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### The AMSR-E Snow Depth Algorithm: Description and I

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#### Abstract

This paper describes the development of the current version of the Scanning Radiometer for the Earth Observing System (AMSR-E) a estimate snow depth for the Japan Aerospace Exploration Agency. native resolution brightness temperature observations, except for the is resampled to the 36GHz footprint, with brightness temperature c native measurements rather than using the aggregated brightness ter

A shallow snow detector is developed using the 89GHz channels to Furthermore, algorithm retrievals are comprised of the sum of a for non-forested component with a dynamic estimation of snow depth evolution from selected polarization differences. When compared with ground station measurements of snow depth, tests show that the new is better than previous static parameterized versions both in overall terms to moderate fractional forest cover. For dense forest cover, the algorithm performance is similar to the previous version. Bias improvements are also visible. Further work is still required to improve the new algorithm's performance in terms and for different fractional landcover mixtures.

Keywords: [snow depth](#), [passive microwave](#), [hydrology](#), [remote sensing](#)

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