

Thomas Patrick Martin – A pioneer in cluster science

O. Echt

Physics Department, University of New Hampshire, USA

olof.echt@unh.edu



Thomas Patrick Martin passed away on August 20 at the age of 78. Pat, or simply TP to many of us, earned his Ph.D. in physics from the University of Rochester, New York, in 1967. From 1970 until his retirement in 2001 he was a research scientist at the Max-Planck Institute for Solid State Research in Stuttgart, Germany. Already in 1973, three years before the first ISSPIC conference, he published research on optical properties of *microcrystals*, soon to be named *small particles* and eventually *atomic clusters*.

Pat's research focused on the shell structure of clusters. He and his coworkers explored geometric shells in alkali halides, metals, and molecular clusters including fullerenes, and electronic shell and supershell structure of simple metal clusters. Many of their experiments could not have been performed anywhere else. They perfected the gas aggregation source to a point where they could grow and detect very large clusters, clusters with a well-defined, controllable temperature, and binary clusters such as fullerene aggregates coated with metals. A one-of-a-kind time-of flight mass spectrometer allowed them to resolve ions containing tens of thousands of atoms; innovative laser heating experiments made it possible to generate highly charged alkali cluster ions and study their fission.

Pat organized several memorable workshops and summer schools. His talks at major cluster conferences were highly anticipated; he would present the most astounding results in a lucid, tutorial way, with characteristic calmness, modesty and subtle humor. He will be remembered as a great scientist and wonderful person.