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# Assessment of global cloud properties

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Satellite observations provide a continuous survey of the state of the atmosphere over the whole globe. One GEWEX activity is to assess the quality and reliability of available global cloud data sets for climate studies (http://cimss.ssec.wisc.edu/cloud_climatology/2006). GEWEX cloud products are provided by the International Satellite Cloud Climatology Project (ISCCP), using data from a combination of polar orbiting and geostationary imagers. There are three cloud analyses (TOVS Path-A, TOVS Path-B and HIRS-NOAA) using TIROS-N Operational Vertical Sounder Operational (TOVS) observations onboard the NOAA polar orbiting satellites. The relatively high spectral resolution of these instruments provides reliable cirrus identification, day and night. Recently, the NOAA PATMOS-x project has reanalyzed the Advanced Very High Resolution Radiometer (AVHRR) data onboard the same satellites. Cloud occurrence climatologies using sun occultation measurements from the Stratospheric Aerosol and Gas Experiment (SAGE) and from surface observations also participate in the assessment, as well as analyses using the second generation instruments MODIS (Moderate Resolution Imaging Spectroradiometer) and AIRS (Atmospheric Infrared Sounder) aboard the NASA the Earth Observing System (EOS). Climatological averages of cloud properties, their regional, seasonal and diurnal variations as well as time series are compared.