



**International Workshop NAROO-GAIA "A new reduction of old observations in the Gaia era", Paris Observatory, June 20-22, 2012**

Registration of participants  
of Workshop NAROO-GAIA

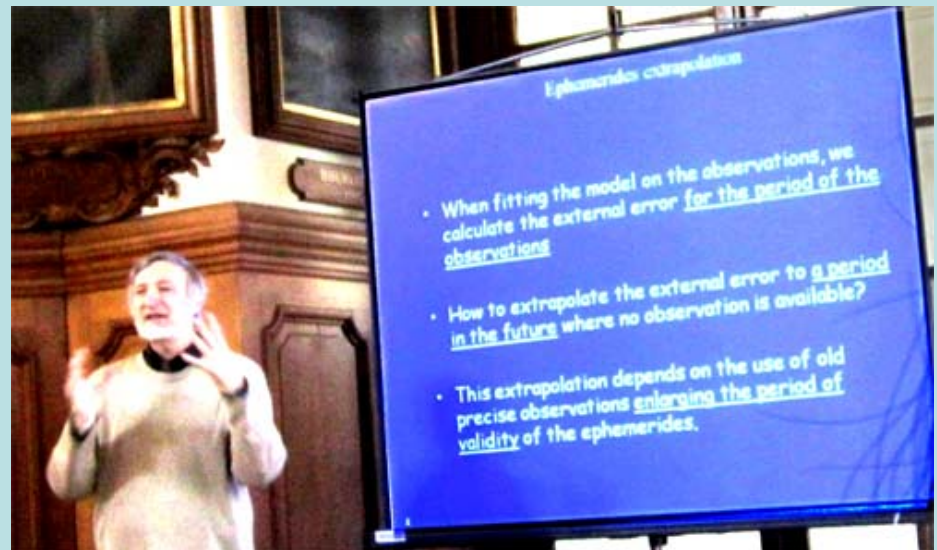


Before the first meeting



### OPENING OF THE WORKSHOP

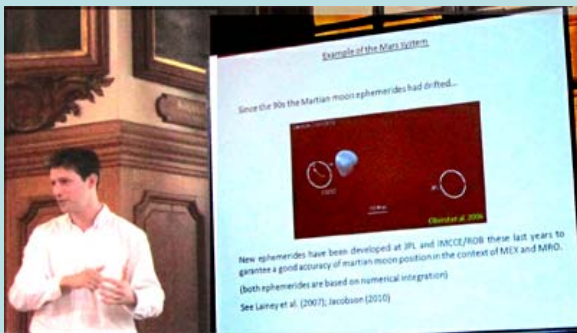
The natural planetary satellites are observed since centuries in order to understand their dynamics and their evolution. A high level astrometric accuracy is necessary for this purpose. How re-reducing old observations can help?



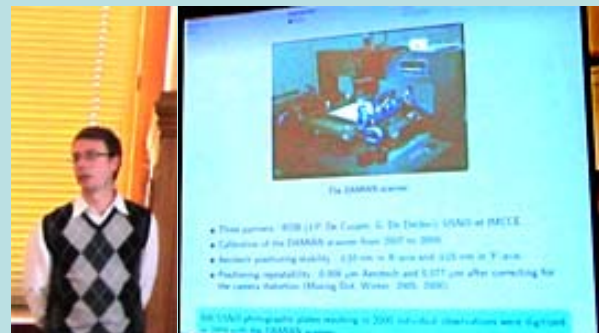
Chairman of the Workshop NAROO-GAIA  
J.-E. Arlot



# 20.06.2012. Session 1. Science results, reports, data mining.



**V. Lainey:** The accuracy of the dynamical models does not depend only on the accuracy of the observations but also on the length of the period of observations.



**V. Robert:** About 500 plates of the Galilean satellites made with the 26-inch refractor of USNO from 1967 to 1998 were digitized and reduced using the UCAC2 catalogue.



**L. Beauvalet:** Strong need of a new reduction of Pluto's old observations



**W. Thuillot:** Fast computation of orbits of a newly detected Near Earth Object is very important.



**M. Birlan:** Near-Earth Asteroids Data mining on Astronomical Databases: Euronear experience.



**N. Cooper:** We plan to create an online archive of 'raw' astrometric data for easy reprocessing using new catalogues such as GAIA.



**D. Pascu:** GAIA star positions will significantly improve astrometry of old plates with observations of the moons of Mars and of the outer planets taken at USNO from 1967 to 2003 and also CCD-frames.

At present archives of photographic plates there are in many astronomical institutions around the world. At the same time there are already large archives of observational data obtained from spacecrafts. The accuracy of these data exceeds the precision of the photographic observations.

So what is such nowadays the old photographic plates?  
Is it valuable scientific data, or old trash?



