

The weak topology on L^p of a vector measure

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Theorem (Curbera 1992)

Every **order continuous** Banach lattice with **weak unit** is order isometric to the L^1 space of some vector measure.

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Theorem (Ferrando-R. 2007)

The weak topology and $\sigma(L^p(\nu), \Gamma)$ coincide on any bounded subset of $L^p(\nu)$.

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$$B_{Y^*} = \overline{\text{co}(B)}^{\text{norm}}$$

In particular, the weak topology and $\sigma(Y, B)$ coincide on any bounded subset of Y .

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- ν has relatively **norm** compact range and $L^p(\nu)$ is **reflexive**.
- X is a Banach lattice and ν is **positive**.

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Is Γ a James boundary for $B_{L^p(\nu)^*}$?

Theorem (Ferrando-R. 2007)

The answer is “**yes**” in each of the following cases:

- ν has relatively **norm** compact range and $L^p(\nu)$ is **reflexive**.
- X is a Banach lattice and ν is **positive**.

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