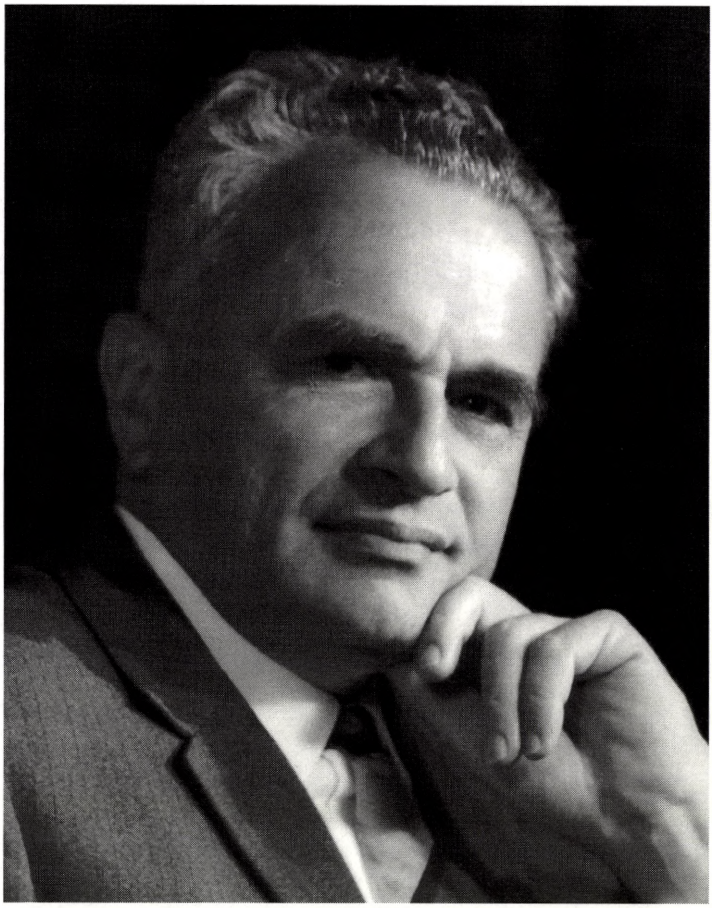

Bernard Peters

22. december 1910 – 2. februar 1993

Af Herbert Schnopper

Bernard Peters, for more than four decades a world leader in probing cosmic rays, died at the age of 82 on 2. February 1993 i Copenhagen. Born in Posen (now Poznan in Poland), he grew up in academic circles in Germany between the wars. His bold early anti-Nazi activity as an engineering student in Munich brought him briefly to Dachau, but he soon found his way to he US, in 1934. A few years later, while a dockworker in San Francisco, he met Robert Oppenheimer through mutual friends, and soon he became one among Oppie's students. Peters took a PhD at Berkeley in 1942, then spent the war years working on the magnetic separation of ^{235}U.

Off to the University of Rochester at war's end, Peters formed a highflying collaboration with another young group from the University of Minnesota. In 1948 they flew a package up to the last few grams/cm^2 of the air in a balloon. The package contained both a small cloud chamber for the Minnesotans and a large stack of photographic plates for Peters and Helmut Bradt, a colleague from Rochester who died, sadly, in 1950. The abundant heavy tracks confirmed for the first time that incoming cosmic rays are a mix of nuclei-starstuff like ourselves, somewhere and somehow smoothly accelerated to relativistic energies, but not a primordial mystery of creation.

Soon the McCarthyite cold war chilled American campuses. Peters, although in no danger of a second concentration camp, nevertheless had real troubles to avoid and the high geomagnetic field at the equator still to exploit. Was there any antimatter in those cosmic rays? He was welcomed by Homi Bhabha to the Tata Institute of Fundamental Research in Bombay. There they promptly set a limit on antimatter, less than one antiproton among 1000. Soon Peters conceived another interest in the cosmic beam: It left radioactive tracers everywhere. Once you could ferret out a few dozen specific atoms from tons of meltwater you could study the mutual history of the rays and of the Earth.

Peters stayed in Bombay for eight busy years, happily engaged in such novel tasks as learning chemistry and a little Tamil, processing unprecedentedly large sheets of unbacked photographic emulsion, searching out downed balloons among suspicious, unlettered villagers and hauling heavy ion-exchange columns on horseback high into the Kashmir snows. The TIFR graduate students became devoted to this professor who worked harder than they did, would try out anything he could understand, earnestly explained everything he knew and through it all kept a helpful eye on them as his warm friends. His style is honored today in more than one successful Indian lab.

Peters left the tropics in 1958 to work at the Bohr Institute in Copenhagen. As Peters could improvise in the rickety Indian infrastructure, so he would innovate in the high-technology European context. If a gas at high pressure was a standard but cumbersome medium for Cherenkov detectors aloft, Peters had a better idea: Why not an artificial »gas,« submicron hollow spheres of silica, custom-pressed to the density and refractive index of choice?

After a few years at the Bohr Institute Peters became director of the new Danish Space Research Institute, where his ingenuity and leadership informed many a productive space palyload, even for the much larger agency, NASA. He retired in 1979, still able to challenge the experts with good new ideas about cosmic-ray origins. His personal glow as a cosmopolitan »teacher supreme,« both through his pungent precepts and his reasoned if stubborn example, warms and illumines many who follow his path, fascinated as he was by nature's secrets and eager for human welfare the world around.

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