

GLOBAL PRECIPITATION ANALYSES AND REANALYSES

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ABSTRACT

Variability in precipitation exhibits large-scale coherence on a broad range of spatial and temporal scales. Adequate understanding of the causes and consequences of these variations on continental to global scales requires consistent descriptions, in the form of time series of values on a regular grid, or analyses, of precipitation over the entire globe, including the oceans. Such analyses are essential to determining future water resource and water supply requirements. Since no single source of information can provide us with the accuracy and coverage required to provide such analyses, we and others have developed methods to combine information from a variety of sources and to construct time series of gridded fields of precipitation for a number of time periods, scales and domains. In this presentation, I will discuss the various sources of information and methods used to create global analyses of precipitation and to extend the analyses to cover the period since 1900. Variability in precipitation on regional and global scales as depicted in these data sets will be discussed.