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Interactive comment on “The evolution of Mode-2 nonlinear internal waves over the northern Heng-Chun ridge south of Taiwan” by S. R. Ramp et al.

J. Moum

jnmoum@gmail.com

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Review of npg-2014-97

This paper describes a set of measurements designed to expand on a previous observation of mode-2 nonlinear internal waves at the same site. These really are a nice set of observations and I think the basic result is worthwhile and interesting. However, I think that the present version of the manuscript will require some effort to organize into a concise report for eventual publication. As it stands, it does not seem to be well-organized. Begin with the abstract. I do not think that the “key result . . . is that a profusion of mode-2 waves were observed . . .”. In fact I do not think that is even a

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result. At the same time, I think that there is a key result and this is briefly stated in the final line of the abstract, even though it is not particularly surprising. I encourage the authors to focus and expand on this.

I found the paper to be a little tedious. Too many case studies. I would urge the authors to produce a concise version that 1. establishes the existence and structure of these mode-2 waves with the minimum # of figures 2. provides a clear explanation of the theoretical energy budget and how this version differs from what has been discussed elsewhere (Lamb, Scotti, Moum, Henyey ...) 3. shows precisely how each term is evaluated

I think that the real result is Figure 13, which requires confidence limits.

L465 – I think what we want to know is the wave speed relative to the fluid. This is what can be compared to KdV or DJL, for example

I don't think all of the references in the text are consistently listed. (e.g., Nash et al, 2012, 1539)

L766-771 – a simple graphical or tabular summary of energetics comparison might be helpful

L776 – why J/s/m^2 ? and not W/m^2 ?

Interactive comment on Nonlin. Processes Geophys. Discuss., 2, 243, 2015.

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