



علم الفلك في الجزائر

Astronomy in Algeria

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Astronomy in Algeria



I - Astronomers as Society Science Relays (SSR's)

- *Astronomers are a big asset to society...*

II – Professional Astronomy in Algeria

- *History of Astronomy in Algeria*
- *Academic programs*

III – Amateur Astronomy in Algeria

Astronomers Versus Physicists

- *Astronomers are a big asset to society*
- *Who is more useful to society, astronomers or physicist?*
 - 1- Astronomers are more useful*
 - 2- Every physicist who respects himself ought to be an astronomer (cognizant of astronomy) anyway!*
 - 3 - Furthermore, every astronomer is a bonafide physicist (or almost all)*

Astronomers as SSR's

- **What is my point in comparing them?**
 - *At the conceptual level we know that they are pretty much intertwined:*
 - ... the same laws of physics are used to describe what is going on at the smallest as well as the largest one...
if you don't push it too far!
 - *In the seventies, the marriage between particle physics and cosmology has taken place !*
 - L.Lederman made this very pithy statement:*
 - *“Particle physicists look down with their microscopes and astrophysicists look up with their telescopes and find they are looking at some of the same things...”*

Astronomers as SSR's

- So what makes it so useful, what makes it such a great societal asset?

You know the answer:

In order to spread scientific culture !

Is there a better way to do that than by using Astronomy?

The science which draws:

- the grand picture, the grandest of all

- establish the grand connections,

In the public's eyes, it is the épitomé of science, the easiest to popularize (Thanks in no small measure to Hubble)

Astronomy

- **The Science of:**

The (most) beautiful

The (most) mysterious

The (most) adventurous

The ever unfolding news (higher and higher z galaxies, new extrasolar planets ...)

The "spiritual" (Asking existential questions about yourself, your place in the Universe, about its creation...)

Astronomy :

- **It is by far the easiest science to popularize.**
- **It is the only discipline which can fire up people's imagination, and make science palatable in general.**

CONCLUSION

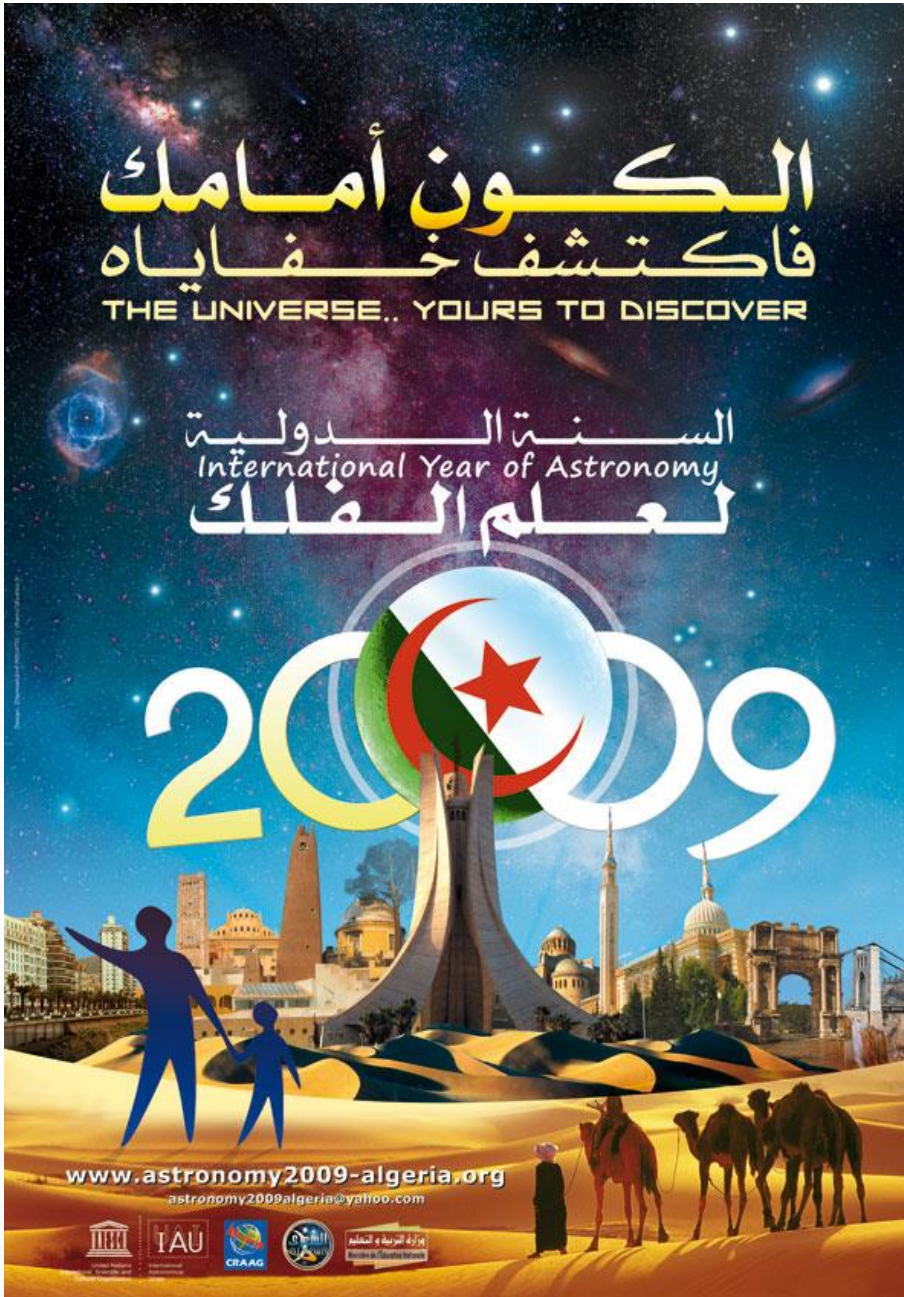
As scientists, astronomers in particular have a dual role to play in their societies:

