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Review of the research article tc-2018-111

Dear Dr. Philip Marsh,

I have reviewed the revision of the manuscript "Evaluation of the CloudSat surface snowfall product over Antarctica using ground-based precipitation radars" by Niels Souverijns and colleagues, submitted for publication in The Cryosphere.

The authors responded pertinently to the questions I had asked. The comparison between MRR datasets and CloudSat snowfall retrieval is more relevant. However, I still have some questions before accepting this article for a publication in The Cryosphere.

Sincerely,

Florentin Lemonnier

Science questions

- Page 14, 3rd line. It is mentioned that MRR is recording a significant less amount of snowfall rate than CloudSat and this by quoting Chen et al., 2016, who propose a comparative study between CloudSat CPR and NOAA/NSSL Multi-Radar Multi-Sensor System. CloudSat is known to overestimate small precipitation and underestimate large precipitation in comparison with other instruments. Is it possible that small amount of precipitation may be missed by MRRs rather than being overestimated by CloudSat, according to CloudSat CPR threshold that would allow to detect rates below 0.1 mm/hr?