IEA WIND – TASK 32 – WIND LIDAR

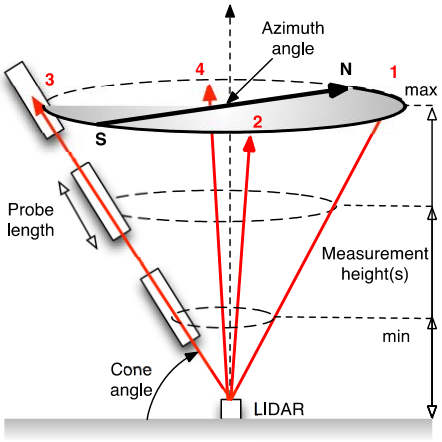
- **Überblick Arbeitsschwerpunkte IEA WIND – Task 32**
- **Leistungsverhalten**

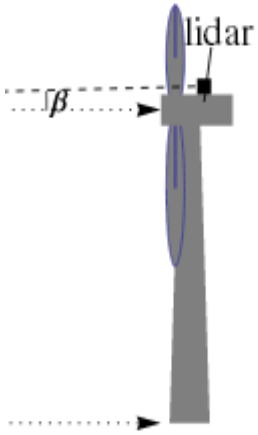
Christoph Tiefgraber

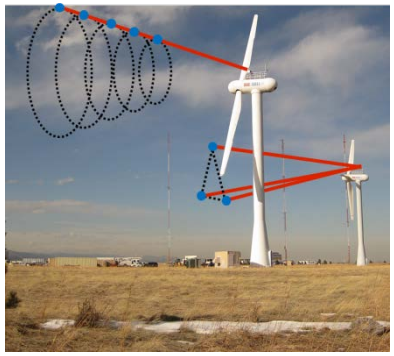
Energiewerkstatt Verein

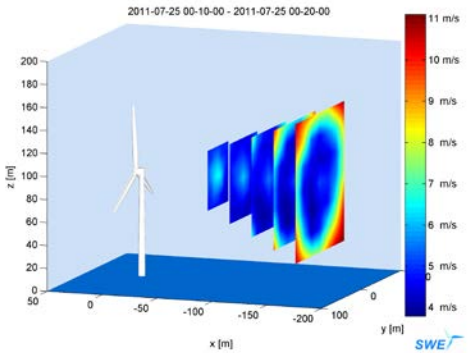
IEA WIND – TASK 32 – WIND LIDAR

Implementation ← Site Assessment — Power Performance — Loads & Control — Complex Flow → **Research**









Quelle: Task 32, David Schlipf, SWE – Universität Stuttgart

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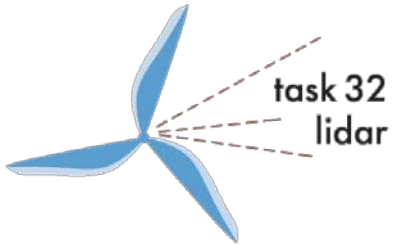
Ergebnisse der ersten Phase



- **IEA Wind Recommended Practices 15 on Ground-Based Remote Sensing**
- IEA Expert Report: *Estimating Turbulence Statistics and Parameters from Ground- and Nacelle-Based Lidar Measurements*
- IEA State-of-the-art Report: *Recommended Practices for Floating Lidar Systems* (to be voted at ExCo#77 in May 2016)
- IEA Technical Report: *Remote Sensing of Complex Flows by Doppler Wind Lidar: Issues and Preliminary Recommendations*
- **Rotor equivalent wind speed for power curve measurement** – comparative exercise for IEA Wind Annex 32 (conference paper, 2014)

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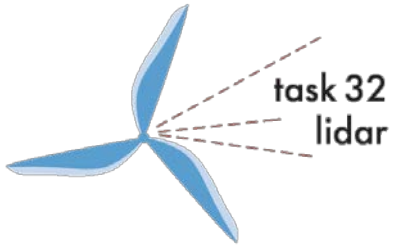
Projekte für die zweite Phase



Neue Themen:

- Lidar-assisted control
- Wake measurements

Workshops:

#1: Floating Lidar
#2: System optimization for control
#3: Wake measurements
#4: Uncertainties in PC

Revision of two IEA Recommended Practices:

- RP on floating lidar
- RP on ground-based remote sensing for wind resource assessment

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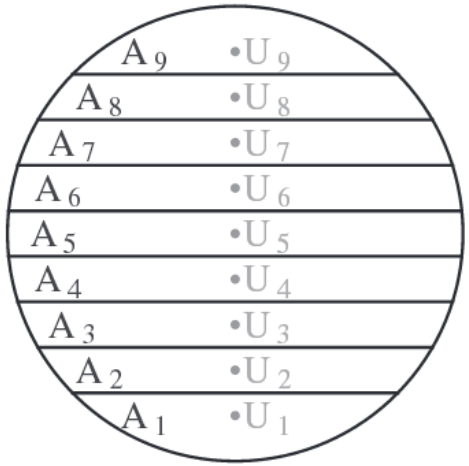

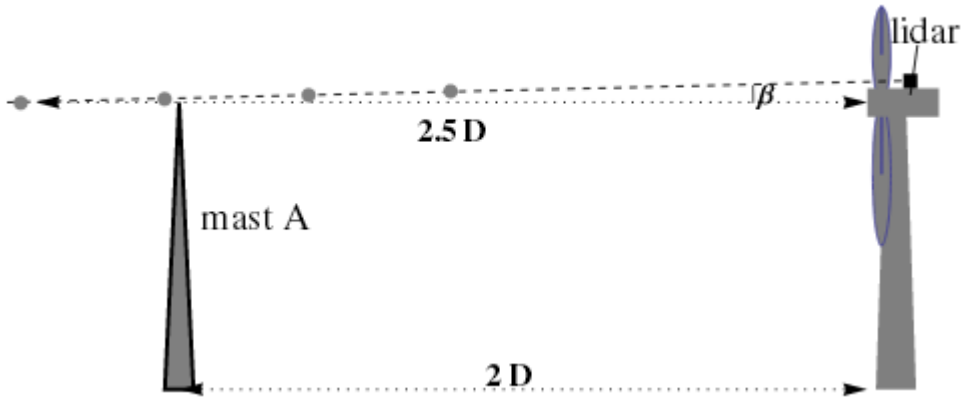

Quelle: Task 32, David Schlipf, SWE – Universität Stuttgart; Wagner et al. DTU

- Anwendung REWS Methode zur LK-Vermessung CD IEC 61400-12-1 (2014)
- Unsicherheiten von LIDAR vermessenen LK (2016)
- Untersuchung wie Standards von Boden LIDARs angepasst werden müssen
- Identifizierung von Lücken in Standards und Übertragbarkeit