Introduction
Continuous collection of global satellite imagery over the years has contributed to the creation of a long data record from AVHRR, MODIS and other sensors. These records account now for 30+ years, and as the archive grows it becomes an invaluable source of data for many environmental related studies dealing with trends and changes at local and global scale. For atmospheric research this is perfect, however for studies dealing with phenomena at the surface of the earth, the presence of cloud, aerosols, spatial gaps, viewing issues, and less than consistent atmosphere correction and reprocessing makes it difficult to obtain good quality data everywhere and every time. These issues change by location and time, making it difficult to know at a glance the availability and quality of the data.

Objectives
Our goal was to assess:
• The global data records quality
• The probability of getting good and enough data to perform a study at any given location and/or time
• The accuracy and certainty of these data

We generated global maps showing the problems and limitations of synoptic global remote sensing, the level of noise and errors in these records, and where science results could be suspect. In doing so we also identified opportunities for further work on these data records.

Data and Methodology
• Terra & Aqua 16-day CMG Vegetation Index record from 2000 to 2009 Additional we used the Terra MODIS CMG land cover product
• Quality information was extracted from the CMG product and the new C5 pixel reliability measure
• The analysis was stratified per latitude, season, land cover and geographic location

Results
Typical global NDVI map (August 2008) showing vegetation at its peak. Only highest quality data retained. The two major biomes, Barren or sparsely vegetated areas need to account for this uncertainty. wooded areas shows the largest level of noise.

Conclusions
Establishing the quality of the data should be the first step for accurate and successful data analysis. The global spatio-temporal distribution of data, quality, cloud and aerosol affects the best biomes, rainforest and boreal forests; are the most challenging owing to excessive cloud, snow and aerosol cover and a host of other issues (ex: poor atmosphere correction),

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