

Curriculum Vitae

Surname: **HECK**
First names: André (Hubert Joseph)
Place and date of birth: Jalhay (Belgium), 20 Sept. 1946
Nationalities: Belgian (birth), French (2004)
Professional address: Observatoire Astronomique
11, rue de l'Université
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France
Phone/fax: +33 (0)388.50.87.72
E-mail: andre.heck@astro.unistra.fr
WWW: <http://astro.u-strasbg.fr/~heck>
Languages: Walloon (mother tongue)
French (education language)
English, Spanish (excellent knowledge)
German (fair knowledge)
practical notions of several other languages

Current Position

- “Exceptional-Class” Astronomer, Strasbourg Observatory, France (2008 to date)

Degrees

- Habilitation to Direct Research – Strasbourg I Univ. (1986)
- Prof. D.Sc. (Sciences/Astronomy) – Liège Univ. (1985)
- Ph.D. (Sciences/Astronomy) – Liège Univ. (1975)
- Master of Mathematics – Liège Univ. (1969)
- Master of Education – Liège Univ. (1969)
- several secondary degrees in astronomy, statistics, data handling, instrumentation, documentation techniques, marketing, communication strategies, and management

Past Positions

- First-Class Astronomer, Strasbourg Observatory, France (1997-2008)
- Astronomer, Strasbourg Observatory, France (1986-1997)
- Associated Astronomer, Strasbourg Observatory, France (1983-1986)
- Resident Astronomer, ESA IUE Observatory, Vilspa, Spain (1977-1980)
- Assistant Professor, Liège Institute of Astrophysics, Belgium (1970-1978)
- Junior Research Associate, Belgian Fund for Scientific Research, Liège Institute of Astrophysics, Belgium (1969-1970)

Visiting Positions

- Invited Chair Professor, Porto University, Portugal (October-November 1990)
- Associated Astronomer, Strasbourg Observatory, France (May-September 1976)
- Visiting Astronomer, Paris Observatory, France (first semester 1971)

Varia: Administrative Activities, Service, Education, Etc.

- Director, Strasbourg Astronomical Observatory, France (1988-1990)
- Acting Director, ESA IUE Observatory (1981-1983)
- Resident Astronomer in charge of operations, ESA IUE Observatory (1977-1983)
- CDS “salesman” (1983-1988)
- Compilation and maintenance of the StarPages databases (ESA, ESO, CDS, ADS) StarWorlds (organizations), StarHeads (individuals), and StarBits (acronyms, etc.)
- Teaching and thesis supervision (Liège, Madrid, Porto, Strasbourg + CNED)
- Organization of 20+ scientific conferences
- Discoveries: Comet 1972VIII (Jan 1973) + object close to the Sun (June 1973 eclipse)

Working Groups and Advisory Bodies

- Astronomical Data (IAU) (1979-2000)
- Astrophysics Data System Panel (NASA) (1987)
- CODATA (IAU Representative 1991-1994)
- Communicating Astronomy to the Public (IAU) (2006)
- Converging Computing Methodologies in Astronomy (ESF) (1995-1997)
- Electronic Information Transfer (CODATA) (1994-1999)
- Electronic Publishing (Academia Europaea) (1997-1998)
- International Association on Pattern Recognition – TC13 (Pattern Recognition in Astronomy and Astrophysics) (1995-1997)
- Modern Astronomical Methodology (1985-1990)
- Science Data Archive Study Panel (ESA) (1985)
- Standard Stars (IAU) (1982-1992)

Editorial Committees/Activities

- Astrophysics and Space Science Library (Kluwer/Springer) (2004-)
- CODATA (1992-1999)
- ESA IUE Newsletter (1979) (Ed.)
- New Astronomy (Elsevier) (1995-1997)
- Newsletter, IAU Comm. 5 Working Group on ‘Astronomical Data’ (1991-1994) (Ed.)
- Newsletter, Working Group for Modern Astronomical Methodology (1985-1989) (Ed.)
- Organizations and Strategies in Astronomy (OSA)(2000-2006) (Ed.)
- Orion (2005-2007) (Associated Ed.)
- Vistas in Astronomy (Pergamon/Elsevier) (1992-1997)

