

Guest House in Santiago. Claus said he could recommend retirement for opening up new avenues and he has enthusiastically taken up his old love of photography once more. He emphasised that the history of ESO is bound up with advances in European astronomy and he is a strong advocate that ESO should engage in astronomy across the electromagnetic spectrum — a trend that is beginning to happen with the hosting of

the southern Cherenkov Telescope Array at Paranal.

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## Retirement of Dietrich Baade

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After 35 years as an astronomer at ESO, Dietrich Baade has retired. He held many different scientific positions in ESO during his career and a brief appreciation is presented, together with a glimpse of his astronomical research interests. A retirement party was held in September 2016.

Dietrich Baade retired from ESO at the end of September 2016 with 35 years service, after a highly varied career within the Organisation. He joined ESO as a Fellow in February 1981, having received his PhD from the Astronomisches Institut, Universität Münster in 1979. After his Fellowship he joined the Space Telescope European Co-ordinating Facility (ST-ECF) when it was set up at ESO Garching in 1984, long before the actual launch of the Hubble Space Telescope (HST) in 1990. There he worked in the area of instrument calibration, particularly for the High Resolution Spectrograph (HRS), and was involved in the development of an exposure time simulator for HST instruments. When HST was subsequently launched he worked with Leon Lucy on restoration



Dietrich Baade

and deconvolution of the aberrated images with increased sampling, and also applied these methods to imaging with the New Technology Telescope (NTT).

On leaving the ST-ECF he worked in the Visiting Astronomers Section providing support for data reduction visitors and use of the remote observing facility, by which visitors could use the NTT, and the Coudé Echelle Spectrometer (CES)

at the Coudé Auxiliary Telescope (CAT), in remote mode. He was a long-time user of MIDAS (Munich Image Data Analysis System) and contributed to the development of the data reduction system and the Data Organiser. He was a member of the working group (headed by Preben Grosbol) that conceived the Very Large Telescope (VLT) Science Data Flow and edited the first version of the VLT Science Operations Plan that has subsequently matured to the standard of today.

## Telescopes, instruments and detectors

A few years after the opening of the NTT, with its outstanding image quality (Wilson, 1989), a team was set up within ESO, headed by Dietrich, to determine why the initial promise could not be sustained (Baade et al., 1994). Claus Madsen refers to this in his book (Madsen, 2012) as the “Dream Team”. The team found that the operations and the control software required improvement and this was seen as an opportunity to install and test the VLT Control Software, which was in advanced development, and thus to provide an opportunity to test and develop the VLT operations model. It was decided to take the telescope out of commission for a year to refurbish it. Lead of this project was continued by Jason Spyromilio and culminated in the “NTT Big Bang” which was completed in 1997 (Mathys, 1997).

Dietrich then moved as instrument scientist to the development of the Wide Field Imager (WFI) to be installed on the 2.2-metre MPG/ESO telescope at La Silla. This 67 megapixel camera, with a field of 34 by 33 arcminutes (using eight charge-coupled device [CCD] chips) and a large suite of filters, was built by ESO (Baade et al., 1995). The WFI was successfully commissioned in 2002 (after the camera head was carried in Dietrich’s hand luggage from Garching to La Silla) and was in service as ESO’s large area camera for a decade before the Survey Telescopes (Visible and Infrared Survey Telescope for Astronomy [VISTA] and VLT Survey Telescope [VST]) came into operation. Following this experience with instrumentation, he became head of the Optical Detectors Team (ODT) in 2002 and was involved in the development of the 16 × 16K CCD detector system for the VST camera, OmegaCam.

During his time in the ODT the New General detector Controller (NGC; Baade et al., 2009) based on high-speed serial link technology was developed and implemented jointly with the Infrared Detectors Department; it has become the standard detector controller for all VLT instruments. The ODT was also involved in adaptive optics wavefront-sensing detector developments. Dietrich continued to head this group of engineers and

earned a reputation as an astronomer with a real understanding for the engineering, which was highly appreciated by his engineering colleagues. He encouraged the engineers to deepen their analysis in order to better understand the instruments and their performance, often with “Gedankenexperimenten”. Dietrich was the head of the Optical Detectors Department from 2009 until 2013, when he became head of the Instrument Science Department, now the Project Science Department, in the Science Directorate. From 2009–2012 Dietrich was also Chair of the ESO Astronomy Faculty. He was finally elevated to Deputy Director for Science for his last two years before retirement.

## Be stars, non-radial pulsations and supernovae

Throughout his astronomical research career Dietrich has been energised by Be stars, whose periodic and non-periodic photometric and spectroscopic variations have been subject to deepening study and understanding. He was twice chair of the IAU Working Group on Be and active B stars. He has also participated in surveys for Be stars in the Magellanic Clouds. Thomas Rivinius from ESO and Stanislav Štefl (deceased 2014) were among his closest collaborators in this field.

Around 2000, he started to study supernovae in nearby galaxies with Lifan Wang (then at Lawrence Berkeley National Laboratory and subsequently at Texas A. & M. University) and became interested in the investigation of the asymmetry of the SN explosion as revealed by spectropolarimetry, for which the FOcal Reducer low dispersion Spectrographs, FORS1 and FORS2, are ideally suited. He has continued this collaboration and has also studied SN 1987a and the light echoes around SNe. His concentration on Be stars and long-period photometry has now found its forte in observations with the BRITE-Constellation Nanosatellite mission<sup>1</sup>. Its 3 cm telescope in orbit allows milli-magnitude photometry over periods of many months, suitable for the investigation of periodicities in variable stars of all types, though of course confined to the brightest examples.

## Retirement

In the weeks before he retired Dietrich gave two very well-received talks in the lunch-time “Astronomy for non-astronomers” series, reminiscing, in 76 anecdotes, about tough (and sometimes very comfortable) times observing at La Silla in the 1970s and early 1980s. The talks came with the warranty that the speaker’s observations are absolutely authentic, and incomplete. His first observing trip to La Silla was in 1976 during his PhD. Unusually for modern talks he presented no slides, but kept his audience’s attention, and received many questions.

A retirement party was held at ESO Headquarters on 16 September 2016 and Dietrich gave a farewell speech in several chapters, interspersed with some heartfelt tributes from those he had worked with, led by the Director for Science, Rob Ivison. His zeal was well known at ESO Headquarters and his famous yellow Smart car was typically seen to be one of the first to arrive in the car park in the morning and among the last to leave in the evening, even on his last official day at ESO. Dietrich is still seen around the Headquarters building as he begins his retirement, devoting himself to the ESO Supernova Planetarium & Visitor Centre and more intensively than ever to hot star studies and semi-infinite photometry with BRITE-Constellation, interspersed with non-periodic travels to remote parts of the globe.

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## References

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## Links

- <sup>1</sup> BRITE-Constellation Nanosatellite Mission: <http://www.brite-constellation.at/>