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BANDS IN PERVASIVE PRE–RIESZ SPACES

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Abstract. Pre-Riesz spaces are partially ordered vector spaces which are order dense subspaces of vector lattices. A band in a pre-Riesz space can be extended to a band in the ambient vector lattice. The corresponding restriction property does not hold in general. We provide sufficient conditions on the underlying space such that the restriction property for bands holds. As an application, we consider the space $L^r(l_0^\infty)$ of all regular operators on the space l_0^∞ of all finally constant sequences. We establish that $L^r(l_0^\infty)$ is pre-Riesz and that its subspace of all order continuous operators is a band in $L^r(l_0^\infty)$.

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