

## Complementarity in Quantum Optics

Brigitte Falkenburg, TU Dortmund (brigitte.falkenburg@udo.edu)

In recent quantum optics, a discussion came up what is more fundamental: Bohr's principle of complementarity or Heisenberg's uncertainty relation. The context of the discussion were recent "Which Way" experiments which stand in the tradition of Heisenberg's light microscope and the Bohr-einstein debate. In 1991, Scully, Englert and Walther suggested a thought experiment about the above question. A first version was realized by Dürr and Rempe in 1998. The talk will give a survey of the historical background of the debate, its systematic import and the way in which it was resolved. In particular, it will focus on the relation between Bohr's original account of complementarity and the way in which the concept was taken up by the later physicists.