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# Dr. Nanabhai Ardesher Framji Moos (1859—1936)

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The I. G. Y. 1957 and the I. G. C. 1959 have highlighted the necessity of active cooperation on the international level amongst the scientists of the world in the joint pursuit of scientific knowledge. India and her scientists can be justifiably proud of her share in this gigantic cooperative effort. However, it may be recalled that India's contribution to the subject of meteorology and geomagnetism goes far back into the nineteenth century—a contribution made possible by the hard and devoted work of successive workers. A prominent worker among these was the first Indian Director of the Government Observatory, Bombay (Colaba), Dr. Nanabhai Ardesher Framji Moos whose centenary falls in October 1959.

Moos was born on 29 October 1859. He graduated in Engineering from the Poona College of Science in 1878 and took his B. Sc. Degree with distinction in 1886 at Edinburgh University. On his return to India he worked for sometime as Professor of Physics in the Elphinston College, Bombay. In 1896 he was appointed Director, Colaba (Bombay) Observatory, a post which he held with distinction till his retirement in 1919. Even after his official retirement at the age of 60, Moos continued to take a keen interest in meteorological, magnetic and seismological problems until his death on 12 March 1936.

Within a few years of his appointment as Director, Moos had to face the problem of shifting the Magnetic Observatory from Colaba where it had functioned since 1846. In 1900 the magnetic work at Colaba was threatened by the proposed introduction of electric traction in the city of Bombay and in order to preserve the continuity of the long series of data, it became necessary to shift the Observatory to Alibag, about 20 miles to the southeast of Bombay, and free from this source of disturbance. Moos tackled the problem of shift with vigour, started the Magnetic Observatory at Alibag in 1904, and arranged for duplicate records for two years at the old and new sites, before the electric tram service at

Bombay came into operation. This overlapping period of two years, linking up the series of observations recorded at Colaba with the Alibag observations, has ensured a continuous series of geomagnetic data extending well over a century, —a record of which any nation can be proud.

The outstanding contribution of Moos to terrestrial magnetism was the publication of the two-volume work entitled *Colaba Magnetic Data 1846-1905*. The first systematic study of "magnetic storms" was presented in these volumes. Among the many questions dealt with by Moos, two may be specially mentioned. One of them was the investigation of the "Disturbance Daily Variation", *i. e.*, the difference between the mean solar diurnal variation on disturbed days and that on quiet days. Moos showed that the disturbance daily variation depends at any place on the local time and is quite different in character from the daily variation on quiet days. The other was the study of the inter-diurnal variability of the horizontal intensity of the earth's magnetic field at Colaba. Geomagnetic workers all over the world regard these two volumes, which amplified the earlier ideas on the subject of geomagnetism, as a valuable store-house of information on the science of terrestrial magnetism. The thorough and conscientious work carried out by Moos in his capacity as the first Indian Director of the Colaba and Alibag Magnetic Observatories, brought him international recognition and also served to enhance the prestige of the Colaba and Alibag Observatories. The celebration of the Golden Jubilee of the Alibag Magnetic Observatory in December 1954, and its commemoration by the publication of special geomagnetic number of the *Indian Journal of Meteorology and Geophysics*, can also be considered as a recent recognition of the work of Moos—the founder of the observatory.