Perdigão 2017 Field Experiment

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Vindkraftnet Meeting
1st June 2017
Outline

- Objective and Research Questions
- Experiment Layout
- WindScanner Setup
- Preliminary Data
Objective and Research Questions

**General Objective**
- Providing an extensive dataset for validation of flow models in complex terrain

**Science Questions**
- Wind resource mapping with scanning lidars
- Stability and wind resource
- Turbulence and other wind turbine load generating properties
- Recirculation zones
Experiment layout

Two ridges with **100 m** masts
... and six 60 m masts ...
... and a lot of **30, 20** and **10 m masts**
Mast Data
Scanning and profiling lidars
DTU WindScanner Setup
5th May – 6:00 UTC

SE Transect 20170502060000

\[ V_r \text{ [m/s]} \]

Range [m]

Height [m]

DTU Wind Energy (RISØ), Technical University of Denmark
Phase V – Data Processing

$V_r [\text{m/s}]$

SE Transect 20170407060000
Animation of 12h of data
Wind Turbine Wake Measurements

Ridge Scans 20170515042000

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Thank you for your attention!