Discussions continue between meetings,

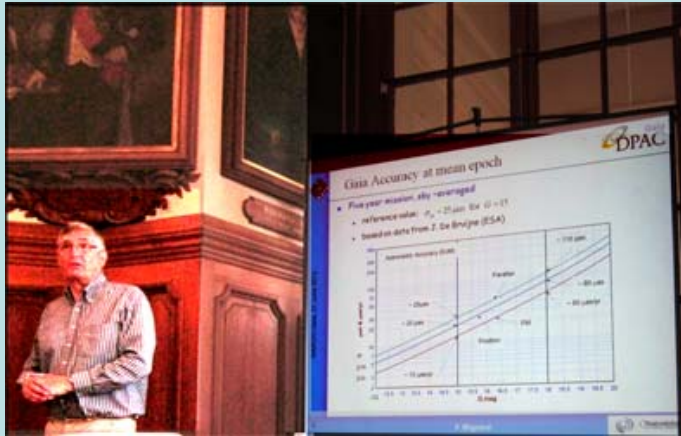


during coffee break

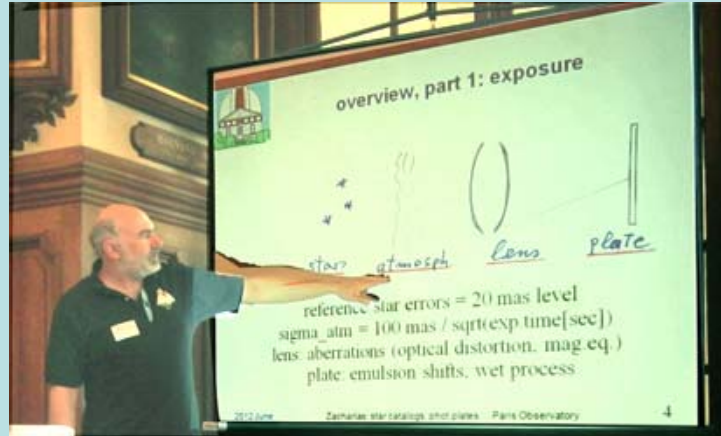
and even during dinner



# 21.06.2012. Session 2. Reduction, digitization, Gaia star catalogue



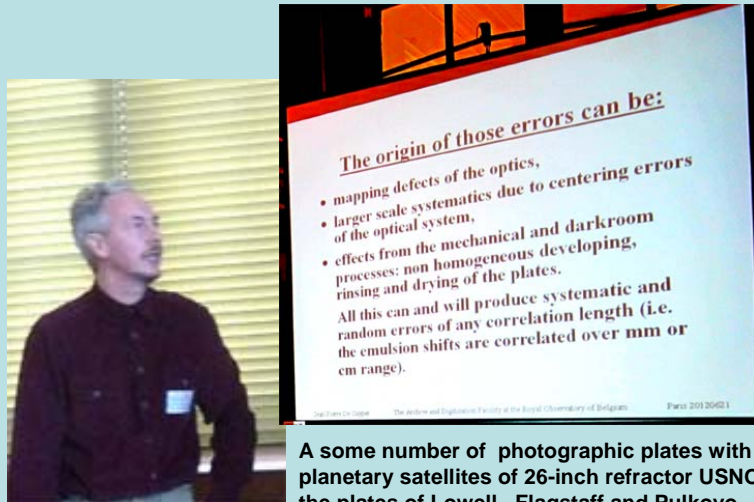
**F. Mignard:** Gaia is due for launch in the third quarter of 2013 and will open a new page in fundamental astronomy. The astrometric accuracy of Gaia catalogue will permit to know the positions of millions stars with mas accuracy almost 100 years back in time



**N. Zacharias:** The accuracy of the new reduction of photographic plates will depend not only on the accuracy of the reference catalogue.



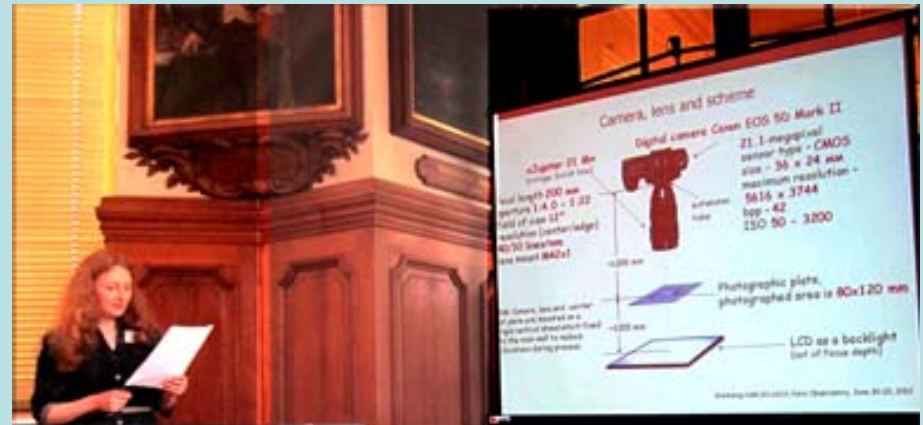
**E. Khrutskaya:** If measurement accuracy is about 1 micron and best, the accuracy of the new reduction largely will depend from quality of the photographic plate



