

Willem Wamsteker (1942-2005)

It is only fit that the proceedings of this conference be dedicated to the memory of Willem Wamsteker. Indeed, Willem, who passed away on November 25, 2005, played a major role in promoting ultraviolet astronomy and federating the UV scientific community worldwide, but particularly in Europe.

Willem Wamsteker was born in Haarlem, The Netherlands on 23 November 1942. He went to school in Overveen and then went to study at the Sterrewacht – part of Leiden University. In 1969 he moved to the United States where he stayed until 1975. While in the US he worked with G.P. Kuiper at the University of Arizona where he made observations of the satellites of the major planets that later formed the basis of his Ph.D. thesis. He also worked at NASA's Marshall Space Flight Center. He obtained his Ph.D. in 1975 at Leiden, under H.C. van de Hulst, with his thesis on "A Narrow Band Spectrophotometric Study of the Major Planets and their Large Satellites". In 1975 Willem moved his family to Chile where he worked as a Staff Astronomer for ESO (European Southern Observatory).

He joined the European Space Agency (ESA) in 1980 as the third and by far the longest serving Observatory Controller of the International Ultraviolet Explorer (IUE). In his combined role of Project manager and Project Scientist, he oversaw the fate of IUE until the mission was terminated in 1996. IUE was ESA's longest lasting science project. Willem did not finish with it at termination. He then brought the project to an effective conclusion, including the IUE New Extracted Spectra System (INES), the archive system set up in cooperation with the Spanish institute Laboratorio de Astrofísica Espacial y Física Fundamental (LAEFF). Following this Willem was appointed as Multi-Disciplinary Scientist in ESAC, the European Space Astronomy Centre (formerly known as VILSPA) and as such continued his devoted support to UV astronomy as well as his involvement in the World Space Observatory (a project close to his heart). His contribution to the ESA/UN series of workshops, promoting space in parts of the world not normally associated with such activities, was much appreciated and earned him the respect of many.

Willem was my hierarchical manager from 1984, when I (re)joined the team in charge of the European leg of the IUE observatory, to 1991, when I moved toward the Infrared Space Observatory (ISO) project. He was probably the best “boss” I ever had. He was always fair and helpful, doing his best to protect his staff from administrative hurdles and to provide them with the best possible scientific environment. Because he worked very hard himself, he also demanded much from his team. This was no problem since we were all glad and proud to serve under him for what was then the only UV observatory in the world. Indeed, Willem's enthusiasm was so contagious that it was impossible to resist his plans. And plans he had. For instance, he was one of the first to conceive and implement an on-line electronic archive. At the time in 1985, the primitive network capacity imposed severe constraints on the size of the files that could be downloaded. Thus was born the Uniform Low Dispersion Archives (ULDA) which Willem conceived and had implemented in a few years. The ULDA provided European astronomers instantaneous access to all the low dispersion IUE spectra processed in a

homogeneous way. The ULDA was a resounding success. The rapid dissemination of data which it facilitated multiplied the number of active UV astronomers in the world and significantly enhanced the scientific impact of IUE, to the point that NASA, which was initially reluctant, was eventually forced to adopt and implement the ULDA as well.

Despite the heavy burden of his IUE managerial responsibilities, Willem remained scientifically active throughout his life. Here again, his talent to organise and motivate played a vital role in the success of major scientific projects. The one I was most closely associated with, the so-called “AGN Watch”, was very much conceived by Willem, with me as an associated conspirator. In the mid-1980’s, several teams around the world were involved in intensive spectroscopic monitoring of Active Galactic Nuclei (AGN): the goal was to obtain light-curves for the continuum and the emission lines sufficiently well sampled that one could cross-correlate them and measure their respective time lag. The lag is a direct measure of the photon travel time from the accretion disk to the so-called Broad Line Region (BLR) responsible for the emission of the broad emission lines characteristic of AGN and quasars spectra. Knowing the BLR length scale and bulk velocity, it was then trivial to derive an estimate of the mass of the central black hole. The technique has been applied many times since then and has yielded important results on the structure and evolution of AGNs. At that time however, one was limited by the very large amount of observing time required to achieve densely sampled light-curves. It was also soon realised that the best way to do that was in the far ultraviolet, because of the access to many important resonance lines, of the proximity of the ionising continuum but also because observations from space guaranteed the photometric homogeneity of the data. Hence, Willem, together with a handful of influent scientist from all over the world decided to create collaboration large enough as to secure the amount of observing time required for the project. The “AGN Watch” collaboration was born at a workshop which Willem and I organised in Segovia in September 1987. By cumulating ESA and NASA observing time, it was possible to obtain IUE spectra of the AGN NGC 5548 every 4 days during 4 months. The campaign was carried out in 1989 and the final result published in 1991 contained the first convincing proof that the BLR was photo-ionised and only a few light days across. It is worth noting that the data were put at the disposal of the entire collaboration almost immediately after they were acquired. This turned out to be an essential measure to build trust within the collaboration and stimulate the analysis and interpretation of the results. The ULDA played a significant role in facilitating the rapid dissemination of the spectra. I am convinced that the AGN Watch would not have been possible without Willem. His enthusiasm and profound honesty played a crucial role in forming and maintaining the large collaboration together and focussed toward one single objective. Willem had no personal bias in this endeavour and was only author number 10 of the final article which had 57 co-authors. He would gladly leave his place to his collaborators if he thought it best for the project. His true motivation was to get the best possible science, full stop. Indeed, Willem was a profoundly generous person. It his generosity which made miracles happen, because it was infectious. Generosity is the quality for which I remember him most. And it is because Willem gave without counting to the IUE project, to UV astronomy, to science in general, to his colleagues, to his friends and to his family that we all miss him so much.