Main Professional Societies

- American Astronomical Society
- Association for Computational Machinery
- Astronomical Society of the Pacific
- Astronomische Gesellschaft

- College of Alumni, Belgian Royal Academy
- European Association for the Study of Science and Technology
- European Astronomical Society
- International Astronomical Union
- Royal Astronomical Society
- Society for Industrial and Applied Mathematics

Honors

- Paul and Marie Stroobant Prize, Belgian Royal Academy (2007)
- Édouard Mailly Prize, Belgian Royal Academy (1996)
- Recognition for Exceptional Services, ESA (1996)
- Patronym assigned to Comet 1972 VIII (discoverer), IAU (1973)
- Victor Quoilin Prize, Belgian Ministry of Education (1961 & 1964)
- inclusion in various biographical compilations

Main Fields of Research

- Galactic distance scale (statistical parallaxes)
- Comets (monitoring, discovery of Comet 1973a)
- uvby β photometry (variable stars – monitoring, discovery, interpretation)
- UV astrophysics (IUE – various objects, classification, standard stars, reference atlas)
- Information mining (methodologies MDA, KBS, IIR, PR, etc.)
- Electronic information handling (e-pub, hubs, etc.)
- Socio-strategies in astronomy and related sciences (OSA Books, etc.)
- Contemporary history (XIX-XXth centuries)
- Future professional communication in astronomy

Publications

A selection among 1500+ publications – including some 70 books (author or editor) and some 130 refereed/review papers, with a total of 147,500+ pages – having little meaning, only four groups of recent books will be listed here:

- Information Handling in Astronomy + Historical Vistas, Kluwer (2000/2003)
- Organizations and Strategies in Astronomy, Kluwer/Springer (7 volumes/2000-2006)
- The Multinational History of Strasbourg Astronomical Observatory, Springer (2005)
- Future Professional Communication in Astronomy, Roy. Acad. Belgium (2007)

The following databases should also be mentioned: StarWays (ESA/ESRIN, 1992), StarGates & StarWords (ESO, 1993), MediaTheque (CDS, 1993), StarWorlds, StarBits & StarHeads (CDS, 1994), the latter one being a reference for the NASA/CfA ADS service.

[detailed cv, with lists of publications, at: <http://astro.u-strasbg.fr/~heck/>]

(December 2009)

NDBA Biographical Notice

André HECK was born on 20 September 1946 in Jalhay (Belgium). After secondary schooling at Verviers Royal Atheneum, he entered Liege University where he obtained in 1969 a Master of Mathematics (with a thesis on the apsidal motion and internal structure of stars) and a Master of Education.

After joining Paul Ledoux's group at Liege Institute of Astrophysics as Research Fellow of the Belgian Fund for Scientific Research, he was hired the following year as Assistant Professor in Pol Swings' group, completing his training in both theoretical and observational astrophysics. In January 1973, he discovered the first comet of Haute Provence Observatory. A few months later, he detected an object close to the Sun during a total solar eclipse in Kenya. He also devoted numerous observing runs in Chile to the photometric study of variable stars.

But during all those years Heck mainly developed applications of modern statistical methodologies to astronomical data, starting with a long stay at Paris Observatory in 1971. He subsequently visited frequently this establishment as well as Strasbourg Observatory where he became the first scientific user of the Data Center (CDS), even before its official founding in 1972. He also resuscitated the Liege Astronomical Society, equipped it with an observatory, and ensured its regional and national visibility.

In 1975, Heck got his PhD with a main thesis on the application of the maximum-likelihood principle to the calibration of stellar luminosity criteria and with a secondary thesis on the statistical relationships between photometric indices and spectral classifications. In 1977, Heck joined the European Space Agency (ESA) then setting up, at Villafraanca del Castillo near Madrid (Spain), an observatory for operating the International Ultraviolet Explorer (IUE) in collaboration with NASA and UK's SERC. First in charge of scientific operations, Heck became Deputy Director of that observatory in 1980 and Acting Director in 1981-1982. In parallel to those managerial activities, he took part in numerous scientific investigations, including the compilation of an atlas of stellar reference sequences in the ultraviolet.

