Turkish Journal of Mathematics

@

Scientific Journals Home Page

The Dual of the Bochner Space L^p(μ,E) for arbitrary μ

Bahaettin CENGİZ
Department of Mathematical Sciences,
King Fahd University of Petroleum and Minerals,
Dhahran 31261, Saudi Arabia

Abstract: Let μ be a finite measure, E a Banach space, and $1\leq p <\infty$, $1<q\leq \infty$ be such that $\frac{1}{p}+\frac{1}{q}=1$. It is known that $L^p(\mu,E)^*\simeq L^q(\mu,E^*)$ if, and only if, E^* has the Radon-Nikodým property with respect to μ. The aim of this article is to generalize the above result to arbitrary measures.