

**Navara, Mirko; Pták, Pavel**

**Quantum logics with given centers and variable state spaces.** (English) Zbl 0906.03063  
*Int. J. Theor. Phys.* 37, No. 1, 139-145 (1998).

In logico-algebraic approaches to the foundations of quantum mechanics, the so-called quantum logic of an experiment is identified with a  $\sigma$ -orthocomplete orthomodular poset, while a state is represented by a  $\sigma$ -additive probability measure on it. This paper considers the intriguing question whether the center of the quantum logic and the state space are independent, answering that they are almost. The paper is an extension of *J. Binder* [*Rep. Math. Phys.* 24, 337-341 (1986; [Zbl 0637.03061](#))] and supplements *D. Foulis* and *P. Pták* [*Ric. Mat.* 44, 19-29 (1995)] and *M. Navara, P. Pták* and *V. Rogalewicz* [*Pac. J. Math.* 135, 361-369 (1988; [Zbl 0617.06006](#))].

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**MSC:**

[03G12](#) Quantum logic

[81P10](#) Logical foundations of quantum mechanics; quantum logic (quantum-theoretic aspects)

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[quantum logic](#); [center](#); [state space](#)

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