

Compatibility in quantum structures

Josef Tkadlec*

Department of Mathematics, Faculty of Electrical Engineering,
Czech Technical University, 166 27 Praha, Czech Republic,
e-mail: `tkadlec@fel.cvut.cz`

Compatibility play an important role in the axiomatics of quantum structures and has been studied extensively. We present some recent results concerning compatibility in quantum structures, their consequences to the axiomatics and their relationship to previous achievements. We show, e.g., that a residuated orthomodular lattice is a Boolean algebra.

References

- [1] Foulis, D. J., Bennett, M. K.: *Effect algebras and unsharp quantum logics*, *Found. Phys.* **24** (1994), 1331–1352.
- [2] Greechie, R. J., Foulis, D., Pulmannová, S.: *The center of an effect algebra*, *Order* **12** (1995), 91–106.
- [3] Tkadlec, J.: *Conditions that force an orthomodular poset to be a Boolean algebra*, *Tatra Mount. Math. Publ.* **10** (1997), 55–62.
- [4] Tkadlec, J.: *Central elements of effect algebras*, *Int. J. Theoret. Phys.* **43** (2004), 1363–1369.

*The work was supported by the research plan of the Ministry of Education of the Czech Republic No. 6840770010.