1 - Producing knowledge

2 - Be SSR's (Society Science Relays)

One can't be an effective science communicator if one has not tasted science, its excitement, its frustration...

Thus the importance of being (or having being) an active scientist to be an effective Science Communicator.



International
Astronomical
Union



United Nations
Educational, Scientific and
Cultural Organization

Astronomy in Algeria

N.Seghouani & J.Mimouni

- Astronomy in the Northern half of Africa
- Astronomy in Algeria
- Some bright events that took place during IYA 2009

Astronomy in Medieval Era till the 19th century

- Astronomy in Algeria during this period (10-19 century) was very prolific.
- Many Algerian scholars were working in astronomy :
 - *Ibn Qunfudh* (XIV) born in Constantine 1330 (position of stars, astronomy mathematical ...)
 - *Al Habbak* (XIV) Born in Tlemcen (well known for his work on astronomical calculations, and astrolabe making...)
 - *Al-Akhdari* (XVI) , *Al Buni* (XIth century)....
 - *Al Hafidhi* (XIX-XX)
- The city of Béjaia, as an example, has known great scientific development, and has welcomed many scientists across the world (*Fibonacci(1175-1250)*, *Abu'l Hassan Ali*, *Al Raqqam*...)
 - Algeria → Important historical legacy in Astronomy

Astronomy during the Colonial era

- 1830-1962 : French Colonization
- Creation of a meteorological station at Algiers in 1856 (Paris's Observatory)
- 1883-1890 **Creation of the Algiers Observatory at Bouzaréah** (Altitude 345m)
- It is the second observatory in Africa (after the Observatory of Cape Town 1820)
- The main buildings : Library, administration are very similar to Nice Observatory



b Astr
Office





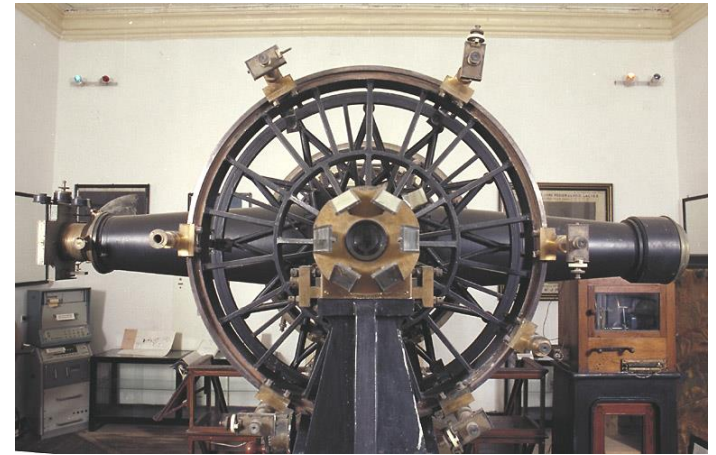
**L'Astrographe or
Equatorial Photographique (1890)**

