

Referee's report on the paper

“A class of non-parametric deformed exponential statistical models”

with authors: Montrucchio, L. and Pistone, G.

In this paper the authors study the class of non-parametric deformed exponential models, where the deformed exponential has linear growth at infinity and is sub-exponential at zero. The results presented are interesting generalizations of those obtained by Pistone and co-authors in previous papers.

What I have found particularly interesting is the definition of deformed divergence, which involves the escort density and the difference of the deformed logarithms computed at q and p . Generalizations of Shannon divergence are usually defined in terms of the ratio q/p , so what one could expect is the term $\log_A(q/p)$, which differs from $\log_A(q) - \log_A(p)$ as the authors say. It would be interesting if the authors could say something more about that.

MINOR REMARKS.

Page 1: please defined L_0

Page 2, line 14: dominated

Page 3, Section 2.1: $\log_A(x)$

Page 7, line 11: $\exp_A(tu + \log_A p)/Z(t)$