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$B(H)$ Has Classically Normal Pure States

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Abstract

A pure state f of a von Neumann algebra M is called *classically normal* if f is normal on any von Neumann subalgebra of M on which f is multiplicative. Assuming the continuum hypothesis, Nik Weaver and I have shown that $B(H)$ has classically normal, singular pure states (as do other factors of types II and III). This result answers a 1959 question of Kadison and Singer (**not** the most famous question from that paper!). This talk will outline the methods used for possible application to other problems. I will also discuss the relationship between this problem and its more famous brother, the Kadison-Singer Problem.

Date: Friday, May 18, 2007
Time: 15:30
Place: IMBM Seminar Room, Boğaziçi University

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