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FROM THE LIKELIHOOD MAP TO EUCLIDEAN MINIMAL SUFFICIENCY

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Abstract: We use the minimal sufficiency of the likelihood map (Fraser et al. [9]) to show the existence of a minimal sufficient statistic with Euclidean range under weak regularity conditions, and to extend a well-known theorem due to Barndorff-Nielsen et al. [2]. Examples of minimal sufficient statistics are given in problems having either a restricted parameter space or a truncated error distribution.

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