2012 Nobel Prize in Physics

Serge Haroche and David Wineland awarded the Nobel Prize for measurement and manipulation of individual quantum systems.

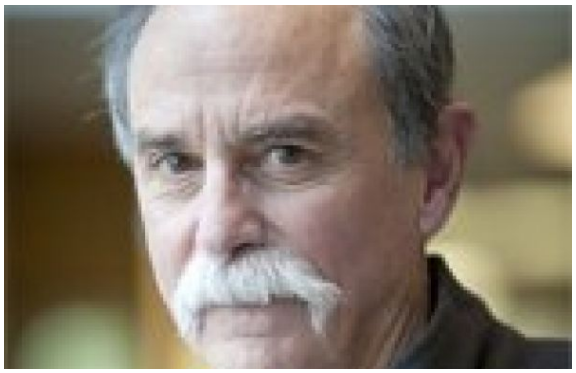
October 09, 2012

Today we celebrate the awarding of the 2012 Nobel Prize in Physics to two scientists working in the field of Optics and Photonics applied to the control and manipulation of atoms. Physicists Serge Haroche and David J. Wineland have been awarded this prestigious honor for "innovative experimental methods that allow the measurement and manipulation of individual quantum systems".

Dr. Ignacio Cirac, Distinguished Invited Professor at ICFO who jointly won the Benjamin Franklin award for Physics with David Wineland in 2010, added his support for this Nobel explaining that "they have made a ground breaking contribution in isolating single atoms, testing and manipulating them according to the mysterious laws of quantum mechanics". In fact, "experimental quantum information science was pushed forward by Dave Wineland,

who was the first to realize a quantum logic gate in experiment with ion. Serge Haroche's research achieved the first observation of the so called Schrodinger cat, the macroscopic superposition of many photon states", highlighted Dr. Maciej Lewenstein, leader of the Quantum Optics Theory Group at ICFO. These accomplishments have opened up the possibility of building new devices based on the laws of quantum mechanics. There is general agreement in the optics and photonics community that Drs. Wineland and Haroche have done something that merits special distinction.

ICFO salutes these kindred spirits and celebrates their important accomplishments for the entire Optics and Photonics community.



David Wineland