

## ***Interactive comment on “Multi-method observation and analysis of an impulse wave and tsunami caused by glacier calving” by M. P. Lüthi and A. Vieli***

### **Anonymous Referee #1**

Received and published: 3 December 2015

I think that this is a wonderful paper because it addresses a rarely observed, but widely acknowledged, phenomena that occurs within the iceberg-calving zone of Greenland (and other marine terminating) glaciers. The potential for extraordinarily violent ocean wave phenomena, documented from a unique perspective within this study, suggests that episodic, rare events contribute not only to hazards in the vicinity of calving fronts, but may actually help to determine the state of ice in the area (e.g., ice fracture in response to impulsive pressure variations caused by calving and other impulsive mass movements).

I have really no significant comments except for a couple of suggested re-wordings:

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1. At the outset, the term "slide" should be defined as the "calving" or "face collapse" that are more common ways of describing the source. I was midway into the paper and realized that I was seeing the word "slide" and had to figure out that it was a reference to a "mass slide" or "ice slide" or "land slide"...

2. The manuscript presents ranges of numbers using three periods. e.g., 1....5 represents "in a range of 1 to 5". I don't know if this is within the style of TC... I'd prefer a longer-handed way of writing out the range.

3. p. 6475 line 7... the boat was not "in" but was "at a distance"

4. p/ 6477 line 20 not "unstable" but "unstable"

Otherwise, I am delighted to read such an interesting paper and to see a top-notch observation come from the combination of disparate and unexpected field sources.

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Interactive comment on The Cryosphere Discuss., 9, 6471, 2015.

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