Correction to "Normed barely Baire spaces" by J. Arias de Reyna, Israel Journal of Mathematics, Vol. 42, Nos. 1–2, 1982, pp. 33–36.

M. Valdivia has observed that there is an error in the above paper, namely, the spaces M_γ do not have the property

$$(*) \qquad \text{if } x \in M_\gamma,\ x \neq 0, \text{ then } f(x) = \gamma,$$

which is implicitly used in the proof of Lemma 3.

Nevertheless, the main result of the paper is true. We can modify the definition of the spaces M_γ so that (*) will hold. All we need is to replace Lemma 1 by the following lemma, which is proved in a similar manner as Lemma 1:

LEMMA 1a. *Let $H = \bigoplus_{k<\omega} H_k$ be the Hilbert direct sum of infinite dimensional separable Hilbert spaces. There exists a Baire dense subspace M of H such that for every $x \in M$, $x \neq 0$, infinitely many projections of x on the space H_k do not vanish.*

With this lemma, we construct M_γ as follows: put, for $1 \leqq k < \omega$,

$$C_k = \{\alpha_n : n = 2^k(2r+1),\ r < \omega\} \quad \text{and} \quad L_k = \{x \in H_\gamma : x_\alpha = 0 \text{ if } \alpha \notin C_k\}.$$

Since every L_k is infinite dimensional and separable, there exists a Baire dense subspace M_γ of H_γ such that, if $x \in M_\gamma$ and $x = \Sigma x_k \neq 0$ where $x_k \in L_k$ for $k < \omega$, then infinitely many x_k do not vanish. This implies easily that $f(x) = \gamma$.

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