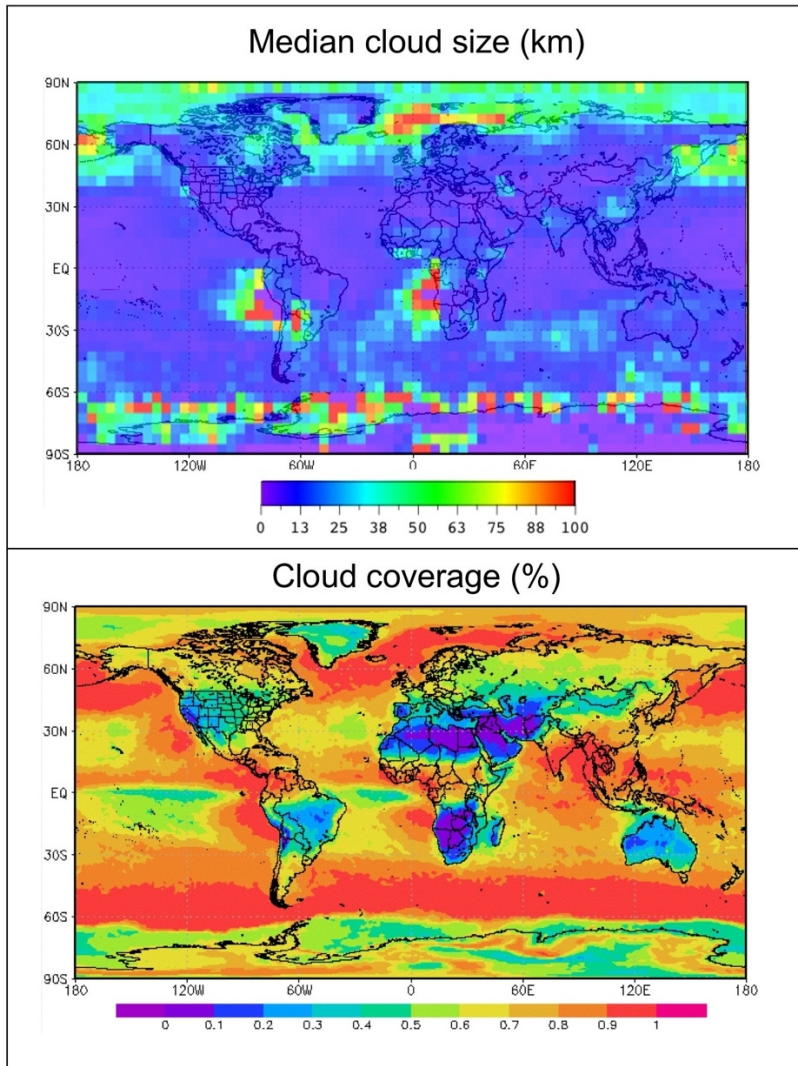


Correlation between horizontal cloud size and fractional cloud coverage



This image combines possibly the first global map of horizontal cloud size with the concurrent map of fractional cloud coverage. Both maps are based on MODerate resolution Imaging Spectral radiometer (MODIS) observations from June to August 2005. In many areas, cloud fraction and cloud size are well-correlated: higher cloud fraction corresponds to more horizontally extended clouds. For example, the North Pacific and North Atlantic Oceans are often covered by extended stratiform clouds that reach their maximum size and frequency in summer. The frequent stratocumulus clouds off the coasts of Peru and Angola also tend to occur in large overcast decks. In other areas, however, correlation is poor: high cloud coverage does not correspond to large clouds. For example, clouds associated with the Intertropical Convergence Zone (ITCZ) near the equator, or with the summer monsoon in India and Indochina, are often caused by convection and hence are relatively smaller, while the stratocumulus decks off the coast of California appear to consist of largely broken, smaller elements.

The cloud size map was constructed using observations from virtually all daytime data granule extracted at the Goddard Earth Sciences Data and Information Services Center (GES DISC) MODIS data pool, by considering all liquid phase clouds that were flagged as "high confidence" by the operational MODIS optical thickness retrieval algorithm. The cloud coverage map was generated by the Giovanni MODIS Online Visualization and Analysis (MOVAS) tool, using the MODIS/Terra Atmosphere Monthly Global Product.

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