



The Concepts and Practice of Adaptive Observations

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Most atmospheric and oceanic observations have been collected either on a rigid schedule (e.g., synoptic time observations), or as opportunities arise (e. g., satellite overpass). The collection of adaptive observations, in contrast, are driven by the needs of the forecast process. This is a relatively new practice that involves, first, the identification of threatening future weather events (i. e., verification time, location, event). Computations are then carried out to determine the area and time (i. e., adaptive observational time and location) when and where the collection of extra observations, beyond those available routinely, can most improve the forecast for the threatening weather event. The targeted data, collected via adaptively deployable platforms, are used in operational data assimilation/forecast cycles to improve high impact weather forecasts.