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## Jan Hendrik OORT (1900–1992) – Looking Ahead in Wonder

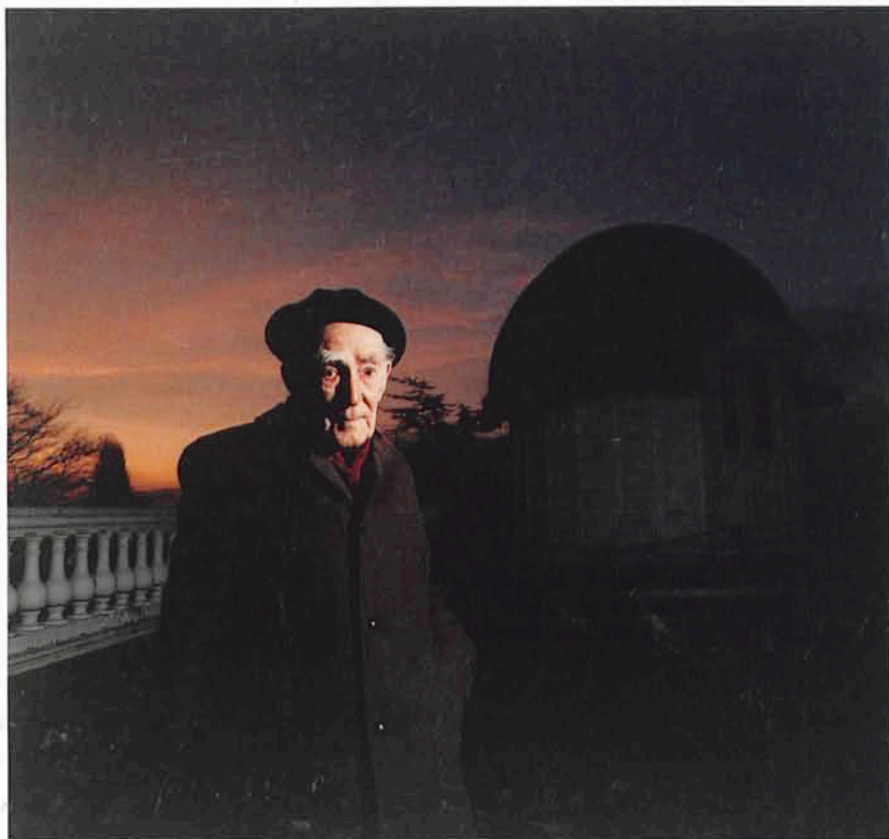
The life of the man I think of as this century's greatest astronomer ended on 5 November 1992, a life long, rich, full of arduous labour and marvellous results. Without Jan Oort, ESO would not have begun when it did, indeed without him ESO might never have been. Yet our Organization's birth is but one of his many achievements and as we gratefully remember him, his life is an inspiration unparalleled in our science, an epoch-making journey of our time.

At Leiden Observatory – de Sterrewacht de Leiden – which was Oort's base for most of his professional endeavours, a careful compilation of his writings, including notes and correspondence, has been prepared and recently published, the archive deposited with the Leiden University Library, readily accessible for historical research. In 1980 friends and colleagues wrote a book, a *liber amicorum* for and about him, called *OORT and the UNIVERSE*. Shortly thereafter Oort himself wrote one of his scarce autobiographical papers which appeared in the series "My life as an Astronomer", in the 1981 issue of *Annual Reviews of Astronomy and Astrophysics*. A fascinating biography remains to be written.

Professor Oort managed in some inimitable way to combine his teaching and research in the university context with policy making, programme development and organizational actions on both the national and international

scenes. His research spans seven decades: from his first paper, in 1922, entitled "Some peculiarities in the motion of stars of high velocities" to the last one I

found (*MERCURY*, March/April 1992), on "Exploring the Nuclei of Galaxies (Including our Own)". Oort normally dealt with major themes that he pursued for



J.-H. Oort at the Leiden Observatory, January 1992.

Photo: Bert Janssen



years or even decades and to which he contributed insights which have often become authoritative standards in our science, sometimes the commonly shared features of mankind's worldview. Of the former I remember the influence I experienced of his classic paper with Walraven on the Crab Nebula in 1956. The latter certainly is the case for both the rotation of the Galaxy and the origin of comets. He was often decades ahead of his time, was for example lecturing on dark matter in 1926 . . .

