

A SPLITTER OF ATOMS

World-Famous Scientist to Talk for NBS

SCIENCE walks forward on the two feet of theory and experiment. Sometimes one is advanced first, sometimes the other—but progress is only possible through the use of both.

The metaphor comes from Dr. Robert Andrews Millikan, an unusual person with some unusual things to tell listeners in the near future.

It summarises the story of a career which, in the baldest possible biographical outline, reaches 4000 words.

Dr. Millikan is the experimenter. As the foot of theory has been advanced he has hitched the foot of experiment level, or pushed it a little in front, so that theory must hop to catch up.

While the fine brilliance of the Rutherfords of the world has been thrusting the spearpoint of science into the unknown, the Millikans have been testing, probing, inquiring; consolidating each good position; questioning each doubtful one.

That is one side of the man who will arrive in New Zealand next month, for an all-too-brief twelve days, under contract to the National Broadcasting Service, to talk on the dates detailed with our frontispiece photograph.

The other side is homely.

We find that this splitter of atoms, this man who plays with electrons and cosmic rays, is also the most human of human beings.

Son of a Minister

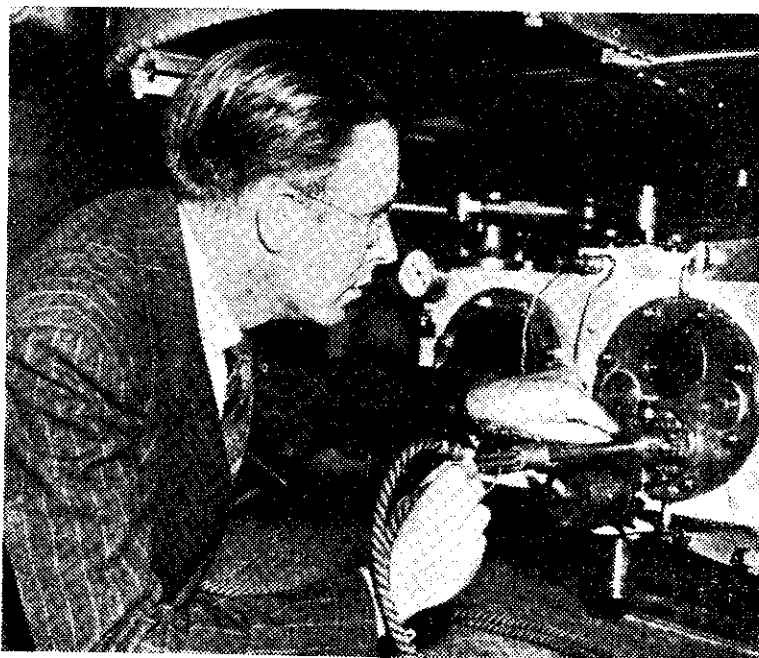
His ancestors' names were Pease, Franklin, McKnight, Mason, and this Scots-English mixture, added to the influences of America's rugged and honest New England, made Robert Andrews Millikan, son of a Congregational Minister, the world figure he has now become.

Church and school had been the all-absorbing interests of four decades in a typical New England settlement in Illinois before the father's life work took him elsewhere, to Kansas and Iowa. Young Robert Andrews, in character, was to remain true to his lineage, but his mind and thought were to look forward into the farthest bounds of knowledge reached by the scientific imaginations of his fellow men.

Strangely enough, when he followed his father and mother to Oberlin College, Ohio, he took only one short course in physics. Greek and mathematics were his most absorbing studies, gymnastics and sprinting over

100 and 220 yards his sports, editorship of the college magazine, and membership of Phi Beta Kappa his diversions.

He graduated at Oberlin in 1891, stayed to teach elementary physics until 1893, discovered a growing interest in the subject, secured a Fellowship in it at Columbia University, won his Doctorate there, went on to teach and study in Germany, returned to the University of Chicago (in 1896), and from Assistant in Physics climbed steadily up to his Professorship in 1910. In 1921 he became



THE ATOM UNDER FIRE. Here is another prominent physicist, Dr. E. O. Lawrence, director of the University of California radiation laboratory, making final adjustments to the cyclotron, or atom smasher—a machine capable of more than twice the output of electronic energy previously produced

Director of the Norman Bridge Laboratory of Physics and Chairman of the Executive Council of the California Institute of Technology at Pasadena, the exalted position he still holds.

Nobel Prize-Winner

Behind this bright history is a brighter story of 17 books published, far-reaching research (under eight main headings) into new developments of a science which is progressing so fast as to challenge man's ability to keep up with it; the tribute of a Nobel Prize; membership of 21 societies, boards, congresses, and academies in ten countries; twenty-two honorary degrees from the universities of five nations, twelve medals, prizes

and special awards from the academies, institutes, and societies of America, France, England, Italy, and Sweden.

Membership of the Congregational Church remains on his list.

Knowing so much, Dr. Millikan, like every scientist, becomes the more acutely conscious of how little it really is. With all but men like himself, or Jeans and Eddington, the realisation builds up a barrier of reserve which gives to the ordinary man an impres-

sion that the sciences are mysteries beyond the circumscribed boundaries of his thought. Or if he does not think of them as mysteries he regards them as something resembling superstition. But in either case, if his ignorance does not lead to prejudice, it leaves him with an unsatisfied interest in what really is going on—in what the best brains of his time are making of their investigations into the what and the why of the world. At heart he is just as curious about himself and the natural phenomena surrounding him as Madame Curie, or Pasteur, or Einstein, or Edison, or Marconi.

He Speaks Our Language

Dr. Millikan is one scientist who is prepared to take the risk of trying to satisfy the ordinary man's curiosity. He risks the disapprobation of his contemporaries, and the misunderstanding of those to whom he talks; but he takes the risk, and most of us will be grateful. It is refreshing, in a

world of so many engrossing interests, to find one man willing to turn aside from his own specialities for a moment to summarise them, set them into a common vocabulary, and make them less mysterious, less like superstitions, less distorted by prejudice.

Listeners who may think that Dr. Millikan has nothing to share with them on their own level may be reassured by the knowledge that he has been married thirty-seven years, has always been an enthusiastic tennis player (but has lately taken to golf), and has three children in whom he takes the same doting interest as any ordinary family man. But his children are by no means ordinary. One son has represented America in high hurdles at Wimbledon and is now an Associate Professor of Aeronautics at the California Institute; another is at present a Fellow of Trinity College, Cambridge, England; and a third son is an instructor in economics at Yale University.