Two years of wind-lidar measurements at an Italian Mediterranean Coastal Site

Two years of wind-lidar measurements at an Italian Mediterranean Coastal Site

Reliable measurements of vertical profiles of wind speed and direction are needed for testing models and methodologies of use for wind energy assessment. In particular, modelling complex terrain such as coastal areas is challenging due to the coastal discontinuity that is not accurately resolved in mesoscale numerical model. Here, we present a unique database from a coastal site in South Italy (middle of the Mediterranean area) where vertical profiles of wind speed and direction have been collected during a two-year period from a wind-lidar ZEPHIR-300® at a coastal-suburban area. We show an overview analysis on two-year 10-minute averaged wind profiles.

General information
State: Published
Organisations: Department of Wind Energy, Resource Assessment Modelling, Italian National Research Council
Contributors: Gulli, D., Avolio, E., Calidonna, C. R., Lo Feudo, T., Torcasio, R. C., Sempreviva, A. M.
Pages: 214-220
Publication date: 2017
Peer-reviewed: Yes

Publication information
Journal: Energy Procedia
Volume: 125
ISSN (Print): 1876-6102
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 1.44 SJR 0.495 SNIP 0.799
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 1.16 SJR 0.464 SNIP 0.598
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 0.92 SJR 0.359 SNIP 0.562
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 1.09 SJR 0.429 SNIP 0.807
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 1.02 SJR 0.42 SNIP 0.778
ISI indexed (2013): ISI indexed no
Web of Science (2013): Indexed yes
Scopus rating (2012): CiteScore 1.08 SJR 0.411 SNIP 0.55
ISI indexed (2012): ISI indexed no
Web of Science (2012): Indexed yes
Scopus rating (2011): CiteScore 2.42 SJR 0.877 SNIP 1.45
ISI indexed (2011): ISI indexed no
Scopus rating (2010): SJR 0.416 SNIP 0.91
Web of Science (2009): Indexed yes
Original language: English
Keywords: Energy (all), breeze, coastal wind condition, wind energy, wind-lidar, Boundary layer flow, Coastal engineering, Wind, Wind power, Averaged wind profiles, Coastal winds, Mesoscale numerical model, Reliable measurement, Wind energy assessment, Wind lidar, Wind speed and directions, Optical radar
Electronic versions:
1_s2.0_S1876610217336974_main.pdf
DOIs:
10.1016/j.egypro.2017.08.194
Source: FindIt
Source-ID: 2388105105
Research output: Research - peer-review › Journal article – Annual report year: 2017