



Direct Normal Irradiance Nowcasting methods for optimised operation of concentrating solar technologies (DNICast) 3rd END-USER WORKSHOP

Presenting the nearly final results of the FP7 project

Date: June 1st, 2017

Venue: Room 21, Intersolar Europe Exhibition, ICM Munich
<http://www.intersolar.de/en/home.html>

The FP7 DNICast project aims to advance current state-of-the-art of concentrating solar technologies by reducing uncertainty of short-term DNI forecasts and thereby contributing to increase the overall plant efficiency. Since October 2013, a multidisciplinary consortium of meteorological scientists, solar engineers and energy analysts, has investigated different methods for DNI nowcasting, with the aim to identify main advantages and drawbacks and suggest possible combinations depending on the user requirements. A full coupling of all methods is out of the scope of the project, but an approach on how to merge different information sources is intended. A portfolio of complementary methods for the nowcasting of the DNI and their combinations in order to cover the complete nowcasting horizon from now to 6 hours are the expected results of DNICast.

Project intermediate results have been extensively discussed with a large number of experts, including the members of the Advisory Board, recipients of the project newsletter and several other experts gathered through end-user workshops. Indeed, one of the main project aims is to exchange with the potential end-users of DNICast results, including industry.

This is the third and last of such end-user workshops, and has the aim to present and discuss overall results, as well as to collect feedback for streamlining before the end of the project, next October. The focus is to:

- disseminate the results for the benefit of the industry
- present and discuss lessons learnt and areas for further improvement
- move forward to make sure that the results are of use and can be further exploited by the research and industry communities

The agenda will see a mix of presentations and discussions and will allow for an extensive exchange and dialogue among participants.

Organization Team:

- Michael Pikridas (Cyl)
- Martín Gastón Romeo (CENER)
- Abdelghani El Gharras, Emanuela Menichetti (OME)
- Marion Schroedter-Homscheidt, Stefan Wilbert (DLR)



Registration:

No registration fee is required for attending the workshop at Intersolar; however, registration is mandatory through the following [FORMS](#)

AGENDA

09:15-09:30 Introduction

Welcome & Introduction to DNICast and Objectives of the Workshop

09:30-11:15 SESSION I: SYNTHESIS OF NEARLY FINAL RESULTS

Requirements and accuracy needs for Concentrating Solar technologies

Presentation of the investigated nowcasting methods

- With all Sky cameras
- Based on satellite images
- Using NWP models
- Combination of DNICast predictions: Examples of combination methodologies and improvements achieved

Validation and uncertainty assessment of the DNICast nowcasting methods

11:15-11:30 Coffee Break

11:30-12:45 SESSION II: HOW TO MOVE FORWARD FOR INDUSTRY EXPLOITABLE RESULTS

Preliminary assessment of the impact of spatially-resolved DNI on the electricity production of Concentrating Solar Technologies

Assessment of the effect of DNI nowcasting on the yield of exemplary CSP plants for South Africa's time dependent feed in tariff

A web demonstrator for the DNICast results

Integration of DNICast methods in CSP plants

12:45-13:30 GENERAL DISCUSSION AND CONCLUSIONS