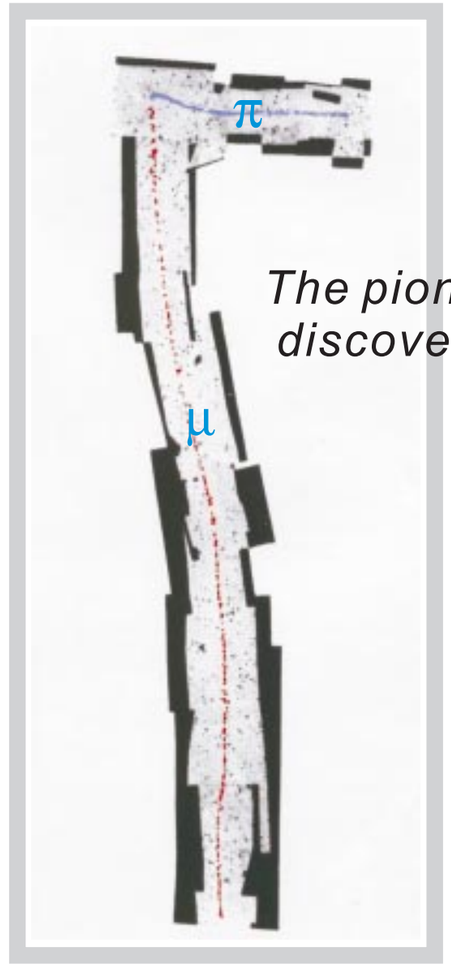
Giuseppe 'Beppo' Occhialini

1907 - 1993

Giuseppe Occhialini, universally known to the older generation of physicists as 'Beppo', was born in Fossombrone, the son of Augusto, a physicist of considerable standing. He graduated from Florence University in 1929, with some research in cosmic rays. From 1932 through 1937 he was a research assistant in the Arcetri laboratory. This was the birthplace of Italian cosmic ray physics. Thoroughly familiar with the 'most modern' techniques, he went with an Italian Fellowship to Cambridge, to work with Patrick Blackett, an authority on cloud chamber physics. At the Cavendish Laboratory they developed together the counter-controlled cloud chamber, one that was triggered by coincidences generated by cosmic rays. One of the first fruits of this collaboration was the discovery of electron-positron pairs, an almost immediate confirmation (and extension) of Carl Anderson's discovery of low mass positive tracks. The study of electromagnetic showers and the discovery (with Blackett and Chadwick) of pairs produced by gamma rays followed.

Upon returning to Florence in 1934, Occhialini could not stand the increasingly irksome political climate and in 1937 accepted a professorship in Sao Paolo. With Brazil's entry into the war (August 1942) he became an enemy alien and had to abandon his post. He took refuge in the Itatiaya mountains, living in a meteorological hut and acting as guide (he was an expert mountain climber and wrote an excellent (unpublished) guide book on that range). After the Italian armistice, in September of 1943, he became a guest of C. Chagas, then director of a biophysics lab in Rio.

After the Second World War he moved to the Wills Laboratory in Bristol, England, and joined C.P.S.Powell. There, using a novel approach involving the use of photoemulsions for the detection of elementary particles, he contributed to the discovery of the pion in 1947.



The pion decay discovery

The Arcetri laboratory near Florence, where Beppo was research assistant with Bruno Rossi

Occhialini was the decisive partner in two research efforts that were crowned with the Nobel Prizes, the one that went to Patrick Blackett, the other which was awarded to Cecil Powell. Beppo's contributions were however not entirely ignored; he received the prestigious Wolf Prize 'for his contribution to the discoveries of electron pair production and of the charged pion', became a foreign fellow of The Royal Society and was elected to the Academia dei Lincei as well as to a number of other learned societies.

Beppo was a born experimentalist, a consummate technician, a worker of irrepressible energy and magnetic personality capable of transferring his enthusiasm to those around him. He had a good intuition for physics, but rarely wrote down a formula. He taught scrupulous integrity in the execution of scientific research and in giving credit to others, both outside and inside his group. He had a strong sense for proper experimental evidence and the proper phrasing of his papers. These qualities made him a role model for his students. Ever a dialectic materialist, he often took the opposite view even when agreeing with his interlocutor, just to demolish the latter's arguments. He liked to express himself through parables: his remarks were often difficult to understand by the uninitiated. He liked artists, literature and poetry; he could, to quote *his* quote 'see the world in a grain of salt and ...eternity in an hour'.

E.F. & V.T.