**J.-P. De Cuyper**

A some number of photographic plates with planetary satellites of 26-inch refractor USNO, the plates of Lowell, Flagstaff and Pulkovo observatories were digitized by the Damian digitizer.

Our goal is to have a digitizer with a precision < 0.1  $\mu\text{m}$  of the extracted astrometric positions on the plates.



**E. Grosheva:** It's difficult to compete with Damian digitizer.... The accuracy of Mobile Digitizing Device can be estimated more objectively by comparing the results of a new reduction for plates digitized with using the Damian and MDD



**D.A.Nedelcu.** Analysis of the photographic plates of the Bucharest Observatory photographic plates had been made



**Li Shan-Na.** Improvement of the old reductions of irregular satellites using the first publications of the data



**N. Emelianov.** The plate archive of the Sternberg Astronomical Institute



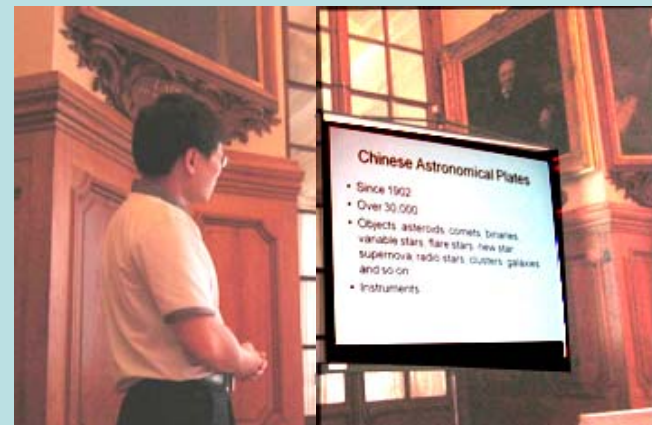
**J. Berthier.** The IMCCE VO Solar System Portal



**N. A. Shakht:** The most interesting objects for observation during space mission Gaia are proposed.



**A. Vienne:** A new approach for the correction of the geometric distortion is proposed.



**Tang Zheng Hong.** Work plan of digitizing Chinese photographic plates



# 22.06.2012. Session 3. Photographic archives and databases



**I. Kulyk.** Database of photographic observations of natural satellites obtained at the Goloseevo observatory of Ukraine during 1961-1990



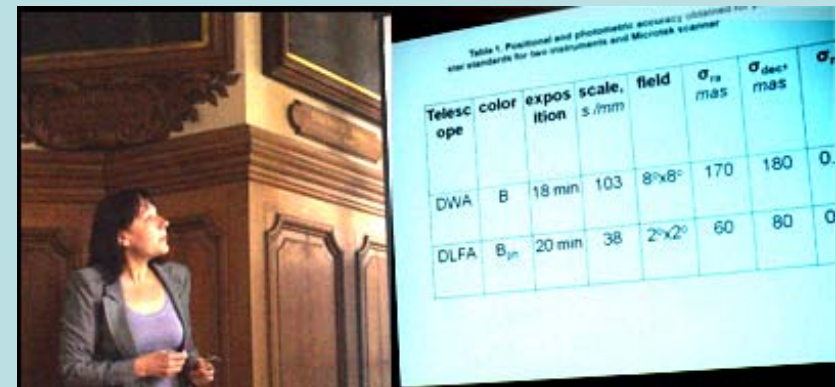
**A. Ivantsov.** Archive of photographic plates in Nikolaev Observatory of Ukraine.



