



Global Precipitation Measurements

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The quantification of precipitation is fundamental as an input into any hydrological system. However, the measurement of precipitation across the globe varies greatly, both with the locality and period of observation. Some regions can be regarded as being adequately covered by rain (and snow) gauges, and to a lesser extent weather radar coverage. However, large parts of the Earth's surface remain poorly covered by such measurements. For a truly global assessment of precipitation, it is necessary to rely upon estimates derived from Earth observation satellites.

This paper provides an overview of global precipitation measurements from conventional instrumentation and from satellite sensors. The measurement of precipitation from space has undergone much research and development over the last 50 years, with a large range of satellite sensors now available from which precipitation estimates can be derived. The availability of precipitation products will be outlined and, in particular, the spatial and temporal scales at which the estimates are available. Finally, the paper will highlight some of critical areas for further research and how such precipitation estimates can be usefully be employed in hydrological modelling.