

Introduction

Ceilometers are inexpensive single-channel lidars, an active remote sensing instruments which emits a finite pulse of light and measures the photons scattered back along the path by atmospheric targets. The backscattered power is a function of the area of the target illuminated by the ceilometer beam; therefore backscatter from larger targets like clouds will be of a greater magnitude than backscatter from aerosol targets. In fact cloud returns tend to be at least one order of magnitude greater than backscatter from aerosol, allowing clouds to be easily identified by gradient or limit based algorithms. Hence these instruments are principally employed to automatically identify the height of the cloud base above the instrument

More details:

[Ceilometer Fundamentals](#)

[Ceilometer Operational Status](#)

[Ceilometer Error Characteristics](#)

[Ceilometer Progress and challenges](#)