At the end of 1982, Heck accepted an invitation of Strasbourg Observatory where he became associated astronomer in April 1983 and tenured astronomer from 1986 on. He served as Observatory Director from 1988 to 1990. In 1985, he unanimously received a DSc ("Agrégation de l'Enseignement Supérieur Universitaire") from Liege University with a main thesis reviewing his contributions to astronomical multivariate statistics and three secondary theses respectively devoted to the irregular variable V348 Sgr, to the very slow nova RR Tel, and to a synthesis of the galactic distance determinations carried out with the algorithm he had developed. The title of his academic lesson was "The Rotation of the Galaxy". The following year, Heck was bestowed the first habilitation to direct research granted by Strasbourg Louis Pasteur University. In parallel, and as an example of his varied centers of interest (among others for scientific public outreach), he had obtained in 1985 a degree in communication techniques.

Already before his arrival in Strasbourg, and thanks to his numerous contacts in the space research field, Heck had managed to get CDS acknowledged as a world center of excellence, an activity he continued with total success. He kept on with investigating advanced statistical methodologies, knowledge-based systems and information mining techniques. Towards the end of the 1980s, a partial invalidity forced him to re-orient his activities.

Thus, he organized in 1991 the first international colloquium on professional electronic publishing in astronomy, from which originate many of today's materializations and collaborations in the field. His editorial production is impressive with some 70 books as author or editor and more than 1400 papers, quite a few of them being directed to the public at large – a return towards the society that he never neglected.

The advent of the new electronic media enabled making available world-wide the StarPages, a set of directories, dictionaries, databases and online services that Heck had started to compile already back in the 1970s – their distribution being ensured by organizations such as ESA, NASA, ESO and CDS. Heck recently produced an edited book on the multinational history of Strasbourg Observatory. He launched also a novel series of volumes devoted the organizational, strategical and sociological issues in astronomy and related disciplines: the “Organizations and Strategies in Astronomy” (OSA) series to which he himself contributed with his editorials, reviews and interviews.

Recent references

- Heck, A. 1997, *Electronic Publishing for Physics and Astronomy*, Kluwer, Dordrecht, viii + 250 pp. (ISBN 0-7923-4820-6)
- Heck, A. & Caputo, F. 1999, *Post-Hipparcos Cosmic Candles*, Kluwer, Dordrecht, x + 284 pp. (ISBN 0-7923-5348-X)
- Heck, A. 2000, *Information Handling in Astronomy*, Kluwer, Dordrecht, x + 242 pp. (ISBN 0-7923-6494-5) & Heck, A. (Ed.) 2003, *Information Handling in Astronomy – Historical Vistas*, Kluwer, Dordrecht, xii + 294 pp. (ISBN 0-4020-1178-4)
- Heck, A. 2000-2006, *Organizations and Strategies in Astronomy – Vol. 1-7*, Kluwer-Springer, Dordrecht (ISBN 0-7923-6671-9, 0-7923-7172-0, 1-4020-0812-0, 1-4020-1526-7, 1-4020-2570-X, 1-4020-4055-5 & 1-4020-5300-2)
- Heck, A. & Madsen, C. 2003, *Astronomy Communication*, Kluwer, Dordrecht, xii + 226 pp. (ISBN 1-4020-1345-0)
- Heck, A. 2004, *StarGuides Plus*, Kluwer, Dordrecht, xii + 1140 pp. (ISBN 1-4020-1926-2) & Heck, A. 2004, *StarBriefs Plus*, Kluwer, Dordrecht, viii + 1114 pp. (ISBN 1-4020-1925-4)
- Heck, A. 2005, *The Multinational History of Strasbourg Astronomical Observatory*, Springer, Dordrecht, viii + 310 pp. (ISBN 1-4020-3643-4)
- Heck, A. 2006, Personal file, Univ. Louis Pasteur, Strasbourg, x + 126 pp. & web site at <http://vizier.u-strasbg.fr/~heck/>

[H.W. Duerbeck (Vrije Univ. Brussel) *NBDA* 45 (2006) 4668-4669]

Stroobant Prize Press Release

Académie Royale des Sciences,
des Lettres et des Beaux-Arts de Belgique
Palais des Académies
Rue Ducale 1
B-1000 Bruxelles
Belgium

