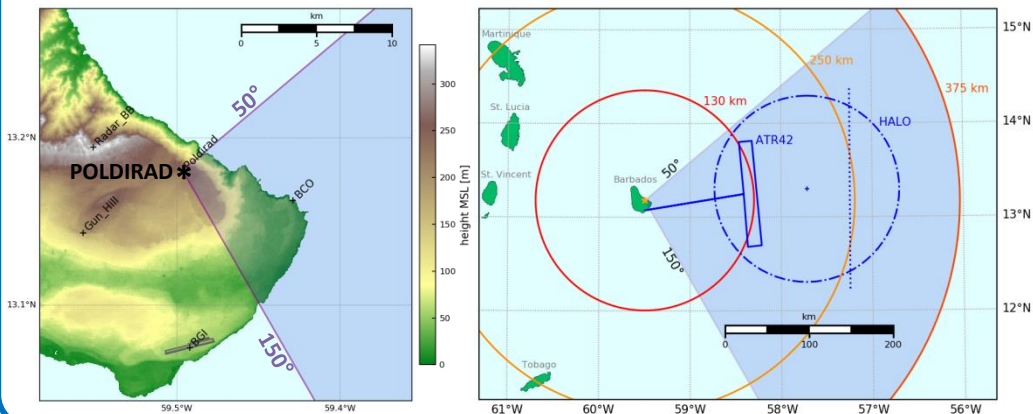# Characterizing Precipitation in Convective Cloud Regimes in the Trades with the polarimetric C-band radar POLDIRAD

Martin Hagen, Florian Ewald, Silke Groß, Qiang Li, Lothar Oswald, and Eleni Tetoni
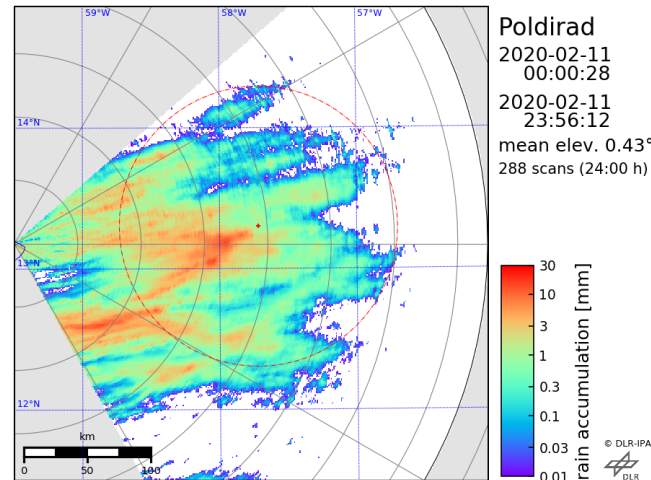
Poldirad Installation on Barbados

- Operation 5 – 27 February 2020
  - surveillance PPI scans up to 375 km
  - volume PPI scans up to 130 km
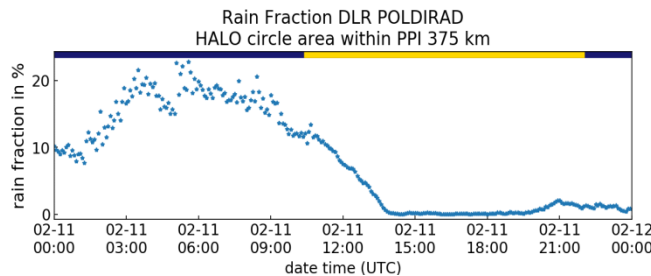 - vertical RHI scans towards BCO

