Record Nr. UNINA9910257431003321 Autore Holevo Alexander S Titolo Statistical Structure of Quantum Theory / / by Alexander S. Holevo Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa 2001 3-540-44998-1 **ISBN** Edizione [1st ed. 2001.] Descrizione fisica 1 online resource (IX, 166 p.) Collana Lecture Notes in Physics Monographs;; 67 Disciplina 530.12/0151 Soggetti Quantum theory System theory **Probabilities** Mathematical physics **Quantum Physics** Complex Systems **Probability Theory** Theoretical, Mathematical and Computational Physics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto The Standard Statistical Model of Quantum Mechanics -- Statistics of Quantum Measurements -- Evolution of an Open System -- Repeated and Continuous Measurement Processes -- Processes in Fock Space. Sommario/riassunto New ideas on the mathematical foundations of quantum mechanics, related to the theory of quantum measurement, as well as the emergence of quantum optics, quantum electronics and optical communications have shown that the statistical structure of quantum mechanics deserves special investigation. In the meantime it has become a mature subject. In this book, the author, himself a leading researcher in this field, surveys the basic principles and results of the theory, concentrating on mathematically precise formulations. Special attention is given to the measurement dynamics. The presentation is pragmatic, concentrating on the ideas and their motivation. For detailed proofs, the readers, researchers and graduate students, are

referred to the extensively documented literature.