## Majorization and disorder in generalized thermal states

M. Portesi,\* N. Canosa, and R. Rossignoli

IFLP (CONICET-UNLP) and Dpto. de Fisica,

Univ. Nacional de La Plata, La Plata, Argentina

## Abstract

The disorder properties of generalized thermal distributions have been studied employing the theory of majorization. We have determined sufficient conditions for universal entropy increment due to variation of the parameters that describe the system. We have analyzed in detail the case of thermal states associated to power law distributions, showing that they can be characterized by two rigorous mixing parameters, temperature and nonextensivity index.

<sup>\*</sup>Electronic address: portesi@fisica.unlp.edu.ar