

Editorial

N Mukunda, Chief Editor

Two months ago we featured one of the great figures of twentieth century physics, Erwin Schrödinger. This month we turn to another, Wolfgang Pauli jr., also an Austrian and a Viennese. Many areas of modern physics were touched by his tremendous power and critical insight. So much of chemistry and of solid state physics rests on his exclusion principle; the spin of the electron never ceases to fascinate and tease the imagination. One of his boldest ideas, so hesitantly expressed in 1930, was the existence of a new particle which he first called a 'neutron', but which Fermi renamed as 'neutrino'. (The neutron we know, discovered in 1932, is a very different particle). The first experimental detection of the neutrino by Reines and Cowan was in 1956. A few years later, in 1962, Lederman, Schwartz and Steinberger showed that there were two kinds of neutrinos; today we believe there are three. To celebrate all this, and to encourage a young student contributor too, we have an article on neutrinos by Revathi Ananthakrishnan.

Pauli's life and oeuvre are recalled in an article-in-a-box, and his famous 1930 letter on the neutrino is presented elsewhere. We also have assessments of him by Niels Bohr and Werner Heisenberg. His contributions to quantum field theory and elementary particle physics laid the foundations of these subjects. He was also the source of the 'Pauli effect': if Pauli walked into a laboratory, the ongoing experiment would definitely fail. Somewhat rare among physicists of his generation and reputation, he had tendencies towards mysticism, but his relatively early death has delayed general appreciation and understanding of his philosophical views. A discerning scholar, Kalervo Laurikainen, had this to say:



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