

## Nephelometer and visibility

The Nephelometer is one of the main components of any complete Air Quality Monitoring Station (AQMS). Nephelometers are used as a standard part of Air quality monitoring networks in many parts of the world, including state EPA's in Australia and the U.S.A.

The Nephelometer measures the scattering of light, thus it can detect the distance the naked eye can see (in km). This monitoring is extremely useful when reporting data to the general public as the general public can relate bad air quality to visible distance more than parts per billion.

This factor has been demonstrated most evidently during the 2008 Beijing Olympics where the great measure of improvement of air quality was that the people of Beijing could see the blue sky, as reported in many articles including the following:

<http://en.beijing2008.cn/news/olympiccities/beijing/n214229614.shtml>

True and accurate visibility measurement by a nephelometer must be performed by taking wet measurements. Wet measurements do not control humidity (by heating sample) and include the affects of humidity, fog and their interaction with aerosols in the visibility measurement.

The Aurora Nephelometer is the ideal instrument to perform visibility monitoring. The Aurora uses advanced LED technology (patent pending) to measure light scattering, this LED light source does not heat up the sample (as alternative lamp technology does) and allows the option of either wet or dry measurement, unlike others that only allow dry measurement.