



A Fifteen-Year Climatology of Aerosol Optical Depth in the Salt Lake City Basin

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As part of the Goddard Institute for Space Studies program known as the Solar Irradiance Research Network (SIRN), multi-filter rotating shadowband radiometers (MFRSRs) were deployed at several sites around the United States, including one in the Salt Lake City (SLC) area starting in the mid 1990s. While the SIRN project was discontinued, the SLC MFRSR has continued to operate to this day. The MFRSR has five narrowband channels useful for total column aerosol optical depth (AOD) measurements. Part of the talk will explain the semi-automated data reduction procedures that have been implemented to continuously calibrate using field measurements, to reduce these measurements to optical depths, and then to cloud screen to ensure that the measurement is of the aerosol column. The primary portion of the talk will examine the 15-year data record for daily, seasonal, and longer-term trends in the record. For part of the record AODs are compared to PM 2.5 measurements that were introduced after the AOD record began. These PM 2.5 in situ measurements, which are more typical of those made for air quality assessments, should compare favorably with the AOD results as will be discussed.