

**PHYSICAL COLLOQUIUM**  
**INVITATION**

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Monday, 04.01.2016, 4.15 p.m., W2-1-148

speaks

**Dr. Elke Lorenz**

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Workgroup Energy Meteorology

about

**Solar Power Forecasting for System Integration of Solar Energy**

Power generation with solar energy systems is highly variable due to its dependence on meteorological conditions. With the constantly increasing contribution of photovoltaic (PV) power to the electricity mix, reliable predictions of the expected PV power generation are getting more and more important as a basis for management and operation strategies.

In this talk I will give an overview of different approaches for solar irradiance and PV power prediction. These include numerical weather predictions for forecast horizons of several days, and short-term forecasts based on the detection of cloud motion in satellite images and high resolution ground-based sky images. In addition, statistical methods are employed to integrate measurement data and to optimize and combine different data sources as well as parametric models to derive PV power from predicted irradiances.

Evaluation results for different irradiance and power prediction models will be shown and the benefit of different approaches for different timescales will be discussed.

All interested persons are cordially invited.

Sgd. Prof. Dr. Jutta Kunz