

Cloud Height

The height of the base or top of a cloud is the vertical distance from the point of observation to the level of the base. Note that this point may be on a hill or a mountain.

Reports of cloud height based upon visual estimates can allow for variations over time and space but may suffer from substantial errors of estimation. At stations where the observer has reports available from aircraft descending or ascending in the vicinity, the observer can relate these to what he sees and so provide reports sufficiently reliable for meteorological purposes. At other stations estimates can sometimes be widely in error. At airport or airfields, much useful information as to cloud height can be obtained from aircraft pilots.

If the weather station has a good view over hilly or mountainous country, the known heights of peaks or other reference points should enable the observer to determine the height of the base of any clouds below the summits, with considerable accuracy.

The concept of levels may also be of some help to the observer when estimating the height of a particular cloud.

Height and altitude

 cloudatlas.wmo.int/height-and-altitude.html

(Section 2.7.4)

The observer should measure or estimate the height of the cloud base above the level of the place of observation or the altitude above mean sea level. If possible, the vertical extent of the clouds should also be determined. The basis for the reported height or altitude (estimation, measurement by ceilometer, etc.) should always be stated.

The text enclosed in grey-shaded boxes, like this example, comprises Annex I to the *Technical Regulations (WMO-No. 49)* and has the legal status of standard practices and procedures.

Direction and speed of movement

 cloudatlas.wmo.int/direction-and-speed-of-movement.html

(Section 2.7.5)

By convention, the direction of movement of a cloud is the direction from which the cloud moves. For example, if a cloud moves from south-west to north-east, the recorded direction of movement is “south-west”. The speed of a cloud is the speed of its horizontal movement.

An observation of the sky should report the direction and, whenever possible, the speed of movement of the clouds or their macroscopic elements. In most cases, this is also a good approximation of the direction and speed of the wind at cloud level. It is possible for the movement of a cloud as a whole to be very different from the movement of its macroscopic elements, particularly in the case of orographic clouds. When such a difference is observed, it should be reported.

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