

AN INTRODUCTION TO INSTITUTE FOR THE HISTORY OF NATURAL SCIENCES, CAS

中国科学院 自然科学史研究所简介

Institute for the History of Natural Sciences *Editor*

自然科学史研究所 / 编

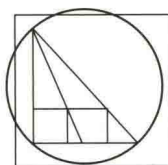


An Introduction to Institute for the History of Natural Sciences
Chinese Academy of Sciences

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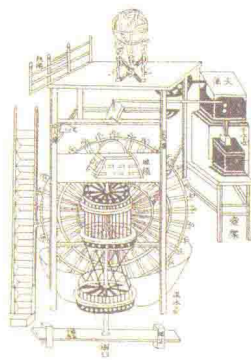
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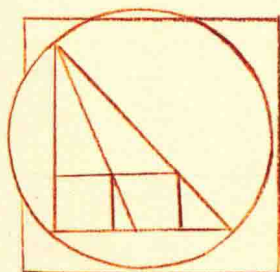
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究 天 人 之 际 通 古 今 之 变

EXAMINE ALL THAT ENCOMPASSES HEAVEN AND MAN, FATHOM THE VICISSITUDES OF PAST AND PRESENT.





所徽设计创意来自中国的《周髀算经》。圆形代表太阳，方形代表大地。一条水平线假设为地平，两根立杆用于测量太阳高度。

The logo of the Institute is designed on the basis of *Zhoubi Suanjing (Mathematical Canon of the Gnomon of the Zhou Dynasty, 1st century B.C.)*. The heaven is round while the earth is square. A horizontal line represents the horizon. Two poles were used to measure the distance between the sun and the earth.



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序 言

自 1957 年以来，自然科学史研究所面临过许多机遇和挑战。在前辈们的率领下，研究所适应国家政治、经济与学术变化，实现自身的繁荣与发展。现在，我们又迎来了新的发展机遇。

2011 年中国科学院将“创新 2020”战略具体化为“一三五”规划，要求发挥各研究所的优势，聚焦于优先领域，实行重大产出导向的评价机制。据此，自然科学史研究所制订了十年发展规划，鼓励学者们突破传统的“成就考证与描述”模式，尝试“理解和阐释与境中的知识”的新视野与新路径，将研究工作拓展到新领域，实现“从传统到现代”和“从中国到世界”的转变。

作为国立科研机构，自然科学史研究所既面向国际学术前沿，又面向社会需求。它扩展了科技史的应用研究，为保护文化遗产、沟通科学与人文、建设国家科学思想库做出了贡献。它将科研活动整合为“三个重大突破”和“五个重点培育方向”。所内外的学者们参与了规划中的科研项目，促进研究视角、模式与方法的转变，探讨知识的发展，而不仅仅是科学的发展。

人才是第一资源。自然科学史研究所被视为国内培养科技史与科技哲学人才的主要基地，其优势之一是通过研究项目与学术研讨活动等形式培养研究生。学生们成长在这个充满活力、治学严谨的学术环境里。为了适应科研布局的调整，研究所积极吸引青年才俊。近四年来，员工数量逐年增长。我们希望新员工在学术创新中快速进步，成长为合格的学术接班人。

Preface

Since 1957, the Institute for the History of Natural Sciences (IHNS) has faced many opportunities and challenges. Under our predecessors' leadership, the Institute flourished and grew, always adapting to momentous political, economic and academic changes. We now find ourselves at another moment of great opportunity.

In 2011, the Chinese Academy of Sciences (CAS) crystallized its “Innovation 2020” strategy into the “One-Three-Five” Strategic Planning agenda, which emphasizes a focus on strengths and priorities and “major output-oriented review”. In line with the policies proposed CAS, the IHNS has mapped out its ten-year development trajectory. It is encouraging researchers to break out of the traditional model of “verifying and describing achievements in history” to test new visions and approaches for “understanding and interpreting knowledge in context”, expanding and transforming our research into new fields broadly encapsulated by the phrases “from traditional China to modern China” and “from China to the world”.

As a national institution, the IHNS orients its research not only to cutting-edge academic fields, but also to social needs. It is expanding applied research on the protection of cultural heritage, and contributing to building bridges between science and the humanities, as well as the knowledge base for the national advisory structure or so-called “National Science Think-Tank”. It has been moulding its key research initiatives into “Three Major Breakthroughs” and “Five Priorities”, which involve most IHNS staff, as well as scholars from other universities, and even from overseas. These scholars are promoting the transformation of perspectives, models, and methods of research on the development of knowledge, not just science alone.

Talent is a primary resource. The IHNS has always been viewed as China's main source for producing talent in the history and philosophy of science and technology. A great strength of the Institute is the fact that student-nurturing is embodied in research projects and diverse academic activities such as hands-on workshops, ensuring that graduate students are schooled in a vibrant and rigorous academic atmosphere. In order to match the improved research structure, the Institute has paid special attention to attracting more talented young scholars to its ranks. In the last four years, there has been a considerable increase in IHNS staff. We hope that they will make rapid progress in their innovative research, and will become worthy successors to our established talent in the decades to come.

