

How the Press Relates to the Public

1. Fractional Quantum Hall Effect: Nobel Press Release 1998

Robert B. Laughlin, Horst L. Störmer, Daniel C. Tsui

...for discovering that electrons acting together in strong magnetic fields can form new types of "particles", with charges that are fractions of electron charges

...*"for their discovery of a new form of quantum fluid with fractionally charged excitations*

...electrons ... form a kind of quantum fluid related to the quantum fluids that occur in superconductivity

..*yet another breakthrough in our understanding of quantum physics*

2. Bose Einstein Condensates: Nobel Press Release 2001

Eric A. Cornell, Wolfgang Ketterle, Carl E. Wieman

... caused atoms to "sing in unison"

...thus discovering a new state of matter, the *Bose-Einstein condensate*

...Seventy years were to pass before this year's Nobel Laureates

...considered as a primitive "laser beam" using matter instead of light.

...The new "control" of matter ... is going to bring revolutionary applications in such fields as precision measurement and nanotechnology.

3. Disorder in Metals: Nobel Press Release 1977

Philip W. Anderson, Sir Nevill F. Mott, John H. van Vleck

...for their fundamental theoretical investigations of the electronic structure of magnetic and disordered systems.

...solid state physics lies behind...current technical development, particularly in electronics

...van Vleck's ideas have played a central role for the development of the laser

...technical development of amorphous materials like glass...would be unthinkable without Mott's and Anderson's contributions to the fundamental theory

4. Superfluidity in a Fermi Gas: AIP Briefing for the Press 2004

...properties of the "atomic jelly" can provide information on much smaller superfluid systems (such as a quark-gluon plasma) and much larger ones (neutron stars)

...could help determine whether it's physically possible to create room temperature superconductors

...could lead to breakthroughs, from widely available energy-saving power lines to magnetically levitated trains