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Characterization of a Marine Aerosol Layer using the Atmospheric Infrared Sounder (AIRS) on EOS Aqua.

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Observations of the sea surface with the Atmospheric Infrared Sounder (AIRS) in highly transparent surface channels at 2616, 1231 and 900 cm^{-1} using first principles corrections for atmospheric absorption and surface emissivity have been used to characterize a low marine aerosol layer with optical depth of about 0.02, which covers large regions of the tropical to moderate oceans under what appear to be cloud free conditions. We discuss the properties of this layer as function of global variability, wavelengths, optical depth, physical thickness and temperature and humidity correlations and possible climate implications. AIRS were launched into polar orbit on the EOS Aqua spacecraft on May 4, 2002.

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