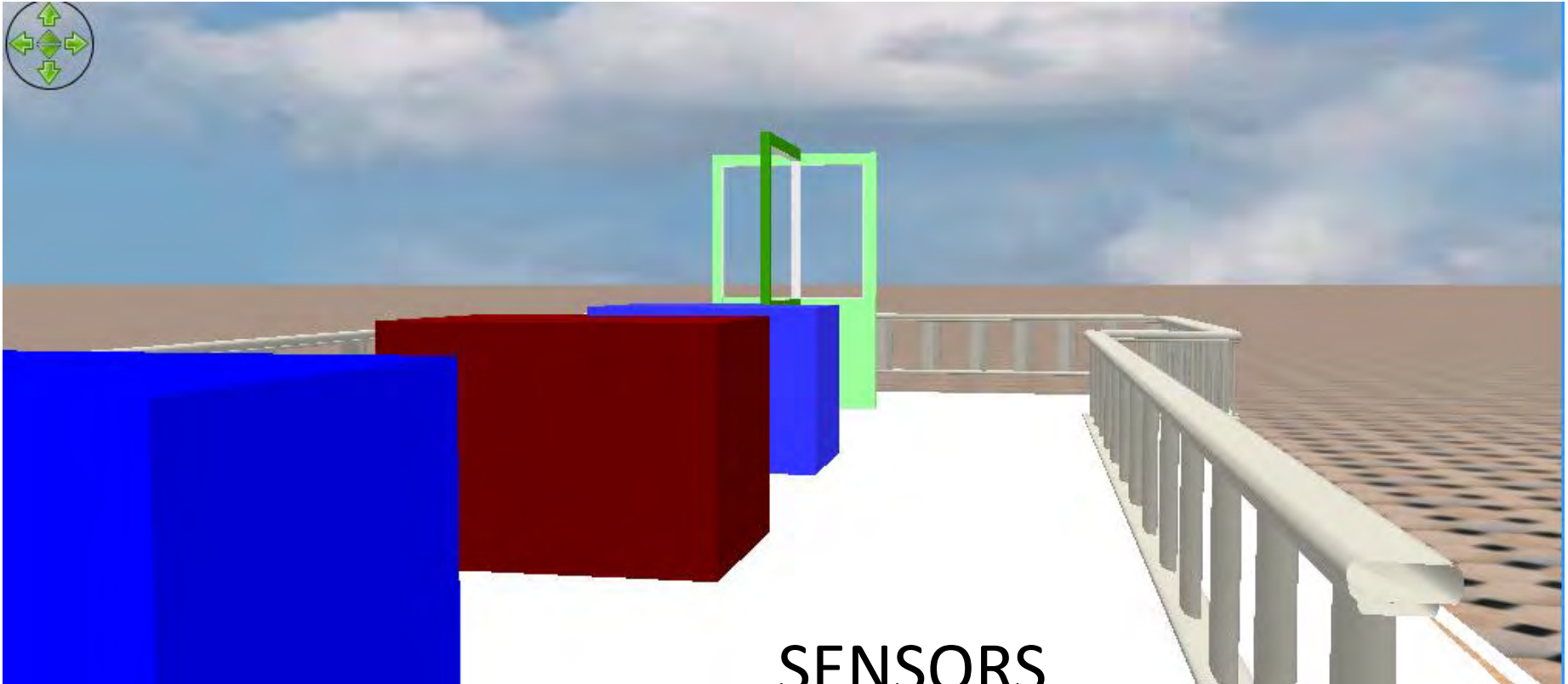


LABORATORY PROJECTS

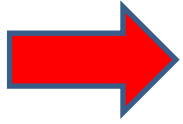
ACCESS TO TERRACE



TERRACE

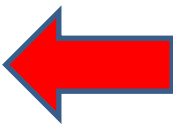


SENSORS



QUITO

JERUSALEM



National Polytechnic School

