

Teachers: the interwar scholarly tradition

Introduction

This chapter focuses on the generation of astronomers who studied and graduated in the first half of the 20th century and, together with scholarly institutions, amateur astronomer communities, observatories and astronomical instruments, were significant actors in setting the stage for the first postwar generation of astronomers. To understand this generation of astronomers, we need to explore the institutional conditions of astronomy education and research that shaped their careers both positively and negatively. These conditions are inextricably linked to the development of university education and the political situation in the Czech lands.

From the late 19th century up until World War II, education in astronomy took place at universities' faculties of arts, and later at faculties of science or at technical universities. University students enrolled in courses at their discretion, and study plans did not appear at Charles-Ferdinand University (CFU), for example, until the late 1930s.⁶⁸ After four years, students could finish their studies with teacher qualification exams, doctoral degrees or both. Thus, aspiring scientists could pass teacher qualification exams and find employment as secondary school teachers while working for their university as unpaid assistants or Privatdozents as they waited for vacancies in systemized positions.

As part of the Austro-Hungarian Empire, the Bohemian lands were considered a province and Prague universities or polytechnics only peripheral universities compared to Vienna, the capital of Cisleithania, with a large, well-funded university and a sizable new university observatory. German-speaking scholars from outside the Bohemian lands considered Prague scholarly institutions to be only a temporary posting before they found a more prestigious position. Czech university education emerged

68 *Seznam přednášek, které se budou konati na Universitě Karlově v Praze* [List of lectures to be held at the Charles University in Prague], Praha: nákladem Akademického senátu University Karlovy v Praze. From years 1935–39.

during the national revival, accompanied by national tensions.⁶⁹ This led to the division of two major Bohemian universities in the second half of the 19th century into Czech and German parts.⁷⁰

Another significant change came after the empire's dissolution and the Czechoslovak Republic's establishment in 1918. New faculties of science were created by separating from the faculties of arts of the CFU and in Brno the MU was founded. International cooperation in astronomy was reorganized soon after the war, and the IAU was founded in 1919 in Brussels. Czechoslovak astronomers renewed old foreign cooperation after the Great War, pursued new collaboration, and sought active participation in the organization of the unions.⁷¹

In the following sections, we will discuss the respective institutions that provided astronomical education and facilities for research, beginning with the CAS, which played an essential role in educating a new generation of astronomers and developing scientific institutions.

Part 1: Astronomical associations

The Czech Astronomical Society

Amateur astronomers began to play a more prominent role in astronomy research towards the end of the 19th century, particularly with the emergence of variable star observation.⁷² The Czech amateur astronomy community underwent significant development, and even during the era of the Austro-Hungarian Empire, they founded a national society. This platform enabled the closer cooperation of scholars and amateurs on time-consuming research tasks (e.g., variable star observation).

69 Miloslav Čedík, "Národnostní otázka a rozdělení pražské univerzity", *Acta Universitatis Carolinae Historia Universitatis Carolinae Pragensis* 22, no. 1 (1982): 15–25.

70 The Czech Prague Technical University (Czech PTU), and the German Prague Technical University (German PTU) in 1869; the Czech Charles-Ferdinand University (Czech CFU), and the German Charles-Ferdinand University (German CFU) in 1882. Cf. Surman, *Universities in Imperial*, 87, 104. The Brno Technical University remained with German-language education, until the Czech Brno Technical University was founded in 1899.

71 Petra Hyklová, "The Presence of Czech Astronomers at International Conferences", in *Science Overcoming Borders*, eds. Věra Dvořáčková and Martin Franc (Praha: MÚA, 2018), 123–44.

72 Edward C. Pickering, "A Plan for Securing Observations of the Variable Stars", *The Observatory* 6 (1 February 1883): 46–51.

The process of establishing the CAS began with a series of ten lectures on astronomy held by Jaroslav Štych⁷³ at the Worker's Academy in Prague in 1915. These lectures attracted other astronomy enthusiasts, and the following year, they founded the Astronomy Club. On this platform, the establishment of the CAS and its goals were negotiated. During this process, different actors with various ideas contributed to the future concept. The negotiators could rely on the existence of astronomical societies abroad – in particular, the Vienna Urania and the French Astronomical Society.⁷⁴

The concept of an amateur astronomy society is closely associated with the concept of a public observatory. Apart from the research observatory, the location of which is intended to provide the best conditions for observation,⁷⁵ the public observatory's key role is outreach. They should be accessible to the general public and thus be located in cities and towns. The first public observatory in the Bohemian lands was founded by Baron Artur Kraus⁷⁶ in Pardubice in 1912.⁷⁷ This People's Observatory, in addition to a time service and a programme of solar observations, offered free public observations and literature for those interested in astronomy.⁷⁸ Kraus, as the brother of a high-ranking viceregency official, was able to acquire official permission to found the CAS.

Štych and his wife Luisa⁷⁹ engaged in the workers' movement and were closely associated with anarchism, monism, atheism, Marxism and the Social Democrats.⁸⁰ Štych promoted the idea of workers' education in cities, to which other actors were not opposed, but it was not their primary goal.

73 Jaroslav Štych (1881–1941). Amateur astronomer and building engineer. Born in Prague, studied at the Czech PTU. Popularizer of astronomy since 1910. Cofounder and first executive director of the CAS. Holubec, *Nešťastná revolucionářka*, 33.

74 Founded by Camille Flammarion (1842–1925) in 1887.

75 During the industrial development, cities proved to be unsuitable for astronomical observations due to light and dust pollution and vibrations from transport. New observatories were constructed outside cities, in the high mountains if possible (a good example is Skalnaté pleso Observatory in the Tatras).

76 Artur Kraus (1854–1930). Amateur astronomer and popularizer. Studied in France with astronomer Flammarion. Built the first private observatory in Pardubice in 1895 and a second, public observatory in 1912. Engaged in outreach, education and information for the general public. In 1912–30, he extended his network of observers and correspondants to about 2,000 people. Pioneer of sports, cycling, aviation and motor vehicles.

77 Štěpán Ivan Kovář, *Místa astronomické vzdělanosti 1918–1945* (Praha: ALE, 2000), 10.

78 The observatory closed after Kraus's death in the 1930s because neither his heirs nor Pardubice city council were interested in continuing its operation.

79 Luisa Landová-Štychová (1885–1969). Politician and popularizer of science. Attended business and acting courses. Member of Parliament of Czechoslovakia 1918–23, 1925–29. Vice-Chair of CAS from 1945–59.

80 Holubec, *Nešťastná revolucionářka*, 46–53.