On Dual Space Characterizations of Real Locally C*- and Locally JB-Algebras.

The Jordan decomposition of a signed measure theorem is generalized to obtain a characterization of the real locally C*-algebras (projective limits of real C*-algebras) among real locally multiplicatively convex *-algebras as those having decomposition of a continuous hermitian linear functional into a difference of two positive linear functionals. Analogous results are obtained as well for the locally JB-algebras (projective limits of JB-algebras). (Received September 20, 2007)