

## **General comments**

The authors present an update to the “Global SnowPack” binary snow presence dataset to incorporate VIIRS NPP snow cover products alongside MODIS (MOD10A1 and MYD10A1) products. In addition to reading the Brief Communication, I had the benefit of reading the first reviewer’s comments and the authors’ responses. I agree with many points from the first reviewer and appreciate that the authors plan to address those concerns.

While the validation results presented in Figures 2 and 3 are helpful, readers may also be interested in how the updates have changed the Global SnowPack dataset from the previous version. As one example, was the dataset between 2000-2012 (when only MODIS was available) also resampled to 371 m resolution? If yes, how do the two versions compare during this period? Even if extensive validation data are not available, a relative comparison could give helpful information to potential data users.

## **Specific comments**

Line 32-33: It is unclear which dataset the Landsat calibration/validation is applied to. If it’s for the existing MODIS/VIIRS products, please provide a reference. If it’s for the updated Global SnowPack data, please state this more explicitly.

Line 35: delete “has been prepared”

Line 54: Please define the F1 metric and include a sentence describing why this metric was selected to determine the NDSI threshold.

Figure 2: Please note the different y-axis limits in the figure caption.

Figure 3/Lines 82-85: I guess the general idea for this dataset is that incorporating VIIRS provides more data coverage while not significantly decreasing the accuracy and recall presented in Figure 2. In the text, it would be helpful to potential data users to describe the additional cloud-free pixels in terms of additional snow-covered area. For example, the inclusion of an extra 10% of land pixels in the summer may not make much of a difference if those pixels are over parts of the planet where snow is not expected during that time of year. Could you give some examples of additional snow covered area that this new dataset captures that the others do not?

Figure 3: The caption references colors that are not actually present in the figure.

Line 66: This is the first time “snow line elevation information” has been presented – please provide more information here.