LEND: GOING BEYOND NOMINAL ANGULAR RESOLUTION Daniel Usikov[1], Tim McClanahan[2], Roald Sagdeev[1], Robert Khachatryan[3], Gennady Milikh[1], Gordon Chin[3], Jao-Jang Su[1]

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The omnidirectional channel of LEND for epithermal neutrons (SETN) since the start of operations in 2009 have accumulated more than 10^9 neutron events. This data was used to generate the neutron suppression maps of the Moon with nominal resolution (~60 km). The volume of statistical database (still storing at the pace of about 10 cps) now is sufficient to go beyond nominal resolution of SETN by introducing the set of multiply overlapping pixels.

We applied such approach in the framework of several alternative computational techniques of deconvolution such as Conjugate Gradient, Iterative Gaussian Smoothing, Weiner and Regularized Deconvolution [1] to construct "super-resolution " maps (up to 20 km) for a few selected areas with most pronounced presence of hydrogen (Shoemaker PSR, NSRs, and others).

References: [1] McClanahan T.P. et al. (2010), *Computers & Geosciences*, *36*, 1484-1493.