

## **Czech Astronomers at the European Southern Observatory in Chile**

Luboš Perek  
[perek@ig.cas.cz](mailto:perek@ig.cas.cz)  
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ESO is the European Organization for Astronomical Research in the Southern Hemisphere. It provides state-of-the-art research facilities to European astronomers. The Czech Republic joined the ESO in January 2007 and became its thirteenth member state. It offers to Czech astronomers the opportunity to share with other European countries the benefit of very large instruments for research. Up to now the largest telescope was the 2 m reflecting telescope built in 1967. It is located near Prague, it is 40 years old, its altitude above sea level is only 500 m, and it has to manage with the climate of central Europe. The telescopes of ESO enjoy many clear nights and an excellent quality of images in northern Chile. The first site of ESO in Chile is at La Silla, 600 km north of Santiago at an altitude of 2400 m, the second is at Paranal, south of Antofagasta at 2600 m altitude, and the third is at Llano de Chajnantor at an altitude of 5000 m.

Czech astronomers were lucky already in the years before their country joined the ESO because on several occasions they could visit ESO and work at its observatories in Chile.

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The site of ESO at La Silla was inaugurated on 25 March 1969 by the President of the Republic of Chile, Salvador Allende Gossens, in the presence of more than 300 guests invited for the occasion. Among the guests of honor were ambassadors of six European countries which founded ESO, Belgium, Denmark, France, Germany, the Netherlands and Sweden. On their behalf, Olof Palme, minister of education of Sweden, addressed the audience.

The ambassador of the USA represented the observatory of US universities built at Cerro Tololo. Many guests represented the hosting country Chile and its province of Coquimbo. Also present were top astronomers and initiators of ESO, Jan Oort, Adriaan Blaauw and Marcel Minnaert of the Netherlands, Charles Fehrenbach from France, Bengt Stromgren from Denmark and several others. The International Astronomical Union was represented by Otto Heckmann, Director General of ESO and President of the IAU, Jorge Sahade, Vice-President of the IAU, and, as chance had it, Luboš Perek, Secretary General of the IAU.

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As soon as I learned about the invitation, I submitted a proposal for measuring brightnesses of faint planetary nebulae in the southern hemisphere in the spectral line H beta. The proposal was approved and I received 16 observing nights at the

one-meter photometric telescope on La Silla. The first half of April is close to the end of the season of favorable atmospheric conditions. Nevertheless, I was able to use more than half of the observing time and measured fluxes of 117 planetary nebulae<sup>1</sup>. Identification of small objects in crowded stellar fields was easy because finding charts were published in the Catalogue of Galactic Planetary Nebulae<sup>2</sup>. With pleasure, I donated the copy of the Catalogue to the library at La Silla for possible future use.

The Observatory took good care of visiting guests. A comfortable hotel and excellent restaurant were at disposal. What was most appreciated was the use of a car for easy transport between the hotel and telescope dome.

An interesting event happened during my observing period. A group of French astronomers intended to observe the X-ray source Scorpio X-1, at an extremely short wavelength below 0.1 nm. Such observations cannot be done from the ground because of atmospheric extinction. Only a balloon ascending above dense layers of the atmosphere gives a chance. The launch of the balloon was planned from the cosmodrome Kourou in French Guiana at the time of my observing period. Adriaan Blaauw asked me to make photometric measurements at the time of the ascent of the balloon. I agreed and proposed to observe the object also from the two-meter telescope at Ondřejov near Prague. Pavel Koubský, the chief of the Ondřejov telescope, agreed. Simultaneous observations of the object at different wavelengths made the project of intercontinental cooperation quite interesting. Unfortunately, heavy rain and low temperatures in French Guiana prevented the balloon to reach sufficient altitude.



The conglomeration of faint planetary nebulae near the galactic center induced Luboš Kohoutek to use more than 220 observing nights at La Silla to photometric and spectral measurements in the course of years 1974-2003. He studied in particular the variability of their central stars. A part of his results has already been published<sup>3</sup> and a concluding part is under preparation. Few astronomers were in a position to devote such a large amount of observing time to one kind of objects. Kohoutek's work on planetary nebulae is quite extensive. In addition to his own observations, he used also observations of his colleagues and photographic material of the Remeis Observatory in Bamberg and of the Observatory of the Mount John University in New Zealand.



Another Czech astronomer who worked in Chile was Zdeněk Kvíz. He was truly international. He was on the staff of the University in Sydney, Australia, and cooperated with the Geneva Observatory, Switzerland, by observing eclipsing binaries in Chile. Between the years 1976-1999 he published 30 papers, mostly on observations at La Silla. His last paper was co-authored with M. Zejda, L. Kohoutek

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<sup>1</sup> L. Perek, Photometry of Southern Planetary Nebulae, Bull. of Astron. Inst. of Czechoslovakia, Vol. 22, 103, 1971.

<sup>2</sup> L. Perek and L. Kohoutek, Catalogue of Galactic Planetary Nebulae, Academia, Publishing House of the Czechoslovak Academy of Sciences, Prague 1967.

<sup>3</sup> L. Kohoutek, Search for Variability in Bright Central Stars of Southern Planetary Nebulae, Abhandlungen aus der Hamburgwer Sternwarte, Band XIII, Heft 1 and 2, 2003 and 2004.

and J. Grygar<sup>4</sup>. The paper had a rather interesting history. Zdeněk Kvíz bequeathed his notebook to Grygar who found on it a file with the observed data. The three co-authors wrote and published the paper, a posthumous tribute to their friend. My thanks go to J. Grygar for that information.

While recalling old times, permit me to mention my last meeting with Zdeněk Kvíz at the IAU European Astronomical Meeting in Tenerife in 1989. Zdeněk was constantly listening on his transistor radio to Radio Free Europe. The signal was good on Canary Islands, as he said, but not as clear and loud as on Tahiti. He also had a story about his two pieces of luggage, one sent ahead of his travels to Europe, the other, with warm clothes for observing nights, to Chile. It was a very practical arrangement up to the year when he confused the addresses. His positive attitude, however, helped him to survive cold nights on the mountain in formal clothes.



The last Czech astronomer at ESA, as far as I know, is Stanislav Štefl. He worked at ESO for several years before the Czech Republic joined ESO. As early as 1991-1993 he was a Research Associate of ESO coordinating the project on rapid variability of Be stars. Since November 2004 he is on long-term leave at the ESO Paranal Observatory, facing a bright future.

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<sup>4</sup> Kvíz, Z., Zejda, M., Kohoutek, L., Grygar, J., Times of Minima of Southern Eclipsing Binaries, Information Bulletin on Variable stars, No. 4739, Konkoly Observatory, Hungary.