

# **KDP Detection For Microbursts: Case Studies From WFO Goodland's CWA**

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Why do some thunderstorms produce damaging wind gusts and others do not? Kuster ET Al. 2021 first went into examining how KDP detection can be used to detect what storms may have wet microburst potential or not. Using the same strategies, NWS Goodland wanted to see if the same can be used on the High Plains and their typically dry microburst environments in certain cases from 2020-2022.

Microbursts are defined as “a localized column of sinking air (downdraft) within convection that is usually less than 2.5 miles in diameter”. In Kuster Et Al 2021 it was found that around 99% of downbursts were associated with a KDP core and developed within 10-30 mins after a developing core. Using what was found in Kuster Et Al 2021, some other key features were found with High Plains Microbursts including local environmental mesoanalysis and an uptick in lightning Using the methods found and the additional parameters forecasters at NWS Goodland were able to issue warnings, with lead time, on what seemed to be just ordinary summer time convection.