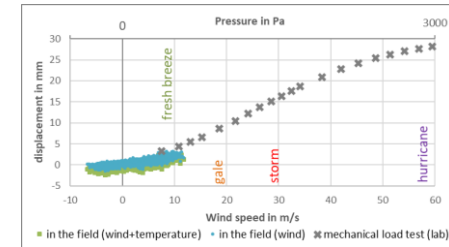
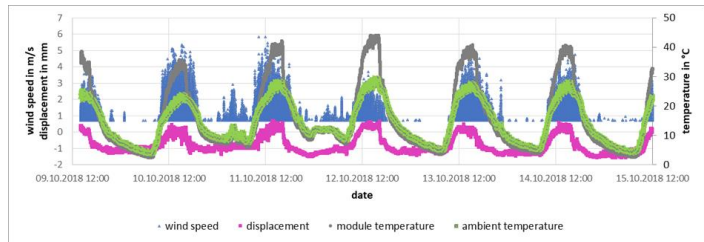


Bachelor Thesis – Developing a method for analysing highly resolved weather and wind data



During their operation time PV-modules are exposed differing weather conditions. Fracture of solar cells and modules might cause significant power and yield losses. Therefore, the impact of wind and snow loads on the initiation and growth of cell cracks is of large interest. In order to mimick the wind gust-related mechanical stresses to PV-modules in the lab, wind characteristics have to be studied.

In this Bachelor Thesis, collected wind data in Erlangen and Arzberg during the last year shall be analysed in detail, wind speed, its distribution, its direction. Furthermore, the influence of the module temperature shall be analysed and the module displacement investigated.

TODO's:

- Process highly resolved data
- Develop an efficient data processing method
- Defining relevant wind gusts with respect to module displacement, bending and mechanical stress

Qualification:

- Student of Material Science, Process Engineering or comparable
- Profound technical knowledge
- Experience in a programming language is beneficial

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