DR. HOMI J. BHABHA, F.R.S.

INDIAN Scientists, and Physicists in particular, will learn with great joy that DR. HOMI J. BHABHA has been honoured by a Fellowship of the Royal Society of London. That this should have come at such an early age and on the first nomination is a fitting recognition of his brilliant researches. The conferment of this distinction on two Indian Physicists during the year is a clear indication of the momentum that the study of pure science for its own sake has acquired in this country and the international recognition it has earned for itself.

Born in the year 1909 Dr. Bhabha took his early University education at the Royal Institute of Science, Bombay, and at 17 he joined Gonville and Caius College, Cambridge. After taking the Mathematical Tripos Part I, he changed over to engineering and took the Mechanical Sciences Tripos in 1930. But the engineer soon turned Physicist, and like Prof. Dirac he took to mathematical physics. He got his early training under Profs. Dirac and N. F. Mott at Cambridge and later under Prof. W. Pauli at Zurich. He made useful contacts with great scientists on the Continent by working in turn with Prof. Fermi at Rome, Prof. Krammers at Utrecht and Prof. Niels Bhor at Copenhagen.

From 1935 onwards Dr. Bhabha lectured at the University of Cambridge till the outbreak of War cut short his career there. Since his return to India he has spent most of his time at Bangalore, where he has continued his researches at the Indian Institute of Science and given lectures on theoretical physics.

His presence in India is largely responsible for the great rise in interest in the study of cosmic radiation in which he is an authority.

His later years at Cambridge were very fruitful to Dr. Bhabha from the view-point of scientific research. His first important work was a paper with Heitler on the cascade theory of cosmic ray showers which appeared in the *Proceedings of the Royal Society* in 1937. In the following year he published two other important papers. The first showed the existence of a new fundamental particle in the penetrating component of cosmic radiation and the second gave the quantum theory of this particle, which has now been called the meson. The first paper also explained the production of showers by the penetrating component through the agency of collision electrons, by a process which is now called after Bhabha. There were nevertheless serious difficulties in the quantum theory of mesons and during the last two years Dr. Bhabha has given solutions of these difficulties in three papers. Two of the difficulties were connected with the scattering of mesons, which as predicted by the old theory was in disagreement with observations. Dr. Bhabha's solution of this difficulty predicts two new fundamental particles, and points the way to future experiments.

Dr. Bhabha's most serious hobby when he is away from physics is painting, and apart from his pictures, he has designed and painted the Stage Decor of several Operas and plays which were produced at Cambridge. Such a rare combination of artistic and scientific talent is certainly very refreshing to any one who comes in contact with him. It is with sure confidence that we can expect greater successes from this scientist.

VIKRAM SARABHAI.