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TITLE: *Göllnitz's (Big) partition theorem and a new companion*

ABSTRACT: One of the deepest Rogers-Ramanujan type partition identities is a 1967 theorem of Göllnitz which can be viewed as the next level result beyond the famous 1926 partition theorem of Schur. Extending the *method of weighted words* that Alladi-Gordon introduced to generalize Schur's theorem, Alladi-Andrews-Gordon obtained a major generalization and refinement of Göllnitz's theorem in 1995 by viewing it as emerging from a remarkable 3-parameter q -hypergeometric key identity. In the 1960s, Andrews had found two infinite companion hierarchies of partition theorems emanating from Schur's theorem, but these are very different from Göllnitz's theorem. In the spirit of these two hierarchies, Andrews recently found a new companion to Göllnitz's theorem following which I showed that the key identity for this companion is the same as the one we found in 1995, but is obtained by different means.