Chapter 8

China and the International Geophysical Year

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In the history of science during the cold war, the International Geophysical Year (IGY) 1957–58 often has been viewed as a great success story of global scientific collaboration across the Iron Curtain, with the only exception being the withdrawal of the People’s Republic of China (PRC) from the endeavor when the IGY organizers admitted Taiwan in 1957. Thanks to research by Ronald Doel, we now know that the U.S. State Department played a central role in the controversy by prompting Taiwan to apply for IGY membership, but little is known about the mainland Chinese side of the story. In this essay we propose to examine Chinese sources to reconstruct the considerations that led China to join the IGY in the first place and the reactions to the Taiwanese issue that eventually led to its withdrawal. We will also examine the impact of the IGY on Chinese geophysical research even after its formal withdrawal from the collaboration.

China and IPY

Although it did not send polar expeditions, China was involved in both the first and second International Polar Years (IPY), 1882–83 and 1932–33, that were sponsored by the International Meteorological Organization (now the World Meteorological Organization) and were precursors to the IGY. During the first IPY, the French-run geomagnetic station at Sheshan near Shanghai provided data for the international collaboration. The second IPY coincided with a great buildup of Chinese scientific effort under the new Nationalist government. As a result China was able to expand considerably its participation in the project: Besides measurements of geomagnetism and solar radiation at Sheshan, observatories at Shanghai and Qingdao carried out measurements related to the determination of longitudes and latitudes, and, perhaps most notably, two stations were established at the mountaintops at Taishan in Shandong and Emei in Sichuan to carry out...
meteorological measurements. Coordinating most of these activities was the leading Chinese meteorologist and geographer Zhu Kezhen, who had received his PhD from Harvard in 1918 and who at the time headed the newly established Meteorological Institute of the Academia Sinica. Working under difficult conditions and without the resources to participate in polar explorations, Chinese scientists played only a marginal role in the second IPY, but they were nevertheless delighted to make a contribution to the global endeavor.

The international political environment changed dramatically for Chinese scientists when the third IPY, renamed the International Geophysical Year to indicate a broadened scope, was proposed in the early 1950s for implementation in 1957–58. In 1949 the Communist forces under the leadership of Mao Zedong had won the civil war against the U.S.-backed Nationalist government under Jiang Jieshi (Chiang Kai-shek), which had fled to Taiwan. Most Chinese scientists were unfamiliar with the Communists but nevertheless decided in the end to stay on the mainland, primarily due to their loss of confidence in the corruption-ridden Nationalists and with the hope that the Communists would provide a stable political government for the reconstruction of the country and the support of scientific research. For example, Zhu Kezhen declined, at great personal risk, Jiang’s special invitation to retreat with him to Taiwan. Instead, Zhu responded to the new government’s call to Beijing to become a vice president of the Chinese Academy of Sciences (CAS). The CAS was established in those institutes of the Academia Sinica that had remained on the mainland; the Academia Sinica moved its headquarters and a few institutes to Taiwan, where it continued operations.

**Joining IGY**

Thus by 1951–52, when the International Council of Scientific Unions (ICSU) approved the proposal for the IGY—a proposal that had originated in 1950 at the famous Washington dinner party attended by, among others, Sydney Chapman of Oxford, James van Allen of Johns Hopkins’s Applied Physics Laboratory, and Lloyd Berkner of the Carnegie Institution—China became both an important link in the international project and a sensitive political issue. Any comprehensive investigation of the geophysics of Earth would be amiss if it did not include the vast Chinese mainland, but China, even more than the Soviet Union, posed a problem for the IGY organizers: The recent revolution had placed the country’s representations in international scientific associations in dispute as both sides of the Taiwan strait—the PRC under the Communists and the Republic of China under the Nationalists—vied for China’s seat. Furthermore, the United States, in armed conflict with China in Korea, continued to back the Nationalists in the United Nations and other international bodies, such as ICSU.

The IGY organizers were determined to find a way to get China involved in the IGY. In 1952, vowing its non-political nature, the ICSU Special Committee (Comité Spéciale de l’Année Géophysique Internationale,