Oort cannot be called an observational astronomer, but neither was he a theoretician. He could be more sceptical of clever theories than of even the shakiest of observations (at least if the latter fitted his intuitive expectations), his theoretical work was driven and directed by empirical evidence, by observations, by the phenomena for which he had an insatiable appetite. He was the *interpretive astronomer par excellence*, able always to discern features in maps and in other data sets which those who had so diligently acquired them had overlooked, could oft barely distinguish even when he pointed them out. One of the reasons he interacted so intensely with such an inordinate number and variety of astronomers, in conversation, in discussions, in correspondence, was surely his overwhelming interest in astronomical data, his contagious enthusiasm for observational discoveries and his impatience with the construction of new facilities. The last time I spoke to him he praised the NTT for the SHARP pictures of the Galactic Centre (referred to in his last article) and wanted a progress report on the VLT from which, especially in its interferometric mode, he expected wonders.

In the Netherlands Oort was the driving force and the guiding spirit of the team which from the simplest beginning with the Wurzburg dish at Kootwijk, via the Dwingeloo Telescope to the sophistication of the Synthesis Radio Telescope at Westerbork brought radio astronomy to its uncontested observational maturity in thirty years of unrivalled progress. While elsewhere radio engineers and physicists started and operated radio observatories, in Holland an astronomer from the start determined the observing programmes, the technical priorities and the next telescope's configuration. As a result the Dutch school of astronomy, perhaps before any other, became problem- rather than technique-oriented, working on astronomical themes and using whatever technique was available, in whatever wavelength region, as long as it contributed to insight in the problems astronomically posed and astrophysically interpreted. It is this approach which

caused Oort also to take major initiatives in Dutch space research.

Oort was in spirit and actions a world citizen. Aided by his fluency in four languages, he worked towards international collaborations, exchange and astronomical pooling of resources throughout his career. It was his fate, and the world community's good fortune that he was Secretary General of the International Astronomical Union in 1938. He held this office for a decade, carrying the IAU through those awful times with persistence, loyalty and the conviction that astronomy defies ideology and is a precious human endeavour. Unlike ESO's, I know of no written account for the development of the IAU; it will be very interesting to learn what its archives can reveal of this period in IAU history.

Adriaan Blaauw's book "ESO's Early History" has an index where Oort's name stands out by its long list of page references. More than quantity though, it is the substance of Oort's contributions to ESO which is vital and unique. An idea conceived at Leiden in discussions between Walter Baade and Jan Oort in 1953, it took ten years to bring it to first fruition, marked by the signatory ceremony of the ESO Convention in Paris on 5 October 1962. In the interval this splendid idea of ESO was threatened numerous times and it was the tenacity of Oort, who untiringly used his linguistically supported diplomatic skills, which ensured that the future remained open. Thanks in large measure to him, astronomy in Europe today possesses the exciting prospects to which this quarterly testifies each issue.

Overviewing Oort's scientific achievements and the size of his oeuvre, one is awed by the creativity of his long life. But assessing his organizational and policy accomplishments is an equally amazing experience. That one man should take several major initiatives and then lead such a large fraction to successful maturity is scarcely imaginable. The combination stands out as towering

productivity and unstinting devotion. To think however that this must have been a workaholic's life, neglectful of family and friends, is belied by all of us who knew him from close range. His family life was rich, as movingly attested by a son and a granddaughter at the memorial gathering on 10 November. Mieke and Jan were frequent and warmly attentive hosts to innumerable tea- and dinner guests. Those who discussed literary works with Jan, rowed with him or skated through the wintry polder landscape north of Leiden know how broad his interests and how varied his exertions were.

Nevertheless, things astronomical were predominant in his life, especially the latest things and the things to come. The phrase in the heading of this In Memoriam is the title Oort wrote he would have given to the autobiography he did not write. He was forever curious about the latest results from telescopes, any telescope, he lived in anticipation of data to come, he hungered for perspectives in regions where his mind sought to penetrate; he died, as a well-known Dutch weekly headlined its obituary, "with a head full of questions".

The Oort family, in the official announcement of their husband's father's, grandfather's and greatgrandfather's death, cite from Loren Eiseley's "Immense Journey" a passage so quintessentially focussing his life that I repeat it here:

*"Down how many roads among the stars must man propel himself in search of the final secret! The journey is difficult, immense, at times impossible, yet that will not deter some of us from attempting it . . .; we will travel as far as we can, but we cannot in one lifetime see all that we would like to see or learn all that we hunger to know."*

It was our privilege to know Jan Hendrik Oort, to learn from him as we traveled far with him. It is our privilege to continue his journey.

H. VAN DER LAAN

## ANNOUNCEMENT

### 2nd Miniworkshop on Large CCDs

is planned for October 4-5, 1993 at the ESO Headquarters in Garching. As it was the case for the workshop held in June 1991, ESO solicits the participation of the groups in Europe who are active in this field and will secure the attendance of a few selected experts from overseas. We expect also presentations by the companies which are involved in the production of CCDs for astronomy.

Topics to be discussed are design, manufacturing and characterization of large-size CCDs, plans for future devices, control systems and developments related to data preprocessing and data compression.

If you are interested in future announcements, please contact:

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