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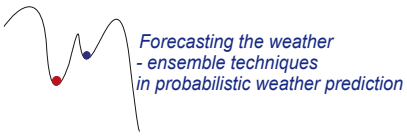

Quality Assurance for Data Publication with Estimated Propability Densities

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For a researcher the publication of his work is a very important part for building up his reputation. At the moment this is mainly done by producing papers, but the publication of raw data will become more important in the coming years. Actually there are some problems especially how to ensure the quality of this data. Besides a thoroughly control of the metadata the data itself have to be controlled.

To achieve this, tests have to be used and developed, which help to find indicators if the data got a good quality. A new test in this field is based on the comparison of histograms. This test use different measures, like die Kullback-Leibler Distance or the Earth Mover's Distance to identify regions with different characteristics compared to the rest of the data. These different characteristics may be variance or level shifts. With this it is possible to detect internal inconsistencies.

This contribution will introduce the basic framework of a scientific quality control, which is actually introduced at the World Data Center for Climate (WDCC) in Hamburg. A focus will be set to the new test. Its theory and behavior will be shown in sensitivity tests and applications.