PRESS RELEASE

André HECK, 60, currently astronomer at Strasbourg Observatory (France), has been awarded the Paul and Marie Stroobant Prize 2007 by the Royal Academy of Sciences, Letters and Fine Arts of Belgium.*

Created in 1950, the Stroobant prize is awarded every other year to a Belgian or French citizen who has authored the most remarkable astronomy-related work. The 2007 Academy's Stroobant Prize has been awarded to Heck for his impressive professional production and in particular for his pioneering series of volumes entitled "Organizations and Strategies in Astronomy (OSA)", initiated in Year 2000.

Born Belgian, Heck has been first researcher at the Liège, Belgium, Institute of Astrophysics before becoming in 1977 one of the founding members of the observatory set up in Spain by the European Space Agency (ESA) to exploit the International Ultraviolet Explorer (IUE) satellite [a joint venture with the US NASA and the UK SERC, now PPARC]. He served as Deputy and Acting IUE Observatory Director from 1981 to 1983. Heck took up a position at Strasbourg Observatory in 1983 where he served as Director from 1988 to 1990.

Heck obtained his PhD in sciences from the University of Liège in 1975 and a DSc in 1986. The following year, he got a degree as Research Director from the Louis Pasteur University in Strasbourg. Unconventionally he also secured degrees in management and communication techniques.

Over his career, Heck moved successfully from field to field, both in observational and theoretical astronomy. He became a skilled observer with Schmidt telescopes (discovering a comet in 1973), spent innumerable nights carrying out photometric measurements (mainly in Chile) and pioneered new techniques of UV spectroscopy while being in charge of scientific operations on the IUE spacecraft (leading to a substantial increase of the satellite's useful life).

Beyond exploiting his own observations of quite a variety of astrophysical objects, Heck developed methodologies of various kinds: statistical parallaxes (galactic distance scale), multivariate data analysis (relationships between photometric and spectroscopic data), and more generally information handling and mining techniques applied to the large amounts of data collected by modern instruments and made available today via "virtual observatories".

* Belgian Astronomer Paul Stroobant (1868-1936) directed the Royal Observatory in Brussels (1925-1936) and had been nominated Professor of Astronomy at Brussels University as early as 1896. He presided the "Classe des Sciences" of the Academy in 1931-1932.

Heck played a key role in getting Strasbourg astronomical Data Center (CDS) recognized as a world centre of excellence. He was also instrumental in catalyzing materializations and collaborations in the field of electronic publishing for astronomy.

Heck has organized numerous international conferences and is currently preparing another one to be held in June 2007 at the Palace of the Academies in Brussels on the “Future Professional Communication in Astronomy (and its impact on evaluation)”. Heck has been himself an invited speaker at many meetings round the world. He is a prolific author, an editor of reference books and an active science communicator. Among his editorial production, his latest and successful volumes entitled *Organizations and Strategies in Astronomy (OSA)* (Kluwer/Springer) deserve a special mention. Interestingly Heck’s opening chapter in Volume OSA 1 had reproduced – in a premonitory connection with the prize he just received – a world map of astronomy-related organizations drawn by Stroobant and published in 1907.

More details on Heck’s activities (as well as contact elements, lists of publications, photographs, etc.) can be found on the web: <http://vizier.u-strasbg.fr/~heck> . A brief CV is available at <http://vizier.u-strasbg.fr/~heck/cvbrief.pdf> .

(Brussels, March 2007)

Possible quotations:

Prof. Léo Houziaux, Permanent Secretary of the Belgian Royal Academy:

“The prize committee was impressed by Prof. Heck’s scientific production and in particular by his important and pioneering publications on astronomy-related organizations.”

Recipient André Heck:

“I am deeply honoured by this renowned prize awarded by an international jury. It recognizes the appropriateness of pioneering new astronomy-related fields, such as organizational, strategical and sociological issues. As the initiator and catalyser of the series *Organizations and Strategies in Astronomy (OSA)*, I feel this recognition should be echoed over all contributors: the authors of some 150 chapters so far, the interviewees, as well as the grandees of astronomy who wrote the forewords to the volumes.”