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**Alexander A Katz\*** ([katza@stjohns.edu](mailto:katza@stjohns.edu)), St. John's University, Dep. of Math & CS, 300 Howard Ave., DaSilva 314, Staten Island, NY 10301. *On the notion of  $\Phi$ -normed spaces.*

The notion of  $\Phi$ -normed topological vector space is investigated for which the topology is defined by a norm-like mapping from a cone of positive elements of a Tikhonov topological semifield  $\mathbb{R}_+^\Delta$  into itself. We show that every locally convex space is  $\Phi$ -normed, and every  $\Phi$ -normed space is topologically isomorphic to an inductive limit of a family of locally convex spaces. (Received April 10, 2009)