



Impact of natural atmospheric variability on validation

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The natural variability of the atmosphere has influence on satellite validation since comparison measurements mostly do not exactly match in time and space (miss-time error / miss-distance error). Based on ERA40 temperature data the expected miss-time error was calculated depending on location, height and season. The seasonal and the year-to-year variability of the miss-time error are found to be strongly correlated to the activity of the planetary wave no.1. The miss-time error shows positive and negative trends over a period from 1978 to 2002 depending on month and latitude. This is tentatively interpreted in terms of a trend in planetary wave activity.