D M BOSE AND COSMIC RAY RESEARCH*

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*To the Historians of Science, D M Bose (1885-1975) is known for his monumental work '*A Concise History of Science in India*', which was published by the Indian National Science Academy in 1971.[1] This article is our tribute to D M Bose, on the occasion of the Golden Jubilee of the journal* Indian Journal of History of Science *(*IJHS*), who incidentally was the first editor of the journal. The purpose of this article is to focus on some aspects of D M Bose's life which are immensely significant yet almost unknown to the scientific community. D M Bose made significant contributions in the areas of magnetism, radioactivity, cosmic rays and plant physiology. We, in this article, will concentrate on his pioneering works on cosmic ray research done at Bose Institute, Kolkata and discovery of meson. In a series of articles published in* Nature *in early forties, D M Bose and Bibha Choudhuri (also known as Biva Choudhuri or B Chowdhury) identified a cosmic particle having mass close to 200 times the mass of electron (later known as mu-meson). Many believe (Das, 2010) that they missed the Nobel Prize for this discovery because of their lack of access to modern scientific tools (Roy, 2010). In spite of pain-staking and tedious experiments done by Biva Chaudhuri, she is little known and less discussed in the scientific community. We have attempted here to put together a comprehensive review of their works related to this discovery, which, in the opinion of the present authors, has not done before.1 Contrary to known beliefs that D M Bose did his Ph.D. with Erich Regener, it has been revealed for the first time that his official Ph.D. guides were Heinrich Ruben and Max Planck. And lastly an attempt has been made to understand why, despite Bose's scientific recognition and reputation in India and abroad, he has not become a public figure unlike his contemporaries.*

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[1] The author Naba K. Mondal has given a good review of "Experimental high-energy physics", (in: History of science, philosophy and culture in Indian civilization, vol. XIII – Part I – India in the world of physics – Then and now, Ed. Mitra A.N.), Pearson Longman, Delhi 2009, pp. 345-358. The summary of D.M. Bose et al. work is to found on pages 345 and 346.