

The Hazy Space between Cloud and Aerosol

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The definition of what is and is not a cloud is not well defined for markedly optically-thin situations of condensed water in the atmospheric column. For aerosols, we tend to think mostly in terms of small dry particles of low optical depths. The transition zone between our common perceptions of "aerosol" and "cloud" is a bit hazy at best. We take a look at this transitional loading that has been coined the "twilight zone" to determine the frequency of occurrence and importance using several surface-based observing techniques. Sensitivity analyses are applied on sky camera images, and broadband and spectral radiometric measurements, taken at Girona (Spain) and Boulder (CO, USA).

Results. Sky cameras

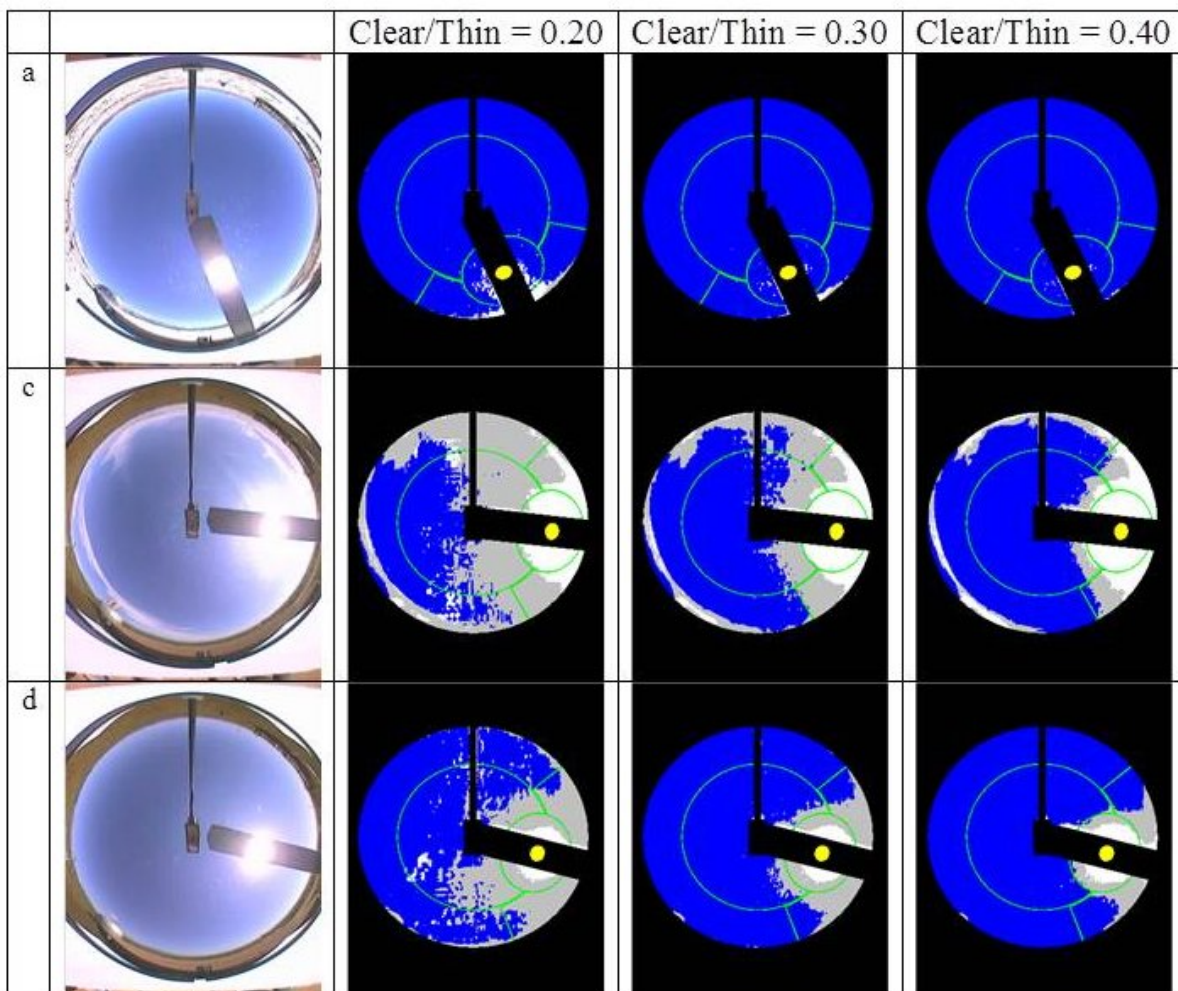


Figure 1. Examples of testing various processing thresholds for classifying cloud/no clouds for three different "haziness" conditions.