

PROFESSOR TAKEMATU OKADA

寺田寅彦

青空文庫



Prof. Takematu Okada was born on August 17, 1874, In Husa of Tiba Prefecture, a sunny and peaceful riverside town of the [Great Tone] , within forty kilometres of the Pacific coast. When attending the Imperial University of Tokyo as a student of the College of Science he chose physics as his special course. After graduating in July 1899, he was appointed as an Assistant Meteorologist in the Central Meteorological Observatory of Tokyo. This was at the time when meteorology in our country was still in its infant stage under the care of its foster-fathers, among whom we especially mention Prof. Kiyoo Nakamura, former Director of the Observatory, and Prof. [Yuji Wada] , later Director of Zinsen Observatory in Korea. At that time the great majority of the students of physics cared little for meteorology and perhaps no one dreamed of the development of this branch of science in this country, a development reserved for future accomplishment by the hand of this young post-graduate in physics.

The tasks which were entrusted to him were the most difficult ones, --no less than those of the daily weather forecasting and storm-warnings. A physicist confined in his laboratory or lecture room can scarcely imagine the difficulties met with by those who are in charge of this kind of work, which

h is in immediate connection with the daily life of people who have little or no understanding of things scientific. He has had, indeed, to endure not only ill-humoured complaints of people but also the most unsympathetic criticisms by journalists and even by some scientists. He has, however, stood manfully in this difficult situation by gradually improving the scientific basis of the method of prediction as well as the organization of the net-work system of observation. For example, the reception of observation data from ships at sea was first put into practice upon his initiative in 1910, previous to any other country, as his insight promptly perceived the urgent need of this means of obtaining data from the neighbouring seas, in view of the peculiar geographical location of this country. Observatories were also founded at Sionomisaki in 1912, at Muroto Zaki and at Shanghai in 1919 to facilitate warnings of coming cyclones. In the meantime, he felt the need of founding a Marine Meteorological Observatory for a further development of the system of prediction and succeeded in raising the necessary fund from among the chief shipping companies and ship-owners. The institute was founded in 1919 of which he was appointed the first Director. M. S. " [Syunpu-maru] " (Spring-Breeze) was constructed for the exclusive use of the observatory equipped with all the instruments and accessories necessary for regular oceanographical investigation. The results of research work c

carried out on board this ship have been published in a number of Reports and Memoirs. On the other hand Professor Okada was keenly alive to the necessity of a school devoted to the thorough education of the younger meteorologists who were destined to become the staff members of the central as well as of the local observatories. He therefore planned and founded an institution attached to the Central Meteorological Observatory in which the students were to attend a system of regular courses in different departments of physical and mathematical sciences. Among the list of the teachers we find the names of a number of the most eminent meteorologists of this country. In 1919 the installation of the wireless system for meteorological communication was completed in the Imperial Marine Observatory, for the first time in this country. Further development of this system of communication was effected by the installation of the sending stations at Okinawa, Naze and Isigaki, besides those in Tokyo and [Kobe], by which the first forecasting typhoons was observed and speedily reported to the central station.

In 1923 Prof. K. Nakamura resigned and the chair of the Director of the Central Meteorological Observatory was filled by Prof. Okada while at the same time he retained the directorship of the Imperial Marine Observatory.

Seismological observations which were being regularly made from the earlier dates were established on an entirely new status under his supervision, after the bitter experience of the [Great Kwan to<sup>^</sup> Earthquake of 1923] , by improving and amplifying the instrumental equipments in a number of selected local observatories. The activity of the seismologists under his guidance may be judged from the number of the important papers already published.

To provide for the rapid development of aeronautical practices he founded a special department of aeronautical meteorology in the Central Meteorological Observatory and, connected with it, a number of branch observatories in the vicinities of the chief aerodromes and also along the main regular routes of aerial communication.

Those local observatories which are situated on islands or promontories and had been notorious for the frequent damage incurred by exceptional severity of cyclonic storms on account of their frail wooden structures were rebuilt into massive reinforced concrete buildings, so that they could stand from now on as undaunted sentinels in the face of raging typhoons.

The Magnetic Observatory at Kakioka which was founded by the late Prof. K. Nakamura, has also been reconstructed and considerably amplified in its instrumental equipment.

