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Algebraically compact elements of JBW^*-triples. (English)

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A Hilbert space operator $A \in B(H)$ is compact iff the mapping $X \to XAX$ is weak*-continuous on the closed unit ball of $B(H)$. This characterization makes it possible to extend the notion of compact elements to JBW*-triples: dual Banach spaces with a triple product $x, y, z \to \{xyz\}$, which satisfies a certain Jordan triple identity and $\|\{xxx\}\| = \|x\|^3$.
The purpose of this paper is to characterize compact elements in JBW*-triples and to provide a spectral theorem for such elements:

$$a = \sum_{i \in I} \alpha_i e_i \quad (\alpha_i - \text{coefficients}; e_i - \text{compact atoms}).$$

K.N.Boyadzhiev (Ada)

Keywords : triple product; Jordan triple identity; compact elements in JBW^*- triples; spectral theorem
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