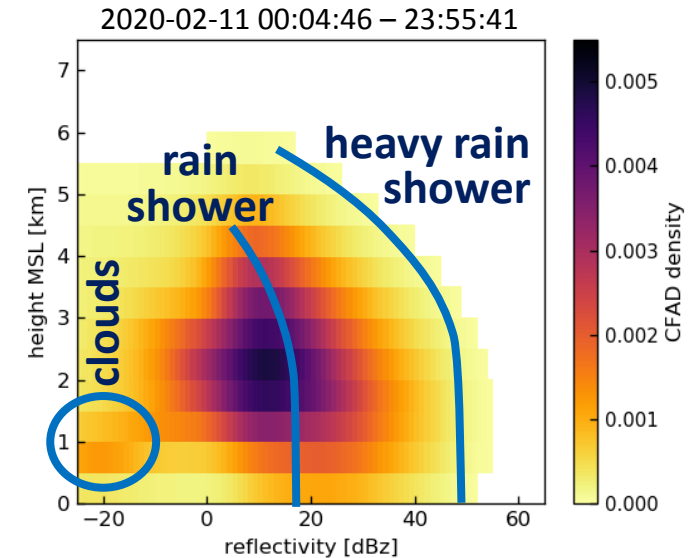## 11 February 2020

- Rain accumulation

- Rain fraction within HALO circle

11 February 2020

Contoured Frequency by Altitude Diagram (CFAD) of reflectivity from RHI scans

CFADs from RHIs are limited:
- radar does not see to ground at far ranges
- RHIs have upper elevation
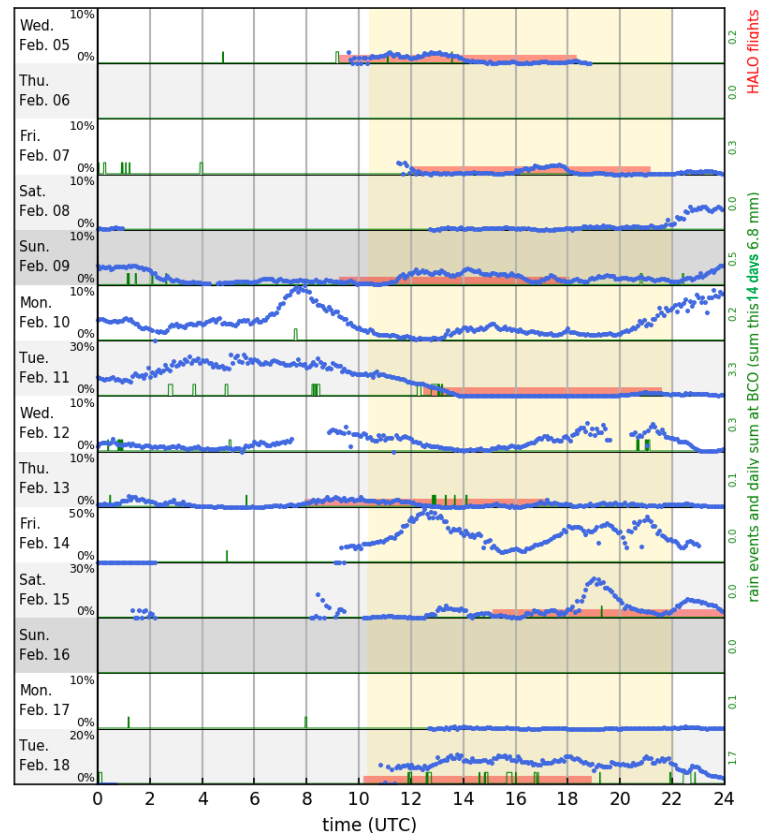- sensitivity is limited at far range

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– Supplementary Material –

Poldirad Operation and Rain Fraction within HALO Circle

Characterizing Precipitation in Convective Cloud Regimes in the Trades with the polarimetric C-band radar POLDIRAD

