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Classification of snow and rainfall using commercial microwave links

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The use of Commercial microwave links (CMLs) to estimate rainfall has been under investigation for the past 15 years. CMLs still seem like a promising supplement to standard measurement methods. So far, CMLs have almost exclusively been applied for rainfall only situations. It is expected that different precipitation types affect the CML signal strength and error sources differently. For CML applications in high latitude countries with frequent and extended periods with snowfall and mixed precipitation, an extension of the classification methods for these precipitation types is needed.

In this presentation we study how the CML signal attenuation is affected by different precipitation types and how those can be used to classify the different events. We use nearby disdrometers as a ground truth reference and CML data from different climatological conditions in Norway.