Gautier ($\text{Ø}=34\text{cm}$ et $f=3\text{m}43$)

Main Project at the Observatory (1895)

Sky Map Project (Carte du Ciel)

***Actually there is more than 5000
photographic plates*** stored there



**Lunette équatoriale (refractor):
Le Grand Cercle Méridien (1888)**
Gautier ($\text{Ø}= 19 \text{ cm}$ et $f= 2\text{m}30$)



Télescope de Foucault (1888)
September 1861
The Telescope was fabricated by
Secrétan:
Newtonian, $\varnothing=50$ cm, $f= 3m50$



L'Equatorial Coudé (1888)
***Gautier* ($\varnothing= 32$ cm et $f=6m60$)**

- Today, Algiers Observatory host the CRAAG which is a research center in Astronomy & Geophysics
- 3 Research Departments : Astronomy, Geophysics & Seismology.



The Post Independance Astronomy in Algeria

- **The legacy of the Bouzaréah Observatory near Algiers**
 - *The “Carte du Ciel” project.*
 - *Not one single Algerian astronomer was to be found at Independence time.*
- **Astronomy survived in the sixties and seventies**
 - Algerian astronomers were home bred ...*
 - *The research centre in Astronomy was dependant to the Interior Ministry as part of the CRAAG (Seismic monitoring...)*
 - *The lack of any link with the academic sector (Thus only in house evaluation...)*
- **The disappearance act in the eighties**

The Post Independance Astronomy in Algeria

- ...
- **The Nineties and its slashed hopes**
 - *An astrophysics Dept. project at Emir AbdelKader University at Constantine which however didn't come to light*
 - *Start of a graduate study program in astrophysics at Blida University, near Algiers*
- **The coming of age of the national « Ecole Doctorale d'Astrophysique » in 2007**
- **The project of a National Observatory in the Aurès mountain range**
- **The Master Program in Astrophysics, Constantine University**

Astronomy and Astrophysics in Algeria

- *Ecole Doctorale d'Astrophysique (Graduate program in Astrophysics) Collaboration between 4 Universities & research centers.*
- *Master of Astrophysics at Constantine Univ. and Bab Ezzouar Univ. (Algiers)*
- *Master of Astronomy and Space Science at Sétif University*

The Aures Observatory Project

- **A New Observatory planned to be set up in the Aurès mountain range**

The first observatory since the independence of Algeria. In fact the second one of importance after the Bouzaréah observatory built in 1883

- **Another one planned in the Hoggar mountain range in the Southern part of Algeria**

- Go to the site



Amateur Astronomy activities

- Quite few astronomy clubs and associations
Mostly affiliated with the Ministry of Youth and Sports... but uneven level of activities.
- El-Battani (Oran), El-Birouni (Algiers), El-Bouzdjani (Médéa), Sirius (Constantine), Amnir, Angham El-Hayat (Ghardaia), Ibn Haitham (Ain Fakroun), Aster (Kherrata)...
- But only few associations are independent and have members with adequate training ...

To Conclude...

- Astronomy in Algeria has an important historical legacy...
- Education and research are growing, and a large number of new Phd's is expected in the near future.
- Amateur astronomy is also growing ...
- People from all walks of life are much attracted to astronomical events and activities.
- Need of a working observatory both for research purpose, and for education and outreach.
- Collaborative programs with the Tunisian associations

Astronomy Year 2009 in Algeria

Various documents, reports, diaporamas... at:

<http://www.siriusalgeria.net/iya09/ProgIYA09Algeria.htm>





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