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Announcements of new results

ANNOUNCEMENTS OF NEW RESULTS
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ORTHOMODULAR LATTICES NEED NOT ADMIT NONTRIVIAL GROUP-VALUED MEASURES

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Orthomodular lattices which are non-distributive generalizations of Boolean algebras, have recently been studied as event structures for quantum theories. Also, measures on orthomodular lattices with values in a commutative group have been investigated. A question has arisen whether for every orthomodular lattice L there is a commutative group G and a nontrivial G-valued measure on L. We have obtained a negative answer to this question. Our counterexample (having 239 atoms) may be viewed as a generalization of an analogous result on nonnegative real-valued measures (Greechie, R.J.: *Orthomodular lattices admitting no states*, J. Combin. Theory Ser. A **10** (1971), 119–132).