

Preface

Astronomy has always had a somewhat privileged position in history, having been practised at the courts of monarchs and the nobility as well as in academic and ecclesiastical settings. There were compelling reasons for this – navigation, mapmaking, the calendar, accurate time keeping and transmission, and initially astrology, none of which could have ever done without astronomy. As a science with state support, astronomy established itself in the 18th and 19th centuries, when state observatories were being established to perform these tasks and to help implement the state's interest in demarcating territory, regulating time and monitoring weather to facilitate economic development. In parallel, however, there was also a growing number of private observatories set up by those who enjoyed observing planets, stars, star clusters and nebulae or searching for comets.

At the same time, it has always been the case that astronomers in Europe – and later on other continents as well – shared the results of their observations and measurements. Until the latter half of the 20th century, individual observatories published their observations and reports in regular publications, which were sent to subscribers and exchanged with astronomical institutions around the world. Moreover, journals were established to publish scientific articles, such as the *Philosophical Transactions of the Royal Society* (since 1665, London), *Monthly Notices of the Royal Astronomical Society* (since 1827, London), *Astronomische Nachrichten* (since 1820, Altona/Hamburg), *Astronomical Journal* (since 1849) and *Astrophysical Journal* (since 1895), both published by the American Astronomical Society. In 1969, the French, Dutch and German journals were merged into the newly established European journal *Astronomy and Astrophysics*, founded by D. Reidel, Dordrecht; after a few years, Italy, Belgium, East Germany, Scandinavia, Poland and Czechoslovakia began contributing to the journal. Czechoslovakia which by then was publishing the *Bulletin of the Astronomical Institutes of Czechoslovakia* (from 1947) was the first of the former Eastern bloc countries to be admitted to a European journal (in 1991).

After our excursion into national and international scientific journals, let us turn our attention to the national observatories established during the 20th century. With the emergence of the successor states after the First

World War and the subsequent dynamic technical and scientific developments, there was an increasing need to modernize astronomy, though few state resources were actually being invested.

There were only three substantial state-owned observatories in Czechoslovakia after the First World War. The historic one in Prague's Klementinum had practically no equipment compatible with modern science, while the originally private observatory at Ondřejov, near Prague, was donated to the state by its founder, Josef Jan Frič, to mark its 10th anniversary for the needs of Charles University, but no significant investments were made there either. Finally, the third observatory, also originally private, at Stará Ďala on the Hungarian-Czechoslovakian border, built and modernized by Count Miklós Konkoly-Thege, became part of the State Observatory during the interwar period.

While the state's concern for modernization faltered, a promising lay interest in astronomy was emerging as both private and collective, i.e. "people's", observatories were being built. In the Czech lands in particular, lay interest in membership in the Czechoslovak Astronomical Society exceeded equivalent interest in many European countries, actually intensifying during the Second World War occupation. The emerging *astroculture* had different faces and different social, political and ideological elements, which started to be channelled in one direction after the Second World War. However, this modern history of Czech and Czechoslovak astronomy and *astroculture* in the Czech lands and Czechoslovakia has not yet been written. The present book approaches them by analysing the education of the first postwar generation of professional astronomers and their international involvement.

In this context, the Slovak context is not neglected, as the Slovak state lost the aforementioned observatory in Stará Ďala during the Second World War, but thanks to the initiative and lobbying of the Czech astronomer Antonín Bečvář, a high-altitude observatory and meteorological station was actually constructed at Skalnaté pleso.

After the end of the Second World War, space sciences saw rapid advances in theory and technology worldwide. The radar technology developed during the war was now declassified, and antennas could be pointed at radio sources in outer space. This new field – radio astronomy – found favourable conditions even in small countries such as the Netherlands, though optical astronomy was not being neglected either. In 1949 the telescope on Mt Palomar in the USA, with a mirror diameter of five metres, the largest telescope in the world at that time, was brought into operation, along with the large Schmidt camera, which made it possible to take previously unimaginable pictures of the starry sky (the Palomar Photographic Atlas was compiled with its assistance).

In some respects, all astronomers had the same starting conditions after the Second World War when it came to discovering new objects in space. The young generation of astronomers, to whom this book is dedicated, was well aware of the necessity of obtaining data by making observations with large, modern instruments, which, however, were lacking in Czechoslovakia. What the generation of that time concentrated on might be called science of modest means, i.e. projects of global importance that were not financially demanding. It is a matter of debate to what extent they stand up in discussions of big science and comparisons with other scientific disciplines.

The book we are presenting to readers seeks to map out the turbulent history of astronomy in Czechoslovakia after the Second World War. Despite various reorganizations, political and economic obstacles, and the not always peaceful backdrop of interpersonal relations, astronomy emerged victorious from this period. Czechoslovak astronomers gained scientific prominence, held elected positions in international organizations and participated in international scientific projects. This culminated in 1967 in the 13th General Assembly of the International Astronomical Union held in Prague, accompanied by the inauguration of a two-metre reflecting telescope at the Ondřejov Observatory.

The circumstances of the Cold War meant that the Congress did not take place again in the geopolitical space of Central and Eastern Europe until the IAU General Assembly was held for the second time in Prague in 2006, confirming the unprecedentedly important position of the otherwise minority Czech astronomical community. The lion's share of this success is due to Luboš Perek, to whom this book is primarily dedicated.

As the oldest member of the team of authors, I was an eyewitness of the last years of this period, I met the individuals involved and heard many of their reminiscences, sometimes very personal. For years I have wished for this history to be preserved, which has now come to pass thanks to the support of the Czech Science Foundation. This historical research has been greatly aided by the two co-authors, who have made extensive use of the archive holdings at the Astronomical Institute's Ondřejov Observatory, as well as other archive collections. Using the oral history method, they have made and processed recordings of the memories of the experts, the last living astronomers of Perek's generation. The authors would like to express their gratitude to their colleagues who supported them as they wrote this book. Without their kind help and inspirational conversations, it would not have come into being.

Hopefully, this book, which openly presents both the bright and the dark sides of the development of astronomy in this country, will be of interest not only to historians of science but also to the public at large.



Luboš Perek (left) as a consultant at the UN,
sitting next to the ambassador Peter Jankowitsch, COPUOS Preparatory Committee,
24.6.1980 (photo by M. Grant, MÚA, A AV ČR, Luboš Perek collection, photo catalogue No. 314)