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On the spectrum of inner derivations in partial Jordan triples. (English)

Math. Scand. 66, No.2, 242-248 (1990).
http://www.mscand.dk/issues.php
http://dz-srv1.sub.uni-goettingen.de/sub/digbib/loader?did=D179522

Let E be a complex Banach space and E_0 a closed subspace with involution. Let $(x, a, y) \mapsto \{xa^*y\}$ be a continuous real trilinear map $E \times E_0 \times E \to E$, which is symmetric complex bilinear in x, y and conjugate linear in a. Certain algebraic postulates for $\{xa^*y\}$ are assumed, including $a\Box a^* \in \mathrm{Her}(E)$ $(\forall a \in E_0)$, where $a\Box a^*$ is the operator $x \mapsto \{aa^*x\}$ and $\mathrm{Her}(E)$ is the set of all operators on E which are Hermitian in the sense of Vidav. Such systems are called here Partial J^*-triples.
The main result is that when the system is geometric (all vector fields $a - \{xa^*x\}\partial/\partial x$ $(a \in E_0)$ are complete in some bounded balanced domain in E), then every Hermitian operator $a\Box a^*$ $(a \in E_0)$ has a non-negative spectrum.

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