**C. Murray.** The RGO Archive



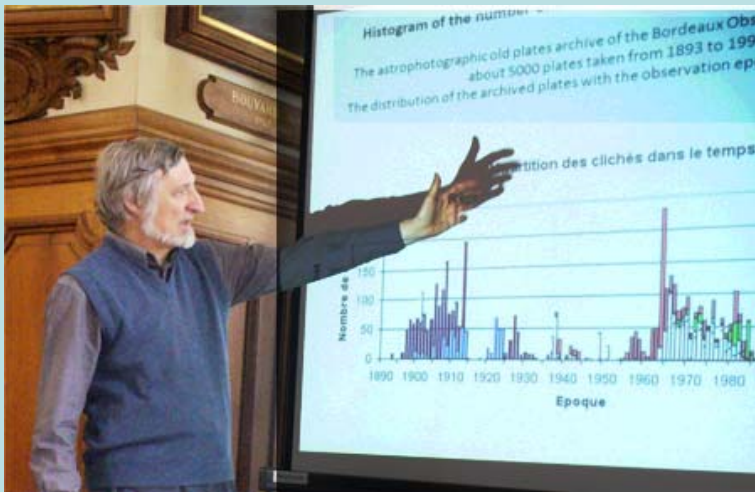
**E. Bertin:** The DANCe project aims at deriving a comprehensive census of the stellar and substellar content of a number of nearby (<1 kpc) young (<500 Myr) associations.



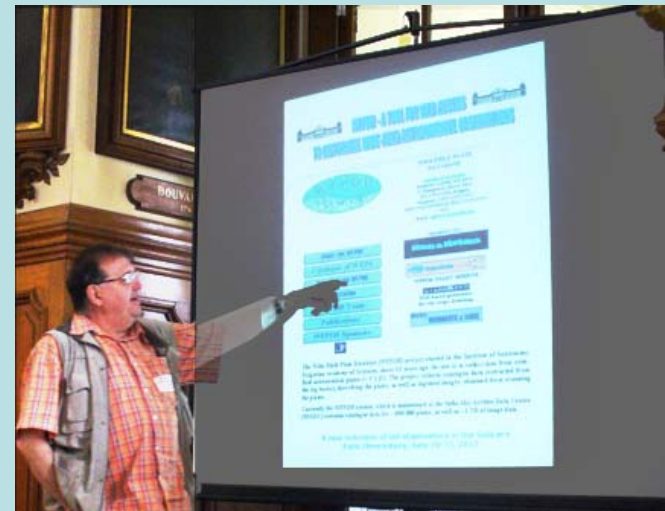
**I. Kulyk.** Archive of photographic plates in Goloseevo Observatory of Ukraine.

**Xi Xiaojin.** The works in field of improvement of the orbits of planets in NTSC for almost 30 years.





**J.-E. Arlot:** The astrophotographic old plates archive of the Bordeaux Observatory has collected about 5000 plates taken from 1893 to 1996.

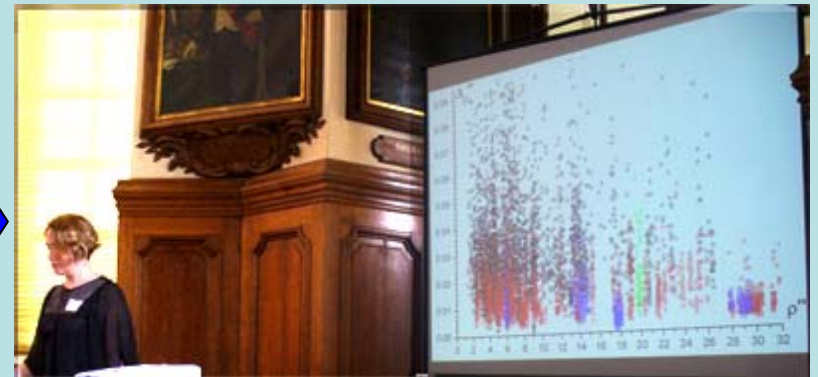


**M. Tsvetkov:** The Wide-Field Plate Database (WFPDB) as a basic source of data for the wide-field astronomical photographic plates obtained with professional telescopes worldwide, is presented.



**K. Tsvetkova:** The last version of the Catalogue of Wide-Field Plate Archives (CWFPAs) from January 2012 is presented.

**O.O. Vasilkova:** Results of re-measurement and a new reduction of photographic plates of the Pulkovo catalog of visual - double stars are presented.



**J. Souchay:** Astrometry and light curves with SUBARU telescope.



# 20.06.2012. Excursion to the museum of Paris Observatory

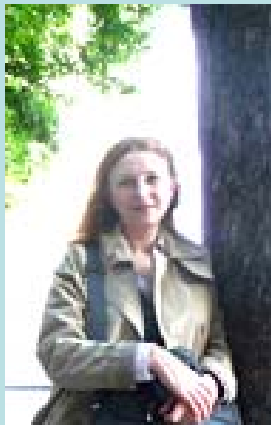


The Paris Observatory is the oldest of now working in the world. The building of observatory was begun in 1667 by order of Louis XIV and it was finished in 1672. Claude Perrault projected the building and directed its construction.





22.06.2012. Evening walk through Paris



The Workshop is over, it was time come back home and to ponder about the benefit of old photographic observations.

My best wishes to all participants of the Workshop NAROO-GAIA.

*E.Khrutskaya*

