

W. Orchiston presented also a poster on *Solar Radio Astronomy in New-Zealand 1945-1948*. Radio astronomy was also present with a poster *Development of Radio Astronomy in Ukraine* by **L. Litvinenko** and **S. Braude** (Institute of Radio Astronomy, Kharkov; Ukrainia). *History of Astronomy in Honduras : An Outline of its periods* was the title of the poster from **M.C. Pinedas de Crias**, **J.R. Sanchez** and **L.A. Sanchez** (Universidad Nacional Autonoma de Honduras). A similar subject was the purpose of the poster from **J.G. Trejo** (Instituto de Astronomia UNAM/INAOE) *The Astronomy in Prehispanic Mexico*.

Among the Works in progress and also on the occasion of the Report concerning the **Working Group on Archives**, several papers and posters showed the great value of historical records of astronomical results, observations or phenomena for the modern research.

MODERN ASTRONOMY AND ITS ARCHIVAL MATERIAL IN THE AFRO-ASIAN OBSERVATORIES

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In contradiction to the history of traditional astronomy during the ancient and medieval periods in the Afro-Asian countries, the origin and development of twentieth century (modern) astronomy in these countries is hardly known. However here, we wish to confine ourselves to just mention the instrumentation (size of telescopes with year of acquisition or operation), the programme of work or contribution to any world-wide astronomical project (e.g., Carte du Ciel etc.), the existence of any archival material at a number of Afro-Asian observatories. We are not including China, Japan and South Africa here, for want of space. We use below the following abbreviations: **obsn.** for observations, **obsy.** for observatories, **arch.** for archival material, **tel.** for telescope, and **part.** for participation/collaboration.

1. *Algeria*: **tel.** (1989), **part.** Carte du Ciel project, **arch.** 5000 plates, also atomic clocks, **part.** Bureau Internal. de l'Heure. 2. *Egypt*: 30" **tel.** (1903), 74" (1964), **obsn.** stellar, **obsy.** at Helwan, El-Kottamia. 3. *Indonesia*: 7" **tel.** (1920) presented by De Sitter, 60" (1928), 51" Schmidt (1959), **obsn.** visual doubles, globular and galactic cluster in southern sky, **part.** Kavalur (India) programme, **arch.** 1070 plates, **obsy.** Boscha. 4. *Iran*: 7 **tel.** 20 cm to 51 cm, **obsy.** at Shiraz, Tabriz, Meshhad and Tehran, established 1955-92, **obsn.** eclipsing binaries, light curves analysis, stellar evolution etc. 5. *South Korea*: 6 **tel.** 30 cm - 75 cm, **obsy.** estab. 1976-93 also at universities, **obsn.** photo-electric and CCD photometry of variable stars, of comets, of close binaries, of cluster and galaxies etc., planned two 75 cm, one 1.8 m **tel.** and one 1 m APT. 6. *Tajikistan*: 5"-8" reflectors at Dushanbe (1932-40), astrographs, **tel.** 20 cm and 70 cm, **obsy.** at Hissar (1963-70), **obsn.** meteor patrol, comets, variable stars, **arch.** meteor photo-plates. 7. *Saudi Arabia*: 19 **tel.** 6"-21" at university **obsy.** at Riyadh, Jeddah, Hail, include Coudé, Riche-Chriterian and Schmidt, also atomic clocks, CCD camera and 3 m radio **tel.**, **obsn.** crecent visibility, photometry etc. **arch.** 10 yrs. of solar data. 8. *India*: Optical **obsy.** at Kodaikanal **tel.** 6" (1900) and twin spectro-heliographs, Hyderabad **tel.** 15" Grubb (1908), & 48" (1963), Nainital **tel.** 10"-40" (1954-60), Kavalur **tel.** 40" & indigenously constructed 90" (1985), Udaipur 16" solar **tel.** (1975); other **tel.** at Bangalore 10.4 m millimeter-wave, at Ooty 326.5 MHz radio **tel.** (1970), at Mt. Abu IR **tel.** 1.2 m, at Gulmarg & Pachmarhi g-ray **tel.** (1985-86). Future plans

for a Giant Metre-wave radio **tel.**, **obsn.** whole e.m. spectrum, stellar and inter-stellar, galactic and extra galactic, planets & comets, **arch.** solar records since 1900, solar eclipses, variable stars, radio X-ray and g-ray sources, **part.** Carte du Ciel (Hyderabad), GÖNG (Udaipur) etc.

It is clear from this listing, that Indian astronomical research is the most extended one, well developed in the last three decades; that of Indonesia is also appreciable. South Korea will surely develop astronomy research even in universities at the turn of the present century. Many countries in the Middle East, especially North African *Maghreb*, are still struggling, although Egypt has a long standing of astronomy & Iran is following suit. However all of us, including India, are quite weak in astronomy education in the universities. For instance, out of 150 Indian universities only two at Hyderabad & Patiala have astronomy departments. Consequently we are more concerned with manpower problem than that of archival material, despite the world-wide importance of the latter. We intend to publish a detailed write-up elsewhere.

The author gratefully acknowledges the cooperation of colleagues & directors of observatories for providing information quite promptly.

UP TO DATE PROPER MOTIONS OF STARS FROM OLD "CARTE DU CIEL" PLATES

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The year 1887 was launched at the Paris Observatory, under the suggestion of Mouchez (then director of the Observatory) and of Gill (then director of the Cape Observatory), an international enterprise named "Carte du Ciel". It was a consequence of the development of photography during the 19th century and the level of quality attained during the eighties at the time a great comet was obtained on a plate together with an incredible number of stars. During the 87 meetings and the following ones, it was decided that there would be two programmes : - plates for the "Carte" of the Carte du Ciel with three exposures of 30 min in triangle for each case ; - plates for the "Catalogue" of the Carte du Ciel with three exposures of 30s, 5 min and 5min 30s on a line for each case.

Around 1900, and in some cases, a little further, 17 or 18 observatories participated and some re-observations were performed around 1950. During the 1970 GA, Paul Couderc has given a report about the achievement of the work for the Carte du Ciel programme. In most cases the plates are still in existence, kept in various observatories and catalogues were published. Published data and plates are both in use nowadays as it can be seen from a meeting held in Cambridge in June 1993 on the subjects "Galactic and Solar system optical astrometry". After one century, they constitute a "first epoch" for the modern observations, both from the ground and from space.

The value recognized in countries, such as UK, USA, Germany, Denmark, Ukraina, Russia,..., in the interest of the Carte du Ciel plates and the published corresponding catalogues, brings us to think about the conservation and preservation of archives, data and related documents for the coming generations, even in the case we do not know with great certitude what could be their use : an observational fact in astronomy can never be repeated...