



Exploring the offshore wind farm far field

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Offshore wind farms contribute a considerable part of today's production of renewable electric energy. In the last years a massive built-up in offshore wind energy farms has occurred with a concentration of the wind farms in group and cluster. This arrangement affects one another through increased wake losses. The German Government is presently funding a research project called WIPAFF (WInd PArk Far Field) which is dedicated to the the analysis of properties and impacts of offshore wind park far fields and wake losses. The focus is on the analysis of wind farm wakes, their interaction among each other and their regional climate impact. This is done by in-situ, extensive aircraft and satellite measurements and by operating meso-scale wind field models and an analytical wind farm model. We will present this project and show preliminary results of the the first in situ evidence by airborne measurements of these wakes behind off shore windfarms with a wind deficit zones and enhanced turbulence.