

***Interactive comment on “Brief communication
“Snow profile associated measurements (SPAM) –
a new instrument for quick snow profile
measurements”” by P. Lahtinen***

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This Brief communication reports preliminary developments to obtain vertical profiles of snow physical properties. The idea is nice and addresses a constant concern of snow scientists : how to obtain snow properties without having to dig a snowpit. However, I have to say that the implementation of this idea is not developed enough to lead to a publication. No measurement is yet validated and there seems to be large and uncontrolled errors at many stages of measurements. The author himself acknowledges that, as one reads “some additional calibration are needed”, “further tests are needed”, “The absolute value of the reflectance should be possible to be calculated”,

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“only preliminary results are shown”, “This hypothesis has not been tested” “This is left for future studies”, “readings from the IR thermometer were rendered useless”, “due to non ideal design”, etc. . . I strongly recommend that the author validates the measurement of one selected variable, such as temperature or irradiance, and shows actual theory and comparison with another well established measurement method. Also, as written the paper does not read well. In the first pages, it is not clear what variables have actually been studied. Vague statements leave the reader frustrated. I recommend a well focused paper that says from the start what has actually been achieved. What might be achieved later is of limited interest.

Interactive comment on The Cryosphere Discuss., 5, 1737, 2011.