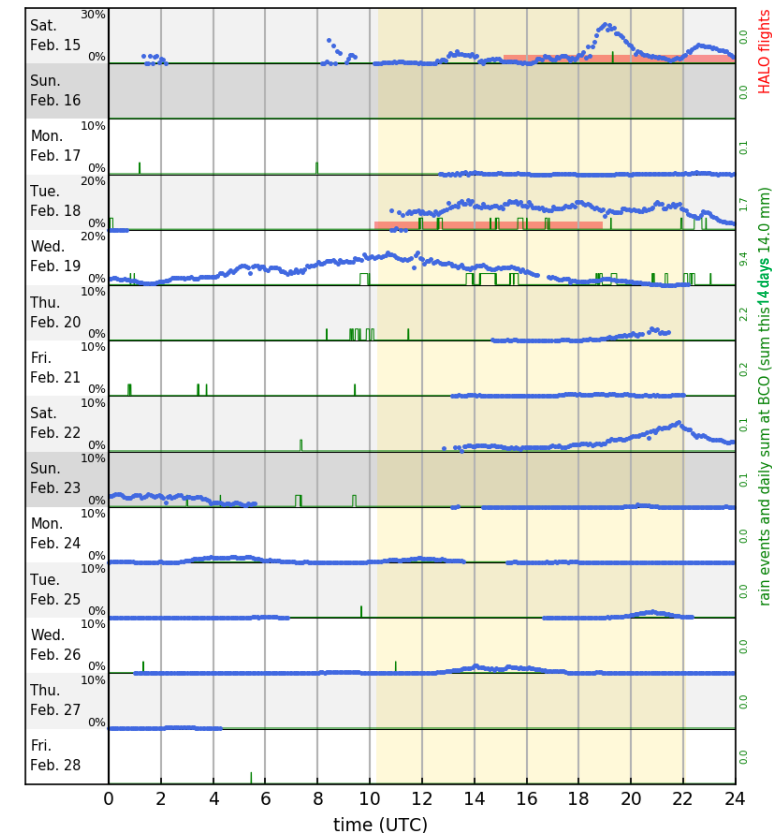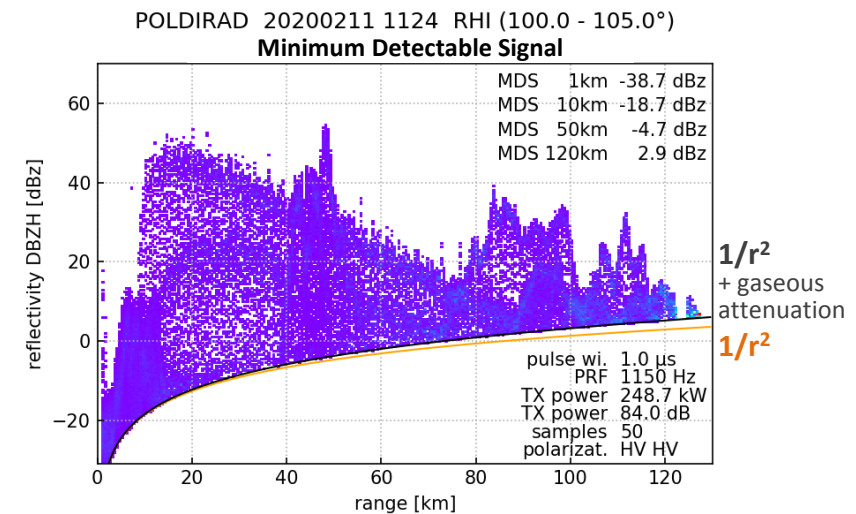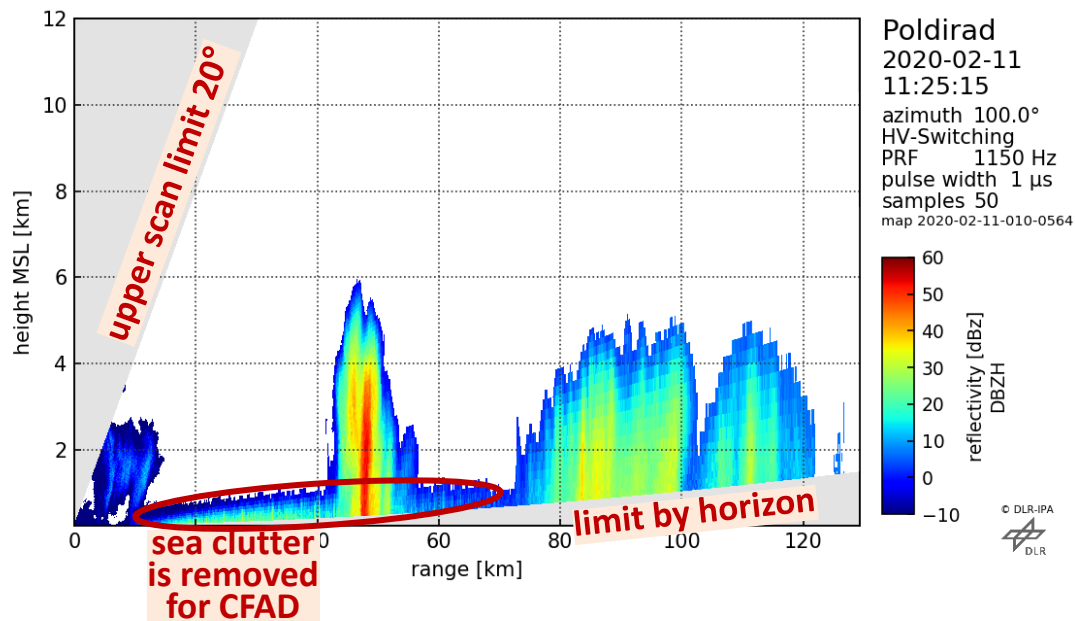Martin Hagen, Florian Ewald, Silke Groß, Qiang Li, Lothar Oswald, and Eleni Tetoni

– Supplementary Material –

Contoured Frequency by Altitude Diagram (CFAD) of reflectivity from RHI scans

CFADs from RHIs are limited by
- due to Earth curvature, radar does not see to ground at far ranges
- RHIs have upper elevation
- sensitivity is limited at far range
- attenuation in strong rain will reduce observed reflectivity

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– Supplementary Material –

Thanks to all of you for your help in getting POLDIRAD finally running after all the hassle with shipping and custom