

Hellwig, K.-E.

Quantum measurements and information theory. (English) [Zbl 0866.46048](#)

Gielera, R. (ed.) et al., Quantum groups and related topics. Proceedings of the first Max Born symposium, Wojnowice Castle, Wrocław, Poland, September 27-29, 1991. Dordrecht: Kluwer Academic Publishers. Math. Phys. Stud. 13, 211-221 (1992).

In the section following the introduction the author discusses first the historical and modern approach to the theory of quantum measurement and then the concept of informational completeness. The subsequent section is entitled 'Quantum measurements and information'. It starts with recalling the concepts of information theory and then combining these concepts with quantum measurement theory. In his conclusion the author claims that he demonstrated how concepts of the theory of statistical information can be fitted into the description of quantum measurements. For more details, the reader is referred to a dissertation [*Matthias Singer, Zur Informationstheorie statistischer Experimente, Fachbereich Physik der Technischen Universität Berlin, D 83 (1989)*].

For the entire collection see [\[Zbl 0818.00012\]](#).

Reviewer: [W.Slowikowski \(Aarhus\)](#)

MSC:

46N50 Applications of functional analysis in quantum physics

81P15 Quantum measurement theory, state operations, state preparations

Keywords:

[quantum measurements](#); [informational completeness](#)