The extent and variety of the routine work officially carried out in the Central Meteorological Observatory were conspicuously enlarged since the day of his directorship, as may be judged from the increase in the number of the chairs of experts in charge of their respective special branches of work, such as precipitations, thunderstorms, wireless communications, aeronautics, agricultural meteorology, terrestrial magnetism, clocks, tides radiations, library and cartography. Moreover, workshops were installed respectively for printing, metal and wood working. On the other hand, the Mountain Observatories on Huzi, Tukuba, and Ibuki were either founded or reconstructed under his supervision.

In Prof. Okada we find a happy combination of administrative ability with scientific talent, which is, as it seems, rather rarely the case at least in this country. While busily engaged in his bureau work which his official duty necessitates he manages somehow to find leisure to be devoted to his favourite research work. Among his earlier works, we may mention his papers dealing with the underground temperature, the conductivity of snow, the evaporation in the Inland Sea districts, the foehn-winds etc. His exhaustive investigations on the origin of the rainy season, "Baiu," is a genuine classic in this field. His work regarding the typhoon of the Far East comprises the fruits of his long pract

ical experience of prediction service. It is interesting to remark that the most important law of motion of cyclones and anticyclones under mutual influences, which he discovered and later was named after him by Prof. Fujiwhara, was described not in any of his papers, but in his elementary textbook of meteorology.

There are also some of his papers of a mathematical nature such as those regarding the geometrical construction for finding the centre and track of cyclone. Thanks to his natural sympathy towards the mathematical school of meteorology, a pleiades of able mathematicians have risen up among the younger generation of meteorologists under his unwearying guidance and cordial encouragement.

At the same time he is deeply interested in the practical problem of long period weather prediction, especially in connection with the agricultural problem of the rice crop, a matter of most important national concern in this country. A series of papers have been published by him as well as by his collaborators on the correlation of different meteorological elements in the Far East and also on the prediction of rice crops.

The recent compilation of "Climate of Japan" by Prof. Okada's own hand will be universally welcomed as an inexhaustible source for reference of useful data of which the reliability is insured by his



own name, by all those who are engaged in any kind of scientific or practical work, as there is scarcely anything in this world which is entirely free from the influence of meteorological factors. He has also written a number of excellent books on meteorology, among which we may especially mention an elementary textbook for beginners, a treatise for advanced students, a book on rain and a manual for meteorological instruments. These are not only undisputedly the best of the kind ever written in our language, but they may well compete with those written in occidental languages by renowned authors and, besides, they abound with materials typical of the Far East.

A series of short episodes and reminiscences by his fluent pen appears frequently in "Umi to Sora", which afford very interesting reading not only for meteorologists but also for scientist at large, being an embodiment of long year's experiences of a veteran scientist.

Well deserved recognition of his achievements as a man of science is shown by the fact that in 1924 he was awarded the Symons's Gold Medal by the Royal Meteorological Society of London and in 1925 he was elected an Honorary Member of the same Society. Again, in 1931, he was elected a Member of the Imperial Academy of Japan.

Prof. Okada's deep love of science is perhaps connected with his bibliophilistic inclination which

is well known among his friends. His private collection abounds with rare books not only in the domains of meteorology and geophysics but also in other fields of the natural sciences. It seems that the library of the Central Meteorological Observatory owes its richness and amplitude to this welcome propensity of the Director. The present writer has involuntarily acquired a wicked habit of appealing at once for Prof. Okada's assistance whenever puzzled in search of literature concerning some matters lying outsidés of beaten tracks. Again, his own love of science combined with the cordiality of his personality which is revealed in his prompt assistance and kind encouragement given to anyone engaged in any kind of original research, has resulted in fostering a fervent atmosphere of scientific enthusiasm among the younger staff members of the Central Meteorological Observatory as well as of its branch observatories, which have now risen to the level of the most active centres of scientific research of this country. This latter fact may be recognized also by the remarkable activity on the part of the members of the Meteorological Society of Japan. Its Meeting which was formerly held once a month is now regularly held twice.

At the age of fifty eight he is still in his prime of youthful activities, with his everlasting zeal in weaving together the more and more elaborate network of the weather service of Japan, at the same

e time devoting his spare time as ever to his own research work, as it seems, as his most favourite hobby, and never neglecting his care for his beloved foster-children, who find in Prof. Okada a direct or, a teacher, a friend and at the same time their most affectionate father. It is merely the humblest expression of the profound feeling of gratitude on the part of this younger generation of Japanese meteorologists that they have here undertaken to compile the present Anniversary Volume and to devote it to the commemoration of his thirty years' service in the Central Meteorological Observatory with their heartfelt desire that Prof. Okada may always continue his activity in good health, on behalf of themselves as well as for the future prosperity of meteorological science in Japan.

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