在中国科学院的国际化战略推动下，自然科学史研究所将扩大与海外机构的不同形式的合作与交流，邀请更多的国外学者和研究机构参与中方的科研活动。同时，研究所正在加强与国内的大学、科研机构、博物馆和出版社等机构的广泛联系。比如，它与一些出版社签订合作协议，以出版若干种反映“一三五”规划布局的系列研究成果。

无疑，中国科学院的新战略为自然科学史研究所提供了新的科研动力。我们相信，研究所能够应对环境的挑战，抓住发展机遇，开创新局面。

张柏春

2014年3月3日

Motivated by the CAS policy of internationalization, the IHNS is expanding and diversifying its collaborations with overseas institutions, increasing invitations to foreign scholars and institutions with which to carry out its research projects. Meanwhile, it is strengthening our wide-ranging bonds with Chinese universities, research institutes, museums and publishing agencies. In the last two years, it has signed agreements with prestigious publishers to jointly publish several book series generated under the “One-Three-Five” plan.

Unquestionably, the CAS’ new strategy has initiated a new research dynamic. We believe that by seizing development opportunities and rising to the challenges provided by the current academic climate the Institute has the potential for a very bright future.

ZHANG Baichun

March 3, 2014

1. 历史沿革



图1 竺可桢
Figure 1 ZHU Kezhen



图2 中科院学部委员李俨
Figure 2 LI Yan, Member of
Academic Divisions of CAS



图3 中科院院士席泽宗
Figure 3 XI Zelong,
Academician of CAS

中国科学院自然科学史研究所的前身是中国自然科学史研究室，由中国科学院副院长竺可桢（图1）倡议成立于1957年，1975年扩建成为研究所。它是多学科和综合性的国立科技史专门研究机构，是世界上少数几个中国科技史的研究中心之一。李俨（图2）、段伯宇、仓孝和、席泽宗（图3）、陈美东、廖克、刘钝、廖育群先后担任过所长或研究所的负责人。现任所长为张柏春。

自1957年以来，研究所（图4）经历了三个发展阶段：创建与初期发展阶段（1957—1975）（图5），恢复与发展阶段（1975—1999）（图6），改革阶段（1999—今）（图7）。在第一个阶段，强调有计划地整理中国自然科学和技术遗产，专注中国古代科技史研究，特别是数学史、天文学史等学科门类史。“文化大革命”期间，研究所的正常工作曾陷于停滞。

在第二个阶段，学科发展方向由单一的中国古代科技史，拓展至近现代科技史，并增加科技哲学方向，尝试组织机构改革。1978年建立中国古代科技史研究室与近现代科学史研究室。1984年，中国古代科技史研究室分为数学天文史、物理化学史、生物地学史、技术史和中国科学技术通史5个研究室。1998年，6个研究室调整为中国古代科学史、技术与应用科学史、中国近现代与世界科学史、科技史理论与综合4个研究室。

在第三个阶段，按照科学院“知识创新工程”等部署，研究所全面推进研究和管理的改革。在学科发展方面，以中国古代科技史、中国近现代科技史为主体，适应中国科学院和国家的需要，于1999年增加科技战略方向，2001年前后增加科学文化研究方向，2006年增加中外科技发展比较方向。在组织机构方面，2002年将4个研究室合并为一个研究部，2004年创建传统工艺与文物科技研究中心，2006年建立

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1. A Brief History of the Institute

The predecessor of the Institute of the History of Natural Sciences (IHNS) was the Research Department on the History of Natural Sciences, which was established in 1957 on the initiative of Prof. ZHU Kezhen, a vice-president of Chinese Academy of Sciences (CAS) (Figure 1). The Department was expanded to become a research institute in 1975, forming a multidisciplinary and comprehensive national institute specialized in the study of history of science and technology (S&T). It is one of the few institutes in the world committed to studying the history of S&T in China. LI Yan (Figure 2), DUAN Boyu, CANG Xiaohe, XI Zezong (Figure 3), CHEN Meidong, LIAO Ke, LIU Dun and LIAO Yuqun have served successively as the director or head of the IHNS. The current director is Prof. ZHANG Baichun.

Since 1957, the IHNS (Figure 4) has passed through three phases: the establishment and early development phase (1957—1975) (Figure 5), the recovery and development phase (1975-1999) (Figure 6), and the reform phase (1999-present) (Figure 7). In the first phase, studying the heritage of Chinese S&T in a planned way was the main focus, and great importance was attached to studying the history of S&T in pre-modern China, especially the history of disciplines such as mathematics and astronomy. However, during the Cultural Revolution, the work in the IHNS stalled.

In the second phase, the range of disciplines studied expanded from history of S&T in pre-modern China to embrace the history of modern S&T and philosophy of S&T. The Department of History of S&T in Pre-modern China and the Department of History of Modern Science were established in 1978. In 1984, the Department of History of S&T in Pre-modern China was split into 5 separate departments, namely Department of History of Mathematics and Astronomy, Department of History of Physics and Chemistry, Department of History of Biology and Geo-sciences, Department of History of Technology and the General History of S&T in China. In 1998, the 6 departments were integrated into 4, i.e. Department of History of Science in Pre-modern China, Department of History of Technology and Applied Science, Department of History of Science in Modern China and the World, as well as Department of Theory and Comprehensive Issues of History of S&T.

In the third phase, in accordance with the CAS Knowledge Innovation Program and related policies, the IHNS has implemented a series of research and management reforms. In terms of discipline development, the IHNS